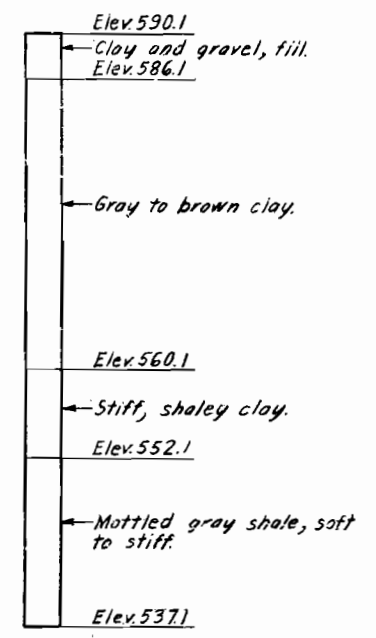
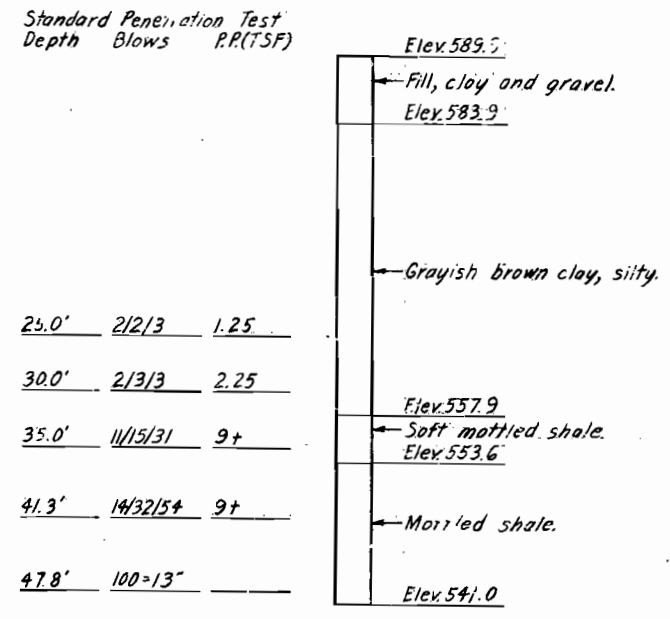
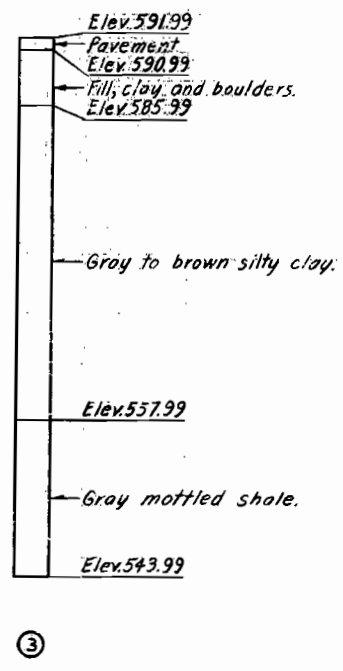
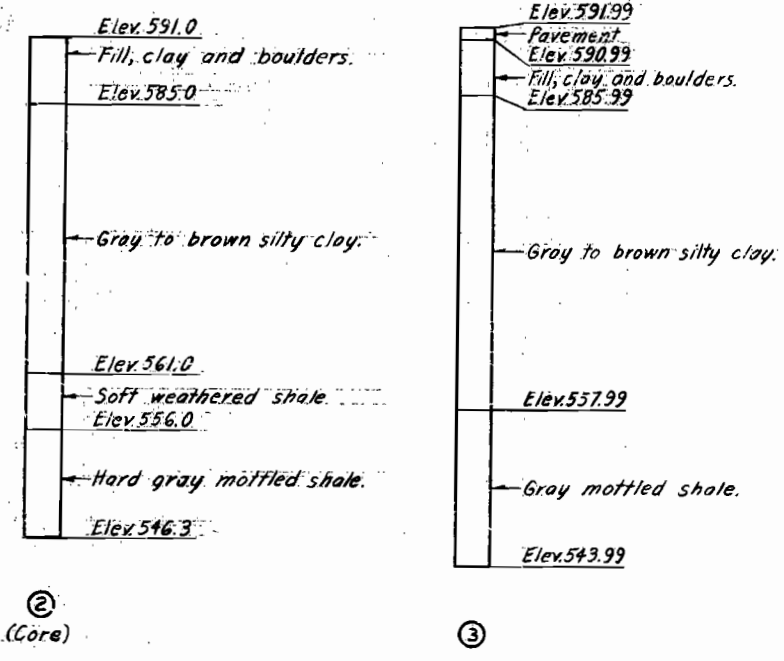
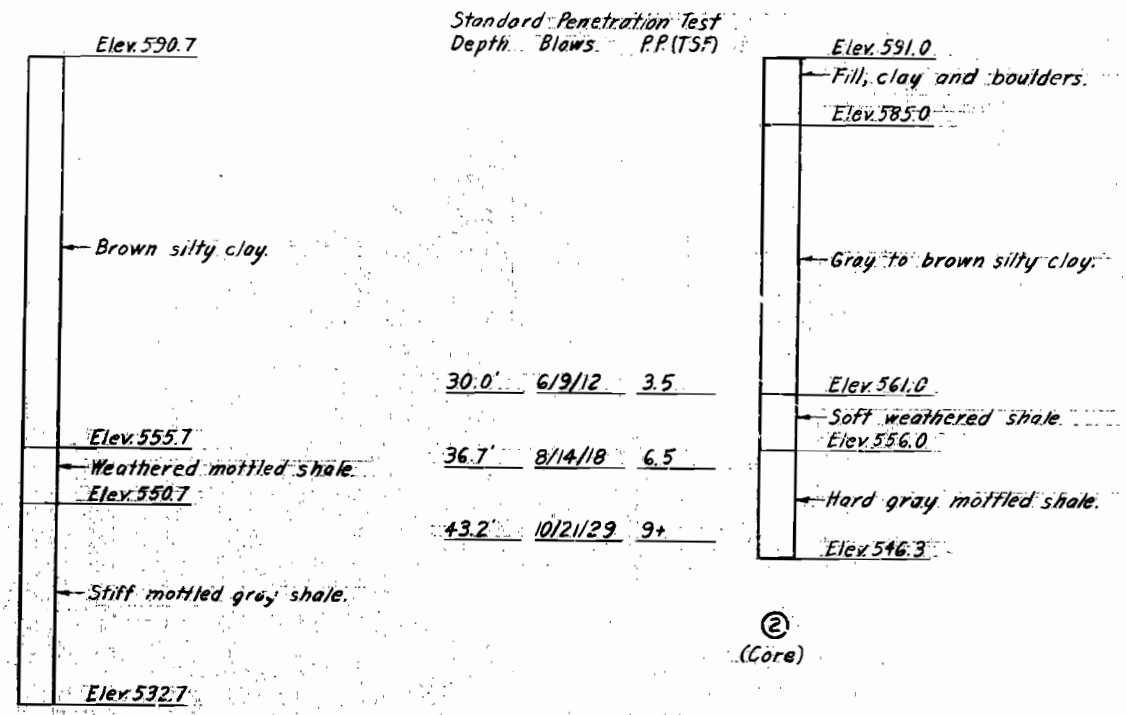
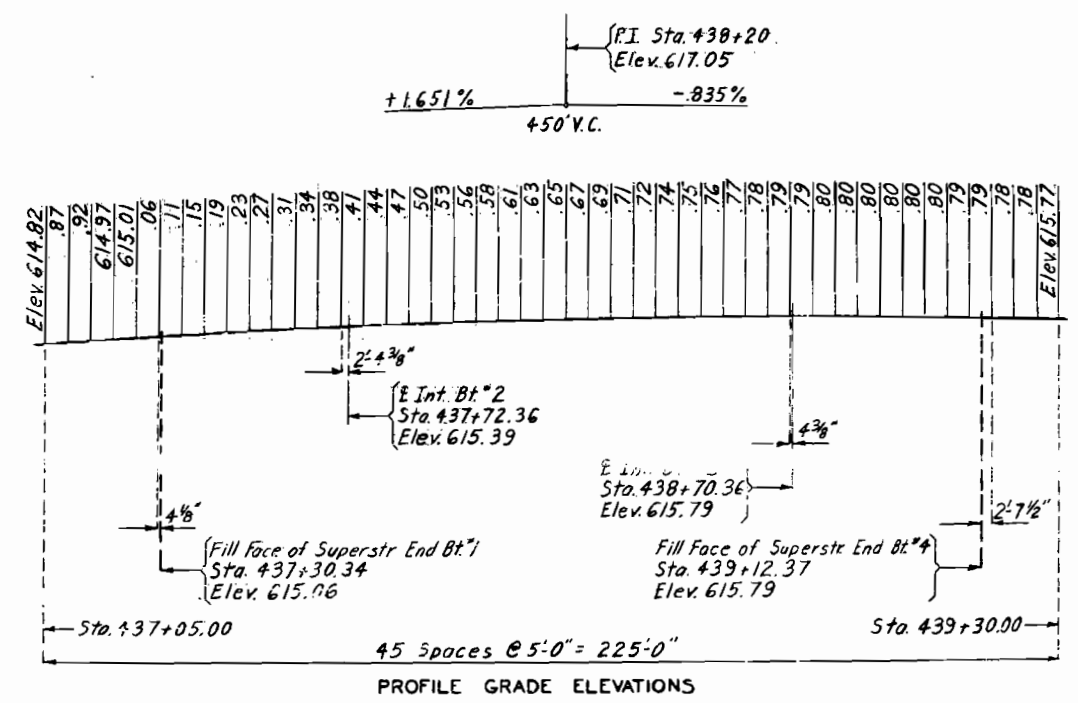


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
3	MO.		19	43	



Note: For location of Borings see Sheet No. 1

BORING DATA



DETAILED April, 1979
CHECKED Jan, 1979

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 2 of 20

ST. LOUIS COUNTY

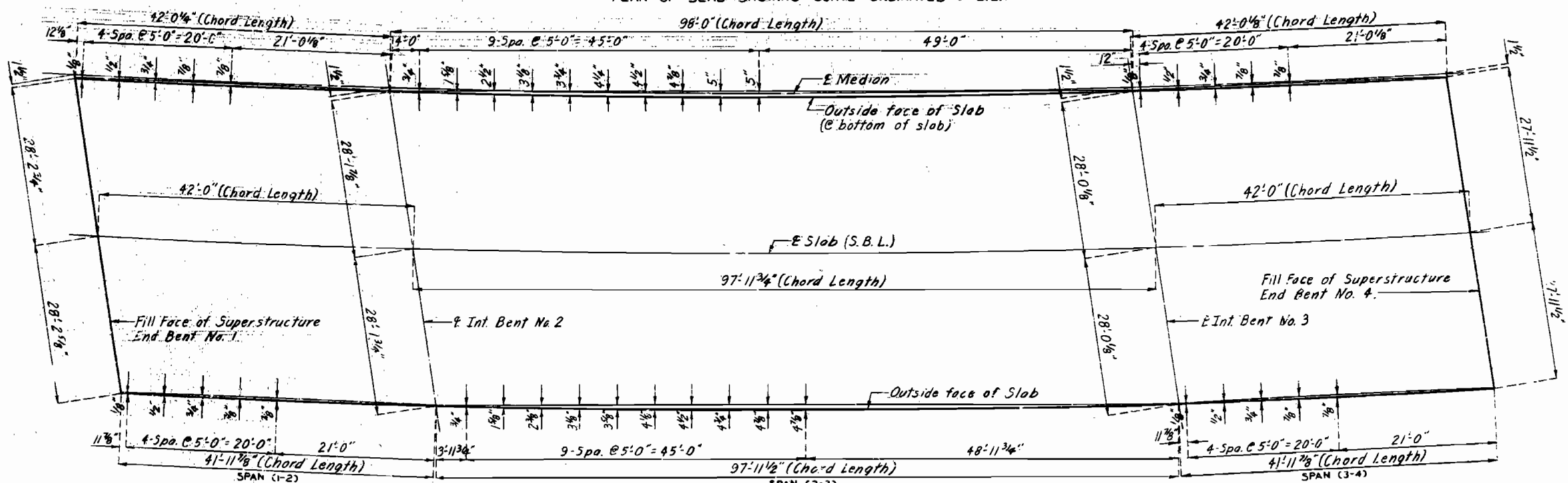
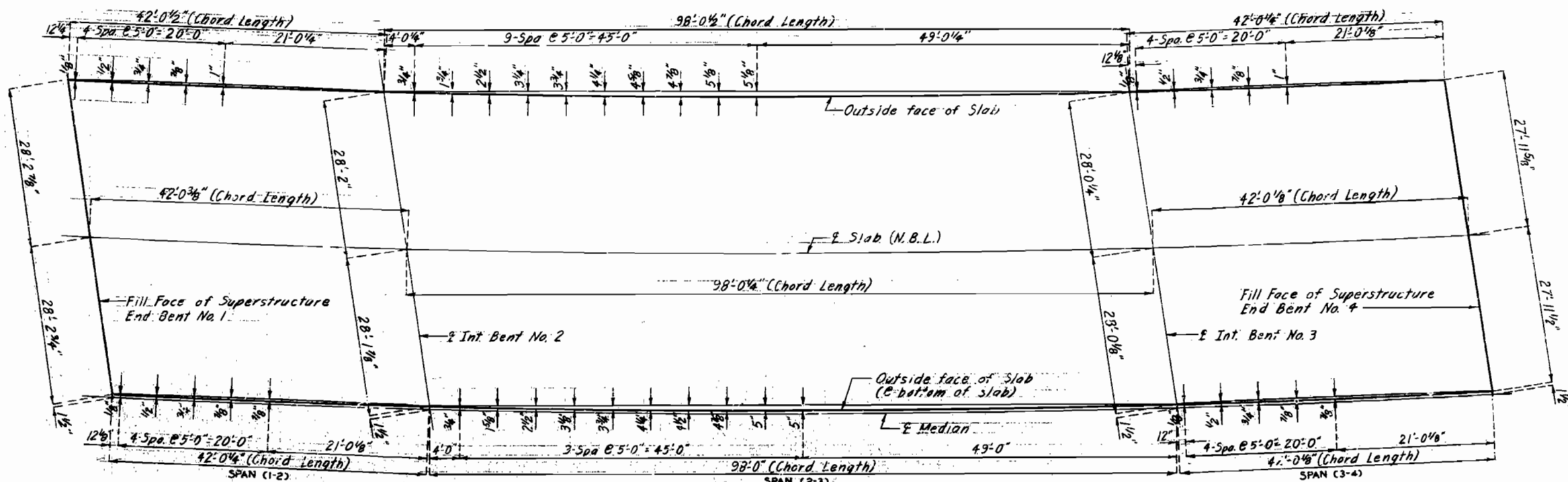
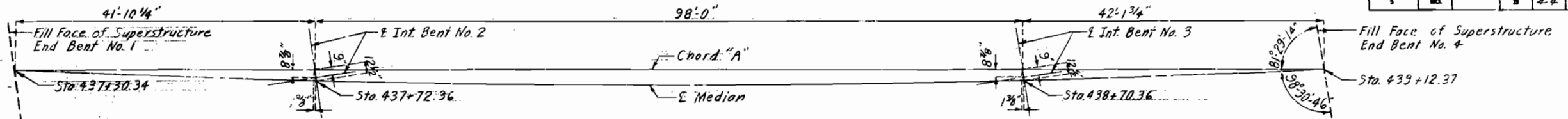
A-3176

Note: Bents cannot be accurately located from the reference point on the tangent by conventional survey methods based on 100' chords.

