

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
3-12-90	3-14-90			6	ARK.			
				JOB NO.		3979	13	84
① 6345, 6346 & 6347 QUANTITIES 30716								

ALT. NO. I

SCHEDULE OF BRIDGE QUANTITIES-JOB 3979

BRIDGE NO.	CODE NO.	NAME PLATE TITLE	UNIT OF STRUCTURE	ITEM NO.	*205	603	801	SS & 802	SS & 802	803	SS & 804	SS & 804	SS & 805	SS & 805	805	812	816	816	
				ITEM	REMOVAL OF EXISTING BRIDGE STRUCTURE ( SITE NO. )	TEMPORARY BRIDGE STRUCTURE ( 20' ROADWAY WIDTH)	UNCLASSIFIED EXCAVATION FOR STRUCTURES-BRIDGE	CLASS S CONCRETE	CLASS S(AE) CONCRETE	BOILED LINSEED OIL	REINFORCING STEEL ( GRADE 60)	EPOXY COATED REINFORCING STEEL ( GRADE 60)	STEEL PILING ( HP 10X42)	TEST PILES ( HP 10X42)	PILE ENCASEMENT	BRIDGE NAME PLATE ( TYPE C)	FILTER BLANKET	DUMPED RIPRAP	
					UNIT	LUMP SUM	LIN. FT.	CU. YD.	CU. YD.	CU. YD.	GAL.	LB.	LB.	LIN. FT.	LIN. FT.	LIN. FT.	EACH	SQ. YD.	CU. YD.
6345	X021	NUMBER ONE BAYOU	End Bent Nos.1 & 10				4	△17.20			△2,320		250				370	185	
			Int. Bent Nos. 2 thru 9					△75.20			10,170		995	65	360				
			2 - 25'-0'' R.C.D.G. End Spans						109.90	5.6	△15,080	7,920				1			
			7 - 25'-0'' R.C.D.G. Int. Spans						321.80	18.2	45,010	27,720							
			Site No. 2	1.0															
			TOTALS FOR BR. NO. 6345	1.0	120	4	△92.40	431.70	23.8	△72,580	35,640	1,245	65	360	1	370	185		
6346	X021	MIDDLE CREEK	End Bent Nos. 1 & 4				3	△17.20			△2,320		250				510	255	
			Int. Bent Nos. 2 & 3					△18.80			2,590		225	30	100				
			2 - 25'-0'' R.C.D.G. End Spans						109.90	5.6	△15,080	7,920				1			
			1 - 25'-0'' R.C.D.G. Int. Span						46.00	2.6	6,430	3,960							
			Site No. 3	1.0															
			TOTALS FOR BR. NO. 6346	1.0		3	△36.00	155.90	8.2	△26,420	11,880	475	30	100	1	510	255		
6347	X021	LITTLE MISSOURI RELIEF	End Bent Nos. 1 & 18				4	△17.20			△2,320		270	35			700	350	
			Int. Bent Nos. 2 thru 17					△150.40			20,340		2,310	105	930				
			2 - 25'-0'' R.C.D.G. End Spans						109.90	5.6	△15,080	7,920				1			
			15 - 25'-0'' R.C.D.G. Int. Spans						689.60	39.0	96,450	59,400							
			Site No. 6	1.0															
			TOTALS FOR BR. NO. 6347	1.0	125	4	△167.60	799.50	44.6	△134,190	67,320	2,580	140	930	1	700	350		
TOTALS FOR JOB 3979						245	11	△296.00	1,387.10	76.6	△233,190	114,840	4,300	235	1,390	3	1,580	790	

\* See Rdwy. Plans for Removal  
of Existing Bridge Structures  
at sites 1, 4 & 5.

△ Revised concrete & reinforcing steel quantities - EJK-3-12-90

GARY ASHLEY  
DESIGN SECTION SUPERVISOR

ALT. NO. I

SCHEDULE OF BRIDGE QUANTITIES

PIKE CO. LINE - HWY. 29 STRS. & APPRS.

NEVADA COUNTY

ROUTE 19 SEC. 5

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: EJK DATE: 9-7-89

CHECKED BY: GYA DATE: 9-14-89

DESIGNED BY: DATE:

SCALE: NONE

BRIDGE NO. 6345, 6346, 6347 DRAWING NO. 30716

*Vernon Pinkerton*  
BRIDGE ENGINEER



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		3979	14	82
① 6345, 6346, & 6347 QUANTITIES 30717								

ALT. NO. 2

SCHEDULE OF BRIDGE QUANTITIES-JOB 3979

BRIDGE NO.	CODE NO.	NAME PLATE TITLE	UNIT OF STRUCTURE	ITEM NO.	* 205	603	801	SS & 802	SS & 802	803	SS & 804	SS & 804	SS & 805	SS & 805	805	812	816	816	
				ITEM	REMOVAL OF EXISTING BRIDGE STRUCTURE ( SITE NO. )	TEMPORARY BRIDGE STRUCTURE ( 20' ROADWAY WIDTH)	UNCLASSIFIED EXCAVATION FOR STRUCTURES-BRIDGE	CLASS S CONCRETE	CLASS S(AE) CONCRETE	BOILED LINSEED OIL	REINFORCING STEEL ( GRADE 60)	EPOXY COATED REINFORCING STEEL ( GRADE 60)	STEEL PILING (HP 10X42)	TEST PILES (HP 10x42)	PILE ENCASEMENT	BRIDGE NAME PLATE ( TYPE C )	FILTER BLANKET	DUMPED RI PRAP	
					UNIT	LUMP SUM	LIN. FT.	CU. YD.	CU. YD.	CU. YD.	GAL.	LB.	LB.	LIN. FT.	LIN. FT.	LIN. FT.	EACH	SQ. YD.	CU. YD.
6345	X021	BAYOU	NUMBER ONE	End Bent Nos. 1 & 8			2	35.14		0.6	5,160		250			1	470	235	
				Int. Bent Nos. 2 thru 7				50.56			7,514		745	65	300				
				7 - 30'-4'' Pan Formed Deck Girders					392.50	22.4	58,556	34,510							
				Site No. 2	1.0														
				TOTALS FOR BR. NO. 6345	1.0	120	2	85.70	392.50	23.0	71,230	34,510	995	65	300	1	470	235	
6346	X021	MIDDLE CREEK		End Bent Nos. 1 & 4			29	35.14		0.6	5,160		250			1	440	220	
				Int. Bent Nos. 2 & 3				16.86			2,600		225	30	100				
				3 - 30'-4'' Pan Formed Deck Girders					168.20	9.6	25,090	14,790							
				Site No. 3	1.0														
				TOTALS FOR BR. NO. 6346	1.0		29	52.00	168.20	10.2	32,850	14,790	475	30	100	1	440	220	
6347	X021	LITTLE MISSOURI RELIEF		End Bent Nos. 1 & 15			6	35.14		0.6	5,160		300			1	700	350	
				Int. Bent Nos. 2 thru 14				109.56			16,329		1,860	105	780				
				14 - 30'-4'' Pan Formed Deck Girders					785.00	44.8	117,101	69,010							
				Site No. 5	1.0														
				TOTALS FOR BR. NO. 6347	1.0	125	6	144.70	785.00	45.4	138,590	69,010	2,160	105	780	1	700	350	
TOTALS FOR JOB 3979						245	37	282.40	1,345.70	78.6	242,670	118,310	3,630	200	1,180	3	1,610	805	

\*See Roadway Plans for Removal of Existing Bridge Structures, Sites 1, 4 & 5.

GARY ASHLEY  
DESIGN SECTION SUPERVISOR

ALT. NO. 2

SCHEDULE OF BRIDGE QUANTITIES

PIKE CO. LINE - HWY. 29 STRS. & APPRS.

NEVADA COUNTY

ROUTE 19 SEC. 5

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: EJK DATE: 9-7-89

CHECKED BY: GVA DATE: 9-14-89 SCALE: NONE

DESIGNED BY: DATE:

BRIDGE NO. 6345, 6346, & 6347 DRAWING NO. 30717

*V. J. Pinkerton*  
BRIDGE ENGINEER



GENERAL NOTES:

ENCLOSURE MARK: Chiseled "□", top of wheelwell, painted white, 16' lt. of centerline Sta. 546 + 11.86, Elevation 248.57.

CONSTRUCTION SPECIFICATIONS: Arkansas State Highway and Transportation Department Standard Specifications for Highway Construction, 1988 edition, with applicable supplemental specifications and special provisions.

DESIGN SPECIFICATIONS: AASHTO Standard Specifications for Highway Bridges, 1983 with current interim specifications.

LIVE LOADING: HS20 METHOD OF DESIGN: Load Factor

MATERIALS AND STRENGTHS:

Class (S/AE) Concrete (superstructure)	$f'c = 4,000$ psi
Class S Concrete (substructure)	$f'c = 3,500$ psi
Reinforcing Steel (A615 or A617, GR. 60)	$F_y = 60,000$ psi

BORING LOGS: Boring logs may be obtained from the Programs and Contracts Division.

PILE PILING: Piling shall be HP10x42 and shall be driven with an approved air, steam or diesel hammer to a minimum safe bearing capacity of 55 tons per pile and to a minimum penetration of 15' below natural ground. Piling in end bents shall be driven after embankment to bottom of cap is in place. Lengths of end bent piling shown are assumed for estimating quantities only. Actual lengths are to be determined in the field. Drive one 30' test pile in Bent No. 2 and drive one 35' test pile in Bent No. 8.

PILE ENCASEMENT: Pile encasement for Bents 2 thru 9 shall extend 3' into the ground and to the bottom of cap or column. See Drawing Number 14995A for additional information.

BRIDGE DECK: The concrete bridge deck shall be given a fine finish as specified for final finishing in subsection 802.20 for Class 5 Bridge Roadway Surface Finish.

BOILED LINSEED OIL: Boiled linseed oil treatment shall be applied to the roadway surface and to the face and top of the concrete parapet rail.

DETAIL DRAWINGS:

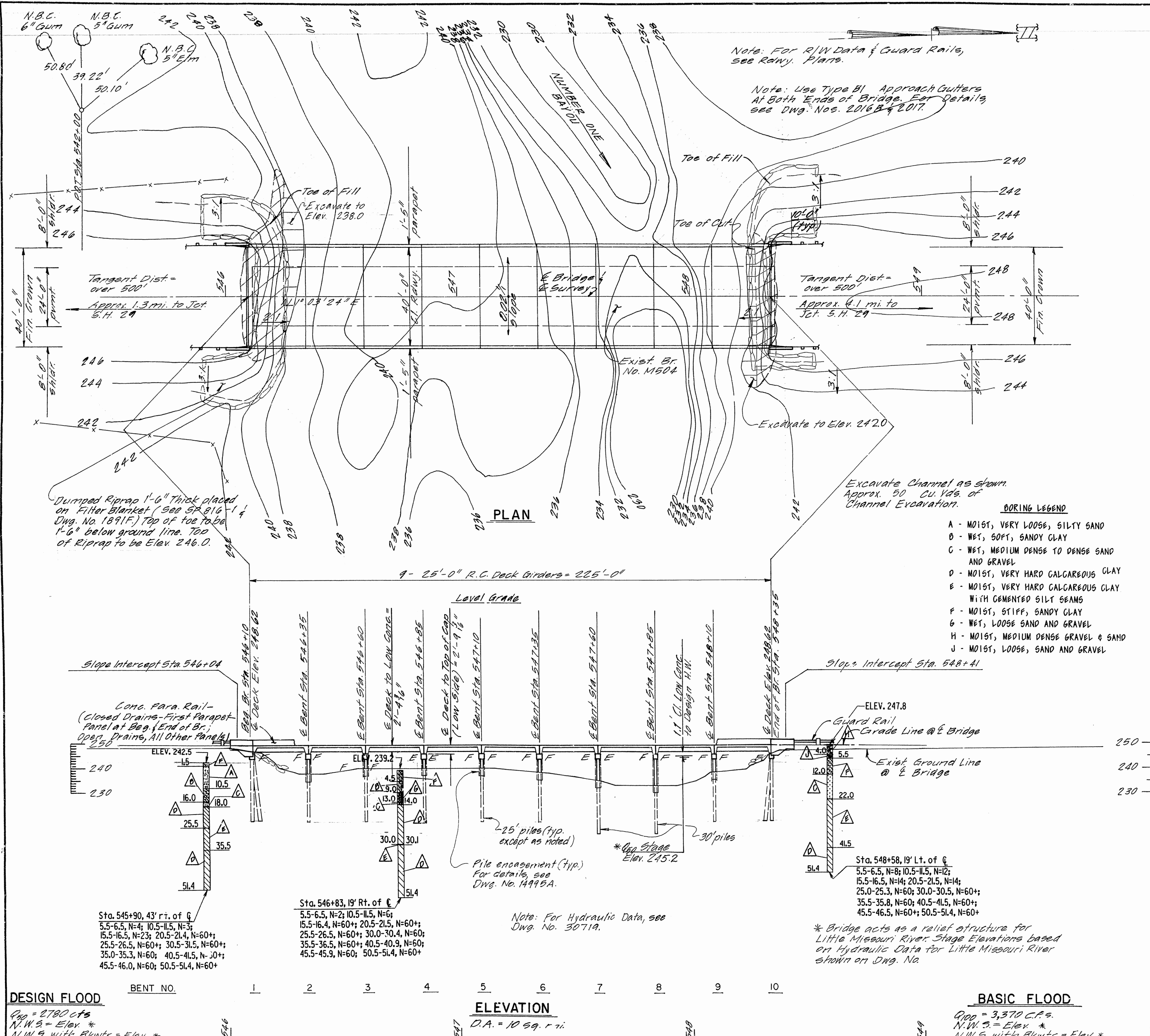
Bents	DRAWING NO.
5'-0" RCDG Spans	30721
	30722 & 30723

EXISTING BRIDGE: The existing bridge No. M504 is 24' wide and 225' long (15 spans) and consists of a precast concrete superstructure supported by timber pile bents with concrete caps.

REMOVAL AND SALVAGE: The existing bridge (M504) shall be removed in accordance with section 205 of the Standard Specifications. All material from the existing bridge shall become the property of the contractor.

TEMPORARY BRIDGE: Construct a 120' long temporary bridge approximately 48' downstream. The temporary bridge shall have a minimum roadway width of 20', a minimum live load capacity of H15 and a minimum deck elevation of 245.0. See section 603 of the Standard Specifications. See drawing numbers 2391, 2391A and 2392 for standard temporary bridge details. If timber piling and pile caps are used on this temporary bridge structure, the materials shall be treated with a preservative according to the standard specifications. See roadway plans for actual detour grade and alignment.

ALT. NO. 1  
LAYOUT OF BRIDGE OVER  
NUMBER ONE BAYOU  
PIKE CO. LINE-HWY. 29 BRS. & APPRS.  
NEVADA COUNTY  
ROUTE 19 SEC. 5  
KANSAS STATE HIGHWAY COMMISSION  
LITTLE ROCK, ARK.  
DRAWN BY: EAK DATE: 4-30-87  
CHECKED BY: DBA DATE: 3-15-88 SCALE: 1" = 20'  
DESIGNED BY: GVA DATE: 4-30-87  
BRIDGE NO. 6345 DRAWING NO. 30718





Note: For R/W Data & Guard Rails, see R/Wy. Plans.

Note: Use Type B1 Approach Gutters at both ends of Bridge. For Details, see Dwg. Nos. 20168 & 2017

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	3979		24	82

6347 LAYOUT 30720

#### GENERAL NOTES

BENCH MARK: Chiseled "X", top of wheelwall, painted white; 16' rt. of centerline Sta. 601+26.12, Elevation 251.88.

CONSTRUCTION SPECIFICATIONS: Arkansas State Highway and Transportation Department Standard Specifications for Highway Construction, 1988 edition, with applicable supplemental specifications and special provisions.

DESIGN SPECIFICATIONS: AASHTO Standard Specifications for Highway Bridges, 1983 with current interim specifications.

LIVE LOADING: HS20 METHOD OF DESIGN: Load Factor

MATERIALS AND STRENGTHS:  
Class S(AE) Concrete (superstructure)  $f'c = 4,000$  psi  
Class S Concrete (substructure)  $f'c = 3,500$  psi  
Reinforcing Steel (A615 or A617, GR. 60)  $F_y = 60,000$  psi

BORING LOGS: Boring logs may be obtained from the Programs and Contracts Division.

STEEL PILING: Piling shall be HP10x42 and shall be driven with an approved air, steam or diesel hammer to a minimum safe bearing capacity of 55 tons per pile and to a minimum penetration of 15' below natural ground. Piling in end bents shall be driven after embankment to bottom of cap is in place. Lengths of end bent piling shown are assumed for estimating quantities only. Actual lengths are to be determined in the field. Drive one 35' test pile in Bent Nos. 1, 6, 11 and 16.

PILE ENCASUREMENT: Pile encasement for Bents 2 thru 17 shall extend 3' into the ground and to the bottom of cap or column. See Drawing Number 1495A for additional information.

BRIDGE DECK: The concrete bridge deck shall be given a fine finish as specified for final finishing in subsection 802.20 for Class 5 Bridge Roadway Surface Finish.

BOILED LINSEED OIL: Boiled linseed oil treatment shall be applied to the roadway surface and to the face and top of the concrete parapet rail.

DETAIL DRAWINGS: DRAWING NO.  
Bents 30721  
25'-0" RCDG Spans 30722 & 30723

EXISTING BRIDGE: The existing bridge No. 3104 is 24' wide and 418' long (22 spans) and consists of a precast concrete superstructure supported by timber pile bents with concrete caps.

REMOVAL AND SALVAGE: The existing bridge (3104) shall be removed in accordance with section 205 of the Standard Specifications. All material from the existing bridge shall become the property of the contractor.

TEMPORARY BRIDGE: Construct a 125' long temporary bridge approximately 48' downstream. The temporary bridge shall have a minimum roadway width of 20', a minimum live load capacity of H15 and a minimum deck elevation of 249.0. See section 603 of the Standard Specifications. See drawing numbers 2391, 2391A and 2392 for standard temporary bridge details. If timber piling and pine timber are used on this temporary bridge structure, the materials shall be treated with a preservative according to the standard specifications. See roadway plans for actual detour grade and alignment.

Slope Intercept Sta. 601+38  
Conc. Parapet Rail (Closed Drains - First Parapet Panel at Beg. & End of Bridge; open drains - all other panels)

Predrilling may be required to obtain minimum pile penetration. Size and depth of predrilling shall be approved by the engineer. Any cost for predrilling shall be included in the cost for steel piling.

ALT. NO. 1  
LAYOUT OF BRIDGE OVER  
LITTLE MISSOURI RIVER RELIEF  
PIKE CO. LINE-HWY. 29 BRS. & APPRS.  
NEVADA COUNTY  
ROUTE 19 SEC. 5  
ARIZONA STATE HIGHWAY COMMISSION  
LITTLE ROCK, ARK.

DRAWN BY: E.H.K. DATE: 5-1-87  
CHECKED BY: J.W.B. DATE: 3-15-88  
DESIGNED BY: G.V.A. DATE: 5-1-87  
SCALE: 1" = 20'

BRIDGE NO. 6347 DRAWING NO. 30720

LITTLE MISSOURI RIVER RELIEF

#### BORING LEGEND

- A - MOIST, MEDIUM STIFF TO STIFF SANDY CLAY
- B - WET, MEDIUM DENSE TO DENSE SAND AND GRAVEL
- C - MOIST, HARD TO VERY HARD CALCAREOUS CLAY
- D - MOIST, MEDIUM STIFF SANDY CL. WITH GRAVEL
- E - MOIST, VERY STIFF SANDY CLAY
- F - WET, MEDIUM DENSE CLAYEY SAND AND
- G - WET, LOOSE SAND AND GRAVEL

#### PLAN

17-25'-0" R.C. Deck Girders = 425'-0"

#### Level Grade

#### ELEVATION

Note: For hydraulic data, see Dwg. No. 30719.

Note: For Hydraulic Data, see Dwg. No.

