

FED. ROAD DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	ARK.	1-30-1 (59) 45		10	73
JOB NO.		3723			

SUMMARY OF BRIDGE QUANTITIES																
BRIDGE NO.	CODE NO.	BRIDGE NAME PLATE	ITEM NO.	801	Sp 8 802	Sp 8 802	Sp 8 802	Sp 8 803	804	804	*SP 8 805 (ALT. NO. 1) 805 (A-36)	SP 8 806	SP-806-9	812	817	SP-802-9
			ITEM	COMMON EXCAVATION FOR STRUCTURES	CLASS S (AE) CONCRETE	CLASS S CONCRETE	CLASS A CONCRETE	REINFORCING STEEL	BEARING PILING (16")	PROVIDING EQUIPMENT FOR DRIVING TEST PILES	(ALT. NO. 1) METAL (ALUM.) BRIDGE RAILING (TYPE A) (ALT. NO. 2) METAL (STEEL) BRIDGE RAILING (TYPE A)	STRUCTURAL STEEL IN BEAM SPANS (A-36)	PREFORMED JOINT SEALER	BRIDGE NAME PLATES (TYPE C)	CONCRETE RIPRAP	BOILED LINSEED OIL
				UNIT OF BRIDGE	UNIT	CU. YD.	CU. YD.	CU. YD.	CU. YD.	LBS.	LIN. FT.	COMP. ITEM.	LIN. FT.	LBS.	LIN. FT.	PLATE
5063	X771	INTERCHANGE	End Bents No. 1 & 6	132.0		45.3		4,450	724					1	158.9	
			Int. Bents No. 2 & 5	67.3		51.6	42.0	10,690	1,044							
			Int. Bents No. 3 & 4	81.4		53.8	56.0	16,230	1,224							
			Spans No. 1 Thru 5		340.6			81,260			656.9	400,950	175.0			33.5
			TOTAL BRIDGE 5063 JOB NO. 3723	280.7	340.6	150.7	93.0	112,630	2,992	1.0	656.9	400,950	175.0	1	158.9	33.5

* See Sp-806-10

SUMMARY OF BRIDGE QUANTITIES

ROUTE 30 SEC. 1

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY L.D.M. DATE

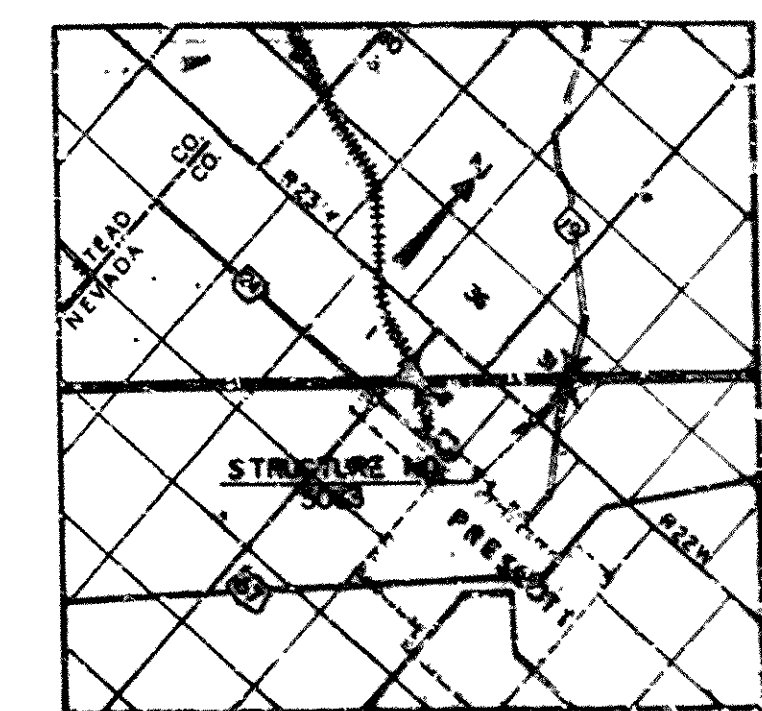
TRACE BY L.D.M. DATE

CHECKED BY D.L.W. DATE

SCALE

BRIDGE NO. 5063 DRAWING NO. 14430

FILE NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	ARK.	1-30-1 (S) 45		20	73
JOB NO.	3727				



KEY PLAN

GENERAL NOTES

ALL CONCRETE TO BE POURED IN THE DRY. EXPOSED CORNERS TO BE CHAMFERED 3/4" UNLESS OTHERWISE NOTED.

IN GENERAL, ALL CONSTRUCTION JOINTS IN ABUTMENTS AND PIERS SHALL BE HORIZONTAL AND SHALL BE PROVIDED WITH KEYS NOT LESS THAN 1/4" HIGH COVERING THE MIDDLE THIRD OF BOTH DIMENSIONS.

ALL PILING SHALL BE 16" OCTAGONAL PRECAST CONCRETE OR 16" CONCRETE FILLED METAL SHELLS AND SHALL BE DRIVEN WITH AN APPROVED AIR, STEAM, OR DIESEL HAMMER TO A MINIMUM BEARING CAPACITY OF 40 TONS PER PILE, WITH A MINIMUM LENGTH OF 20' OR 12' INTO EXISTING GROUND LINE. LENGTHS OF PILING SHOWN ARE ASSUMED FOR ESTIMATING QUANTITIES ONLY. ACTUAL LENGTHS TO BE DETERMINED IN THE FIELD. DRIVE ONE 30" TEST PILE IN BENT NO. 2 AND ONE 30" TEST PILE IN BENT NO. 5.

PILES IN END BENTS SHALL BE DRIVEN AFTER EMBANKMENT IS IN PLACE, TO SUBGRADE ELEVATION.

SPECIFICATIONS: ARKANSAS STATE HIGHWAY COMMISSION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, EDITION OF 1939, AND 1966 SUPPLEMENTAL SPECIFICATIONS.

DESIGN SPECIFICATIONS: AASHTO 1960

LIVE LOADING: HS20

UNIT STRESSES:	CLASS A CONCRETE (n-15)	840 PSI
	CLASS S (AE) CONCRETE (n-10)	1,200 PSI
	CLASS S CONCRETE (n-10)	1,200 PSI
	REINFORCING STEEL	20,000 PSI
	STRUCTURAL STEEL (A-36)	20,000 PSI

REFERENCE LIST OF DRAWINGS

FOR DETAILS OF BENT NOS. 1 & 6 SEE DWG. NO. 14432.
 FOR DETAILS OF BENT NOS. 2, 3, 4, & 5 SEE DWG. NO. 14433.
 FOR FRAMING PLAN & STRUCTURAL DETAILS SEE DWG. NO. 14434, 14930 D.
 FOR CONCRETE DECK & RAILING DETAILS SEE DWG. NO. 14435.
 FOR POURING SEQUENCE, GENERAL NOTES & SHEETS SEE DWG. NO. 14435, 14436.
 FOR DETAILS OF MATERIALS SEE DWG. NO. 14437.
 FOR DETAILS OF PILING SEE DWG. NO. 2301.
 FOR CONCRETE RIP RAP DETAILS SEE DWG. NO. 14437.

SOIL CLASSIFICATION		
BR. - BROWN	MULTICOL.	MULTICOLOR
CL. - CLAY	PLST.	PLASTIC
CLY. - CLAYEY	SD.	SAND
DK. - DARK	SDN.	SANDY
FM. - FINE	SD. LNS.	SAND LENSES
FRAG. - FRAGMENTS	SDSTN.	SANDSTONE
GR. - GRAY	SMG.	SEAMS
GRVL. - GRAVELS	SLT.	SILT
HD. - HARD	TN.	TAN
LMST. - LIMESTONE	TLLW.	YELLOW
MS. - M. ST.	WTR. BRG.	WATER BEARING

LAYOUT OF UNDERPASS

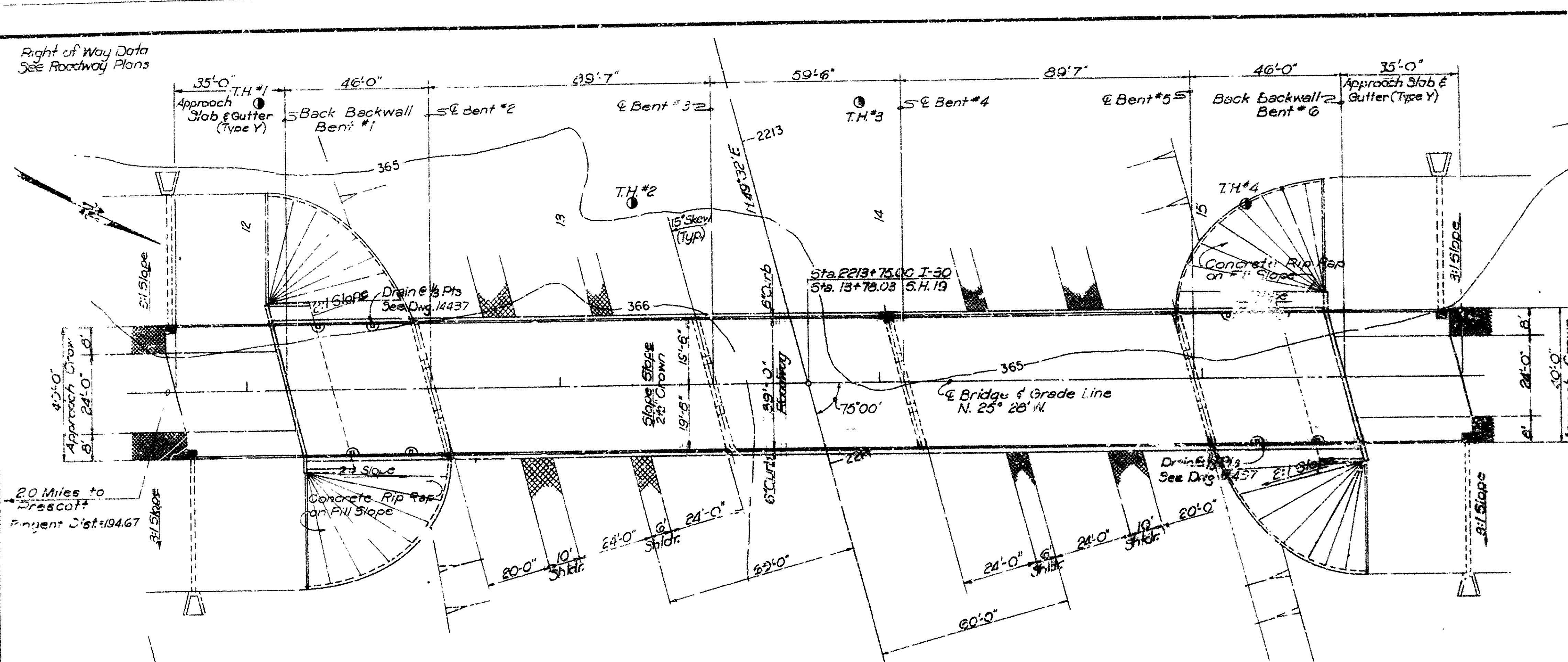
1-30 & JCT. ASH. NO. 19
 NEVADA COUNTY
 ROUTE 30 SEC. 1

ARKANSAS STATE HIGHWAY COMMISSION

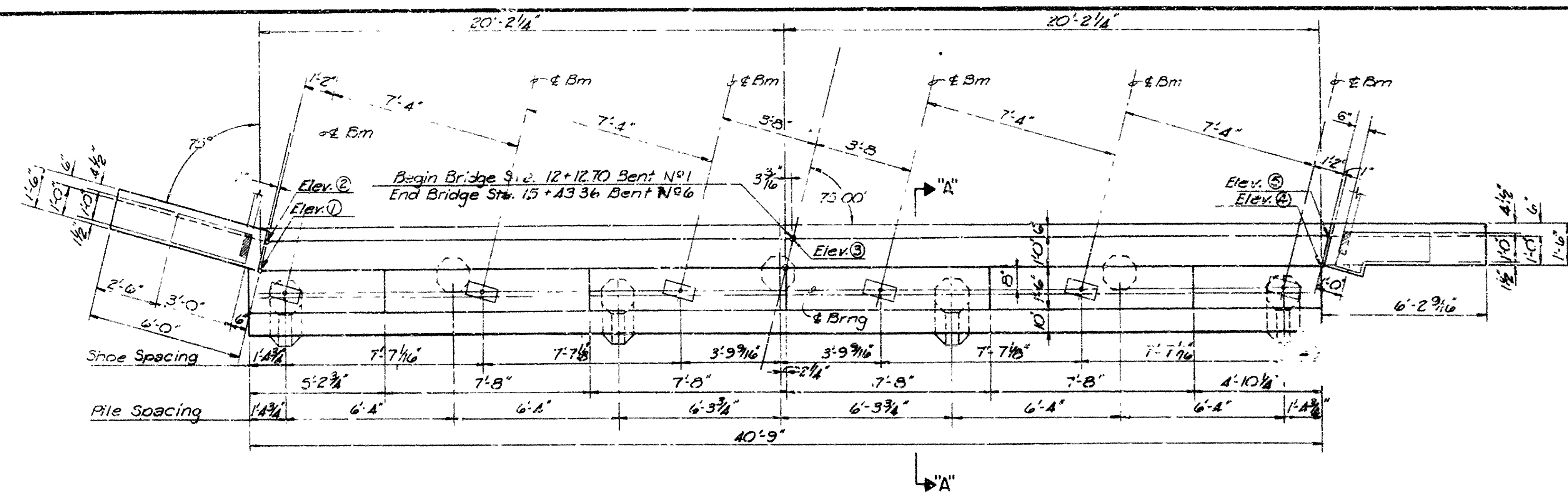
LITTLE ROCK, ARK.

DRAWN BY: LDM DATE: SCALE: 1"=20'-0"

BRIDGE NO. 5063 DRAWING NO. 14431

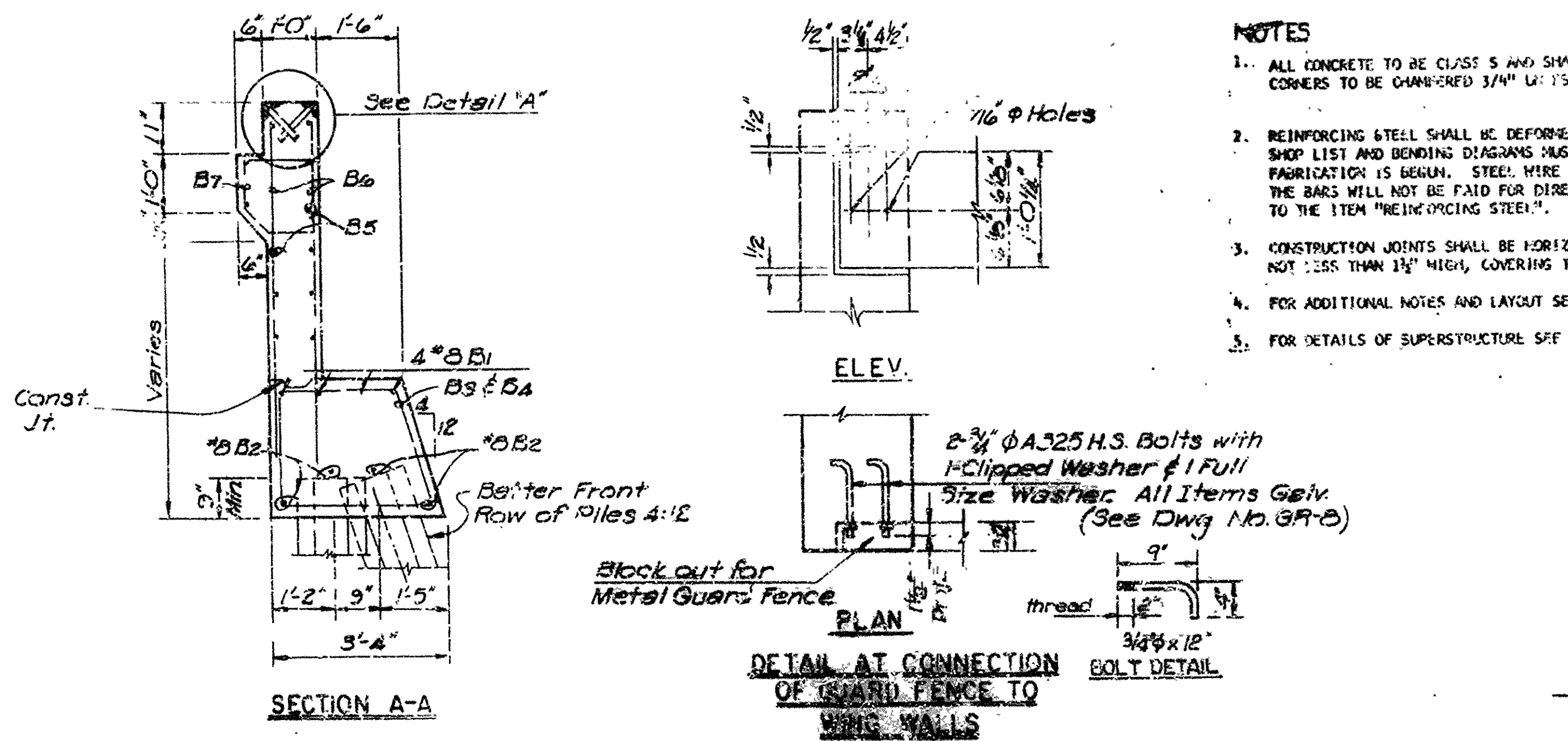
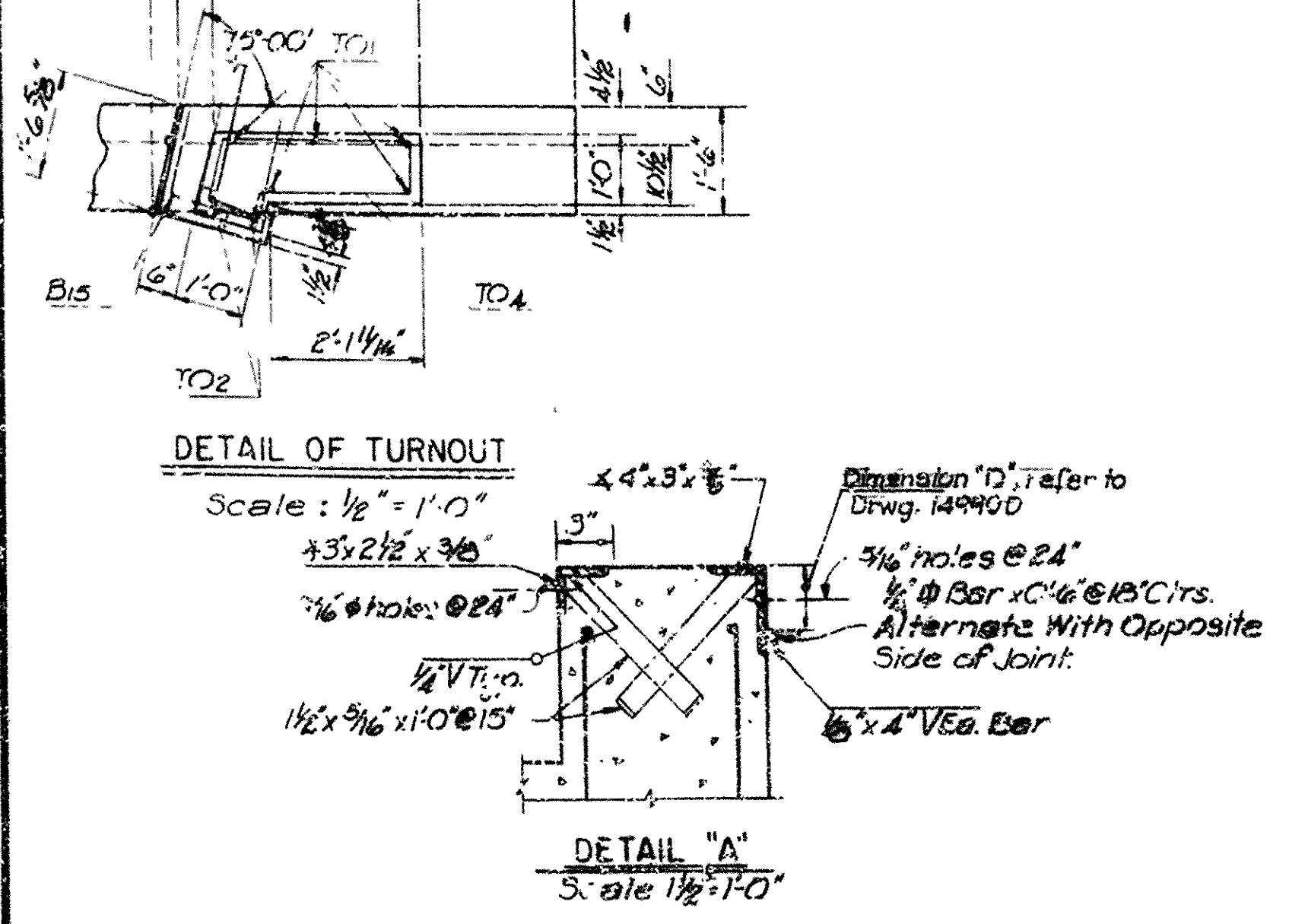
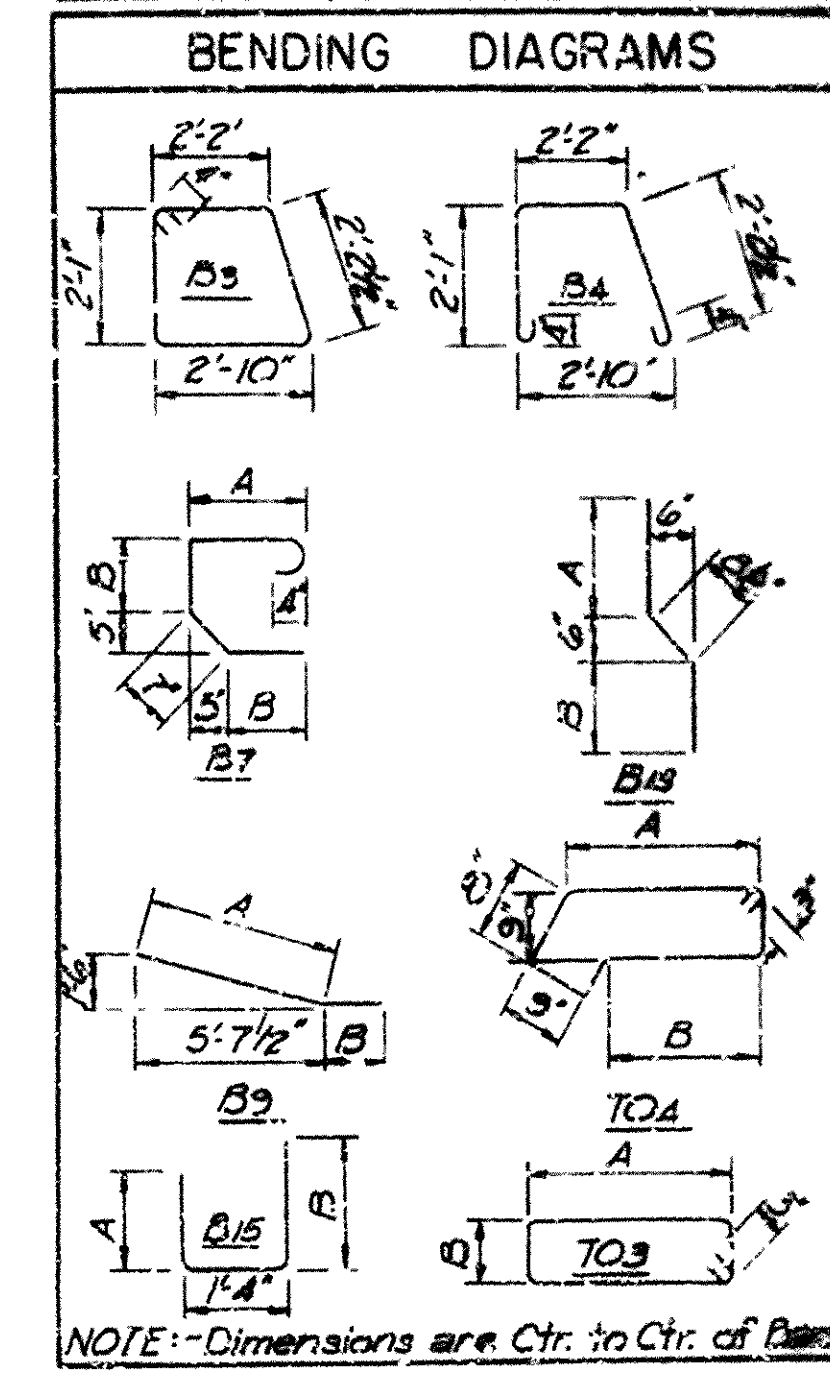
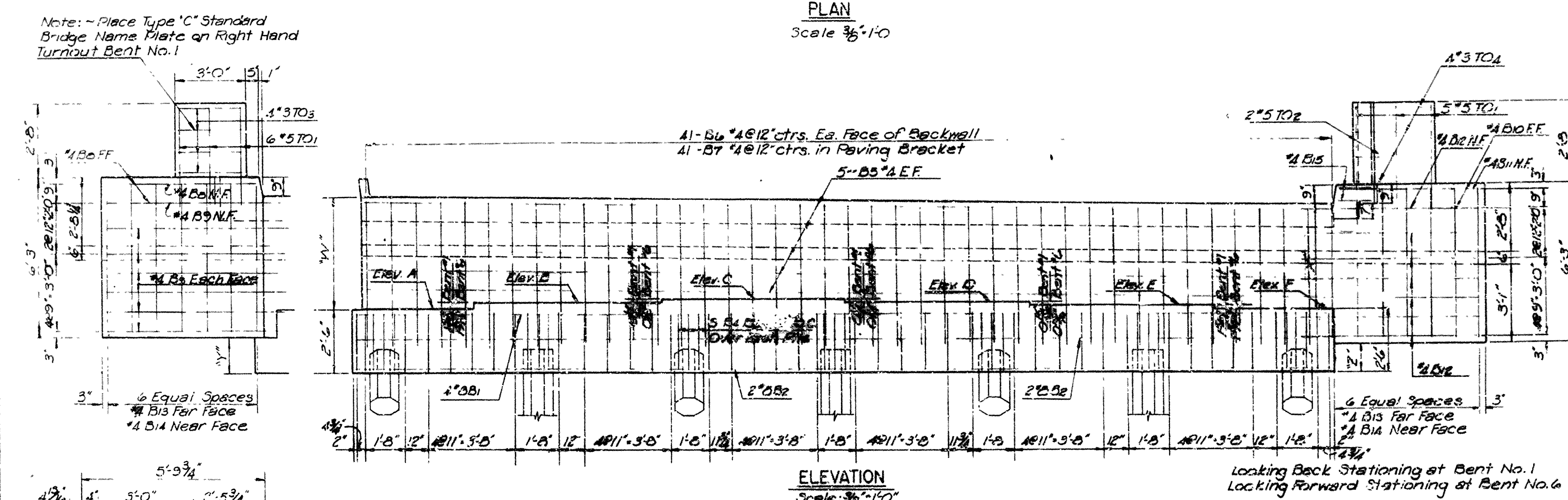