All bents are parallel, longitudinal dimensions shown are horizontal.

All stations shown are along E median.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		10	4-4	



DETAILED April 10 78
CHECKED Jan. 19 79

Note: This drawing is not to scale. Follow dimensions.

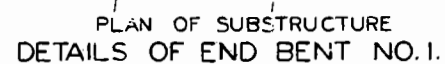
Sheet No. 3 of 10.

ST. LOUIS COUNTY

A-3176

KAE 19 1253 2-77 MC 10544

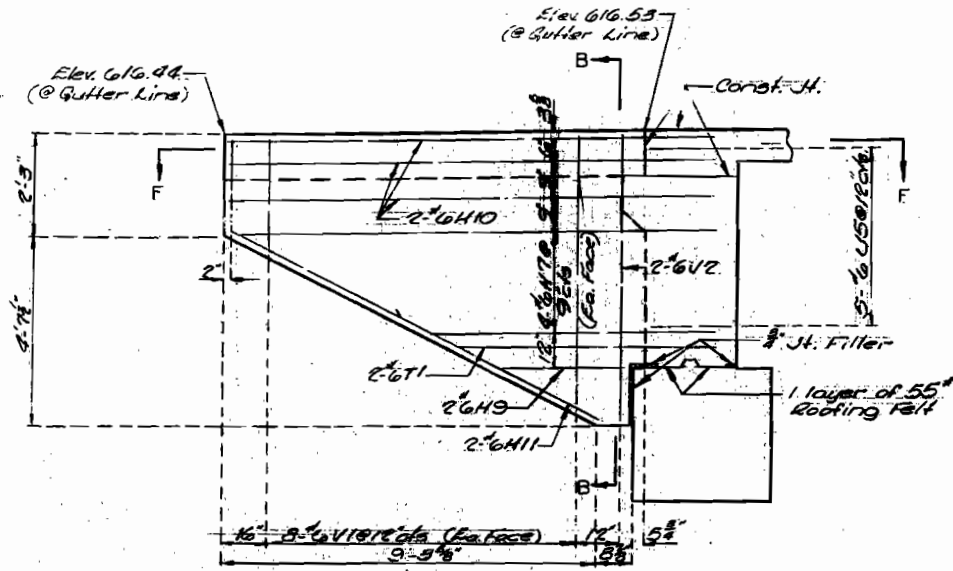
2



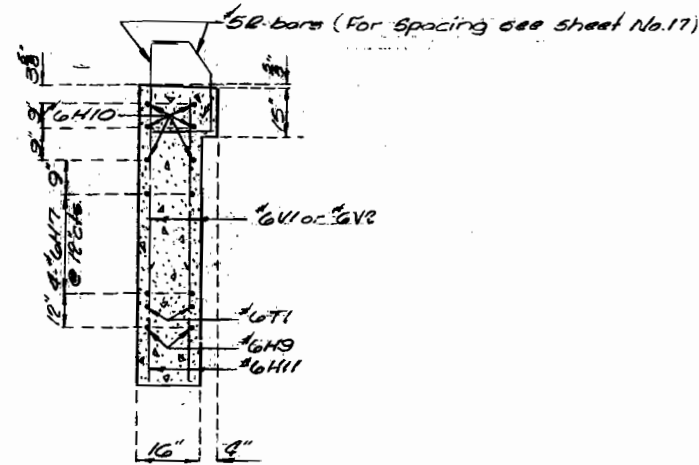
Note: This drawing is not to scale. Follow dimensions.

A-3176

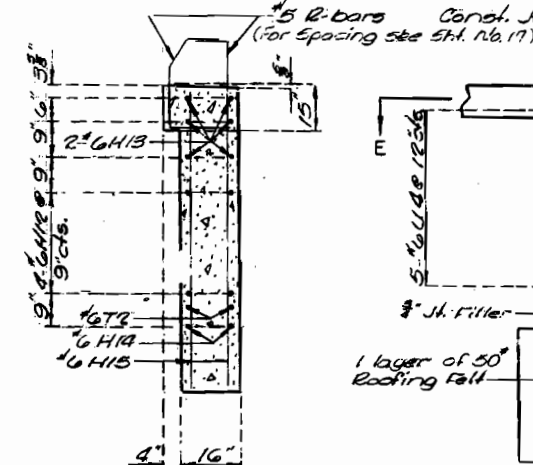
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	46	



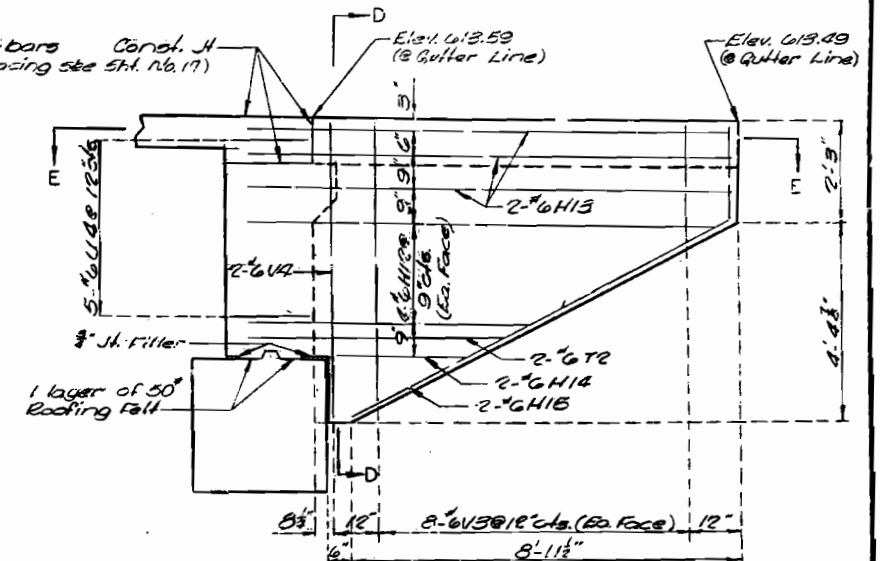
ELEVATION A-A



SECTION B-B

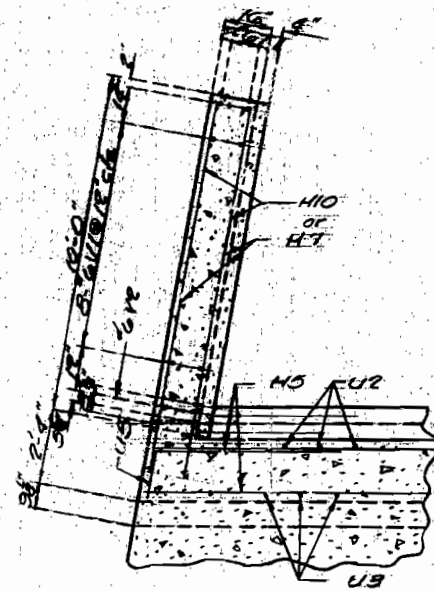


SECTION D-D

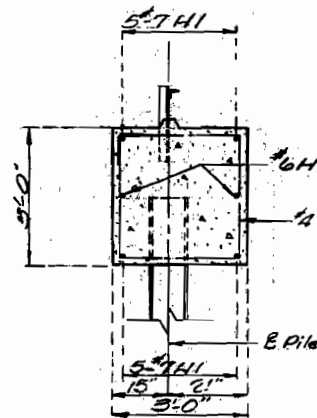


ELEVATION C-C

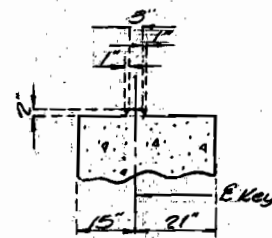
Note: For location of Elevation A-A, and C-C and Section G-G, and H-H, see sheet No. 4.