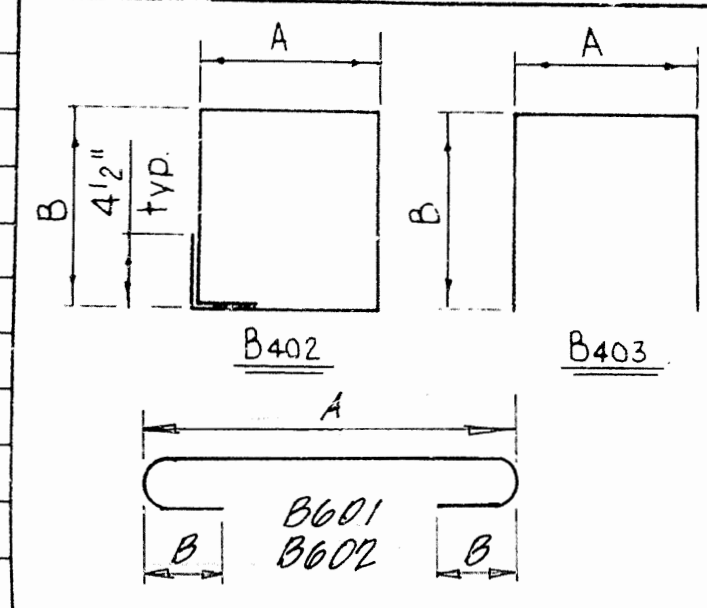


DATE REVISED	DATE	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
3-12-90	3-14-90			6	ARK.			
				JOB NO.	3479		25	82

6345, 6346, 6347 STD. BENTS 30721

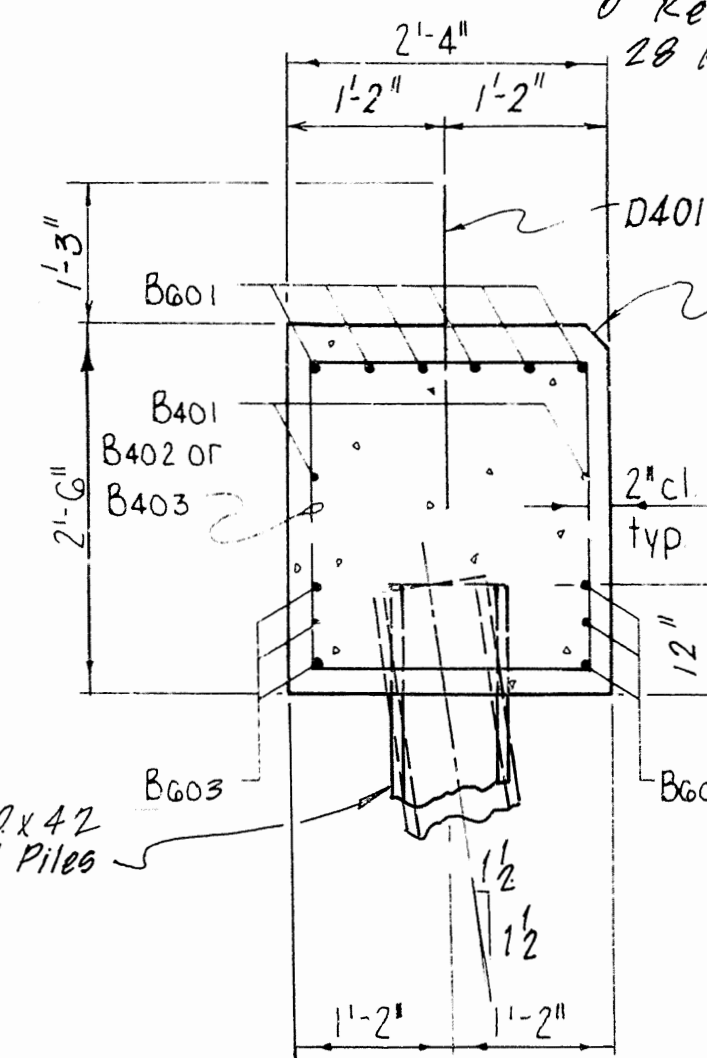
BAR LIST - PER BENT

MARK	NUMBER REQUIRED		LENGTH	BENDING DIAGRAMS		
	END BT.	INT. BT.		A	B	P.D.
B401	2		39'-7"			Str.
B402	48	50	8'-8"	2'-0"	2'-2"	2"
B403	15	15	6'-2"	2'-0"	2'-2"	2"
B404		4	22'-5"			Str.
D401	26	*	2'-6"			Str.
B601	6		40'-11"	39'-7"	0"	4 1/2"
B602	6	6	44'-6"	43'-0"	6"	4 1/2"
B603	6		39'-7"			Str.
B604	6	6	43'-2"			Str.



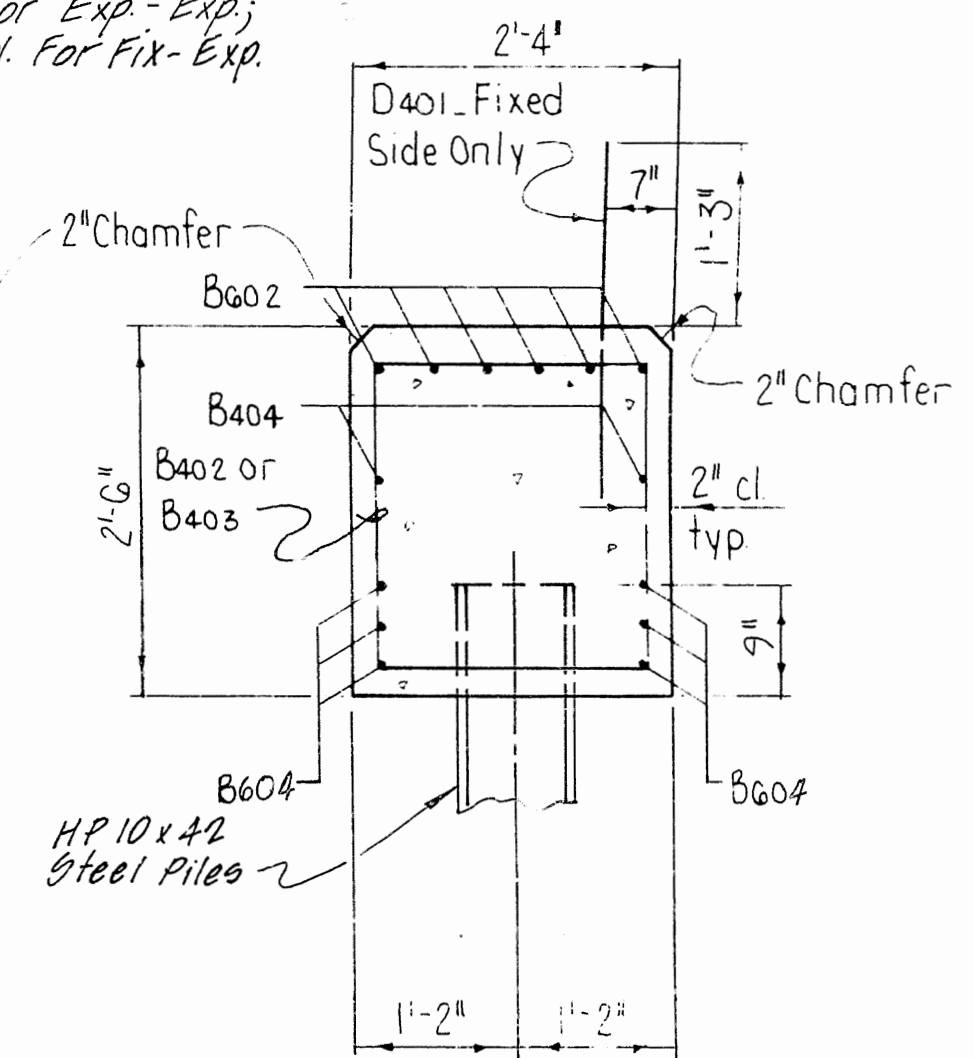
Dimensions are out to out of bars.

\* 56 Req'd. For Fix-Fix;  
0 Req'd. For Exp-Exp;  
28 Req'd. For Fix-Exp.



SECTION A-A

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



SECTION B-B

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

GENERAL NOTES

CONCRETE: ALL CONCRETE SHALL BE CLASS "S" WITH A MINIMUM 28 DAY COMPRESSIVE STRENGTH  $f'_c = 3500$  PSI. ALL CONCRETE SHALL BE POURED IN THE DRY. ALL EXPOSED CORNERS TO BE CHAMFERED 3/4" UNLESS OTHERWISE NOTED.

REINFORCING STEEL: REINFORCING STEEL SHALL CONFORM TO ASTM A615 OR A617, GRADE 60, (YIELD STRENGTH = 60,000 PSI).

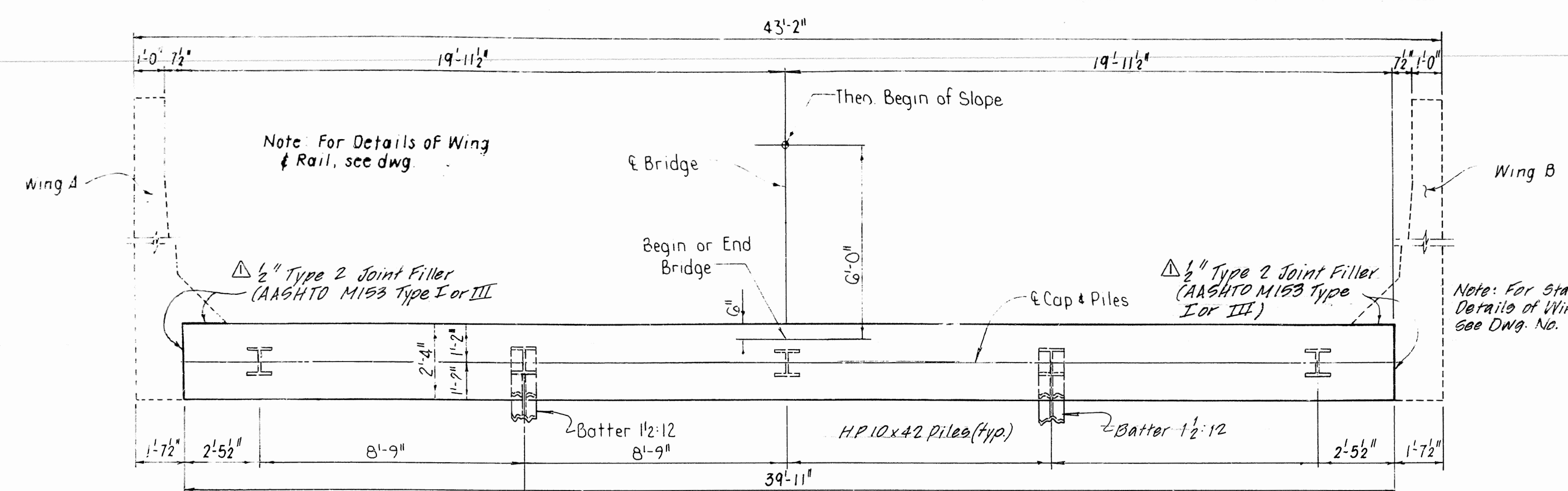
ALL PILING SHALL BE DRIVEN TO A MINIMUM BEARING CAPACITY OF 55 TONS PER PILE. PILING SHALL BE HP 10X42 STEEL PILES.

SPECIFICATIONS: ARKANSAS STATE HIGHWAY COMMISSION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, EDITION OF 1988 AND APPLICABLE SPECIAL PROVISIONS.

LIVE LOAD: HS20

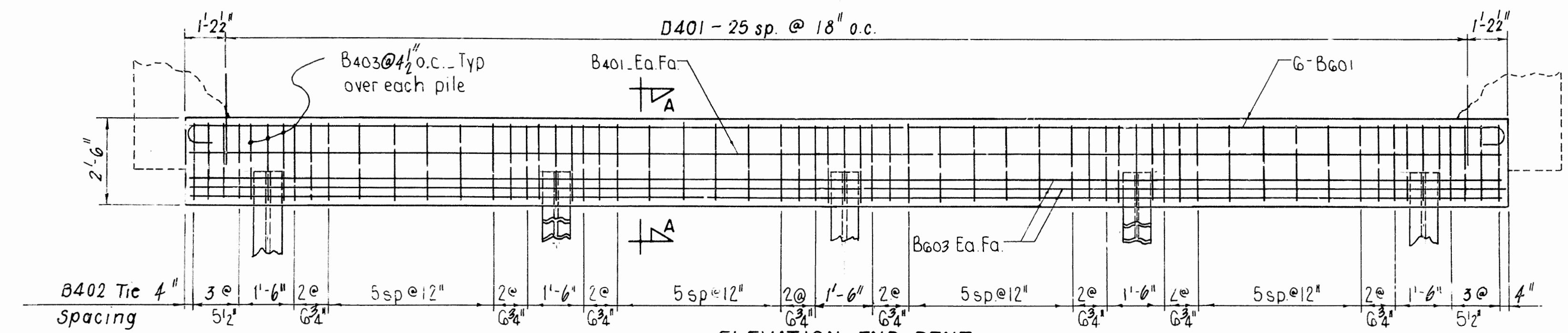
DESIGN SPECIFICATIONS: AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, 1983 WITH CURRENT INTERIMS.

METHOD OF DESIGN: LOAD FACTOR



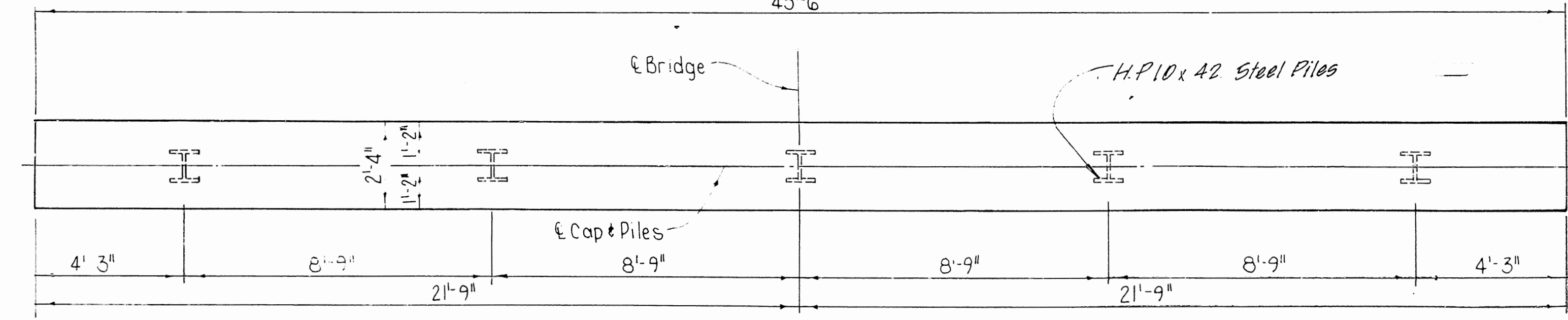
PLAN - END BENT

Scale: 3/8" = 1'-0"



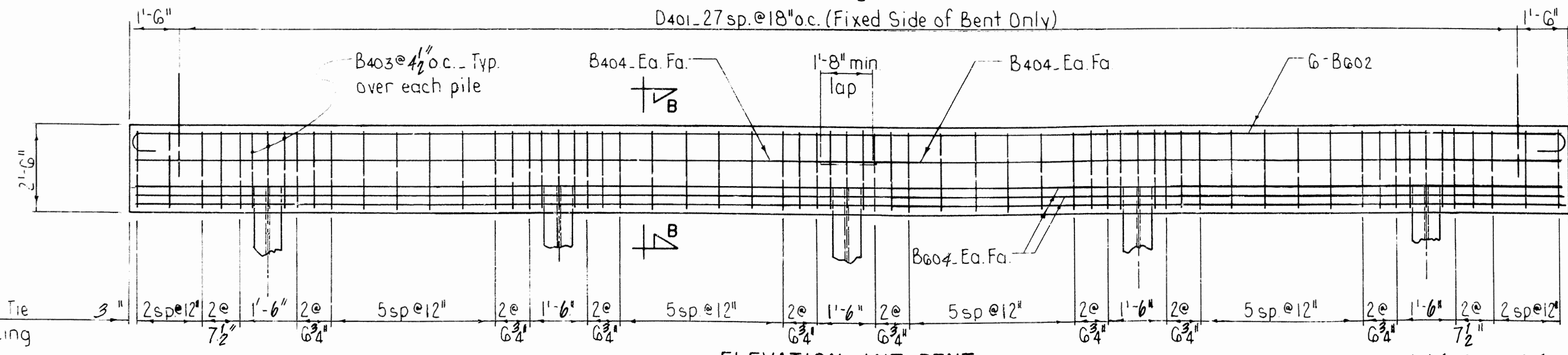
ELEVATION - END BENT

Scale: 3/8" = 1'-0"



PLAN - INT. BENT

Scale: 3/8" = 1'-0"



ELEVATION - INT. BENT

Scale: 3/8" = 1'-0"

BENT QUANTITIES

BENT	CLASS "S" CONCRETE	REINFORCING STEEL
END	8.60 CU. YD.	1160 LB.
INTERIOR	9.40 CU. YD.	EXP. FIX 1248 LBS.
		EXP. EXP. 1201 LBS.
		FIX. FIX 1245 LBS.

Revised Concrete & Reinforcing steel quantities & joints - Exp - 3-12-90

DETAILS OF STD. PILE BENTS  
FOR 25'-0" R.C.D.G. SPANS  
40'-0" CL. RDWY. - 16" CONC. PILES

ROUTE SEC.  
ARKANSAS STATE HIGHWAY COMMISSION  
LITTLE ROCK, ARK.