FED. ROAD DIST. NO.	STATE	FED. ROAD DIST. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	ARK.	1-30-71 (59) 45		21	73
JOB NO.		3723			



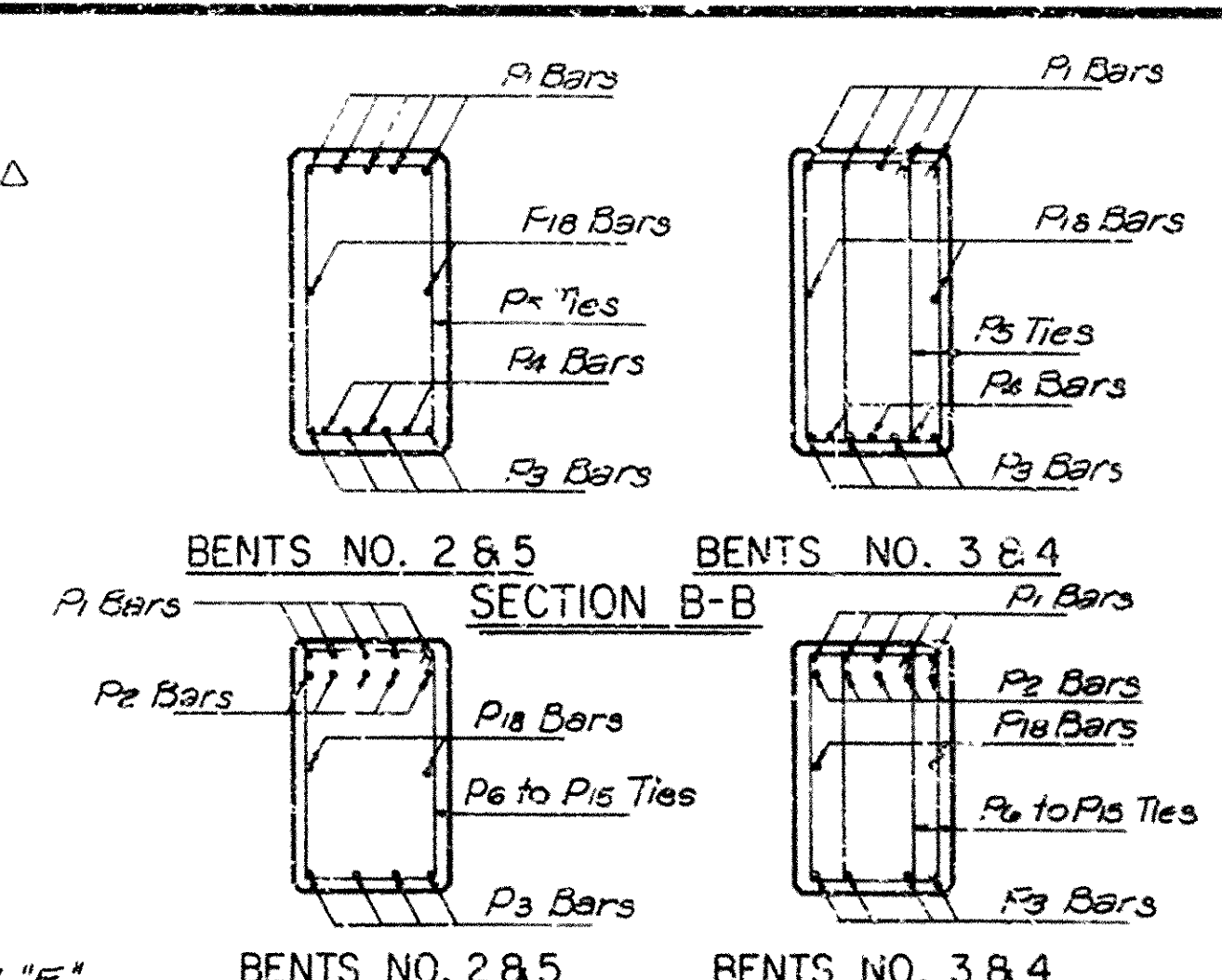
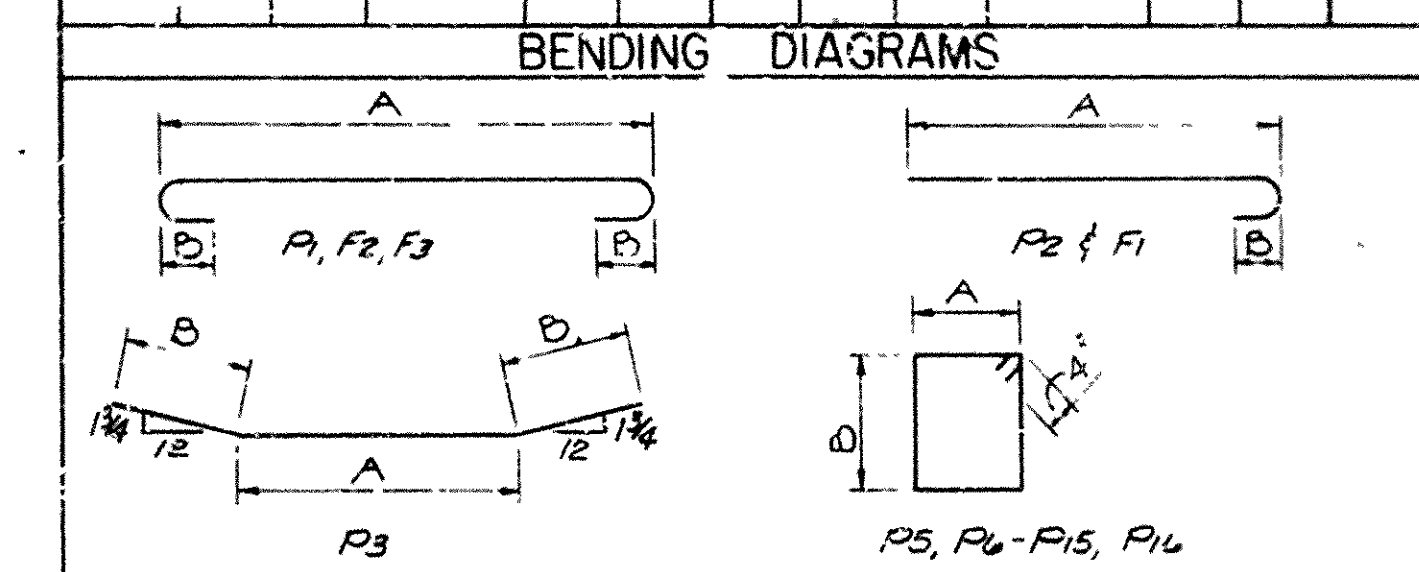
POINT	BENT NO. 1	BENT NO. 6
A	376.84	376.90
B	376.94	377.00
C	376.96	377.04
D	376.96	377.03
E	376.88	376.95
F	376.74	376.81
G	380.52	380.59
H	380.51	380.53
I	380.67	380.74
J	380.42	380.49
K	380.41	380.48
L	380.34	380.41
M	380.34	380.41
N	380.34	380.41
O	380.34	380.41
P	380.34	380.41
Q	380.34	380.41
R	380.34	380.41
S	380.34	380.41
T	380.34	380.41
U	380.34	380.41
V	380.34	380.41
W	380.34	380.41
X	380.34	380.41
Y	380.34	380.41
Z	380.34	380.41

BAR	SIZE	NO.	LENGTH	A	B	FIN DIA.
B1	8	4	40'-5"	-	-	3/8"
B2	8	4	40'-5"	-	-	3/8"
B3	4	40	3'-11"	See Diagrams	1/2"	
B4	4	21	7'-1"	See Diagrams	1/2"	
B5	4	10	40'-0"	-	-	3/8"
B6	4	82	3'-0"	-	-	3/8"
B7	4	41	3'-10"	1'-2"	0'-9"	1/2"
B8	4	3	5'-8"	-	-	3/8"
B9	4	13	7'-5"	5'-9"	1'-8"	1/2"
B10	4	2	5'-6"	-	-	3/8"
B11	4	1	5'-10"	-	-	3/8"
B12	4	13	7'-6"	-	-	3/8"
B13	4	14	5'-11"	2'-5"	2'-9"	1/2"
B14	4	14	5'-9"	-	-	3/8"
B15	4	2	4'-2"	1'-3"	1'-7"	1/2"
T01	5	11	4'-8"	-	-	3/8"
T02	5	2	3'-1"	-	-	3/8"
T03	3	4	7'-5"	2'-9"	0'-9"	1/2"
T04	3	4	9'-0"	2'-9"	2'-9"	1/2"