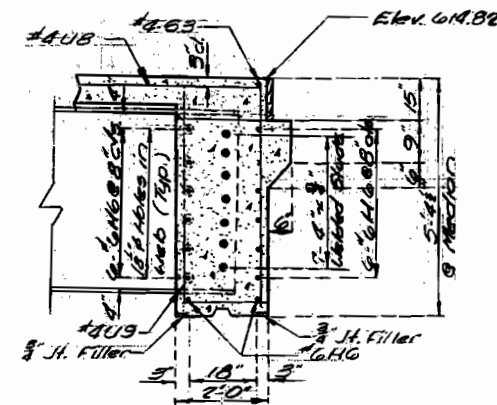
SECTION F-F



SECTION G-G

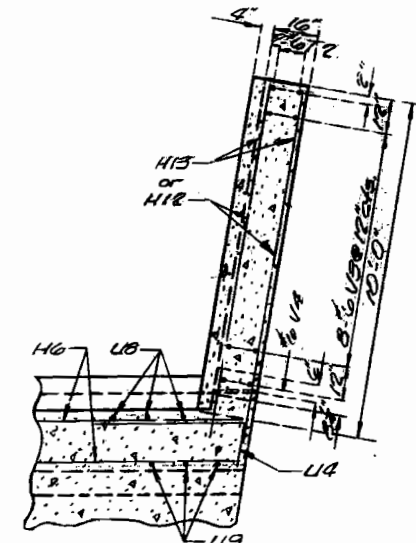


DETAIL OF KEY

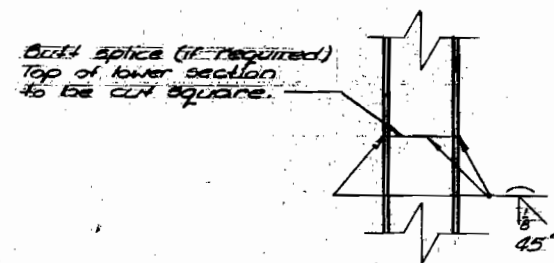


SECTION H-H

For spacing of Slabs see sheet No. 12



SECTION E-E



DETAIL OF STEEL PILE SPLICE

DETAILS FOR END BENT NO. 1



SECTION K-K



DETAIL OF ANCHOR BOLTS

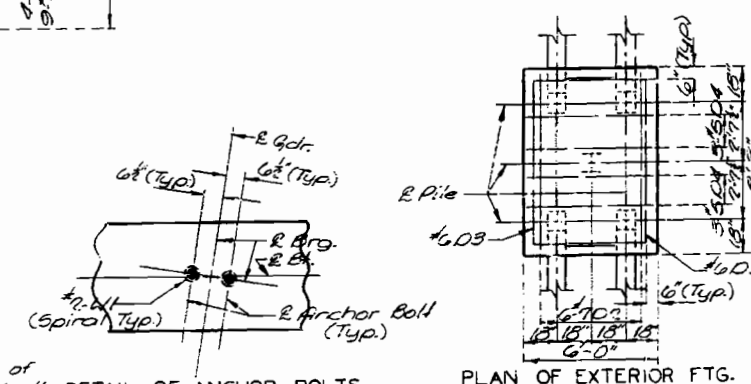
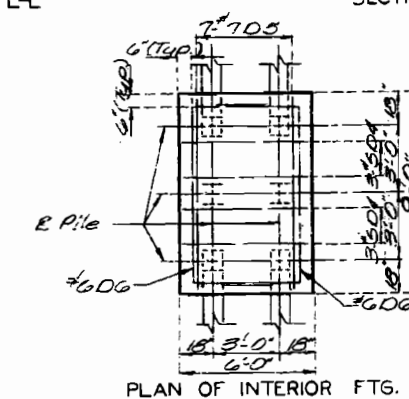
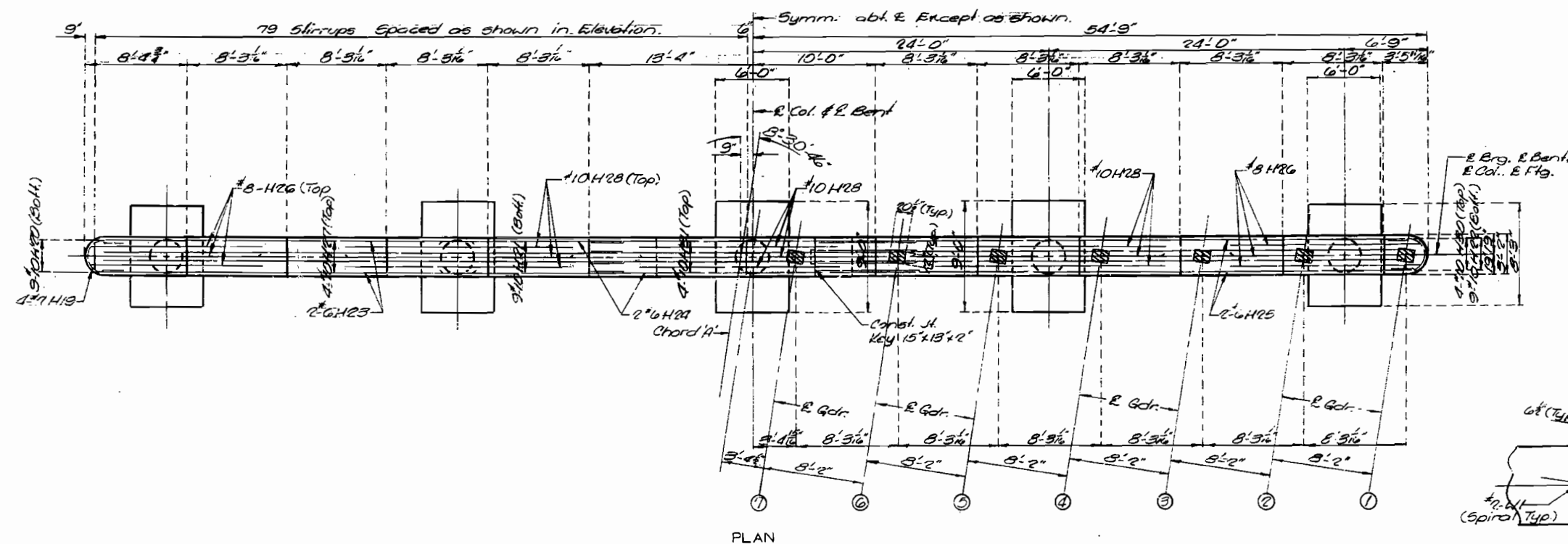
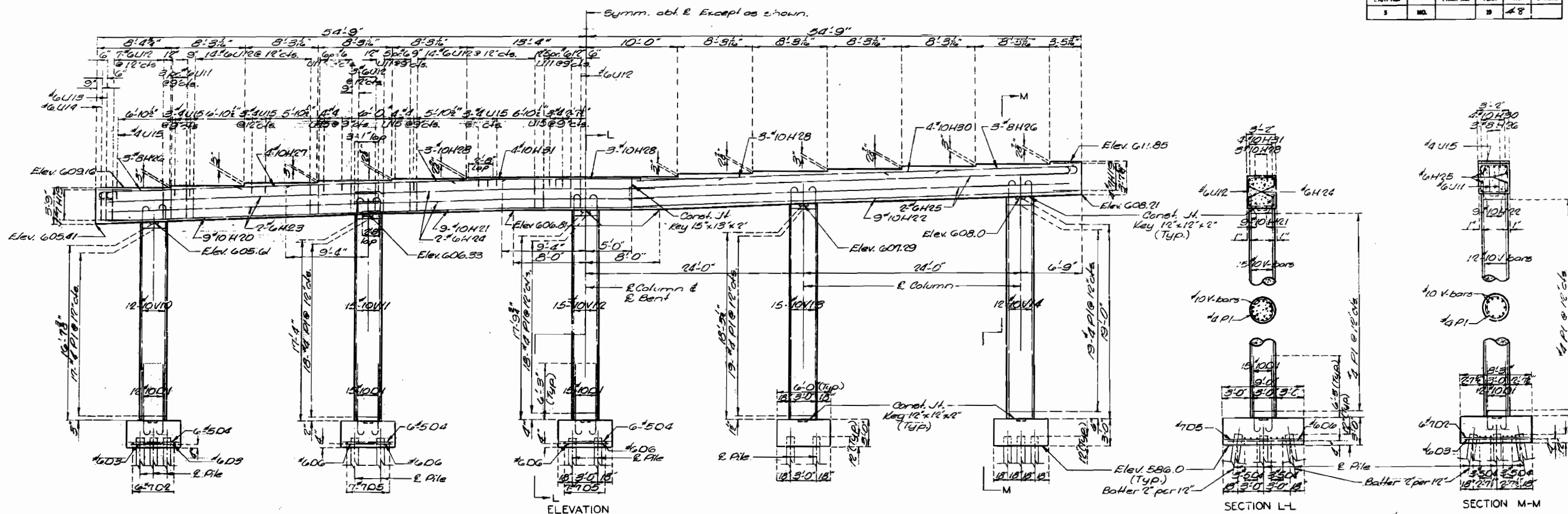
PLAN OF EXTERIOR FTG.

Sheet No. 6 of 20.

ST. LOUIS COUNTY

A-3176

2



Note: All reinforcing bars in tops of substructure beams or caps shall be spaced to clear anchor bolts for bearings by at least 2".

DETAIL OF ANCHOR BOLTS

PLAN OF EXTERIOR FTG.

DETAILS OF INT. BT. NO. 3

DETAILED *May 1978*
CHECKED *Jon 1979*

Note: This drawing is not to scale. Follow dimensions.

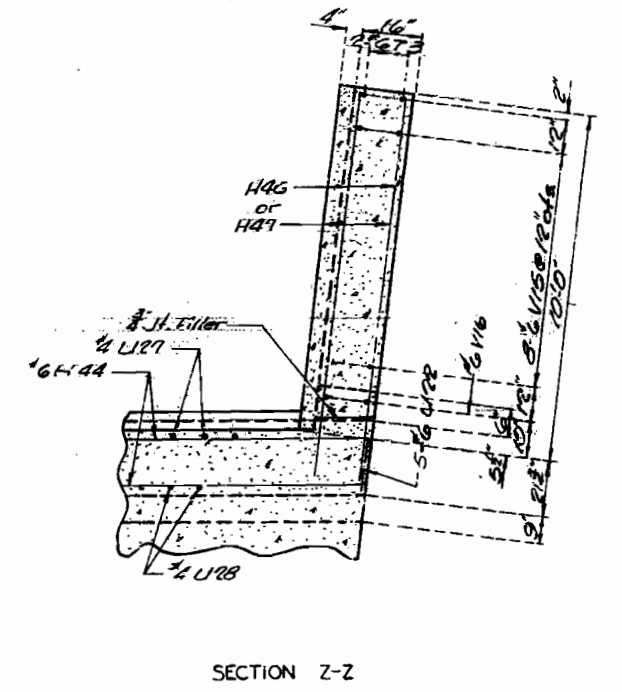
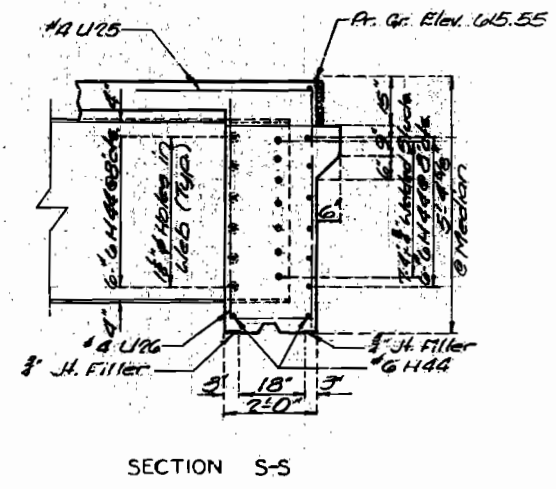
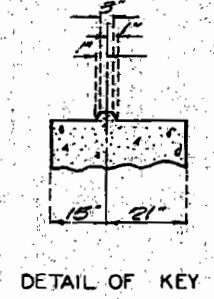
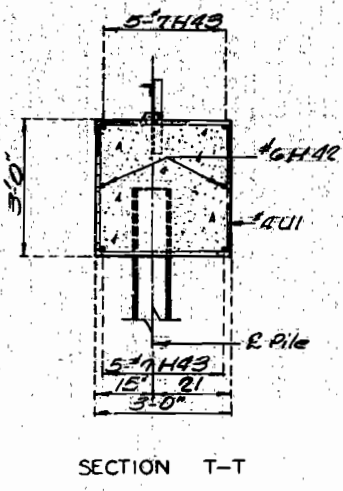
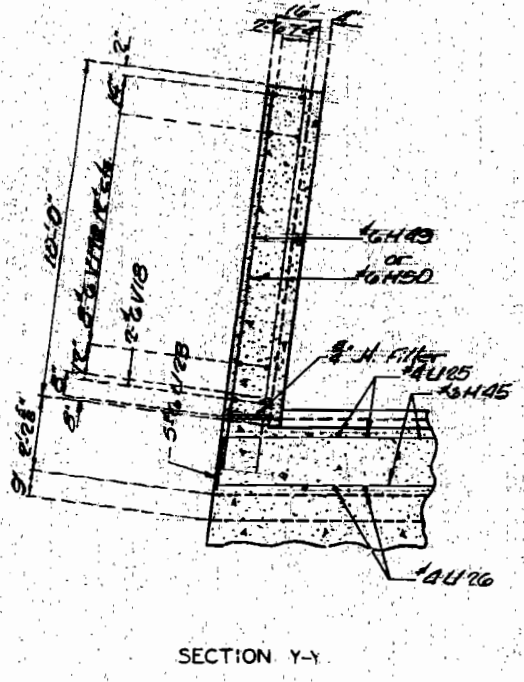
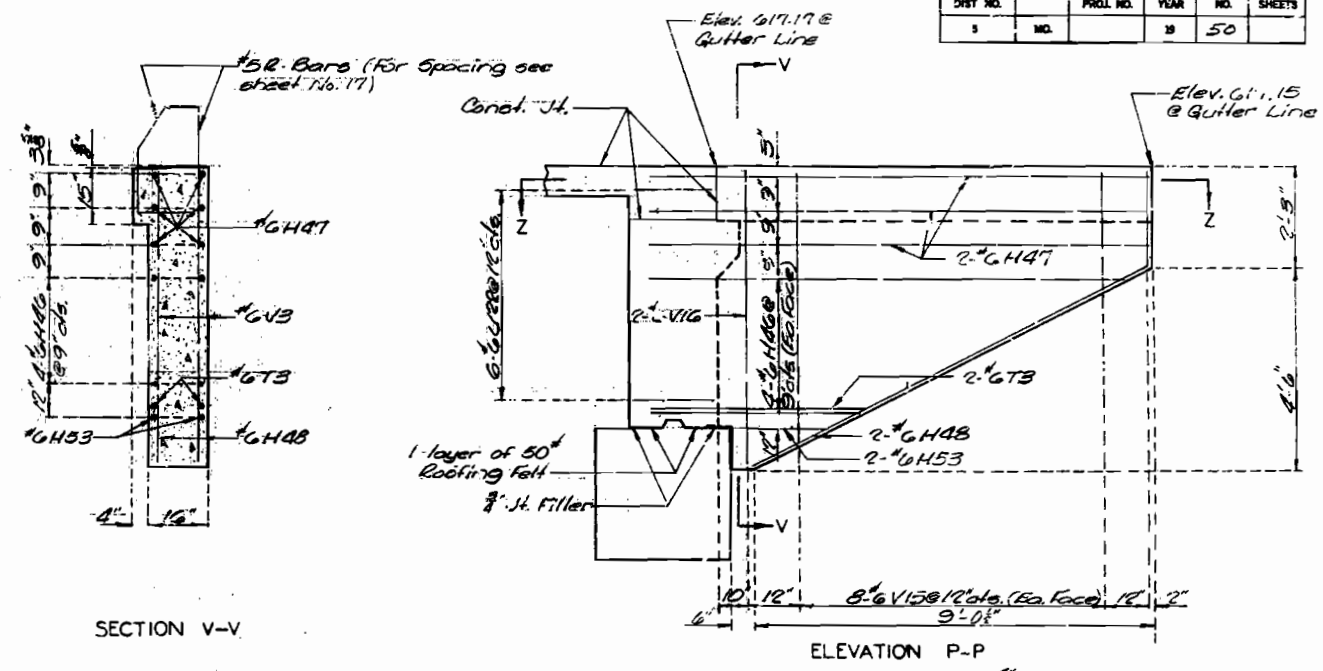
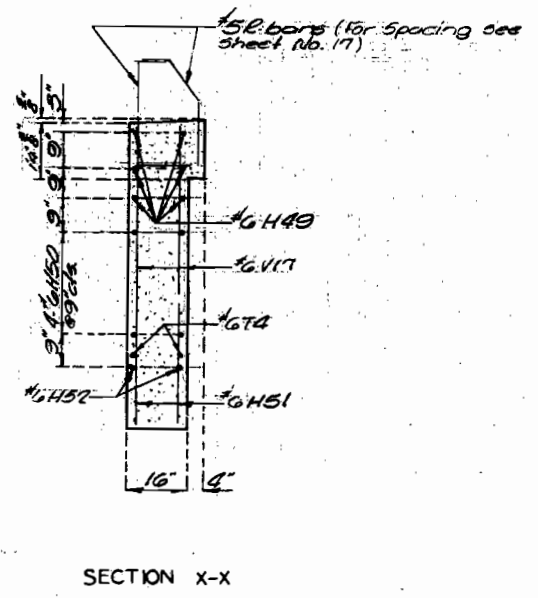
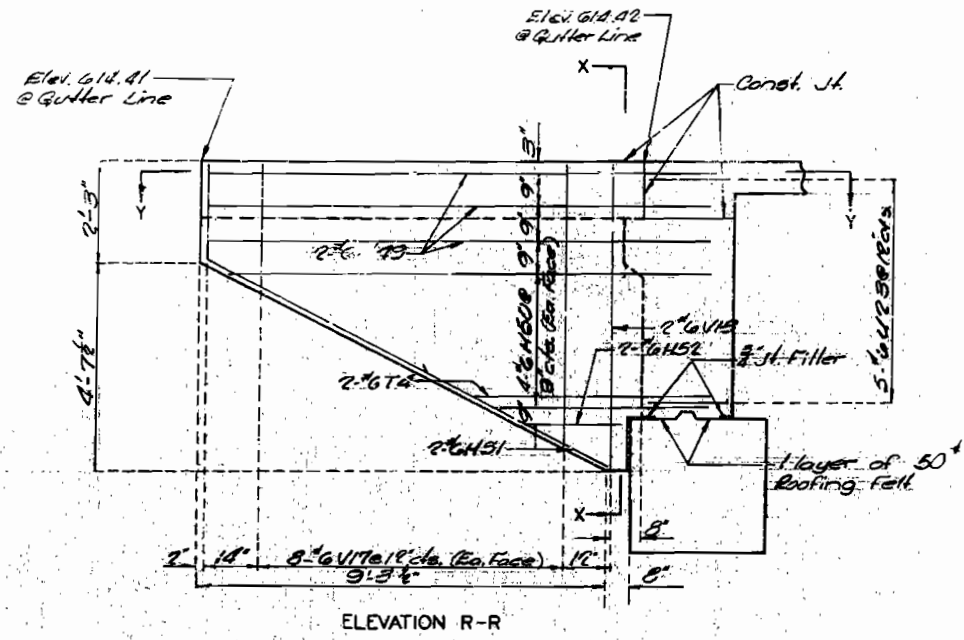
Sheet No. 7 of 20.

