

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.	001588		15	170
				① 6449-6453	QUANTITIES		32704	

SCHEDULE OF BRIDGE QUANTITIES FOR JOB NO. 1588

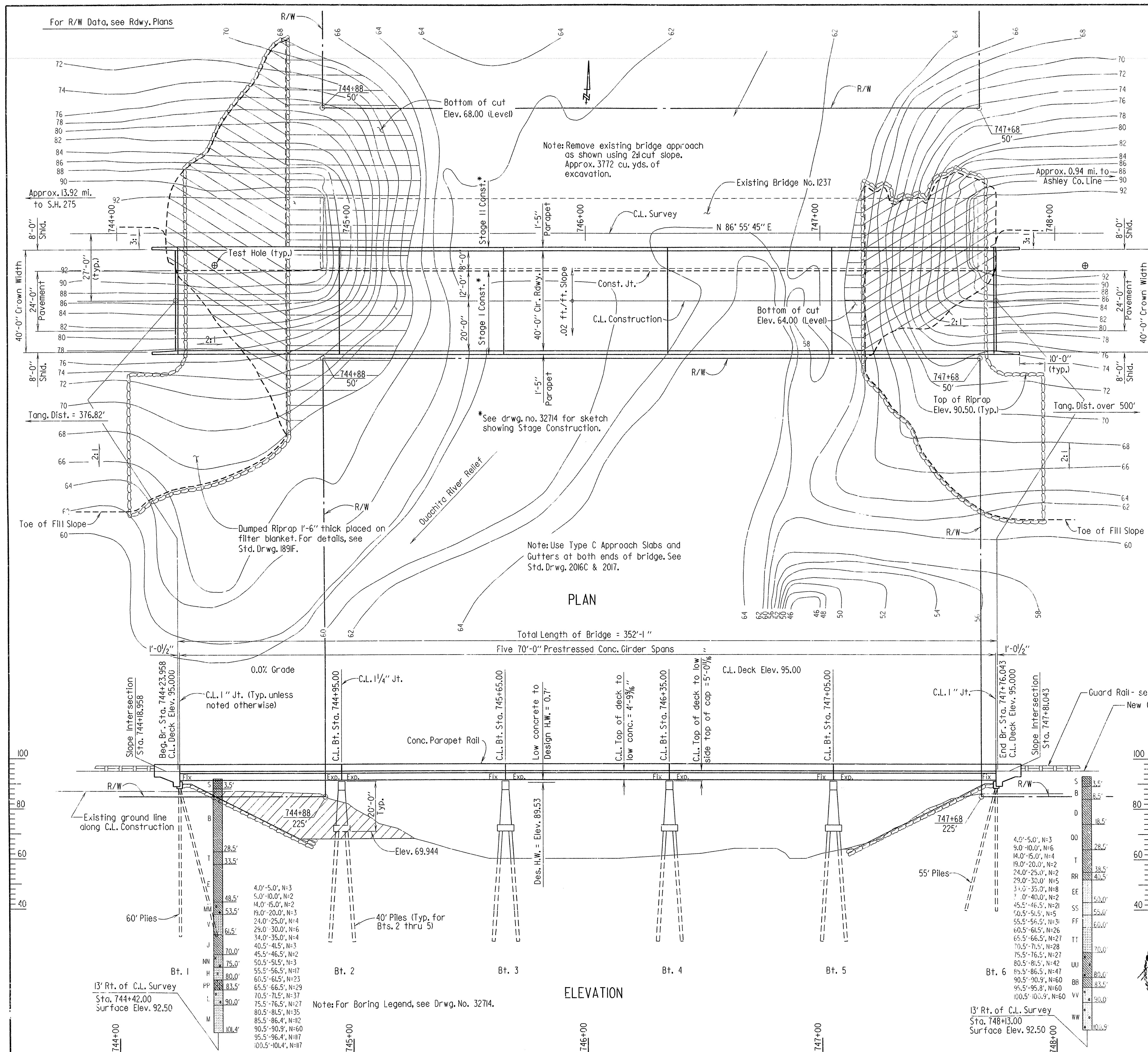
BRIDGE NO.	CODE NO.	NAME PLATE	UNIT OF STRUCTURE	ITEM NO.	205	801	802	802	SP & 802	803	SS & 804	SS & 804	805	805	805	805	805	807	808	809	812	816	816	
				ITEM	REMOVAL OF EXISTING BRIDGE STRUCTURE (SITE NO. )	UNCLASSIFIED EXCAVATION FOR STRUCTURES- BRIDGE	CLASS S CONCRETE- BRIDGE	PRESTRESSED CONCRETE GIRDER (TYPE III )	CLASS S(AE) CONCRETE- BRIDGE	BOILED LINSEED OIL	REINFORCING STEEL - BRIDGE (GRADE 60)	EPOXY COATED REINFORCING STEEL (GRADE 60)	CONCRETE PILING (16" OCT. OR 14" SQ.)	TEST PILES (16" OCT. OR 14" SQ.)	CONCRETE PILING (18" SQ.)	TEST PILES (18" SQ.)	DYNAMIC PILE LOAD TEST	STRUCTURAL STEEL IN BEAM SPANS (A588)	ELASTOMERIC BEARINGS	PREFORMED JOINT SEAL	BRIDGE NAME PLATE (TYPE C)	FILTER BLANKET	DUMPED RIPRAP	
																								UNIT
6449	X081	LAPILE CREEK	End Bent No. 1 & 5			49	59.73			0.4	6430		630	70			1	807				1796	898	
			Interior Bent Nos. 2 thru 4			168.57				30621				1150	60	1								
			4 - 70' Prestressed Conc. Girder Spans				1656	371.40	29.3	6589	92560						9246	6534		214				
			( Site No. 1 )		1.0																			
			TOTAL FOR BRIDGE NO. 6449			49	228.30	1656	371.40	29.7	43640	92560	630	70	1150	60	2	10053	6534		214		1796	898
6450	X081	BIG SLOUGH	End Bent No. 1 & 8			53	59.73			0.4	6428		495	55			1	807				1603	801	
			Interior Bent Nos. 2 thru 7			337.17				61236				1610	90	2								
			7 - 70' Prestressed Conc. Girder Spans				2898	650.10	51.3	11526	162040						16121	11435		343				
			( Site No. 2 )		1.0																			
			TOTAL FOR BRIDGE NO. 6450			53	396.90	2898	650.10	51.7	79190	162040	495	55	1610	90	3	16998	11435		343		1603	801
6451	X081	OUACHITA RIVER RELIEF	End Bent No. 1 & 6			52	59.73			0.4	6430		630	70			1	807				1809	904	
			Interior Bent Nos. 2 thru 5			224.77				40824				1200	100	2								
			5 - 70' Prestressed Conc. Girder Spans				2070	464.70	36.7	8236	115740						11558	8168						
			( Site No. 3 )		1.0																			
			TOTAL FOR BRIDGE NO. 6451			52	284.50	2070	464.70	37.1	55490	115740	630	70	1200	100	3	12365	8168		257		1809	904
6452	X021	OUACHITA RIVER RELIEF	End Bent No. 1 & 8			86	25.33				2948		455	50								1017	509	
			Interior Bent Nos. 2 thru 7			72.07				8430				1395	115									
			7 - 35' R. C. Deck Girder Spans				589.40	25.7	44062	72780														
			( Site No. 4 )		1.0																			
			TOTAL FOR BRIDGE NO. 6452			86	97.40		589.40	25.7	55440	72780	455	50	1395	115							1017	509
6453	X021	OUACHITA RIVER RELIEF	End Bent No. 1 & 8			50	25.33				2948		495	60								1161	580	
			Interior Bent Nos. 2 thru 7			72.07				8430				1540	120									
			7 - 35' R. C. DECK GIRDER SPANS				589.40	25.7	44062	72780														
			( Site No. 5 )		1.0																			
			TOTAL FOR BRIDGE NO. 6453			50	97.40		589.40	25.7	55440	72780	495	60	1540	120							1161	580
TOTALS FOR JOB NO. 1588						290	1104.50	6624	2665.00	169.9	289200	515900	2705	305	6895	485	8	39406	26137		814	5	7386	3692

John A. Sage  
DESIGN SECTION SUPERVISOR



SCHEDULE OF BRIDGE QUANTITIES  
HWY. 82 BRS. & APPRS. (NEAR OUACHITA RIVER)  
UNION COUNTY  
ROUTE 82 SEC. 7  
ARKANSAS STATE HIGHWAY COMMISSION  
LITTLE ROCK, ARK.  
DRAWN BY: RMG DATE: 4 Mar 93  
CHECKED BY: CSL DATE: Mar 5, 93 SCALE: None  
DESIGNED BY: DATE:  
BRIDGE NO. 6449-6453 DRAWING NO. 32704





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.		COI588	52	170
				6451		LAYOUT		32715

GENERAL NOTES

BENCH MARK: Std. Disk in Hub Rail 15' Rt. of C.L. Survey Sta. 747+68.00. Elev. 92.84.

CONSTRUCTION SPECIFICATIONS: Arkansas State Highway and Transportation Department Standard Specifications for Highway Construction, 1993 edition, with applicable supplemental specifications and special provisions.

DESIGN SPECIFICATIONS: AASHTO Standard Specifications for Highway Bridges, 1992 with current interim specifications.

LIVE LOADING: HS20 METHOD OF DESIGN: Load Factor SEISMIC PERFORMANCE CATEGORY: A

MATERIALS AND STRENGTHS:

- Superstructure Concrete (Deck)  $f'c = 4,000$  psi
- Superstructure Concrete (Girders)  $f'c = 5,000$  psi
- Substructure Concrete (Class S)  $f'c = 3,500$  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.

CONCRETE PILING:

End Bents: Piling shall be 16" octagonal or 14" square precast concrete, shall have a minimum penetration of 20' below the natural ground line, and shall be driven to a minimum ultimate bearing capacity of 135 tons per pile. Piling shall be driven after embankment to bottom of cap is in place. Pile shapes shall not be mixed. Drive one 70' test pile in bent 1. Design capacity of piles = 54 tons per pile.

Int. Bents: Piling for bents 2 thru 5 shall be 18" square precast concrete, shall have a minimum penetration of 25' below the natural ground line, and shall be driven to a minimum ultimate bearing capacity of 300 tons per pile. Drive one 50' test pile in bent 3 and one 50' test pile in bent 5. Design capacity of piles = 120 tons per pile.

Bents 1 thru 6: Bearing values shall be determined as specified for 'Method C - Dynamic Load Test' in the standard specifications. For special requirements for hammer and driving equipment see subsection 805.03.

Pile lengths shown are for estimating and bid comparison purposes only. Actual lengths to be determined in the field.

BRIDGE DECK: The concrete bridge deck shall be given a line 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 32706-32708
- 70' Prestressed Conc. Girder Spans 32709-32712
- Concrete Piling 2381
- Type C Bridge Name Plate 2389A
- Embankment Construction 1888A
- Dumped Riprap and Filter Blanket 1891F
- Computing Excavation for Structures 1891F
- Approach Slabs and Gutters 2016C & 2017

EXISTING BRIDGE: The existing bridge No. 1237 (log mile 13.92) is 28' wide and 281' long and consists of a RCGG superstructure supported by a concrete substructure. The existing bridge is located approximately 27 feet upstream from the proposed new bridge.