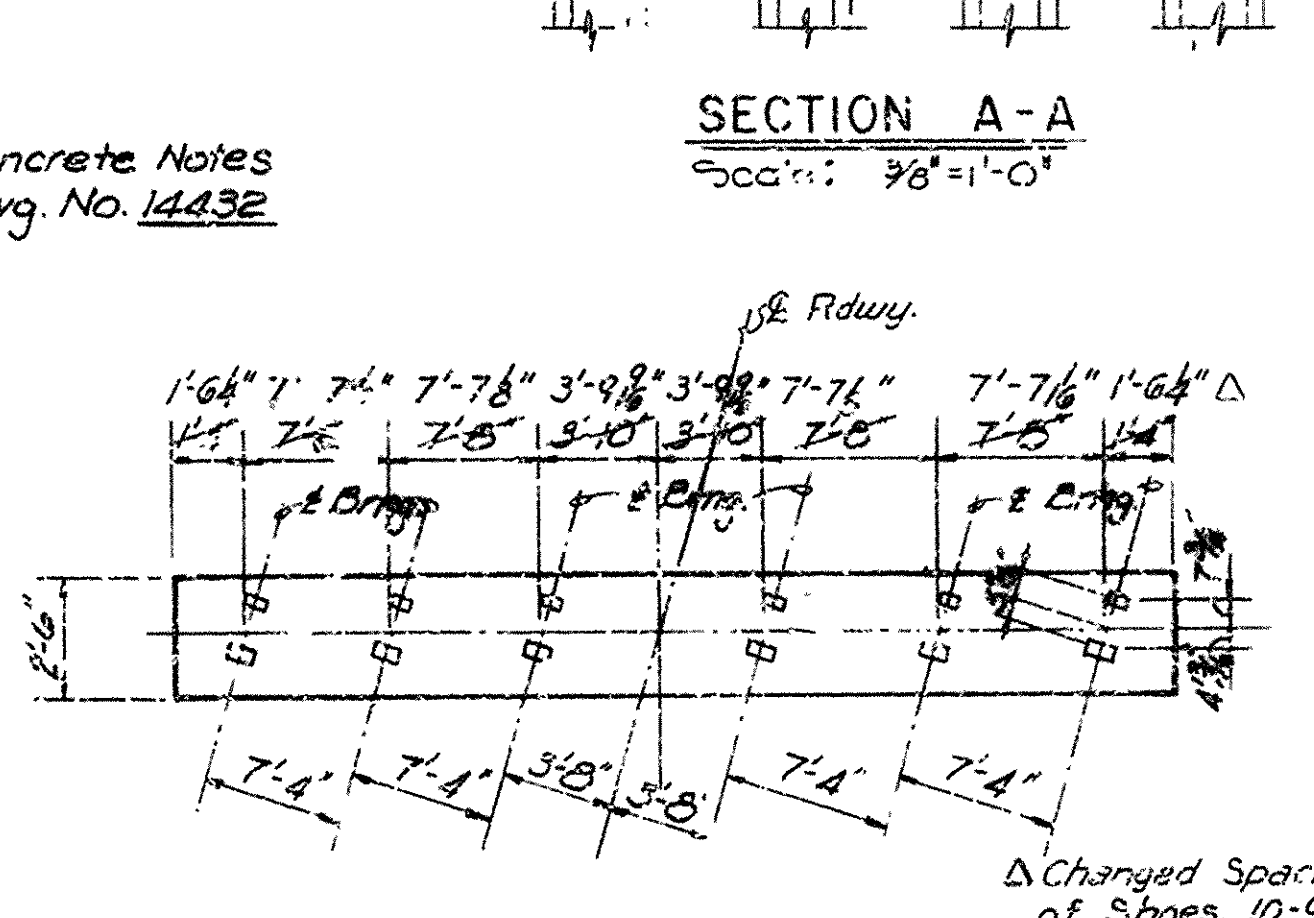
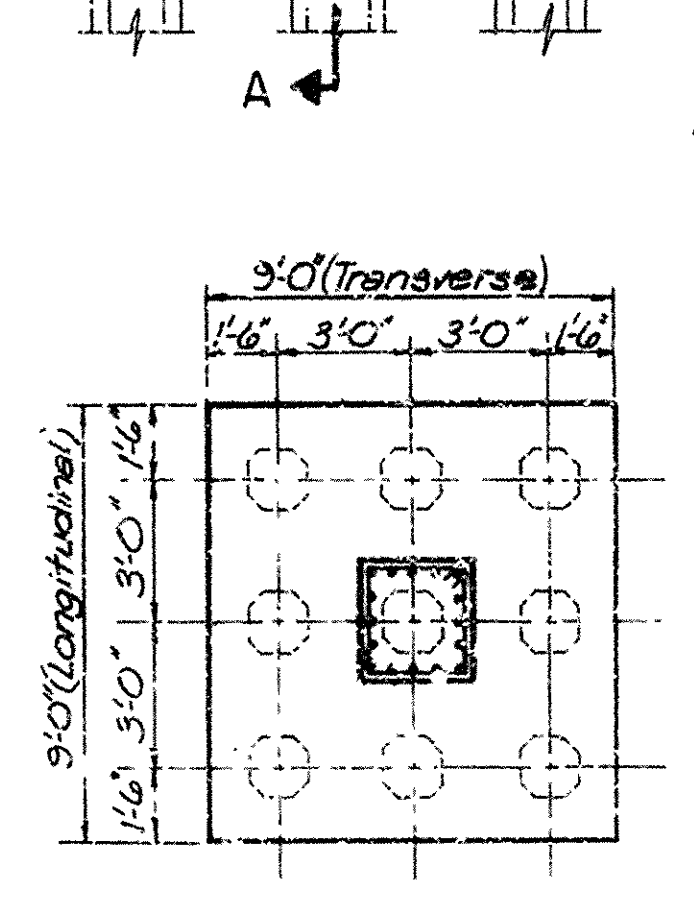
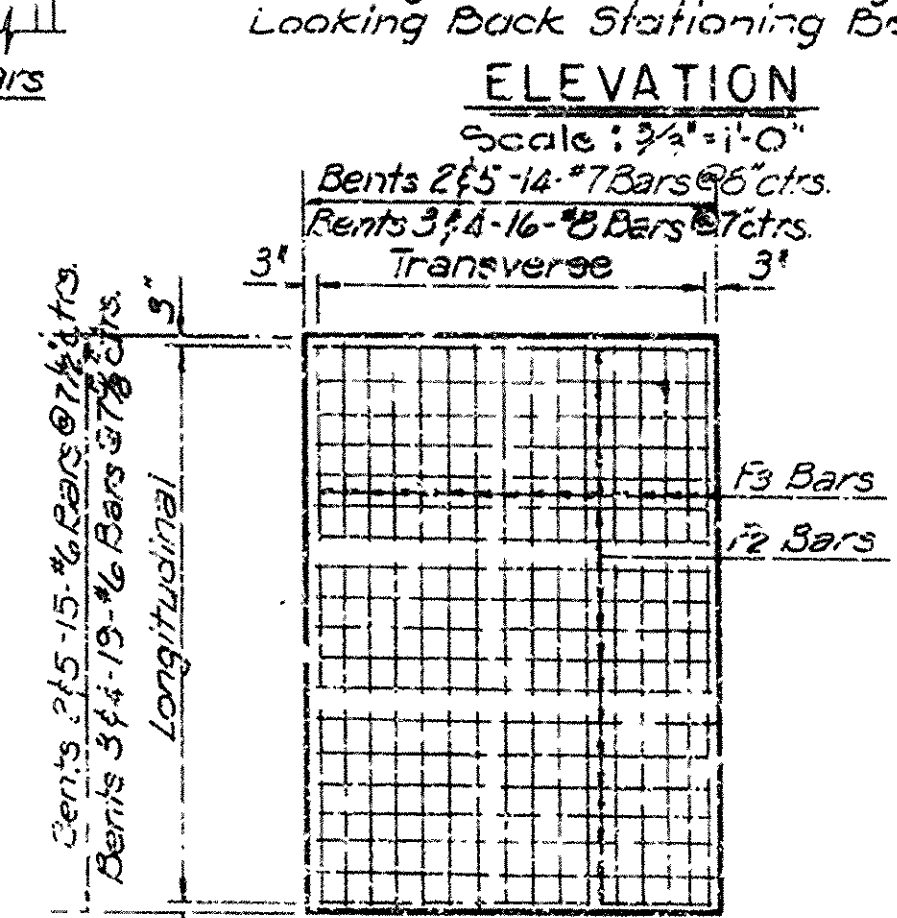
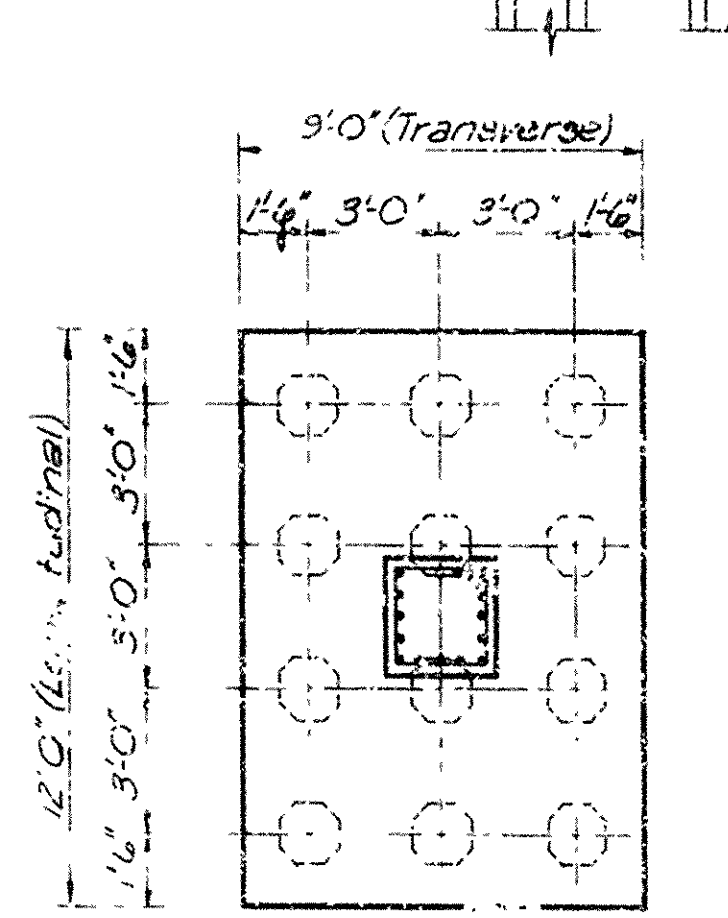
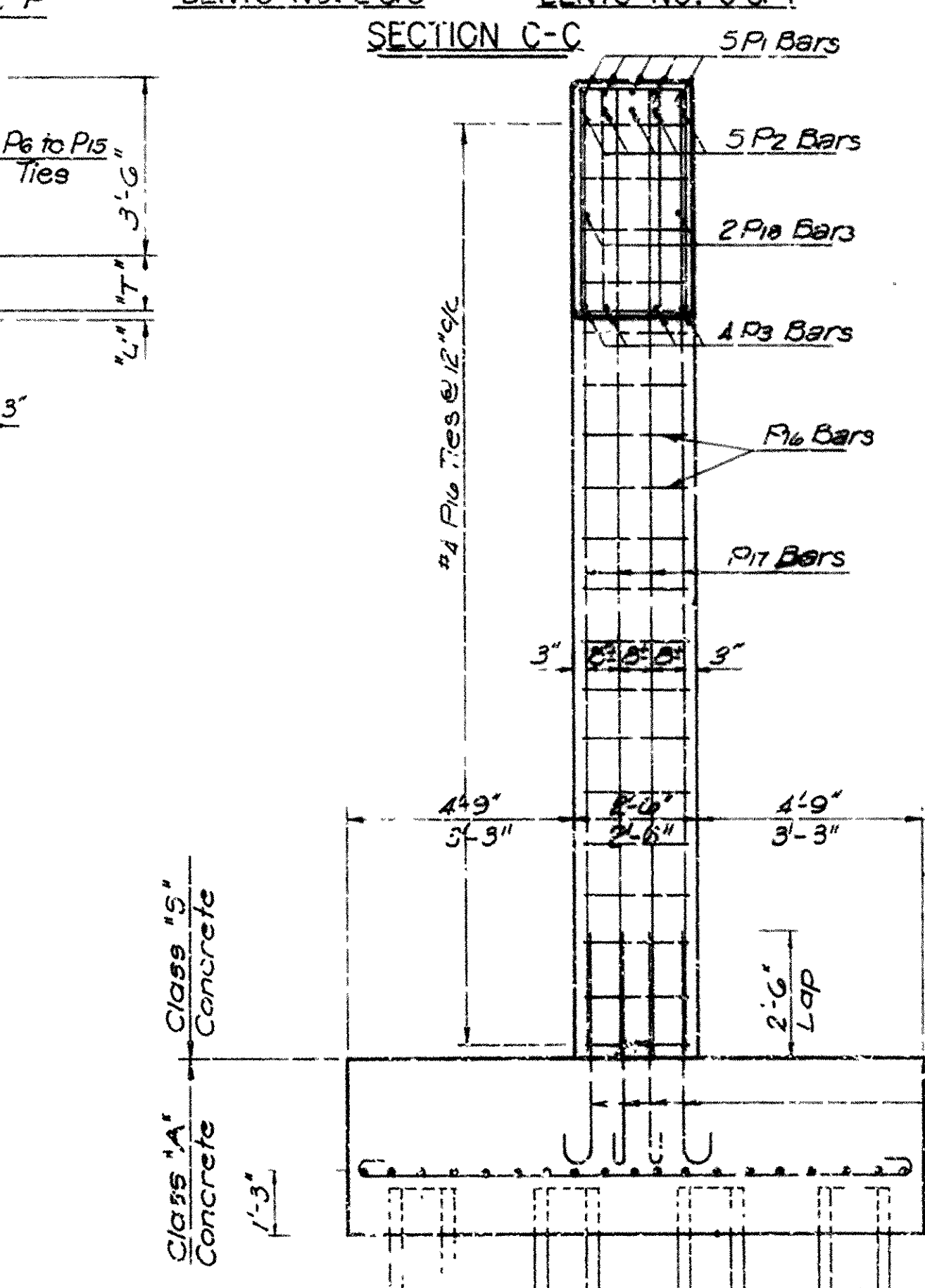
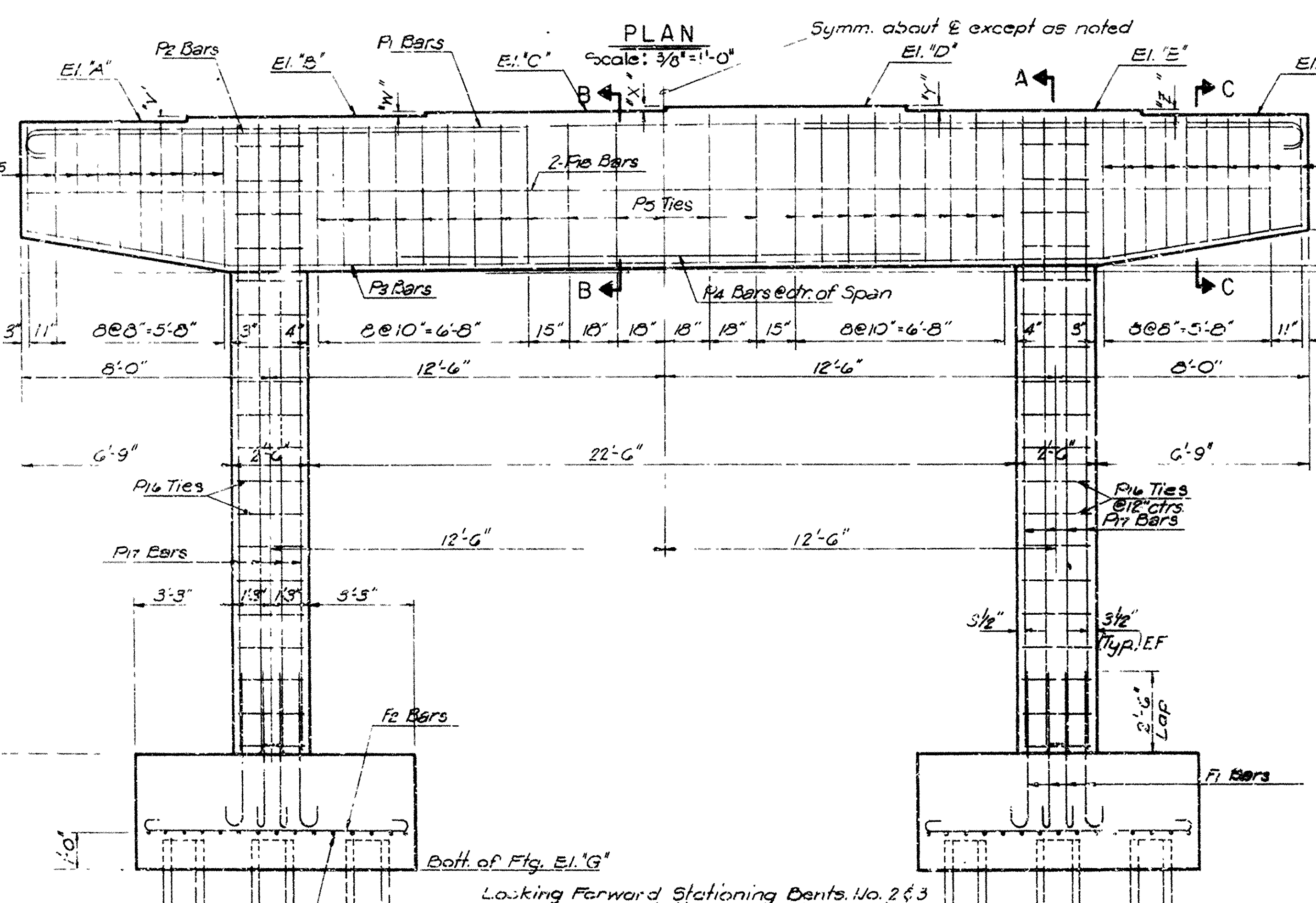


- NOTES
- ALL CONCRETE TO BE CLASS 5 AND SHALL BE POURED IN THE DRY. ALL EXPOSED CORNERS TO BE CHAMFERED 3/4" UNLESS OTHERWISE NOTED.
 - REINFORCING STEEL SHALL BE DEFORMED BARS OF INTERMEDIATE OR HARD GRADE. SHOP LIST AND BENDING DIAGRAMS MUST BE SUBMITTED FOR APPROVAL BEFORE FABRICATION IS BEGUN. STEEL WIRE SUPPORTS USED TO SUPPORT AND SPACE THE BARS WILL NOT BE PAID FOR DIRECTLY BUT WILL BE CONSIDERED SUBSIDIARY TO THE ITEM "REINFORCING STEEL".
 - CONSTRUCTION JOINTS SHALL BE HORIZONTAL AND SHALL BE PROVIDED WITH KEYS NOT LESS THAN 1 1/2" HIGH, COVERING THE MIDDLE THIRD OF BOTH DIMENSIONS.
 - FOR ADDITIONAL NOTES AND LAYOUT SEE DWG. NO. 14431
 - FOR DETAILS OF SUPERSTRUCTURE SEE DWG. NO. 14434 & 14435

DETAILS OF BENTS NO. 1 & 6
A.S.H. NO. 19 UNDERPASS
NEVADA COUNTY
ROUTE 30 SEC. 1
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, AR.
DRAWN BY: LDM DATE: _____
TRACED BY: C.A. DATE: _____
CHECKED BY: CLW DATE: _____
SCALE: AS NOTED
BRIDGE NO. E063 DRAWING NO. 14432

[illegible]

ELEVATION SCHEDULE				
POINT	BENT #2	BENT #3	BENT #4	BENT #5
"A"	375.00	376.28	376.29	375.93
"B"	376.01	376.40	376.41	376.06
"C"	376.00	376.46	376.47	376.13
"D"	376.10	376.47	376.48	376.15
"E"	376.05	376.41	376.42	376.10
"F"	375.95	376.30	376.31	376.00
"G"	352.83	350.73	350.79	352.93
"J"	0'-11 1/8"	0'-11 1/8"	0'-11 1/8"	0'-11 1/8"
"T"	1'-0 1/8"	1'-0 1/8"	1'-0 1/8"	1'-0 1/8"
"U"	0'-0 3/8"	0'-0 3/8"	0'-0 3/8"	0'-0 3/8"
"V"	0'-1 3/8"	0'-1 1/8"	0'-1 3/8"	0'-1 3/8"
"W"	0'-0 3/8"	0'-0 3/8"	0'-0 3/8"	0'-0 3/8"
"X"	0'-0 3/8"	0'-0 1/8"	0'-0 3/8"	0'-0 3/8"
"Y"	0'-0 9/16"	0'-0 9/16"	0'-0 9/16"	0'-0 9/16"
"Z"	0'-1 1/4"	0'-1 3/8"	0'-1 3/8"	0'-1 1/4"



Notes.
For Concrete Notes
See Dwg. No. 14432

SECTION A-A
Sec'n: 3/8" = 1'-0"

PILE SPACING BENT NO. 3 & 4
Scale: $\frac{1}{4}" = 1'-0"$

FOOTING REIN. PLAN
Scale: $\frac{1}{4}" = 1'-0"$

FILE SPACING BENT NO. 2 & 5
Scale: $\frac{1}{4}" = 1'-0"$

TOP OF CAP BENT NO. 2 & 5
Note: See Plan this Sheet for
Bearing Plate Arrangement
For Bent No. 3 & 4.

DETAILS OF BENTS NO. 2, 3, 4 & 5
A. S. H. NO. 19 UNDERPASS
NEVADA COUNTY

ROUTE 30 SEC. 1
ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY LDM DATE _____
TRACEE BY C.A. DATE _____ SCALE AS NOTED
CHECKED BY RLW DATE _____

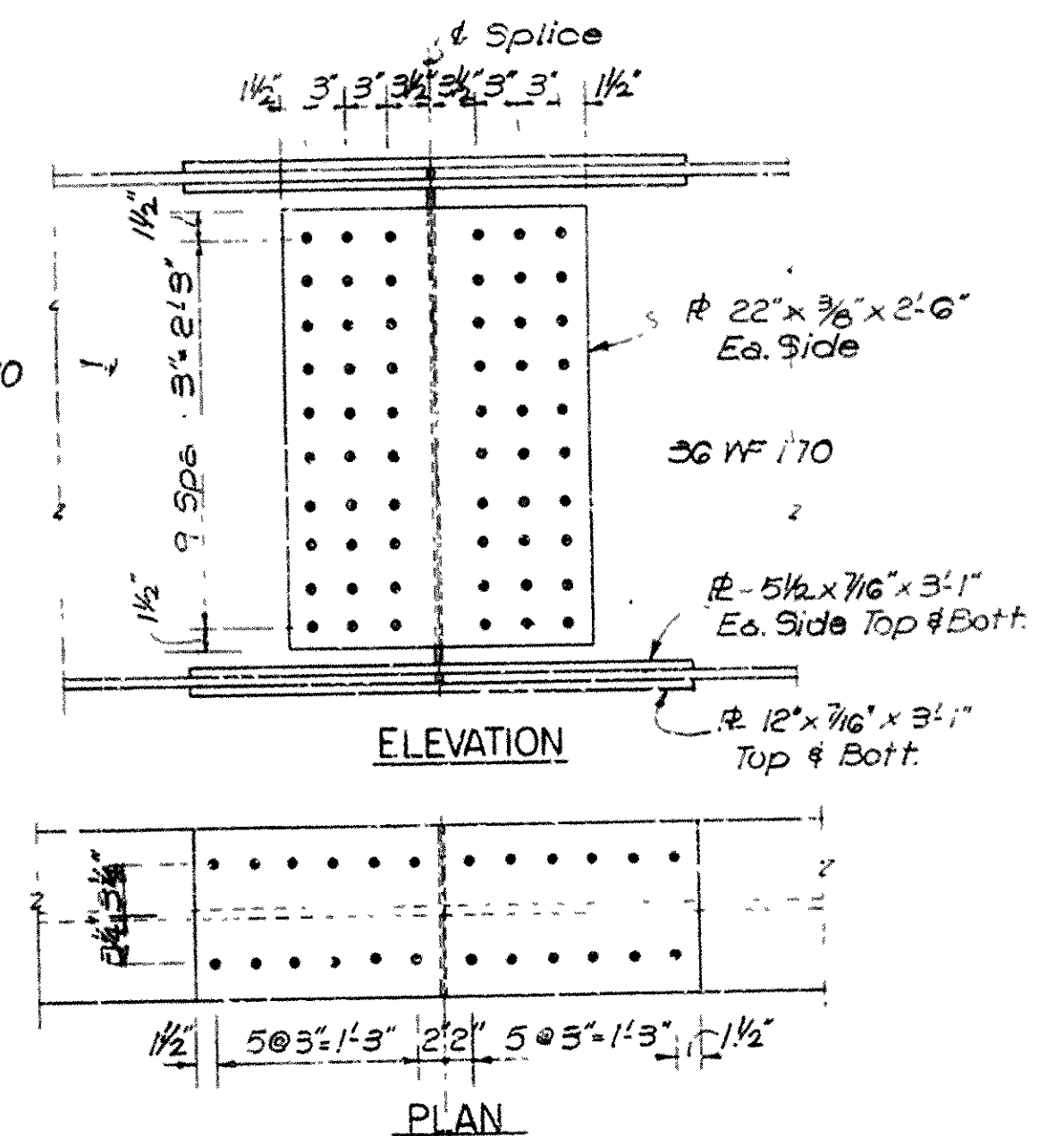
BRIDGE NO. 5063 DRAWING NO. 14433

FED ROAD DIV NO	STATE	PROJ NO	FISCAL YEAR	SHEET NO	TOTAL SHEETS
6	ARK.	1-30-1 (39) 45		23	73
JOB NO		3723			

DESIGN SPECIFICATIONS _____ AAGHO 1965

- | 1. DEAD LOAD | INTERIOR BEAM | EXTERIOR BEAM |
|--|------------------------------------|----------------------------------|
| a) TO GIRD. ONLY
(SPANS 1 & 5)
(SPANS 2, 3 & 4) | 848 (8+8) #/FT.
910 (910) #/FT. | 929 (46) #/FT.
964 (78) #/FT. |
| b) TO COMP. BM.
(SPANS 1 & 5)
(SPANS 2, 3 & 4) | 51 (51) #/FT. | 51 (234) #/FT. |
| c) WEARING SURFACE | 81 #/FT. | 81 #/FT. |
| 2. LIVE LOAD | | |
| a) TO COMPOSITE | 1.332 WHEELS
+ IMPACT | 1.257 WHEELS
+ IMPACT |
| 3. SLABS, CURB, PARAPET CONCRETE
CLASS 5(A) CONCRETE (n=10) F _c = 1200 | | |

NOTE: VALUES SHOWN ARE WITH THE CURB AND DECK POURED MONOLITHICALLY. VALUES SHOWN IN PARENTHESES ARE WITH THE CURB AND DECK AS SEPARATE POURS.

