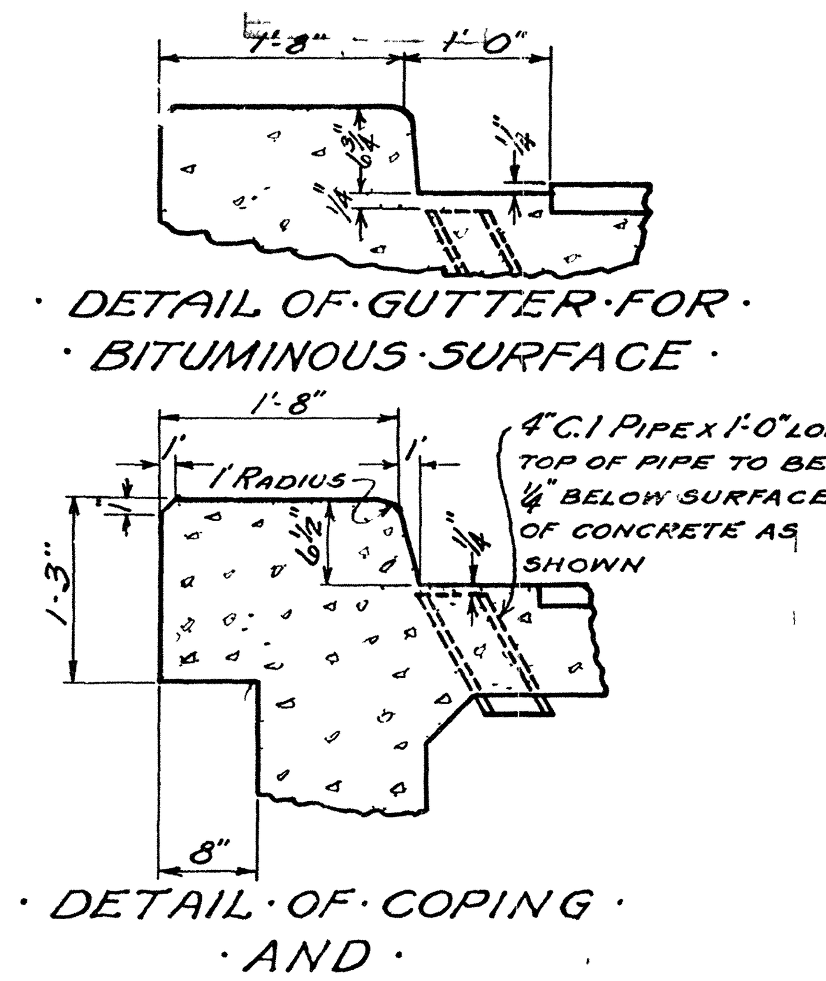
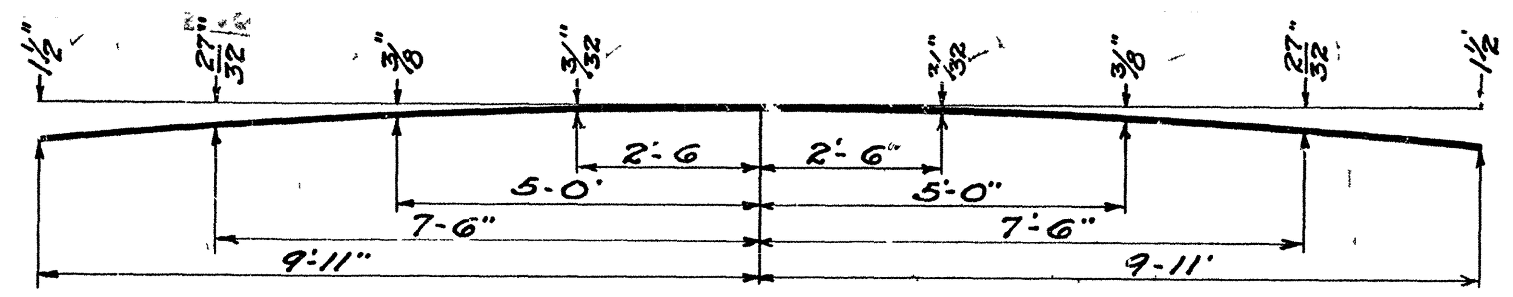
FED. ROAD DIST No	STATE	FED. AID PROJ No	FISCAL YEAR	SHEET No	TOTAL SHEETS
8	TENN	[illegible]		[illegible]	[illegible]

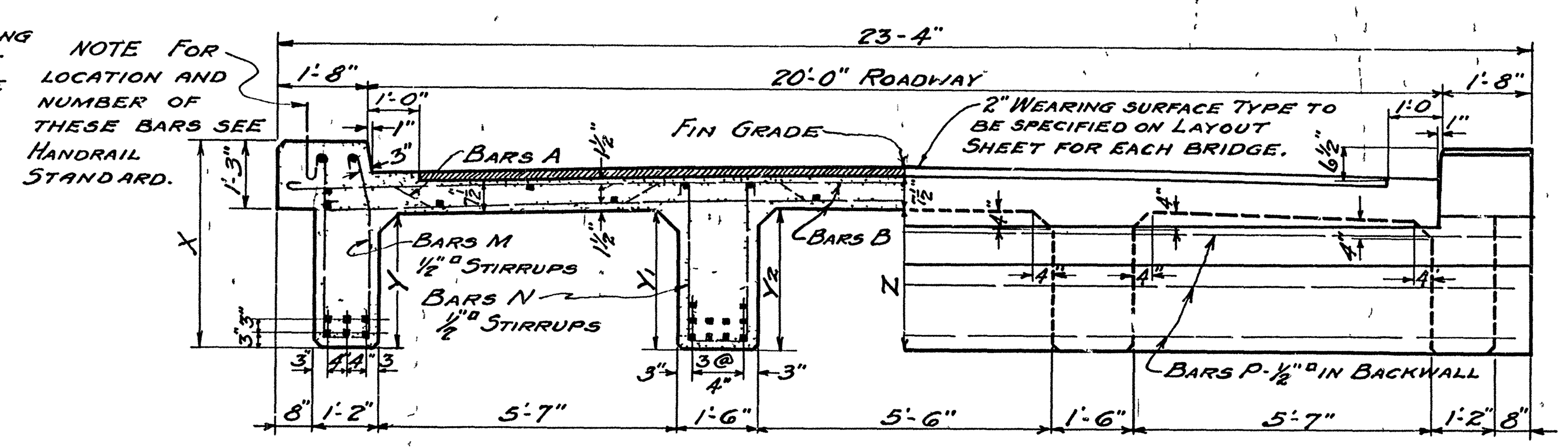


· DETAIL · OF · GUTTER · FOR · BITUMINOUS · SURFACE ·

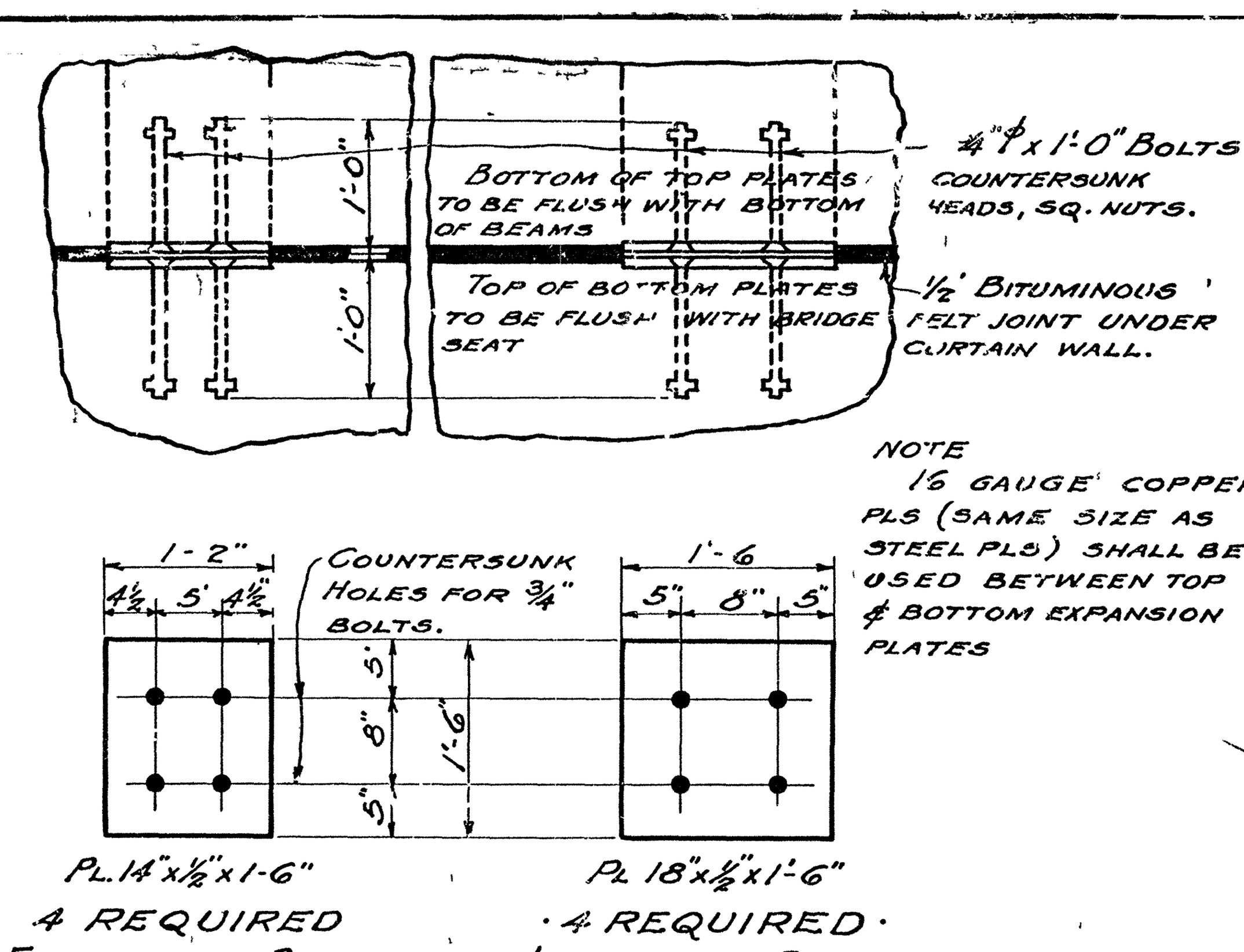
· DETAIL · OF · COPING · AND · ROADWAY · DRAIN ·



· DETAIL · OF · ROADWAY · TEMPLATE · FOR · GIRDERS ·



· HALF · SECTION · A · A · · HALF · END · ELEVATION ·

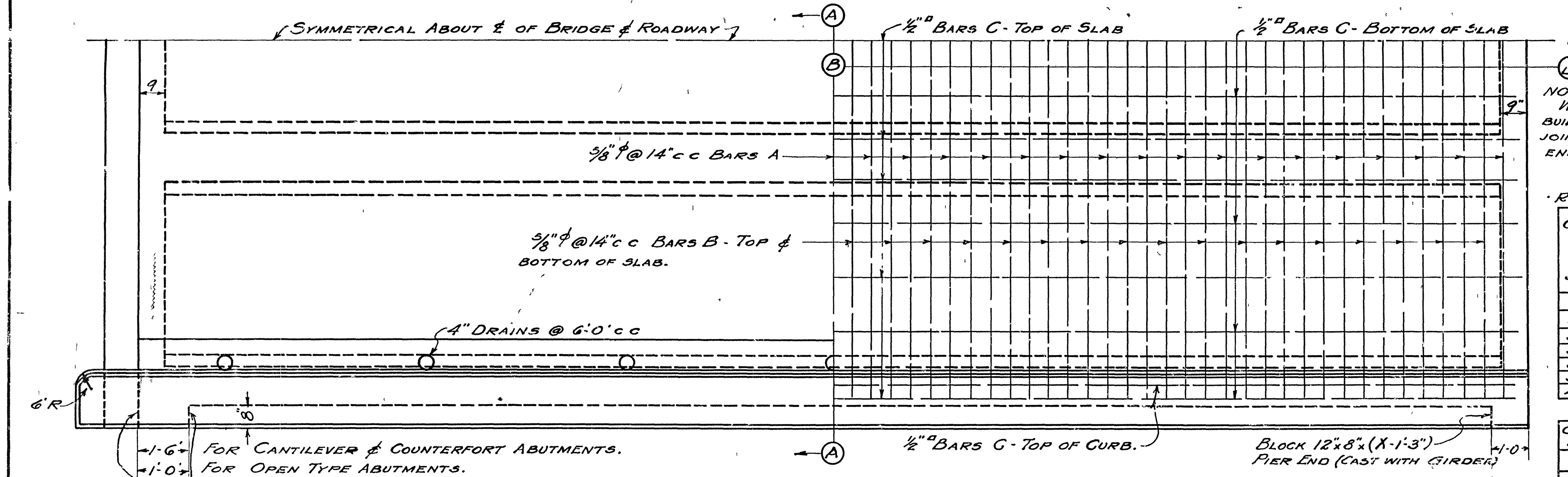


· DETAIL · AT · EXPANSION · END ·

DIMENSIONS · AND · QUANTITIES ·
· INTERMEDIATE · SPANS · ONLY ·

CLEAR SPAN FEET	TOTAL LENGTH	DIMENSIONS X	Y	Y_1	Y_2	Z	STIRRUP SPACING EXTERIOR BEAM STIRRUPS M	INTERIOR BEAM STIRRUPS N	QUANTITIES CLASS A CONCRETE CU YDS	REINF. STEEL LBS.	STRUCT STEEL LBS.
28	31'-0"	3'-0"	1'-8½"	1'-9⅛"	1'-9⅜"	1'-9½"	9 SPA. @ 1'-0 8 " " 1'-6 9 " " 1'-0	18 SPA @ 7" 9 " " 1'-0 18 " " 7	32.5	7287	398
30	33'-0"	3'-2"	1'-10⅛"	1'-11⅛"	1'-11⅜"	1'-11½"	9 " " 1-0 8 " " 1-6 9 " " 1-0	18 " " 7" 10 " " 1'-0 18 " " 7"	35.7	7931	398
32	35-0"	3-4	2-0⅛"	2-1⅛"	2-1⅜"	2-1½"	9 " " 1-0 10 " " 1-6" 9 " " 1-0	18 " " 7 12 " " 1-0 18 " " 7	39 1	8530	398
34	37-0"	3'-6"	2'-2⅛"	2'-3⅛	2'-3⅜"	2'-3½"	9 1-0 12 1-6 9 1-0	18 7 14 1-0 18 7	42 6	9265	398
36	39'-0"	3-8"	2'-4⅛"	2'-5⅛"	2'-5⅜"	2-5½	12 " " 1-0 8 " " 1-9 12 " " 1'-0	19 " " 8" 10 " " 1-2' 19 " " 8	46 2	10032	398
38	41'-0"	3'-10"	2'-6⅛"	2'-7⅛"	2'-7⅜"	2'-7½"	13 " " 1'-0" 8 " " 1'-9 13 " " 1-0	19 " " 8 12 " " 1-2 19 " " 8	50 0	10582	398
40	43'-0"	4'-0"	2'-8⅛"	2'-9⅛"	2-9⅜"	2'-9½"	13 " " 1-0' 9 " " 1-9 13 " " 1-0'	20 " " 8' 13 " " 1-2" 20 " " 8	53 9	11467	398

NOTE COST OF C.I. DRAINS AND OF ALL BITUMINOUS FELT JOINTS SHALL BE INCLUDED IN THE PRICE PER CU. YD OF CLASS "A" CONCRETE.



· QUARTER · PLAN ·

· QUARTER · PLAN ·
· SHOWING · SLAB · REINFORCEMENT ·

NOTE
WHEN TWO OR MORE SPANS ARE BUILT, PLACE A ¾" BITUMINOUS FELT JOINT BETWEN SPANS AT EXPANSION ENDS

· ADDITIONAL ·
ESTIMATED QUANTITIES ·
· REQUIRED AT EACH ABUTMENT ·

CLEAR SPAN	CURB PROJECTION BRACKET AND ADDITIONAL IN BLOCKS CONCRETE CU. YDS	STEEL LBS
28'-0"	14	83
30'-0	1.4	83
32-0"	1.5	83
34-0	1 6	83
36-0	1 7	83
38'-0'	1.7	83
40'-0	1.8	83

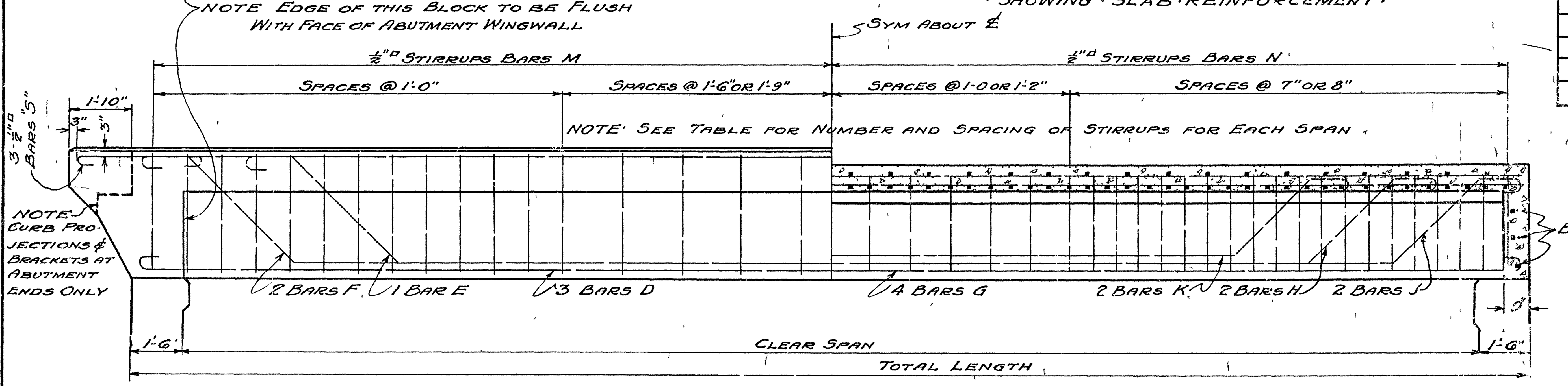
· BILL · OF · STEEL · FOR · ONE · INTERMEDIATE · SPAN

CLEAR SPAN FEET	BARS A ⅝" ϕ SLAB REINF NO	LENGTH	BARS B ⅝" ϕ SLAB REINF NO	LENGTH	BARS C ½" □ SLAB REINF NO	LENGTH	BARS D EXT BEAMS NO	SIZE	LENGTH	BARS E EXT. BEAMS NO	SIZE	LENGTH	BARS F EXT BEAMS NO	SIZE	LENGTH	BARS G INT BEAMS NO	SIZE	LENGTH	BARS H INT BEAMS NO	SIZE	LENGTH	BARS J INT BEAMS NO	SIZE	LENGTH	BARS K INT. BEAMS NO	SIZE	LENGTH	BARS M-½" □ STIRRUPS EXT BEAM NO	LENGTH	BARS N ½" □ STIRRUPS INT BEAM NO	LENGTH	BARS P-½" □ BACKWALL NO	LENGTH
28	27	24'-6"	52	22'-6'	21	30'-6"	6	1⅛" □	32-4	2	1⅛" □	29'-9'	4	1" □	34-1'	8	1⅛" □	32'-4	4	1⅛" □	30'5'	4	1¼" □	33'-11"	-	-	-	54	7-0'	92	6-2	6	23-0'
30	27	24-6"	56	22'-6	21	32-6	6	1⅛" □	34-4'	2	1" □	31-4"	4	1⅛" □	36-4"	8	1¼" □	34-6	4	1⅛" □	32'-2'	4	1⅛" □	35 10'	-	-	-	56	7-4'	94	6-6	6	23-0'
32	29	24-6"	60	22-6'	21	34'-6	6	1¼" □	36'-6	2	1" □	33'-2	4	1" □	38-4'	8	1¼" □	36-6	4	1⅛" □	34-5'	4	1⅛" □	38-0'	-	-	-	58	7-8'	98	6-10'	6	23'-0'
34	31	24'-6"	64	22-6	21	36-6	6	1⅛" □	38-4"	2	1¼" □	35'-3'	4	1⅛" □	40'-7"	8	1¼" □	38-6	4	1⅛" □	35-10'	4	1¼" □	40'-4"	-	-	-	60	8'-0	102	7-2'	6	23'-0"
36	33	24'-6"	68	22'-6'	21	38-6	6	1⅛" □	40'-4"	2	1⅛" □	36-11"	4	1¼" □	42-11"	8	1¼" □	40-6	4	1¼" □	37-9	4	1¼" □	42-5	-	-	-	66	8-4'	98	7-6	6	23'-0
38	35	24'-6'	68	22-6	21	40-6'	6	1¼" □	42-6"	2	1⅛" □	38-9	4	1⅛" □	44-11	8	1¼" □	42-6'	4	1¼" □	39-7	4	1¼" □	44-7	-	-	-	70	8'-8	102	7-10	6	23-0
40	37	24' 6"	72	22' 6	21	42'-6"	6	1¼" □	44'-6	2	1⅛" □	40-6	4	1¼" □	47'-2'	8	1¼" □	44-6	4	1⅛" □	41'-3	4	1⅛" □	46'-7"	4	1" □	35'-6	72	9'-0	108	8-2"	6	23-0'

NOTE FOR EACH END OF BRIDGE ADD 6 BARS S-½" □ x 4'-0, 23 BARS T-½" □ x 2'-3" AND 1 BAR U-½" □ x 22'-3".