SEE FINAL PLANS

ST. LOUIS COUNTY

A-3176

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	50	



Note: For location of Elev. R-R, P-P, & Section T-T & S-S see sheet No. 8.

DETAILS FOR END BENT NO. 4

DETAILED May 1978
CHECKED Jan. 1979

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 9 of 20

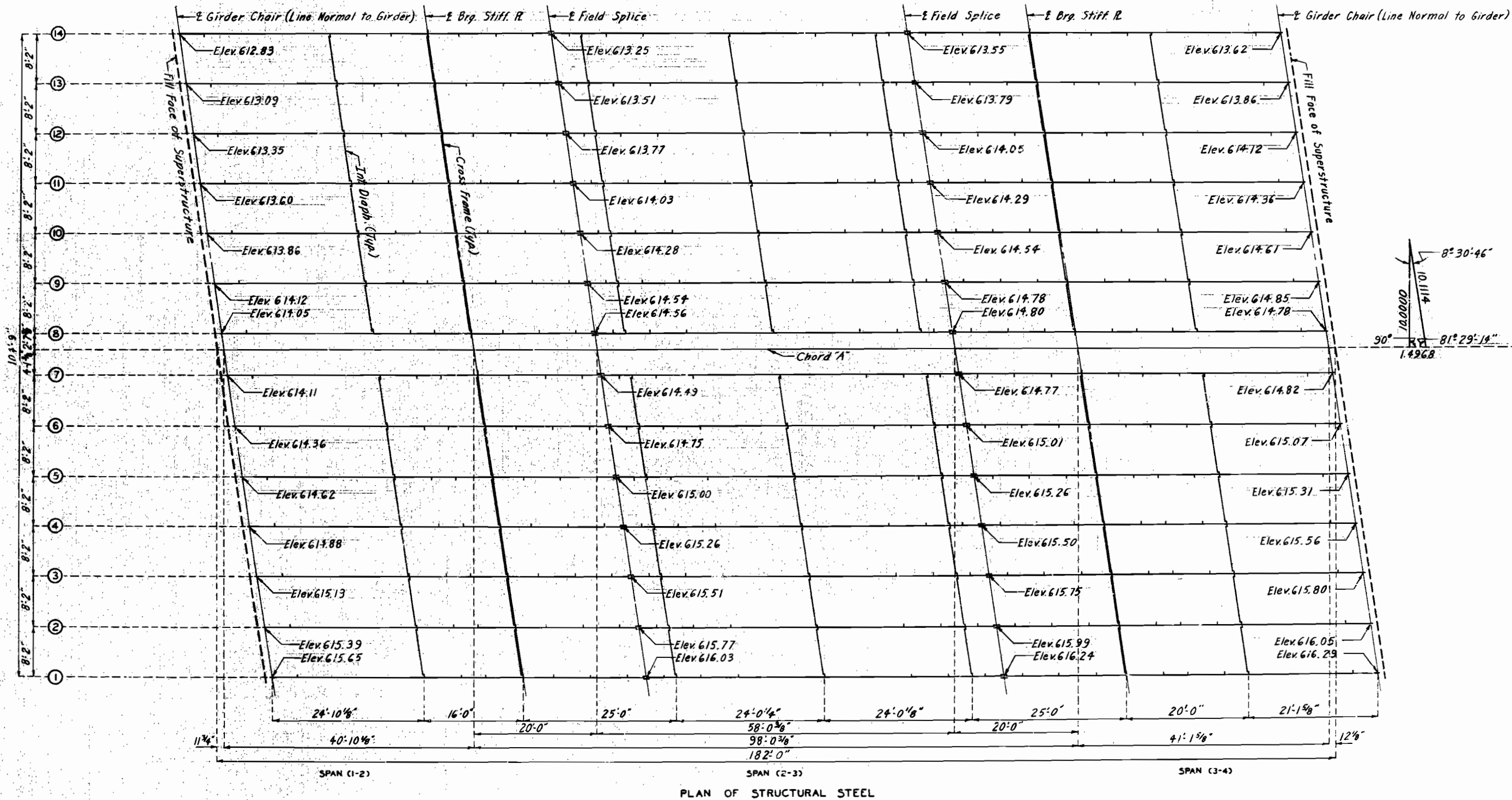
ST. LOUIS COUNTY

A-3176

230

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
1	MO.		19	51	

Note: Longitudinal dimensions are along top of webs.
Int. Diaphragm spacing shown for Girder No. 1 is typical for all Girders.
Elevations shown are at top of webs before dead load deflection.



DETAILED April 1978
CHECKED Jan. 1979

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 10 of 20.

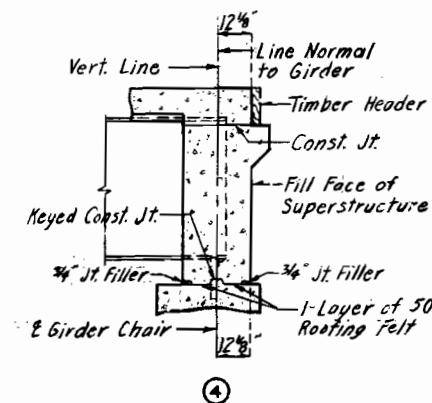
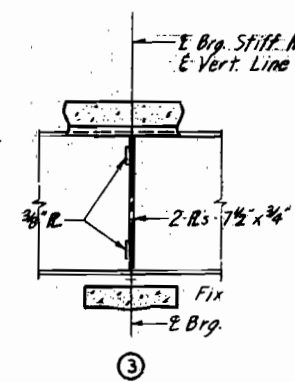
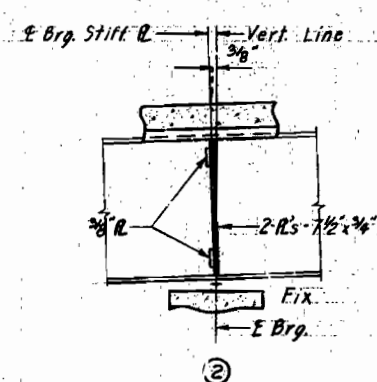
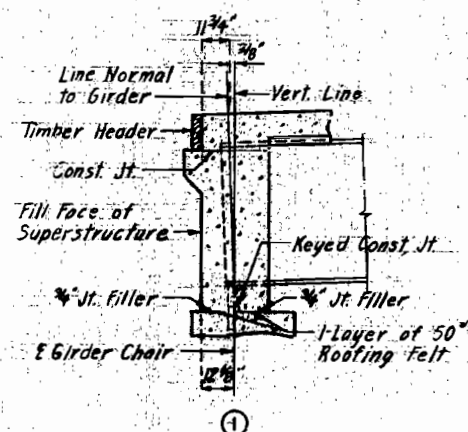
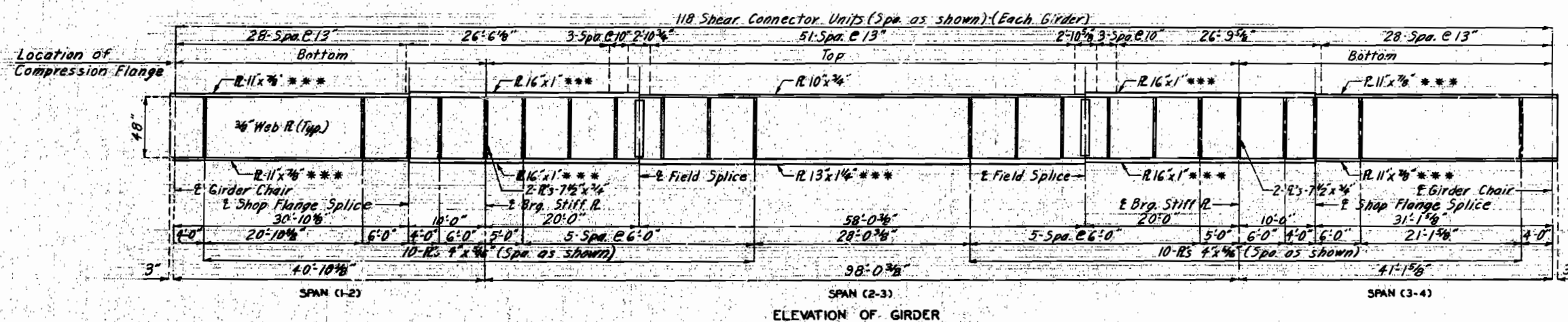
ST. LOUIS COUNTY

A-3176

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	52	

Note: *** Indicates Flange Plates subject to notch toughness requirements. See Special Provisions.
 Transverse web stiffener (R4"x $\frac{1}{16}$ ") spacing shown is typical for all girders. Transverse web stiffener plates shall be orientated as shown in "Plan of Structural Steel" on sheet No. 10.
 Longitudinal dimensions are along top of webs.
 All web plates shall be subject to notch toughness requirements.

Note: See sheet No. 18 for location of $\frac{3}{8}$ " holes in web plate for fabricated sign support brackets.



PART LONGITUDINAL SECTION

DETAILED April 15, 79
 CHECKED Jan. 18, 79

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 11 of 20

ST. LOUIS COUNTY

A-3176

PLAN OF TOP FLANGE

The diagram illustrates the plan view of the top flange of a girder. Key dimensions and features include:

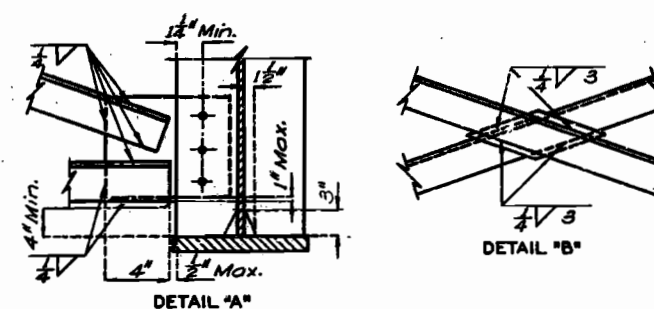
- Overall Width:** 16"
- Flange Thickness:** 4"
- Splice Location:** Indicated by a vertical line with a triangle pointing to it, labeled "12".
- Splice Dimensions:**
 - Distance from left edge to splice: $\frac{13}{16}$ "
 - Distance from splice to right edge: $\frac{13}{16}$ "
 - Splice width: "Spd @ 3"
- Reinforcement:**
 - Top reinforcement: 4 bars, labeled "4".
 - Bottom reinforcement: 4 bars, labeled "4".
 - Reinforcement spacing: "Spd @ 3"
- Labels:**
 - "Symm. abt. & Splice except as shown"
 - "E Girder"
 - "R'd x'x'x'f"
 - "R'd x'x'bx'c"

[illegible]

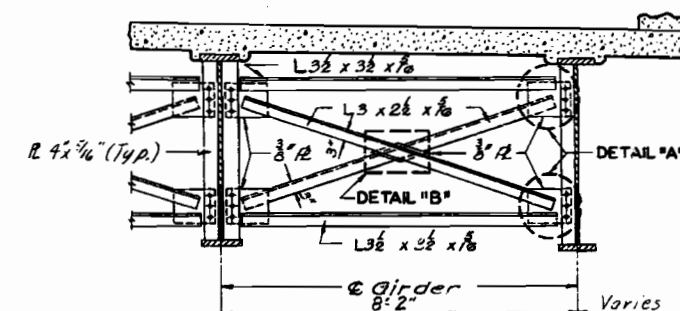
Technical drawing of a column splice showing reinforcement details. The drawing includes labels for reinforcement bars (e.g., 2-#s, 3-#s, 3/8" Web R), dimensions (e.g., 12", 3", 3 1/2", 7-5" @ 5"), and notes (e.g., "Fill R-n"x p"x g"x", "Symm. abt C except as shown", "Note: Use 3" High Strength Bolts with 1/2" reamed holes").