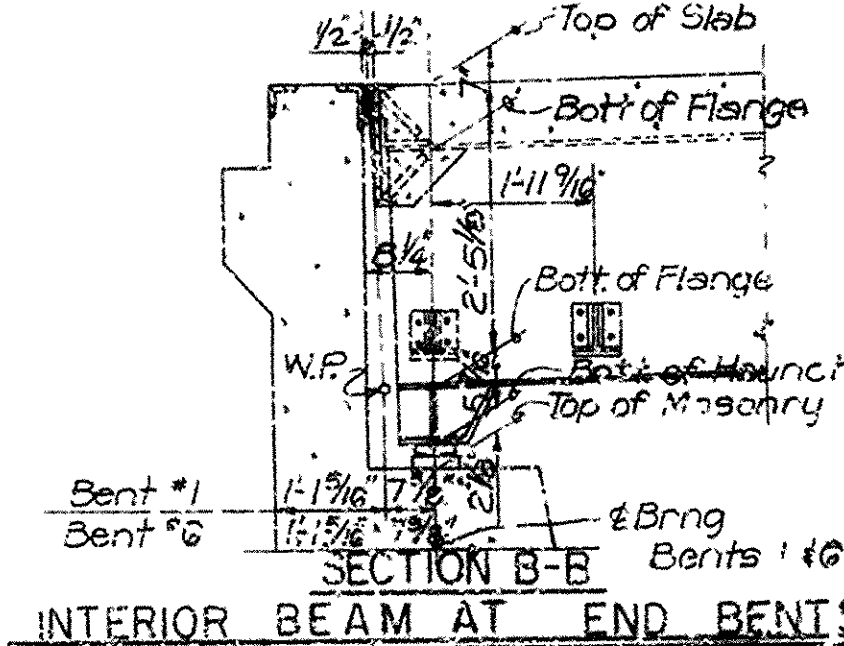
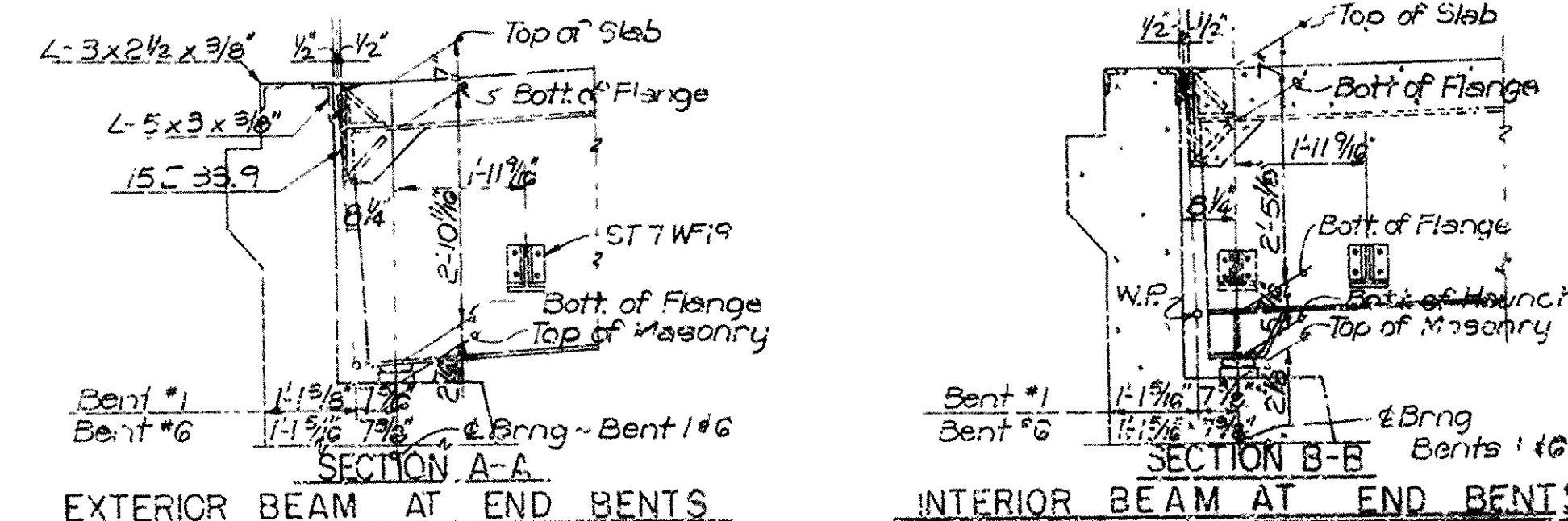
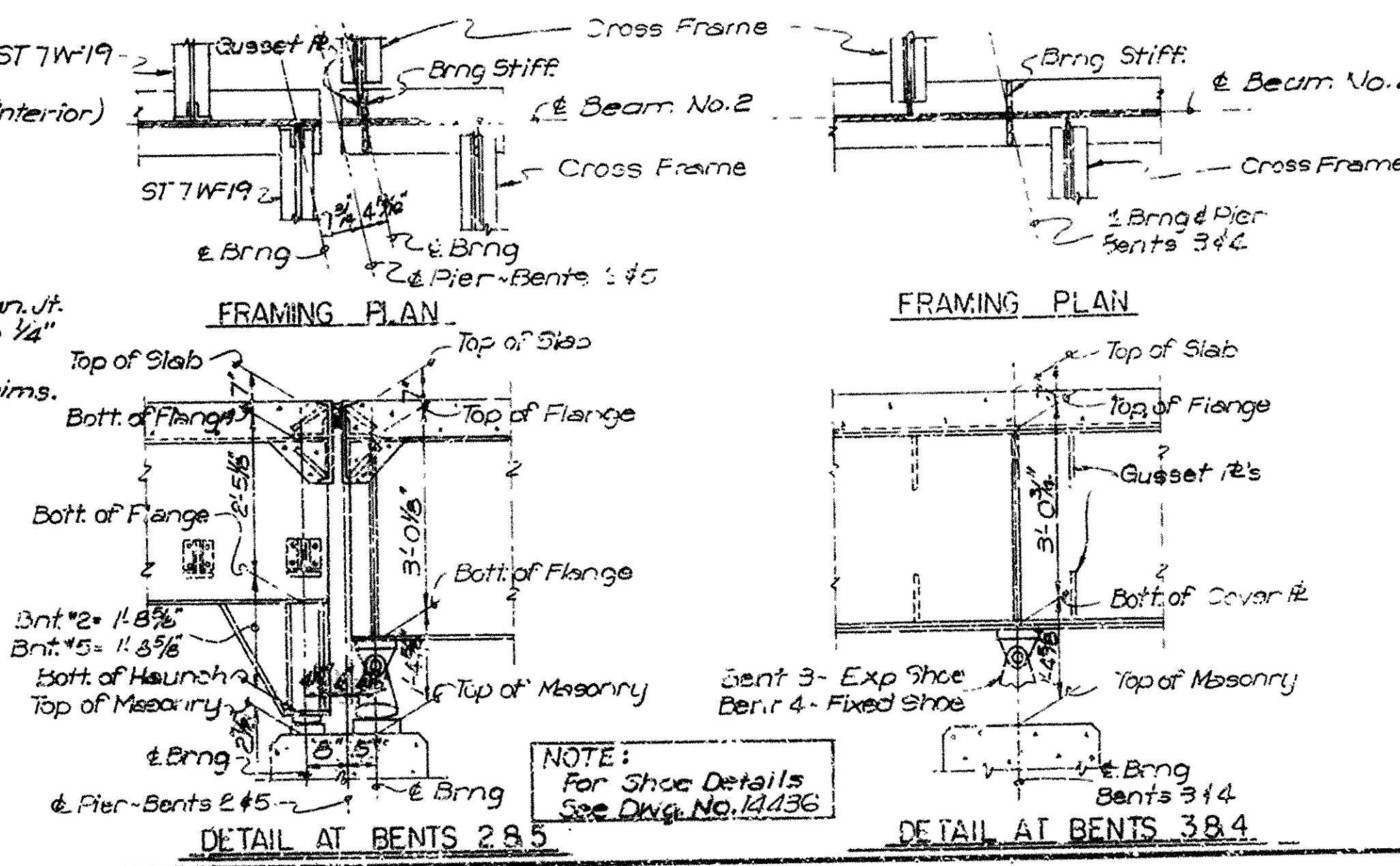
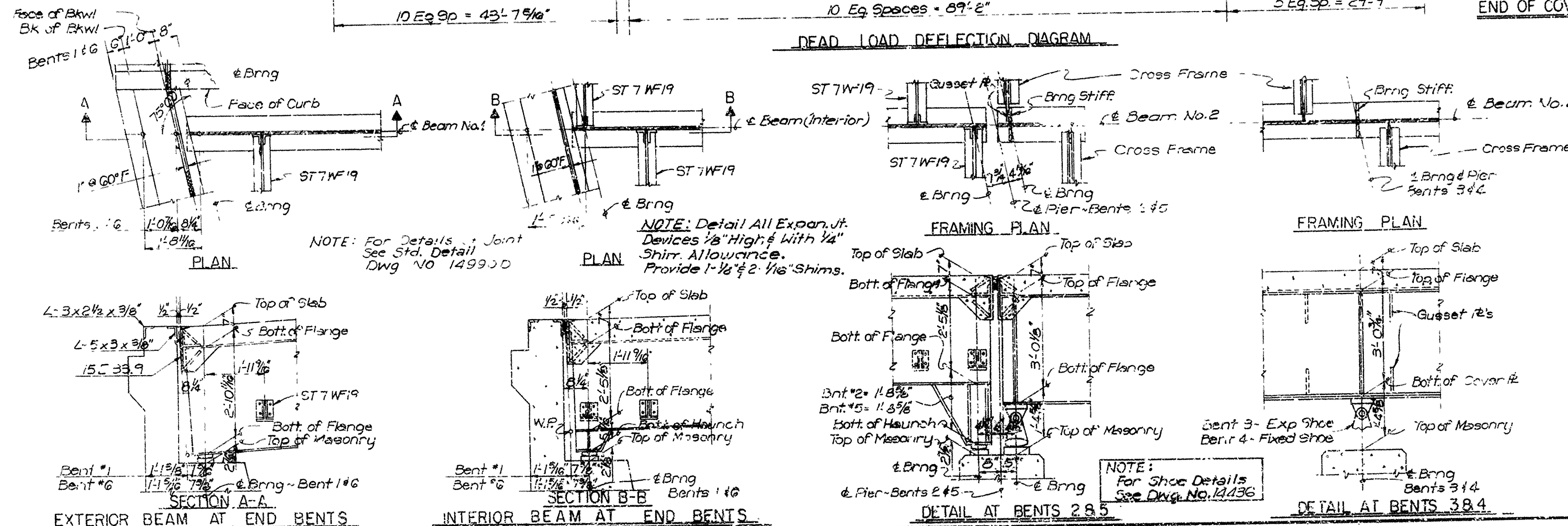
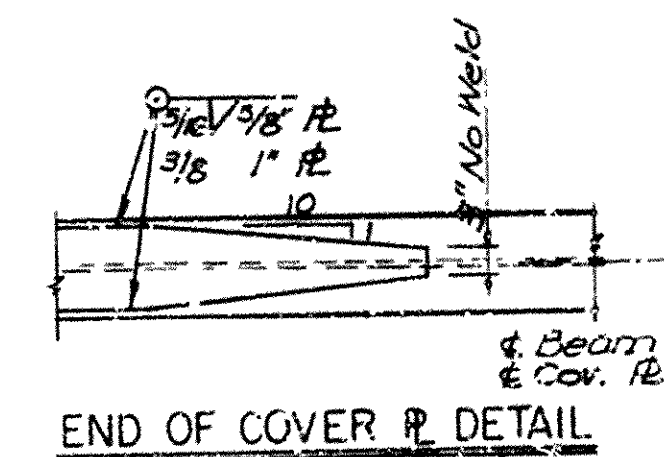
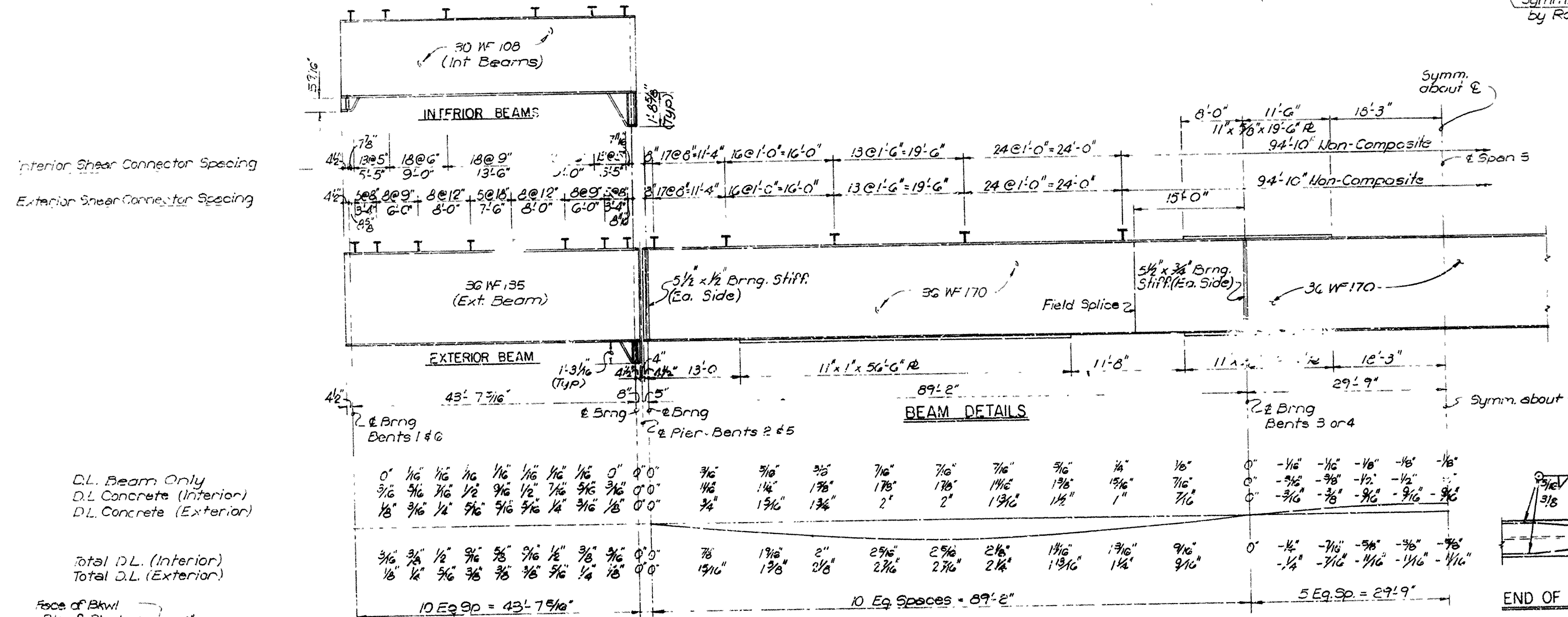
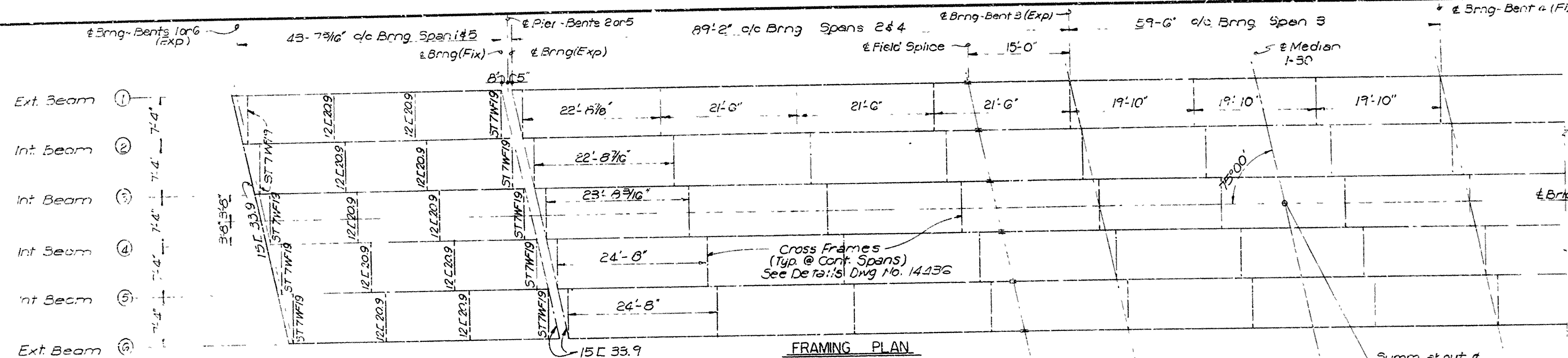


BOLTED FIELD SPLICE (ALTERNATE)
Scale - 1"=1'-0"

NOTE: Basis Of Payment, Regardless Of Type Of Splice
Used. Payment Will Be Based On Quantities
For Bolted Splice.

Deflections shown are from a chord from centerline bent to centerline bent. Vertical curve corrections are not included.
Exterior Beam deflections shown are for curb pours monolithic with slab pours. The Exterior Beam deflections for curb pours separate from slab pours are as follows:

Dead Load Concrete = 81% of Dead Load Concrete exterior.
Total Dead Load = Dead Load Beam only + 81% of Dead Load Concrete exterior.
All Beams shall be shop-assembled in their true position, field connection holes reamed and all parts match-marked. The shop assembly shall have a minimum assembled sequence of 3 sections.



FRAMING PLAN & STRUCTURAL DETAILS
" S.H. NO. 19 UNDERPASS
NEVADA COUNTY
ROUTE 30 SEC. 1

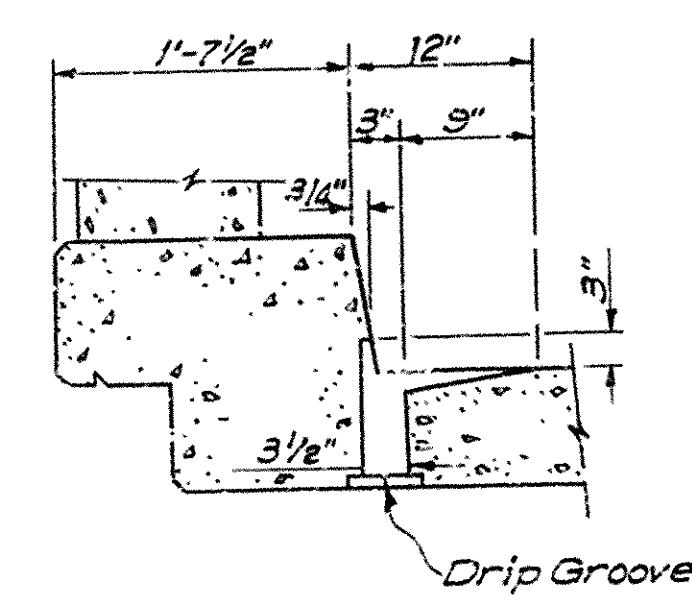
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

LITTLE ROCK, ARK.

DRAWN BY L.D.M. DATE
 CHECKED BY CA. DATE SCALE AS NOTED
 CHECKED BY D.L.V. DATE
 BRIDGE NO. 5063 DRAWING NO. 14434

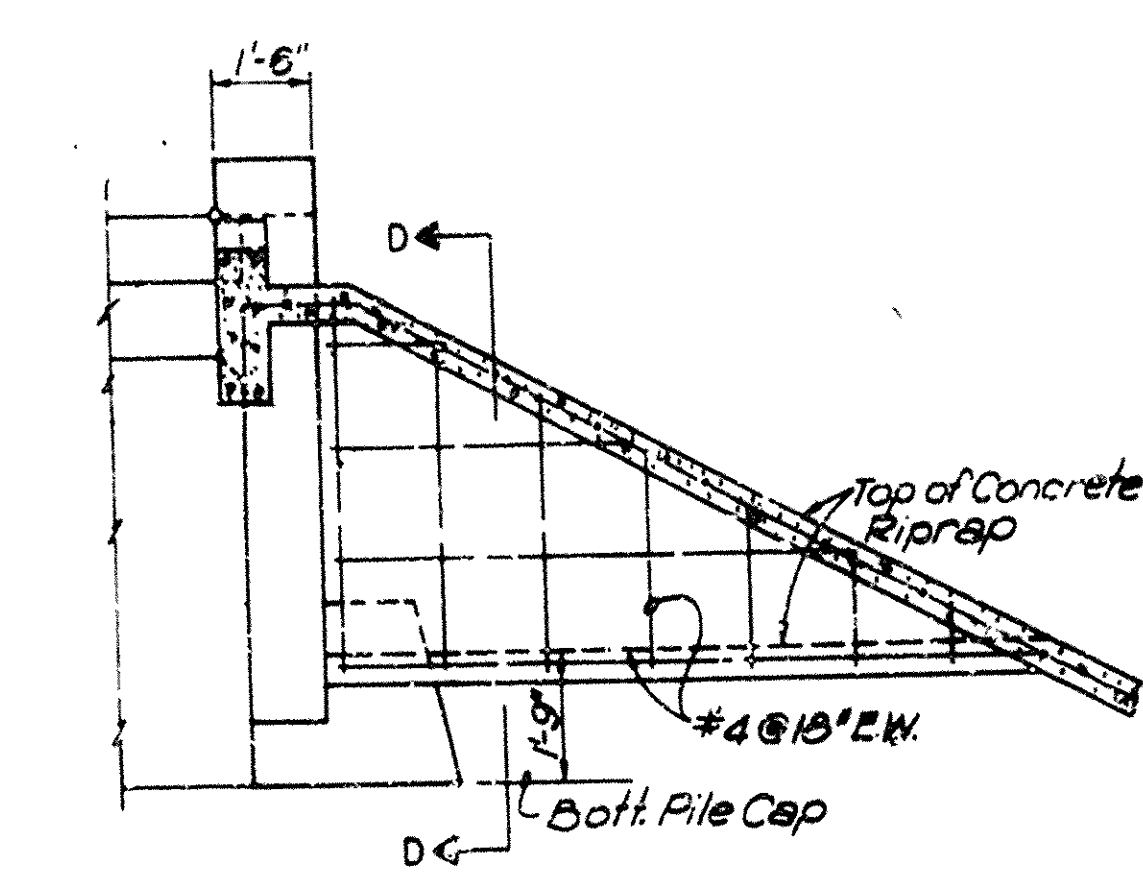
BRIDGE ENGINEER

FED. ROAD DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	ARK.	1-30-1 (39) 45		26	73
JOB NO.		3723			

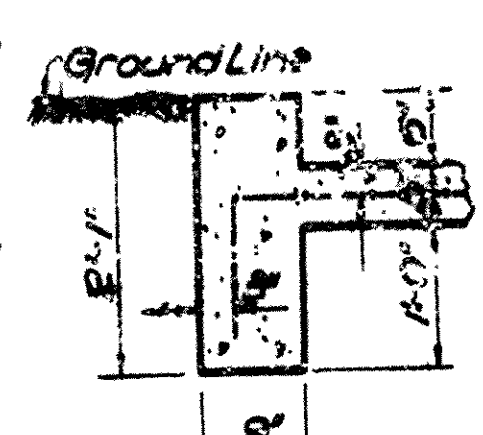


DRAIN DETAIL

Drain:
Drain To Taper From 3"x5"
At Top To 3 1/2"x7" At Bottom
Drain Is Placed On Each
Side Of Roadway.