REMOVAL AND SALVAGE: After the new bridge is open to traffic the existing bridge (1237) 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.

#### HYDRAULIC DATA

Ouachita River			NATURAL WATER SURFACE ELEV. **	WATER SURFACE ELEV. WITH BACKWATER
FLOOD			FEET	FEET
DISCUSSION	FREQ.	DISCHARGE	FEET	FEET
DESIGN	50	13653	89.53	89.68
OVERTOPPING	>500			
BASE	100	13748	89.72	89.88
EXTREME	500	13931	90.22	90.37

Normal Pool Elevation for Ouachita River:

- = 65.0 Ft.
- = 70.0 Ft. (During Water fowl Season)

Remarks:

- No overtopping of roadway approaches occurs.
- Low bridge member elevation = 90.20
- Design water surface elevation at bridge = Elev. 89.53

LAYOUT FOR  
BRIDGE OVER OUACHITA RIVER RELIEF  
HWY. 82 BRS. & APPRS. (NEAR OUACHITA RIVER)  
UNION COUNTY

ROUTE 82 SEC. 7  
ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: KMG DATE: 29 Sept 89  
CHECKED BY: CSL DATE: March 5, 93 SCALE: 1" = 20'  
DESIGNED BY: CSL DATE: July 89  
BRIDGE NO. 6451 DRAWING NO. 32715





SCHEDULE OF BRIDGE QUANTITIES FOR JOB NO. 020189

BRIDGE NO.	CODE NO.	NAME PLATE TITLE	UNIT OF STRUCTURE	ITEM NO.	205	801	802	SP & 802	803	SS & 804	SS & 804	805	805	805	805	812	816	816
				ITEM	REMOVAL OF EXISTING BRIDGE STRUCTURE ( SITE NO. )	UNCLASSIFIED EXCAVATION FOR STRUCTURES- BRIDGE	CLASS S CONCRETE- BRIDGE	CLASS S(AE) CONCRETE- BRIDGE	BOILED LINSEED OIL	REINFORCING STEEL- BRIDGE ( GRADE 60)	EPOXY COATED REINFORCING STEEL ( GRADE 60)	CONCRETE PILING ( 16'' OCT. OR 14'' SQ. )	TEST PILES ( 16'' OCT. OR 14'' SQ. )	CONCRETE PILING ( 18'' SQ. )	TEST PILES ( 18'' SQ. )	BRIDGE NAME PLATE ( TYPE C )	FILTER BLANKET	DUMPED RIPRAP
				UNIT	LUMP SUM	CU. YD.	CU. YD.	CU. YD.	GAL.	LB.	LB.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	EACH	SQ. YD.	CU. YD.
6452	X021	QUACHITA RIVER RELIEF	End Bent No. 1 & 8			86	25.33			2948		455	50				1017	509
			Interior Bent Nos. 2 thru 7				72.07			8430			1395	115				
			7 - 35' R. C. Deck Girder Spans					589.40	25.7	44062	72780				1			
			( Site No. 1 )		1.0													
			TOTAL FOR BRIDGE NO. 6452			86	97.40	589.40	25.7	55440	72780	455	50	1395	115	1	1017	509
6453	X021	QUACHITA RIVER RELIEF	End Bent No. 1 & 8			50	25.33			2948		495	60				1161	580
			Interior Bent Nos. 2 thru 7				72.07			8430			1540	120				
			7 - 35' R. C. DECK GIRDER SPANS					589.40	25.7	44062	72780				1			
			( Site No. 2 )		1.0													
			TOTAL FOR BRIDGE NO. 6453			50	97.40	589.40	25.7	55440	72780	495	60	1540	120	1	1161	580
TOTALS FOR JOB NO. 020189						136	194.80	1178.80	51.4	110880	145560	950	110	2935	235	2	2178	1089