ALTERED BY *[Signature]* DATE 8-3-89  
CHECKED BY *[Signature]* DATE 8-3-89  
DESIGNED BY *[Signature]* DATE 8-3-89

*[Signature]*  
BRIDGE ENGINEER

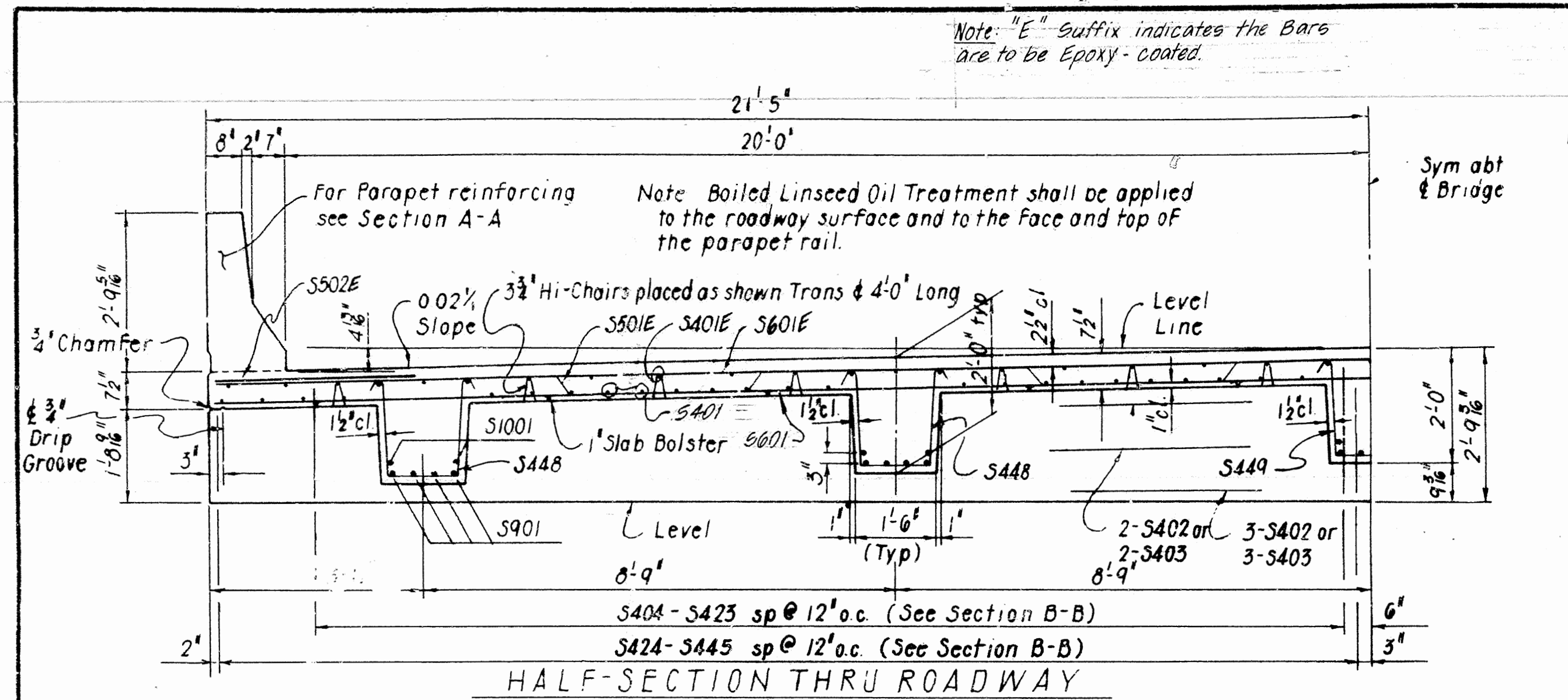
BRIDGE NO. 6345, 6347 DRAWING NO. 30721

10-17-89



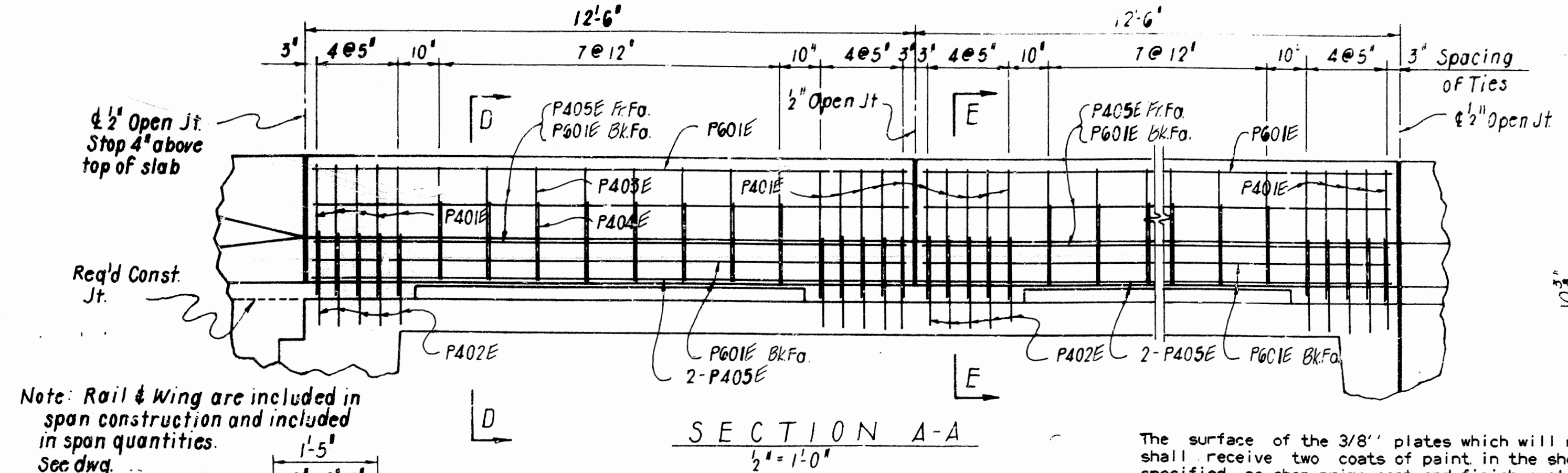
DATE REVISION	DATE FILLED	DATE REVISION	DATE FILLED	PER. NO.	STATE	FED. AID PROJ. NO.	SPRINT NO.	TOTAL SHEETS
				6	ARK.			
						3479	26	82

6345, 6346, 6347 STD R.C.D.G. 30722



Note: See dwg GR-8 & GR-8A Guard Rail Details.

Note: Rail & Wing are included in span construction and included in span quantities. See dwg.



The surface of the 3/8" plates which will not be in contact with concrete shall receive two coats of paint in the shop. The studs shall be those specified as shop prime coat and finish coat in subsection 607.59. Painting of plate shall be considered subsidiary to "Class (S(AE)) Concrete".

NOTE: Parapet Studs shall be 5' long, granular flux filled, solid fluxed, or equal, and automatically end welded to the plate. Studs and plate shall meet the requirements of Section 807. Studs and plate shall be measured and paid for as Class (S(AE)) concrete.

DETAIL Y  
NTS

BAR LIST - PER SPAN

Mark	No Req'd	Length	Pin Dia
	End	Int	
S1001	10	10	24'-8"
S901	20	20	24'-8"
S601	20	20	42'-6"
S601E	20	20	42'-6"
S502E	28	28	5'-0"
S448	172	180	5'-2"
S449	43	45	5'-2"
S401	48	48	24'-8"
S402	18	36	22'-1"
S404-S423	2 ea		5'-7" to 6'-6"
S424-S445	2 ea	4 ea	5'-11" to 5'-10"
S447	36		5'-2"
P401E	40	40	6'-4"
P402E	40	40	5'-6"
P403E	32	32	5'-10"
P404E	32	32	3'-2"
P405E	16	16	12'-1"
P601E	20	20	12'-1"
S403	9		40'-0"
S401E	41	41	24'-8"
S501E	19	19	43'-4"

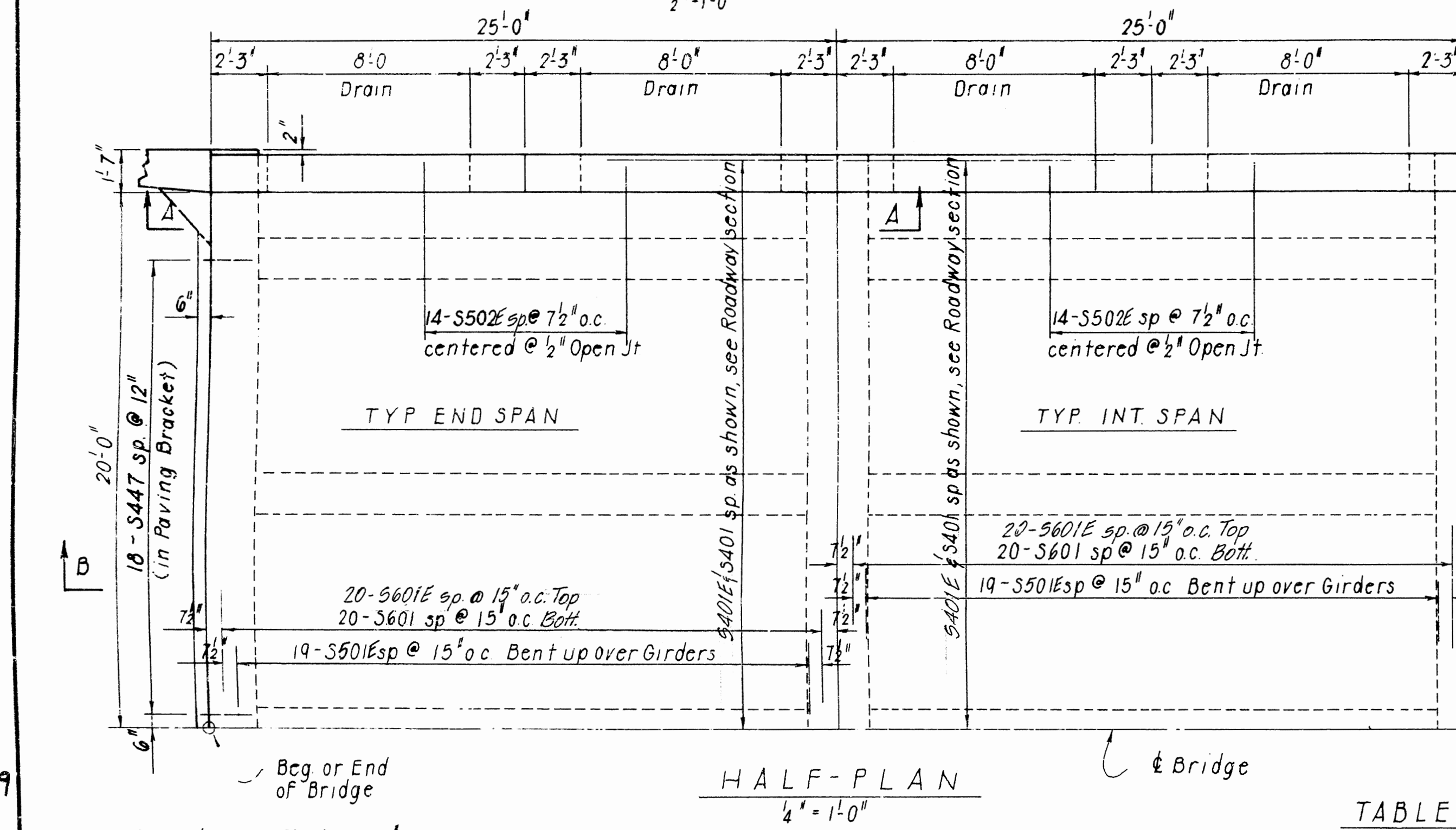
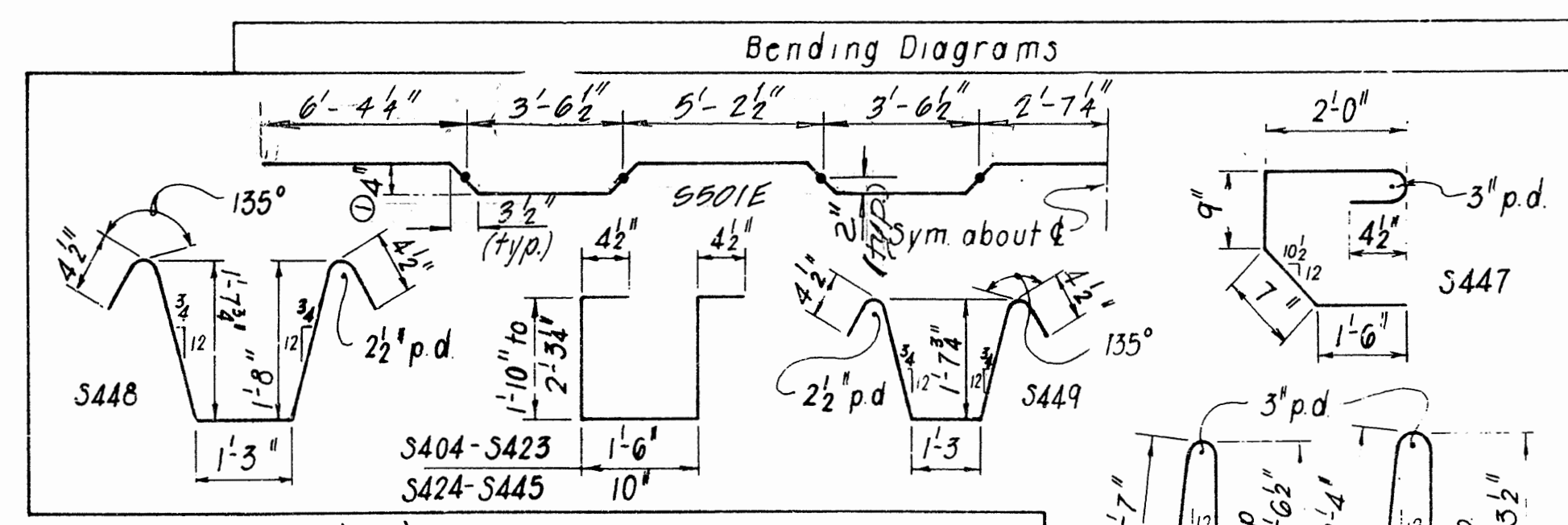


TABLE OF QUANTITIES - PER SPAN

Span	Epoxy-Coated Reinf.	** Reinf.	Class S (AE) Conc.	* Struct. Steel
End	3,960 Lb.	7,510 Lb.	54.95 Cu. Yd.	215 Lb.
Int.	3,960 Lb.	6,430 Lb.	45.97 Cu. Yd.	215 Lb.

\* For information only.  
\*\* Includes Wing & Rail Quantities



END BENT NOTES

All concrete shall be Class "S(AE)" with a minimum 28 day compressive strength of f'c=4,000 p.s.i. Concrete shall be poured in the dry and all exposed corners shall be chamfered 3/4", unless otherwise noted.

The concrete in the girders, end diaphragms, and deck shall be placed in one continuous pour for intermediate spans. The concrete in the girders, deck, and diaphragms and wings shall be placed in one continuous pour for end spans.

Reinforcing steel to be ASTM A615 or A617, Grade 60. Bar supports of reinforcing bars shall not be paid for directly, but will be considered subsidiary to the item "Reinforcing Steel".

Elastomeric pad, preformed joint, structural steel, and poured joints shall be measured and paid for as Class (S(AE)) Concrete. Elastomeric material shall meet the requirements of Section 808.02 of the Standard Specifications and shall be in one piece for the full width and length of the bearing.

SPECIFICATIONS: Arkansas State Highway Commission Standard Specifications for Highway Construction, Edition of 1988 and applicable Supplemental Specifications.

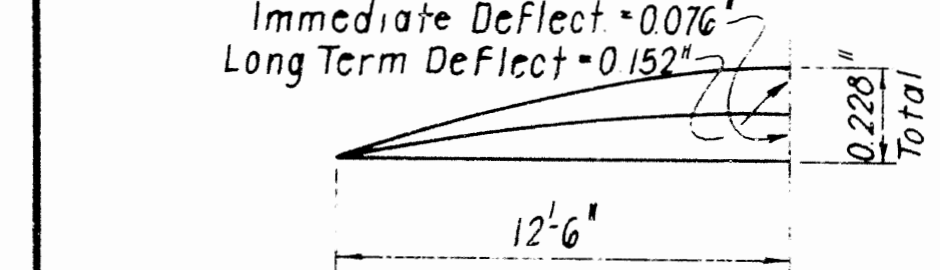
DESIGN SPECIFICATIONS: AASHTO 1983 edition and current Interims

DESIGN LIVE LOADING: HS20 DESIGN METHOD: LOAD FACTOR

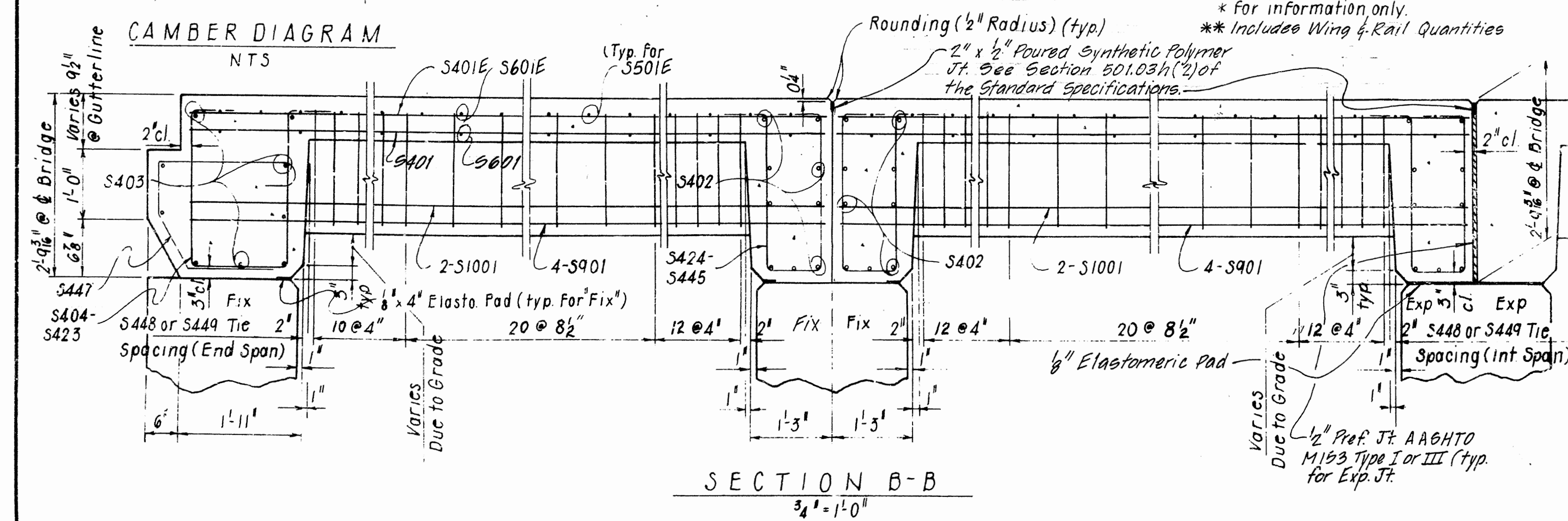
DEAD LOAD: 1522 PLF  
\* Includes future wearing surface: 219 PLF

LIVE LOAD: 1,458 wheel + impact

UNIT STRESSES: 28 day compressive strength of class (S(AE)) concrete=4,000 p.s.i.; yield strength of reinforcing steel = 60,000 p.s.i.



Note: All Joints to be cleaned by sandblasting or other approved methods before pouring joints.



② At the Contractor's option, two straight #5 bars may be substituted for bar S501E. Payment for reinforcing will be based on weight of bar S501E. Bars in Top Mat shall be Epoxy-Coated.

DETAILS OF STANDARD  
25'-0" R.C. DECK GIRDERS

40'-0" CL. ROADWAY  
ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION  
LITTLE ROCK, ARK.

ALTERED BY: *EdK* DATE: 8-14-89  
CHECKED BY: *ABW* DATE: 8-15-89  
DESIGNED BY: *EdK* DATE: 8-15-89

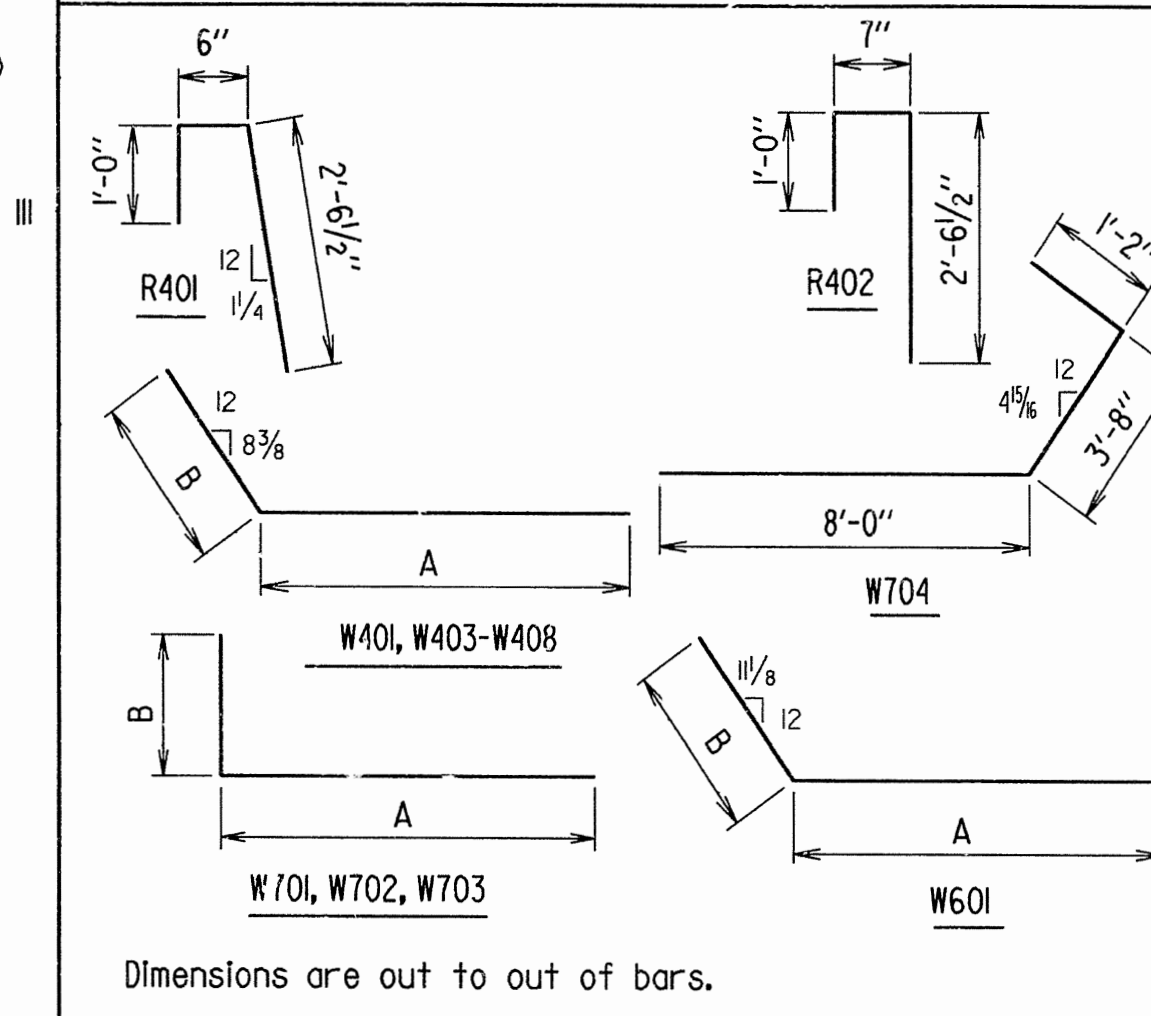
BRIDGE NO. 6345, 6346  
DRAWING NO. 30722