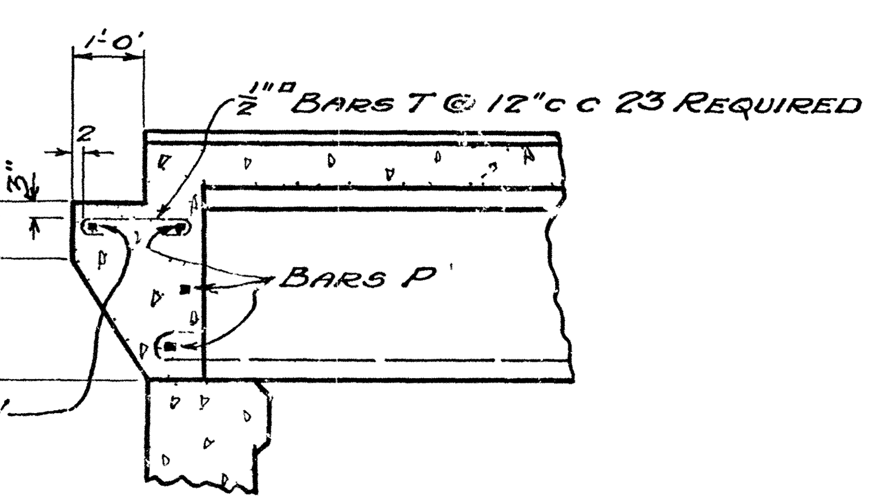
· STEEL · BENDING · TABLE ·

CLEAR SPAN FEET	BARS D & G f	BARS E a	b	c	d	e	BARS F a	b	c	d	e	BARS H a	b	c	d	e	BARS J a	b	c	d	e	BARS K a	b	c	d	e	BARS M h	BARS N h
28	30'-6"	1'-3"	2'-3"	19'-0'	2-3'	3-2¼"	1'-3"	2-3	23-6'	2'-3"	3'-2¼"	1'-3"	1-8'	21'-4	1'-8"	2'-4¼	1-3"	1'-8'	24-8	1-8	2'-4¼	-	-	-	-	-	2-8"	2'-1'
30	32-6"	1-3'	2'-5"	20-4'	2-5'	3-5"	1'-3"	2-5	25-2'	2'-5	3-5	1-3'	1-10	22-8	1-10	2-7⅛"	1'-3"	1-10'	26'-4'	1'-10'	2-7⅛	-	-	-	-	-	2'-10"	2'-3"
32	34-6'	1-3"	2'-7'	21-8	2-7	3-7⅞	1'-3"	2-7	26'-10	2-7'	3'-7⅞"	1'-3"	2-0"	24-0"	2'-0"	2'-10"	1'-3'	2'-0"	28-0	2-0	2-10"	-	-	-	-	-	3'-0"	2-5"
34	36-6"	1-3"	2'-9	23-0	2'-9"	3-10⅝	1-3'	2-9"	28'-6	2-9"	3'-10⅝"	1-3'	2-2'	25-4	2-2"	3-0¾	1'-3"	2'-2	29-8	2-2'	3-0¾'	-	-	-	-	-	3-2	2-7'
36	38-6'	1'-3"	2-11"	24'-4"	2-11'	4-1½	1-3	2'-11	30'-2	2'-11'	4'-1½	1-3	2'-4	26'-8	2'-4	3-3⅝	1'-3'	2'-4	31'-4	2-4	3'-3⅝	-	-	-	-	-	3-4	2'-9'
38	40'-6"	1'-3"	3'-1"	25'-8	3-1"	4'-4⅜	1-3'	3-1'	31-10	3'-1"	4'-4⅜"	1-3'	2'-6	28-0	2-6	3-6⅜	1-3'	2'-6	33-0	2'-6	3-6⅜'	-	-	-	-	-	3-6	2'-11
40	42'-6"	1'-3"	3'-3'	27'-0	3'-3'	4'-7⅛	1-3	3-3"	33-6'	3'-3"	4'-7⅛'	1'-3"	2'-8	29-4'	2'-8"	3'-9¼"	1'-3"	2'-8"	34'-8'	2-8'	3'-9¼'	1'-3"	2-5'	24-6	2'-5	3-5'	3'-8'	3'-1'



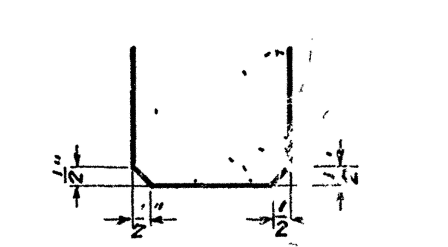
· HALF · SIDE · ELEVATION ·

· HALF · SECTION · B · B ·

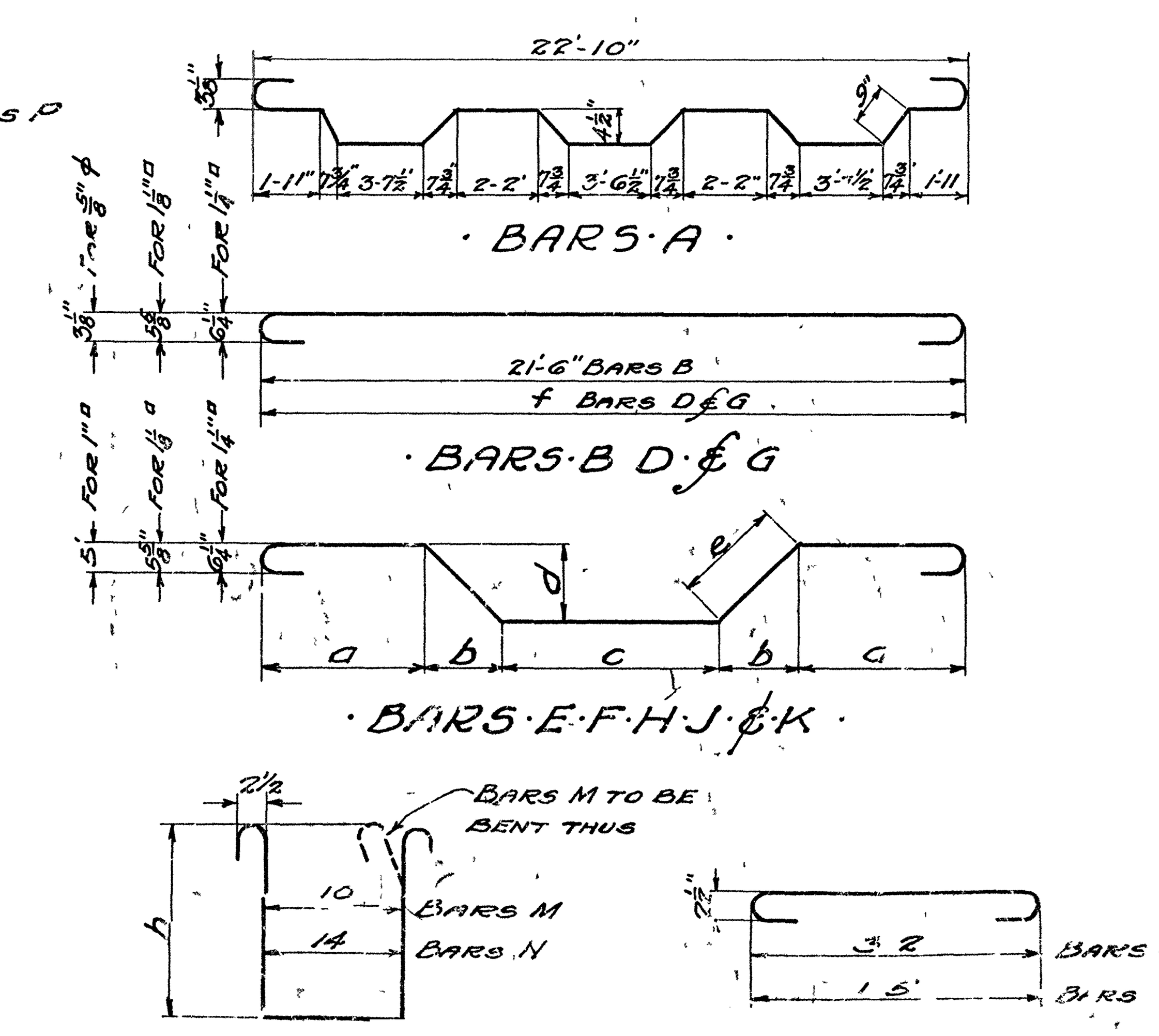


BRACKET DETAIL ·

GENERAL NOTES
SPECIFICATIONS STANDARD ROAD & BRIDGE SPECIFICATIONS OF THE TENNESSEE DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS.
CONCRETE SHALL BE CLASS "A".
REINFORCING STEEL: SEE SPECIFICATIONS.
ALL DIMENSIONS RELATING TO REINFORCEMENT ARE TO CENTERS OF BARS.
FORMS AND FINISH: SEE SPECIFICATIONS.



CHAMFER CORNERS OF BOTTOMS OF ALL BEAMS ½" AS SHOWN.



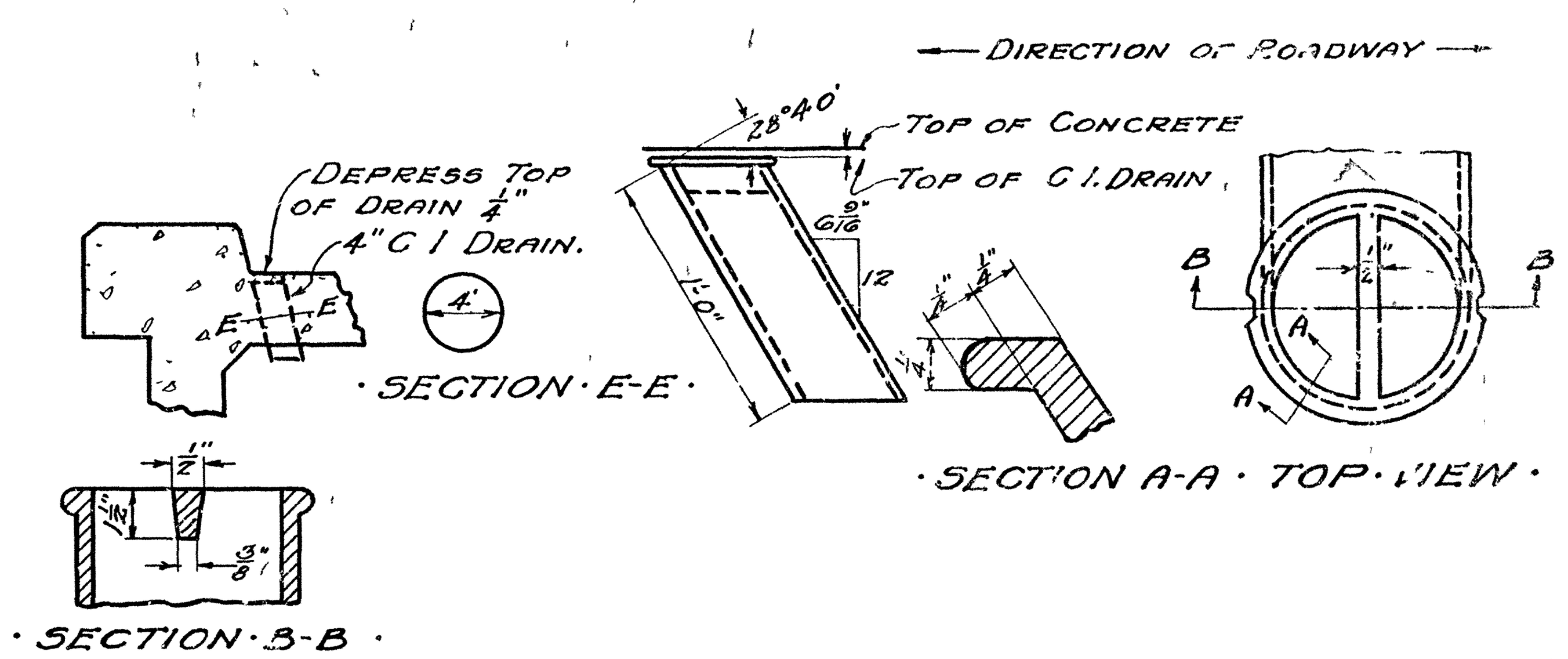
· BARS · A ·

· BARS · B D & G ·

· BARS · E · F · H · J · & K ·

· BARS · M · & · N ·

BARS · S · & · T



· DETAIL · OF · 4" · CAST · IRON · DRAIN · PIPE ·

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
NASHVILLE
STANDARD

CONCRETE BRIDGES DECK GIRDER TYPE

SPANS 28' TO 40' ROADWAY 20'-0"
1930

REVISED BRACKET DETAIL & CURB PROJECTION 12-18-29
ADDED 20 LBS TO WEIGHT OF STRUCTURAL STEEL FOR COPPER PLS 1-17-29

DESIGNED BY .... DATE ....
DRAWN BY .... DATE ....
TRACED BY Maudy [illegible] DATE April 1930
CHECKED BY .... DATE ....

CORRECT. [illegible]
STATE HIGHWAY ENGINEER

SEE M-330-14

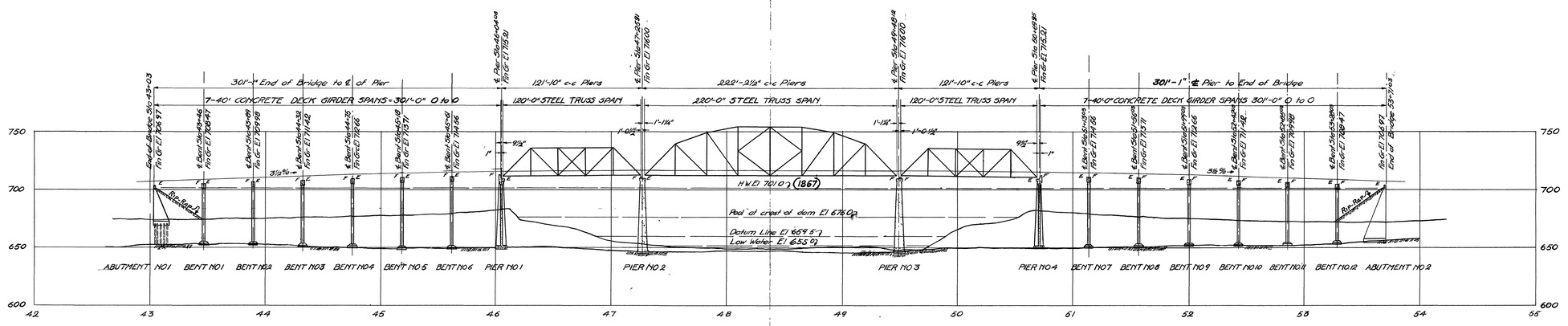
Last Revision · 10-18-28

FED ROAD DIST NO.	STATE	FED AID PROJ NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
8	TENN.		19		

SBP #10

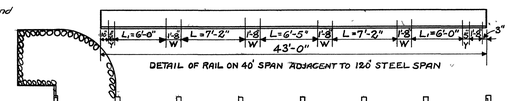
330' V.C.
PC Sta 43+96 El 710.225
PI Sta 45+61 El 716.0
PT Sta 47+26 El 716.0

330' V.C.
PC Sta 49+48.03 El 716.0
PI Sta 51+13.03 El 716.0
PT Sta 52+78.03 El 710.225



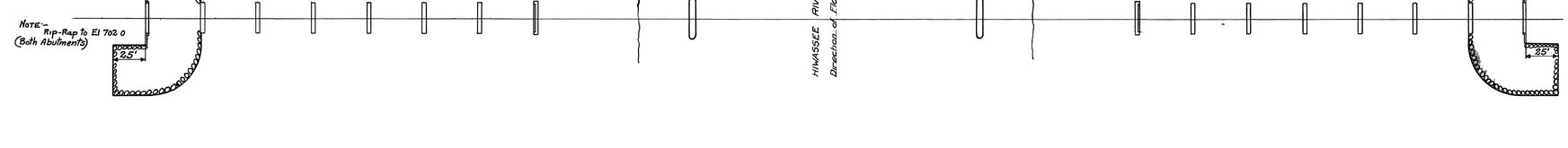
SECTION ON ℄ OF BRIDGE & ROADWAY
Scale 1"=50'-0"

NOTE
E = Expansion End
F = Fixed End



DETAIL OF RAIL ON 40' SPAN ADJACENT TO 120' STEEL SPAN

NOTE:— Rip-Rap to El 702.0 (Both Abutments)

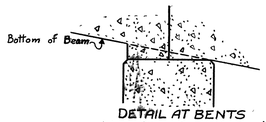


SPECIAL NOTE

This bridge shall be constructed so as to meet requirements for navigation as prescribed by the Chief Engineer of the U.S. War Department

All work shall be so conducted that the free navigation of the waterway shall not be unreasonably interfered with and to the complete satisfaction of the District Engineer of the U.S. Engineering Department

All falsework, pilling or other obstructions used in the construction of the bridge, shall be removed as soon as they are no longer needed, and, in no case, later than ninety days after the bridge has been opened to traffic



DETAIL AT BENTS
Showing blocks poured with beam-stems to obtain level bearings

TABLE OF ESTIMATED QUANTITIES

ITEM	EXCAVATION CU. YDS DRY	EXCAVATION CU. YDS WET	EXCAVATION CU. YDS ROCK	CONCRETE CU YDS CLASS "S"	CONCRETE CU YDS CLASS "A"	CONCRETE CU YDS CLASS "B"	STEEL LBS REINF	STEEL LBS STRUCT.	TREATED PILES LIN. FT.
SUPERSTRUCTURE									
14-40'-0" CONCRETE GIRDER SPANS	—	—	—	81.49	758.20	—	163001	5292	
2-120'-0" STEEL TRUSS SPANS	—	—	—	—	112.00	—	16400	246600	245 ⅛" ø
1-220'-0" STEEL TRUSS SPAN	—	—	—	—	115.90	—	19.400	311 800	31 ⅛" ø
SUBSTRUCTURE									
ABUTMENT NO 1	105	—	—	—	65.4	—	3859	—	750
ABUTMENT NO 2	390	71	10	—	133.1	—	5374	—	—
BENT NO 1	379	70	2	—	41.7	—	6998	—	—
BENT NO 2	412	87	2	—	43.2	—	7286	—	—
BENT NO 3	447	91	2	—	44.2	—	7463	—	—
BENT NO 4	479	79	1	—	44.0	—	7440	—	—
BENT NO 5	527	90	1	—	45.1	—	7640	—	—
BENT NO 6	595	130	2	—	47.5	—	8104	—	—
BENT NO 7	592	81	2	—	45.1	—	7640	—	—
BENT NO 8	464	86	1	—	44.8	—	7596	—	—
BENT NO 9	384	78	1	—	43.9	—	7419	—	—
BENT NO 10	319	53	2	—	42.2	—	7088	—	—
BENT NO 11	284	68	2	—	42.3	—	7109	—	—
BENT NO 12	263	66	2	—	41.5	—	6953	—	—
PIER NO 1	912	144	10	—	177.1	—	5485	—	—
PIER NO 2	—	50	18	—	—	483.4	10333	—	—
PIER NO 3	—	63	13	—	—	488.5	10333	—	—
PIER NO 4	816	130	9	—	164.8	—	5258	—	—
TOTALS	7368	1437	80	81.49	2052.0	971.9	315,579	563,692	750

Rip rap Abut No.1 309 CU.Yds.
" " " No.2 337 CU.Yds.
Surfacing 2136 Sq.Yds.

GENERAL NOTES
Specification: Standard Road and Bridge specifications of the Tennessee Department of HIGHWAYS & Public Works.
Surfacing to be 2" of Bituminous Material.