SPlice LOCATION	TABLE OF DIMENSIONS - FIELD SPlice									
	"a"	"b"	"c"	"d"	"e"	"f"	"j"	"k"	"n"	"q"
Top Flange	10"	3/8"	2'-0 1/2"	4"	1/2"	2'-0 1/2"	3	3	10"	12"
Bottom Flange	13"	3/4"	4'-6 1/2"	5 1/2"	5/8"	4'-0 1/2"	8	7	13"	2'-3"

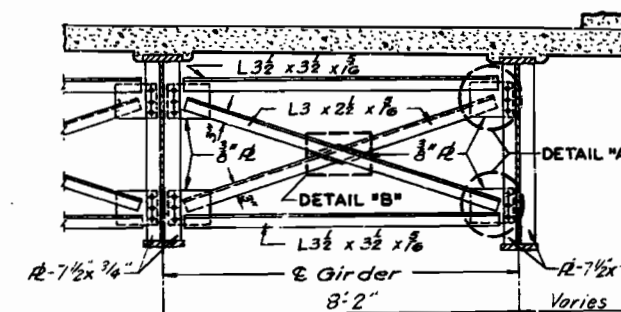
DETAILS OF FIELD SPLICE



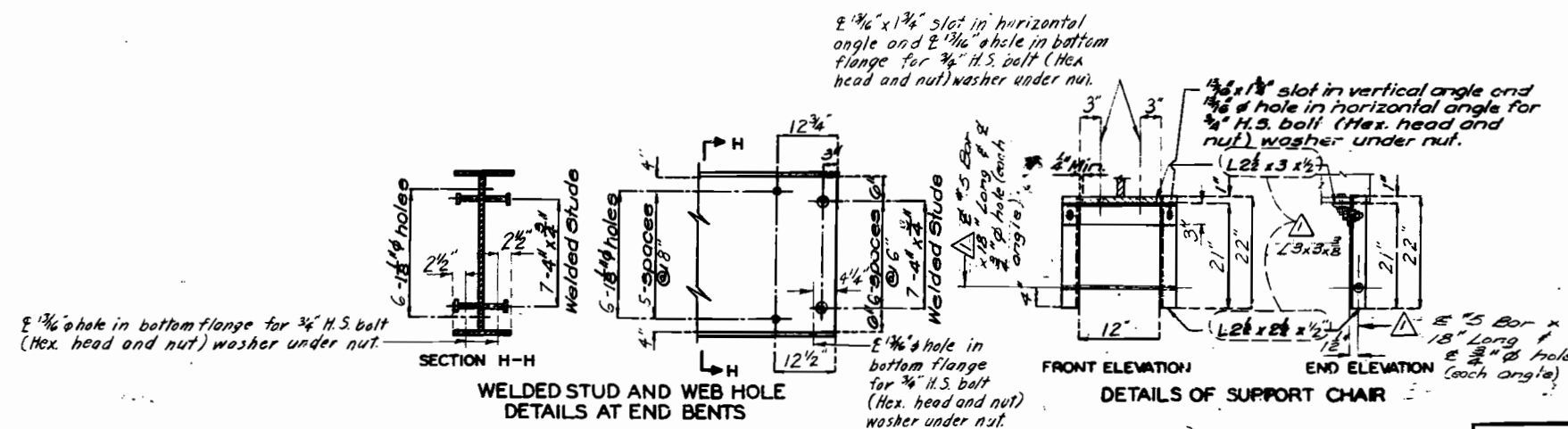
DETAIL "A"



TYP PART SECTION SHOWING INT. DIAPHRAGMS

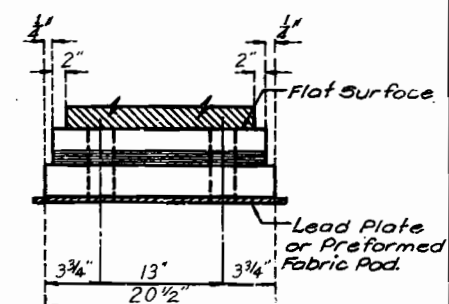
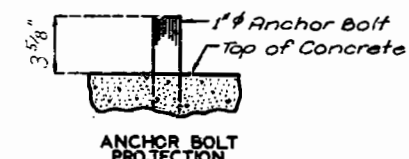


TYP PART SECTION SHOWING CROSS FRAMES



7

SHOP DRAWINGS ARE NOT REQUIRED FOR LEAD PLATES AND/OR PREFORMED FABRIC PADS.



INT. WEB STIFF.
(ONE SIDE ONLY)

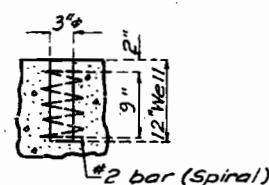
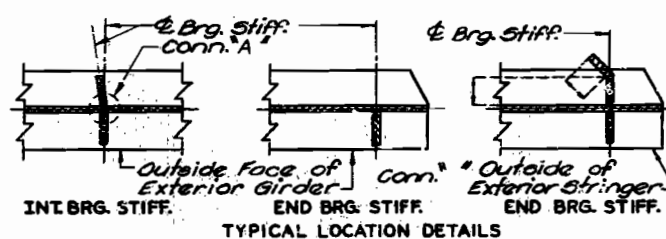
****INT. DIAPH. CONN. R. & WEB STIFF.**

INT. DIAPH. CONN. R. ONLY

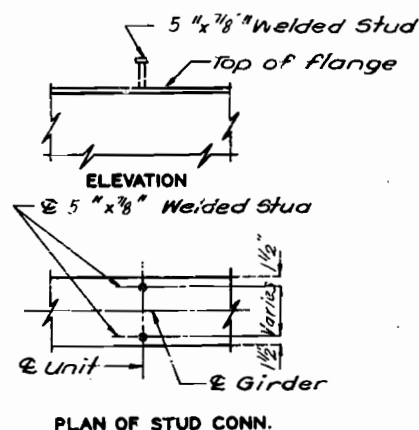
END BRG. STIFF.

INT. BRG. STIFF.

② Weld to compression flange as located on Elevation of Girder.
 * 1/2" Typical for all Int. Web Stiff., Int. Diaph. Conn. R. and Brg. Stiff.
 ** Weld may be omitted on interior girders, and Close Joint used when Intermediate Diaphragm Connection Plate is required on both sides.
 *** 3" Typical for all Int. Web Stiff., Int. Diaph. Conn. R. and Brg. Stiff.



Note: Weight of 3457 lbs. of shear connectors is included in weight of Fabricated Structural Carbon Steel.



The diagram consists of two parts: an Elevation view (top) and a Plan view (bottom).

ELEVATION: Shows a side view of a welded stud. A vertical line represents the stud, labeled "5" x 7/8" Welded Stud". The horizontal line it connects is labeled "Top of flange".

PLAN: Shows a top-down view of the connection. It features a horizontal line labeled "Girder" and a vertical line labeled "Unit". Several horizontal lines represent the studs. Dimensions are provided for the stud layout:

- From the centerline of the girder to the centerline of the first stud: 1 1/2"
- Between the first and second stud: 4 3/8"
- Between the second and third stud: 4 3/8"
- Between the third and fourth stud: 4 3/8"
- Between the fourth and fifth stud: 4 3/8"
- From the centerline of the unit to the centerline of the fifth stud: 1 1/2"
- The total width of the stud group is indicated as 16".

Header Supports
at abt. 3'-0" cts.

Rdwy. Surface

6"x1" wood scab

3"x10" Timber Header

3"x8" wood block

Optional 3" wedge block

8" Min.

6"x1" wood scab (nail to block)

€ 3/4" x 8" lag bolt (washer under head)

SECTION A-A

6"

3"

1"

3"x10" Timber Header

4" Coil Tie

3"x8" wood block or optional 3" wedge blocks

Const. Jt.

Fill Face

PART ELEVATION

Note: Cost of timber headers complete in place to be included in price bid for concrete.

DETAILS OF TIMBER HEADER AT END BENTS

^ Revised 1-7-81

ST. LOUIS COUNTY

A-3176

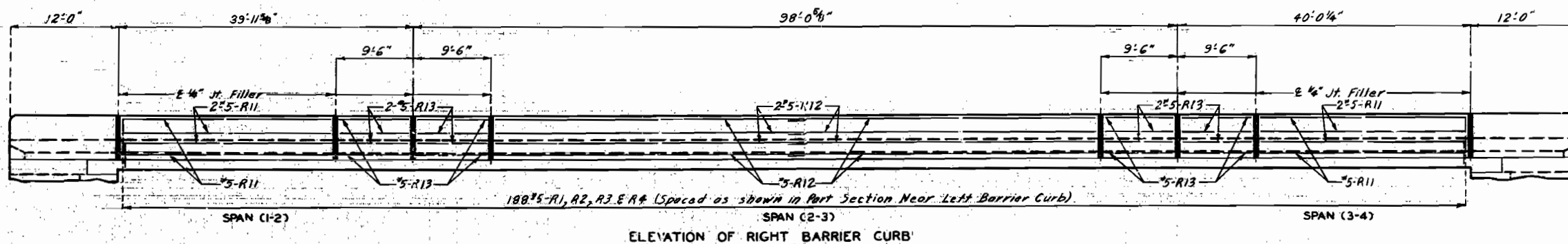
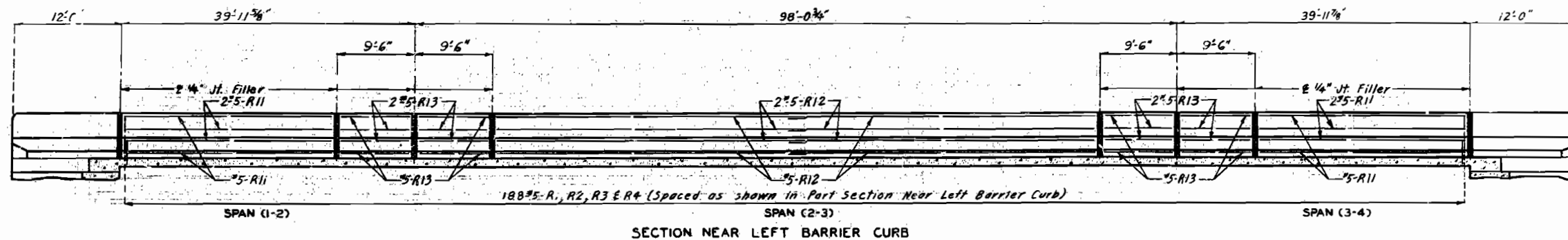
Note: This drawing is not to scale. Follow dimensions.

Sheet No. 13 of 20

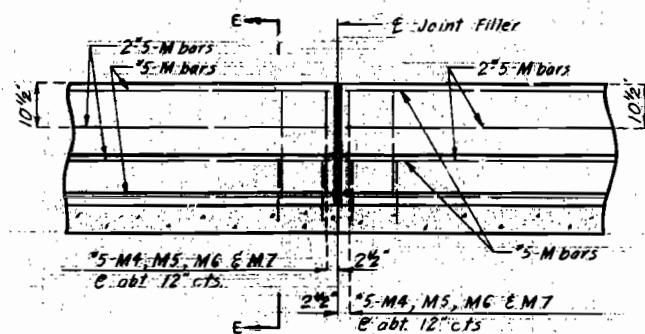
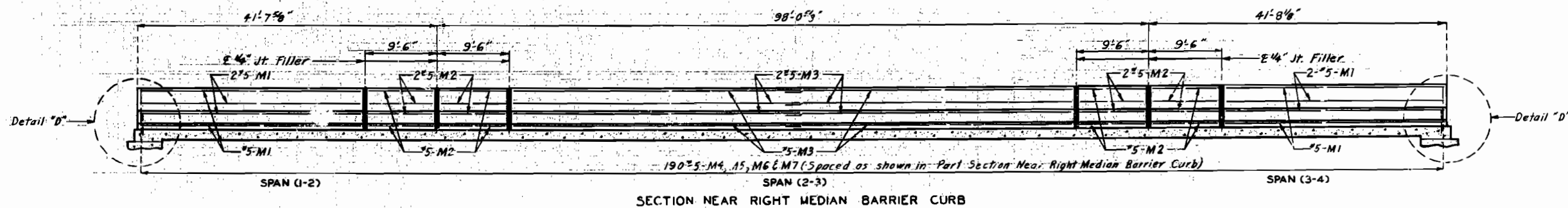
STD. C.B. REVISED	AUG. 1963	OCT. 1977
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DETAILED April 1978
CHECKED Jan. 1979

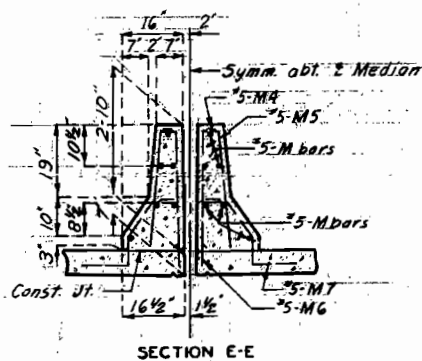
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	57	



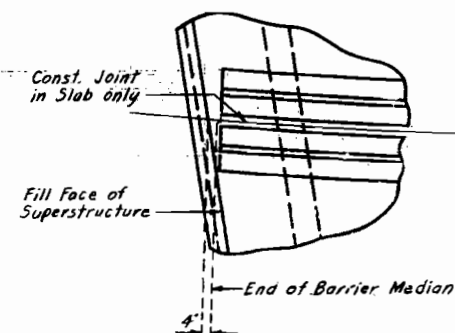
Note: Longitudinal dimensions are arc dimensions along centerline of top of barrier curb parallel to grade.
Longitudinal dimensions are arc dimensions along centerline of median at top of median barrier curb parallel to grade.