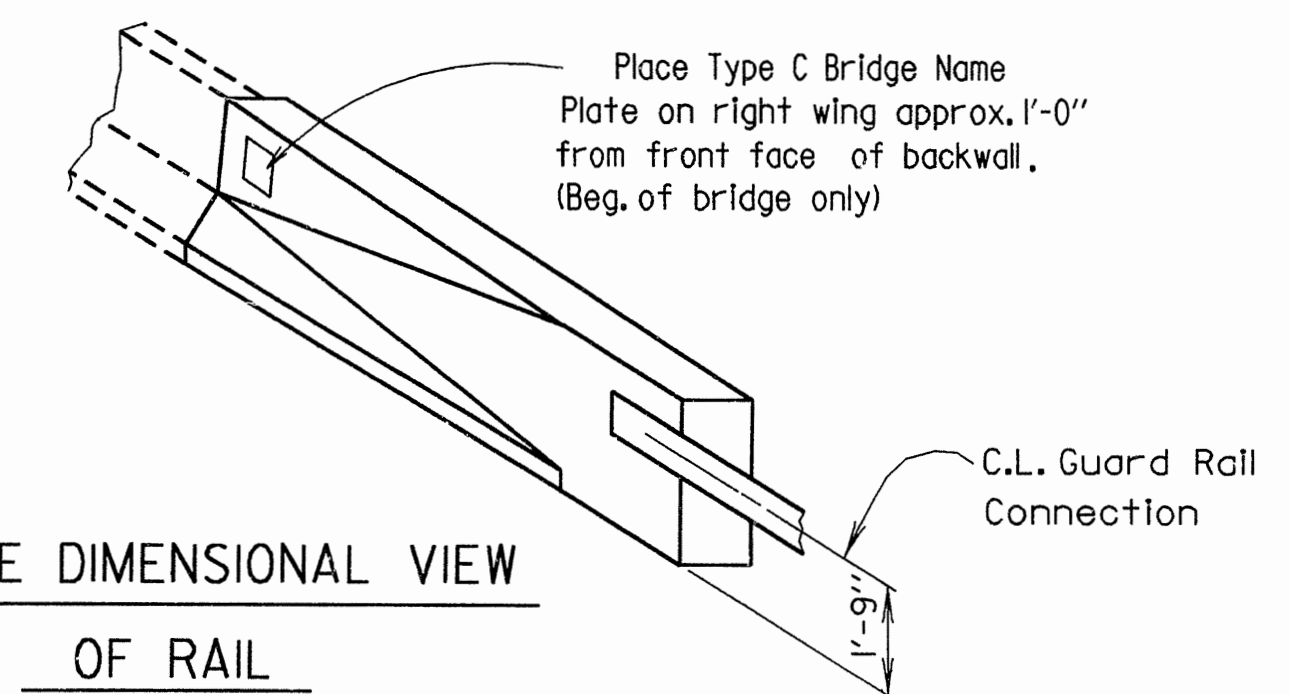
# BAR LIST (WING & RAIL)

MARK	NO. REQ'D.	LENGTH	A	B	PIN DIA.
R401	8	3'-11"			2"
R402	8	4'-0"			2"
R403	12	9'-8"			Str.
R601	16	4'-5"			Str.
R602	6	5'-0"			Str.
R404	12	4'-0"			Str.
W401	4	5'-6"	4'-4"	1'-2"	2"
W402	4	6'-8"			Str.
W403-W408	2 of each	Var. 3'-4" to 5'-5"	Var. 2'-2" to 4'-3"	1'-2"	2"
W409-W414	2 of each	Var. 4'-6" to 6'-7"			Str.
W415	8	3'-11"			Str.
W416	8	3'-1"			Str.
W417	6	2'-7"			Str.
W418	4	1'-10"			Str.
W601	4	7'-5"	6'-7"	1'-0"	4 1/2"
W701	12	12'-6"	11'-6"	1'-2"	5 1/4"
W702	4	8'-6"	7'-6"	1'-2"	5 1/4"
W703	4	6'-8"	5'-8"	1'-2"	5 1/4"
W704	4	12'-6"			5 1/4"
W705	6	6'-0"			Str.

## BENDING DIAGRAMS



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
3-12-90	3-14-90			6	ARK.			
				JOB NO.		3979	27	82
						6345, 6346, 6347 STD. WING	30723	



## THREE DIMENSIONAL VIEW

OF RAIL  
No Scale

## TABLE OF VARIABLES

			Elev. "R"	"H"	"K"	"T"
Br. No. 6345	Bent No. 1	Wing A	248.22	4'-3"	7 3/8"	3 5/8"
		Wing B	248.22	4'-3"	7 3/8"	3 5/8"
Br. No. 6346	Bent No. 10	Wing A	248.22	4'-3"	7 3/8"	3 5/8"
		Wing B	248.22	4'-3"	7 3/8"	3 5/8"
Br. No. 6347	Bent No. 4	Wing A	248.22	4'-3"	7 3/8"	3 5/8"
		Wing B	248.22	4'-3"	7 3/8"	3 5/8"
Br. No. 6347	Bent No. 1	Wing A	251.72	4'-3"	7 3/8"	3 5/8"
		Wing B	251.72	4'-3"	7 3/8"	3 5/8"
Br. No. 6347	Bent No. 18	Wing A	251.72	4'-3"	7 3/8"	3 5/8"
		Wing B	251.72	4'-3"	7 3/8"	3 5/8"

Note: Concrete Insert Anchor Assembly will not be paid for directly, but will be considered subsidiary to the item of Class S(AE) Concrete.

Note: For details of guard rail connections, see Drwg. No. GR-8 & GR-8A.

ALT. NO. 1

STANDARD DETAILS  
FOR WING AND RAIL

ROUTE SEC.  
ARKANSAS STATE HIGHWAY COMMISSION

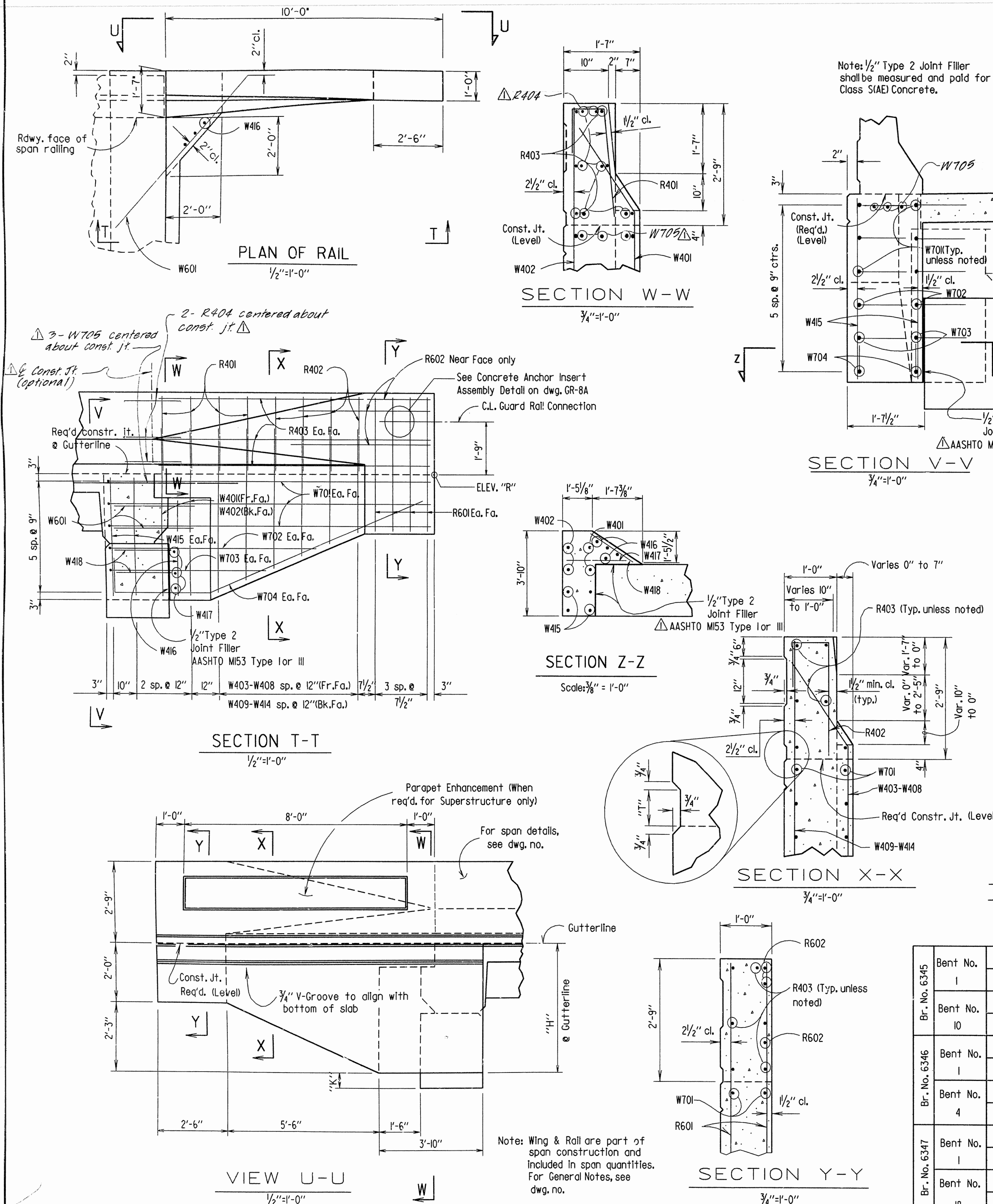
LITTLE ROCK, ARK.

ALTERED BY: EJK DATE: 8-15-89

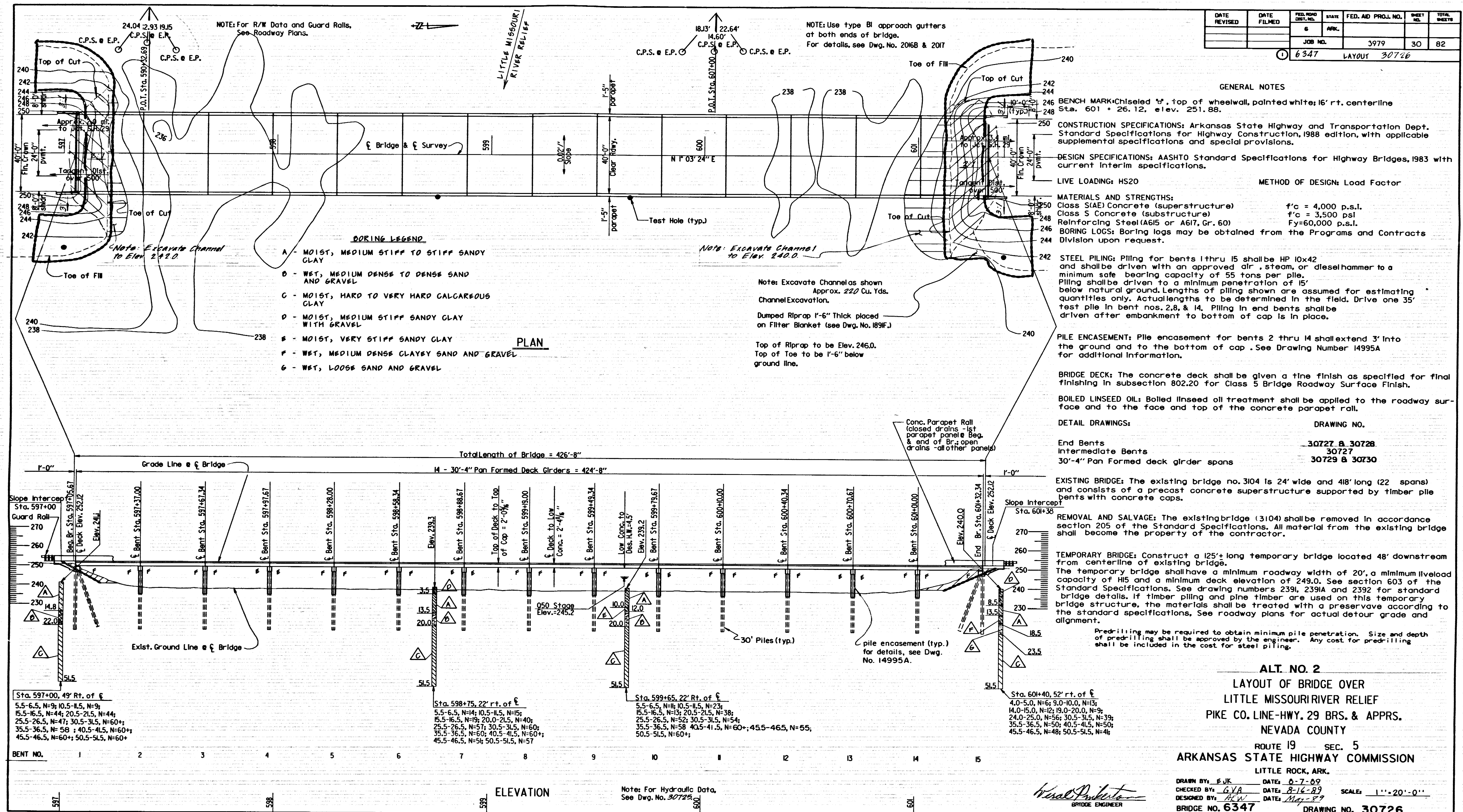
CHECKED BY: ARW DATE: 8-16-89

DESIGNED BY: STD. DATE: SCALE: As Shown

BRIDGE NO. 6345, 6346, 6347 DRAWING NO. 30723



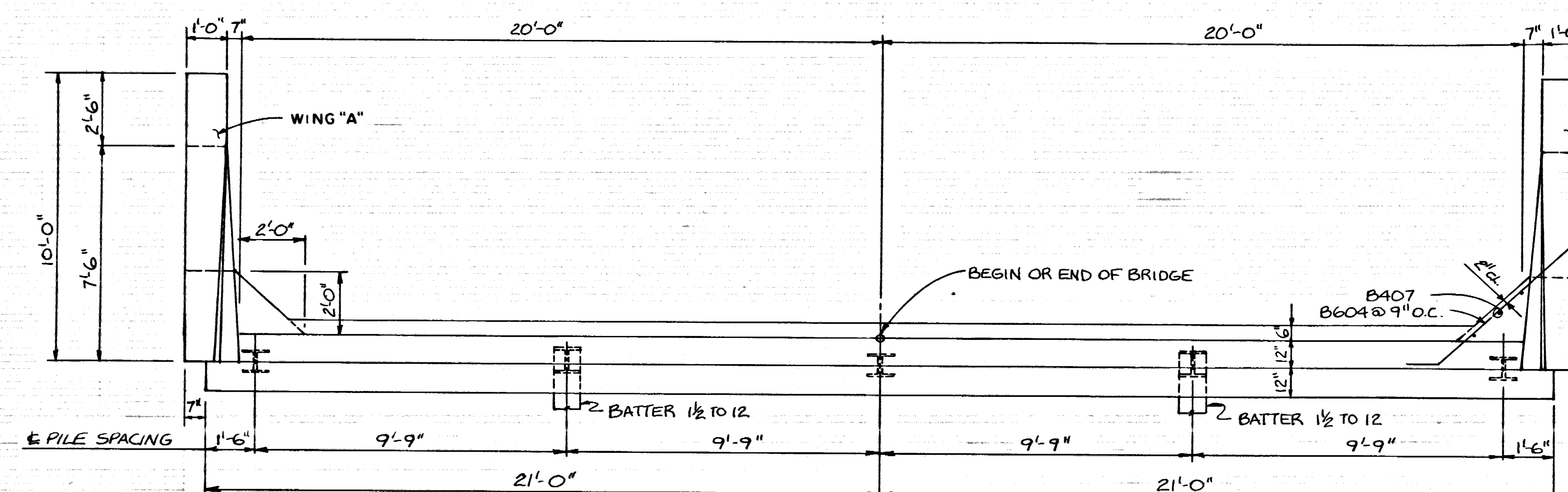




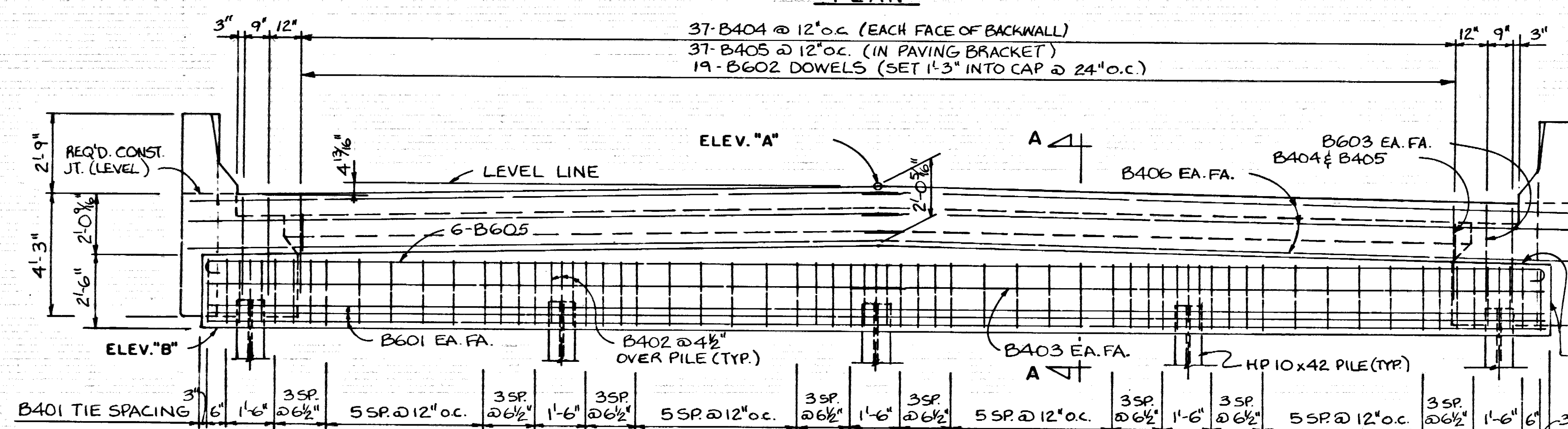


DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEET
				6	ARK.			
				JOB NO.		3979	31	82