FINISHED GRADE ELEVATIONS
FOR GIRDER SPANS
ON VERTICAL CURVE BETWEEN
BENT NO.2 & PIER NO.1 AND PIER NO.4 & BENT NO.11

STATION	ELEVATION
℄ Bent 43+890	709.98
PC 43+96.0	710.225
44+00	710.43
+080	710.64
+160	710.84
+200	711.03
+260	711.24
℄ Bent 44+320	711.42
+363	711.55
+406	711.68
+449	711.81
+492	711.94
+535	712.06
+578	712.19
+621	712.31
+664	712.43
+707	712.54
℄ Bent 44+750	712.66
+793	712.77
+836	712.88
+879	712.99
+922	713.10
+966	713.21
45+009	713.31
+051	713.41
+094	713.51
+137	713.61
℄ Bent 45+180	713.71
+223	713.80
+266	713.89
+309	713.98
+352	714.07
+395	714.16
+438	714.25
+481	714.32
+524	714.40
+567	714.48
℄ Bent 45+610	714.56
+653	714.64
+696	714.70
+739	714.77
+782	714.85
+825	714.91
+868	714.97
+911	715.04
+954	715.10
+997	715.15
End Br 46+040	715.21

STATION	ELEVATION
End Br 50+7203	715.21
+7433	715.15
+7863	715.10
+8293	715.04
+8723	714.97
+9153	714.91
+9583	714.85
51+0013	714.77
+0443	714.70
+0873	714.64
℄ Bent 51+1303	714.56
+1733	714.48
+2163	714.40
+2593	714.32
+3023	714.25
+3453	714.16
+3883	714.07
+4318	713.99
+4743	713.89
+5173	713.80
℄ Bent 51+5608	713.71
+6038	713.61
+6463	713.51
+6893	713.41
+7323	713.31
+7753	713.21
+8183	713.10
+8613	712.99
+9043	712.88
+9473	712.77
℄ Bent 51+9903	712.66
52+0333	712.54
+0763	712.43
+1193	712.31
+1623	712.19
+2053	712.06
+2483	711.94
+2913	711.81
+3343	711.68
+3773	711.55
℄ Bent 52+4203	711.42
+4803	711.24
+5403	711.03
+6003	710.84
+6603	710.64
+7203	710.43
P.T. 52+78.03	710.225
℄ Bent 52+8503	709.98

LIST OF DRAWINGS
For details of Handrail see Drawing D-4-95
For details of Girders see Drawing A-0-3 - Spans 14 @ 40'-0".
For details of 120'-0" Spans see Drawings D-7-97 & 98.
For details of 220'-0" Span see Drawings D-7-17 & 18.
For details of Abutment No.1. See Drawing A-1-77.
For detail of Abutment No.2. See Drawing A-1-78.
For detail of Bents No.1-12 See Drawing A-1-79.
For detail of Piers No 1 & 4 See Drawing A-1-80.
For detail of Piers No.2 & 3 See Drawing A-1-81.
For Expansion Details see Drawing A-2-48

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
NASHVILLE

LAYOUT OF BRIDGE

OVER
HIWASSEE RIVER
STA. 43+03
MEIGS CO
1928

CORRECT L. M. Erickson BRIDGE ENGINEER
APPROVED ... ASSISTANT STATE HIGHWAY ENGINEER

A-1-76

DESIGNED BY T. Grace DATE June 1928
DRAWN BY T. Grace DATE June 1928
TRACED BY ... DATE ...
CHECKED BY A.R. Jeerup DATE 6-30-28

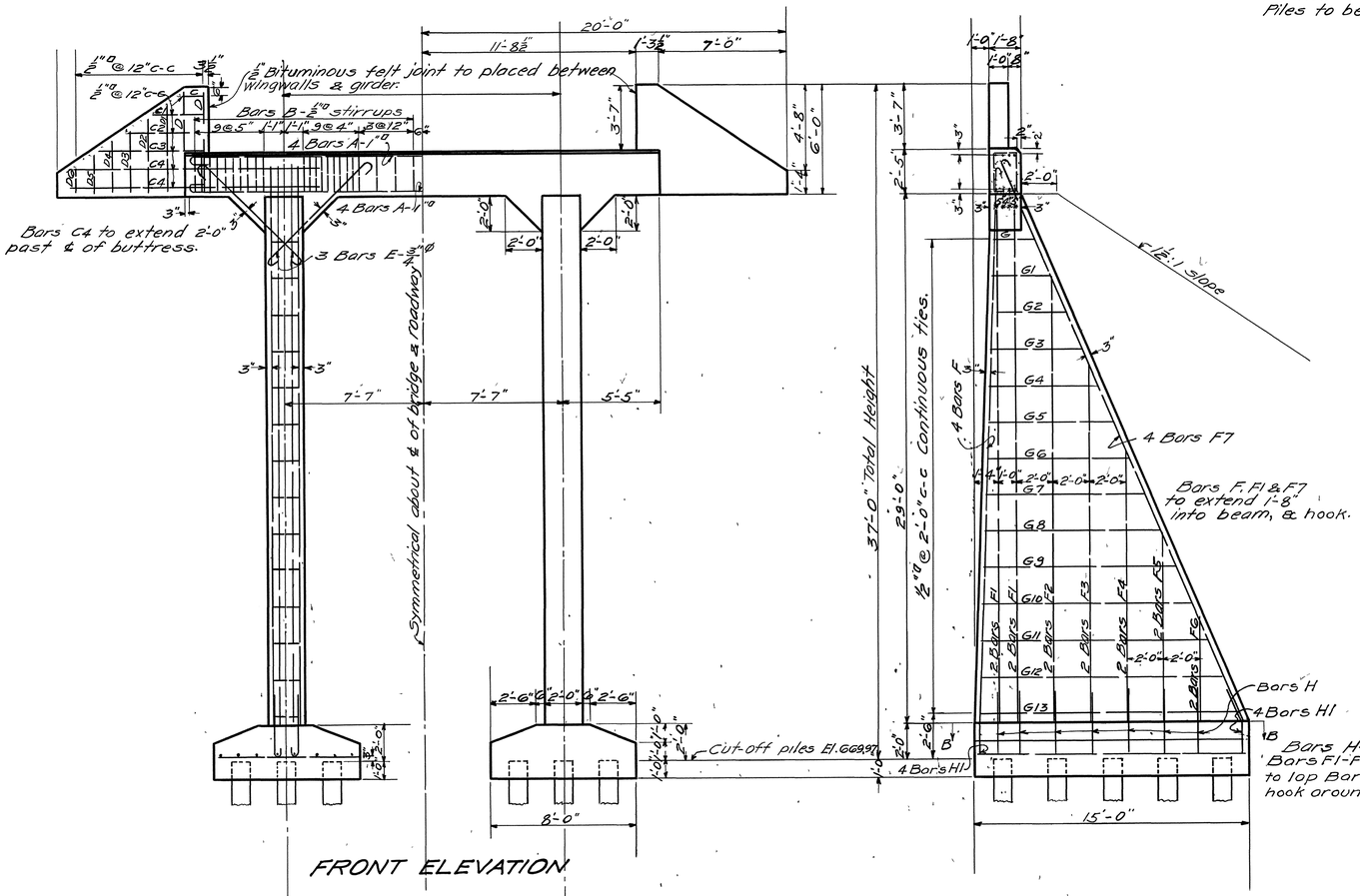
Revision Expansion Details add. 10-18-28

FED ROAD DIST No	STATE	FED AID PROJ No	FISCAL YEAR	SHEET No	TOTAL SHEETS
8	TENN		19		

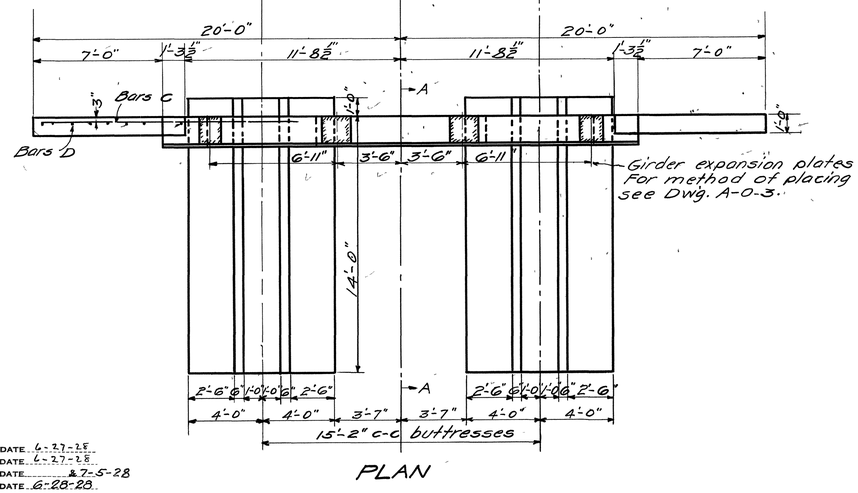
SBP #10

General Notes

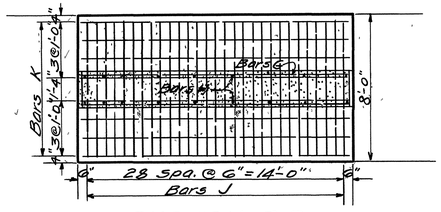
Specifications: Standard Road & Bridge Specifications of the Tennessee Department of Highways & Public Works.
Concrete shall be Class "A".
Reinforcing steel: See Specifications.
Forms & Finish: See Specifications.
Piles to be driven to rock (maximum length about 25')-treated.



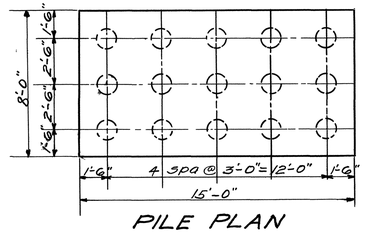
FRONT ELEVATION



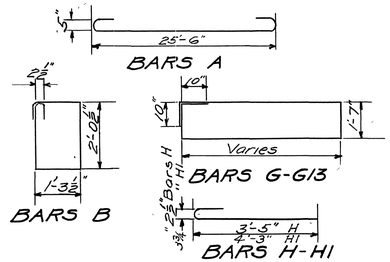
PLAN



SECTION B-B



PILE PLAN



BENDING DIAGRAMS
(ALL BENDS TO BE RADIAL)

BILL OF STEEL.

BAR	SIZE	NO	LENGTH	BAR	SIZE	NO	LENGTH
A	1"ø	8	27'-2"	F5	½"ø	4	10'-6"
B	½"ø	46	7'-6"	F6	½"ø	4	5'-9"
C	½"ø	2	1'-6"	F7	¾"ø	8	34'-0"
C1	"	2	3'-0"	G	½"ø	2	9'-6"
C2	"	2	4'-6"	G1	"	2	11'-3"
C3	"	2	6'-0"	G2	"	2	13'-3"
C4	½"ø	4	13'-9"	G3	"	2	15'-0"
D	½"ø	4	5'-6"	G4	"	2	16'-9"
D1	"	2	4'-9"	G5	"	2	18'-9"
D2	"	2	4'-3"	G6	"	2	20'-6"
D3	"	2	3'-6"	G7	"	2	22'-3"
D4	"	2	2'-9"	G8	"	2	24'-3"
D5	"	2	2'-3"	G9	"	2	26'-0"
D6	½"ø	2	1'-6"	G10	"	2	27'-9"
E	¾"ø	12	8'-9"	G11	"	2	29'-9"
F	¾"ø	8	31'-6"	G12	"	2	31'-6"
F1	1"ø	8	31'-3"	G13	½"ø	2	33'-3"
F2	"	4	24'-6"	H	½"ø	28	3'-10"
F3	"	4	19'-9"	J	½"ø	58	7'-6"
F4	½"ø	4	15'-0"	K	½"ø	16	14'-9"
				H1	¾"ø	16	4'-11"

ESTIMATED QUANTITIES

Concrete Class "A" 65.4 Cu. Yds.
Reinforcing steel 3859 Lbs.

DESIGNED BY T. Grove DATE 4-27-28
DRAWN BY T. Grove DATE 4-27-28
TRACED BY Fowler & Hamm DATE & 7-5-28
CHECKED BY A. R. Jessup DATE 6-28-28

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
NASHVILLE
DETAILS

ABUTMENT NO. 1

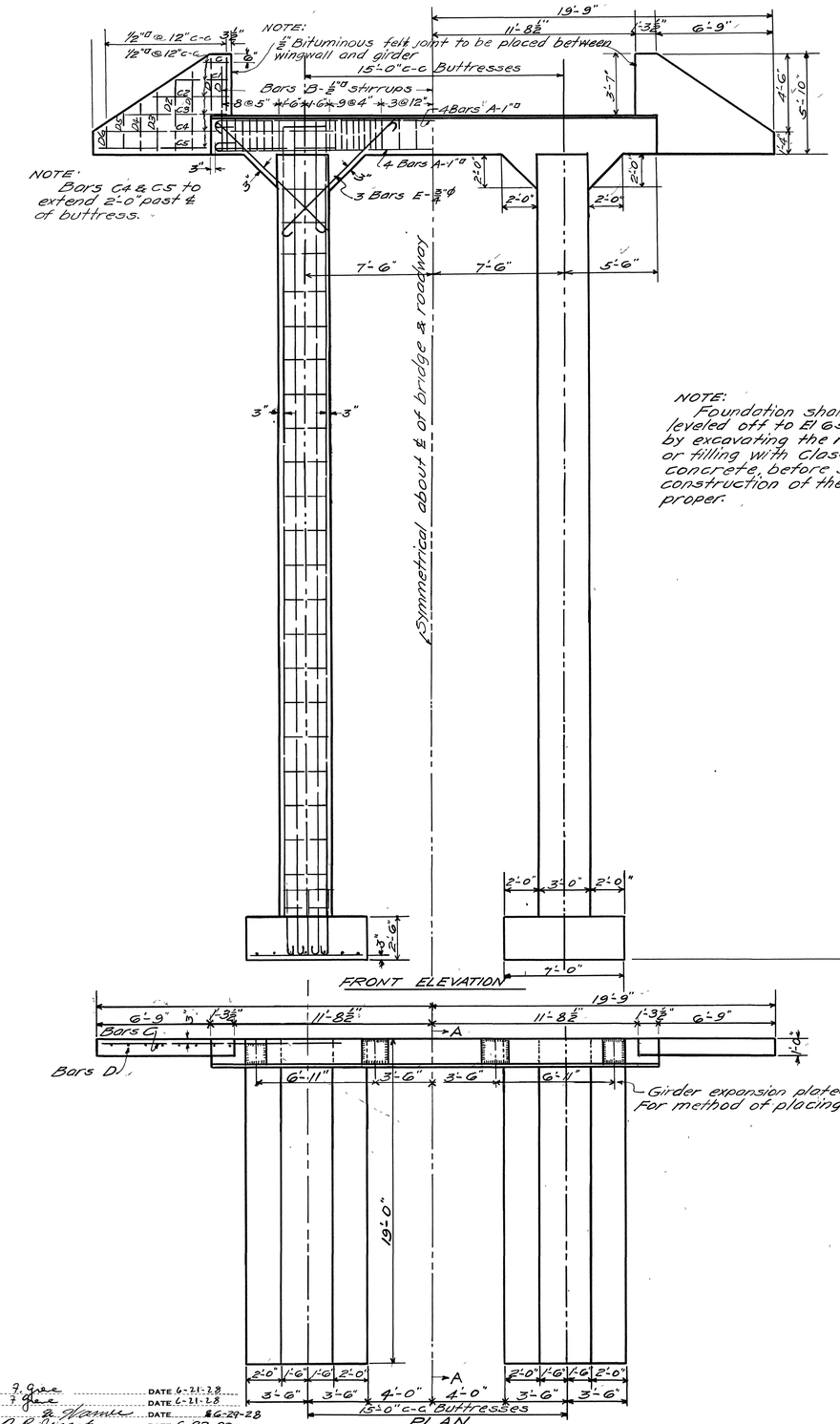
AT
STA. 43+03
MEIGS CO
1928

CORRECT L. M. Erickson
BRIDGE ENGINEER
APPROVED O. Gotz
ASSISTANT STATE HIGHWAY ENGINEER

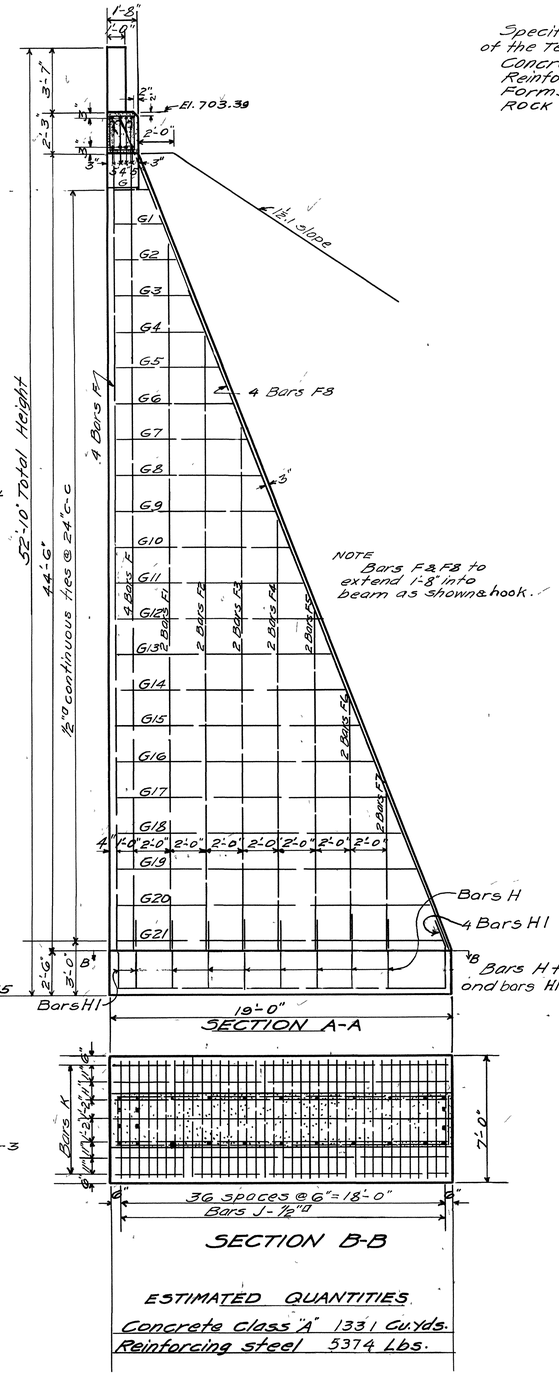
A-1-77

FED ROAD DIST No	STATE	FED AID PROJ No	FISCAL YEAR	SHEET No	TOTAL SHEETS
8	TENN		19		

SBP #10

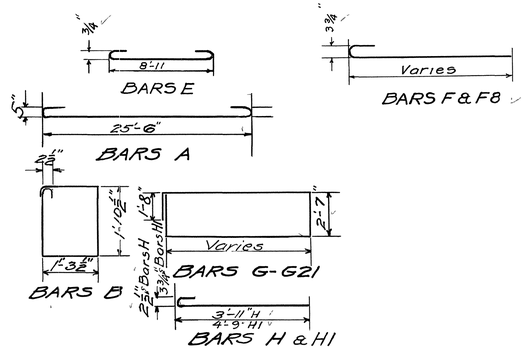


NOTE:
Foundation shall be leveled off to El 654.14 by excavating the rock or filling with Class "A" concrete, before starting construction of the abutment proper.



NOTE
Bars F & F8 to extend 1'-8" into beam as shown & hook.

General Notes
Specifications: Standard Road & Bridge Specifications of the Tennessee Department of Highways & Public Works.
Concrete shall be Class A
Reinforcing steel: See Specifications
Forms & Finish: See Specifications
Rock Foundation: See Specifications.



BENDING DIAGRAMS
(All bends to be radial)

BILL OF STEEL

BAR	SIZE	NO	LENGTH	BAR	SIZE	NO	LENGTH
A	1"ø	8	27'-2"	G	½"ø	2	10'-6"
B	½"ø	43	7'-2"	G1	"	2	12'-3"
C	½"ø	2	1'-6"	G2	"	2	13'-9"
C1	"	2	3'-0"	G3	"	2	15'-3"
C2	"	2	4'-6"	G4	"	2	16'-9"
C3	"	2	6'-0"	G5	"	2	18'-6"
C4	"	2	13'-9"	G6	"	2	20'-0"
C5	½"ø	2	13'-9"	G7	"	2	21'-6"
D	½"ø	4	6'-3"	G8	"	2	23'-0"
D1	"	2	4'-9"	G9	"	2	24'-6"
D2	"	2	4'-0"	G10	"	2	26'-3"
D3	"	2	3'-3"	G11	"	2	27'-9"
D4	"	2	2'-9"	G12	"	2	29'-6"
D5	"	2	2'-0"	G13	"	2	31'-0"
D6	½"ø	2	1'-3"	G14	"	2	32'-6"
E	¾"ø	12	10'-3"	G15	"	2	34'-0"
F	¾"ø	16	47'-0"	G16	"	2	35'-6"
F1	1"ø	4	39'-9"	G17	"	2	37'-0"
F2	"	4	34'-6"	G18	"	2	38'-9"
F3	"	4	29'-6"	G19	"	2	40'-3"
F4	"	4	24'-3"	G20	"	2	41'-9"
F5	"	4	19'-3"	G21	½"ø	2	43'-3"
F6	"	4	14'-3"	H	½"ø	28	4'-4"
F7	1"ø	4	9'-0"	J	½"ø	74	6'-6"
F8	¾"ø	8	50'-3"	K	½"ø	14	18'-9"
				H1	¾"ø	24	5'-5"

NOTE:
. Where necessary to splice bars they shall be lapped 40 diameters.