SECTION B-B



SECTION C-C

NOTE: Sloped Surfaces of Concrete Riprap
to be marked off into blocks (construction joints
optional) with an approved grooving tool.
Spacing the grooved lines about 5' apart.

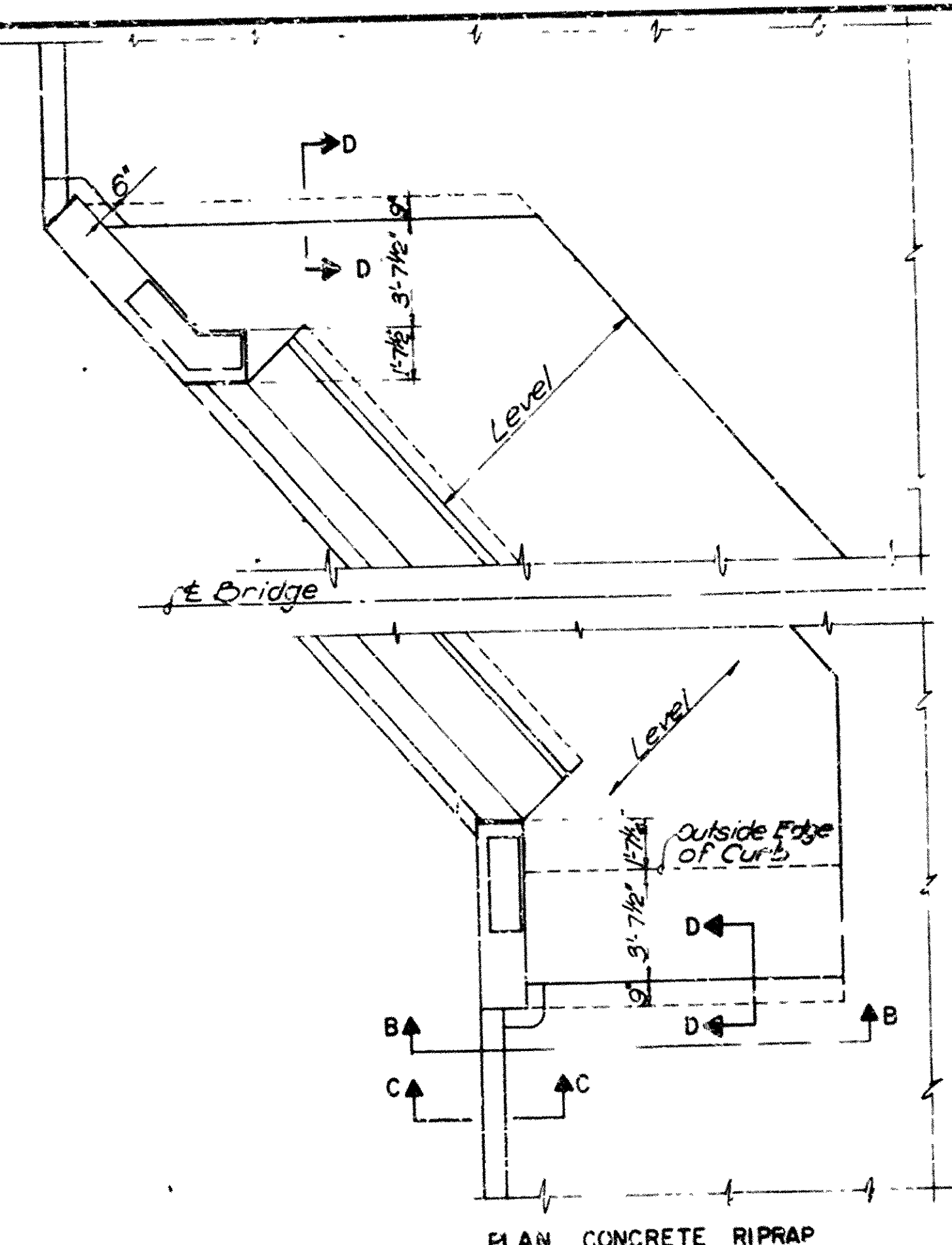
DETAIL OF CONCRETE RIPRAP

- SHOP DRAWINGS SHALL INCLUDE:
1. METHOD OF ALIGNMENT AND CLAMPING GIRDERS DURING FABRICATION AND ERECTION.
 2. PROGRAM FOR WELDING SEQUENCE AND DISTORTION CONTROL DURING FABRICATION AND ERECTION.

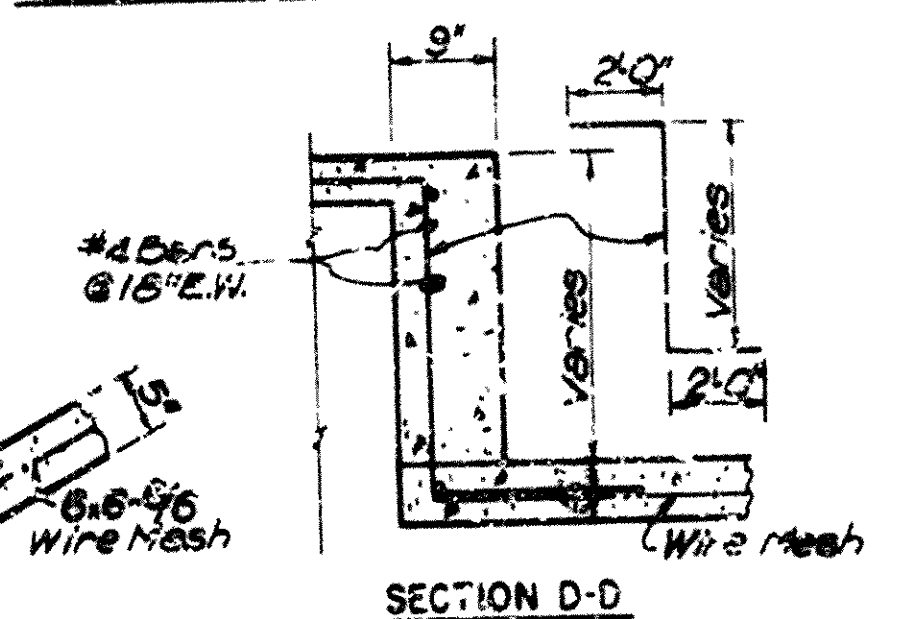
ERECTION:

STEEL MAY BE ERECTED WITHOUT THE USE OF FALSEWORK, PROVIDED ALL SPLICE POINTS ARE WITHIN 1/4" OF THE PLANNED ELEVATION ACCORDING TO THE SHOP DRAWINGS, WITH THE COMPLETE LINE OF BEAMS ERECTED. SPLICE POINTS THAT ARE OFF MORE THAN 1/2" SHALL BE CORRECTED BEFORE ANY WELDING IS STARTED OR ANY BOLTS TIGHTENED.

AFTER THE STRUCTURAL STEEL HAS BEEN ERECTED, A PROFILE OF THE TOP OF THE BEAMS SHALL BE TAKEN TO DETERMINE THE THICKENING OF HAUNCHES REQUIRED FOR THE DEAD LOAD DEFLECTION.



PLAN CONCRETE RIPRAP



SECTION D-D

POURING SEQUENCE

ALL STRUCTURAL STEEL SHALL BE IN PLACE FOR A UNIT BEFORE ANY CONCRETE IS PLACED FOR THAT UNIT. A UNIT CONSISTS OF SIMPLE SPAN NO. 1, SIMPLE SPAN NO. 5 OR CONTINUOUS SPANS 2, 3 & 4.

THE CONCRETE DECK SHALL BE PLACED IN ACCORDANCE WITH ARKANSAS STATE HIGHWAY DEPARTMENT SUPPLEMENTAL SPECIFICATIONS.

EACH POUR SHALL BE A CONTINUOUS, UNINTERRUPTED OPERATION WHICH SHALL PLACE ALL THE CONCRETE IN THAT POUR, WHICH SHALL BE FROM EXPANSION JOINT TO EXPANSION JOINT.

MOVEMENT OF THE FINISHING MACHINE ACROSS NEW CONCRETE, WHEN PROTECTED BY MEANS OF PLANKING PLACED ON THE SURFACE, SHALL BE PROHIBITED FOR 72 HOURS AFTER FINISHING THE POUR.

CURB POURS MAY BE MADE MONOLITHICALLY WITH SLAB POURS, OR SEPARATELY.

CURB POURS SHALL BE POURED CONTINUOUSLY, SAME AS THE SLAB POURS. CURB POURS SHALL NOT BE MADE UNTIL AT LEAST 72 HOURS HAS ELAPSED AFTER COMPLETION OF ALL THE SLAB POURS.

CURB RISER POURS SHALL NOT BE MADE UNTIL AT LEAST 72 HOURS HAS ELAPSED AFTER COMPLETION OF ALL THE CURB POURS OR MONOLITHIC SLAB AND CURB POURS.

GENERAL NOTES

FIELD CONNECTIONS TO BE BOLTED WITH HIGH-STRENGTH BOLTS ASTM A-325.

HIGH-STRENGTH BOLTS: 3/4" Ø, OR 1" Ø EXCEPT WHERE NOTED OTHERWISE. BOLT SPACING SHALL BE 24" UNLESS OTHERWISE NOTED. MINIMUM EDGE DISTANCE SHALL BE 1 1/2" UNLESS OTHERWISE NOTED. BOLTS SHALL BE PLACED WITH HEADS ON THE OUTSIDE FACE OF EXTERIOR GIRDERS AND ON BOTTOM OF GIRDER FLANGES.

STRUCTURAL SHAPES OF EQUAL OR GREATER STRENGTH MAY BE SUBSTITUTED FOR SHAPES SHOWN, BUT PAYMENT WILL BE MADE ON THE BASIS OF SHAPES SHOWN OR THOSE ACTUALLY USED, WHICHEVER IS LESS.

ALL WELDING SHALL CONFORM TO THE AMERICAN WELDING SOCIETY STANDARD SPECIFICATIONS FOR WELDED HIGHWAY AND RAILWAY BRIDGES, CURRENT EDITION, AND EXCEPT AS MODIFIED BY THE SPECIAL PROVISIONS. NO WELDS OTHER THAN THOSE REQUIRED BY THE PLANS AND SPECIFICATIONS MAY BE MADE WITHOUT PRIOR APPROVAL BY THE ENGINEER OF SIZE AND LOCATION.

SHOP PAINT: ALL STRUCTURAL STEEL, EXCEPT GALVANIZED MEMBERS, SURFACES IN CONTACT WITH CONCRETE, CONTACT SURFACES OF BOLTED CONNECTIONS, AND SURFACES WITHIN 3" OF HOLES AND FIELD WELDS, SHALL BE GIVEN ONE COAT OF RED LEAD AND RAW LINED OIL BEFORE SHIPMENT.

FIELD PAINT: AFTER ERECTION, ALL EXPOSED STEEL SURFACES WHICH DID NOT RECEIVE A COAT OF SHOP PAINT, EXCEPT SURFACES IN CONTACT WITH CONCRETE, SHALL BE GIVEN ONE COAT OF RED LEAD AND RAW LINED OIL. TWO ADDITIONAL COATS OF FIELD PAINT SHALL BE APPLIED TO ALL EXPOSED SURFACES. FIRST COAT: RED LEAD TINTED WITH LAMP BLACK; SECOND COAT: ALUMINUM PAINT.

BEARINGS SHALL BE FINALLY SEATED IN ACCORDANCE WITH SEC. 806.59, INCLUDING ALTERNATE, OF THE STANDARD SPECIFICATIONS. THIS WORK AND MATERIAL ARE TO BE CONSIDERED AS SUBSIDIARY TO THE ITEM OF "STRUCTURAL STEEL" AND WILL NOT BE PAID FOR DIRECTLY.

THESE DRAWINGS SHOW GENERAL FEATURES OF DESIGN ONLY. SHOP DRAWINGS SHALL BE MADE IN ACCORDANCE WITH THE SPECIFICATIONS, SUBMITTED, AND APPROVAL SECURED BEFORE FABRICATION IS BEGUN.

ANCHOR BOLTS SHALL BE GALVANIZED TO CONFORM TO ASTM SPECIFICATION, DESIGNATION A-153.

REINFORCING STEEL TO BE DEFORMED BARS OF INTERMEDIATE OR HARD GRADE. THE REINFORCING STEEL IS TO BE ACCURATELY LOCATED IN THE FORME AND FINELY FIELD IN PLACE BY STEEL WIRE SUPPORTS, SUFFICIENT IN NUMBER AND SIZE TO PREVENT DISPLACEMENT DURING THE COURSE OF CONSTRUCTION. THE WIRE SUPPORTS WILL NOT BE PAID FOR DIRECTLY BUT WILL BE CONSIDERED SUBSIDIARY TO THE ITEM OF "REINFORCING STEEL".

SHOP LISTS AND BENDING DIAGRAMS OF REINFORCING STEEL, INCLUDING WIRE SUPPORTS, SHALL BE SUBMITTED AND APPROVAL SECURED BEFORE FABRICATION IS BEGUN.

ALL CHAMFERS ON CONCRETE RISERS ARE TO BE 1/4".

SHOP DRAWINGS FOR BRIDGE RAILING SHALL BE SUBMITTED AND APPROVED BEFORE FABRICATION IS BEGUN.

FABRICATION:

EXTENSION BARS SHALL BE USED IN MAKING BUTT WELDS IN THE FLANGES ACCORDING TO THE A.W.S. SPECIFICATION SECTION 405(P).

ENDS OF BEAMS TO BE SPliced SHALL BE PREPARED IN THE SHOP, TAKING INTO ACCOUNT THE RELATIVE POSITIONS OF ADJACENT CONNECTIONS AND THE ROADWAY GRADE AND ALIGNMENT. ALL BEAMS SHALL BE SHOP-ASSEMBLED WITH BEAM WEBS HORIZONTAL, FIELD CONNECTIONS REVEALED (FOR ALTERNATE SPLICES) AND ALL PARTS MATCH-MARKED. THE SHOP ASSEMBLY SHALL HAVE A MINIMUM OF 2 SECTIONS. A BLOCKING DIAGRAM OF EACH BEAM WITH MATCH-MARKING INDICATED SHALL BE A PART OF THE STRUCTURAL STEEL SHOP DRAWINGS.

ALL BEAM WEBS SHALL BE COVERED WITH PLATE, UNDER TOTAL DEAD LOAD, THE TOP OF THE GIRDER WEBS WILL PARALLEL THE FINISH ROADWAY GRADE WITH A GRADIENT TOLERANCE OF 1/4".

GENERAL NOTES & RIPRAP DETAILS

A.S.H. NO. 19 UNDERPASS

NAVADA COUNTY

ROUTE 30 SEC. 1

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: LRS DATE: _____
 CHECKED BY: G.A. DATE: _____
 REVISIONS BY: G.A. DATE: _____
 BRIDGE NO. 5063 DRAWING NO. 14437

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJECT NO.	QC SHEET	TOTAL SHEETS
				6	ARK	I-630-2(115)40		
				JOB NO.	6878	286	409	
				① RETAINING WALL SOUTH C-D ROAD 14438				

NOTE: Contractor shall protect Retaining Wall at Mt. Walle Cemetery from Damage.

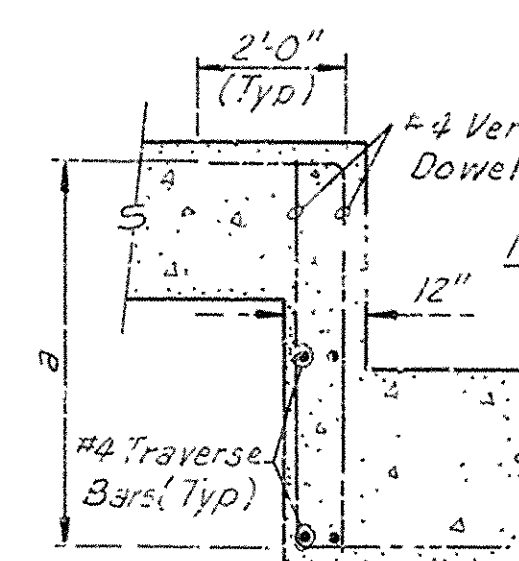
PART PLAN
Scale: 1/8" = 1'-0"

PART ELEVATION
Scale: 1/8" = 1'-0"

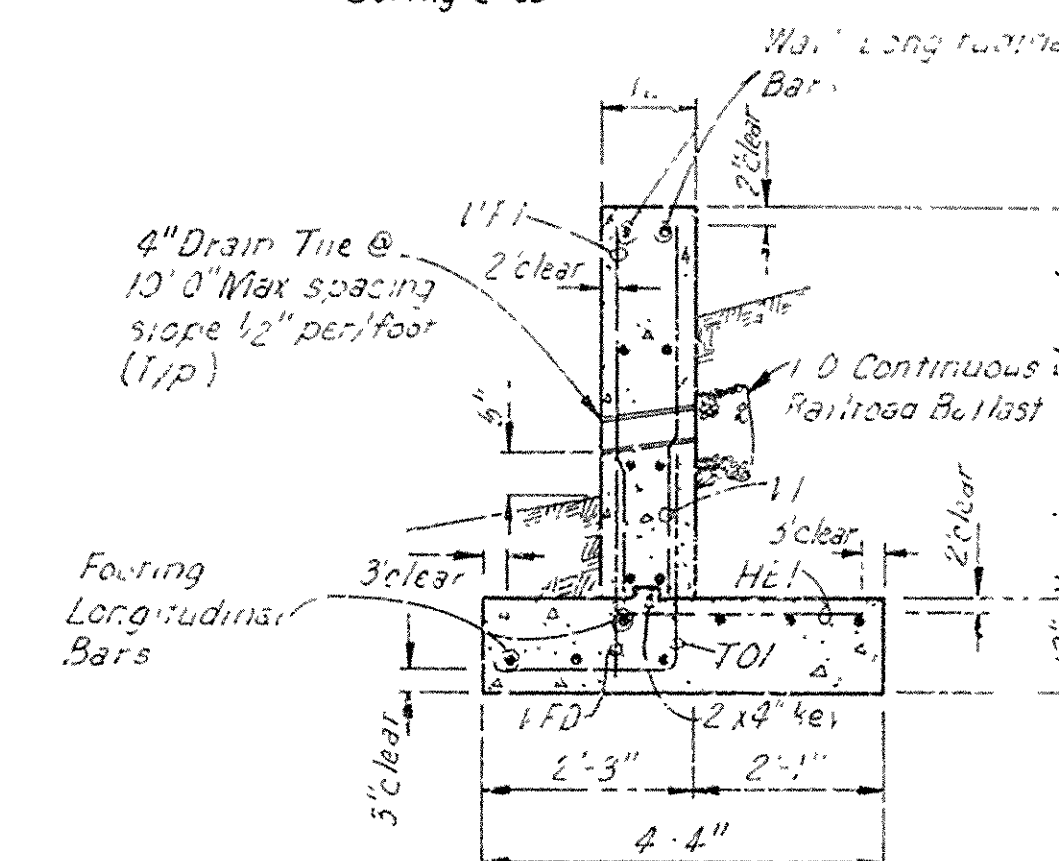
REINFORCEMENT SCHEDULE																									
SECTION	TYPICAL VIEW	FOOTING			TOI					HEI				VFD				VFI				Vi			
		TOE	HEEL	†	SIZE	SPA.	NO.	a	b	SIZE	SPA.	NO.	LENGTH	SIZE	SPA.	NO.	LENGTH	SIZE	SPA.	NO.	LENGTH	SIZE	SPA.	NO.	LENGTH
1	A	2'-3"	2'-1"	12"	#4	12"	26	1'-10"	2'-1"	#4	12"	26	3'-2"	#4	18"	18	2'-1"	#4	18"	16	Varies 2'-4" to 3'-2"	#4	12"	26	Varies 2'-4" to 3'-4"
2	A	2'-3"	2'-1"	12"	#4	12"	28	1'-10"	2'-1"	#4	12"	28	3'-2"	#4	18"	19	2'-1"	#4	18"	19	5'-4"	#4	12"	28	5'-4"
3	A	2'-3"	2'-1"	12"	#4	12"	51	1'-10"	2'-1"	#4	12"	51	3'-2"	#4	18"	34	2'-1"	#4	18"	34	6'-4"	#4	12"	51	6'-4"
4	A	2'-3"	2'-1"	12"	#4	12"	74	1'-10"	2'-1"	#4	12"	74	3'-2"	#4	18"	50	2'-1"	#4	18"	50	8'-4"	#4	12"	74	8'-0"
5	A	2'-3"	2'-1"	12"	#4	12"	62	1'-10"	2'-1"	#4	12"	62	3'-2"	#4	18"	40	2'-1"	#4	18"	40	Varies 8'-3" to 7'-1"	#4	12"	62	Varies 8'-3" to 7'-1"

LONGITUDINAL REINFORCEMENT					
WALL	FOOTING	SIZE	LENGTH	NO.	
#4	#4	2'-8"	2'-8"	6	7
#4	#4	2'-6"	2'-6"	7	7
#4	#4	2'-5"	2'-5"	14	14
#4	#4	2'-3"	2'-3"	35	35
#4	#4	2'-2"	2'-2"	23	23

FOOTING STEP REINFORCEMENT						
STEP	VERTICAL DOWELS			TRANSVERSE BARS		
	SIZE	NO.	"a"	SIZE	NO.	LENGTH
1	#4	7	1'-6"	#4	4	3'-10"
2	#4	7	1'-6"	#4	4	3'-10"
3	#4	7	2'-6"	#4	4	3'-10"
4	#4	7	1'-6"	#4	4	3'-10"



FOOTING STEP REINFORCEMENT DETAIL
Scale: None



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

BORING LOG LEGEND

- ① Brown fine sandy silty with organic matter
- ② Fine and medium gravel with tan clayey fine and medium sand. Gravel at 4' - 5' gravel below 5'.
- ③ Gray with reddish tan silty clay with gravel.
- ④ Silty dark gray slightly blocky silty clay
- ⑤ Very stiff dark gray clay with tan vertical fissures
- ⑥ Very stiff tan slightly blocky clay
- ⑦ Very stiff gray, some dark gray clay

SUMMARY OF QUANTITIES

Sta. 364+80 to 367+16.17	
Gross Concrete	1006 C.Y.
Reinforcing Steel	7,660 Lbs.
Excav.	350 C.Y.
* Rounded Ballast	23 C.Y.