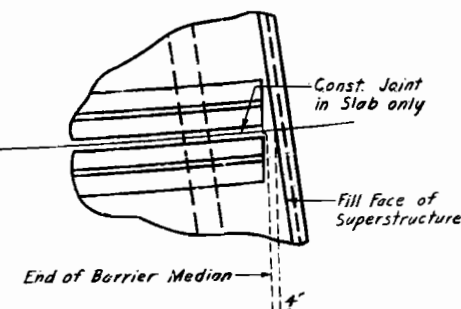
PART SECTION NEAR RIGHT MEDIAN BARRIER CURB



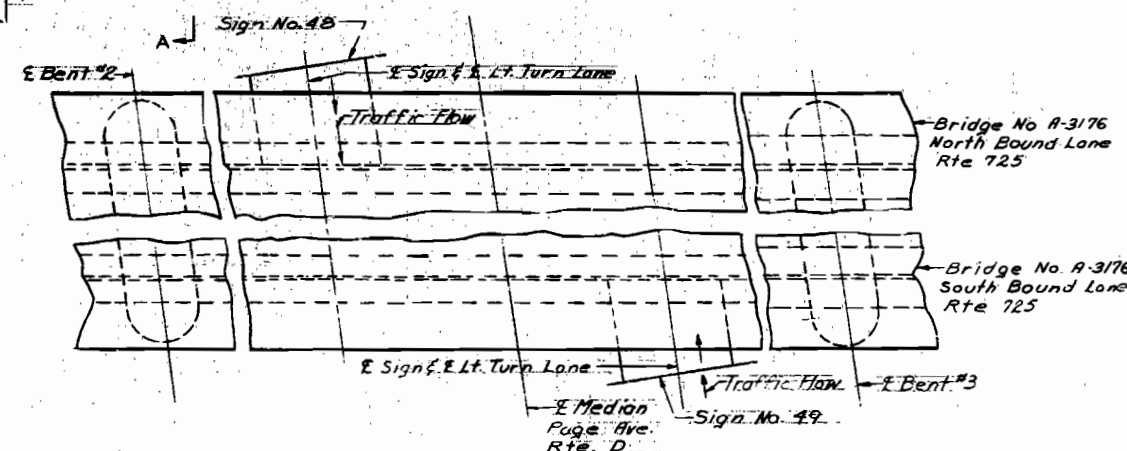
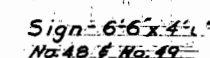
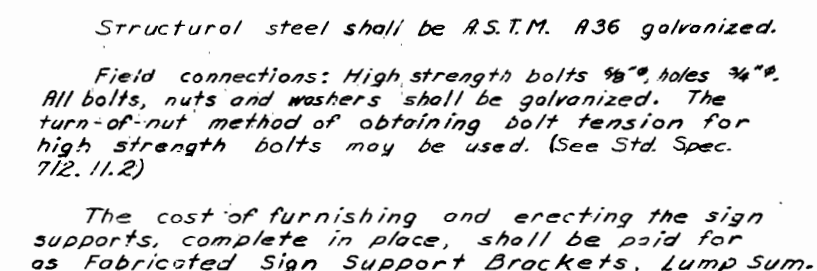
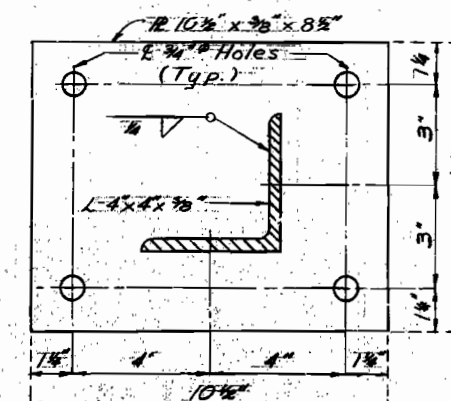
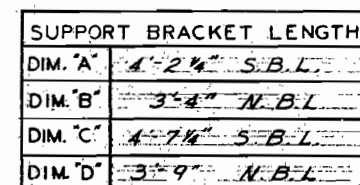
SECTION E-E



DETAIL "D"



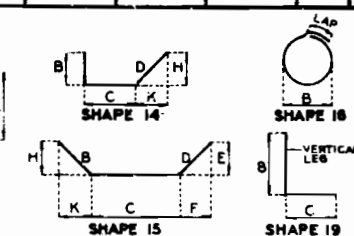
Note: For location of Detail "D" see this sheet and sheets No. 14 and 15.



SIGN SUPPORT BRACKETS

240

STD. 90.8	REVISED
MAY 1974	OCT. 1978

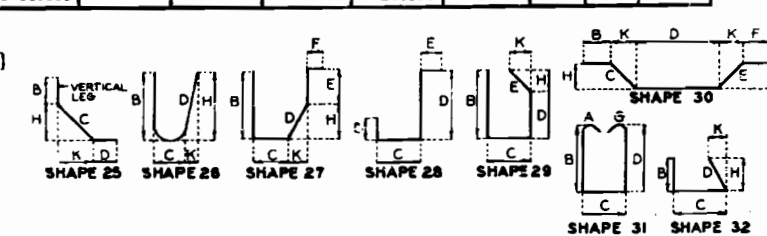


Note: This drawing is not to scale. Follow dimensions.

Sheet No. 19 of 20.

Figure 1 shows the details of the test specimens. The specimens are labeled as follows:

- SHAPE 19:** A rectangular specimen with a central hole and a notch on the right side. Dimensions are labeled: B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z, AA, AB, AC, AD, AE, AF, AG, AH, AI, AJ, AK, AL, AM, AN, AO, AP, AQ, AR, AS, AT, AU, AV, AW, AX, AY, AZ, BA, BB, BC, BD, BE, BF, BG, BH, BI, BJ, BK, BL, BM, BN, BO, BP, BQ, BR, BS, BT, BU, BV, BW, BX, BY, BZ, CA, CB, CC, CD, CE, CF, CG, CH, CI, CJ, CK, CL, CM, CN, CO, CP, CQ, CR, CS, CT, CU, CV, CW, CX, CY, CZ, DA, DB, DC, DD, DE, DF, DG, DH, DI, DJ, DK, DL, DM, DN, DO, DP, DQ, DR, DS, DT, DU, DV, DW, DX, DY, DZ, EA, EB, EC, ED, EE, EF, EG, EH, EI, EJ, EK, EL, EM, EN, EO, EP, EQ, ER, ES, ET, EU, EV, EW, EX, EY, EZ, FA, FB, FC, FD, FE, FF, FG, FH, FI, FJ, FK, FL, FM, FN, FO, FP, FQ, FR, FS, FT, FU, FV, FW, FX, FY, FZ, GA, GB, GC, GD, GE, GF, GG, GH, GI, GJ, GK, GL, GM, GN, GO, GP, GQ, GR, GS, GT, GU, GV, GW, GX, GY, GZ, HA, HB, HC, HD, HE, HF, HG, HH, HI, HJ, HK, HL, HM, HN, HO, HP, HQ, HR, HS, HT, HU, HV, HW, HX, HY, HZ, IA, IB, IC, ID, IE, IF, IG, IH, II, IJ, IK, IL, IM, IN, IO, IP, IQ, IR, IS, IT, IU, IV, IW, IX, IY, IZ, JA, JB, JC, JD, JE, JF, JG, JH, JI, JJ, JK, JL, JM, JN, JO, JP, JQ, JR, JS, JT, JU, JV, JW, JX, JY, JZ, KA, KB, KC, KD, KE, KF, KG, KH, KI, KJ, KL, KM, KN, KO, KP, KQ, KR, KS, KT, KU, KV, KW, KX, KY, KZ, LA, LB, LC, LD, LE, LF, LG, LH, LI, LJ, LK, LL, LM, LN, LO, LP, LQ, LR, LS, LT, LU, LV, LW, LX, LY, LZ, MA, MB, MC, MD, ME, MF, MG, MH, MI, MJ, MK, ML, MM, MN, MO, MP, MQ, MR, MS, MT, MU, MV, MW, MX, MY, MZ, NA, NB, NC, ND, NE, NF, NG, NH, NI, NJ, NK, NL, NM, NN, NO, NP, NQ, NR, NS, NT, NU, NV, NW, NX, NY, NZ, OA, OB, OC, OD, OE, OF, OG, OH, OI, OJ, OK, OL, OM, ON, OO, OP, OQ, OR, OS, OT, OU, OV, OW, OX, OY, OZ, PA, PB, PC, PD, PE, PF, PG, PH, PI, PJ, PK, PL, PM, PN, PO, PP, PQ, PR, PS, PT, PU, PV, PW, PX, PY, PZ, QA, QB, QC, QD, QE, QF, QG, QH, QI, QJ, QK, QL, QM, QN, QO, QP, QQ, QR, QS, QT, QU, QV, QW, QX, QY, QZ, RA, RB, RC, RD, RE, RF, RG, RH, RI, RJ, RK, RL, RM, RN, RO, RP, RQ, RR, RS, RT, RU, RV, RW, RX, RY, RZ, SA, SB, SC, SD, SE, SF, SG, SH, SI, SJ, SK, SL, SM, SN, SO, SP, SQ, SR, SS, ST, SU, SV, SW, SX, SY, SZ, TA, TB, TC, TD, TE, TF, TG, TH, TI, TJ, TK, TL, TM, TN, TO, TP, TQ, TR, TS, TT, TU, TV, TW, TX, TY, TZ, UA, UB, UC, UD, UE, UF, UG, UH, UI, UJ, UK, UL, UM, UN, UO, UP, UQ, UR, US, UT, UY, UZ, VA, VB, VC, VD, VE, VF, VG, VH, VI, VJ, VK, VL, VM, VN, VO, VP, VQ, VR, VS, VT, VU, VV, VW, VX, VY, VZ, WA, WB, WC, WD, WE, WF, WG, WH, WI, WJ, WK, WL, WM, WN, WO, WP, WQ, WR, WS, WT, WU, WV, WW, WX, WY, WZ, XA, XB, XC, XD, XE, XF, XG, XH, XI, XJ, XK, XL, XM, XN, XO, XP, XQ, XR, XS, XT, XU, XV, XW, XX, XY, XZ, YA, YB, YC, YD, YE, YF, YG, YH, YI, YJ, YK, YL, YM, YN, YO, YP, YQ, YR, YS, YT, YU, YV, YW, YX, YY, YZ, ZA, ZB, ZC, ZD, ZE, ZF, ZG, ZH, ZI, ZJ, ZK, ZL, ZM, ZN, ZO, ZP, ZQ, ZR, ZS, ZT, ZU, ZV, ZW, ZX, ZY, ZZ.
- SHAPE 20:** A rectangular specimen with a central hole and a notch on the right side. Dimensions are labeled: B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z, AA, AB, AC, AD, AE, AF, AG, AH, AI, AJ, AK, AL, AM, AN, AO, AP, AQ, AR, AS, AT, AU, AV, AW, AX, AY, AZ, BA, BB, BC, BD, BE, BF, BG, BH, BI, BJ, BK, BL, BM, BN, BO, BP, BQ, BR, BS, BT, BU, BV, BW, BX, BY, BZ, CA, CB, CC, CD, CE, CF, CG, CH, CI, CJ, CK, CL, CM, CN, CO, CP, CQ, CR, CS, CT, CU, CV, CW, CX, CY, CZ, DA, DB, DC, DD, DE, DF, DG, DH, DI, DJ, DK, DL, DM, DN, DO, DP, DQ, DR, DS, DT, DU, DV, DW, DX, DY, DZ, EA, EB, EC, ED, EE, EF, EG, EH, EI, EJ, EK, EL, EM, EN, EO, EP, EQ, ER, ES, ET, EU, EV, EW, EX, EY, EZ, FA, FB, FC, FD, FE, FF, FG, FH, FI, FJ, FK, FL, FM, FN, FO, FP, FQ, FR, FS, FT, FU, FV, FW, FX, FY, FZ, GA, GB, GC, GD, GE, GF, GG, GH, GI, GJ, GK, GL, GM, GN, GO, GP, GQ, GR, GS, GT, GU, GV, GW, GX, GY, GZ, HA, HB, HC, HD, HE, HF, HG, HH, HI, HJ, HK, HL, HM, HN, HO, HP, HQ, HR, HS, HT, HU, HV, HW, HX, HY, HZ, IA, IB, IC, ID, IE, IF, IG, IH, II, IJ, IK, IL, IM, IN, IO, IP, IQ, IR, IS, IT, IU, IV, IW, IX, IY, IZ, JA, JB, JC, JD, JE, JF, JG, JH, JI, JJ, JK, JL, JM, JN, JO, JP, JQ, JR, JS, JT, JU, JV, JW, JX, JY, JZ, KA, KB, KC, KD, KE, KF, KG, KH, KI, KJ, KL, KM, KN, KO, KP, KQ, KR, KS, KT, KU, KV, KW, KX, KY, KZ, LA, LB, LC, LD, LE, LF, LG, LH, LI, LJ, LK, LL, LM, LN, LO, LP, LQ, LR, LS, LT, LU, LV, LW, LX, LY, LZ, MA, MB, MC, MD, ME, MF, MG, MH, MI, MJ, MK, ML, MM, MN, MO, MP, MQ, MR, MS, MT, MU, MV, MW, MX, MY, MZ, NA, NB, NC, ND, NE, NF, NG, NH, NI, NJ, NK, NL, NM, NN, NO, NP, NQ, NR, NS, NT, NU, NV, NW, NX, NY, NZ, OA, OB, OC, OD, OE, OF, OG, OH, OI, OJ, OK, OL, OM, ON, OO, OP, OQ, OR, OS, OT, OU, OV, OW, OX, OY, OZ, PA, PB, PC, PD, PE, PF, PG, PH, PI, PJ, PK, PL, PM, PN, PO, PP, PQ, PR, PS, PT, PU,



GRADES 40-50-60 KSI					
BAR SIZE	D (in.)	90° HOOK		135° HOOK	
		HOKK A OR G		HOKK A OR G	APPROX. H
#3	1-1/2"	4"		4"	2-1/2"
#4	2"	4-1/2"		4-1/2"	3"
#5	2-1/2"	6"		5-1/2"	3-3/4"
#6	4-1/2"	8"		7"	4-1/2"

Figure 10.10 shows two diagrams illustrating the detailing dimensions for reinforcement hooks. The left diagram shows a 180° hook, and the right diagram shows a 90° hook. Both diagrams specify a minimum hook length of 40d or 24 inches.