ESTIMATED QUANTITIES
Concrete Class "A" 1331 Cu.yds.
Reinforcing steel 5374 Lbs.

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
NASHVILLE
DETAILS

ABUTMENT NO. 2.

AT
STA. 43+03
MEIGS CO
1928

CORRECT L. M. Erickson
BRIDGE ENGINEER
APPROVED
ASSISTANT STATE HIGHWAY ENGINEER

DESIGNED BY J. Jones DATE 6-21-28
DRAWN BY J. Jones DATE 6-21-28
TRACED BY B. Harris DATE 6-29-28
CHECKED BY A. R. Jones DATE 6-23-28

A-1-78

Last Revision 12-11-28

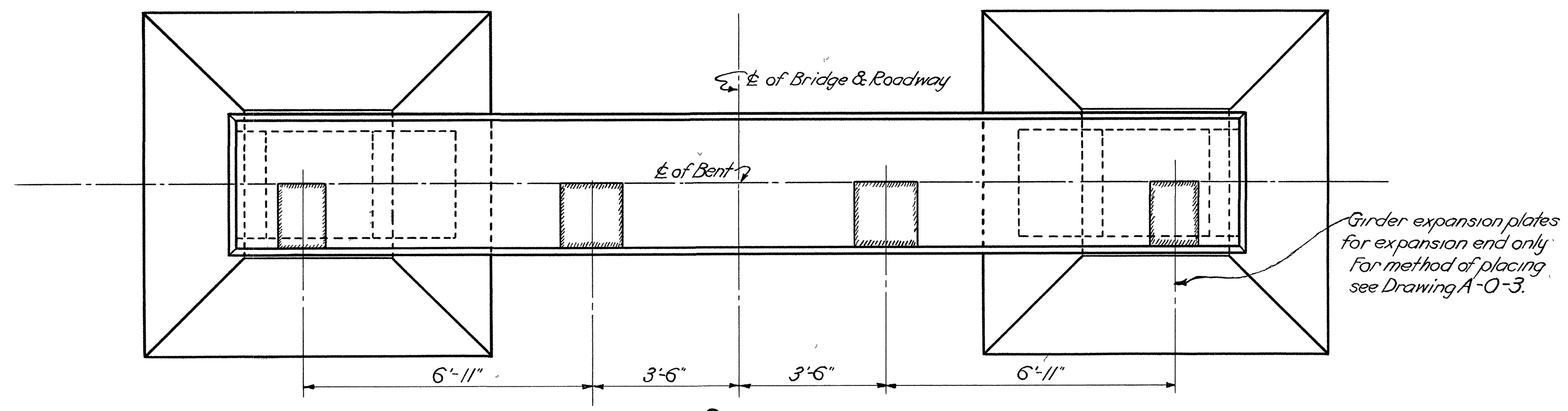
FED ROAD DIST No	STATE	FED AID PROJ No	FISCAL YEAR	SHEET No	TOTAL SHEETS
8	TENN.		19		

S.B.P. #10

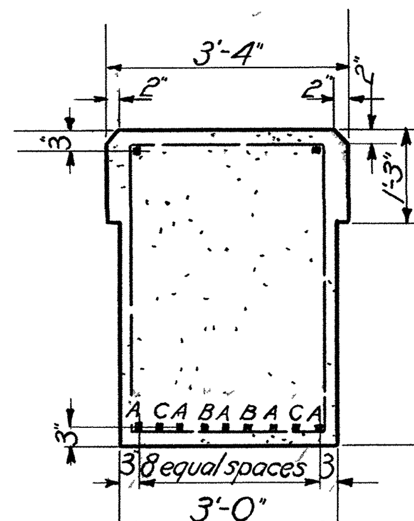
BILL OF STEEL
CONSTANT FOR ALL BENTS

BARS	NO.	SIZE	LENGTH
A	5	1¼"□	25'-6"
B	2	1⅛"□	23'-2"
C	2	1¼"□	28'-2"
D	2	½"□	23'-6"
E	39	½"□	14'-2"
F	6	¾"φ	9'-6"
J	16	1"φ	5'-9"
K	20	¾"φ	7'-8"
L	4	¾"φ	10'-10"
M	8	¾"φ	9'-10"
N	8	¾"φ	8'-10"
T	8	¾"φ	2'-0"

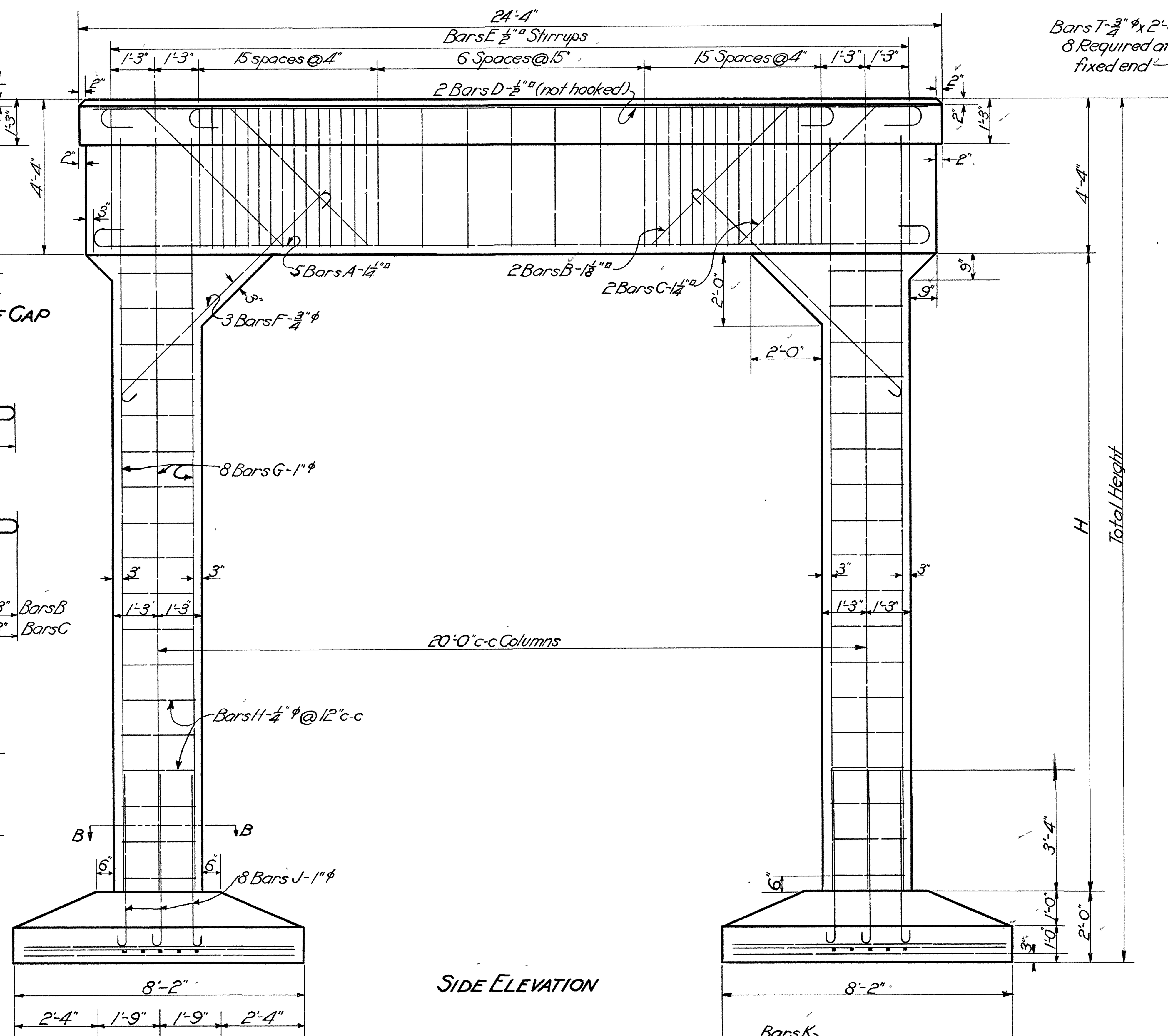
Note: Weights of above bars are included in table of dimensions and estimated quantities



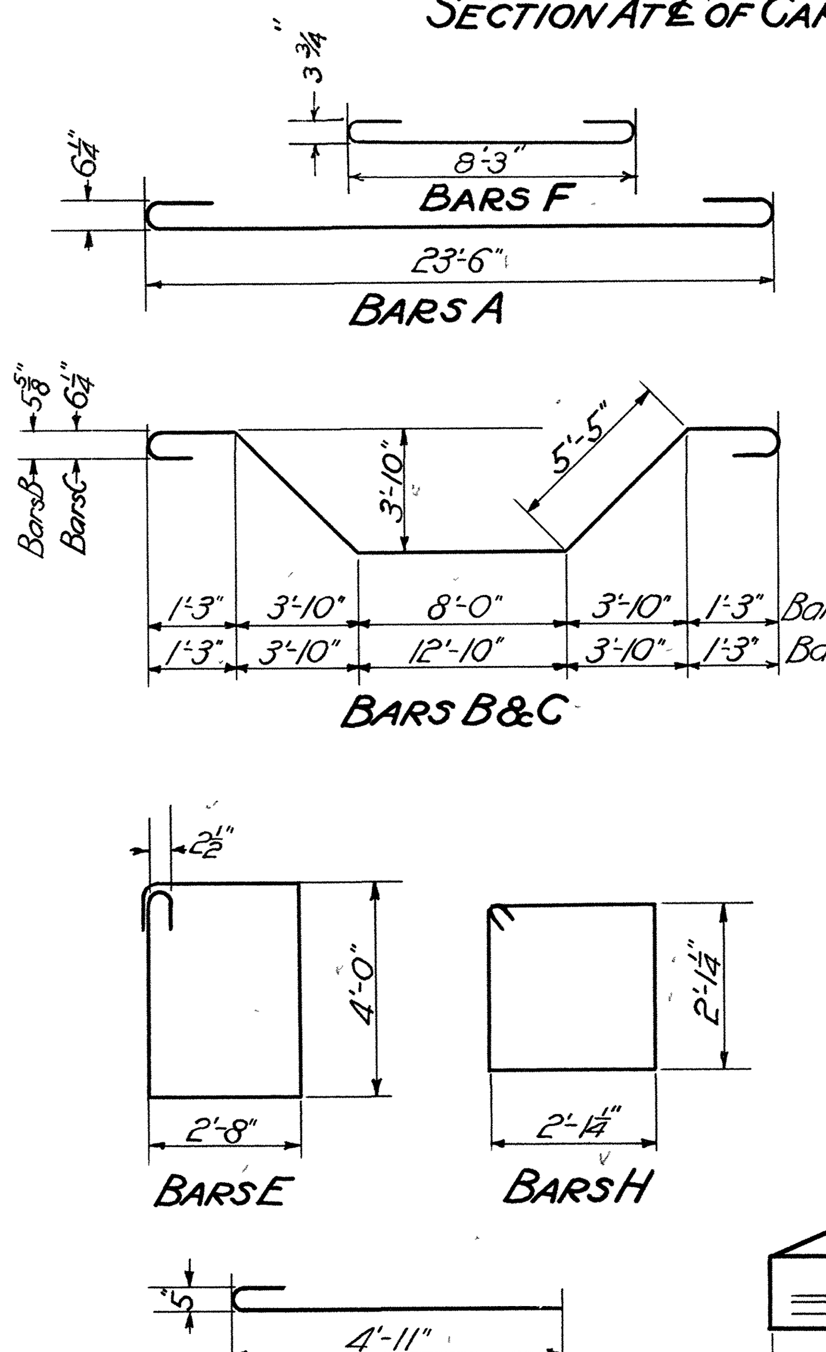
PLAN



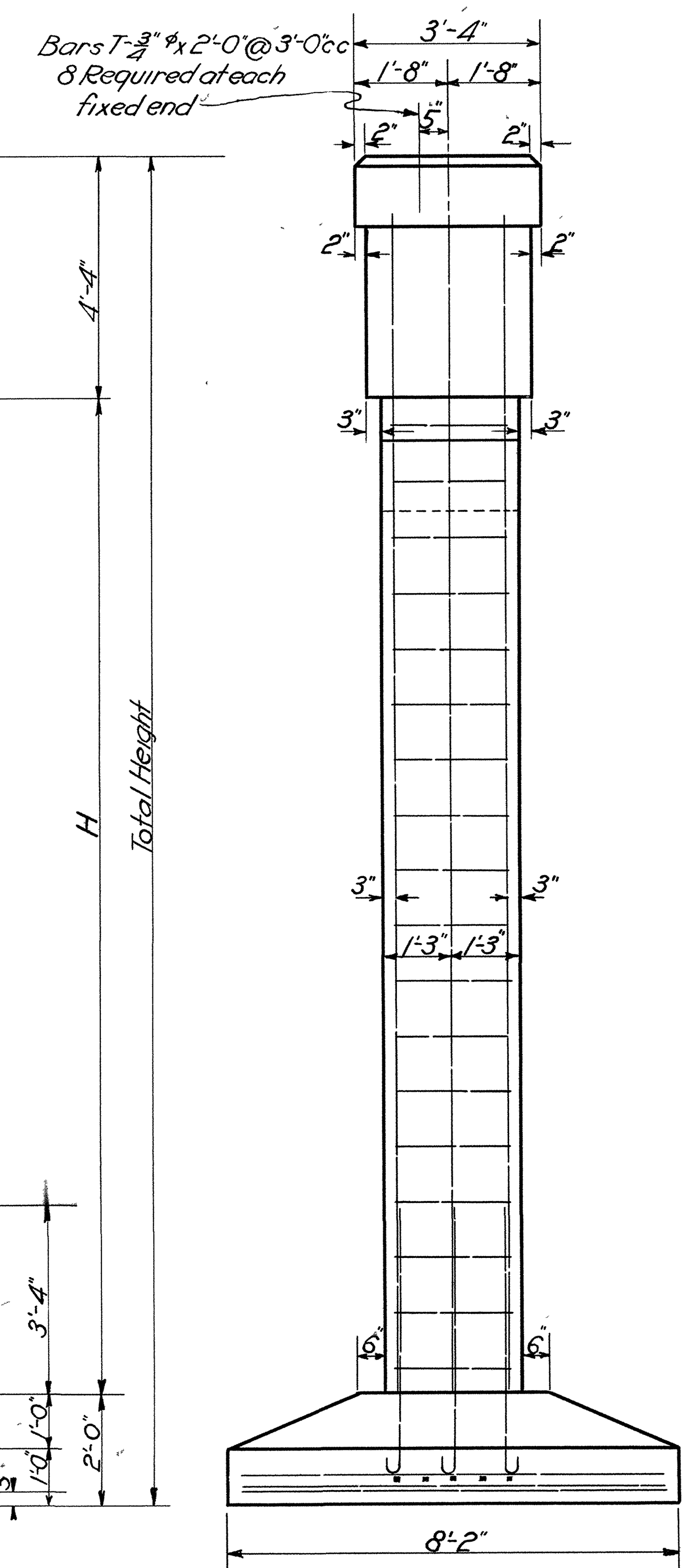
SECTION AT ℄ OF CAP



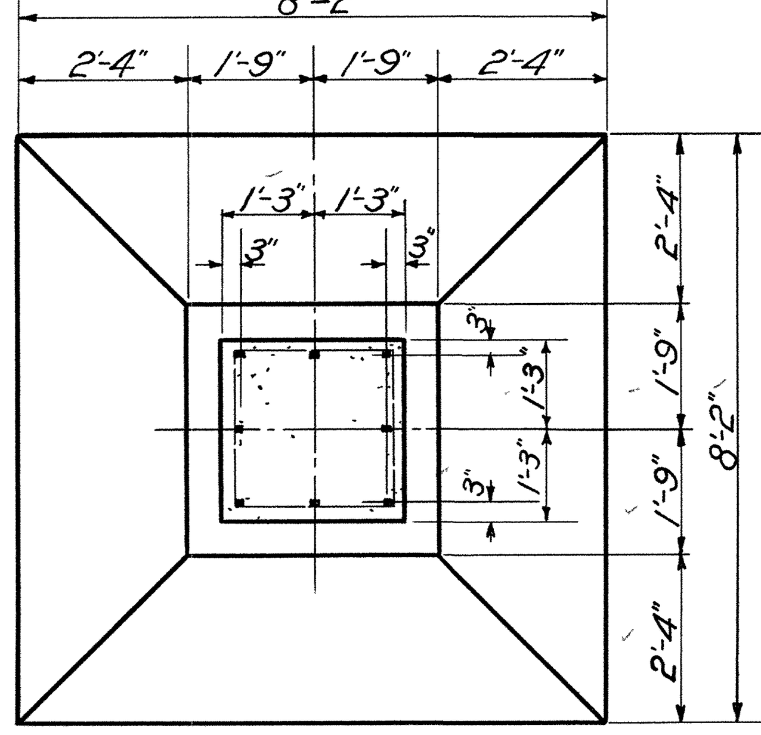
SIDE ELEVATION



BENDING DIAGRAMS
All bends to be radial

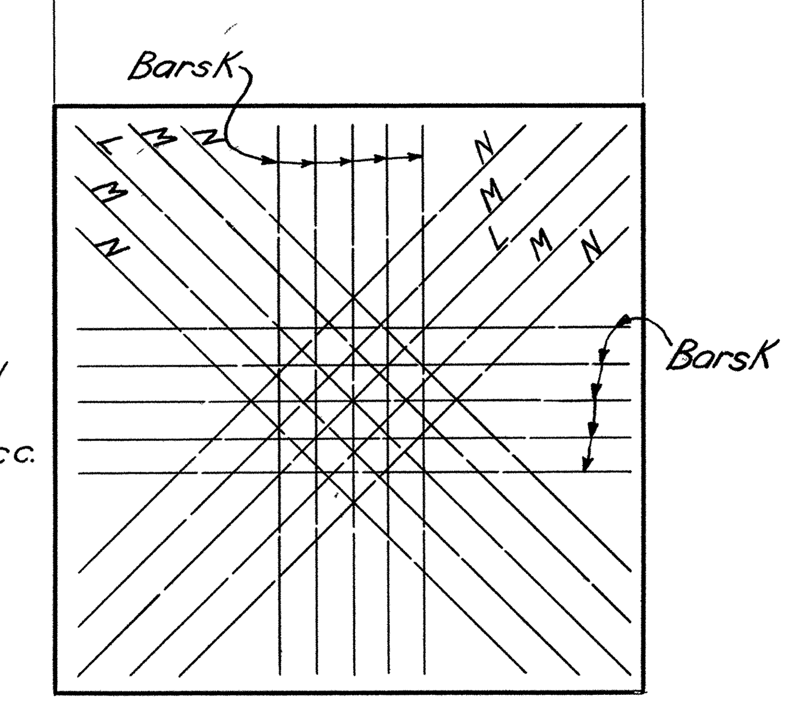


END ELEVATION

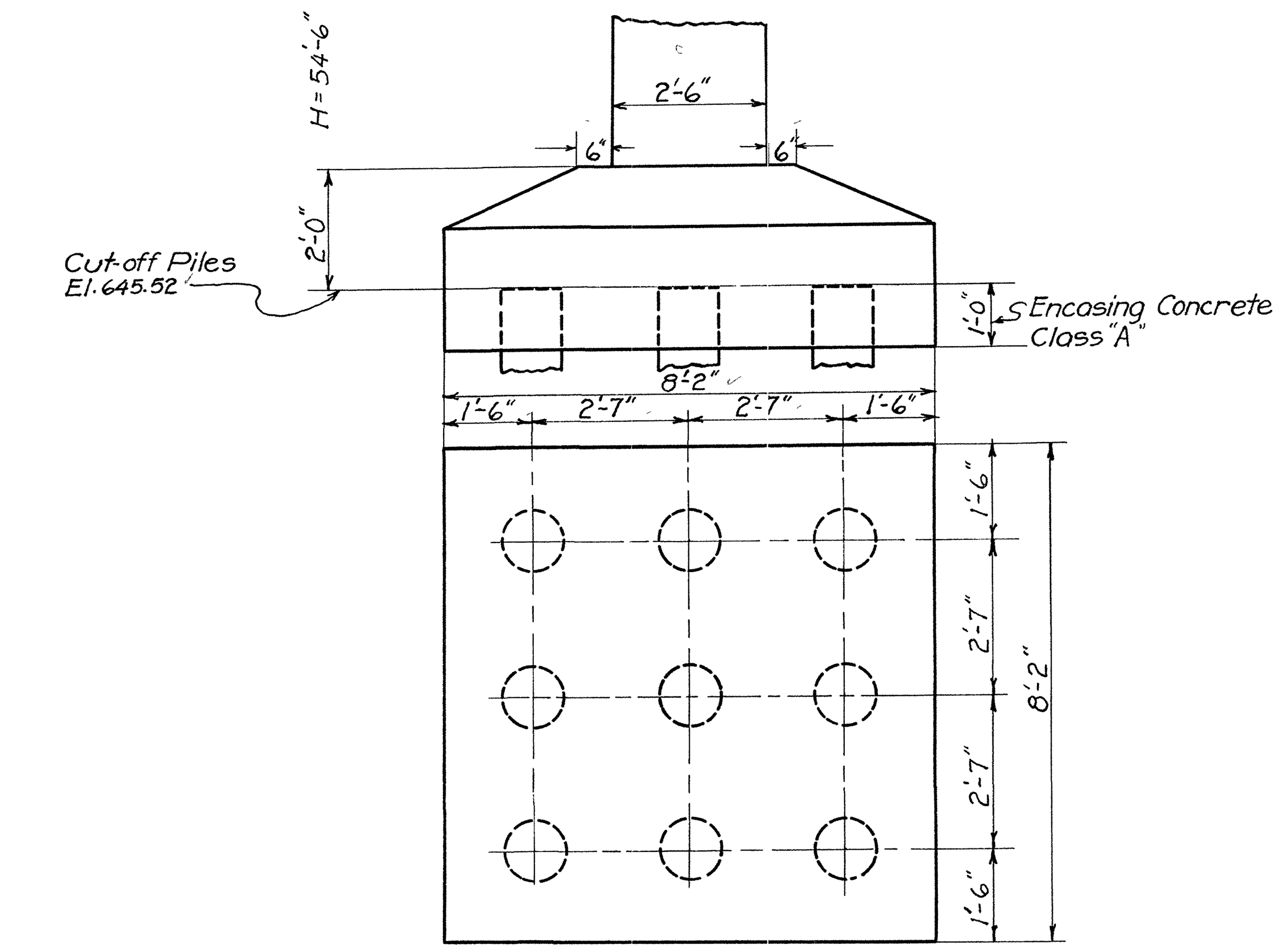


SECTION B-B

Note: All footing steel ¾"φ bars. Bars in each band 6" c.c.