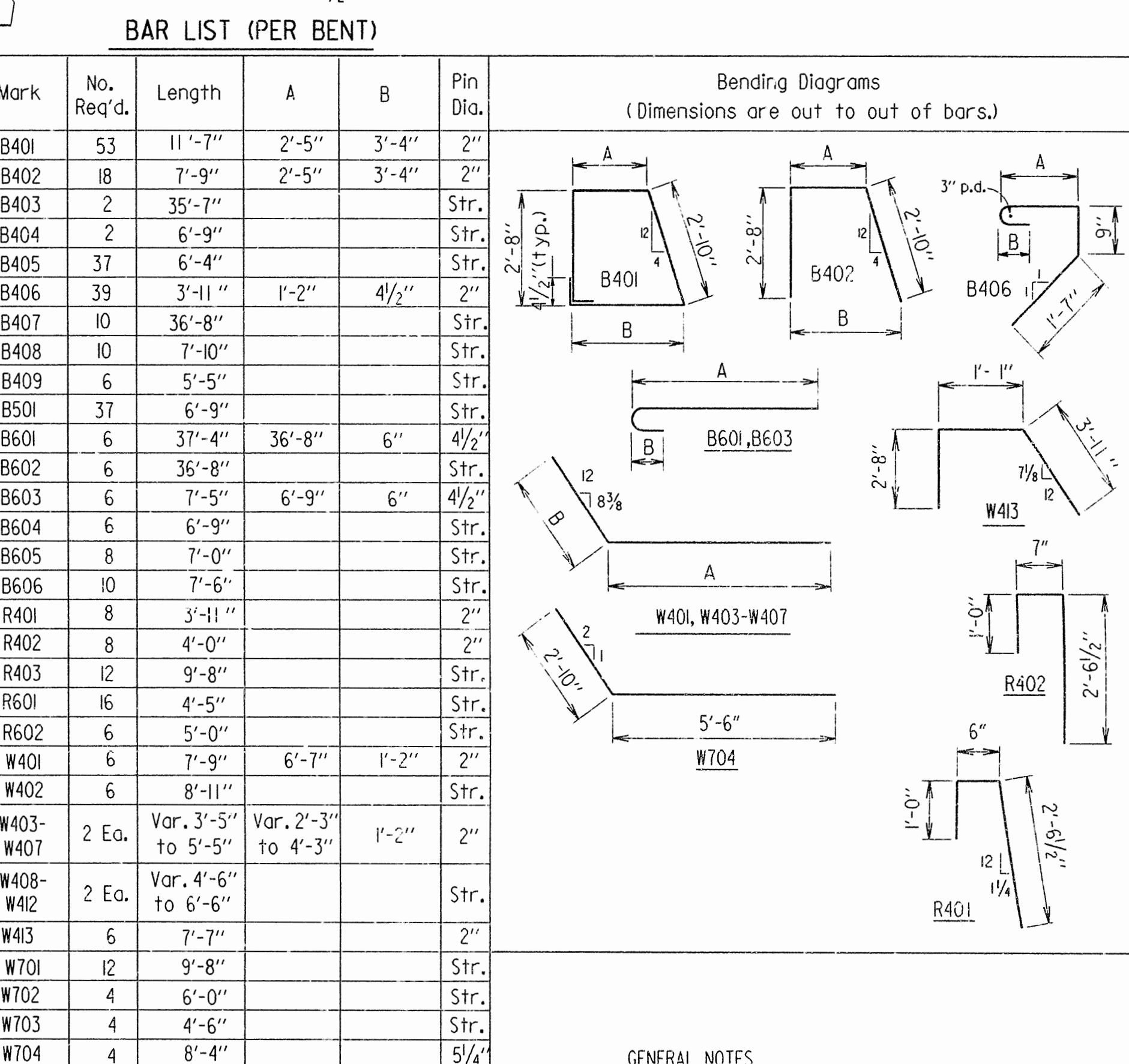
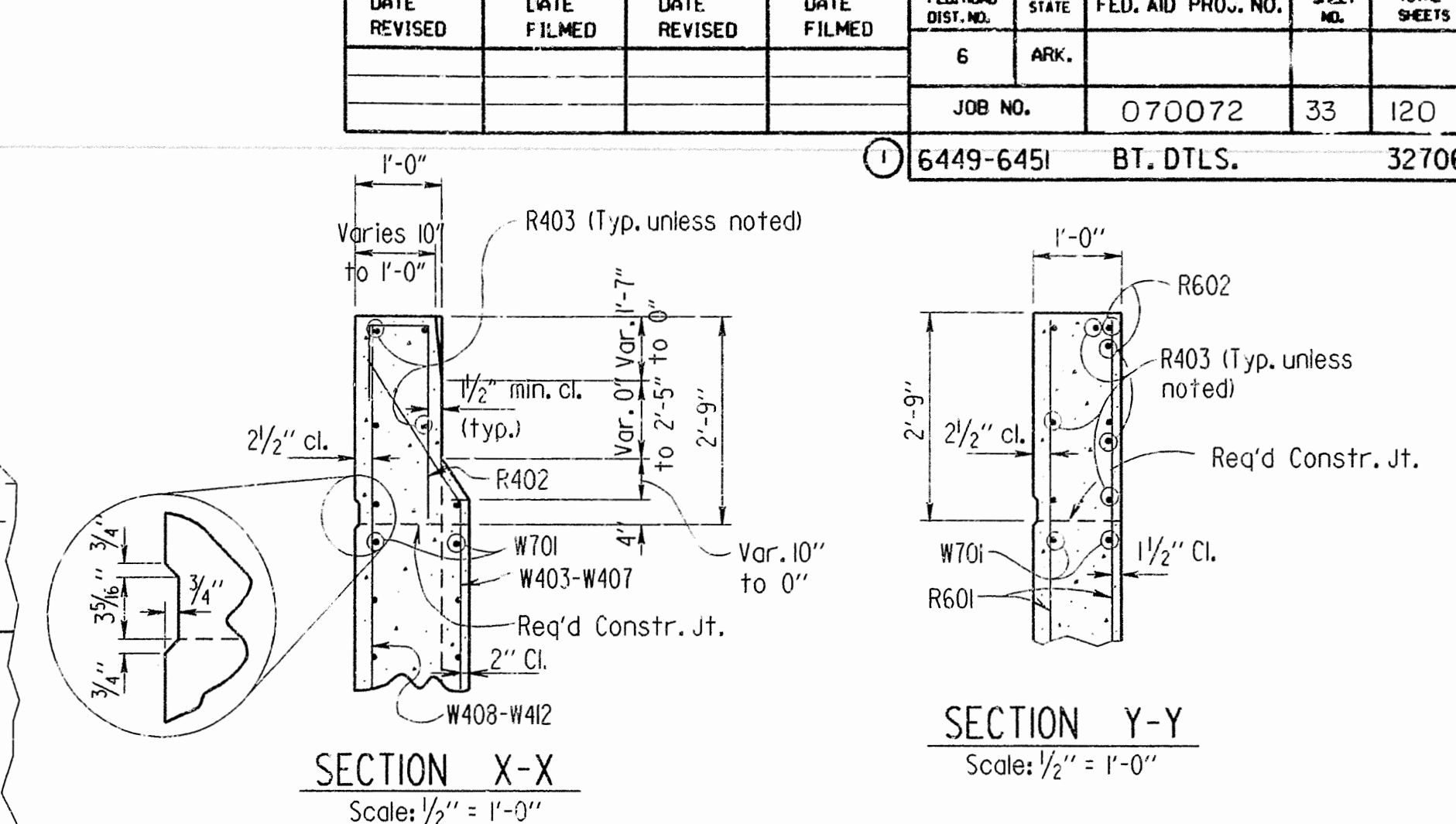
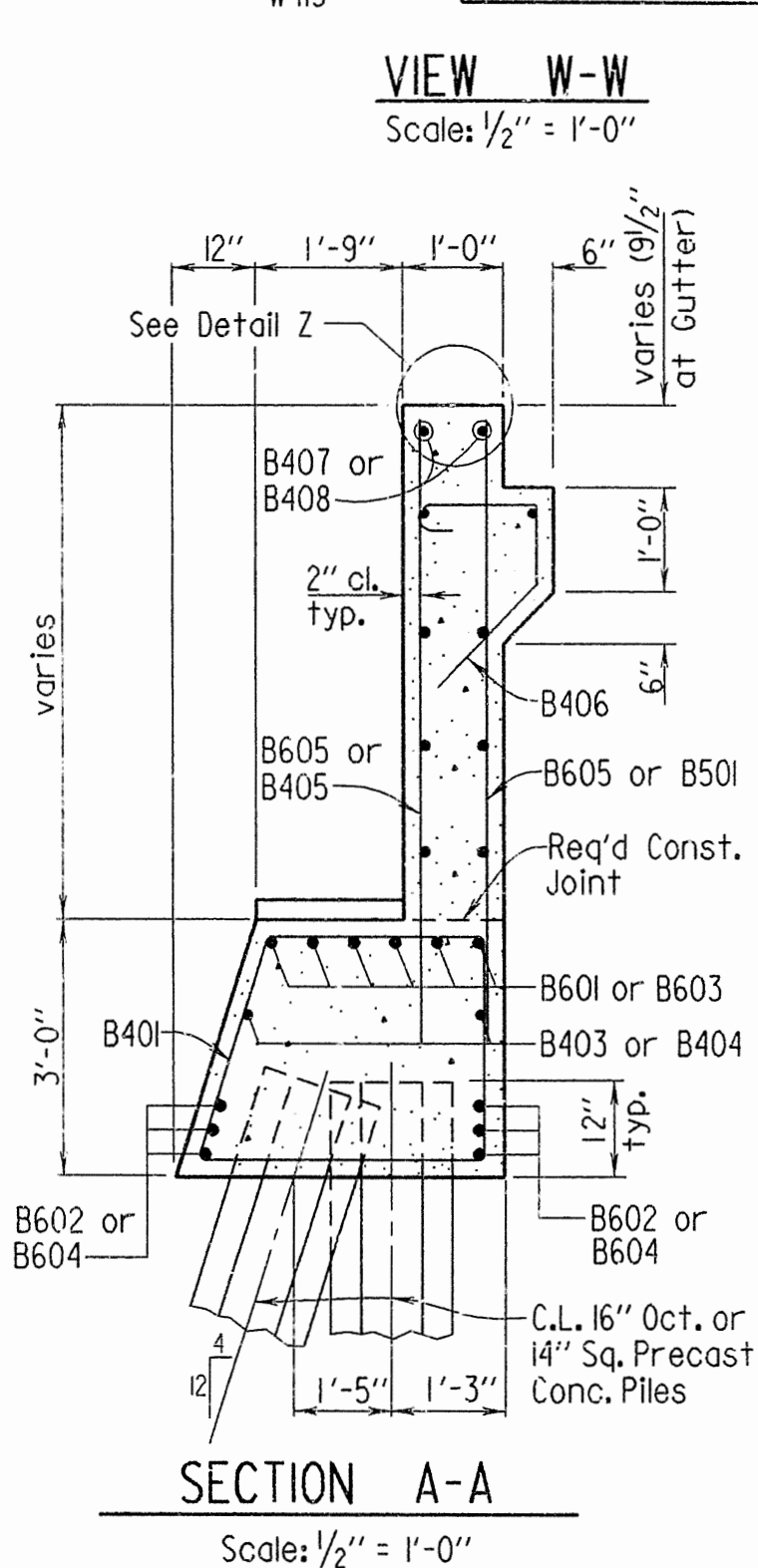
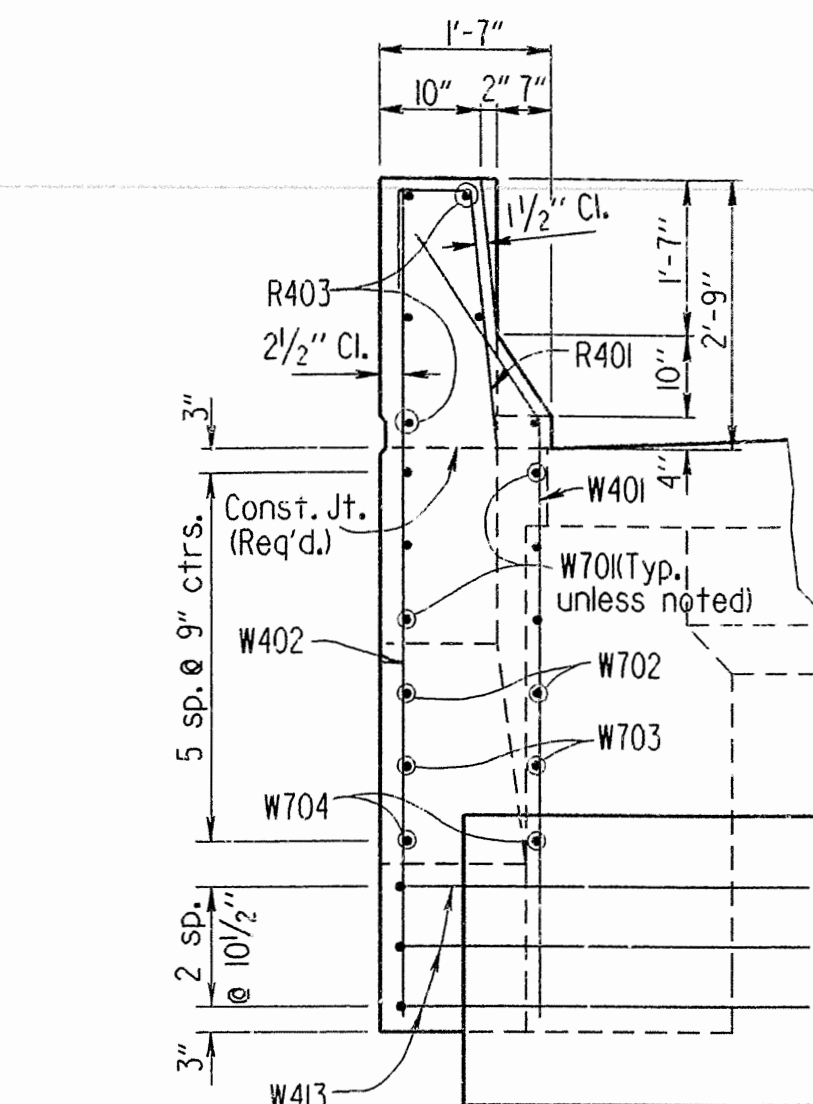
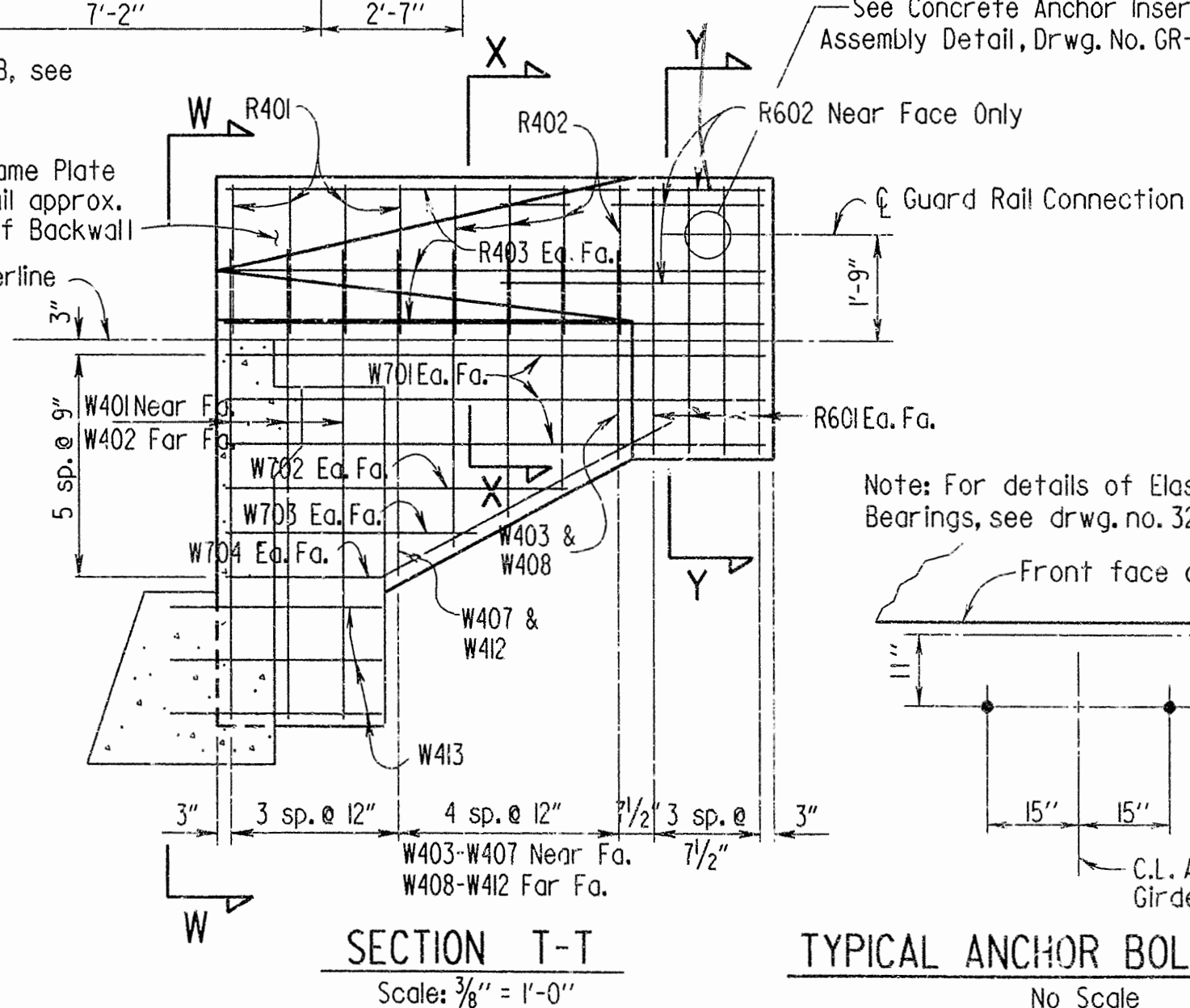