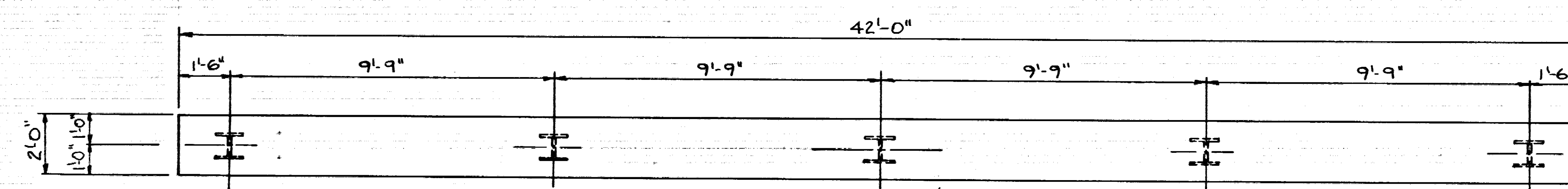
① 6345-6347 BENT DETAILS 30727



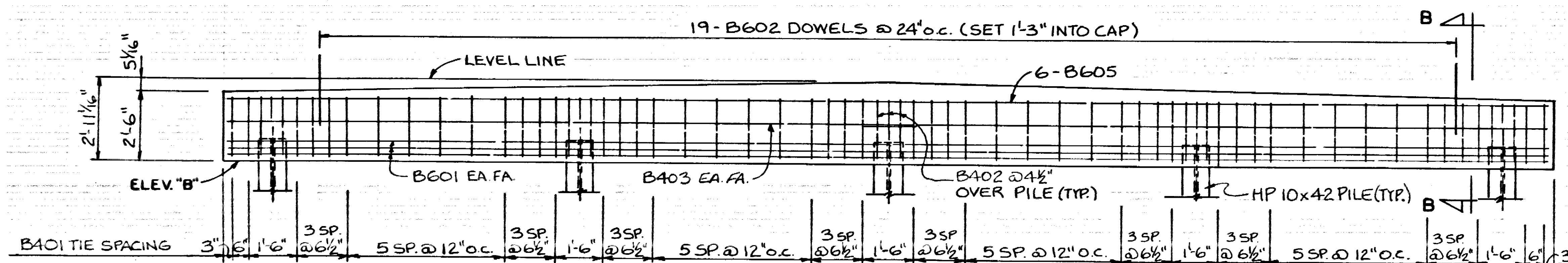
## PLAN



ELEVATION \_ END BENT



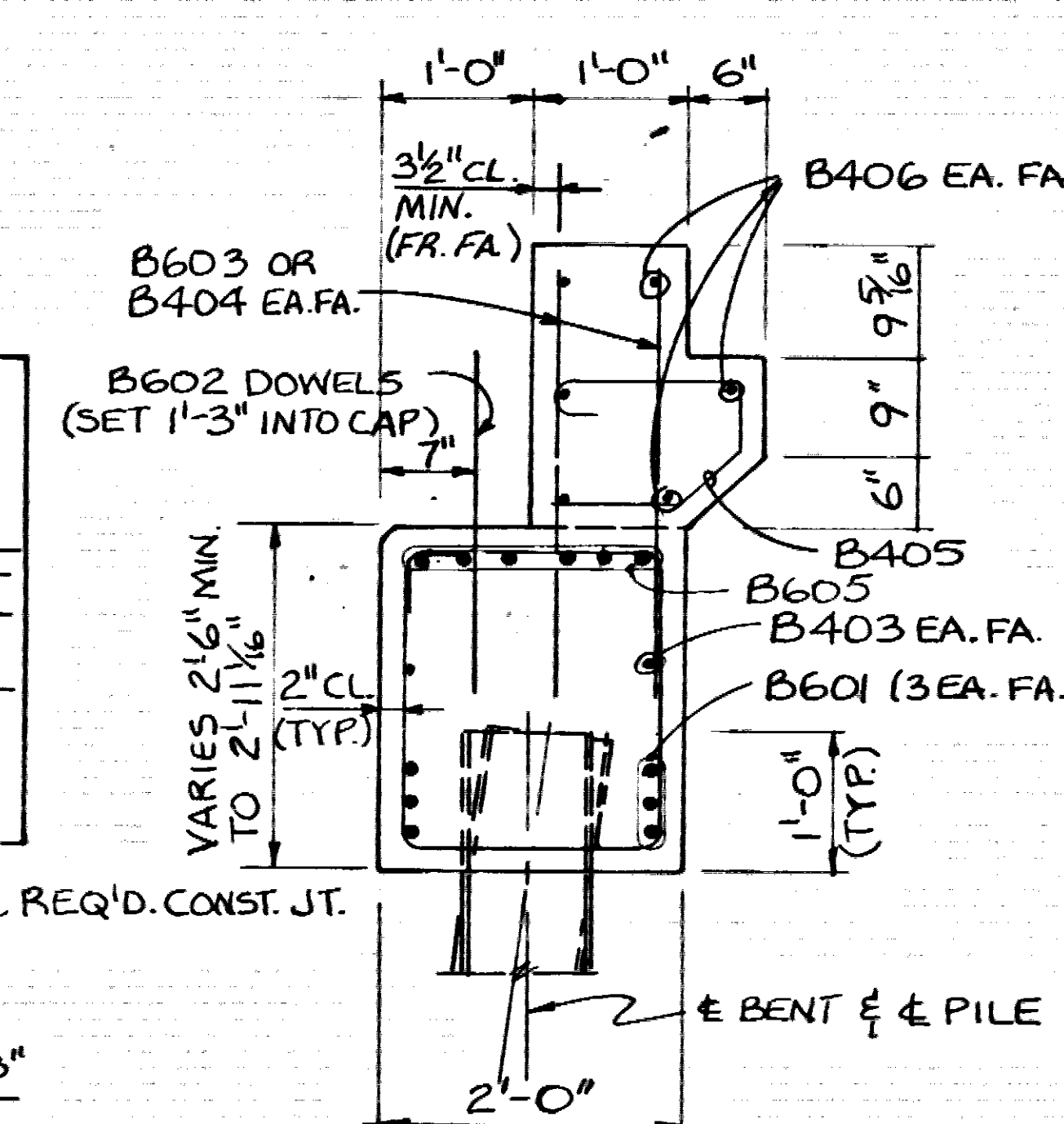
## PLAN



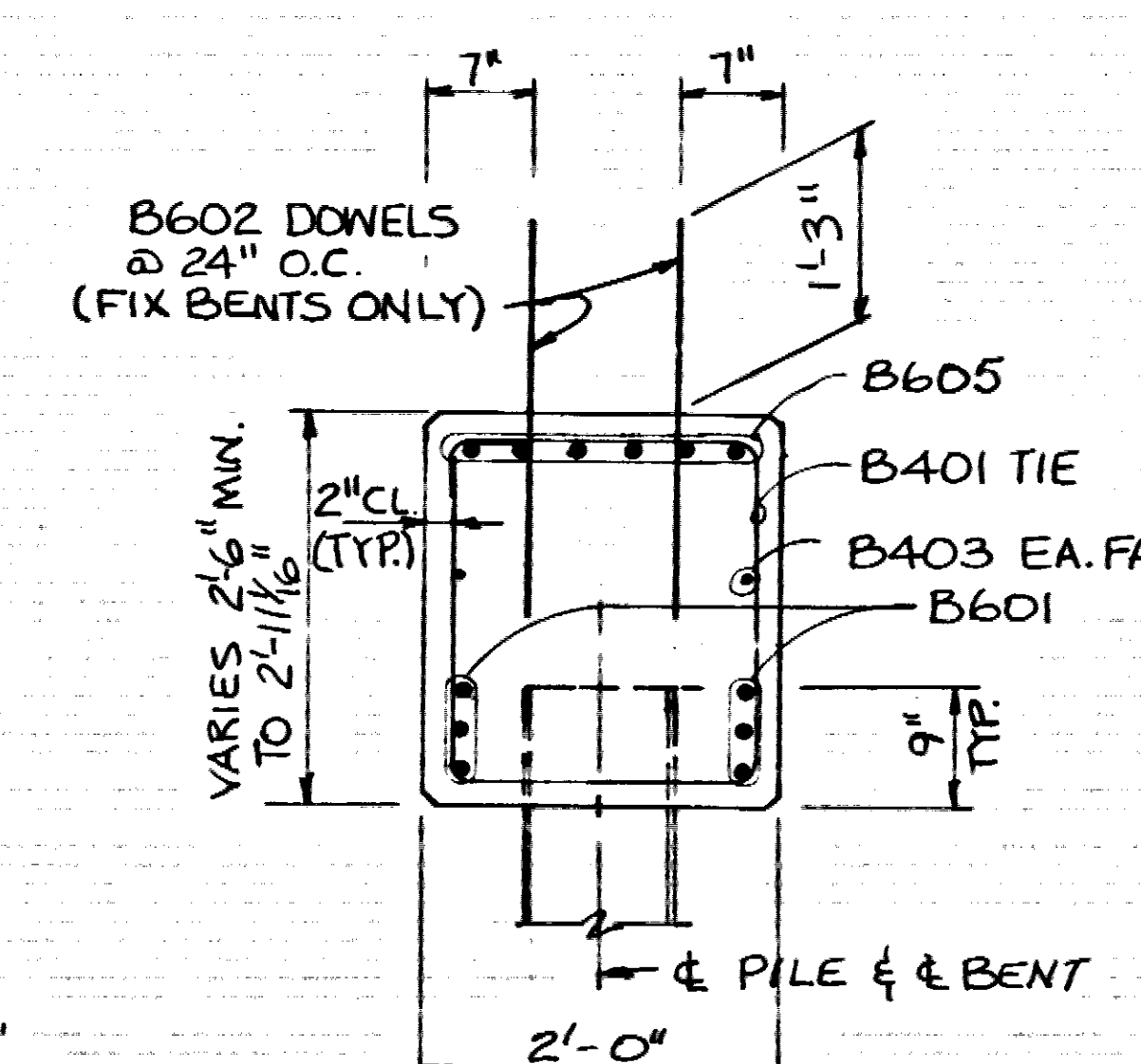
ELEVATION\_INTERMEDIATE BENT

BRIDGE NO.	ELEV."A"	ELEV."B"
6345	248.62	243.67
6346	248.62	243.67
6347	252.12	247.17

NOTE: FOR DETAILS OF WING REINFORCEMENT AND DIMENSIONS, SEE DWG. NO. 30728



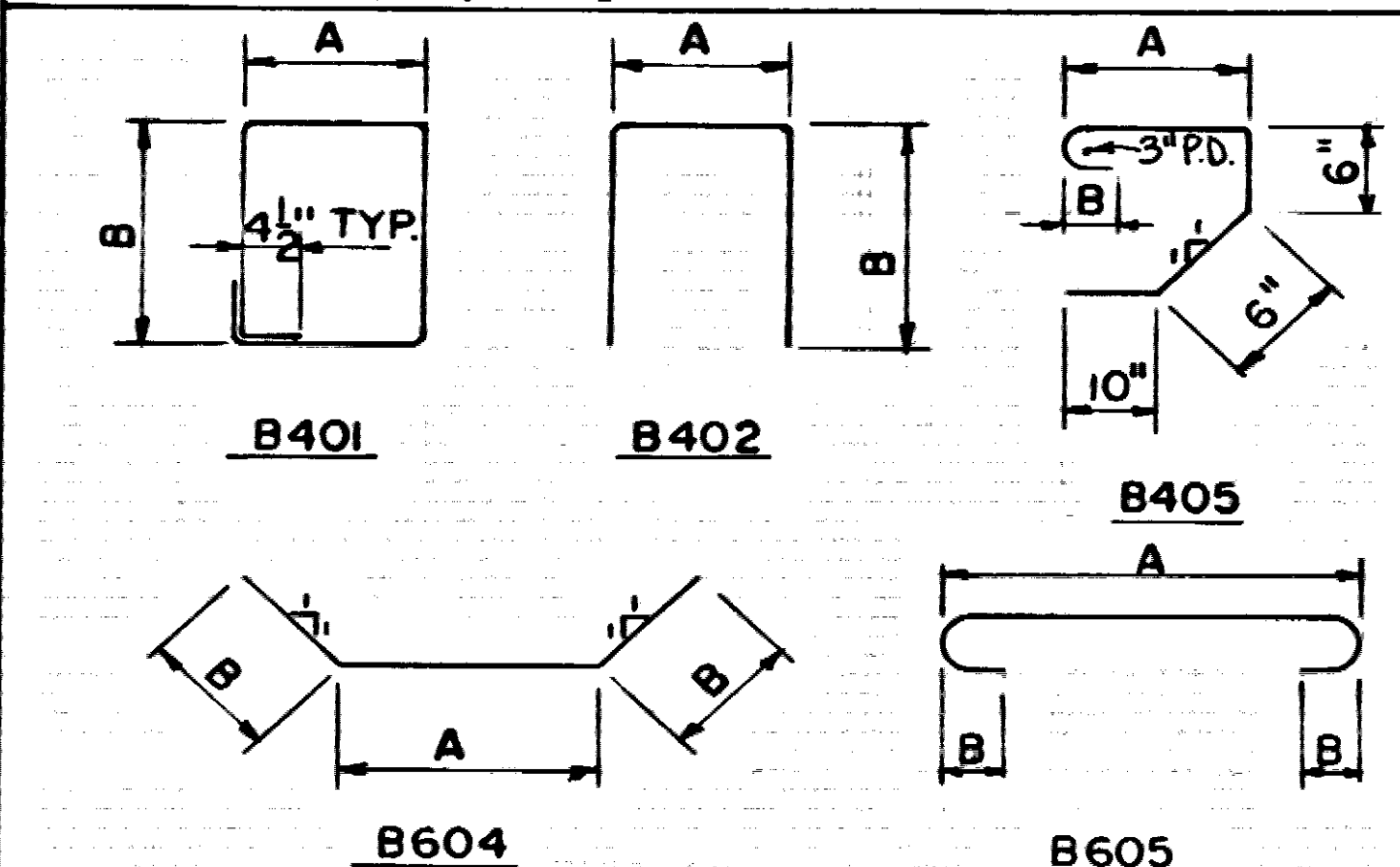
SECTION A-A  
3" = 1'-0"



SECTION B-E  
3" = 1'-0"

BAR LIST						
MARK	REQ'D.		LENGTH	A	B	PIN DIA.
	1- END BENT	1- INT. BENT				
B401	52	52	8'-0"	1'-8"	2'-2"	2"
B402	15	15	5'-10"	1'-8"	2'-2"	2"
B403	4	4	21'-8"			STR
B404	74	-	3'-4"			STR
B405	37	-	3'-6"	1'-2"	4 1/2"	2"
B406	12	-	22'-3"			STR
B407	6	-	3'-1"			STR
B601	6	6	41'-8"			STR
B602	19	(1)	2'-6"			STR
B603	8	-	3'-10"			STR
B604	8	-	7'-3"	5'-3"	1'-0"	4 1/2"
B605	6	6	43'-0"	41'-8"	6"	4 1/2"

BENDING DIAGRAMS		



DIMENSIONS ARE OUT TO OUT OF BARS  
① NOTE: 38 REQ'D. @ FIX-FIX BENT, NONE REQ'D. @ EXP-EXP BT

## BENT NOTES

All concrete shall be Class "S" with a minimum 28 day compressive strength  $f'_c = 3,500$  psi. Concrete shall be poured in the dry and all exposed corners shall be chamfered  $3/4"$ , unless otherwise noted.

All reinforcing steel shall conform to ASTM A615 or A617, Grade 60 (yield strength = 60,000 psi.).

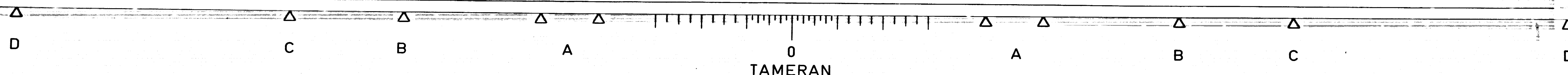
Backwall shall not be poured before girders are in place.

For additional information, see Layout.

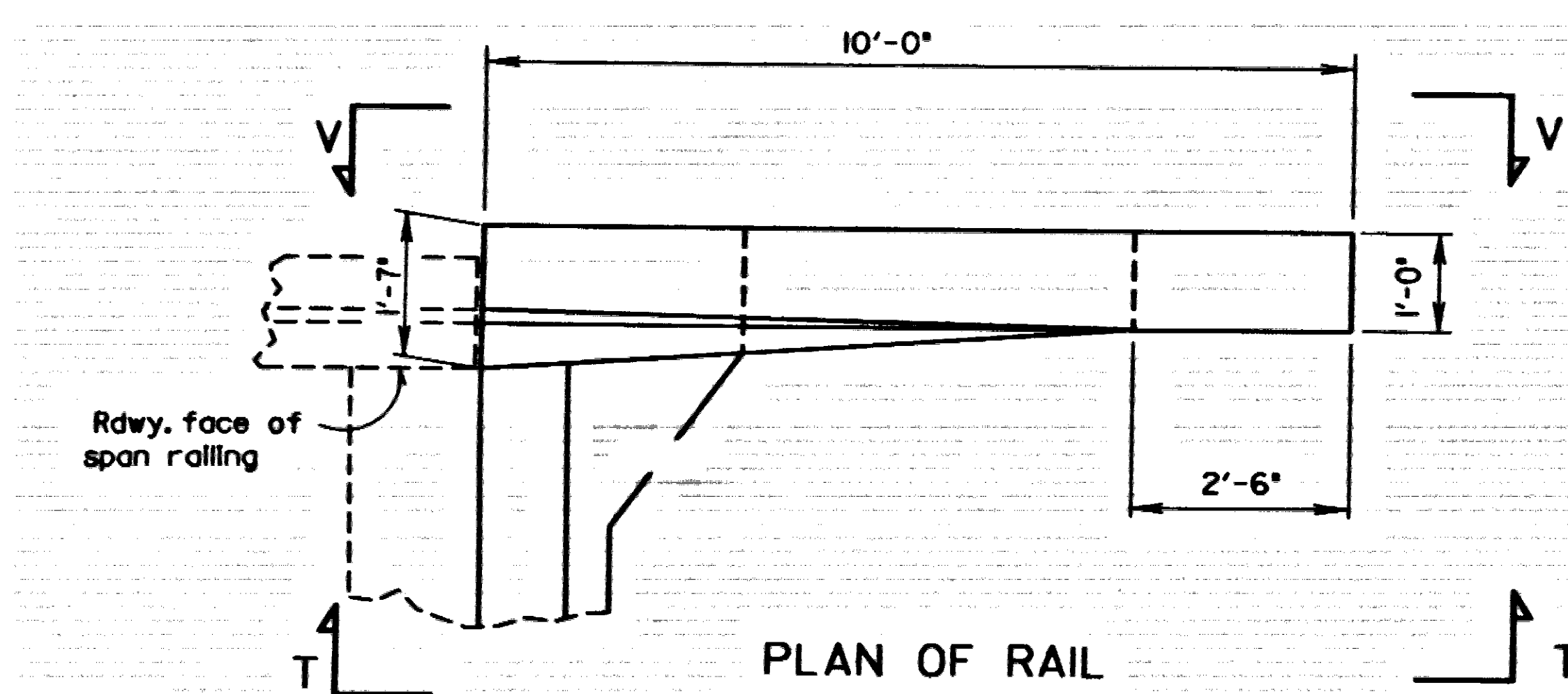
ALTERNATE NO.2  
DETAILS OF BENTS  
NEVADA COUNTY  
ROUTE 19 SEC. 5  
ARKANSAS STATE HIGHWAY COMMISSION  
LITTLE ROCK, ARK.