PLAN OF FOOTING
Showing Steel Reinforcement



Note:
Use treated timber piles and drive to rock.
Length 12'-0" ±.

LEFT COLUMN
BENT NO.2

TABLE OF DIMENSIONS & ESTIMATED QUANTITIES

Bent No	Bottom of Footing Elevation		H		Bars G 16 - 1"φ* Length		Bars H-¼"φ x 9'-3" Number		Concrete Class "A"	Reinforcing Steel
	Right	Left	Right Ft - In	Left Ft - In	Right	Left	Right	Left	Cu Yds	Lbs.
1	652 01	651.01	46 - 6	47 - 6	49'-9"	50'-9"	46	47	41 7	4851
2	652 02	647.52	48 - 0	52 - 6	51'-3"	55'-9"	48	52	43.2	5001
3	647 46	650 96	54 - 0	50 - 6	57'-3"	53'-9	54	50	44 2	5093
4	650 21	651 21	52 - 6	51 - 6	55'-9"	54'-9"	52	51	44 0	5080
5	647.26	651.76	56 - 6	52 - 0	59'-9"	55'-3"	56	52	45 1	5184
6	644.12	646.12	60 - 6	58 - 6	63'-9"	61'-9"	60	58	47.5	5424
7	650 62	650 12	54 - 0	54 - 6	57'-3"	57'-9"	54	54	45 1	5184
8	649 26	650.76	54 - 6	53 - 0	57'-9"	56'-3"	54	53	44.8	5161
9	651 21	650 71	51 - 6	52 - 0	54'-9"	55'-3"	51	52	43 9	5070
10	653 46	653 46	48 - 0	48 - 0	51'-3"	51'-3"	48	48	42 2	4899
11	651.52	652 02	48 - 6	48 - 0	51'-9"	51'-3"	48	48	42 3	4909
12	652 01	652.01	46 - 6	46 - 6	49'-9"	49'-9"	46	46	41.5	4828

*8 in each Column
Where necessary to splice bars, they shall be lapped 40 diameters

GENERAL NOTES
Specifications: Standard Road & Bridge Specifications of the Tennessee Department of Highways & Public Works.
Concrete shall be Class "A".
Reinforcing Steel: See Specifications
Forms & Finish: See Specifications
Rock Foundation: See Specifications

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS
AND PUBLIC WORKS
NASHVILLE

DETAIL
BENTS No.1 TO No.12
STA. 43+03
MEIGS CO.
1928

DESIGNED BY F. Gree DATE June 1928
DRAWN BY F. Gree DATE June 1928
TRACED BY [signature] DATE 6-6-28
CHECKED BY A. R. Jessup DATE 6-4-28

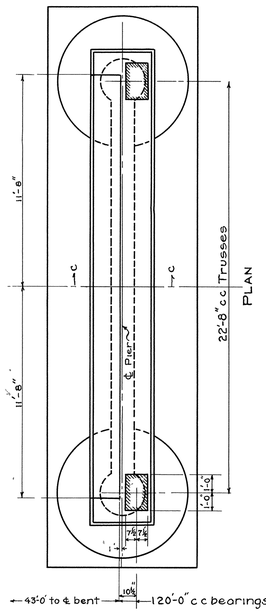
CORRECT L. W. Erickson BRIDGE ENGINEER
APPROVED O. F. Goetz ASSISTANT STATE HIGHWAY ENGINEER

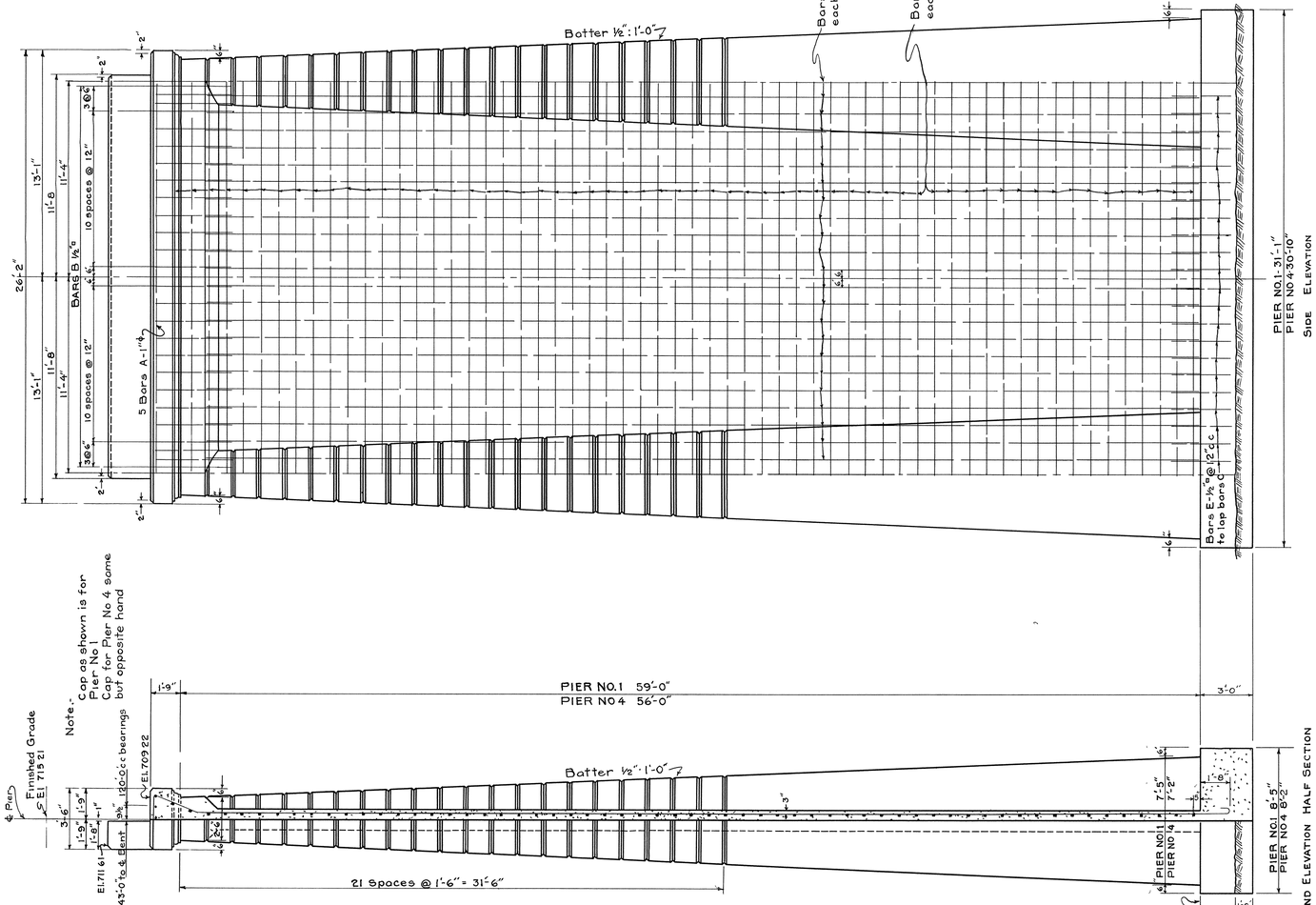
A-1-79

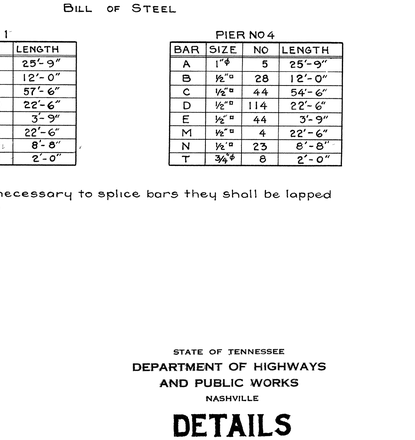
12-11-28 Left Column-Bent No.2 - Revised
7/30/28 Estimated Steel Quantities Revised

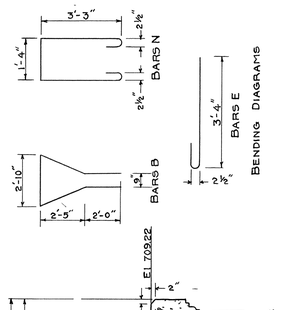
FED ROAD DIST NO	STATE	FED AID PROJ NO	FISCAL YEAR	SHEET NO	TOTAL SHEETS
8	TENN.		19		

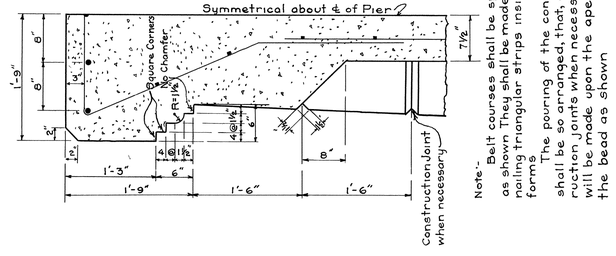
S.B.P. # 10











Note - Belt courses shall be spaced as shown They shall be made by nailing triangular strips inside the forms The pouring of the concrete shall be so arranged, that, construction joints when necessary will be made upon the apex of the bead as shown

GENERAL NOTES

Specifications Standard Road and Bridge Specifications of the Tennessee Department of Highways and Public Works
Concrete shall be Class "A"
Reinforcing Steel · See Specifications.
Forms and Finish See Specifications
Rock Foundation See Specifications

ESTIMATED QUANTITIES

ITEM	PIER NO.1	PIER NO 4
CONCRETE-CLASS "A" CU YDS.	177.1	164 8
REINFORCING STEEL LBS	5485	5258

BILL OF STEEL

PIER NO 1

BAR	SIZE	NO	LENGTH
A	1"ø	5	25'-9"
B	½"ø	28	12'-0"
C	½"ø	44	57'-6"
D	½"ø	120	22'-6"
E	½"ø	44	3'-9"
M	½"ø	4	22'-6"
N	½"ø	23	8'-8"
T	¾"ø	8	2'-0"

PIER NO 4

BAR	SIZE	NO	LENGTH
A	1"ø	5	25'-9"
B	½"ø	28	12'-0"
C	½"ø	44	54'-6"
D	½"ø	114	22'-6"
E	½"ø	44	3'-9"
M	½"ø	4	22'-6"
N	½"ø	23	8'-8"
T	¾"ø	8	2'-0"

NOTE -
Where necessary to splice bars they shall be lapped 40 diameters

DESIGNED BY T. Grace ..... DATE 6-12-28
DRAWN BY T. Grace ..... DATE 6-12-28
TRACED BY WWP ..... DATE 6-28-1928
CHECKED BY A.K. Jessup ..... DATE 6-21-28

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
NASHVILLE

DETAILS
PIERS 1 & 4

MEIGS COUNTY
STATION 43+03
1928.

CORRECT L.W. Erickson BRIDGE ENGINEER
APPROVED O.J. Goeb ASSISTANT STATE HIGHWAY ENGINEER

A-1-80

FED ROAD DIST NO	STATE	FED AID PROJ NO	FISCAL YEAR	SHEET NO	TOTAL SHEETS
8	TENN		19		

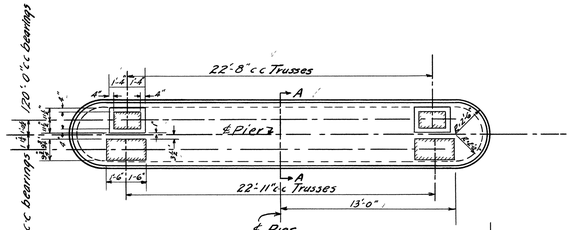
GENERAL NOTES

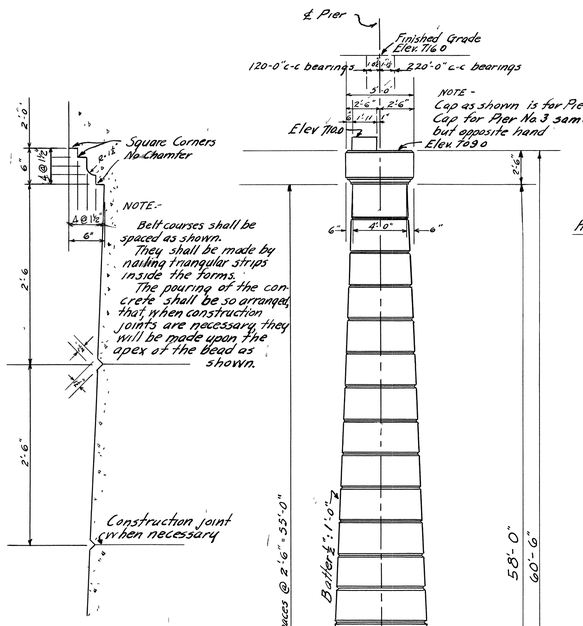
Specifications:- Standard Road and Bridge Specifications of the Tennessee Department of Highways and Public Works
Concrete shall be Class "B"
Reinforcing Steel: See Specifications
Forms and Finish: See Specifications
Rock Foundation: See Specifications

NOTE:-
The steel contractor shall furnish and place an 1/8" sheet of lead (same size as bearing plate) under the bearings of the steel trusses. The cost of these lead sheets shall be included in the price bid for structural steel.

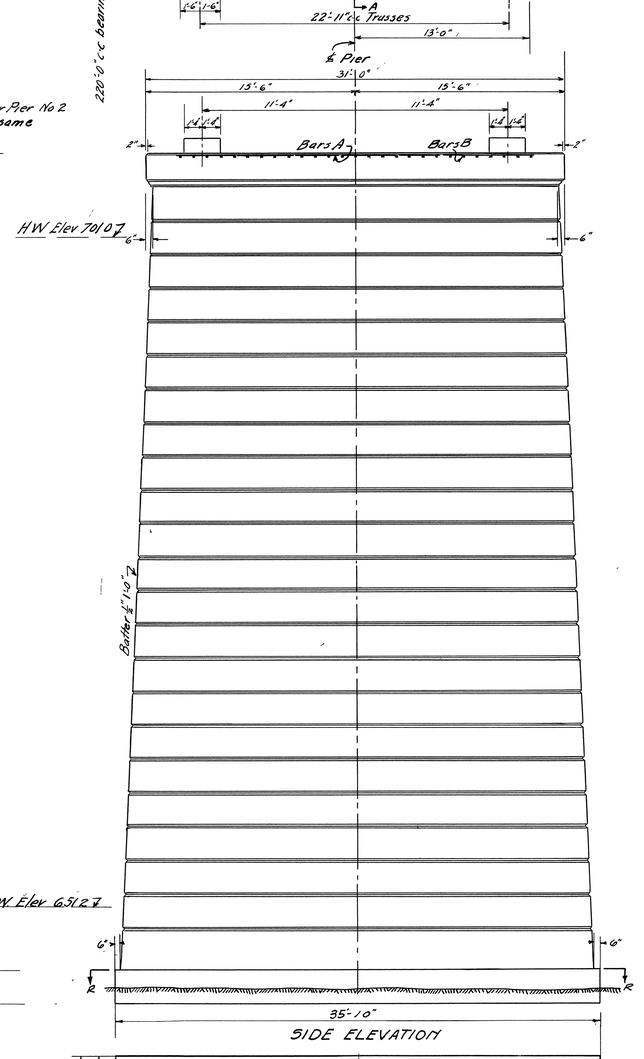
BILL OF STEEL FOR ONE PIER

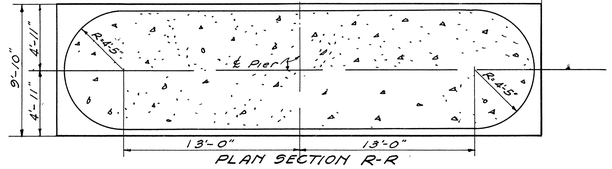
BAR	SIZE	NO	LENGTH
A	1" ø	9	26'-6"
B	1" ø	27	4'-6"
K	1" ø	12	6'-1"
L	1" ø	10	6'-3"

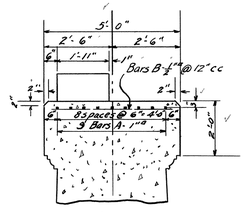


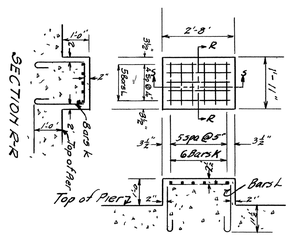


DETAILS OF MOLDING & BELT COURSES

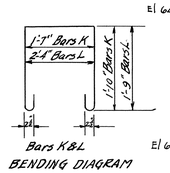




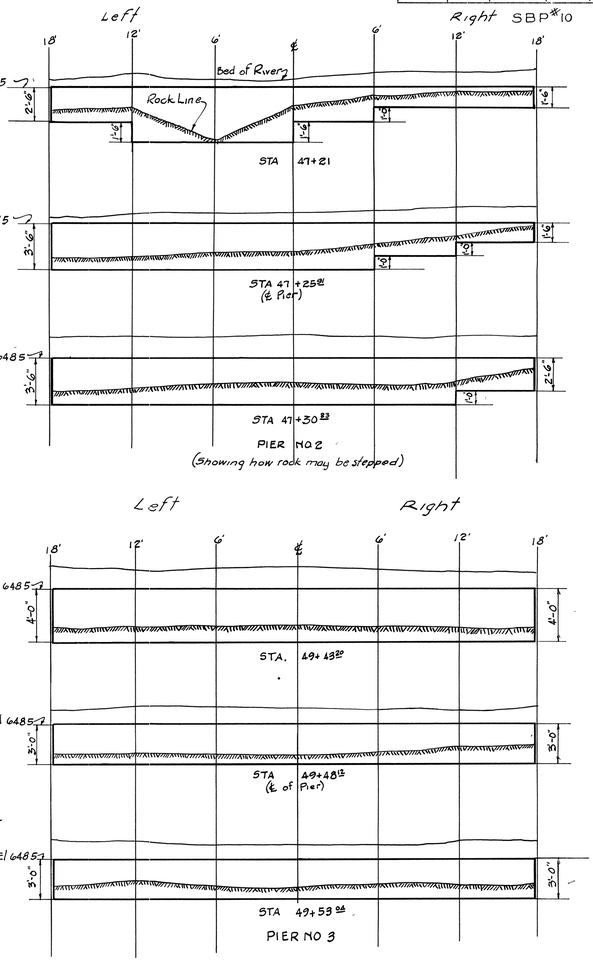




DETAIL OF RISER FOR 120'-0" SPAN



Bars K&L BENDING DIAGRAM



ESTIMATED QUANTITIES

PIER NO. 2

CONCRETE CLASS "B" 483.4 CU YDS.
REINFORCING STEEL 1033 LBS.