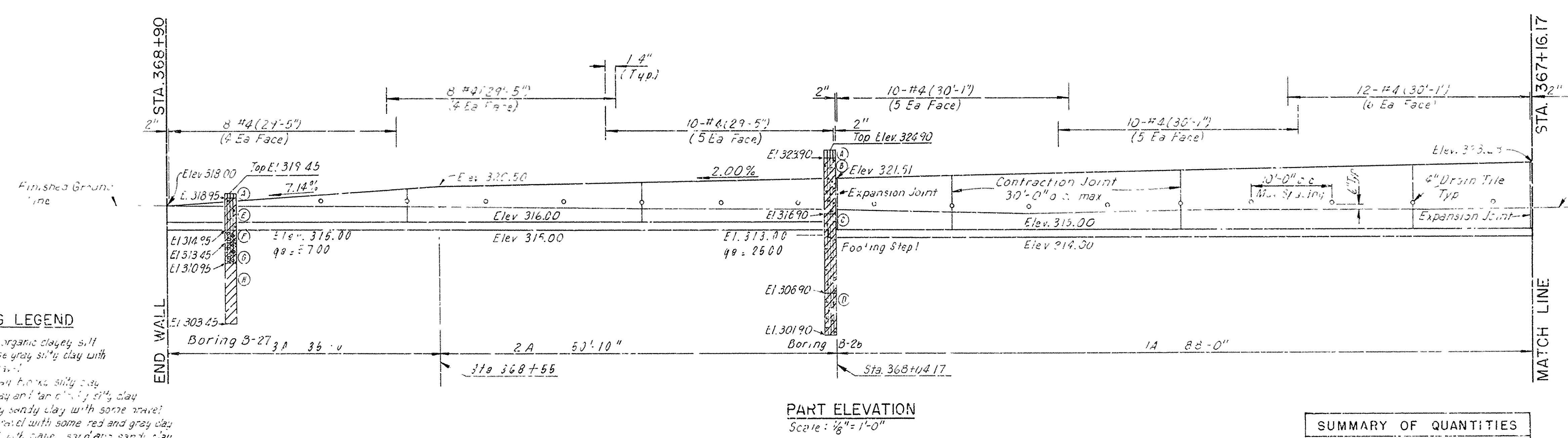
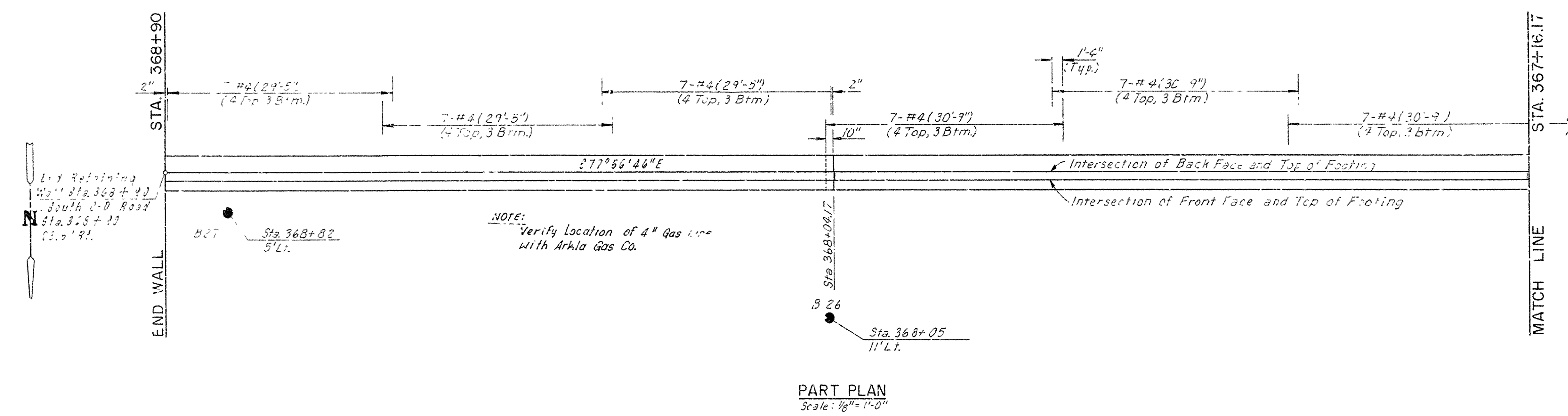
NOTE: See Plan and Profile
Main Lanes Sheet No. 62
* Approximate Quantity Provided for Information

SHEET 1 OF 2
STA. 364+80 TO STA. 367+16.17
RETAINING WALL SOUTH C-D ROAD
PULASKI COUNTY
INT. ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION

DRAWN BY: H.C.F. DATE: 11/1/77
TRACED BY: P.S. DATE: 11/1/77
CHECKED BY: P.C. DATE: 11/1/77 SCALE: AS SHOWN
BRIDGE NO. DRAWING NO. 14438

DATE REVISION	DATE FILMED	DATE REVISION	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJECT NO.	JO. SHEET	TOTAL SHEETS
				6	ARK	1-630-2(115)140		
							6878	287
								409

① RETAINING WALL SOUTH C-D ROAD 14439

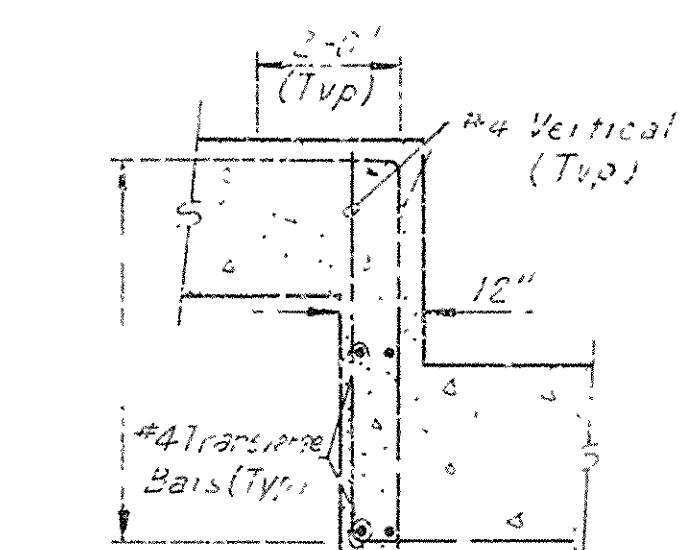


REINFORCEMENT SCHEDULE																									
SECTION	TYPICAL VIEW	FOOTING			TOI					HEI				VFD				VFI				VI			
		TOE	HEEL	+	SIZE	SPA.	NO.	a	b	SIZE	SPA.	NO.	LENGTH	SIZE	SPA.	NO.	LENGTH	SIZE	SPA.	NO.	LENGTH	SIZE	SPA.	NO.	LENGTH
1		2'-3"	2'-11"	12"	#4	12"	81	1'-11"	2'-11"	#4	12"	89	3'-2"	#4	18"	60	2'-11"	#4	18"	60	Varies 7'-11" to 6'-4"	#4	12"	89	Varies 7'-11" to 6'-4"
2		2'-3"	2'-11"	12"	#4	12"	51	1'-11"	2'-11"	#4	12"	51	3'-2"	#4	18"	34	2'-11"	#4	18"	35	Varies 5'-4" to 4'-2"	#4	12"	52	Varies 5'-4" to 4'-4"
3		2'-3"	2'-11"	12"	#4	12"	36	1'-11"	Varies 5'-11" to 4'-7"	#4	12"	36	3'-2"	#4	18"	24	Varies 5'-11" to 4'-7"			None				None	

LONGITUDINAL REINFORCEMENT			
WALL	FOOTING	NO.	LENGTH
#4	#4	30	30
#4	#4	30	30

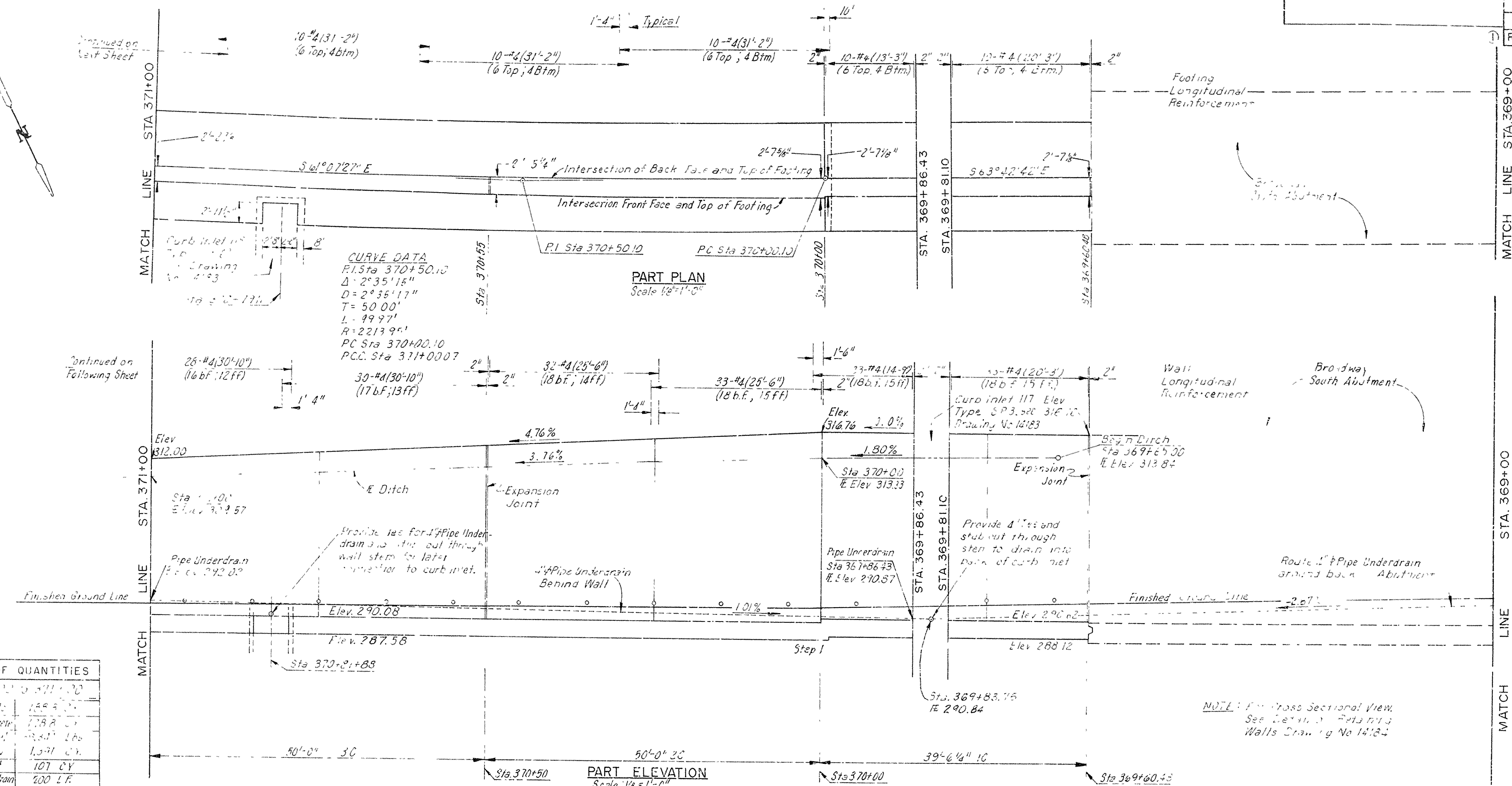
FOOTING STEP REINFORCEMENT						
STEP	VERTICAL DOWELS			TRANSVERSE BARS		
	SIZE	NO.	LENGTH	SIZE	NO.	LENGTH
1	#4	7	1'-6"	#4	4	3'-10"

NOTE: Vertical Dowels match with #4 Bars in footing at least within.



SHEET 2 OF 2
STA. 367+16.17 TO STA. 368+90
RETAINING WALL SOUTH C-D ROAD
PULASKI COUNTY
INT ROUTE SEC
ARKANSAS STATE HIGHWAY COMMISSION
DRAWN BY: J.D. DATE: 10/1/87
CHECKED BY: P.D. DATE: 10/1/87
BRIDGE NO. DRAWING NO. 14439

DATE RECEIVED	DATE FILED	DATE REVISED	DATE PLACED	FED. ROAD DIST. NO.	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
				6	ARK	I-630-2(115)40	289	409
RETAINING WALL RAMP CE-1								14441



SUMMARY OF QUANTITIES	
Concrete	155.3
Reinforcing Steel	17.8
Expansion Joints	1.0
Underdrains	1.0
Railroad Ballast	107.0
1" Pipe Underdrain	200 LF

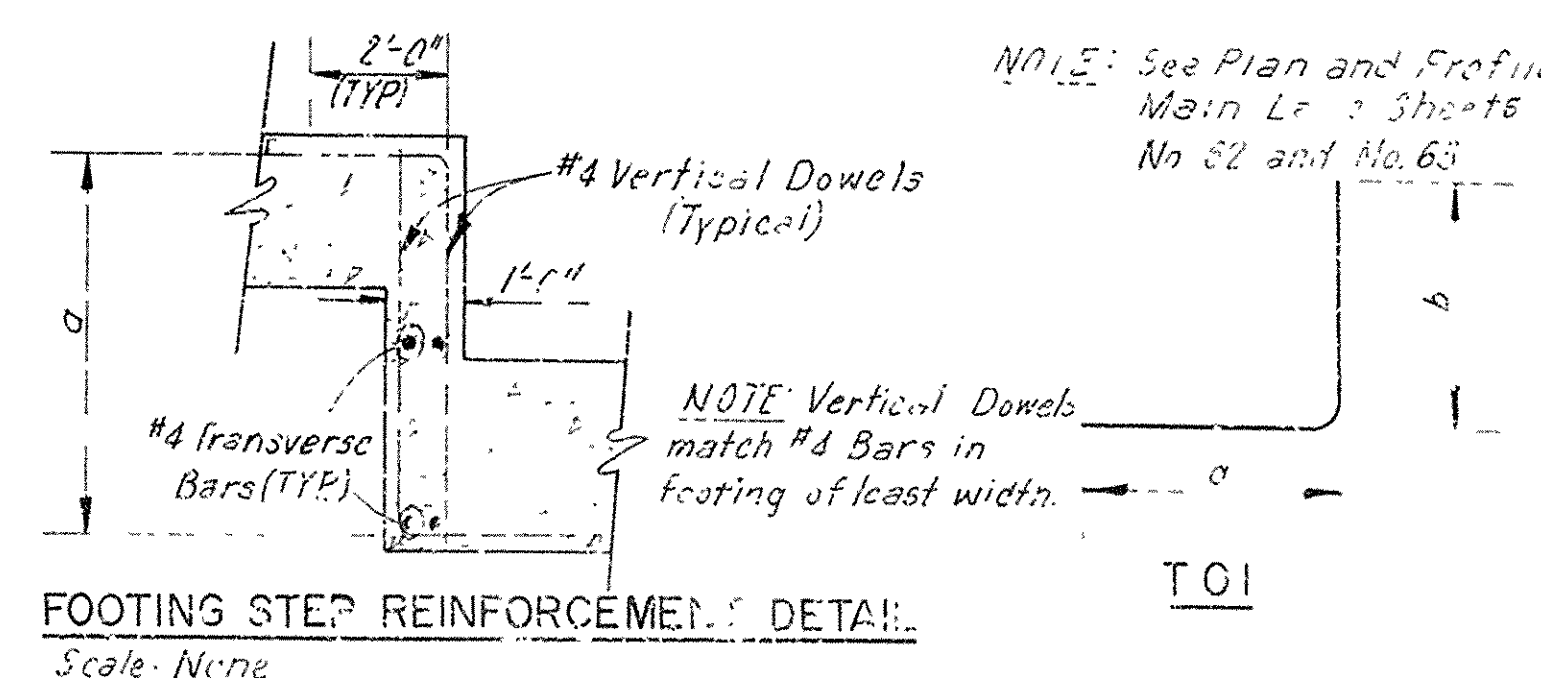
SECTION		TYPICAL VIEW	FOOTING		TOE 1				HEEL 1				VFD				VF 1				VF 2				VF 3				V 1				V 2				V 3				V 4										
			TOE	HEEL	+	SIZE	SPA	NO.	"5"	"6"	SIZE	SPA	NO.	LENGTH	SIZE	SPA	NO.	LENGTH	SIZE	SPA	NO.	LENGTH	SIZE	SPA	NO.	LENGTH	SIZE	SPA	NO.	LENGTH	SIZE	SPA	NO.	LENGTH	SIZE	SPA	NO.	LENGTH	SIZE	SPA	NO.	LENGTH	SIZE	SPA	NO.	LENGTH					
1	C		7'-6"	7'-9"	2'-6"	#7	3"	20	7'-6"	4'-7"	#7	6"	100	10'-5"	#6	6"	101	10'-5"	#4	18"	23	3'-7"	#4	18"	23	9'-4"	#4	18"	23	9'-4"	#4	18"	23	5'-2"	#7	6"	68	10'-0"	#7	6"	101	7'-0"	#6	12"	51	9'-4"	#6	12"	51	5'-3"	
2	C		7'-6"	7'-9"	2'-6"	#7	3"	20	7'-6"	4'-7"	#7	6"	100	10'-5"	#6	6"	101	10'-5"	#4	18"	34	3'-7"	#4	18"	34	9'-4"	#4	18"	34	9'-4"	#4	18"	34	Varies 5'-8" to 3'-4"	#7	6"	100	10'-0"	#7	6"	101	7'-0"	#6	12"	50	9'-4"	#6	12"	51	3'-3"	
3	C		7'-6"	7'-9"	2'-6"	#8	6"	101	7'-6"	5'-3"	#7	6"	100	10'-5"	#6	6"	101	10'-5"	#4	18"	34	3'-7"	#4	18"	34	9'-4"	#4	18"	34	9'-4"	Varies 11'-2" to 8'-11"	N	0	N	E	#7	6"	101	10'-0"	N	0	N	E	#6	12"	51	9'-4"	N	0	N	E

* Provide 14 or 10" Toe Bars with "a" = 3'-5 1/2" for Toe Cut-off

REINFORCEMENT SCHEDULE (CONT.)									
SECT	VE				VT				
	SIZE	SPA	NO.	LENGTH	SIZE	SPA	NO.	LENGTH	
1	#4	12"	25	4'-10"	#4	12"	51	4'-10"	
2	#4	12"	51	4'-10"	#4	12"	51	4'-10"	
3	#4	12"	51	4'-10"	#4	12"	51	4'-10"	

FOOTING STEP REINFORCEMENT					
STEP	SIZE	NO.	LENGTH	TRANSVERSE	BARS
1	#4	10	2'-7"	#4	6

LONGITUDINAL REINFORCEMENT						
WALL			FOOTING			
SIZE	LENGTH	NO	SIZE	LENGTH	NO	
#4	20'-3"	33	#4	20'-3"	10	
#4	25'-6"	65	#4	31'-2"	30	
#4	30'-10"	58	#4	15'-3"	10	
#4	14'-9"	33				