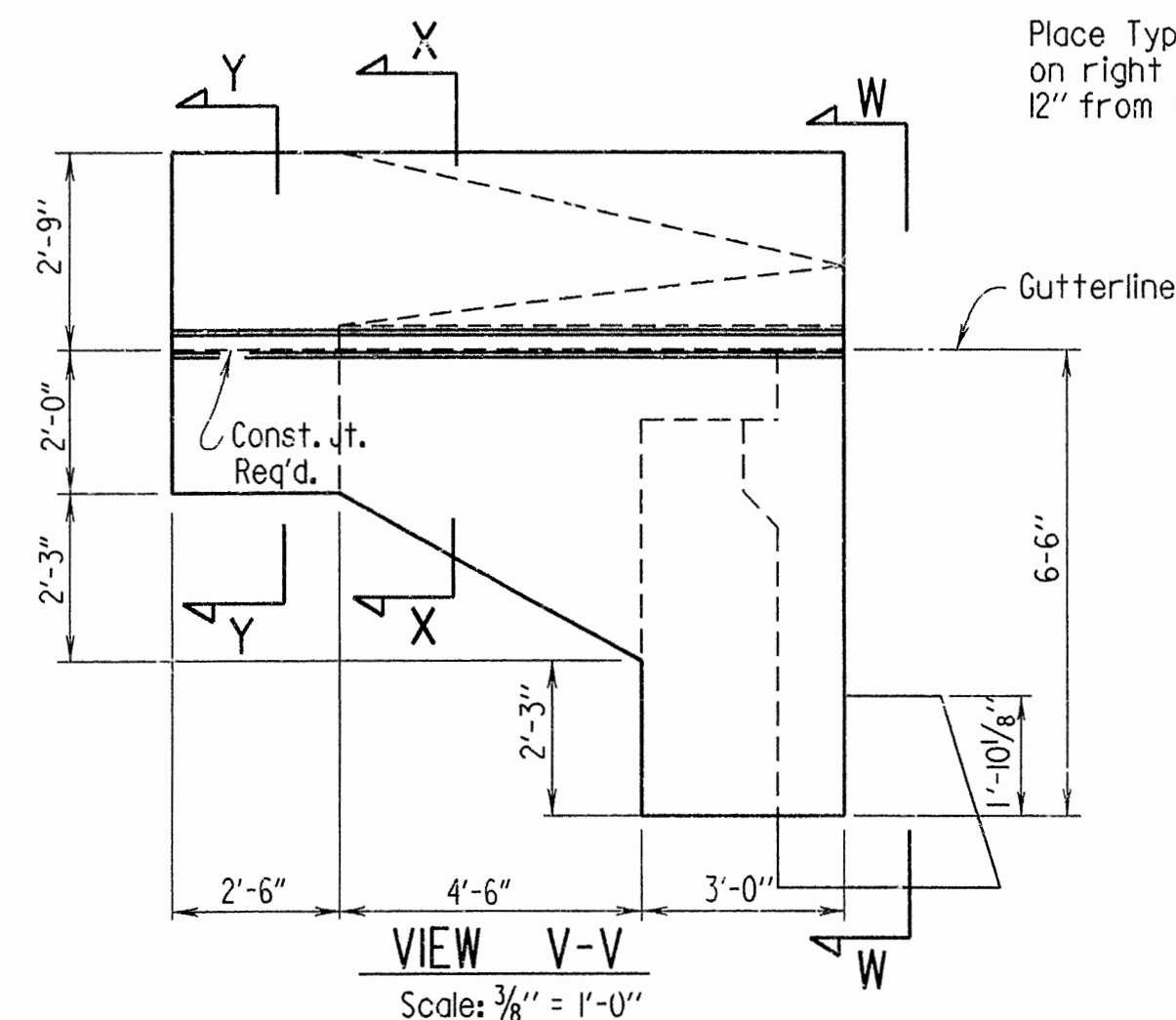
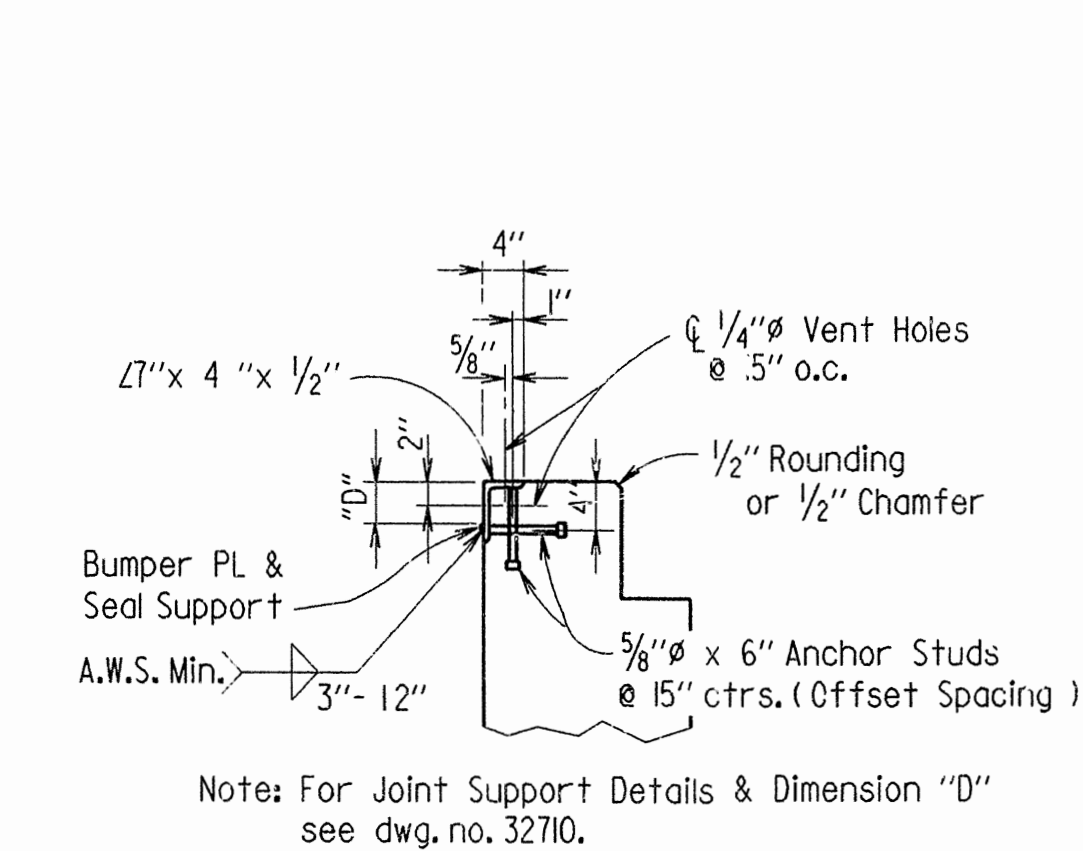
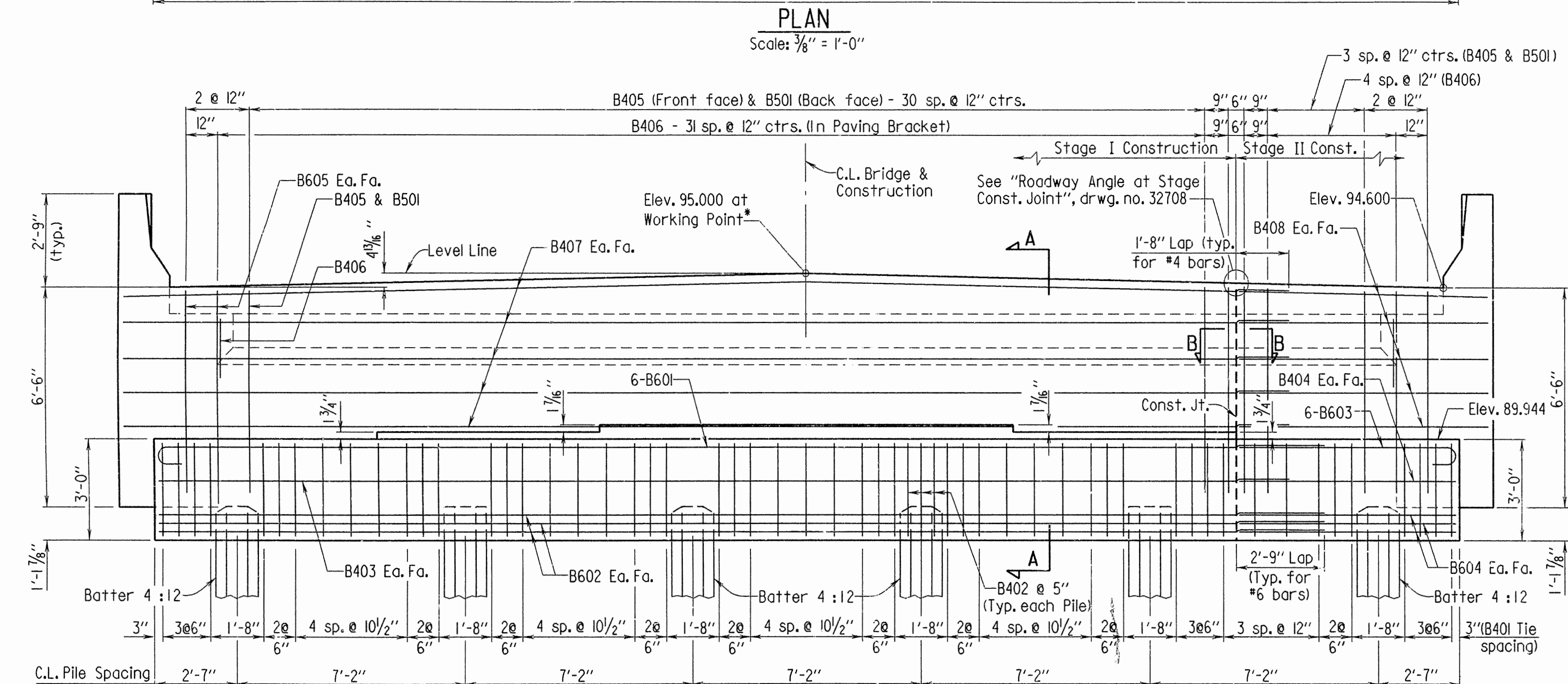
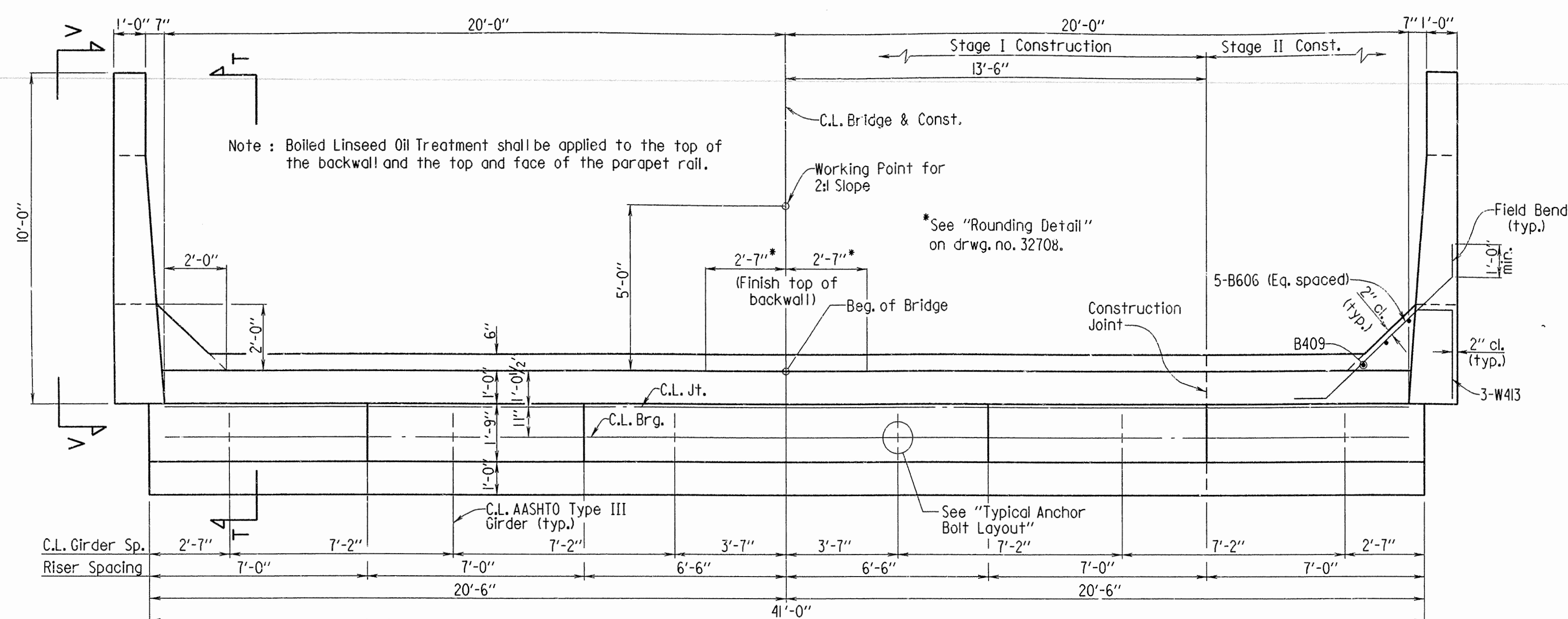
John A Sage  
DESIGN SECTION SUPERVISOR