PIER NO 3

CONCRETE CLASS "B" 488.5 CU. YDS.
REINFORCING STEEL 1033 LBS

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
NASHVILLE

PIERS 2 & 3

STATION 48+03

MEIGS COUNTY

1928

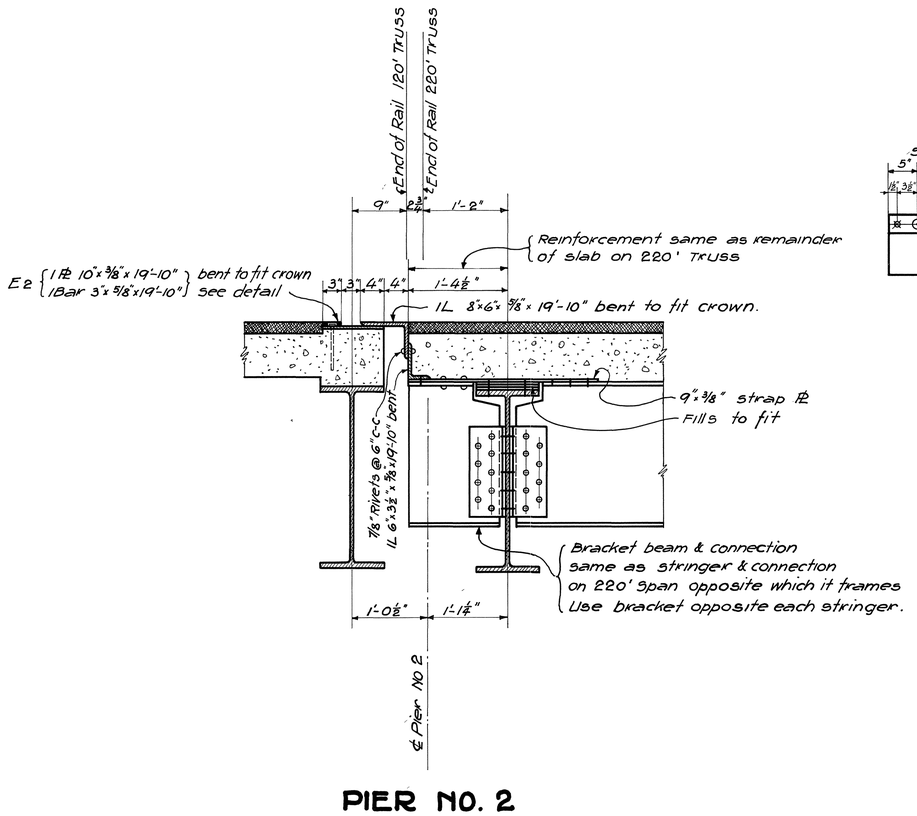
CORRECT L. N. Erickson BRIDGE ENGINEER

APPROVED [signature] ASSISTANT STATE HIGHWAY ENGINEER

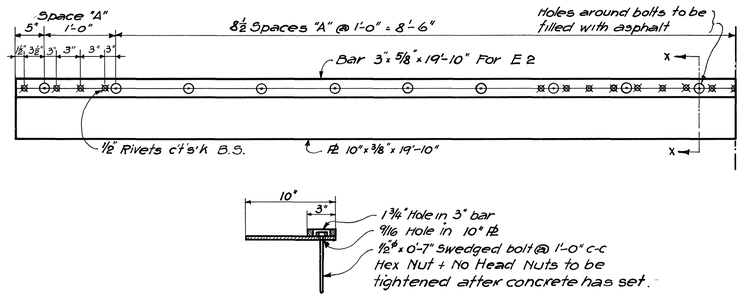
DESIGNED BY T. Grace DATE 5-11-28
DRAWN BY T. Grace DATE 5-11-28
TRACED BY Queenan & Fred A. Pitts Jr. DATE June 1928
CHECKED BY A. R. Jessup DATE 6-22-28

A-1-81

FED ROAD DIST NO	STATE	FED AID PROJ NO	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
8	TENN.		19		



PIER NO. 2

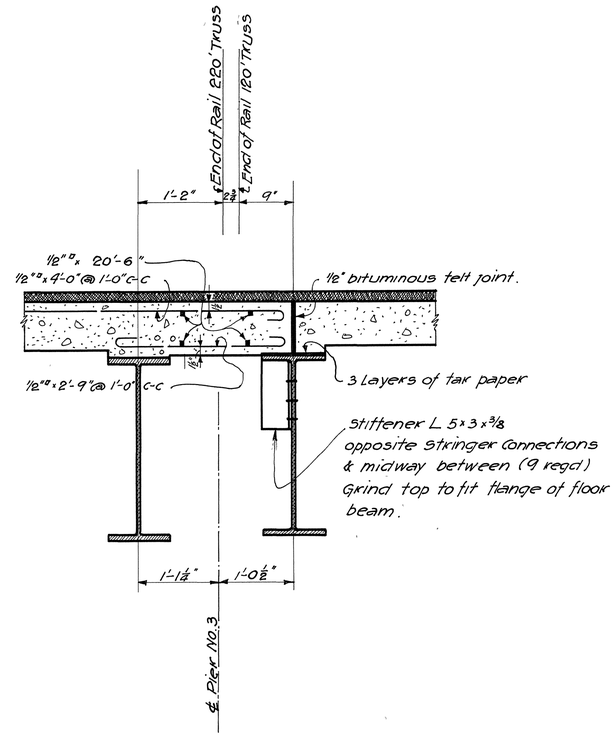


Section X-X

EXPANSION ℓ. E2

NOTE:

For Expansion details at Pier No 1 & No.4 see Drawing D-7-97.
Rail on 120' Truss is symmetrical about ℄ of Span.



PIER NO. 3

DESIGNED BY ..... DATE .....
DRAWN BY H.K. Thomas DATE 10-10-28
TRACED BY John E. Tyler DATE 10.11.28
CHECKED BY J.R. Akers DATE 10-12-28

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS
AND PUBLIC WORKS
NASHVILLE

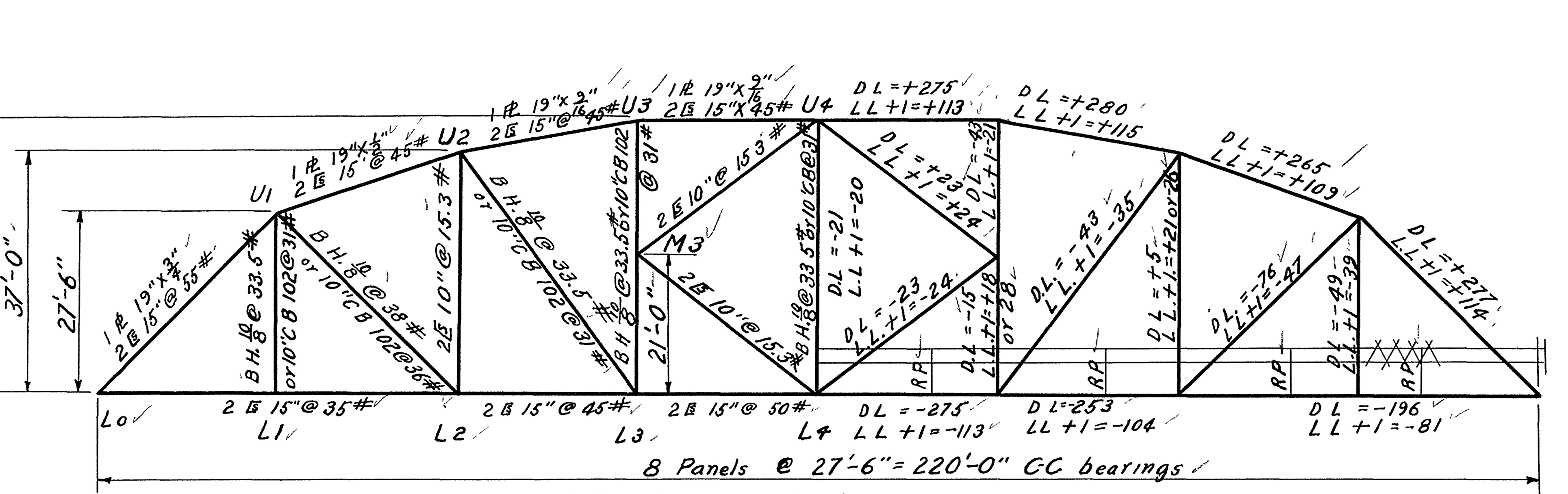
EXPANSION DETAILS

BRIDGE OVER HIWASSEE RIVER
STA. 43+03
MEIGS CO.
1928.

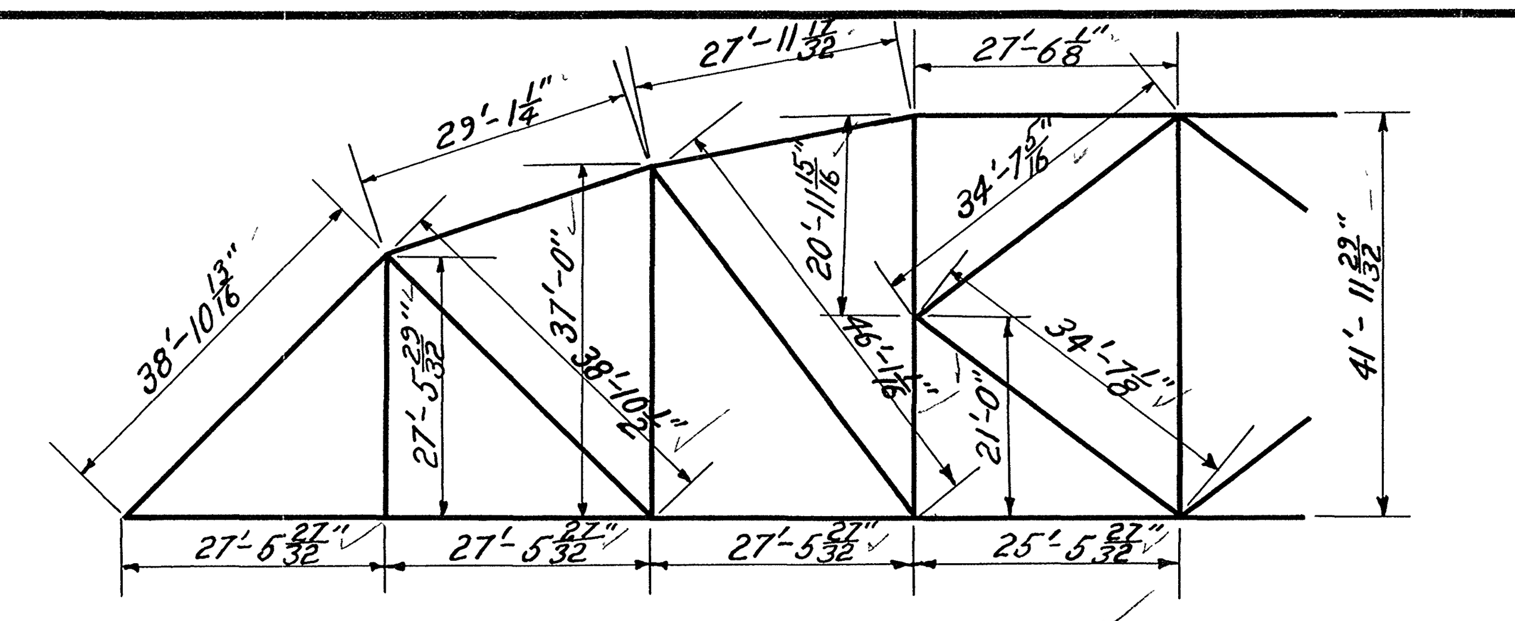
CORRECT L.T. Erickson BRIDGE ENGINEER
APPROVED O.E. Goetz ASSISTANT STATE HIGHWAY ENGINEER

A-2-48

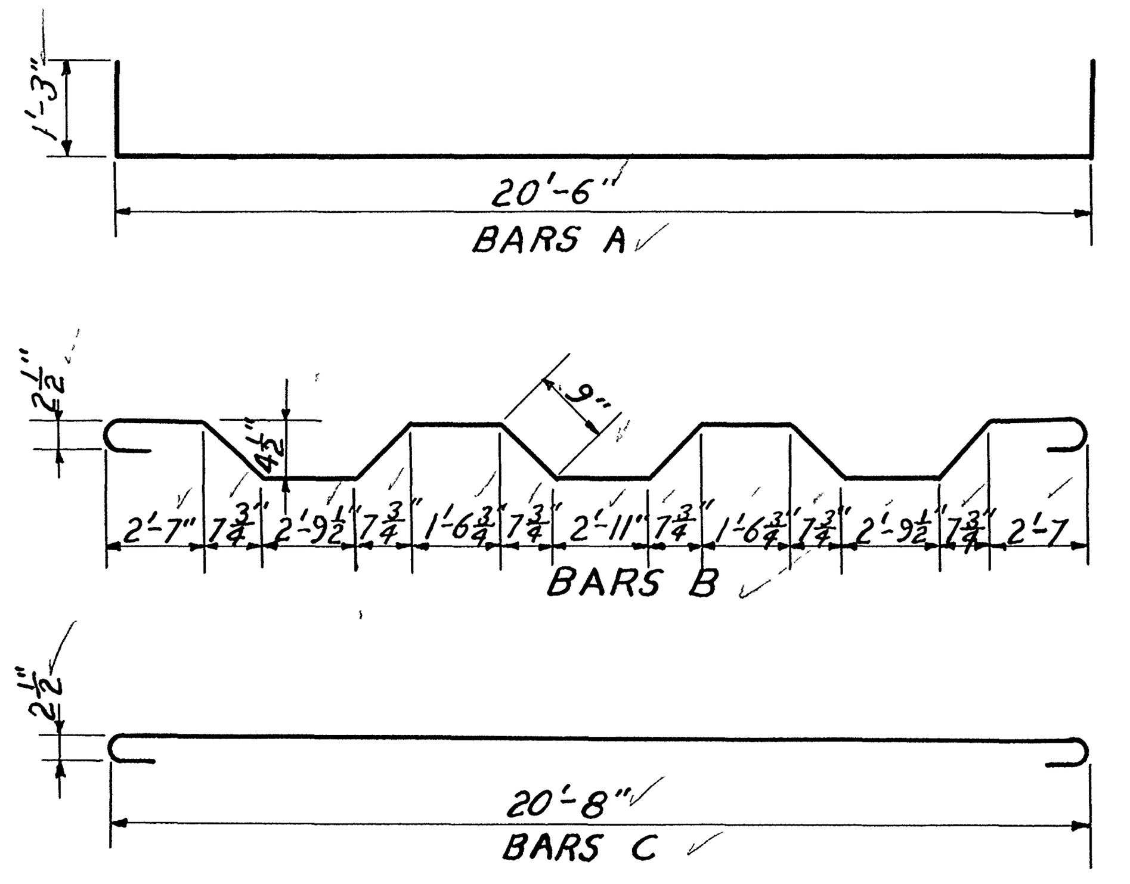
FED ROAD DIST NO	STATE	FED AID PROJ NO	FISCAL YEAR	SHEET NO	TOTAL SHEETS
8	TENN		19		



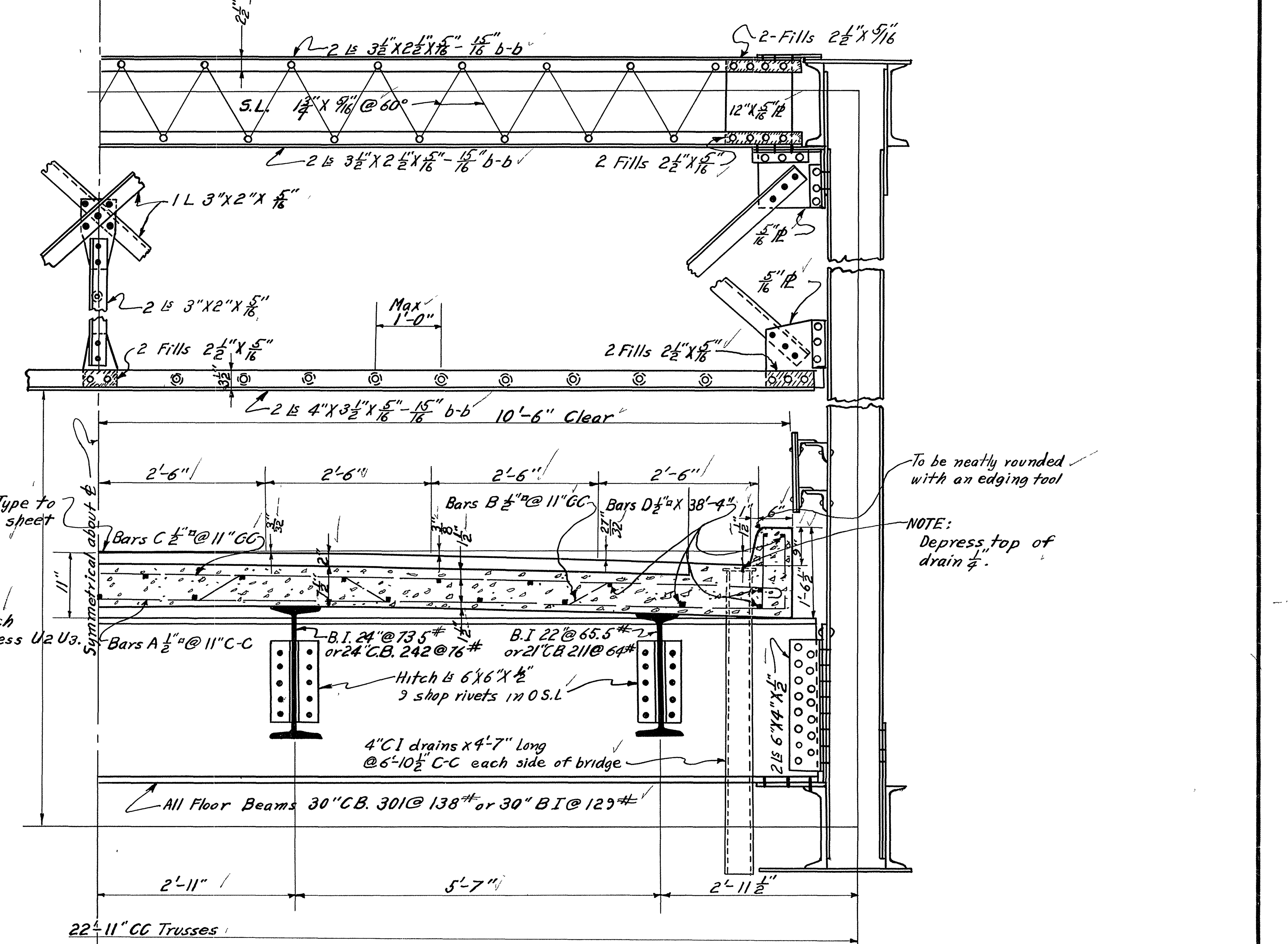
NOTE: If heavier of alternate sections given, is used, the difference in weight will be deducted from the scale weight and the theoretical weight to determine the weight to be paid for.