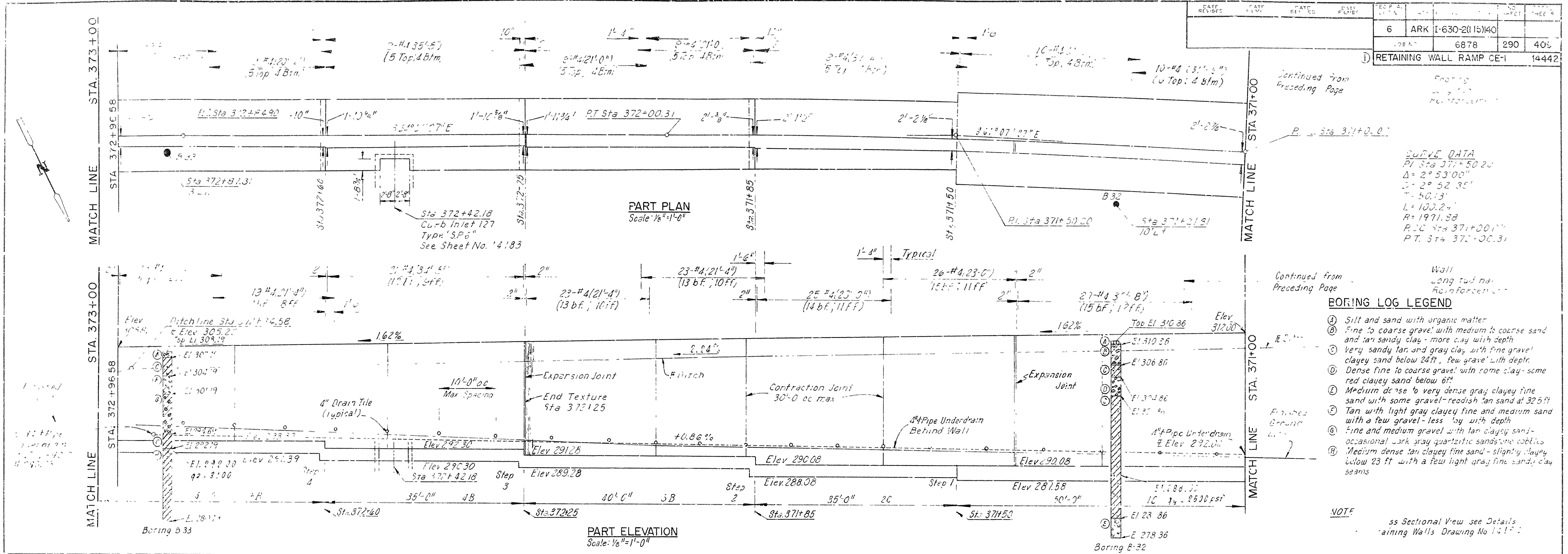


SHEET 2 OF 4
 STA. 369+00 TO STA. 371+00
 RETAINING WALL RAMP CE-1

PULASKI COUNTY
 INT. ROUTE SEC

ARKANSAS STATE HIGHWAY COMMISSION

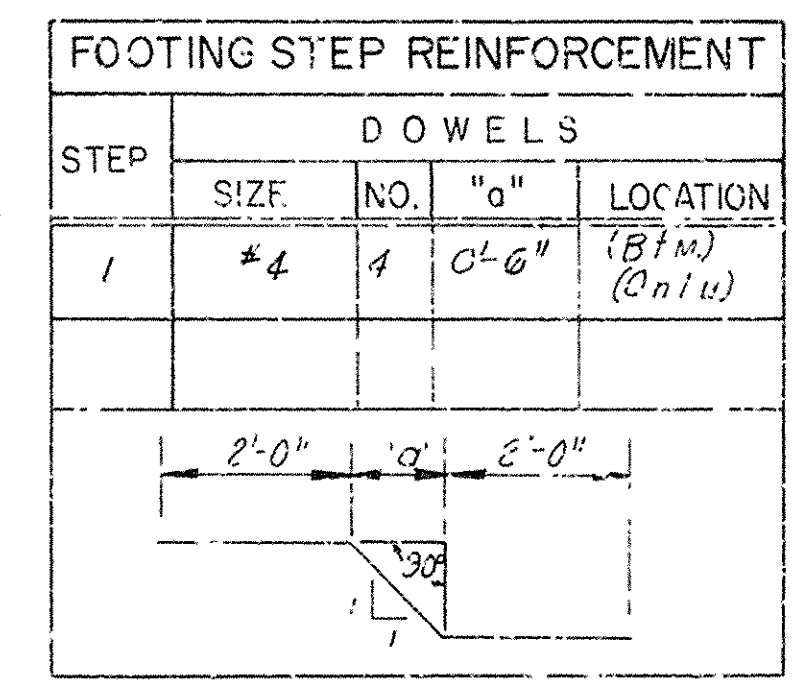
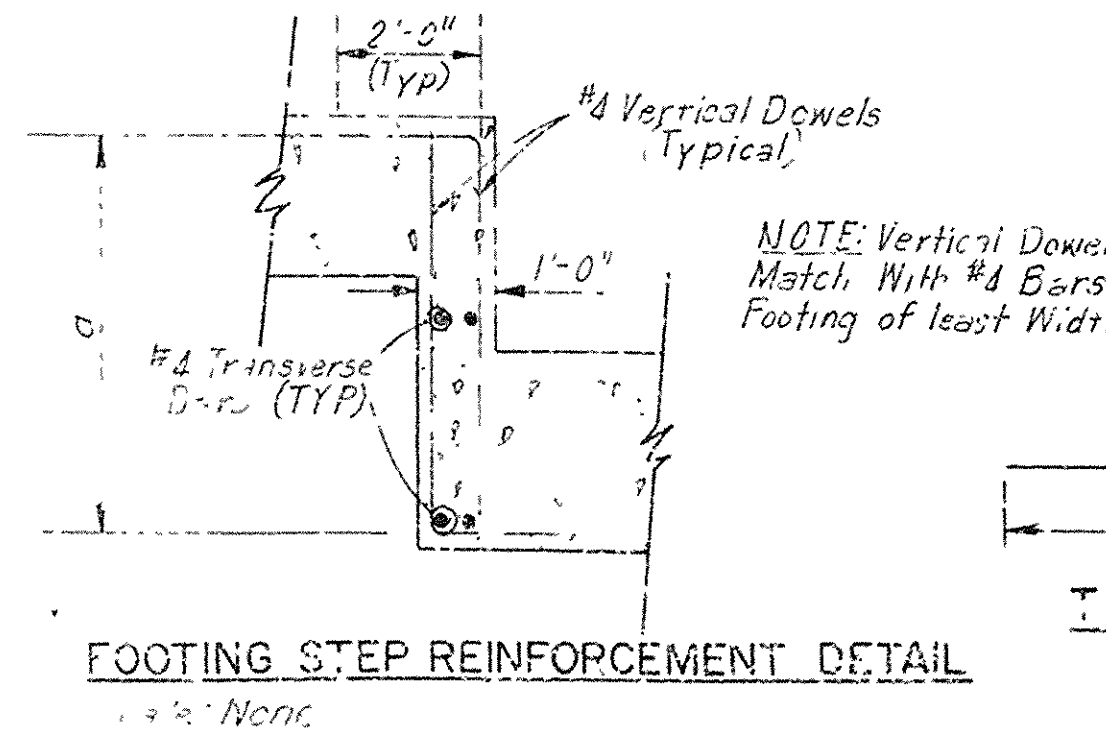
DRAWN BY: R.L.E. DATE: 10-1-77
 CHECKED BY: S.D.E. DATE: 10-1-77
 BRIDGE NO. DRAWING NO. 14441



REINFORCEMENT SCHEDULE																																																
SECTION	TYPICAL VIEW	FOOTING		TOE					HE 1				HE 2				VFD				VFI				VF 2				V 1				V 2				V 3				V 5				VT			
		TOE	HEEL	SIZE	SPA	NO.	"a"	"b"	SIZE	SPA	NO.	LENGTH	SIZE	SPA	NO.	LENGTH	SIZE	SPA	NO.	LENGTH	SIZE	SPA	NO.	LENGTH	SIZE	SPA	NO.	LENGTH	SIZE	SPA	NO.	LENGTH	SIZE	SPA	NO.	LENGTH	SIZE	SPA	NO.	LENGTH								
1		1'-0"	2'-0"	#8	6"	101	7'-4"	5'-5"	#7	6"	100	10'-1"	#6	6"	101	10'-1"	#4	18"	34	3'-7"	#4	18"	34	9'-4"	#4	18"	34	Varies 8'-4" to 8'-3"	#7	6"	101	10'-0"	None	#6	12"	51	9'-4"	#4	12"	51	Varies 5'-9" to 4'-11"	#4	12"	51	4'-10"			
		5'-0"	2'-0"	#7	6"	71	1'-4"	4'-5"	#8	12"	36	8'-5"	#7	12"	36	8'-5"	#4	18"	24	3'-1"	#4	18"	24	9'-4"	#4	18"	24	Varies 8'-3" to 7'-6"	#6	12"	36	9'-8"	#6	12"	37	7'-3"	#5	12"	36	9'-4"	#4	12"	36	Varies 8'-11" to 4'-4"	#4	12"	36	4'-10"
B		5'-9"	2'-0"	#7	6"	81	5'-4"	3'-5"	#8	12"	40	8'-5"	#7	12"	41	8'-5"	#4	18"	27	3'-1"	#4	18"	27	9'-4"	#4	18"	27	Varies 8'-4" to 5'-9"	#6	6"	81	9'-8"	None	#5	12"	41	Varies 8'-4" to 7'-6"	None	#4	12"	41	4'-10"						
B		5'-9"	2'-0"	#8	12"	41	5'-4"	4'-9"	#7	6"	71	8'-5"	None	#4	18"	24	3'-1"	#4	18"	24	9'-4"	#4	18"	24	9'-4"	#4	18"	24	Varies 8'-3" to 4'-1"	#6	12"	36	9'-4"	None	#4	12"	36	Varies 8'-6" to 8'-11"	None	#4	12"	36	4'-10"					
B		5'-9"	2'-0"	#8	12"	41	5'-4"	4'-9"	#7	6"	81	8'-5"	None	#4	18"	27	3'-1"	#4	18"	27	Varies 11'-0" to 10'-5"	None	#6	12"	41	9'-4"	None	#4	12"	41	9'-4"	None	#4	12"	41	Varies 7'-11" to 7'-2"	None	#4	12"	41	4'-10"							

* Provide 1/2" x 1/2" x 1/2" with "a" dimension = 3'-8" for Toe Cutout.

LONGITUDINAL REINFORCEMENT					
WALL			FOOTING		
SIZE	LENGTH	NO.	SIZE	LENGTH	NO.
#4	30'-8"	27	#4	31'-2"	20
#4	23'-0"	51	#4	37'-4"	9
#4	21'-4"	46	#4	27'-6"	1
#4	34'-8"	21	#4	25'-8"	0
#4	21'-4"	9	#4	21'-2"	13
#4	1'-0"	9	#4	1'-0"	7



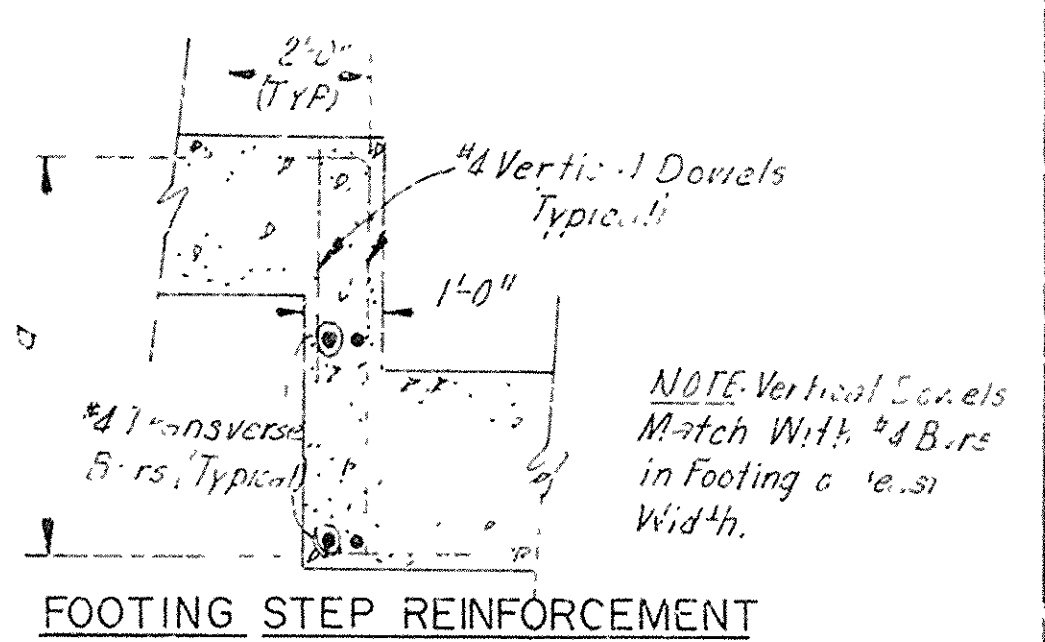
FOOTING STEP REINFORCEMENT					
DOWELS					
STEP	SIZE	NO.	"a"	LOCATION	
1	#4	4	0'-6"	(B1M) (On 11)	

FOOTING STEP REINFORCEMENT					
TRANSVERSE BARS					
STEP	SIZE	NO.	"a"	LENGTH	
2	#4	9	2'-9"	11'-4"	
3	#4	9	2'-7"	11'-4"	
4	#4	9	2'-8"	11'-4"	

SUMMARY OF QUANTITIES					
Sta. 371+00 to 373+00					
Class 3 Concrete	24	2	1		
Class 3 Concrete	12	1	0		
Reinforcing Steel	31,777	4			
Structural Excav.	1,315				
Railroad Box	1				
1" Pipe Underdrain	90	1			

* Approximate Quantity provided for information

NOTE See Plans and Profile Main Lines Sheets 14442 and 14443



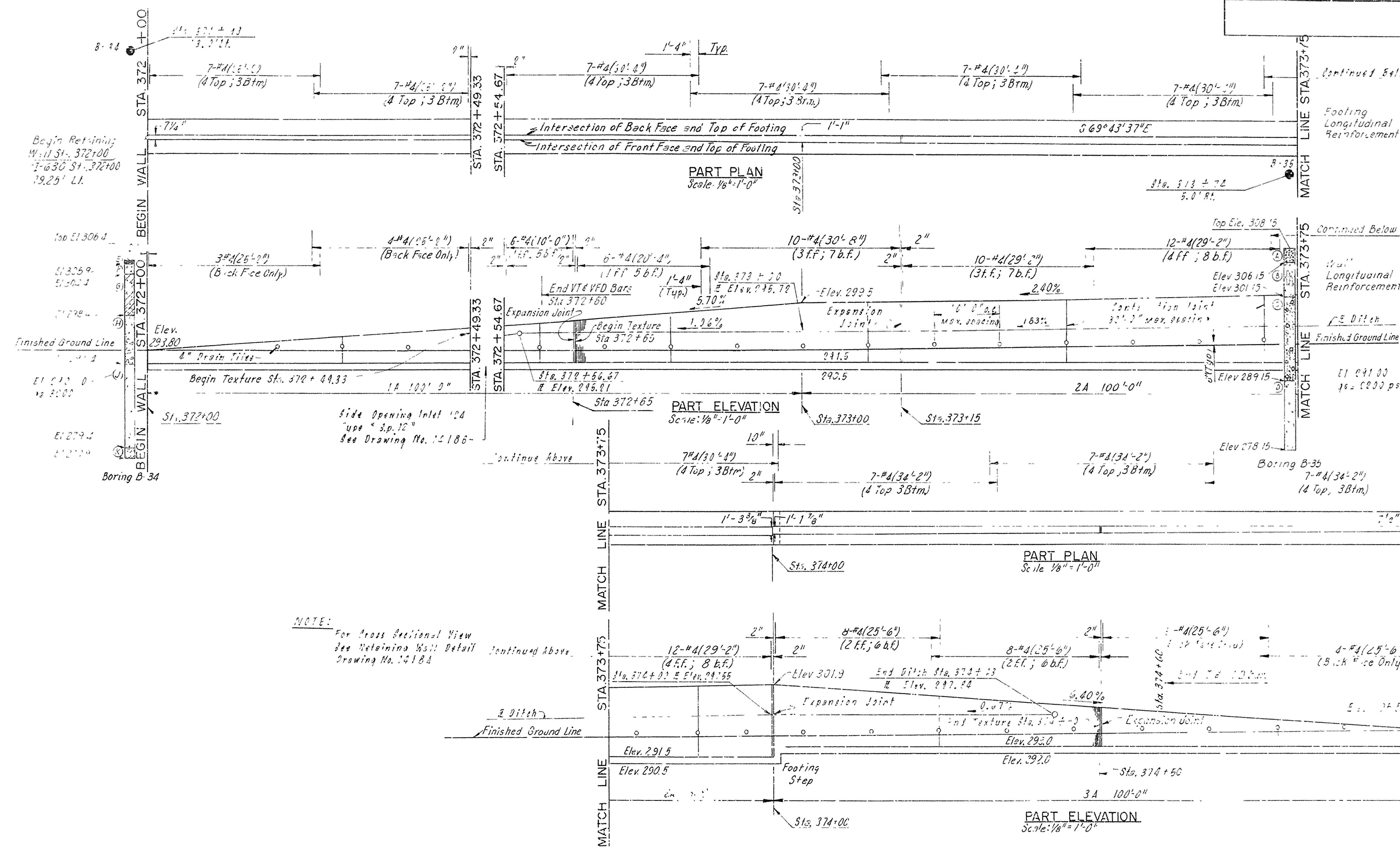
NOTE:
For Cross Sectional View
See Details of Retaining
Walls Drawing No. '4'c4

NOTE:
See Plan and Profile
Main Lanes Sheets
No 62 and No. 63

* Approximate Quantity Provided
for Information.

DRAWN BY: FL DATE: 11-1-68 CHECKED BY: FL
 TRACED BY: FL DATE: 11-1-68
 CHECKED BY: FL DATE: 11-1-68 SCALE: AS NOTED
 BRIDGE NO. DRAWING NO. 14443

DATE REVISED	DATE	REVISION	REVISION	REVISION	REVISION
6	ARK	I-630-2(11)140	6878	292	409
RETAINING WALL N. MAIN LANES 14444					



BORING LOG LEGEND

- Miscellaneous parking lot fill (roofing, piled stone, crushed stone, etc.)
- Tan sandy and silty clay with fine gravel
- Tan to red sandy, silty clay and fine to coarse gravel with occasional cobbles
- Medium dense tan fine to medium sand with occasional fine gravel. More gravel below 2' ft.
- Crushed stone base course
- Brown sandy clay, gravel
- Tan silty clay with fine gravel - coarse gravel
- Cobbles and boulders below 6 ft. in coarse tan sand, gravel, cobbles
- Some fine gravel below 26 ft. more gravel and cobbles below 27 ft.
- Medium dense tan fine to medium sand

NOTE: For Cross Sectional View See Retaining Wall Detail Drawing No. 14184

REINFORCEMENT SCHEDULE

SECTION	TYPICAL VIEW	FOOTING	TOE	HEEL	TO	HE	VFD	VI	VT
1	A	2'-0" x 2'-0" x 1'-0"	#4 12"	#4 12"	#4 12"	#4 12"	#4 18"	#4 12"	#4 12"
2	A	2'-0" x 2'-0" x 1'-0"	#4 12"	#4 12"	#4 12"	#4 12"	#4 18"	#4 12"	#4 12"
3	A	2'-0" x 2'-0" x 1'-0"	#4 12"	#4 12"	#4 12"	#4 12"	#4 18"	#4 12"	#4 12"

LONGITUDINAL REINFORCEMENT

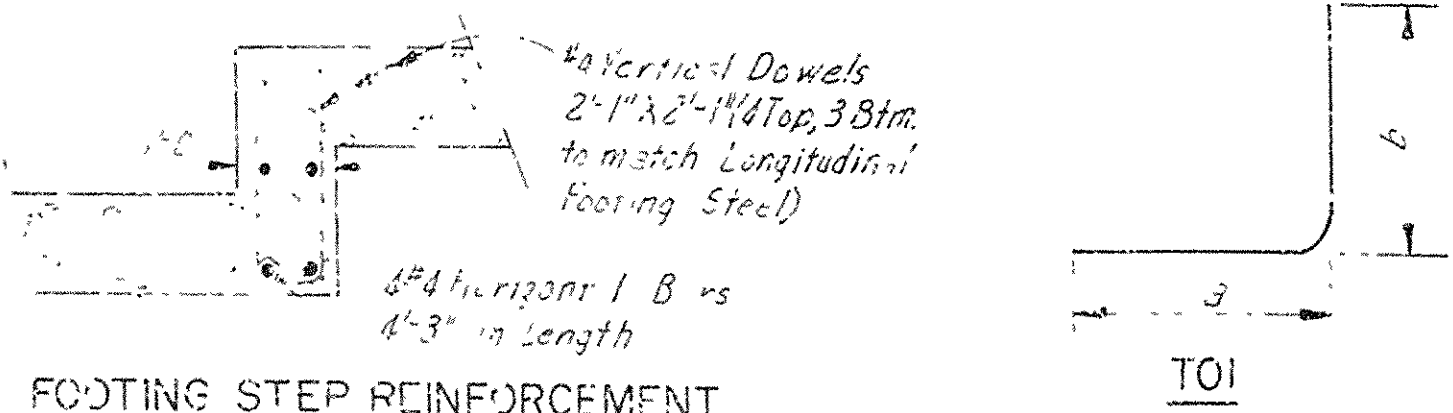
WALL	FOOTING
#4 2'-0" x 2'-0" x 1'-0"	#4 2'-0" x 2'-0" x 1'-0"
#4 2'-0" x 2'-0" x 1'-0"	#4 2'-0" x 2'-0" x 1'-0"
#4 2'-0" x 2'-0" x 1'-0"	#4 2'-0" x 2'-0" x 1'-0"
#4 2'-0" x 2'-0" x 1'-0"	#4 2'-0" x 2'-0" x 1'-0"
#4 2'-0" x 2'-0" x 1'-0"	#4 2'-0" x 2'-0" x 1'-0"
#4 2'-0" x 2'-0" x 1'-0"	#4 2'-0" x 2'-0" x 1'-0"
#4 2'-0" x 2'-0" x 1'-0"	#4 2'-0" x 2'-0" x 1'-0"
#4 2'-0" x 2'-0" x 1'-0"	#4 2'-0" x 2'-0" x 1'-0"
#4 2'-0" x 2'-0" x 1'-0"	#4 2'-0" x 2'-0" x 1'-0"

NOTE: See Plan and Profile Main Lanes Sheet No. 1

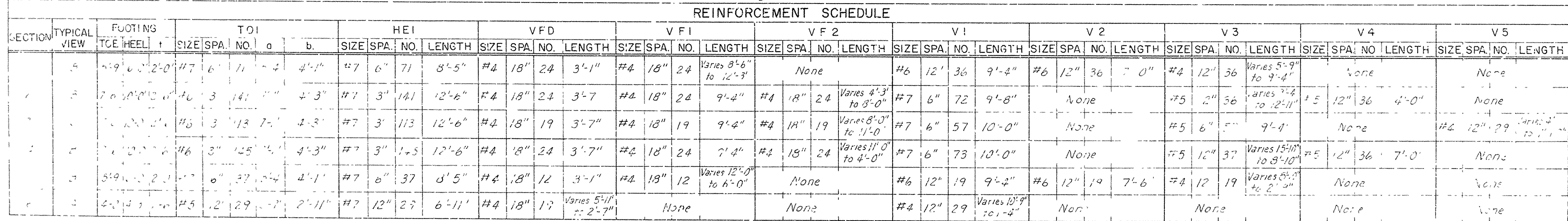
SUMMARY OF QUANTITIES

Class 5 Concrete	0.20 CY
Class 3(AE) Concrete	43.6 CY
Reinforcing Steel	6,817 Lbs
Structural Excav	361 CY
Railroad Boulders	18 CY

* Approximate Quantity provided for interior view



SHEET 1 OF 1
STA. 372+00 TO STA. 375+00
RETAINING WALL - NORTH MAIN LANES
PULASKI COUNTY
INT ROUTE SEC
ARKANSAS STATE HIGHWAY COMMISSION
DRAWN BY: [Name] DATE: [Date]
CHECKED BY: [Name] DATE: [Date]
BRIDGE NO. [Number] DRAWING NO. 14444



* Approximate Quantity provided for Information.