DRAWN BY: J.G.T. DATE: 8-10-89  
CHECKED BY: GJA DATE: 8-16-89  
DESIGNED BY: ARW DATE: July-89  
SCALE:  $\frac{3}{8} = 1'-0"$  or as noted

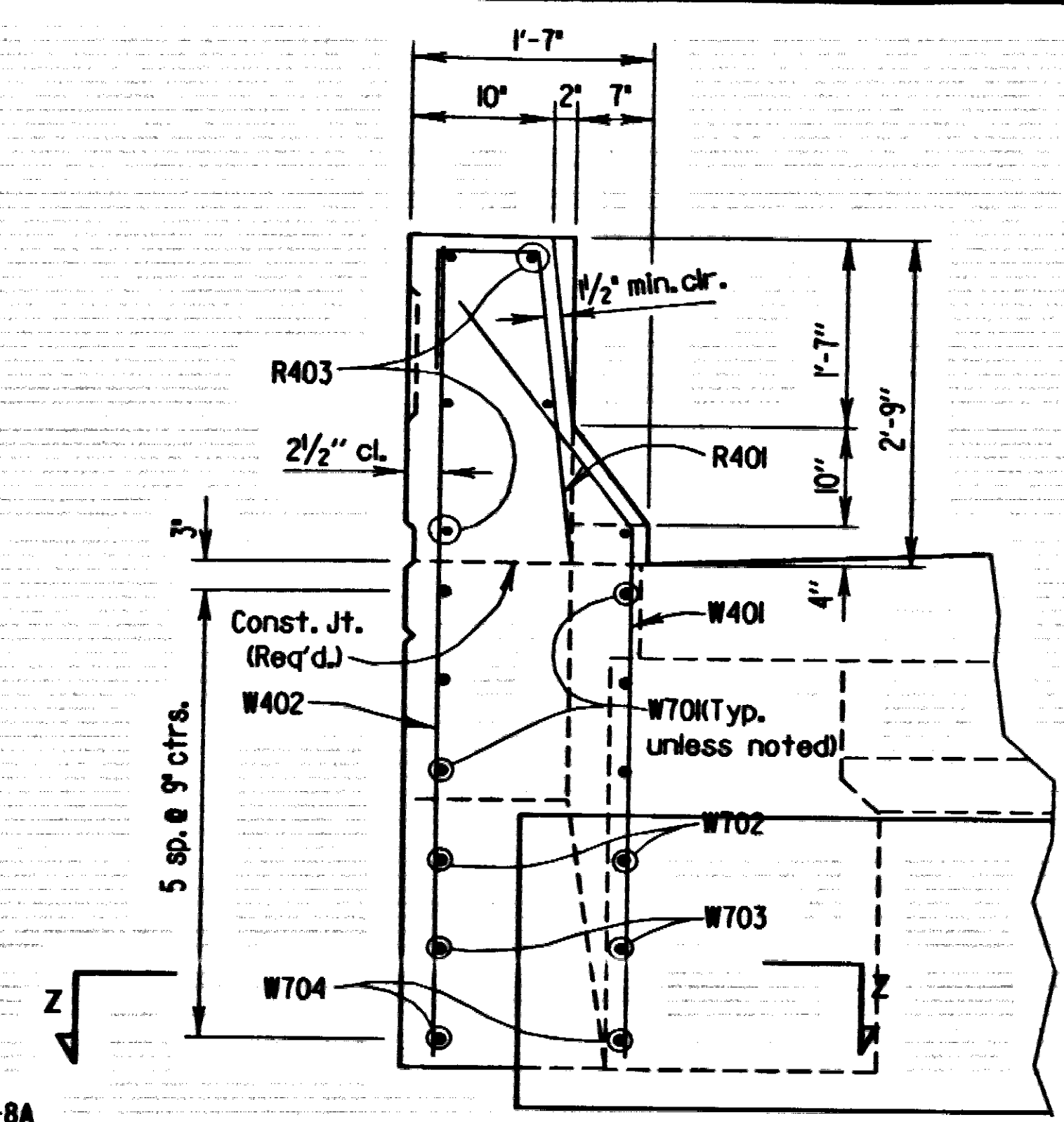
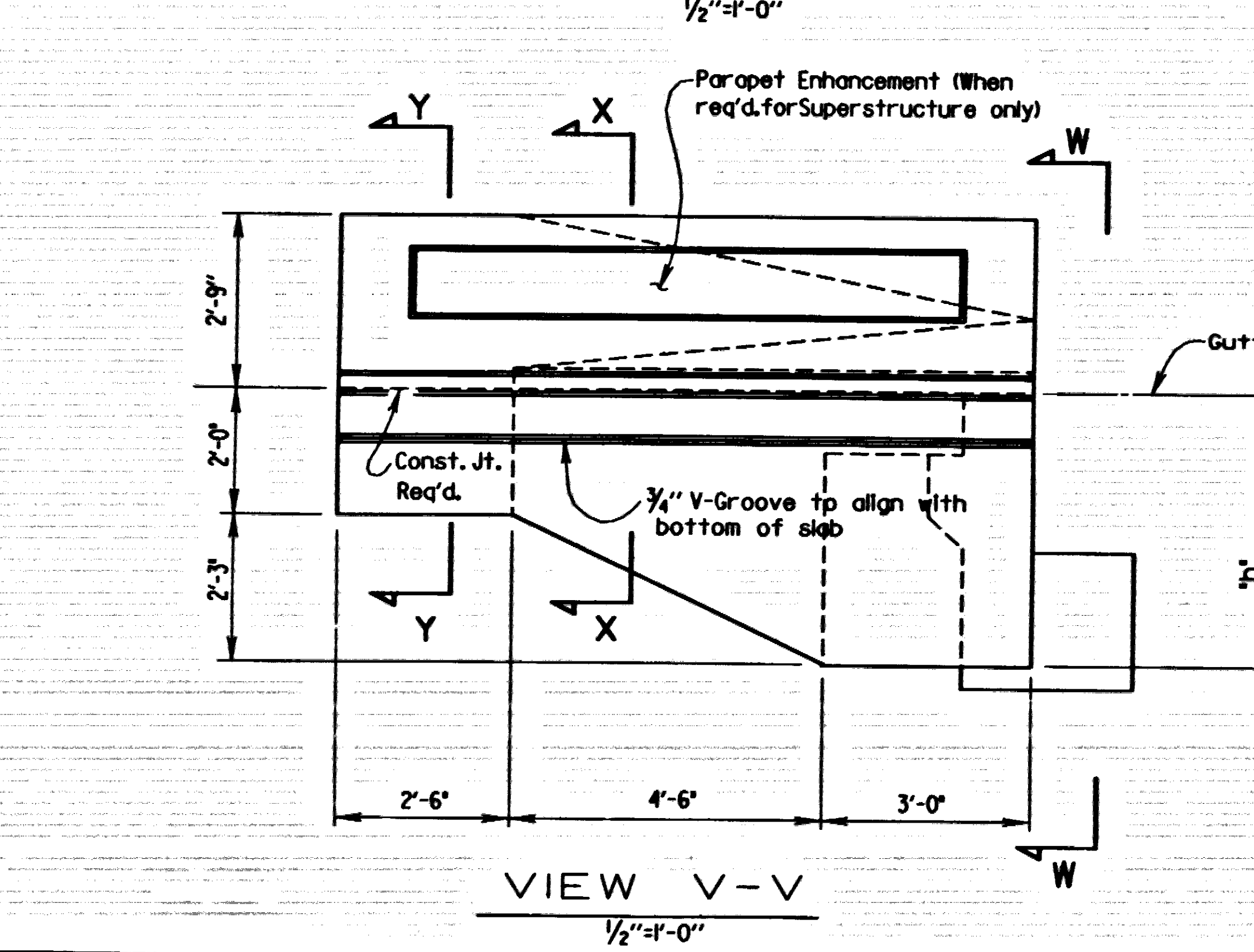
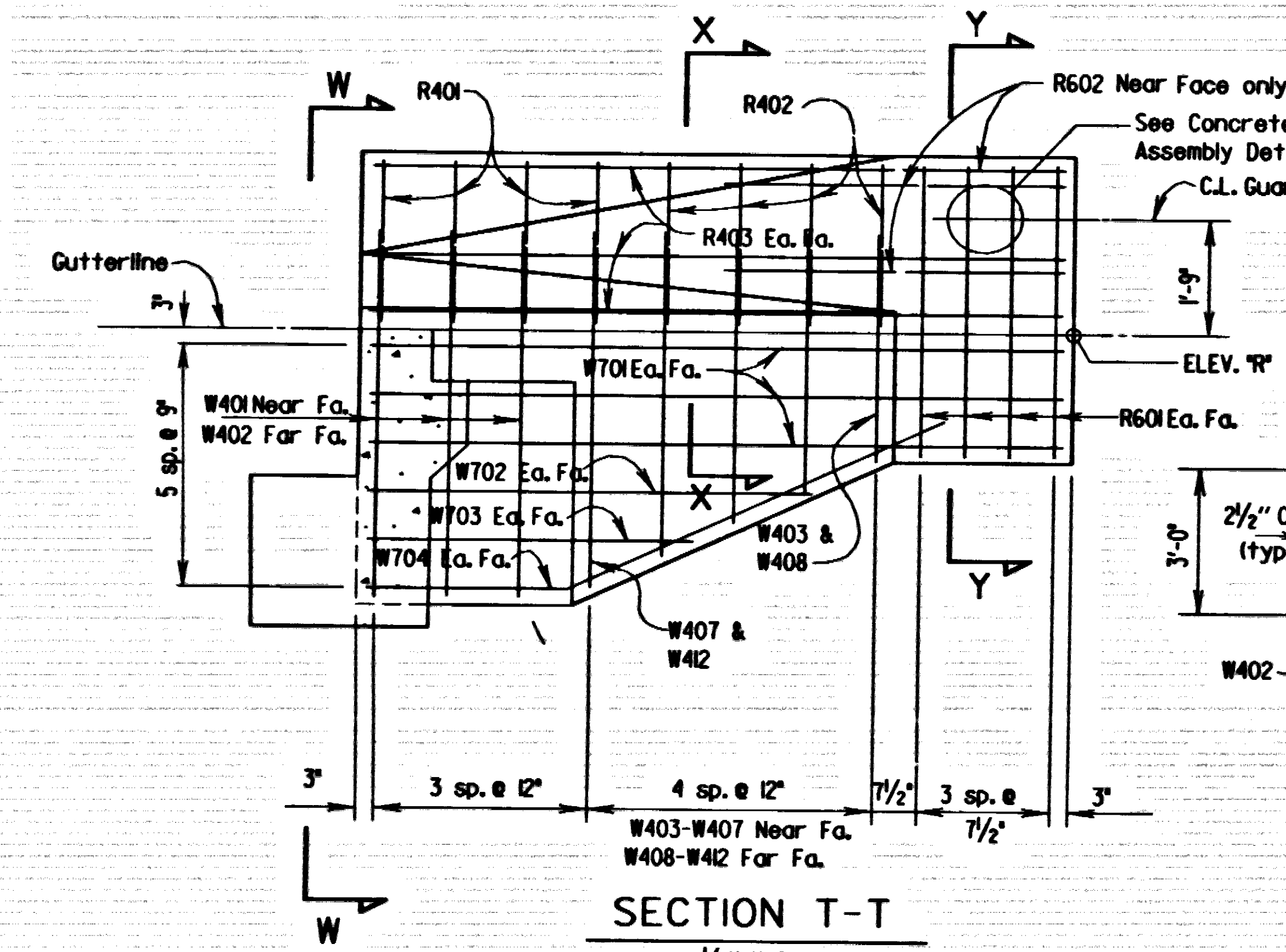
BRIDGE NOS. 6345, 6346  
8, 6347 DRAWING NO. 30727



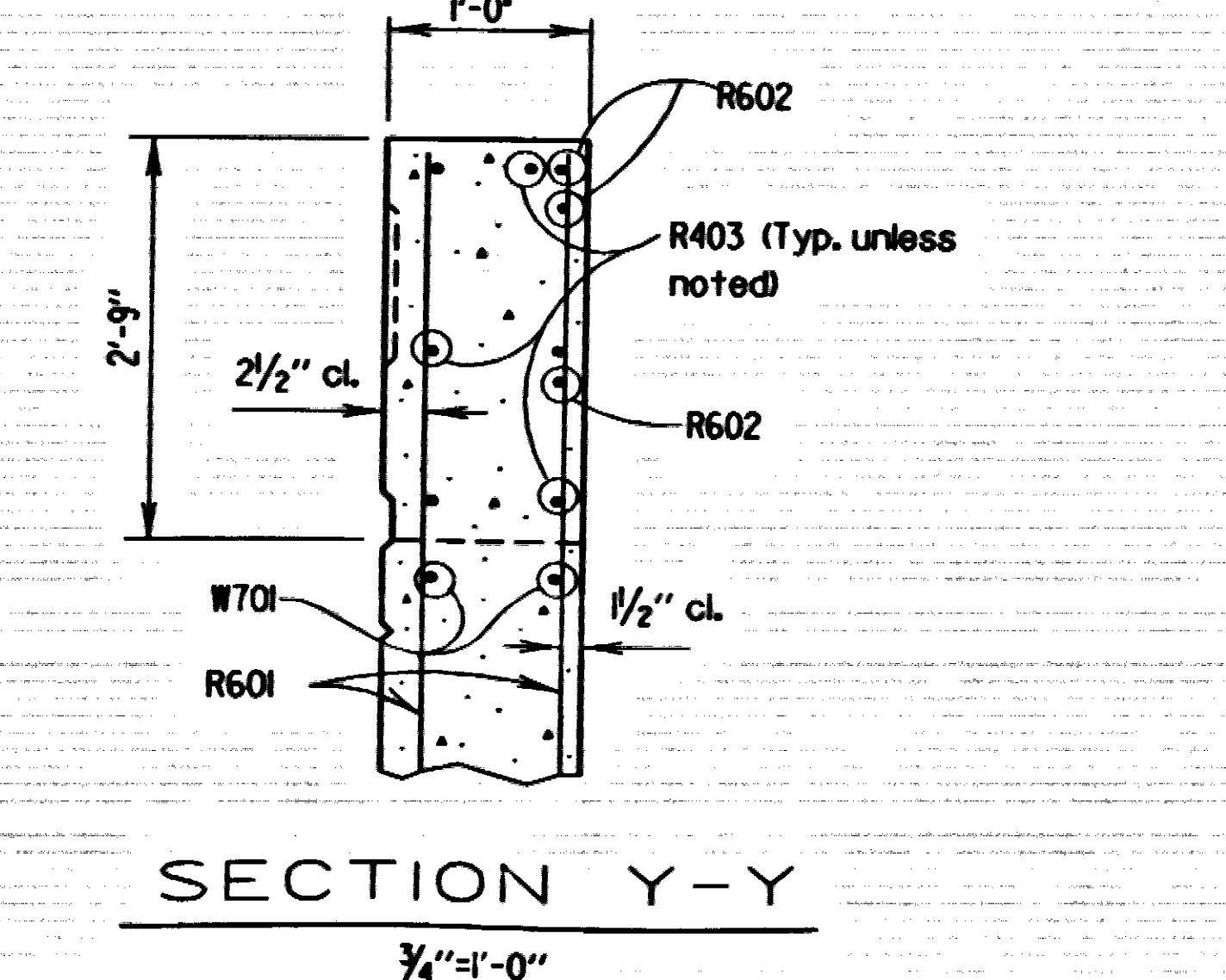
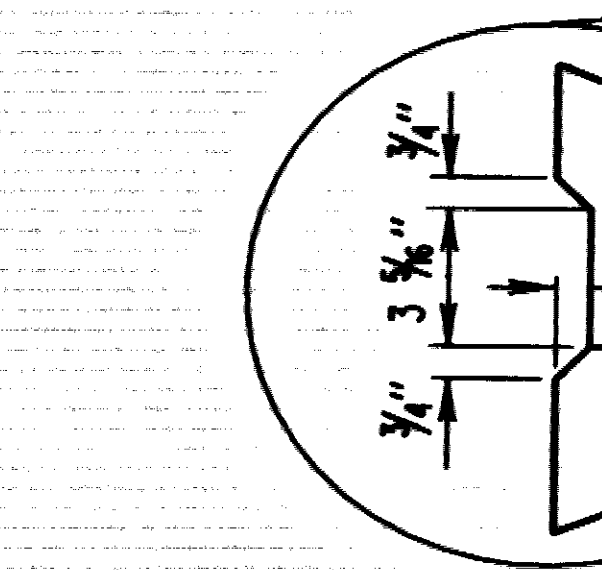




PLAN OF RAIL  
1/2"=1'-0"

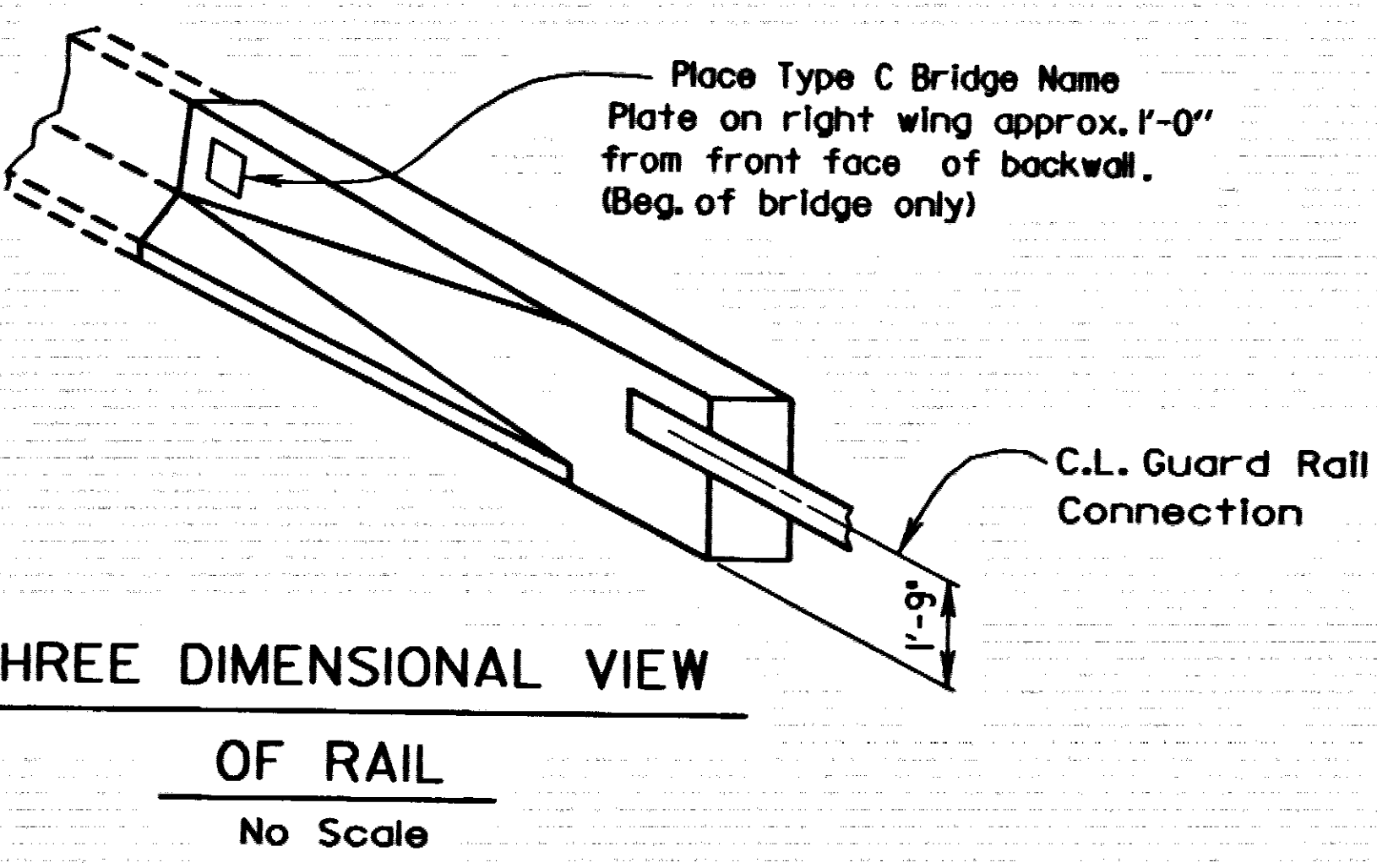
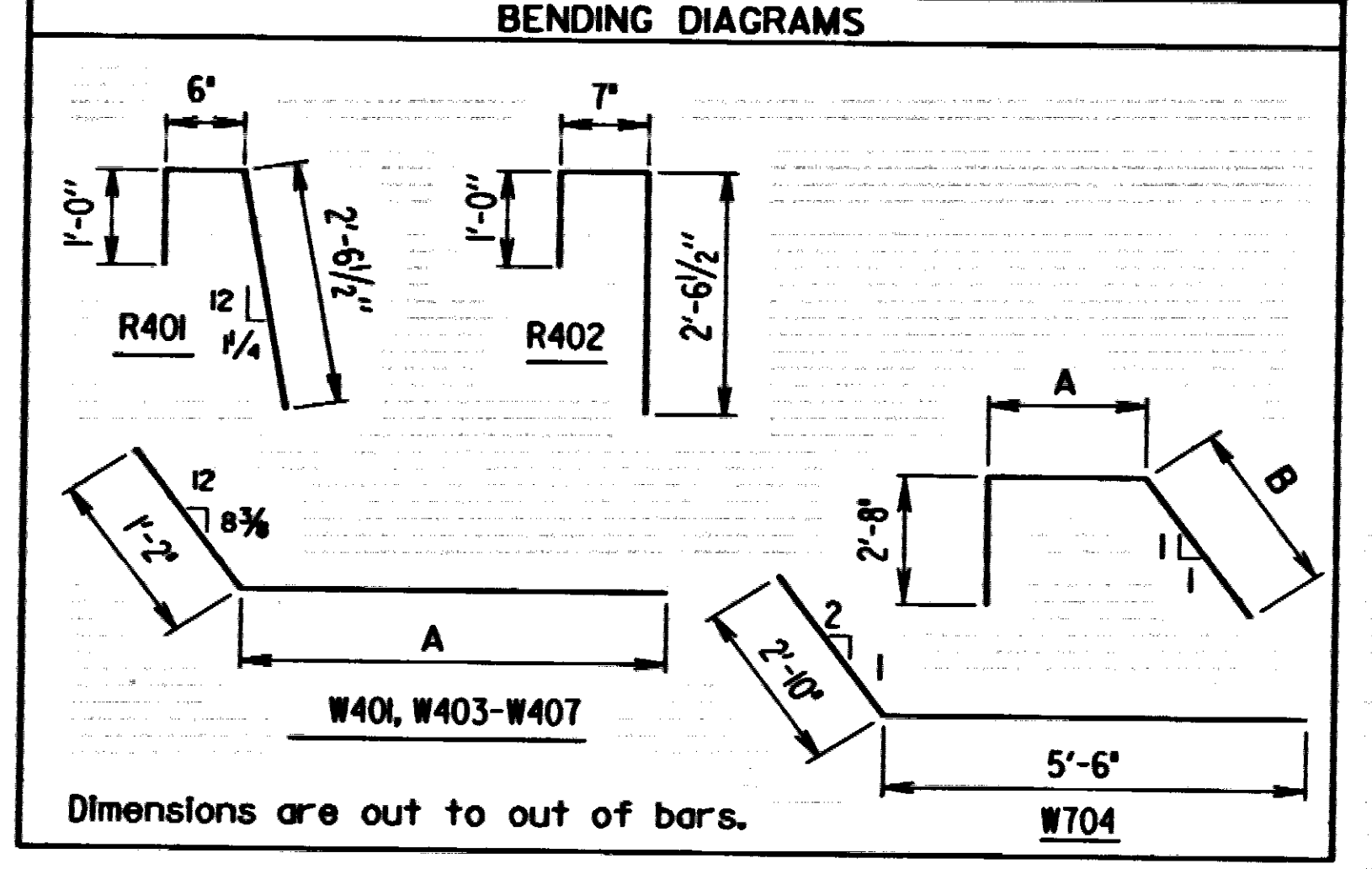