BRIDGE ENGINEER

SCHEDULE OF BRIDGE QUANTITIES  
QUACHITA RIVER - EAST STRS. & APPRS.  
ASHLEY COUNTY  
ROUTE 82 SEC. 7  
ARKANSAS STATE HIGHWAY COMMISSION  
LITTLE ROCK, ARK.  
DRAWN BY: LDF DATE: 2-3-94  
CHECKED BY: JAS DATE: 2-3-94  
DESIGNED BY: DATE: SCALE: None  
BRIDGE NO. 6452 & 6453 DRAWING NO. 32715A





All concrete shall be Class "S" and shall be poured in the dry. All exposed corners shall be chamfered  $\frac{3}{4}"$  unless otherwise noted.

All reinforcing steel shall conform to ASTM A615 or A617, Grade 60.

End Bent backwall shall not be poured before beams are in place.

Structural steel in end bents shall be ASTM A36 and shall be paid for as "Structural Steel in Beam Spans (A36)".

If anchor bolts are drilled into cap, top reinforcing bars shall be properly spaced to avoid damage.

For additional information, see Layout.

DETAILS OF  
PILE END BENTS  
FOR 70' PRESTRESSED CONC. GIRDER SPANS  
(BEG. OF BRIDGE ONLY)

ROUTE 82 SEC. 7  
ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: KMG DATE: 15 Oct 91

CHECKED BY: CSL DATE: Jun. 93 SCALE: As Shown

DESIGNED BY: CSL DATE: Jan. 91  
BRIDGE NO. 6448-6451 DRAWING NO. 32306

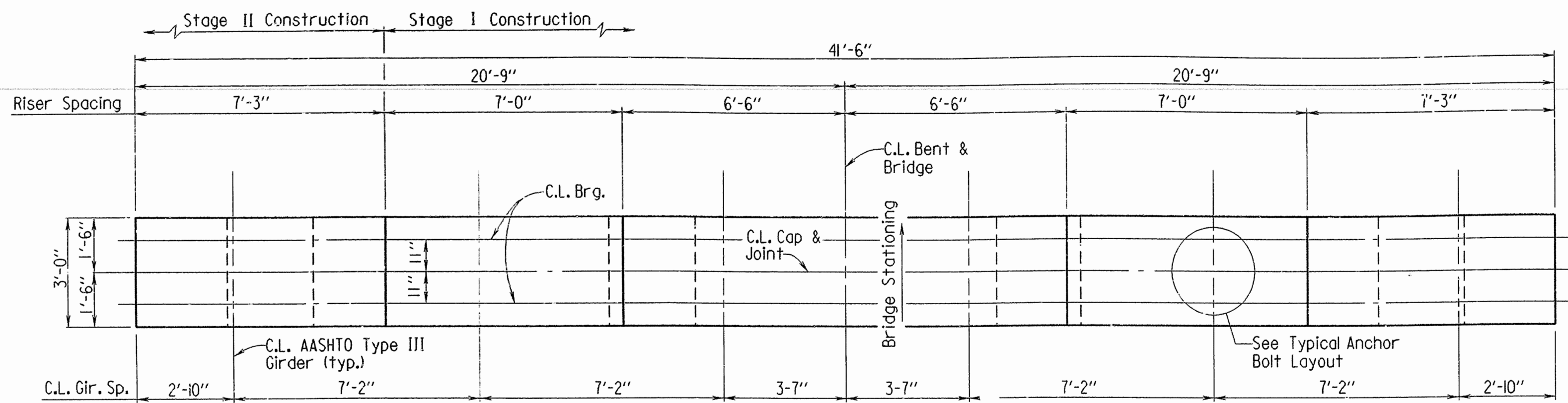
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B1588A.1