LONGITUDINAL REINFORCEMENT			
WALL		FOOTING	
SIZE	LENGTH	NO	
#1	10	32	
#4	36'-4"	9	
#4	25'-8"	46	
#4	9'-4"		
#4	2 - 1'		



- (A) Loose tan organic sili.
- (B) Medium dense reddish tan clayey fine sand with fine gravel
- (C) Loose tan fine sand with fine gravel.

SHEET 2 OF 2
STA. 182+66 TO STA. 184+46
RETAINING WALL EAST I-30

PULASKI COUNTY
INT. ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK
DRAWN BY M. S. DATE 1-11-1974
TRACED BY M. S. DATE 5-14-1974
CHECKED BY ... DATE 1-2-75 SCALE as noted

BRIDGE NO DRAWING NO 14446

366

FEED ROAD NO.	STATE	FEED AID PROJ.	FEED AID YEAR	FEED AID NO.	FEED AID SHEET NO.
6	ARK				
JOB NO. 6902				SHEET NO. 27	
				TOTAL SHEETS 76	

GENERAL NOTES

"1" concrete to be Class S. All exposed corners to be chamfered 3/4" unless otherwise noted.

Field connections to be riveted or bolted with high strength bolts. Plates: 3/16" g open holes 13/16" g except where noted otherwise. Structural shapes of equal or greater strength may be substituted for shapes shown, but payment will be made on the basis of shapes shown or those actually used, whichever is less.

All weld connections to be 5/16" fillet shop welds except as noted. All welding shall conform to the American Welding Society Standard Specifications for Welded Highway and Railway Bridges, current edition.

Shop Paint: All structural steel except surfaces in contact with concrete shall be given one coat of red lead and raw linseed oil before shipment.

Field Paint: First coat-red lead linseed oil; second coat-aluminum paint.

All metal bearing and roadway expansion devices to be paid for as "Structural Steel in Beam Spans." Bearings shall be finally seated in accordance with Sec. 806.54, including alternate, of the Standard Specifications. This work and material are to be paid for directly.

This drawing shows general features of design only. Shop drawings shall be made in accordance with the Specifications, submitted and approved secured before fabrication is begun.

All steel shall be ASTM A-36 unless otherwise noted.

Anchor bolts shall be galvanized to conform to ASTM Specification, Designation A153. Reinforcing steel to be deformed bars of intermediate or hard grade. The reinforcing steel is to be accurately located in the forms and firmly held in place by steel wire supports, sufficient in number and size to prevent displacement during the course of construction. The wire supports will not be paid for directly but will be considered subsidiary to the item of "Reinforcing Steel."

Shop lists and bending diagrams of reinforcing steel, including wire supports, shall be submitted and approved secured before fabrication is begun.

5/16" Tearing Note:

Floor slabs may be poured in one continuous operation with a stirruff extending over the whole span length, or may be poured in increments with the cooler one-third to one-half span length poured first. After the center section is poured, not less than 72 hours shall elapse before pouring the end sections. End sections may be poured simultaneously. If not poured simultaneously, 48 hours shall elapse between end section pours. A minimum of 72 hours shall elapse (1) between completion of the slab and the pouring of the curb section if poured separately, and (2) between the completion of the curb and the pouring of the type A mill propel. Holes for type B or C rail may be poured 24 hours after completion of the curb.

For details of Bridge Rating see Div. No. 14992 or 14993 as shown on Bridge Layout.

SPECIFICATION: Arkansas State Highway Commission Standard Specifications for Highway Construction Edition of 1959, the 1966 Supplemental Specifications thereon and applicable Special Provisions.

EXPANSION JOINT DATA

Span Length of Spans	Span Length of Spans	Span Length of Spans	Span Length of Spans
Exceeding 100' (F-E 2 Spans)	Exceeding 100' (F-E 2 Spans)	Exceeding 100' (F-E 2 Spans)	Exceeding 100' (F-E 2 Spans)
Between 80' to 100'	Between 80' to 100'	Between 80' to 100'	Between 80' to 100'
Over 100' to 140'	Over 100' to 140'	Over 100' to 140'	Over 100' to 140'
Over 140' to 180'	Over 140' to 180'	Over 140' to 180'	Over 140' to 180'

Note: All joints of Abutments and/or Fix Joints shall be 1'.

The Dimension "D" shall conform to the recommendations of the seal manufacturer as approved by the Bridge Engineer. The depth of the seal shall be approximately equal to the uncompressed width of the seal.

DETAILS COMMON TO STANDARD 35'-90' COMPOSITE I-BEAM SPANS

24, 26, 28, 39 ROADWAYS

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: RWM DATE: 1-4-67 SCALE: As Shown
 CHECKED BY: DEL DATE: 1-5-67

BRIDGE NO. 5210

DRAWING NO. 14990D

BRIDGE ENGINEER

Note: This drawing adopted from drawing 14990C.

Preconcrete DL Defl + VC Corr.

Acceptable Beams

No pay for thickening slab final position of beams below plan grade

Use When DL Defl + VC Corr is 3" or More

Natural bow - Max. allowed 4" more than DL Defl + VC correction

Fabricate bow side up

Final Position of Beam

Use When DL Defl + VC Corr is Less Than 3"

CHAMBER DIAGRAMS

No Scale

3" thick stiffener edge of web riveted from edge of Cope Fig 10 edge of bottom plate

8" x 3" x 1/2" Web R

8" x 3" x 1/2" Web R

Use when difference in shoe height is less than 5"

DETAILS OF BEAM BUILDUP

No Scale

Note: Beam buildings are required where modified spans are used, or adjacent regular spans have different "e" plus shoe height. (See accompanying drawings)

8" thick stiffener edge of web to Fig edge (5/16" x 1/2" width)

8" x 3" x 1/2" Web R

8" x 3" x 1/2" Web R

Use when difference in shoe height is 5" or more

DETAILS OF BEAM BUILDUP

No Scale

Note: If fixed shoe is made from welded plates all intersecting surfaces at 90° shall be joined by filler welds, all others shall be joined by bead welds with size welds according to AWS Standard Specifications for Welded Highway & Railway Bridges, current edition.

Note: For shoe type, beam buildup, and for plate thickening, see sketch on Layout or Intermediate Bent Drawing

24" x 26" Row Spans 51'-90'

39" x 28" Row Spans 51'-90'

39" x 28" Row Spans 51'-90'

39" x 28" Row Spans 51'-90'

39" x 28" Row Spans 51'-90'

39" x 28" Row Spans 51'-90'

Preformed Joint Sealer - See Special Provision 806-9

All spans 1/2" x 12" x 8" @ 15 cfs

Holes for 3/4" Mach Bolts 1/4" in angle, 1/2" in flg. 1 washer on top of angle

8" x 3" x 1/2" Web R

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DETAIL 1' (Typical) Scale 1/4" = 1'-0"

As an alternate for spans, 3/4" x 10" automatically welded stud anchors, granular flux filled, solid filled, or equal, may be used. Use weight of spans as basis of measurement of structural steel in anchors.

Int. Bm

Ext. Bm

See detail of beam buildup

Modified Span

Regular Span

Scale: 3/4" = 1'-0"

Joint at Int. Bent

Scale: 3/4" = 1'-0"

Joint at Int. Bent

Scale: 3/4" = 1'-0"

Joint at Int. Bent

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Joint at Int. Bent

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Joint at Int. Bent

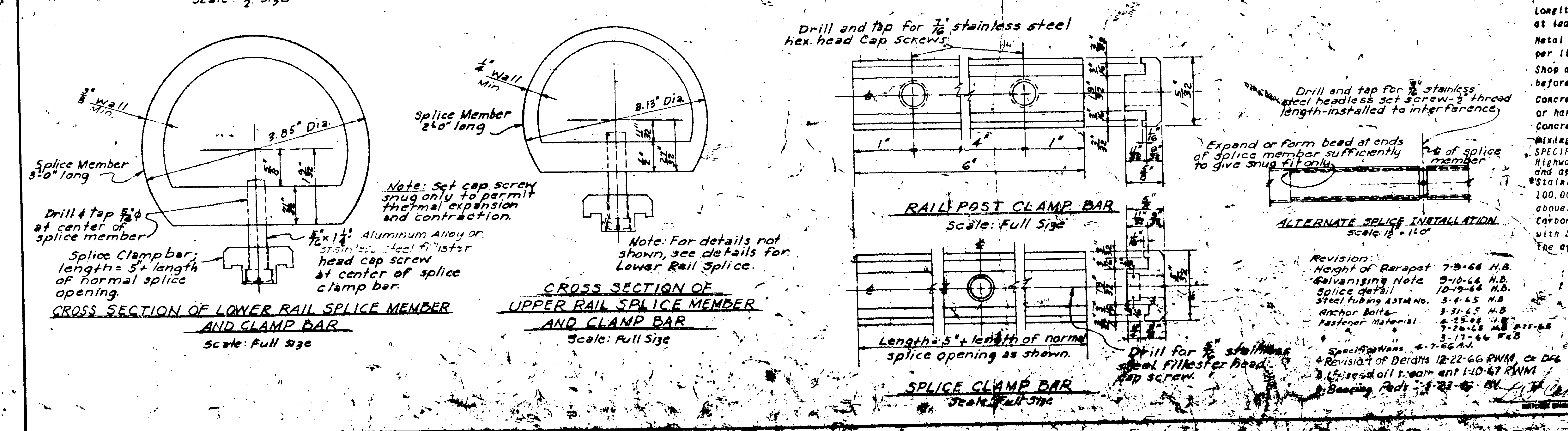
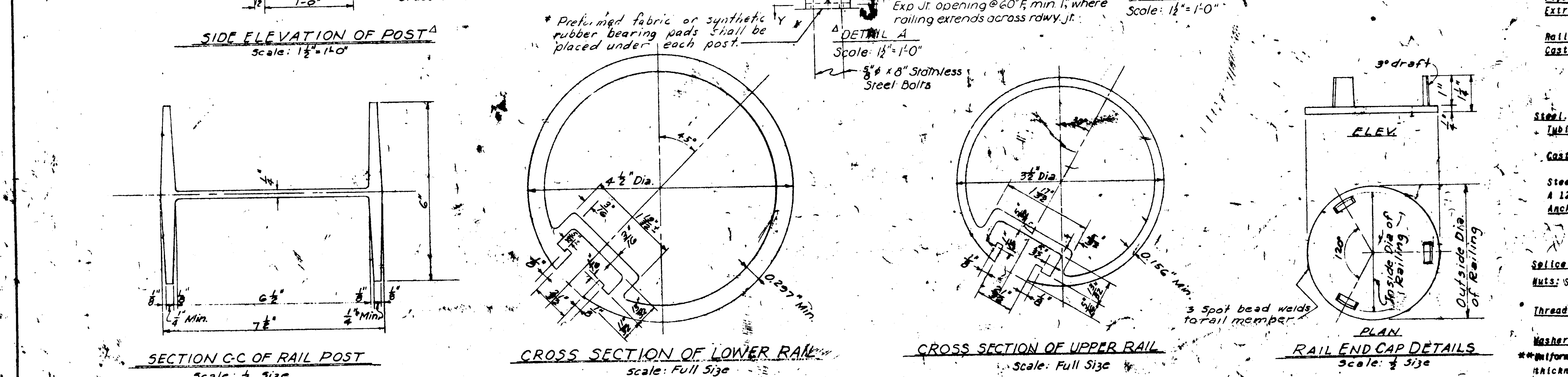
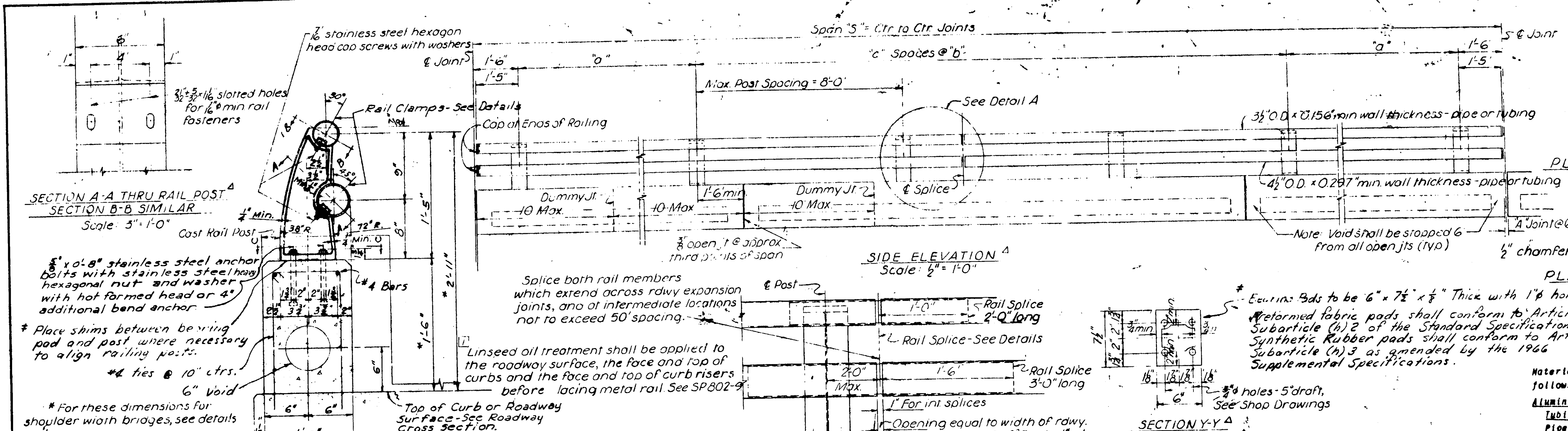
Scale: 3/4" = 1'-0"

Joint at Int. Bent

Scale: 3/4" = 1'-0"

Joint at Int. Bent

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	ARK.	1773	1975	34	35
JOB NO.		10755			



**** Material for Railing Fasteners (1 bolt connection for top rail, 2 bolt connection for bottom rail):**
Bolts and Toggle Pins: Stainless Steel, ASTM A 193 or A 320, Grade B-8 with a minimum yield strength of 80,000 psi, or galvanized High Strength Steel ASTM A 325 or A 354, Grade BC. Bolt size 7/16" minimum; pin 5/16" minimum.
Nuts: Stainless Steel ASTM A 194, Grade 8, or galvanized High Strength Steel ASTM A 325.
Toggle: Aluminum Alloy 6061-T6 or 6062-T6, ASTM B 221; or Stainless Steel ASTM A 276 or A 167, Type 302; or galvanized steel A 36 or A 301.
Washers: Aluminum Alloy Alclad 2024-T4, ASTM B 209; or Stainless Steel ASTM A 276 or A 167, Type 302; or galvanized steel ASTM A 36.
Galvanizing shall be in accordance with ASTM A 153. Galvanized parts shall only be used with galvanized steel rail members.

GENERAL NOTES
Material for metal railing shall be galvanized steel or aluminum alloy as follows:
Aluminum Alloy:
Inclad: 6061-T6 or 6062-T6; ASTM Specification B 221.
Pipe: 6061-T6 or 6062-T6; ASTM Specification B 221.
Extrusions: Rods, bars, and shapes - 6061-T6 or 6062-T6; ASTM Specification B 221.
Rail End Caps: 350F; ASTM Specification A 26, Alloy 30 30.
Permanent Mold Castings A 36-T4; minimum tensile strength 20,000 psi; elongation in 2", 20% minimum. Outside surfaces of flange shall be given a No. 220 grit belt finish, of which all exposed surfaces shall receive one coat of clear lacquer.
Steel:
Inclad, Pipe and Accessories: ASTM Specification A 36 or ASTM Specification A 53, Grade B or ASTM Specification A 27, Grade 88-35.
Cast Rail Posts: Carbon steel castings conforming to ASTM Specification A 123, after fabrication.
Steel rail members shall be galvanized in accordance with ASTM Specification A 123, after fabrication.
Anchor Bolts and Rail Clamp Screws: Anchor bolts and rail clamp screws shall be stainless steel conforming to ASTM Specification A 193, Grade B-8, with a minimum yield strength of 80,000 psi.
Splice Cap Screws: Aluminum Alloy 6061-T6 or 6062-T6; ASTM Specification B 221, less than 1/2" diameter.
NUTS: Stainless Steel, ASTM Specification A 194, Grade 8.
Threads: Threads on bolts, screws and nuts shall conform to American Standard Coarse Series, Class 2 Fit; ASA Specification B1.1.
Washers: Aluminum Alloy, Alclad 2024; ASTM Specification B 209, or 304 or 316 stainless steel or aluminum tubing or pipe of equivalent strength and wall thickness with approved fasteners may be substituted for the design shown. Longitudinal rail members shall be of sufficient length to provide attachment at least three posts.
Metal railing including posts and fastenings shall be paid for at the unit price per linear foot bid for Metal (Aluminum or Steel) Bridge Railing.
Shop drawings showing details of railing shall be submitted and approved before fabrication is begun.
Concrete for parapet shall be Class S. Reinforcing Steel shall be intermediate or hard grade. This work and material shall be measured and paid for as Class S Concrete and Reinforcing Steel respectively.
Mixing of aluminum and galvanized steel parts in railing assembly is not permitted.
SPECIFICATIONS: Arkansas State Highway Commission Standard Specifications for Highway Construction, Edition of 1959, the 1966 Supplemental Specifications thereon and applicable Special Provisions.
Stainless steel, ASTM A276, Type 302 with a minimum ultimate strength of 100,000psi may be used in lieu of the rail fastener material shown in the notes above.
Carbon steel fastener material as specified above, aluminum coated in accordance with Special Provision 806-10, may be used with aluminum rail members in lieu of the applicable material specified.

DETAILS OF METAL BRIDGE RAILING
TYPE A
ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.
BRIDGE NO. 14392
DRAWING NO. 14392

Revision:
Height of Parapet 7'-6" H.B.
Galvanizing Note 9-10-66 H.B.
Splice detail 10-9-66 H.B.
Steel tubing ASTM No. 5-6-65 H.B.
Anchor Bolts 5-31-65 H.B.
Fastener Material 6-22-66 H.B. & 11-14-68 H.B. & 11-17-66 H.B.
Specifications 6-7-66 H.B.
Revision of Details 12-22-66 RNM & D
Revision of Beam and 14-0-67 RNM
Reinforcing Steel 1-1-68 H.B.