SECTION Z-Z  
Scale: 3/4"=1'-0"



BAR LIST (ONE WING & RAIL)

MARK	NO.	REQ'D.	LENGTH	A	B	PIN DIA.
R401	4	3'-11"				2"
R402	4	4'-0"				2"
R403	6	9'-8"				Str.
R601	8	4'-5"				Str.
R602	3	5'-0"				Str.
W401	3	"h"+4'-3"	"h"+1"			2"
W402	3	"h"+4'-3"	"h"+1"			Str.
W403	1 of each	Var. 3'-5" to 5'-5"	Var. 2'-3" to 4'-3"	1'-2"		2"
W407	1 of each	Var. 4'-6" to 6'-6"				Str.
W408	1 of each					Str.
W701	6	9'-8"				Str.
W702	2	6'-0"				Str.
W703	2	4'-6"				Str.
W704	2	8'-4"				5/8"



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						3979	32	82
						6345-47	STD. WING	30728

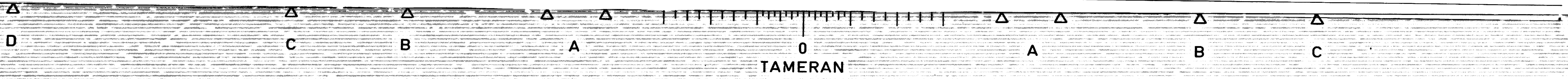
TABLE OF VARIABLES

Bridge No.	Location	Elev. Ft.	"h"
6345	Bt. Nos. 1 & 8 Wing A	248.22	4'-3"
	Wing B	248.22	4'-3"
6346	Bt. Nos. 1 & 4 Wing A	248.22	4'-3"
	Wing B	248.22	4'-3"
6347	Bt. Nos. 1 & 15 Wing A	251.72	4'-3"
	Wing B	251.72	4'-3"

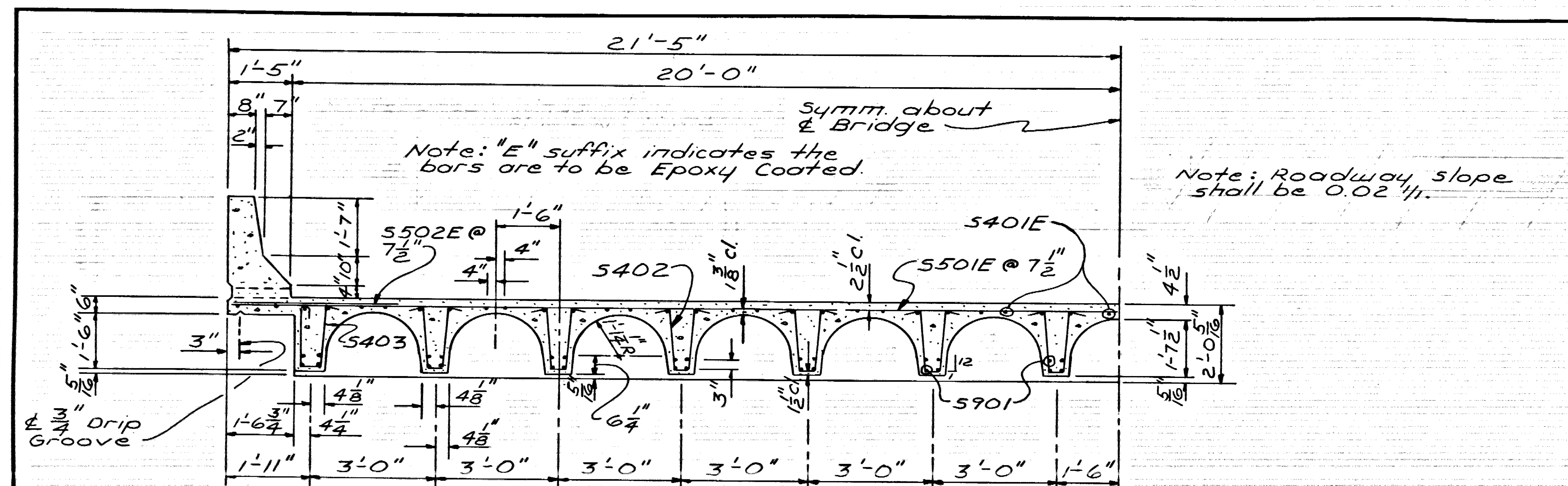
Note: For details of guard rail connections, see Drwg. No. GR-8 & GR-8A.

ALTERNATE NO. 2  
STANDARD DETAILS  
FOR WING AND RAIL  
NEVADA COUNTY  
ROUTE 19 SEC. 5  
ARKANSAS STATE HIGHWAY COMMISSION  
LITTLE ROCK, ARK.  
DRAWN BY: KMG DATE: SEPT. 87  
CHECKED BY: JAS DATE: SEPT. 87  
DESIGNED BY: DATE:  
BRIDGE NO. 6345, 6346 & 6347 DRAWING NO. 30728

JPSE522 : B3979XXXI.WW : L550,300,3979

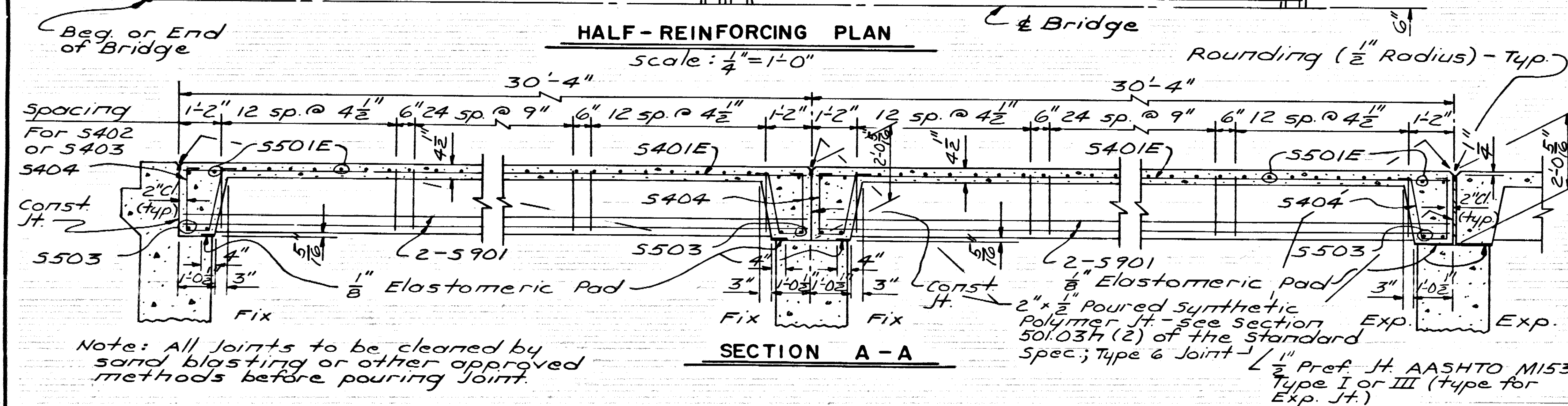
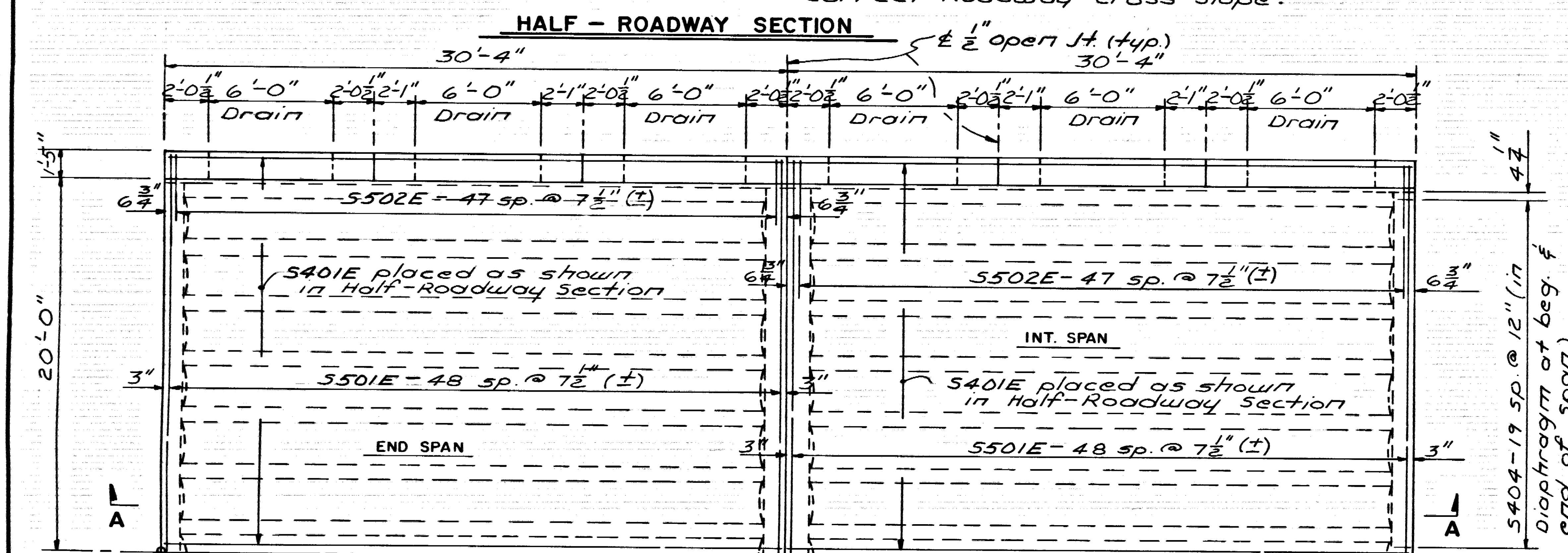






Note: Bailed Linseed Oil Treatment shall be applied to the Roadway surface and to the face and top of the concrete Parapet Rail.

Note: Half-Roadway section is drawn level. Roadway cross slope must be considered during construction. Bent caps shall be sloped to produce the correct Roadway Cross Slope.

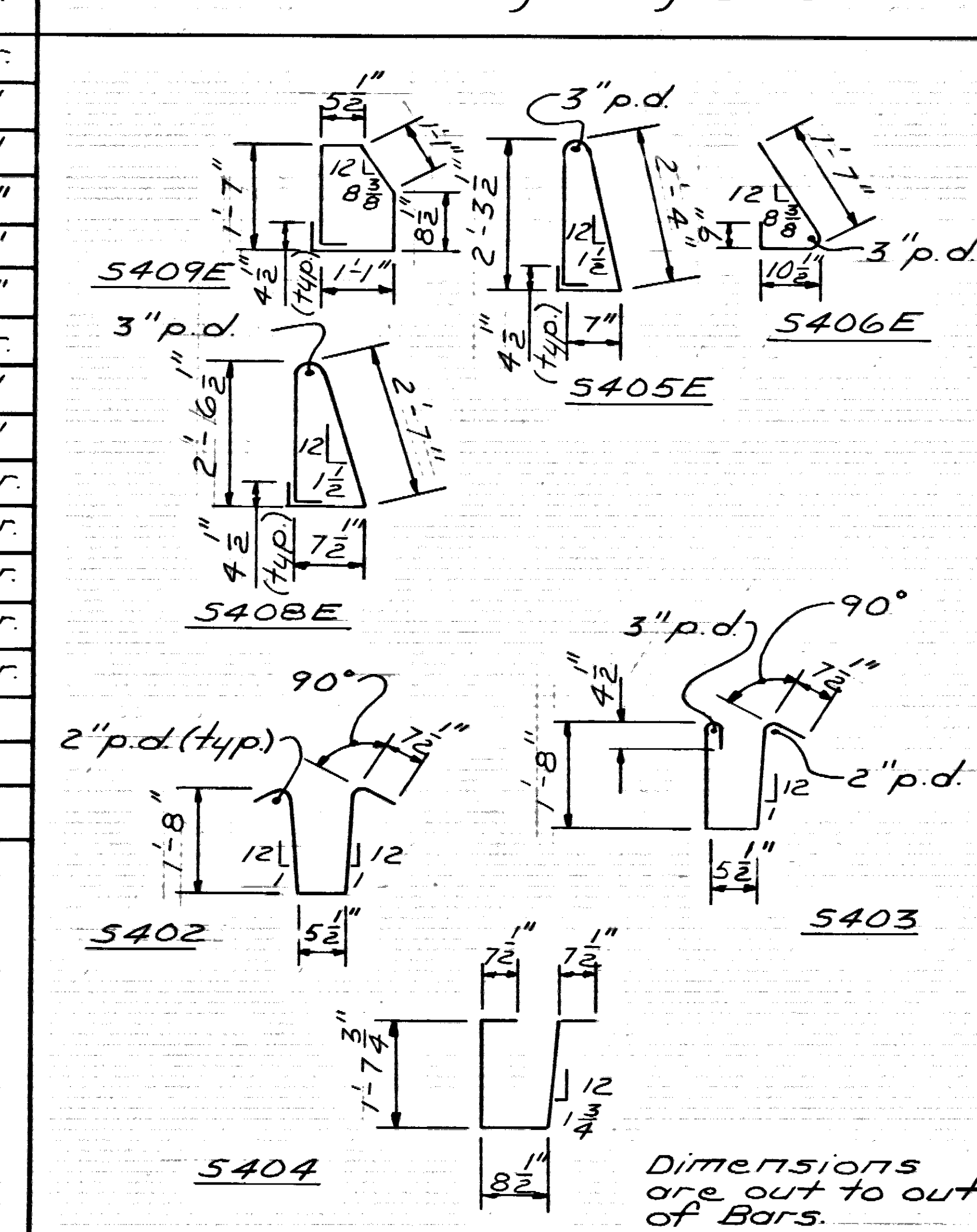


DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		33	82
				JOB NO. 3979		6345, 6346, 6347 SPAN DETAILS 30729		

# BAR LIST PER SPAN

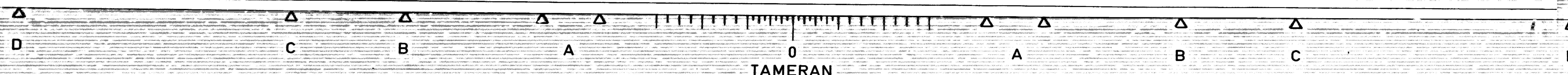
MK.	No. Reqd.	Length	Pin Dia.
S401E	58	30'-0"	5tr.
S402	612	4'-8"	2"
S403	102	4'-8"	2"
S404	80	4'-11"	2"
S405E	42	5'-10"	2"
S406E	42	3'-2"	2"
S407E	24	9'-9"	5tr.
S408E	48	6'-4"	2"
S409E	48	5'-3"	2"
S501E	49	42'-6"	5tr.
S502E	96	3'-9"	5tr.
S503	4	39'-4"	5tr.
S601E	30	9'-9"	5tr.
S901	56	30'-0"	5tr.

## Bending Diagrams



SHEET 1 OF 2  
DETAILS OF  
30'-4" PAN FORMED  
DECK GIRDERS  
NEVADA COUNTY  
ROUTE 19 SEC. 5  
ARKANSAS STATE HIGHWAY COMMISSION