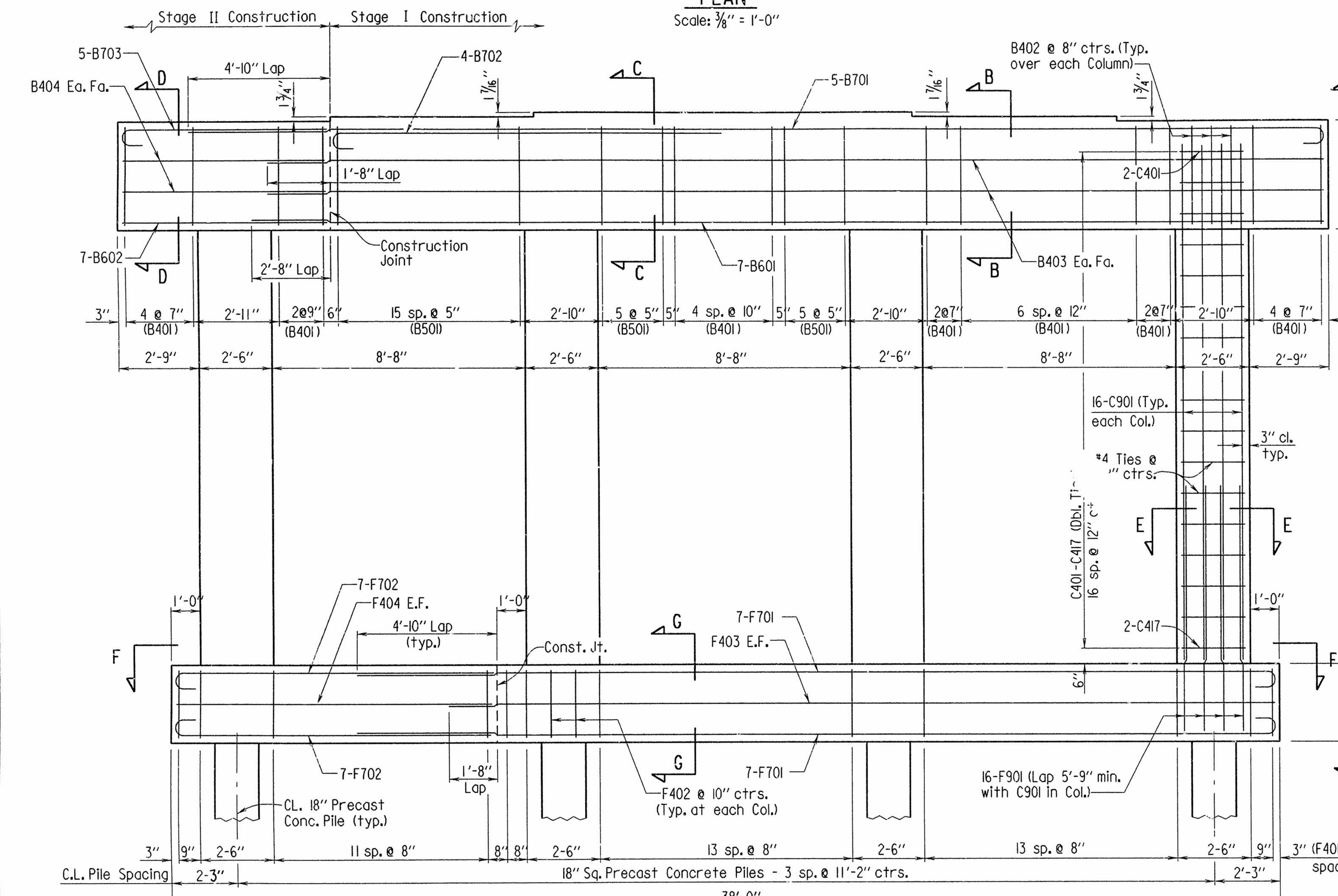


DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		070072	34	120

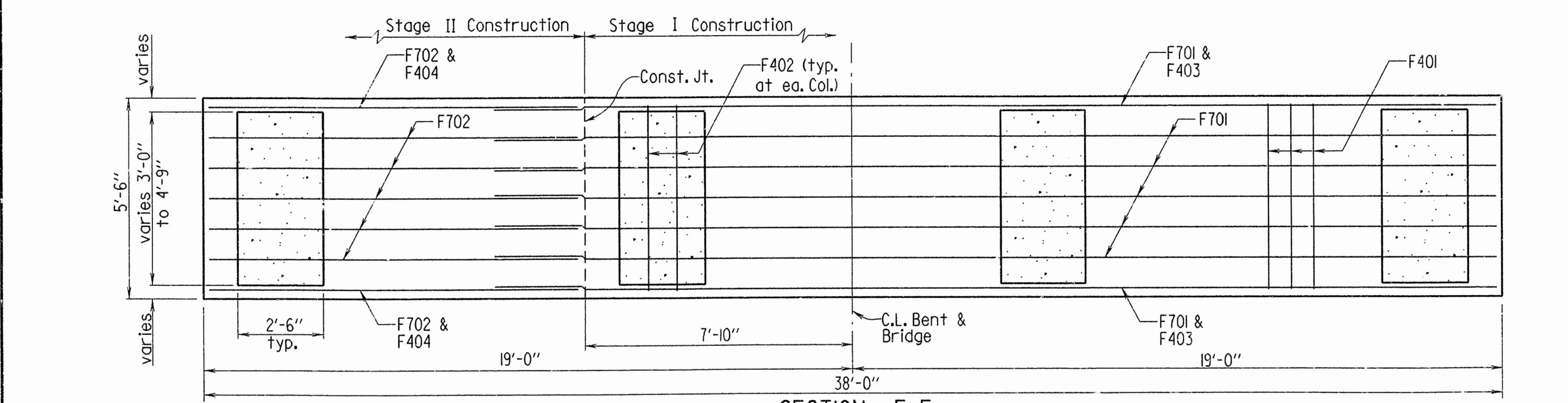
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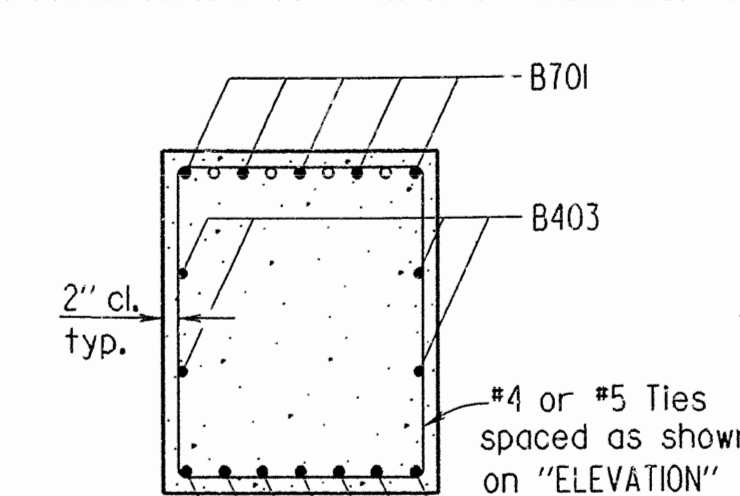
PLAN  
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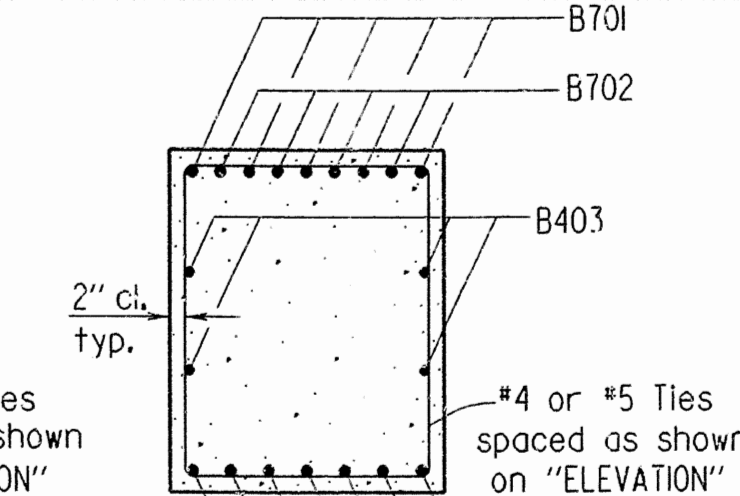
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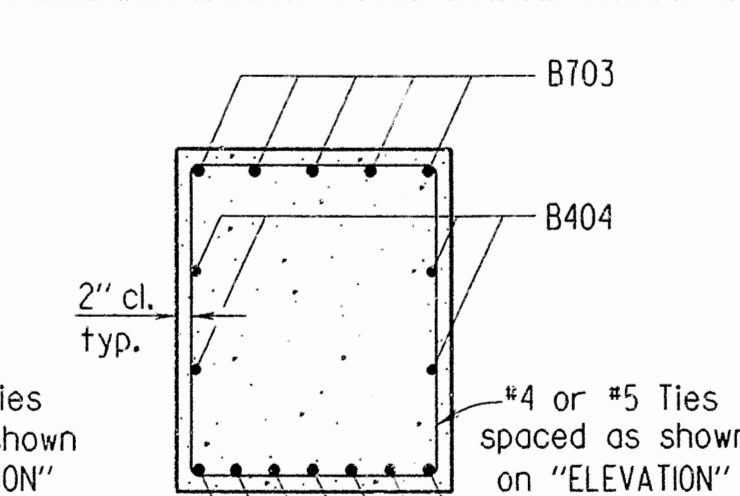
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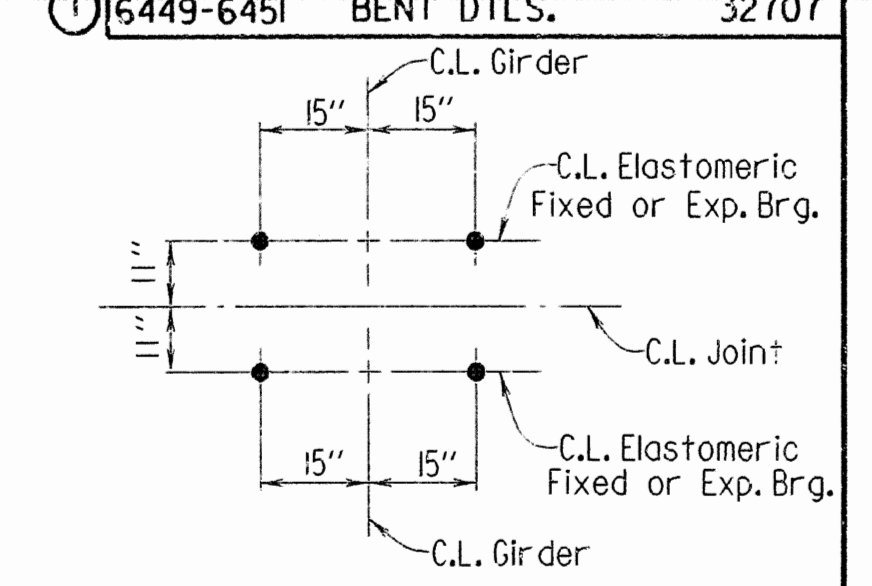
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SECTION C-C  
Scale: 1/2" = 1'-0"



SECTION D-D  
Scale: 1/2" = 1'-0"

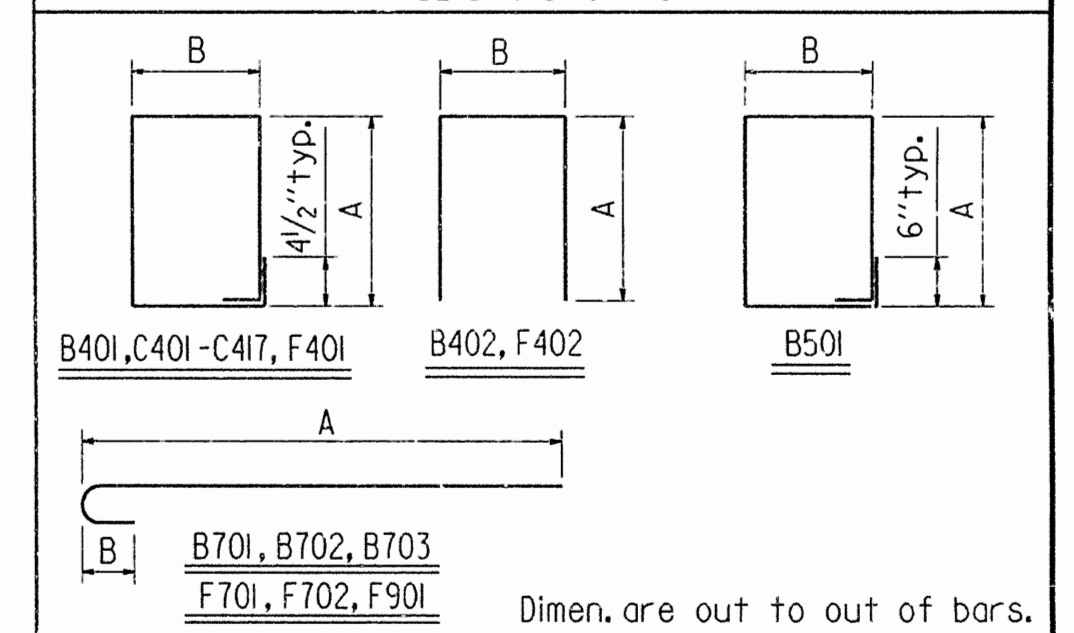


TYPICAL ANCHOR BOLT LAYOUT  
No Scale

BAR LIST (PER BENT)

MARK	NO. REQ'D.	LENGTH	'A'	'B'	P.D.
B401	29	12'-0"	3'-2"	2'-8"	2"
B402	12	8'-10"	3'-2"	2'-8"	2"
B403	4	35'-10"			str.
B404	4	7'-0"			str.
B501	28	12'-2"	3'-2"	2'-8"	2 1/2"
B601	7	36'-10"			str.
B602	7	7'-0"			str.
B701	5	39'-10"	39'-0"	7"	5 1/4"
B702	4	14'-4"	13'-6"	7"	5 1/4"
B703	5	7'-10"	7'-0"	7"	5 1/4"
C401	8 of each	var. 8'-3" to 11'-6"	var. 1'-10 1/2" to 3'-6"	2'-1"	2"
C417					
C901	64	16'-9"			str.
F401	46	14'-8"	2'-1"	5'-1"	2"
F402	8	9'-1"	2'-1"	5'-1"	2"
F403	2	28'-5"			str.
F404	2	10'-11"			str.
F701	14	32'-4"	31'-6"	7"	5 1/4"
F702	14	11'-9"	10'-11"	7"	5 1/4"
F901	64	9'-3"	8'-0"	10"	9"

BENDING DIAGRAMS



General Notes

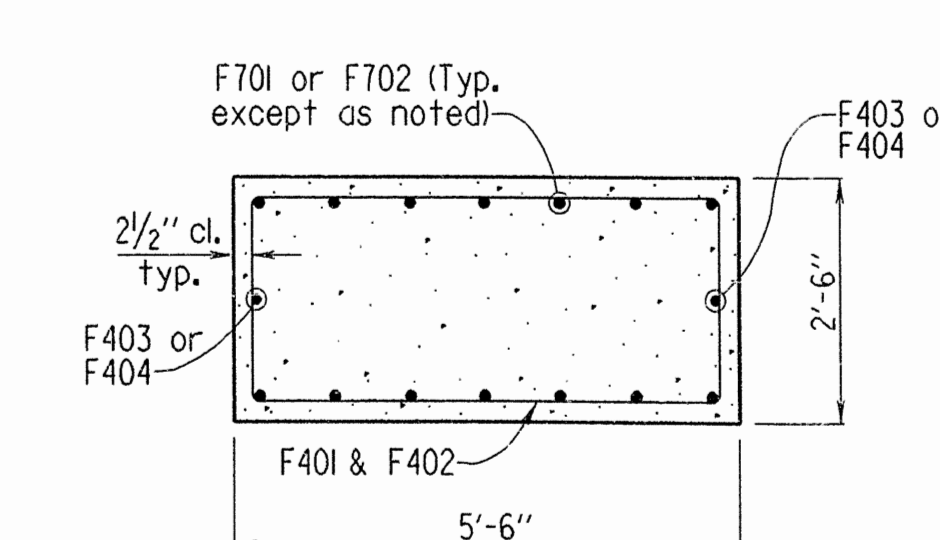
All concrete shall be Class "S" with a minimum 28 day compressive strength  $f'_c = 3,500$  psi. Concrete shall be poured in the dry and all exposed corners to be chamfered 3/4" unless otherwise noted.