SHOP LENGTH FOR CAMBER



BENDING DETAILS

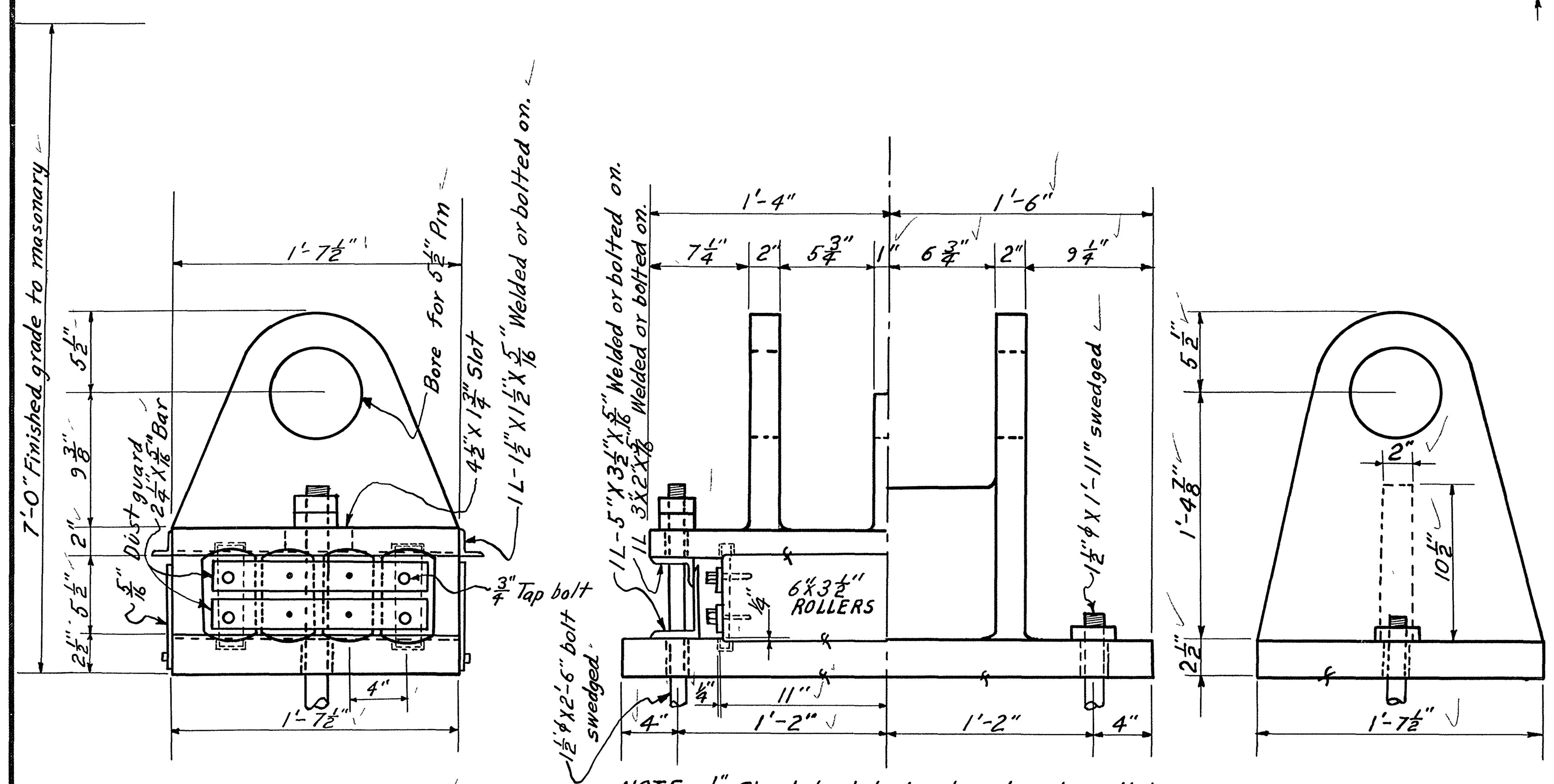


BILL OF REINFORCING STEEL
ALL BARS 1/2" □

BAR	NO.	LENGTH
A	240	23'-0"
B	241	22'-3"
C	240	21'-6"
D	186	38'-4"

2" Wearing Surface. Type to be specified on layout sheet for each structure.

NOTE: Pour slab on alternate panels beginning at center of bridge and working alternately on each side of center so as to avoid reversal of stress U2 U3.



EXPANSION BEARING

NOTE: 1/8" Sheet lead to be placed under all bearings.

MATERIAL: Cast Steel

FIXED BEARING

ASSUMED LOADING

Dead Load: 2040# per foot of truss.
Live Load: 64# per sq. foot of roadway, or 2-15 ton trucks in line @ 42' C-C or abreast @ 9' C.C.
IMPACT: 30% added to all live loads

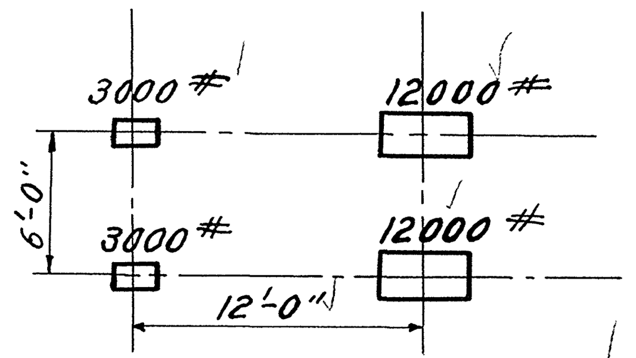
ESTIMATED QUANTITIES

STRUCTURAL STEEL	LBS.
CAST STEEL	LBS.
REINFORCING STEEL	LBS.
SURFACING	CU. YDS.
CONCRETE 1:2:4	CU. YDS.

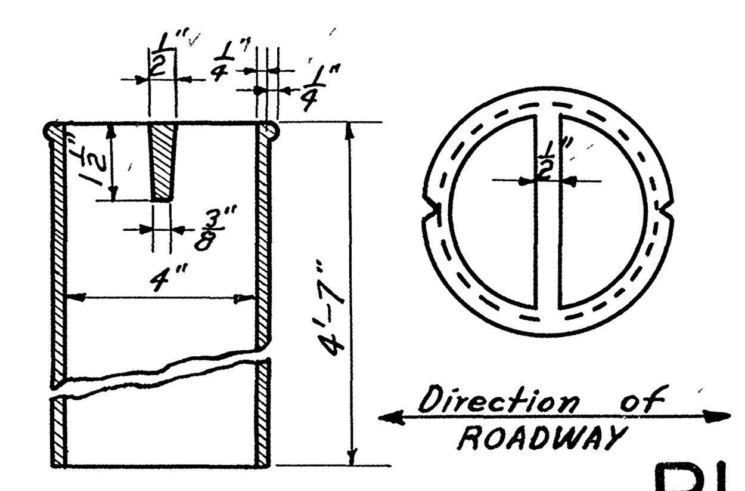
NOTE: Cost of sheet lead, curb bar and cast iron drains in place shall be included in the unit price for above items.

GENERAL NOTES

Specifications: Standard Bridge Specifications of the Tennessee Department of Highways.
Rivets. Maximum allowed by specifications, not to exceed 7/8.
Shop Paint: See Specifications.
Field Paint: See Specifications, final tint to be light gray.
Concrete in floor to be 1:2:4 mixture, coarse aggregate 1/4 to 1¼.
Reinforcing Steel shall be deformed bars of structural steel or intermediate grade made by the O.H. process.
Forms: See Specifications.
Approval of Shop Drawings: See paragraph 134 of Specifications.
Details Gusset plates and length of memembers to be detailed for minimum weight regardless of approximate outlines shown.
Reaming: The trussess shall be subpunched, assembled, reamed, and match marked in the shop. (Main field connections only). See also Paragraph 30.78 & 30.92 of the specifications.



PLAN OF 15 TON TRUCK



DETAIL OF C.I DRAINS

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
NASHVILLE

~ STANDARD ~

RIVETED HIGH TRUSS BRIDGE

SPAN 220' WITH ROADWAY 20'
CONCRETE SLAB FLOOR
1927

DESIGNED BY A. R. Jessup DATE 6-9-27
DRAWN BY A.R.J. DATE "
RETRACED BY L.D.A. DATE 1-12-48
CHECKED BY DATE

9-8-30 Curb & Drains Revised
3-26-30 Wt. of Fl. beam changed
7-17-28 Crown of Road Revised to 1½"

CORRECT L. W. Erickson BRIDGE ENGINEER
APPROVED R H Baker STATE HIGHWAY ENGINEER

D-7-17

Last Revision 9-8-30

FED ROAD DIST NO	STATE	FED AID PROJ NO	FISCAL YEAR	SHEET NO	TOTAL SHEETS
8	TENN		19		

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
NASHVILLE
~STANDARD~

RIVETED HIGH TRUSS BRIDGE

SPAN 220' WITH ROADWAY 20'

CONCRETE SLAB FLOOR

1927

DESIGNED BY A. G. Jessup	DATE 6-9-27	
DRAWN BY	DATE "	
TRACED BY W. D. MINTER	DATE 7-52	
CHECKED BY	DATE	

CORRECT ________ BRIDGE ENGINEER

APPROVED ________ STATE HIGHWAY ENGINEER

D-7-18

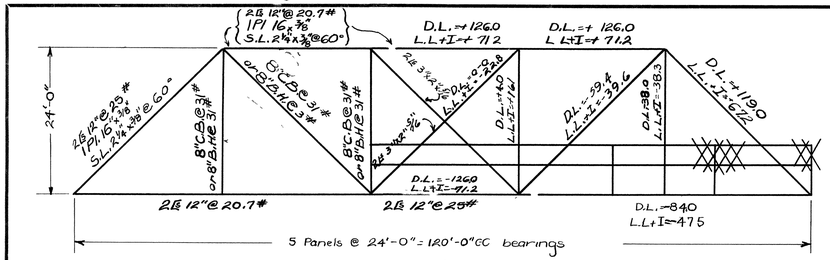
SHEET 2 OF 2
WITH D-7-17

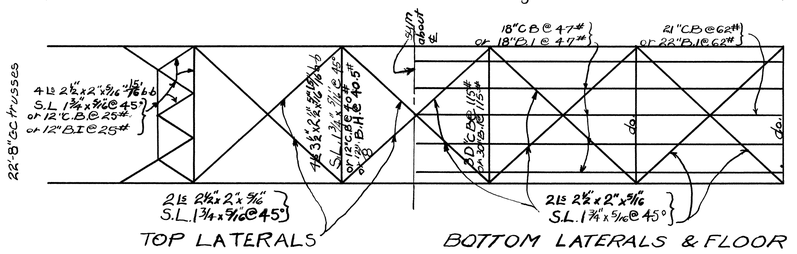
9-8-30 ... Splices Revised
3-26-30 Dimensions to Rail & Rail changed
7-17-28 Crown of Roadway Revised to 1 1/2"

Last Revision 12-12-33

FED ROAD DIST NO	STATE	FED AID PROJ NO	FISCAL YEAR	SHEET NO	TOTAL SHEETS
8	TENN.	29-A	1934	7	12

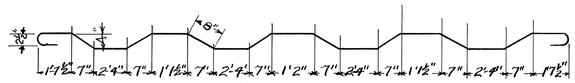
ARS

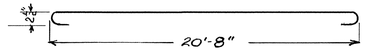


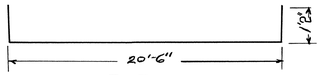


NOTE

Contractor may submit for approval details or sections of equivalent or greater strength than those given. Minimum weight designs either given or submitted and approved shall be used in computing theoretical weights. Excess weight due to use of sections or details heavier than minimum shall be deducted from scale weight to determine weight to be paid for.







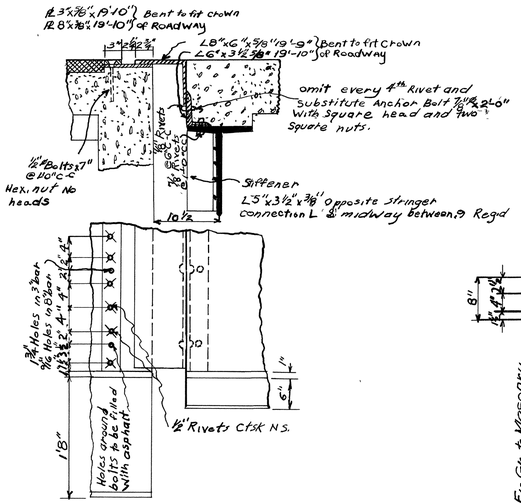
BILL OF REINFORCING STEEL

All Bars ½" ϕ

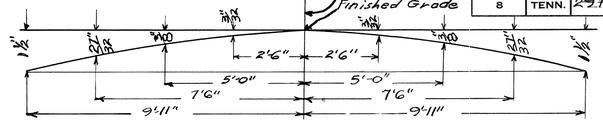
BAR	NO	LENGTH
A	120	22'-2"
B	121	22'-10"
C	121	21'-6"
D	112	3'-6"

Note

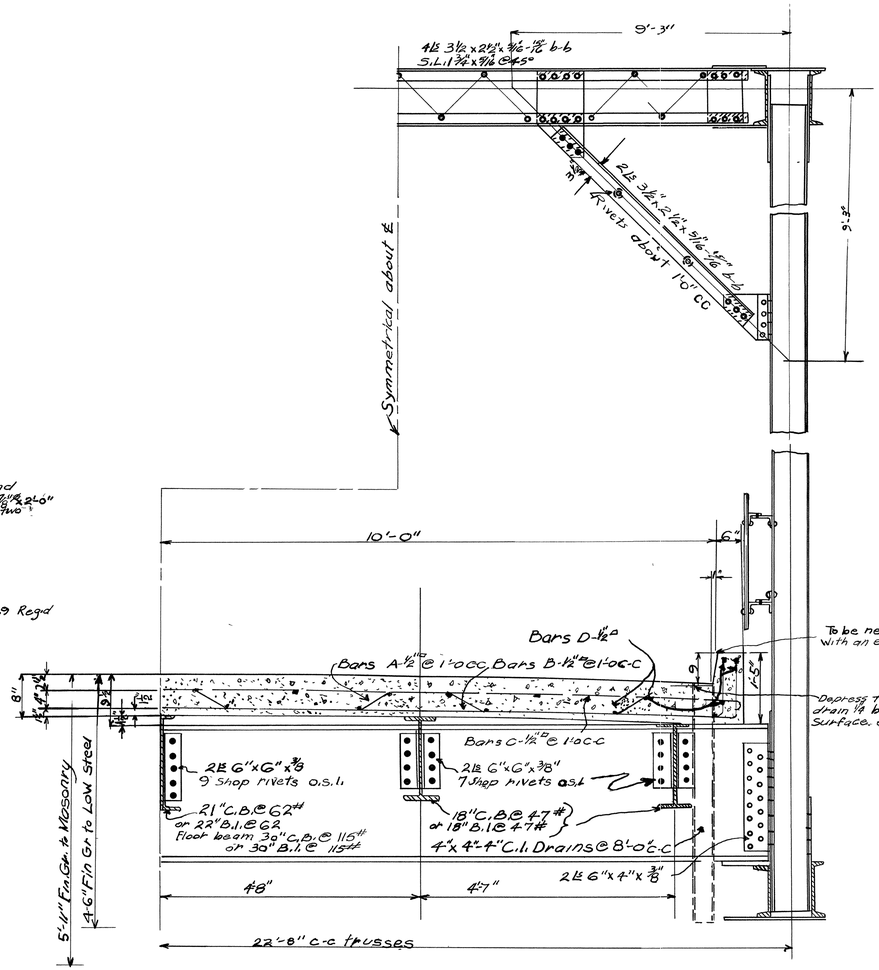
Bill of reinforcing steel and concrete quantities are figured c-c of end bearings

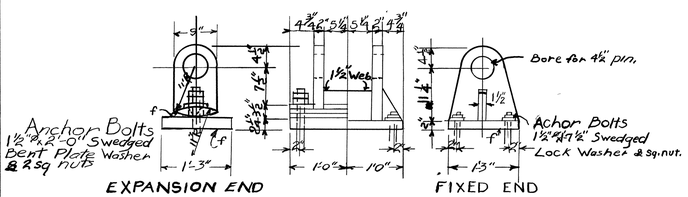


DETAIL OF EXPANSION END
for Fixed end see Layout Sheet for each Structure



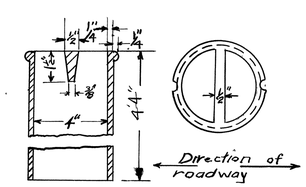
DETAIL OF ROADWAY TEMPLATE





CAST STEEL SHOES

Note ⅛" Sheet lead shall be placed under all Shoes



DETAIL OF C.I. DRAINS

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
NASHVILLE

STANDARD

RIVETED HIGH TRUSS BRIDGE

SPAN 120'-0" WITH ROADWAY 20'-0"

CONCRETE SLAB FLOOR

1928

CORRECT L W Erickson
BRIDGE ENGINEER

APPROVED R N Baker
STATE HIGHWAY ENGINEER

D-7-97
With D-7-98

DESIGNED BY A.R. JESSUP DATE Jan 1928
DRAWN BY ARI DATE "
TRACED BY W.A. SMITH DATE 6-12-50
CHECKED BY J.L. ALBERS DATE 2-19-28

12-12-33-2" Wearing Surface Removed & Slab Revised & Expansion end revised
12-4-33-Slab Portland Cement Mortar Fillet Added
8-12-30 Curb & Drain Revised
Width Crown of Roadway Revised to 1½"

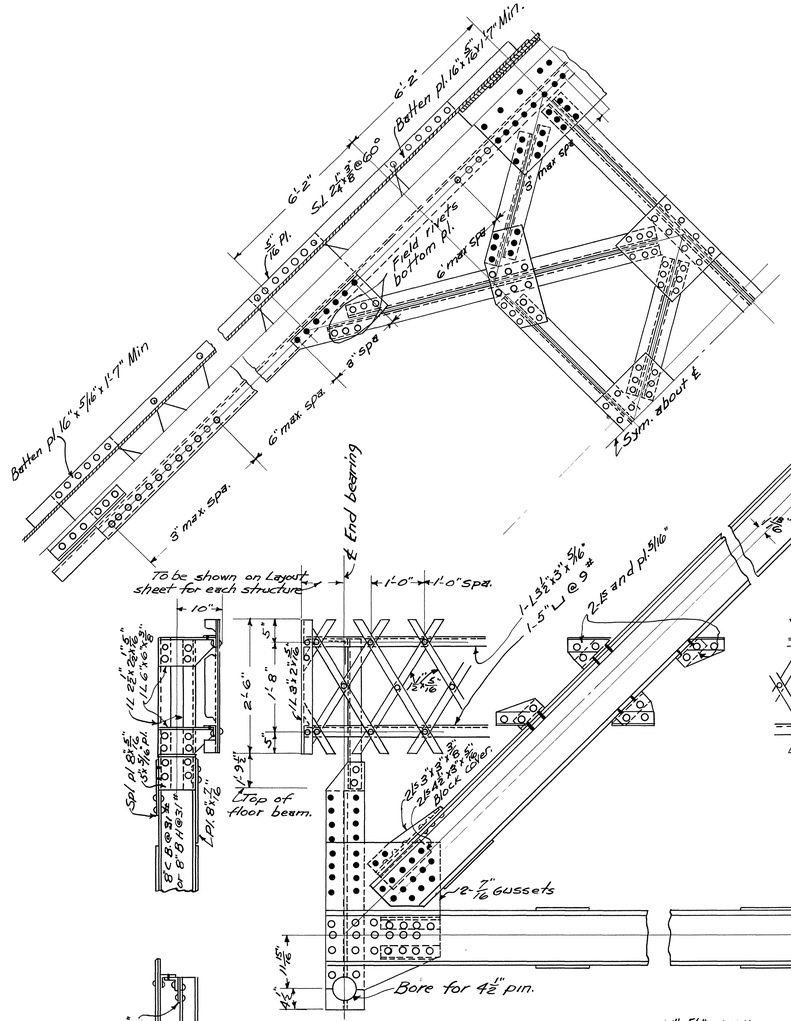
Last Revison 12/6/33

FED ROAD DIST NO	STATE	FED AID PROJ NO	FISCAL YEAR	SHEET NO	TOTAL SHEETS
8	TENN	~~291-A~~	1934	8	12

NRS

12-6-33 Rev. for Rail, slab and battens
2-12-32 Revised for New Weights of Reinforcing steel effective as of July 1st 1930.
Shop and Field Paint Notes and Aluminum Paint Note added 1/4/31
9-8-30 Batten Chord Splices Revised
8/1/30 Height of Rail Revised.
11/26 Crown of Roadway revised to 12"

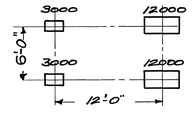
MICROFILMED



DETAIL OF RAIL POST

ASSUMED LOADING

Dead Load: 1750 # per ft. truss
Live Load: 76# per sq. ft. of roadway or 2-15 ton trucks in line at 42'-0" c-c or abreast at 9'-0" c-c.
Impact: 30% added to all live loads.