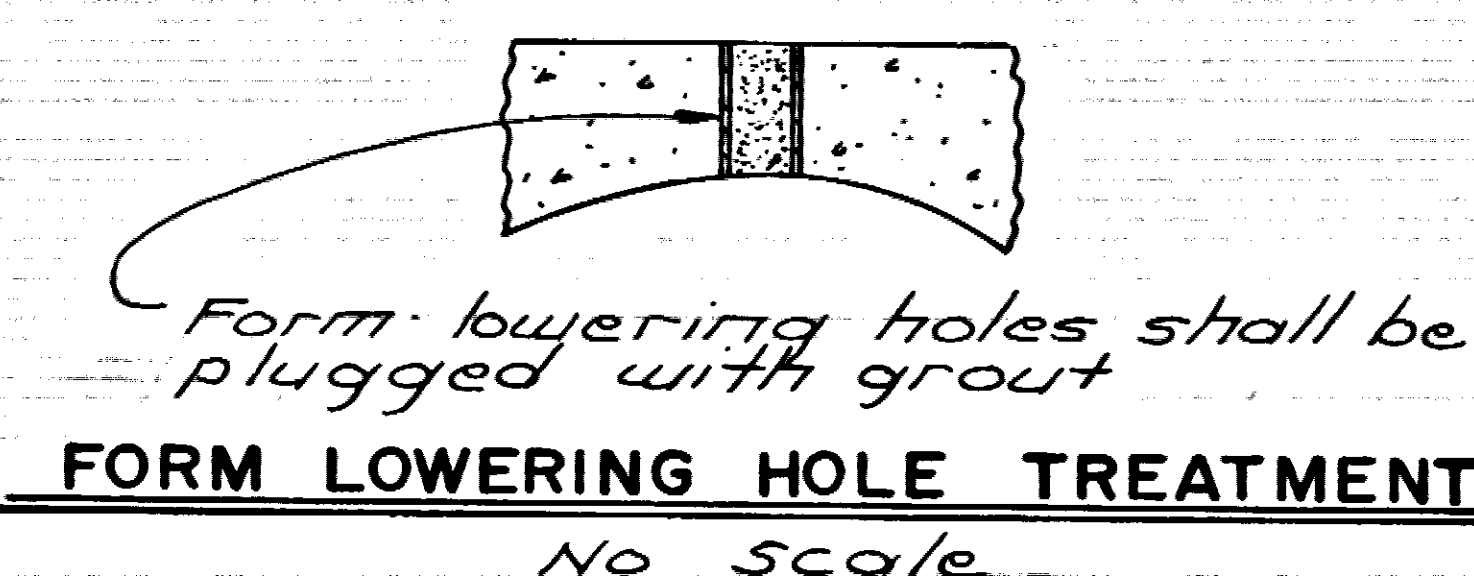
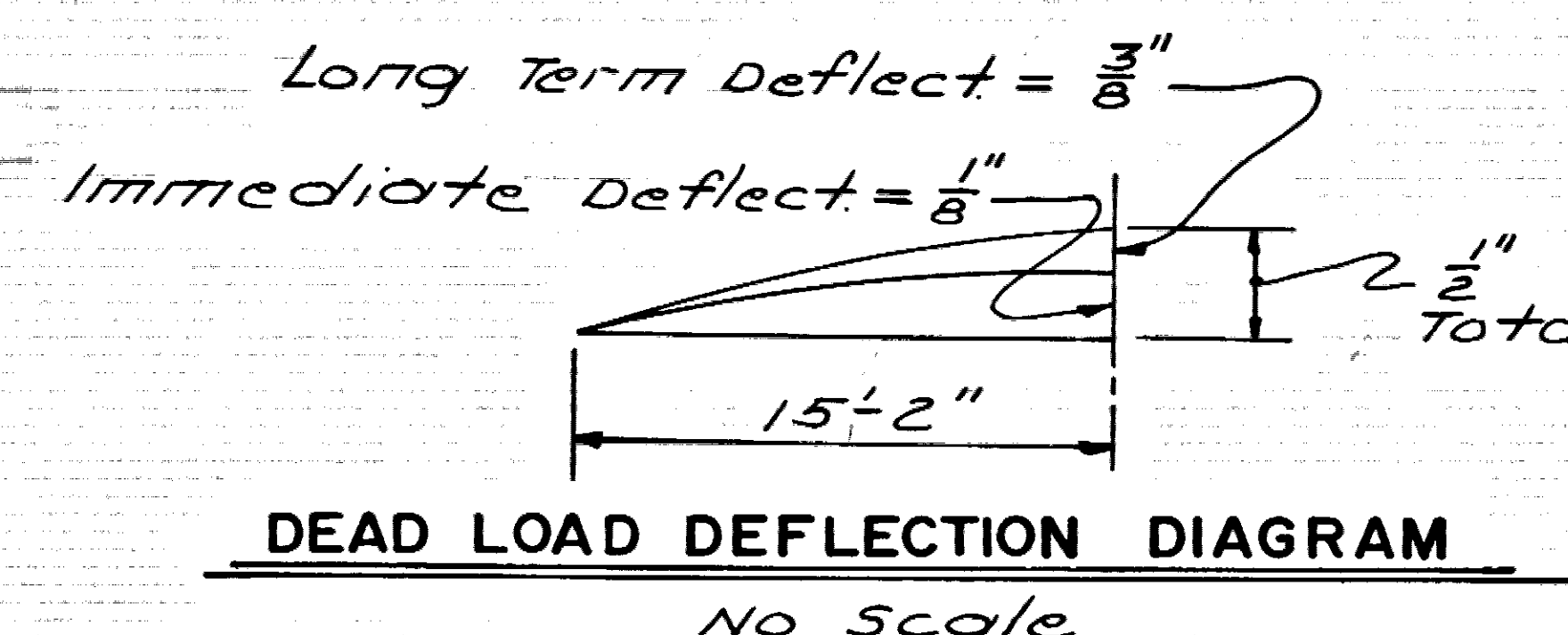
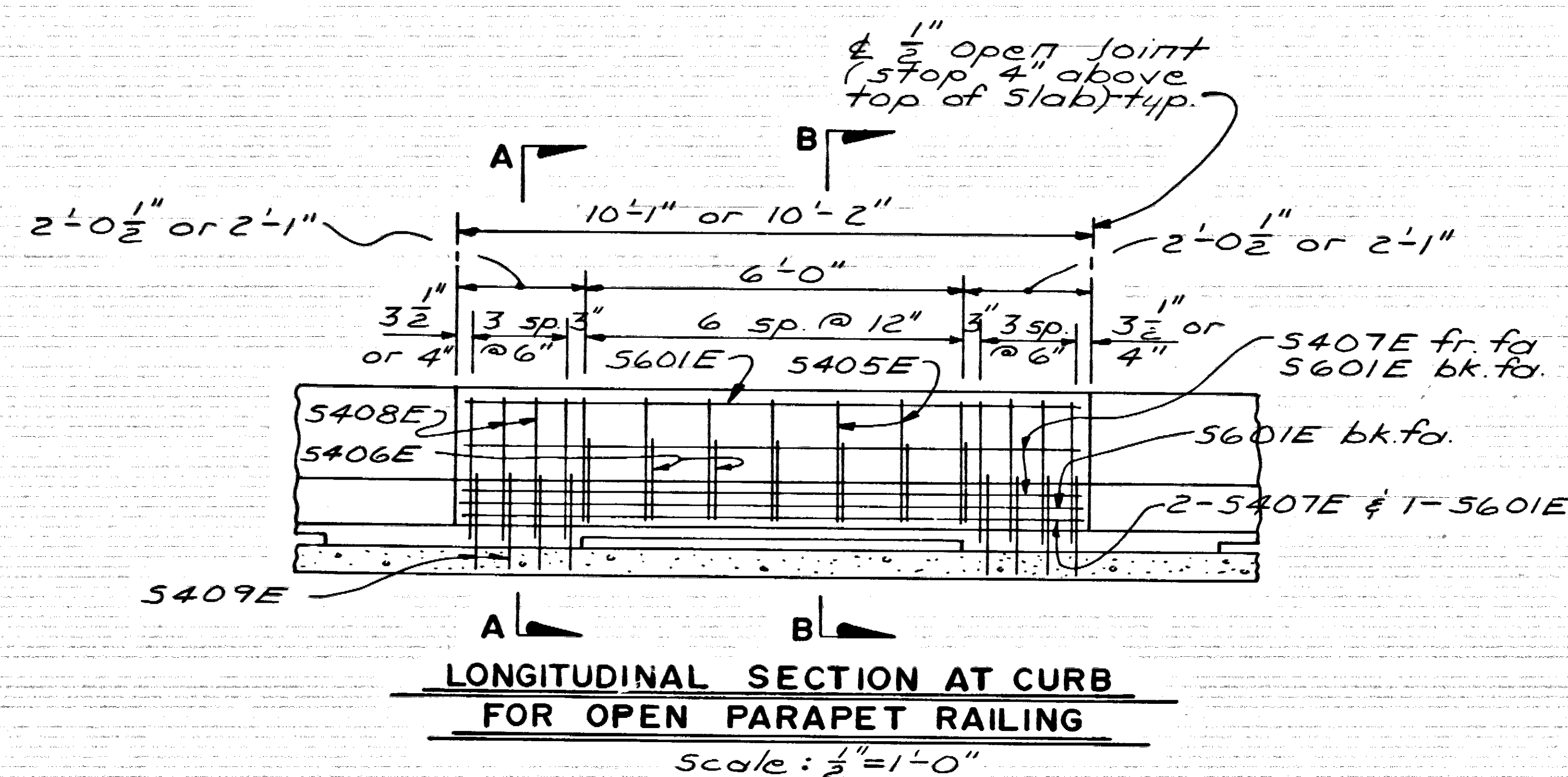
BRIDGE NO. 6345 6347 DRAWING NO. 30729





DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		3979	34	82

① 6345, 6346, 6347 SPAN DTL'S. 30730



#### GENERAL NOTES

ALL CONCRETE TO BE CLASS S (AE). ALL EXPOSED CORNERS TO BE CHAMFERED 3/4" UNLESS OTHERWISE NOTED.

THE CONCRETE IN THE GIRDERS, END DIAPHRAGMS, AND DECK SHALL BE PLACED IN ONE CONTINUOUS POUR FOR SPANS.

REINFORCING STEEL TO BE ASTM A615 OR A617, GRADE 60. BAR SUPPORTS OF REINFORCING BARS WILL NOT BE PAID FOR DIRECTLY, BUT WILL BE CONSIDERED SUBSIDIARY TO THE ITEM "REINFORCING STEEL."

ELASTOMERIC PAD, PREFORMED JOINT, STRUCTURAL STEEL, AND POURED JOINTS SHALL BE MEASURED AND PAID FOR AS CLASS S (AE) CONCRETE. ELASTOMERIC MATERIAL SHALL MEET THE REQUIREMENTS OF SECTION 808.02 OF THE STANDARD SPECS. AND SHALL BE IN ONE PIECE FOR THE FULL WIDTH AND LENGTH OF THE BEARING.

CONSTRUCTION SPECIFICATIONS: ARKANSAS STATE HIGHWAY AND TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, 1988 EDITION, WITH APPLICABLE SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS.

DESIGN SPECIFICATIONS: AASHTO 1983 EDITION AND CURRENT INTERIMS.

DESIGN LIVE LOADING: HS20 DESIGN METHOD: LOAD FACTOR

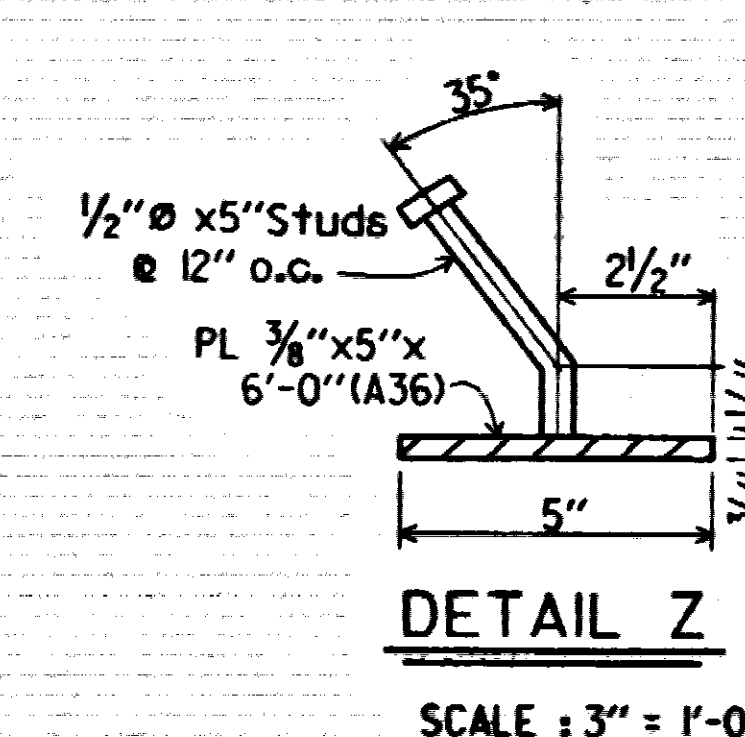
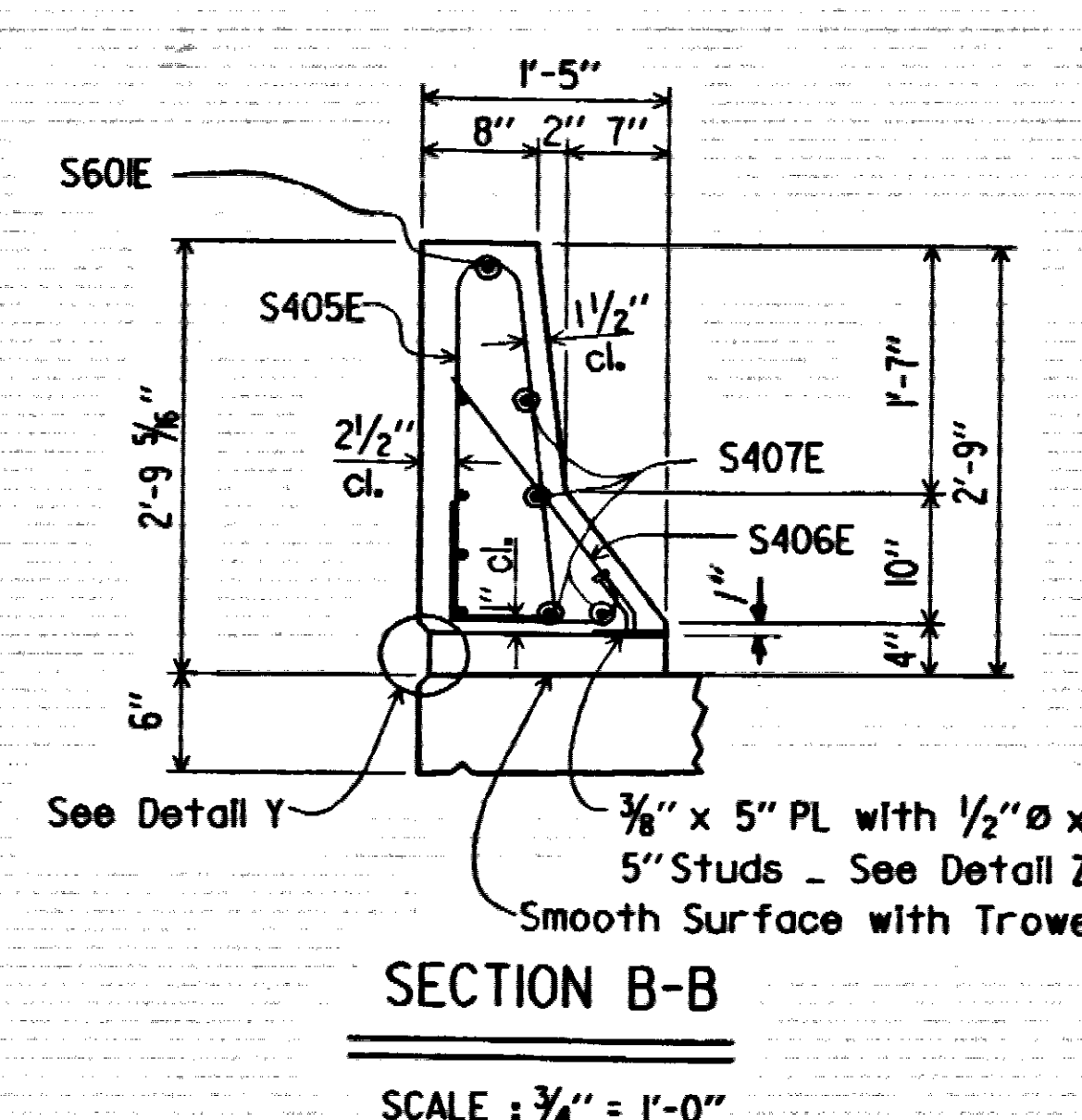
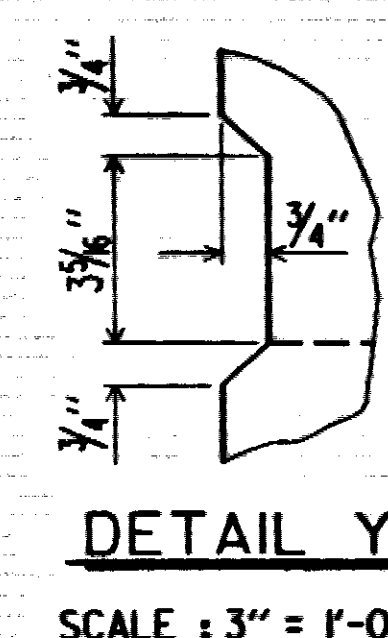
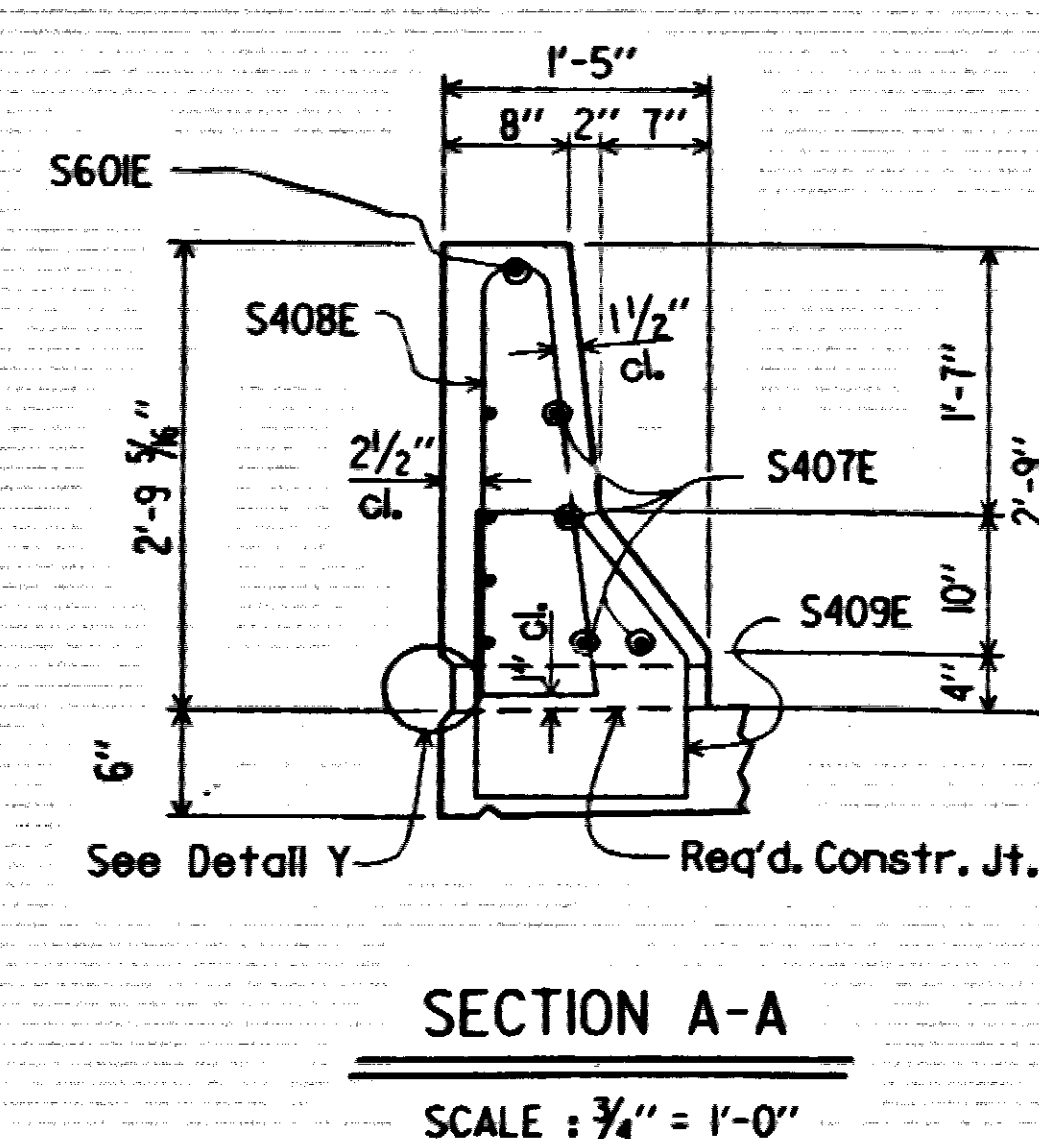
DEAD LOAD: INT. GIRDER = 572 PLF • EXT. GIRDER = 600 PLF •

• INCLUDES FUTURE WEARING SURFACE: 69 PLF

LIVE LOAD: 0.5 WHEEL + IMPACT

UNIT STRESSES: 28 DAY COMPRESSIVE STRENGTH OF CLASS S (AE) CONCRETE = 4000 PSI YIELD STRENGTH OF REINFORCING STEEL = 60,000 PSI

PAY QUANTITY OF CLASS S (AE) CONCRETE WILL BE PLAN QUANTITY WHICH INCLUDES THE QUANTITY OF CONCRETE REQUIRED TO PROVIDE A CAMBER IN TOP OF SLAB AFTER REMOVAL OF FORMS OF 1/2" AT CL. SPAN.



Note:  
Parapet Studs shall be 5" long, granular flux filled, solid fluxed, or equal, and automatically end welded to the plate. Studs and plate shall meet the requirements of Section 807. Studs and plate shall be measured and paid for as Class S(AE) Concrete.  
The surfaces of the 3/4" Plates which will not be in contact with concrete shall receive two coats of paint in the shop. These coats shall be those specified as Shop Prime Coat and Finish Coat in Subsection 807.59. Painting will not be paid for directly, but will be included in the item Class S (AE) Concrete.

#### TABLE OF QUANTITIES

	Reinf. * * *	Class S (AE) Conc	Struct Steel * *
Per Span	13,244	56.07	242

\* For Information Only.  
\* \* 1,130 lbs of Reinf.  
are Epoxy Coated

SHEET 2 OF 2  
DETAILS OF  
30'-4" PAN FORMED  
DECK GIRDERS  
NEVADA COUNTY  
ROUTE 19 SEC. 5  
ARKANSAS STATE HIGHWAY COMMISSION  
LITTLE ROCK, ARK.  
DRAWN BY: J.P.S. DATE: 8-15-87  
CHECKED BY: GVA DATE: 8-22-87  
DESIGNED BY: J.S.W. DATE: 4-14-87  
BRIDGE NO. 6345 6347 DRAWING NO. 30730

Karl Pinkerton  
BRIDGE ENGINEER

MICROFILMED  
OCT 17 1989