END HOOK DIMENSIONS						
BAR SIZE	180° HOOKS				90° HOOKS	
	GRADE 40		GRADE 60		ALL GRADES	
	A OR G	J	A OR G	J	A OR G	
#3	5"	2-3/4"	5"	3"	8"	
#4	6"	3-1/2"	6"	4"	8"	
#5	7"	4-1/2"	7"	5"	10"	
#6	8"	5-1/4"	8"	6"	12"	
#7	9"	6-1/2"	10"	7"	14"	
#8	10"	7"	11"	8"	16"	
#9	12"	8"	15"	11-1/4"	19"	
#10	13"	9"	17"	12-3/4"	22"	
#11	14"	10"	19"	14-1/4"	21-0"	
#14	21-2"	20-1/2"	21-2"	20-1/2"	21-7"	
#18	21-11"	21-3"	21-11"	21-3"	31-5"	

* ALL HOOKS AND BENDS FOR SHAPE NO. 12 - GRADE 40 (GJLY) ARE BASED ON $D = 5d$.

COMPLETE BILL OF REINFORCING STEEL

NO. REQD.	MARK NO.	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	DIMENSIONS								NOMINAL LENGTH	ACTUAL LENGTH	WEIGHT				
									B	C	D	E	F	H	K								
SIZE	MARK								FT.	IN.	FT.	IN.	FT.	IN.	FT.	IN.	FT.	IN.	FT.	IN.	LBS.		
3	6U5	DIAPH		23	S				21.375	4	3.000					21.000	3.750	6	0	5	11	44	
24	4U6	DIAPH		19	S				5	2.000	3	0.000						8	2	8	1	130	
24	4U7	DIAPH		19	S				5	2.000	22.000							7	0	6	11	111	
67	4U8	DIAPH		19	S				5	0.000	3	0.000						8	0	7	11	354	
67	4U9	DIAPH		19	S				5	0.000	22.000							6	10	6	9	302	
16	6V1	WING		20					2	2	9.000							2	9	2	9		
		INCR = 5.750 IN							6	1.000								6	1	6	1	106	
2	6V2	WING		20					6	7.000								6	7	6	7	20	
16	6V3	WING		20					2	2	6.000							2	6	2	6		
		INCR = 6.000 IN							6	0.000								6	0	6	0	102	
2	6V4	WING		20					6	0.000								6	6	6	6	20	
		BENT NO 4																					
14	6H44	DIAPH		20					55	9.000								55	9	55	9	1172	
14	6H45	DIAPH		20					58	2.000								58	2	58	2	1223	
8	6H46	WING		20					6	5.000								6	5	6	5		
		INCR = 17.625 IN							10	10.000								10	10	10	10	104	
6	6H47	WING		20					11	6.000								11	6	11	6	104	
2	6H48	WING		20					4	7.000								4	7	4	7	14	
4	6H49	WING		20					12	0.000								12	0	12	0	108	
8	6H50	WING		20					7	0.000								7	0	7	0		
		INCR = 17.625 IN							11	5.000								11	5	11	5	111	
2	6H51	WING		20					5	4.000								5	4	5	6	17	
2	6H52	WING		20					3	1.000								3	1	3	1	9	
2	6H53	WING		20					2	1.000								2	1	2	1	6	
2	6T3	WING		23	S				2	1.000	7	1.000	5	1.000		3	2.000	4	4.000	14	3	43	
2	6T4	WING		25	S				2	1.000	6	2.750	5	4.000		2	5.250	5	7.000	14	8	44	
5	6U22	DIAPH		21	S				21.125	3	10.000					21.000	2.500	5	7	5	5	41	
5	6U23	DIAPH		23	S				21.125	5	4.000					21.000	2.500	7	1	7	0	53	
54	4U25	DIAPH		19	S				5	0.000	3	0.000						8	0	7	11	286	
54	4U26	DIAPH		19	S				5	0.000	21.000							6	9	6	8	240	
23	4U27	DIAPH		19	S				5	4.000	3	0.000						8	4	8	3	127	
23	4U28	DIAPH		19	S				5	4.000	21.000							7	1	7	0	108	
32	4U29	DIAPH		19	S				5	2.000	3	0.000						8	2	8	1	173	
32	4U30	DIAPH		19	S				5	2.000	21.000							6	11	6	10	146	
6	6V15	WING		20					2	2	7.000							2	7	2	7		
		INCR = 14.000 IN							6	1.000								6	1	6	1	52	
2	6V16	WING		20					6	6.000								6	6	6	6	20	
16	6V17	WING		20					2	2	8.000							2	8	2	8		
		INCR = 6.000 IN							6	2.000								6	2	6	2	106	
2	6V18	WING		20					6	7.000								6	7	6	7	20	
24	5H1	MEDIAN BARRIER		23					31	11.000								31	11	31	11	799	
48	5H2	MEDIAN BARRIER		20					9	3.000								9	3	9	3	463	
24	5H3	MEDIAN BARRIER		20					40	1.000								40	1	40	1	1003	
380	5H4	MEDIAN BARRIER		19					2	5.000	3.500							2	9	2	7	1024	
380	5H5	MEDIAN BARRIER		15					2	5.125	3.500					2	5.000	3.000	2	9	2	7	1024
380	5H6	MEDIAN BARRIER		19	S				17.000	6.000								23	22	727			
380	5H7	MEDIAN BARRIER		27	S				6.300		11.125	7.000	12.000	9.125	6.375	3	0	2	10	1123			
434	5R1	BARRIER CURB		19					2	6.000	6.000							3	0	2	11	1326	
434	5R2	BARRIER CURB		15					2	6.125	6.000					2	6.000	3.000	3	0	2	11	1326

COMPLETE BILL OF REINFORCING STEEL

NO. REQD.	MARK NO.	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	DIMENSIONS								NOMINAL LENGTH	ACTUAL LENGTH	WEIGHT			
									B	C	D	E	F	H	K	FT.				IN.	FT.	IN.
376	5R3	BARRIER CURB	E	19	S					17.000	9.000							2	2	2	1	817
376	5R4	BARRIER CURB	E	27	S						9.000	11.125	7.000	12.000	9.125	6.375	3	3	3	1	1209	
60	5R5	BARRIER CURB	E	19	S					18.000	9.000							2	3	2	2	136
52	5R6	BARRIER CURB	E	27	S					17.000	10.000	11.125	9.000		6.375	9.125	3	11	3	9	203	
4	5R7	BARRIER CURB	E	20						11 6.000								11	4	11	6	48
40	5R8	BARRIER CURB	E	20						11 9.000								11	9	11	9	490
4	5R9	BARRIER CURB	E	20						11 0.000								11	0	11	0	46
24	5R11	BARRIER CURB	E	20						30 3.000								30	3	30	3	757
24	5R12	BARRIER CURB	E	20						40 1.000								40	1	40	1	1003
48	5R13	BARRIER CURB	E	20						9 3.000								9	3	9	3	463
1	6S1	SLAB (NBL)	E	20						2 0.000								2	0	2	0	3
224	6S2	SLAB (NBL)	E	20						5 8.000								5	8	5	8	1907
2	4S3	SLAB (NBL)	E	20						29 0.000								29	0	29	0	39
4	4S4	SLAB (NBL)	E	20						28 8.000								28	8	28	8	77
1	6S5	SLAB (NBL)	E	20						5 1.000								5	1	5	1	8
12	6S6	SLAB (NBL)	E	20				V 1	5	10.000								5	10	5	10	
		INCR = 45.875 IN								47 11.000								47	11	47	11	484
161	6S7	SLAB (NBL)	E	20						51 8.000								51	8	51	8	12494
137	6S8	SLAB (NBL)	E	20						55 4.000								55	4	55	4	11386
13	6S9	SLAB (NBL)	E	20				V 1	4	11.000								4	11	4	11	
		INCR = 47.125 IN								52 0.000								52	0	52	0	554
267	5S10	SLAB (NBL)		20						55 4.000								55	4	55	4	15063
24	5S11	SLAB (NBL)		20				V 2	2	4.000								2	4	2	4	
		INCR = 53.500 IN								51 4.000								51	4	51	4	672
172	5S12	SLAB (NBL)	E	20						46 10.000								46	10	46	10	8402
90	5S13	SLAB (NBL)	E	20						30 9.000								30	9	30	9	2887
88	5S14	SLAB (NBL)	E	20						31 0.000								31	0	31	0	2845
200	5S16	SLAB (NBL)		20						46 10.000								46	10	46	10	9769
1	6S1	SLAB (SBL)	E	20						2 0.000								2	0	2	0	3
272	6S2	SLAB (SBL)	E	20						5 8.000								5	8	5	8	2315
2	4S3	SLAB (SBL)	E	20						29 0.000								29	0	29	0	39
2	4S4	SLAB (SBL)	E	20						28 8.000								28	8	28	8	38
1	6S5	SLAB (SBL)	E	20						5 1.000								5	1	5	1	8
12	6S6	SLAB (SBL)	E	20				V 1	5	10.000								5	10	5	10	
		INCR = 45.875 IN								47 11.000								47	11	47	11	484
201	6S7	SLAB (SBL)	E	20						51 8.000								51	8	51	8	15598
97	6S8	SLAB (SBL)	E	20						55 4.000								55	4	55	4	8062
261	5S10	SLAB (SBL)		20						55 4.000								55	4	55	4	15063
24	5S11	SLAB (SBL)		20				V 2	2	4.000								2	4	2	4	
		INCR = 53.500 IN								51 4.000								51	4	51	4	672
172	5S12	SLAB (SBL)	E	20						46 10.000								46	10	46	10	8402
88	5S13	SLAB (SBL)	E	20						30 9.000								30	9	30	9	2822
88	5S14	SLAB (SBL)	E	20						31 0.000								31	0	31	0	2845
13	6S15	SLAB (SBL)	E	20				V 1	4	10.000								4	10	4	10	
		INCR = 46.500 IN								51 4.000								51	4	51	4	546
200	5S16	SLAB (SBL)		20						46 10.000								46	10	46	10	9769
		END OF BAR LIST																				

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOT. SHE.
5	MO.		19	42	
SEC./SUR. 33		TWP. 46 N.		RGE. 6 E.	

Construction Clearance:
A minimum vertical clearance of 14'-0" from crown, 6' existing
lanes and a minimum lateral clearance of 28'-0"
centered on existing lanes maintained during
construction.

Minimum energy requirement of hammer based on
pilot length and design bearing value of piles.
All pile driven to practical refusal.