PLAN OF 15 TON TRUCK

GENERAL NOTES

Specifications: Standard Road & Bridge Specifications of the Tennessee Department of Highways & Public Works.
Rivets: Floor system and main field connections of trusses 7/8", others ¾" except 5/8" in 2" legs of angles, 1¾" lacing bars and railing lattice.
Reaming: Main field connections of trusses floor-beams and stringers shall be subpunched, assembled, reamed and matchmarked in the shop. Floor-beams and stringers need not be assembled and matchmarked if steel template 1" thick is used in reaming - See Specifications.
Concrete in floor shall be Class A.
Gusset plates and length of members to be detailed for minimum weight regardless of approximate outlines shown.
Shop Paint: See Specifications.
Field Paint: See Specifications, and Special Note below.

SPECIAL NOTE

Second and Third Field Coats of Paint may be Aluminum Paint as per Specification M-22.

ESTIMATED QUANTITIES

Structural steel	121,700	Lbs.
Reinforcing steel	9,935	Lbs.
Cast steel	1,870	Lbs.
Concrete Class A	66.1	Cu. Yds

NOTE: Cost of C.I. Drains, Sheet Lead and Curb Bar in place shall be included in the unit price for above items.
For Expansion as shown for single span add 1570 Lbs.
For additional spans, see Layout Sheet for each bridge.

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
NASHVILLE

STANDARD

RIVETED HIGH TRUSS BRIDGE

SPAN 120'-0" WITH ROADWAY 20'-0"
CONCRETE SLAB FLOOR
1928

DESIGNED BY A. R. Jessup DATE Jan 1928
DRAWN BY ARJ DATE ''
RE-TRACED BY MINTER DATE AUG. 1932
CHECKED BY J. F. Albers DATE 2-13-28

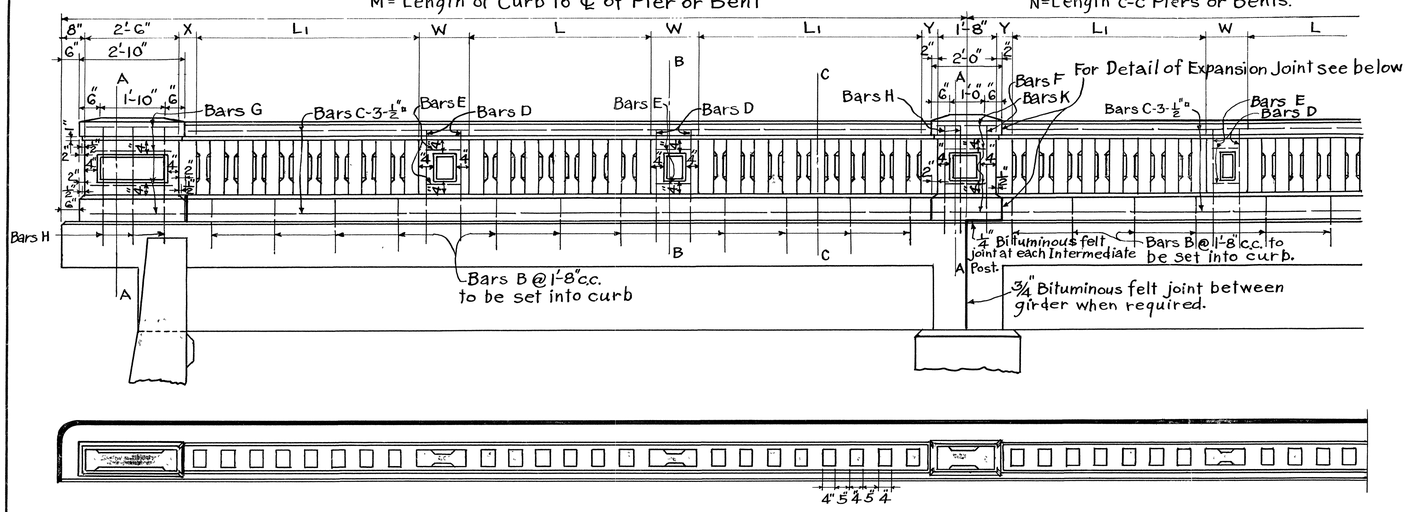
CORRECT L. W. Erickson BRIDGE ENGINEER
APPROVED R. N. Baker STATE HIGHWAY ENGINEER

D-7-98
WITH D-7-97

FED ROAD DIST NO	STATE	FED AID PROJ NO	FISCAL YEAR	SHEET NO	TOTAL SHEETS
8	TENN		19		

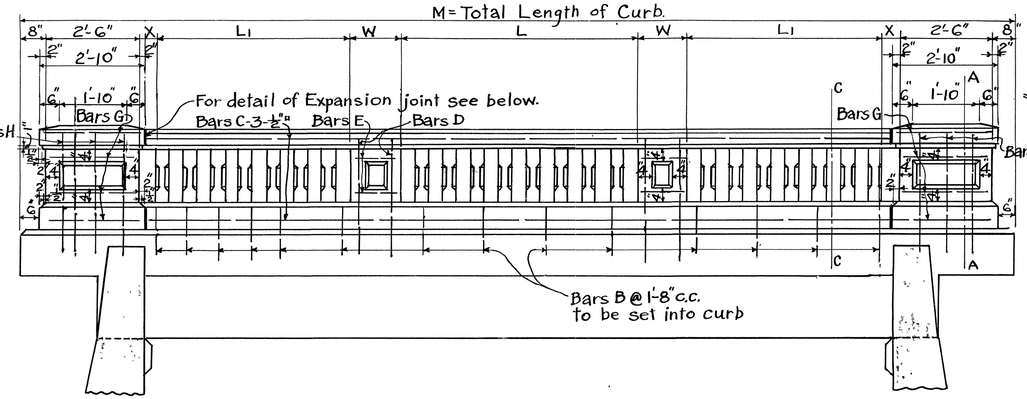
M = Length of Curb to ℄ of Pier or Bent

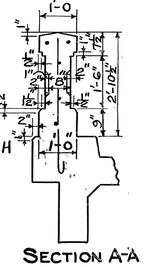
N = Length c-c Piers or Bents.



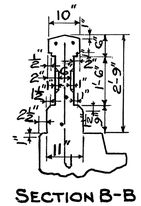
DETAIL OF RAIL FOR END SPANS

M = Total Length of Curb.

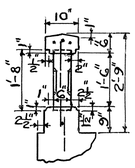




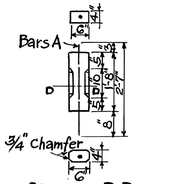
SECTION A-A



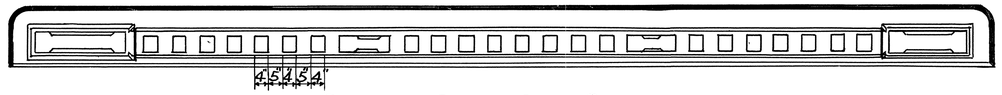
SECTION B-B



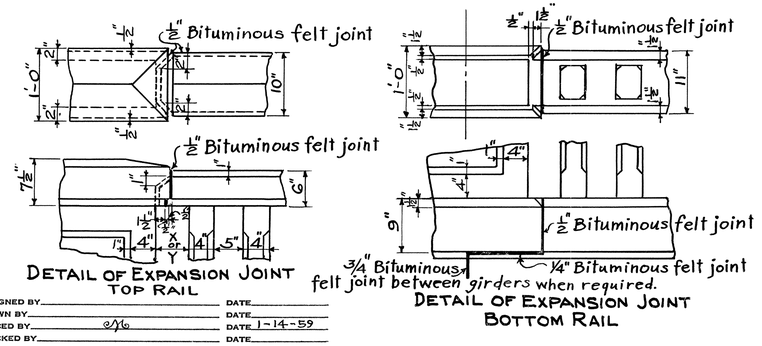
SECTION C-C



SECTION D-D
DETAIL OF PRECAST SPINDLE



DETAIL OF SINGLE SPAN STRUCTURES



BILL OF STEEL AND ESTIMATED QUANTITIES FOR TWO RAIL POSTS AS LISTED						
Description	Mark	No.	Size	Length	Steel Lbs.	Concrete Cu. Yds.
Post at End of Span	G	10	½"a	2'-3"	39.5	.45
	H	6	½"a	4'-0"		
Intermediate Posts.	F	2	½"a	2'-6"	29.9	.32
	H	4	½"a	4'-0"		
	K	10	½"a	1'-5"		

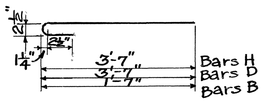


TABLE OF DIMENSIONS AND ESTIMATED QUANTITIES FOR END SPANS

Clear Span Feet	Dimensions M	X	Y	W	L1	L	Steel Reinforcement All Bars ½"a — Bars A No.	Length	Bars B No.	Length	Bars C No.	Length	Bars D No.	Length	Bars E No.	Length	Estimated Quant. Steel Lbs.*	Concrete Cu. Yds.*
12	16'-7"	5"	5"	1'-3"	2@5'-3"	—	28	2'-7"	16	2'-0"	6	12'-0"	4	4'-0"	4	1'-0"	168.8	1.620
14	18'-7"	5"	5"	1'-9"	2@6'-0"	—	32	2'-7"	16	2'-0"	6	14'-0"	4	4'-0"	4	1'-6"	189.8	1.886
16	20'-7"	5"	5"	1'-8"	2@3'-9"	1@4'-11"	32	2'-7"	18	2'-0"	6	16'-0"	8	4'-0"	8	1'-5"	221.8	2.152
18	22'-7"	5½"	5½"	1'-6"	2@4'-6"	1@5'-8"	38	2'-7"	20	2'-0"	6	18'-0"	8	4'-0"	8	1'-3"	247.7	2.419
20	24'-7"	5"	5"	1'-5"	2@5'-3"	1@6'-5"	44	2'-7"	24	2'-0"	6	20'-0"	8	4'-0"	8	1'-2"	277.7	2.685
22	26'-7"	5"	5"	1'-8"	2@6'-0"	1@6'-9"	48	2'-7"	24	2'-0"	6	22'-0"	8	4'-0"	8	1'-5"	298.6	2.951
24	28'-7"	5½"	5½"	1'-6"	2@6'-9"	1@7'-2"	54	2'-7"	30	2'-0"	6	24'-0"	8	4'-0"	8	1'-3"	331.3	3.217
26	30'-7"	5"	5"	1'-5"	2@7'-6"	1@7'-11"	60	2'-7"	30	2'-0"	6	26'-0"	8	4'-0"	8	1'-2"	354.4	3.483
28	32'-10"	4½"	4½"	1'-7"	2@6'-0"	2@5'-8"	60	2'-7"	32	2'-0"	6	28'-2"	12	4'-0"	12	1'-4"	388.5	3.782
30	34'-10"	4½"	4½"	1'-9"	2@6'-0"	2@6'-5"	64	2'-7"	32	2'-0"	6	30'-2"	12	4'-0"	12	1'-6"	409.4	4.048
32	36'-10"	4½"	4½"	1'-5"	2@6'-9"	2@7'-2"	72	2'-7"	40	2'-0"	12	17'-0"	12	4'-0"	12	1'-2"	457.3	4.314
34	38'-10"	4½"	4½"	1'-7"	2@7'-6"	2@7'-2"	76	2'-7"	40	2'-0"	12	18'-0"	12	4'-0"	12	1'-4"	478.1	4.581
36	40'-10"	4½"	4½"	1'-9"	2@7'-6"	2@7'-11"	80	2'-7"	40	2'-0"	12	19'-0"	12	4'-0"	12	1'-6"	499.1	4.847
38	42'-10"	5½"	5½"	1'-8"	2@6'-0"	3@6'-5"	80	2'-7"	40	2'-0"	12	20'-0"	16	4'-0"	16	1'-5"	527.3	5.113
40	44'-10"	4"	4"	1'-8"	2@6'-0"	3@7'-2"	86	2'-7"	40	2'-0"	12	21'-0"	16	4'-0"	16	1'-5"	560.6	5.379
50	54'-10"	4½"	4½"	1'-7"	2@6'-9"	4@7'-2"	108	2'-7"	48	2'-0"	12	26'-0"	20	4'-0"	20	1'-4"	682.6	6.722
60	64'-10"	4½"	4½"	1'-5"	2@6'-0"	5@7'-11"	132	2'-7"	66	2'-0"	12	31'-0"	24	4'-0"	24	1'-2"	833.3	8.053

TABLE OF DIMENSIONS AND ESTIMATED QUANTITIES FOR INTERMEDIATE SPANS

Clear Span Feet	Dimensions N	Y	W	L1	L	Steel Reinforcement All Bars ½"a — Bars A No.	Length	Bars B No.	Length	Bars C No.	Length	Bars D No.	Length	Bars E No.	Length	Estimated Quantities Steel Lbs.*	Concrete Cu. Yds.*
12	14'-6"	5"	1'-6"	2@5'-3"	—	28	2'-7"	16	2'-0"	6	12'-2"	4	4'-0"	4	1'-3"	170.5	1.653
14	16'-6"	5"	2'-0"	2@6'-0"	—	32	2'-7"	16	2'-0"	6	14'-2"	4	4'-0"	4	1'-9"	191.5	1.920
16	18'-6"	5"	1'-5"	2@4'-6"	1@4'-2"	34	2'-7"	18	2'-0"	6	16'-2"	8	4'-0"	8	1'-2"	225.4	2.185
18	20'-6"	5"	1'-8"	2@4'-6"	1@5'-8"	38	2'-7"	20	2'-0"	6	18'-2"	8	4'-0"	8	1'-5"	249.8	2.451
20	22'-6"	5½"	1'-6"	2@5'-3"	1@6'-5"	44	2'-7"	24	2'-0"	6	20'-2"	8	4'-0"	8	1'-3"	279.1	2.717
22	24'-6"	5"	1'-5"	2@6'-0"	1@7'-2"	50	2'-7"	26	2'-0"	6	22'-2"	8	4'-0"	8	1'-2"	305.6	2.983
24	26'-6"	5"	1'-8"	2@6'-9"	1@7'-2"	54	2'-7"	30	2'-0"	6	24'-2"	8	4'-0"	8	1'-5"	333.4	3.250
26	28'-6"	5½"	1'-6"	2@7'-6"	1@7'-11"	60	2'-7"	30	2'-0"	6	26'-2"	8	4'-0"	8	1'-3"	355.8	3.516
28	31'-0"	4½"	1'-9"	2@6'-0"	2@5'-8"	60	2'-7"	32	2'-0"	6	28'-8"	12	4'-0"	12	1'-6"	392.8	3.849
30	33'-0"	4½"	1'-11"	2@6'-0"	2@6'-5"	64	2'-7"	32	2'-0"	6	30'-8"	12	4'-0"	12	1'-8"	413.8	4.115
32	35'-0"	4½"	1'-7"	2@6'-9"	2@7'-2"	72	2'-7"	40	2'-0"	12	17'-2"	12	4'-0"	12	1'-4"	460.7	4.381
34	37'-0"	4½"	1'-9"	2@7'-6"	2@7'-2"	76	2'-7"	40	2'-0"	12	18'-2"	12	4'-0"	12	1'-6"	481.7	4.647
36	39'-0"	4½"	1'-11"	2@7'-6"	2@7'-11"	80	2'-7"	40	2'-0"	12	19'-2"	12	4'-0"	12	1'-8"	502.6	4.914
38	41'-0"	4½"	1'-10"	2@6'-0"	3@6'-5"	80	2'-7"	40	2'-0"	12	20'-2"	16	4'-0"	16	1'-7"	531.2	5.180
40	43'-0"	5"	1'-9"	2@6'-0"	3@7'-2"	86	2'-7"	46	2'-0"	12	21'-2"	16	4'-0"	16	1'-6"	564.0	5.446
50	53'-0"	5"	1'-8"	2@6'-9"	4@7'-2"	108	2'-7"	48	2'-0"	12	26'-2"	20	4'-0"	20	1'-5"	684.3	6.788
60	63'-0"	4½"	1'-6"	2@6'-0"	5@7'-11"	132	2'-7"	66	2'-0"	12	31'-2"	24	4'-0"	24	1'-3"	836.7	8.119

TABLE OF DIMENSIONS AND ESTIMATED QUANTITIES FOR RAIL ON SINGLE SPAN STRUCTURES

Clear Span Feet	Dimensions M	X	W	L1	L	Steel Reinforcement All Bars ½"a — Bars A No.	Length	Bars B No.	Length	Bars C No.	Length	Bars D No.	Length	Bars E No.	Length	Estimated Quant. Steel Lbs.*	Concrete Cu. Yds.*
12	18'-8"	5"	1'-0"	2@5'-3"	—	28	2'-7"	16	2'-0"	6	11'-8"	4	4'-0"	4	0'-9"	166.2	1.587
14	20'-8"	5"	1'-6"	2@6'-0"	—	32	2'-7"	16	2'-0"	6	13'-8"	4	4'-4"	4	1'-3"	187.1	1.853
16	22'-8"	5½"	1'-6"	2@3'-9"	1@4'-11"	32	2'-7"	18	2'-0"	6	15'-8"	8	4'-0"	8	1'-3"	218.9	2.119
18	24'-8"	5"	1'-5"	2@4'-6"	1@5'-8"	38	2'-7"	20	2'-0"	6	17'-8"	8	4'-0"	8	1'-2"	2454	2.385
20	26'-8"	5½"	1'-3"	2@5'-3"	1@6'-5"	44	2'-7"	24	2'-0"	6	19'-8"	8	4'-0"	8	1'-0"	274.8	2.651
22	28'-8"	5½"	1'-6"	2@6'-0"	1@6'-5"	48	2'-7"	24	2'-0"	6	21-8	8	4'-0"	8	1'-3"	295.7	2.918
24	30'-8"	5"	1'-5"	2@6'-9"	1@7'-2"	54	2'-7"	30	2'-0"	6	23'-8	8	4'-0"	8	1'-2"	329.1	3.184
26	32'-8"	5½"	1'-3"	2@7'-6"	1@7'-11"	60	2'-7"	30	2'-0"	6	25'-8	8	4'-0"	8	1'-0"	351.6	3.450
28	34'-8"	4½"	1'-5"	2@6'-0"	2@5'-8"	60	2'-7"	32	2'-0"	6	27'-8"	12	4'-0"	12	1'-2"	384.2	3.716
30	36'-8"	4½"	1'-7"	2@6'-0"	2@6'-5"	64	2'-7"	32	2'-0"	6	29'-8"	12	4'-0"	12	1'-4"	405.1	3.982
32	38'-8"	4½"	1'-3"	2@6'-9"	2@7'-2"	72	2'-7"	40	2'-0"	12	16'-8"	12	4'-0"	12	1'-0"	452.1	4.243
34	40'-8"	4½"	1'-5"	2@7'-6"	2@7'-2"	76	2'-7"	40	2'-0"	12	17'-8	12	4'-0"	12	1'-2"	473.1	4.515
36	42'-8"	4½"	1'-7"	2@7'-6"	2@7'-11"	80	2'-7"	40	2'-0"	12	18'-8"	12	4'-0"	12	1'-4"	493.9	4.780
38	44'-8"	4½"	1'-7"	2@6'-0"	3@6'-5"	80	2'-7"	40	2'-0"	12	19'-8"	16	4'-0"	16	1'-4"	522.6	5.046
40	46'-8"	5"	1'-6"	2@6'-0"	3@7'-2"	86	2'-7"	46	2'-0"	12	20'-8"	16	4'-0"	16	1'-3"	555.4	5.312
50	56'-8"	4"	1'-6"	2@6'-9"	4@7'-2"	108	2'-7"	48	2'-0"	12	25'-8"	20	4'-0"	20	1'-3"	677.7	6.655
60	66'-8"	4½"	1'-4"	2@6'-0"	5@7'-11"	132	2'-7"	66	2'-0"	12	30'-8"	24	4'-0"	24	1'-1"	828.2	7.986

* See also quantities for rail posts.

GENERAL NOTES:

Specifications: Standard Road and Bridge Specifications of the Tennessee Department of Highways and Public Works.
Concrete shall be Class "S"
Reinforcing Steel: See Specifications.
Forms and Finish: See Specifications.

Spindles shall be precast in steel forms & shall not be handled for seven days after they have been poured. Top surfaces of spindles, as they lie in their molds, when cast in a horizontal position, shall be carefully floated to a true plane before the concrete obtains its permanent set.

SPECIAL NOTE:
Handrail to be built as detailed, no chamfer shall be used unless specifically shown.

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
NASHVILLE

STANDARD CONCRETE HANDRAIL

SPINDLE TYPE
FOR
SLAB AND GIRDER BRIDGES
1925

CORRECT Fred Green
BRIDGE ENGINEER
APPROVED C. A. Haug
STATE HIGHWAY ENGINEER

D-4-95

DESIGNED BY _____ DATE _____
DRAWN BY _____ DATE _____
RETRACED BY 2/16 DATE 1-14-59
CHECKED BY _____ DATE _____

MICROFILMED

50's & 60' Span added & Reinforcing Steel revised for new weights 7/3/31
Revised-Special Note Added 2/6/29.