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

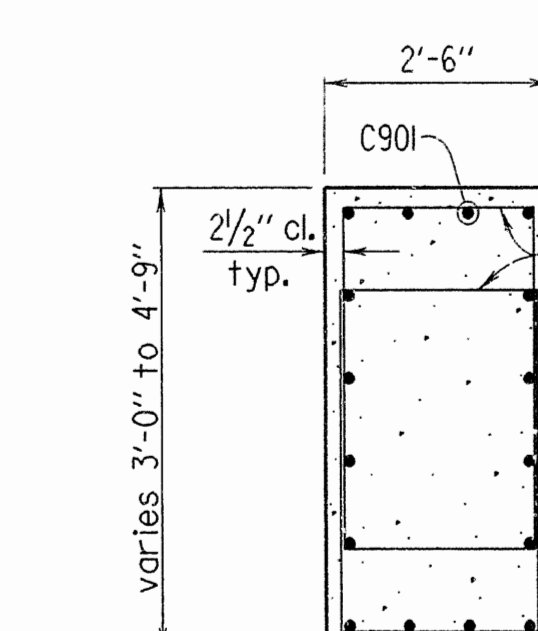
If anchor bolts are drilled into cap, top reinforcing bars shall be properly placed to avoid damage.

For additional information see layout.

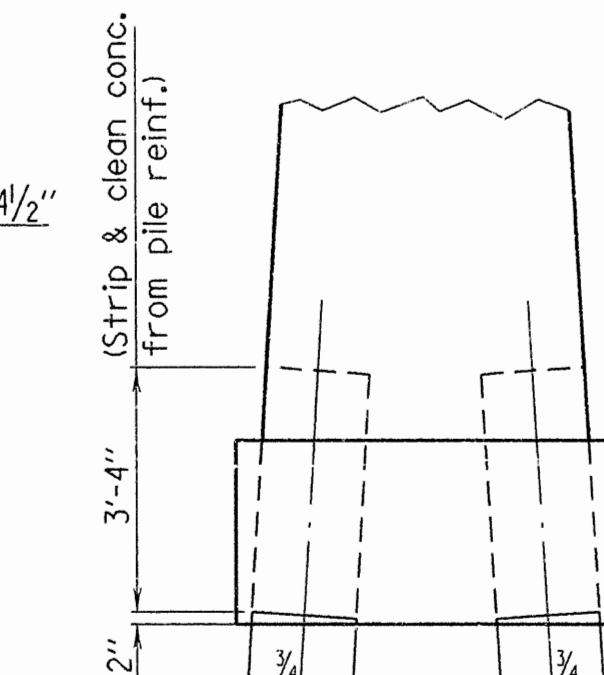
Note: Measurement for payment of concrete piling shall be made to a point 3'-6" above bottom of subcap. Work of stripping pile to provide lap with column bars shall not be paid for directly but shall be considered subsidiary to the item for concrete piling. Cut-offs and build-ups shall be in accordance with the standard specifications.



SECTION G-G  
Scale: 1/2" = 1'-0"

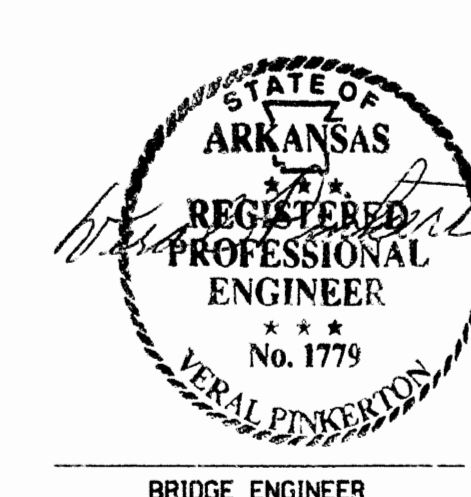


SECTION E-E  
Scale: 1/2" = 1'-0"



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

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



DETAILS OF  
INTERMEDIATE A-FRAME PILE BENTS  
FOR 70' PRESTRESSED CONC. GIRDER SPANS

ROUTE 82 SEC. 7  
ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: KMG DATE: 10 Oct 91

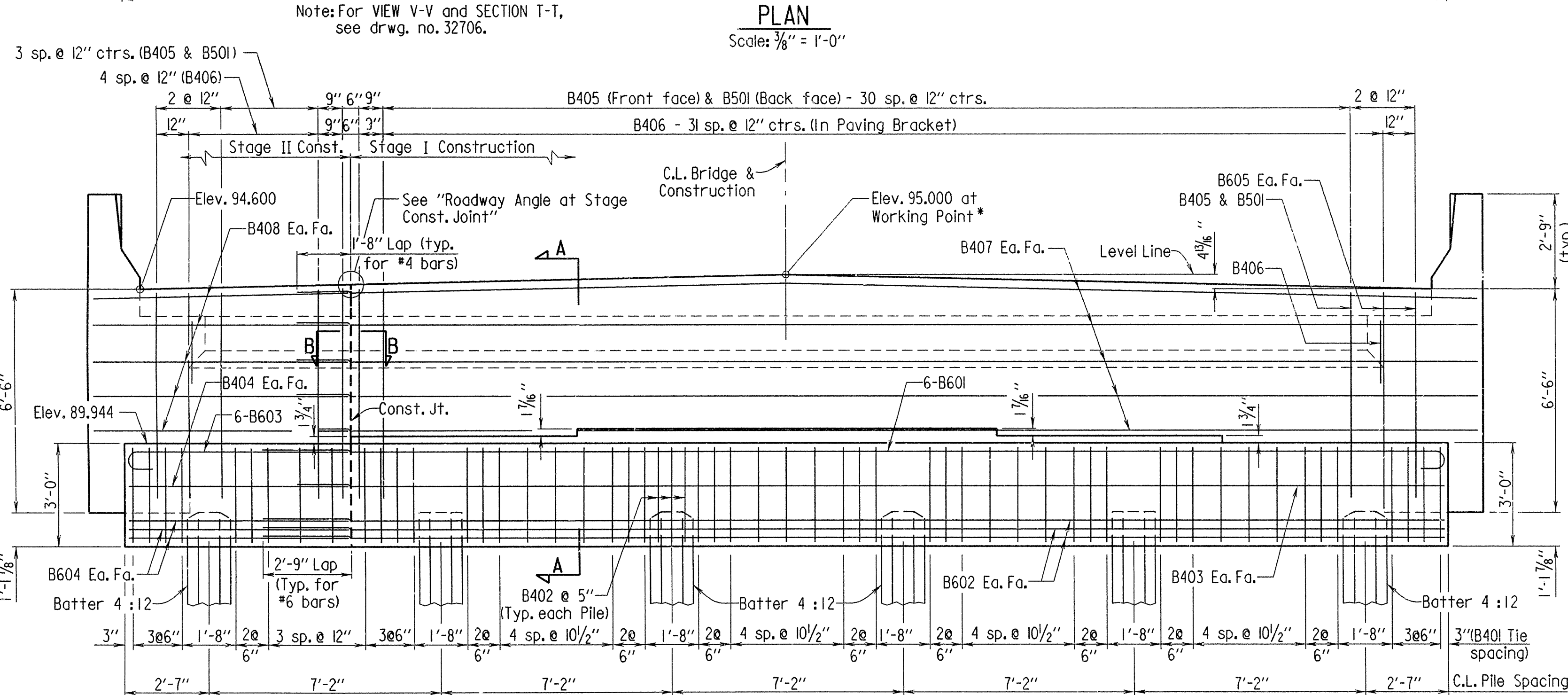
CHECKED BY: CSL DATE: Jan 93

DESIGNED BY: CSL DATE: Jan 91

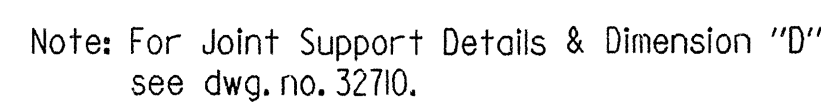
BRIDGE NO. 6449-6451 DRAWING NO. 32707



6449-6451 BT. DTLS. 32708



Scale:  $\frac{3}{8}'' = 1'-0''$



Scale:  $\frac{3}{4}'' = 1'-0''$



### TYPICAL ANCHOR BOLT LAYOUT

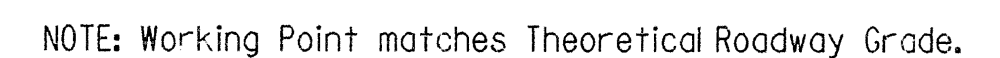
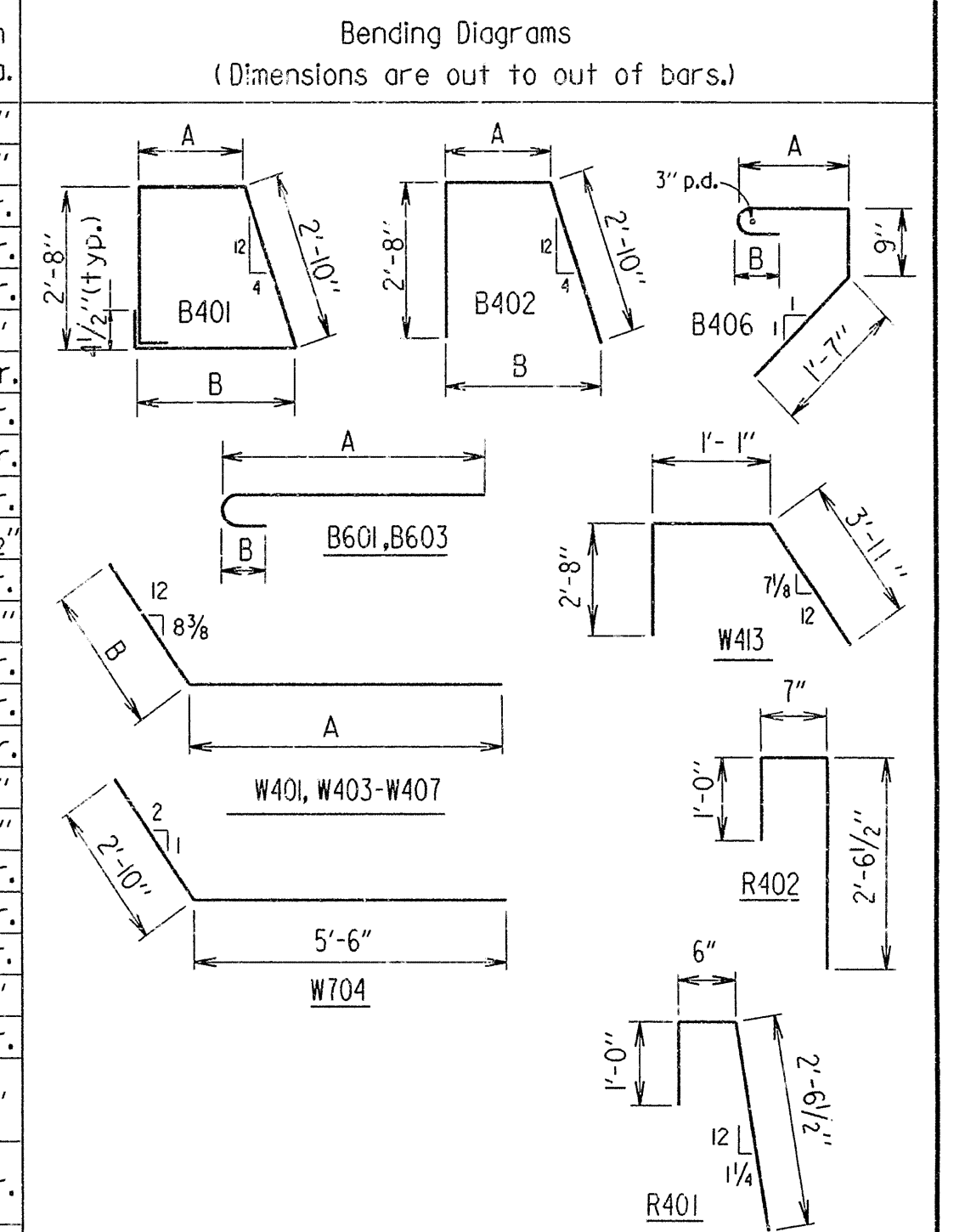