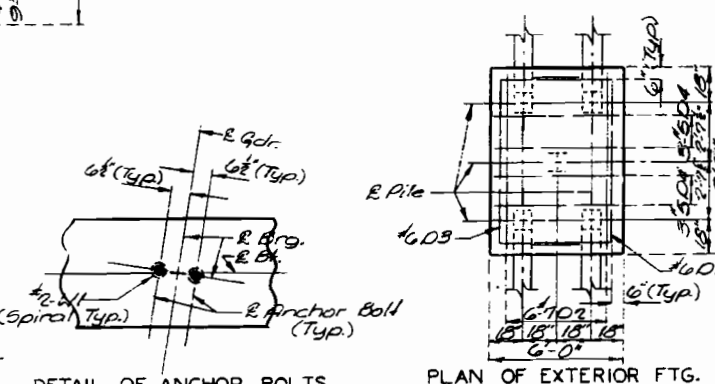
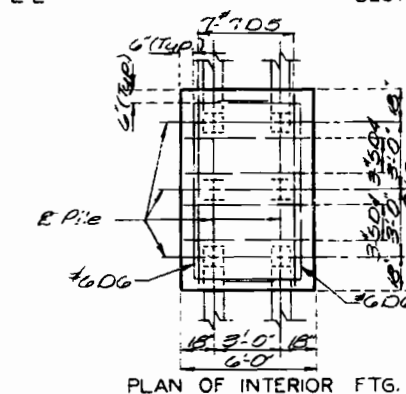
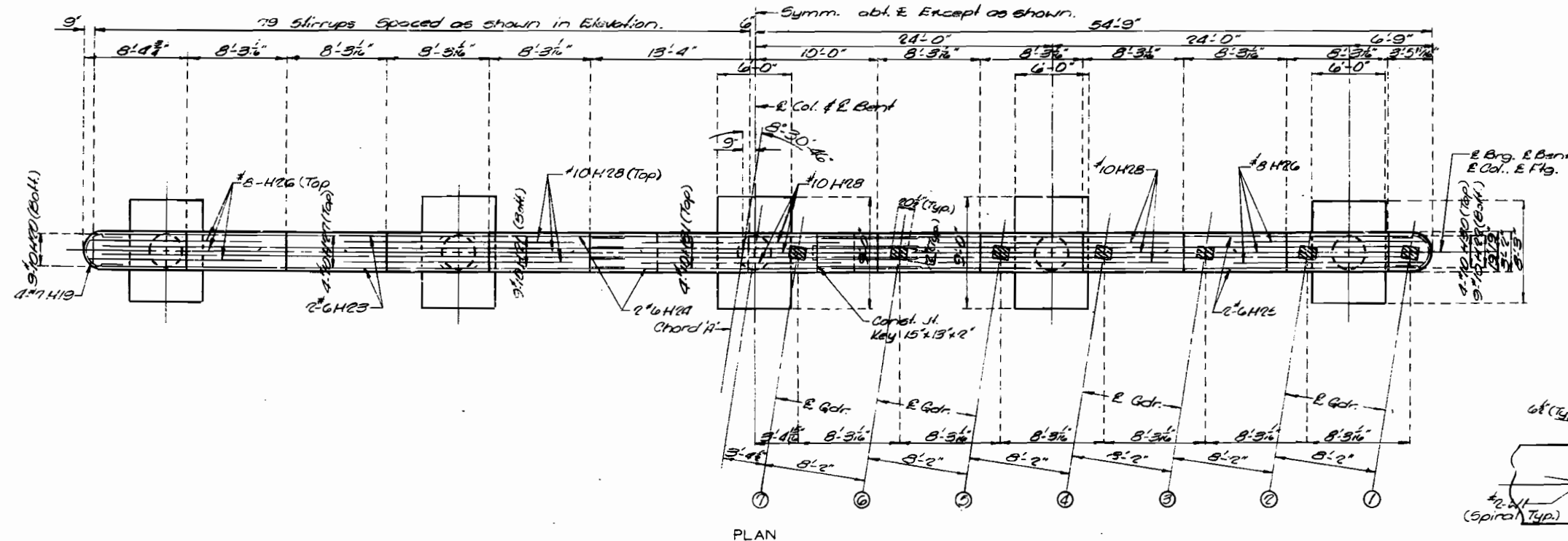
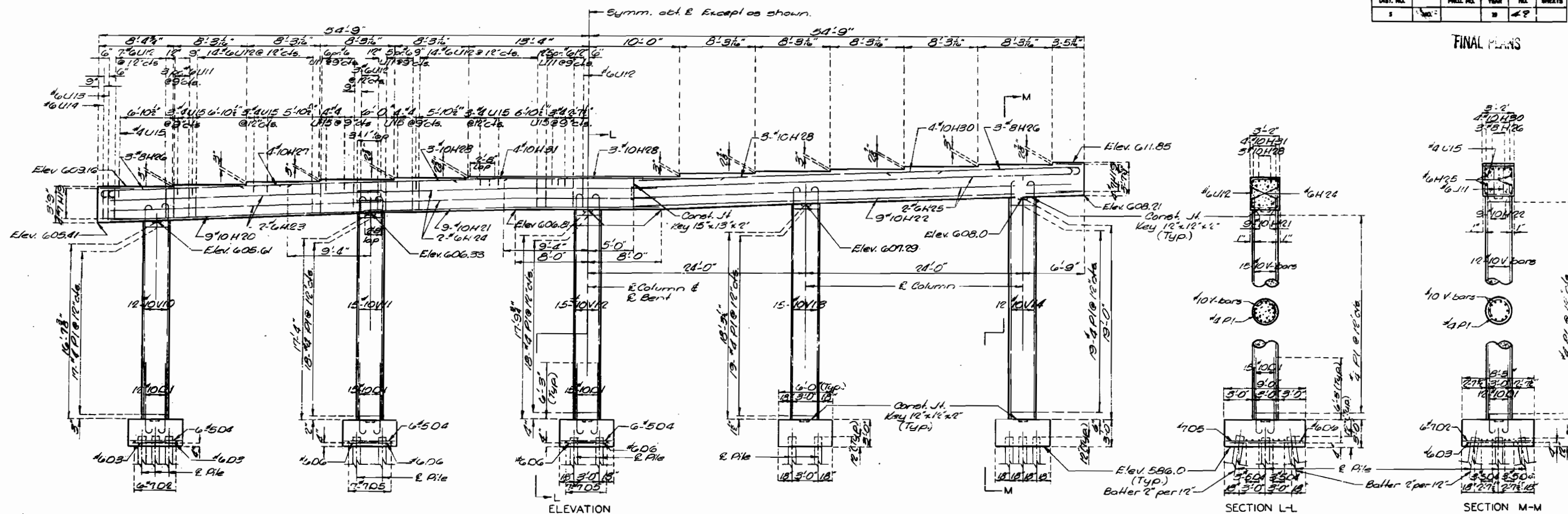
Note: All concrete and reinforcement in erid bents (except pile cap beam) include 10% for structure quantities.

B.M. #84 Elev. 617.08 Chiseled "I" ON TOP OF East Barrier Curb @ Fill Face
End Bt. # 4 N.B.L. 3rd. #3176

A-3176



FINAL PLANS



Note: All reinforcing bars in tops of substructure beams or caps spaced to clear anchor bolts for bearings by at least 2".

DETAIL OF ANCHOR BOLTS

PLAN OF EXTERIOR FTG

DETAILS OF INT. BT. NO. 3

Note: This drawing is not to scale. Follow dimensions.

DETAILED May 1978
CHECKED Jan 1979

ST. LOUIS COUNTY

A-3176

COMPLETE BILL OF REINFORCING STEEL

NO. REQD.	MARK NO.	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	DIMENSIONS								NOMINAL LENGTH	ACTUAL LENGTH	WEIGHT				
									B	C	D	E	F	H	K	FT.				IN.	FT.	IN.	FT.
5	6U5	DIAPH		23	S				21.375	4	3.000				21.000	3.750	6	0	5	11	44		
24	4U6	DIAPH		19	S				5	2.000	3	0.000					8	2	8	1	130		
24	4U7	DIAPH		19	S				5	2.000	22.000						7	0	6	11	111		
67	4U8	DIAPH		19	S				5	0.000	3	0.000					8	0	7	11	354		
47	4U9	DIAPH		19	S				5	0.000	22.000						6	10	6	9	302		
16	6V1	WING		20			V	2	2	9.000							2	9	2	9			
		INCR = 5.750 IN								6	1.000						6	1	6	1	106		
2	6V2	WING		20					6	7.000							6	7	6	7	20		
16	6V3	WING		20			V	2	2	6.000							2	6	2	6			
		INCR = 6.000 IN								6	0.000						6	0	6	0	102		
2	6V4	WING		20					6	6.000							6	6	6	6	20		
		BENT NO 4																					
14	6M4	DIAPH		20					55	9.000							55	9	55	9	1172		
14	6M5	DIAPH		20					58	2.000							58	2	58	2	1223		
8	6M6	WING		20			V	2	6	5.000							6	5	6	5			
		INCR = 17.625 IN								10	10.000						10	10	10	10	104		
6	6M7	WING		20					11	6.000							11	6	11	6	104		
2	6M8	WING		20					4	7.000							4	7	4	7	14		
4	6M9	WING		20					12	0.000							12	0	12	0	108		
8	6M9	WING		20			V	2	7	0.000							7	0	7	0			
		INCR = 17.625 IN								11	5.000						11	5	11	5	111		
2	6M1	WING		20					5	6.000							5	6	5	6	17		
2	6M2	WING		20					3	1.000							3	1	3	1	9		
2	6M3	WING		20					2	1.000							2	1	2	1	6		
2	6T3	WING		25	S				2	1.000	7	1.000	5	1.000		3	2.000	6	4.000	14	3	14	43
2	6T4	WING		25	S				2	1.000	6	2.750	6	4.000		2	9.250	5	7.000	14	8	14	44
5	6U22	DIAPH		23	S				21.125	3	10.000				21.000	2.500	5	7	3	5	41		
5	6U23	DIAPH		23	S				21.125	5	4.000				21.000	2.500	7	1	7	0	93		
54	4U25	DIAPH		19	S				5	0.000	3	0.000					8	0	7	11	286		
54	4U26	DIAPH		19	S				5	0.000	21.000						6	9	6	8	240		
23	4U27	DIAPH		19	S				5	4.000	3	0.000					8	4	8	3	127		
23	4U28	DIAPH		19	S				5	4.000	21.000						7	1	7	0	108		
32	4U29	DIAPH		19	S				5	2.000	3	0.000					8	2	8	1	173		
32	4U30	DIAPH		19	S				5	2.000	21.000						6	11	6	10	146		
16	6V15	WING		20			V	2	2	7.000							2	7	2	7			
		INCR = 14.000 IN								6	1.000						6	1	6	1	104		
2	6V16	WING		20					6	6.000							6	6	6	6	20		
16	6V17	WING		20			V	2	2	8.000							2	8	2	8			
		INCR = 6.000 IN								6	2.000						6	2	6	2	106		
2	6V18	WING		20					6	7.000							6	7	6	7	20		
24	5M1	MEDIAN BARRIER		20					31	11.000							31	11	31	11	799		
48	5M2	MEDIAN BARRIER		20					9	3.000							9	3	9	3	463		
24	5M3	MEDIAN BARRIER		20					40	1.000							40	1	40	1	1003		
390	5M4	MEDIAN BARRIER		14					2	5.000	3.500						2	9	2	7	1024		
390	5M5	MEDIAN BARRIER		14					2	5.125	3.500				2	5.000	3.000	2	9	2	7	1024	
390	5M6	MEDIAN BARRIER		14					17.000		6.000						23	22			727		
390	5M7	MEDIAN BARRIER		27	S				6.000		11.125	7.000	12.000	9.125	6.375	3	0	2	10	1123			
434	5R1	BARRIER CURB		19					2	6.000	6.000						3	0	2	11	1324		
434	5R2	BARRIER CURB		19					2	6.125	6.000				2	6.000	3.000	3	0	2	11	1324	

COMPLETE BILL OF REINFORCING STEEL

NO. REQD.	MARK NO.	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	NO. EACH	DIMENSIONS								NOMINAL LENGTH	ACTUAL LENGTH	WEIGHT			
									B	C	D	E	F	H	K	FT.				IN.	FT.	IN.
376	5R3	BARRIER CURB	E	19	S				17.000	9.000								2	2	2	1	81
376	5R4	BARRIER CURB	E	27	S					9.000	11.125	7.000	12.000	9.125	6.375	3	3	3	1		120	
60	5R5	BARRIER CURB	E	19	S				18.000	9.000								2	3	2	2	13
52	5R6	BARRIER CURB	E	27	S				17.000	10.000	11.125	9.000		6.375	9.125	3	11	3	9		20	
4	5R7	BARRIER CURB	E	20					11	6.000								11	6	11	6	4
40	5R8	BARRIER CURB	E	20					11	9.000								11	9	11	9	49
4	5R9	BARRIER CURB	E	20					11	0.000								11	0	11	0	4
24	5R11	BARRIER CURB	E	20					30	3.000								30	3	30	3	75
24	5R12	BARRIER CURB	E	20					40	1.000								40	1	40	1	100
48	5R13	BARRIER CURB	E	20					9	3.000								9	3	9	3	46
1	6S1	SLAB (NBL)	E	20					2	0.000								2	0	2	0	
224	6S2	SLAB (NBL)	E	20					5	8.000								5	8	5	8	190
2	4S3	SLAB (NBL)	E	20					29	0.000								29	0	29	0	3
4	4S4	SLAB (NBL)	E	20					28	8.000								28	8	28	8	7
1	6S5	SLAB (NBL)	E	20					5	1.000								5	1	5	1	
12	6S6	SLAB (NBL)	E	20			V	1	5	10.000								5	10	5	10	
									INCR = 45.875 IN									47	11.000			48
61	6S7	SLAB (NBL)	E	20					51	8.000								51	8	51	8	1249
137	6S8	SLAB (NBL)	E	20					55	4.000								55	4	55	4	1138
13	6S9	SLAB (NBL)	E	20			V	1	4	11.000								4	11	4	11	
									INCR = 47.125 IN									52	0.000			55
261	5S10	SLAB (NBL)		20					55	4.000								55	4	55	4	1506
24	5S11	SLAB (NBL)		20			V	2	2	4.000								2	4	2	4	
									INCR = 53.500 IN									51	4.000			67
172	5S12	SLAB (NBL)	E	20					46	10.000								46	10	46	10	840
90	5S13	SLAB (NBL)	E	20					30	9.000								30	9	30	9	288
88	5S14	SLAB (NBL)	E	20					31	0.000								31	0	31	0	284
200	5S16	SLAB (NBL)	E	20					46	10.000								46	10	46	10	976
1	6S1	SLAB (SBL)	E	20					2	0.000								2	0	2	0	
272	6S2	SLAB (SBL)	E	20					5	8.000								5	8	5	8	231
2	4S3	SLAB (SBL)	E	20					29	0.000								29	0	29	0	3
2	4S4	SLAB (SBL)	E	20					28	8.000								28	8	28	8	3
1	6S5	SLAB (SBL)	E	20					5	1.000								5	1	5	1	
12	6S6	SLAB (SBL)	E	20			V	1	5	10.000								5	10	5	10	
									INCR = 45.875 IN									47	11.000			48
201	6S7	SLAB (SBL)	E	20					51	8.000								51	8	51	8	1559
97	6S8	SLAB (SBL)	E	20					55	4.000								55	4	55	4	806
261	5S10	SLAB (SBL)		20					55	4.000								55	4	55	4	1506
24	5S11	SLAB (SBL)		20			V	2	2	4.000								2	4	2	4	
									INCR = 53.500 IN									51	4.000			67
172	5S12	SLAB (SBL)	E	20					46	10.000								46	10	46	10	840
88	5S13	SLAB (SBL)	E	20					30	9.000								30	9	30	9	282
88	5S14	SLAB (SBL)	E	20					31	0.000								31	0	31	0	284
13	6S15	SLAB (SBL)	E	20			V	1	4	10.000								4	10	4	10	
									INCR = 46.500 IN									51	4.000			54
200	5S16	SLAB (SBL)		20					46	10.000								46	10	46	10	976
END OF BAR LIST																						