No Scale



No Scale

Mark	No. Req'd.	Length	A	B	Pir Dic
B401	53	11'-7"	2'-5"	3'-4"	2'
B402	18	7'-9"	2'-5"	3'-4"	2'
B403	2	35'-7"			Str
B404	2	6'-9"			Str
B405	37	6'-4"			Str
B406	39	3'-11"	1'-2"	4 1/2"	2'
B407	10	36'-8"			Str
B408	10	7'-10"			Str
B409	6	5'-5"			Str
B501	37	6'-9"			Str
B601	6	37'-4"	36'-8"	6"	4/5"
B602	6	36'-8"			Str
B603	6	7'-5"	6'-9"	6"	4/5"
B604	6	6'-9"			Str
B605	8	7'-0"			Str
B606	10	7'-6"			Str
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
W401	6	7'-9"	6'-7"	1'-2"	2'
W402	6	8'-11"			Str
W403- W407	2 Ea.	Var. 3'-5" to 5'-5"	Var. 2'-3" to 4'-3"	1'-2"	2'
W408- W412	2 Ea.	Var. 4'-6" to 6'-6"			Str
W413	6	7'-7"			2'
W701	12	9'-8"			Str
W702	4	6'-0"			Str
W703	4	4'-6"			Str
W704	4	8'-4"			5'



No Scale

DETAILS OF  
PILE END BENTS  
FOR 70' PRESTRESSED CONC. GIRDER SPANS  
(END OF BRIDGE ONLY)

LITTLE ROCK, ARK.

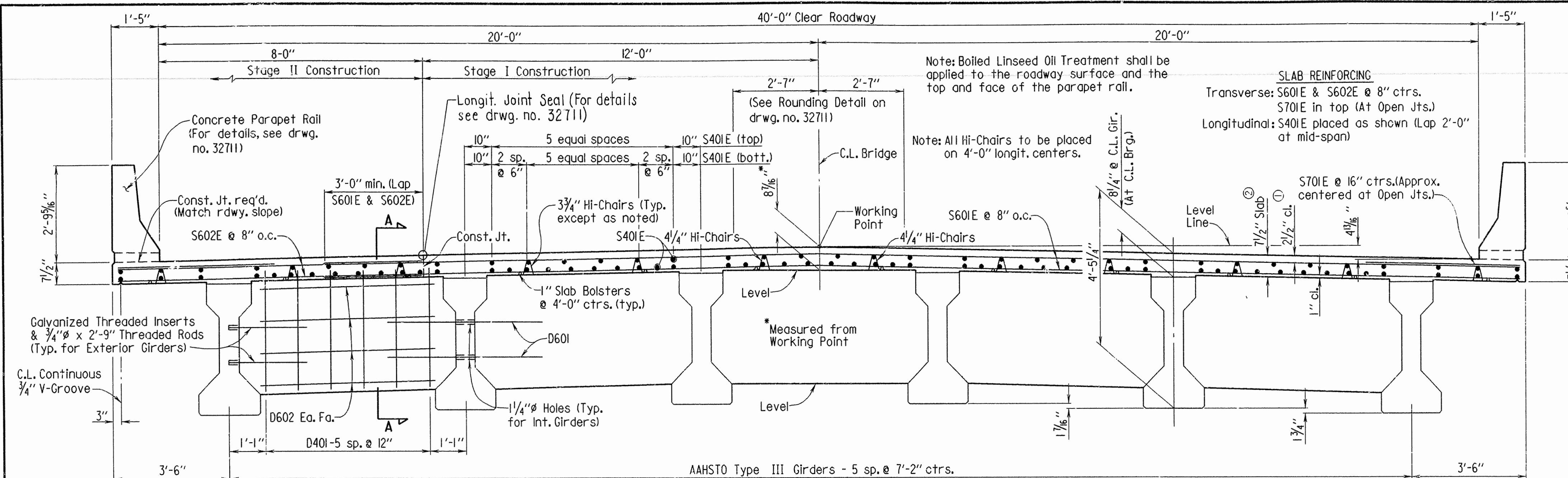
CHECKED BY: CSL DATE: Jan. 93 SCALE: As Shown

DESIGNED BY: CSL DATE: Jan. 91  
BRIDGE NO. 6449-6451 DRAWING NO. 32708

1588A, B12



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.	070072		36	120
				6449-6451	SPAN DTLS.		32709	



\*\*\*Galvanized Threaded Inserts &  $\frac{3}{4}$ "  $\phi$  Threaded Rods to be ASTM A36. (Non-Pay Item-subsidary to the item "Prestressed Concrete Girders.") Galvanizing shall be in accordance with ASTM A513.

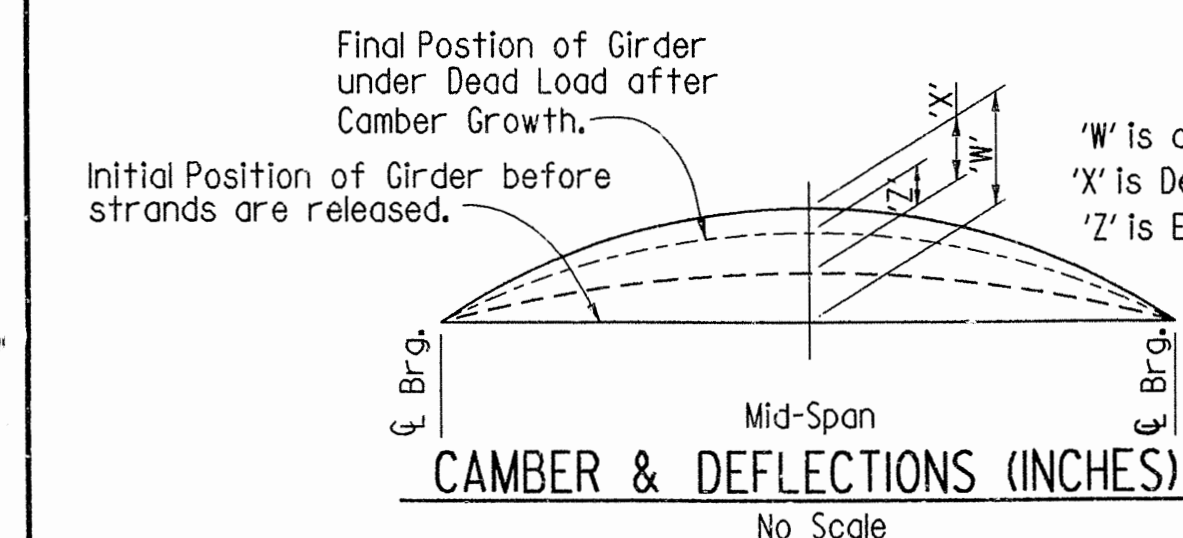
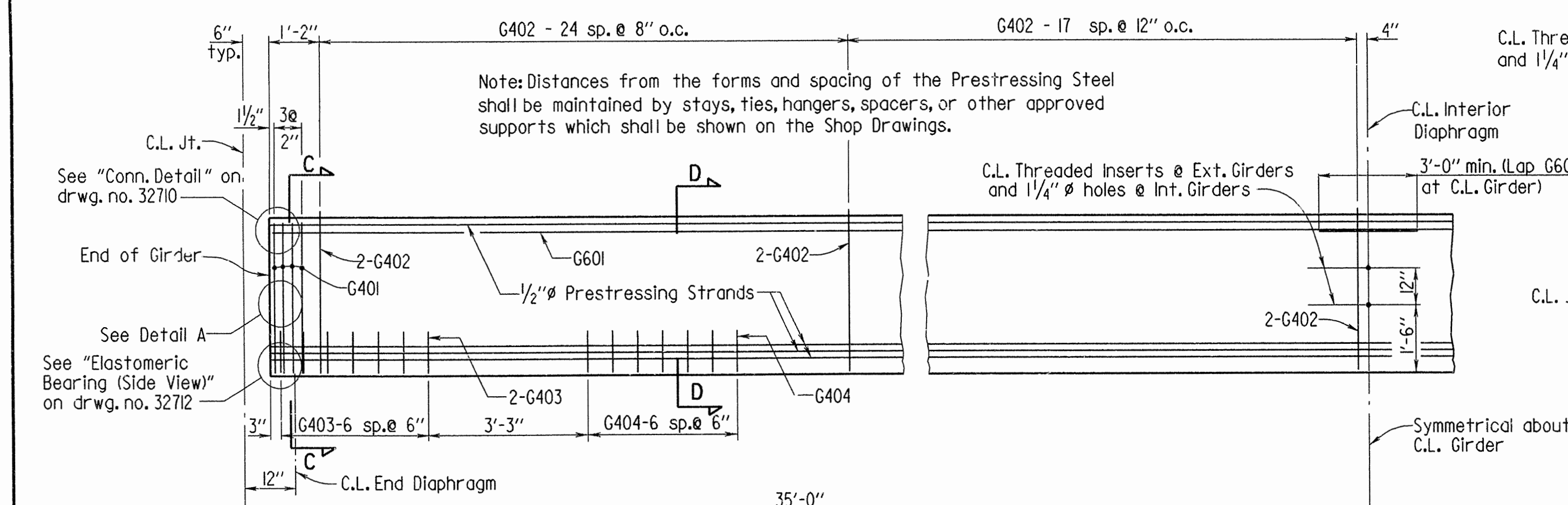
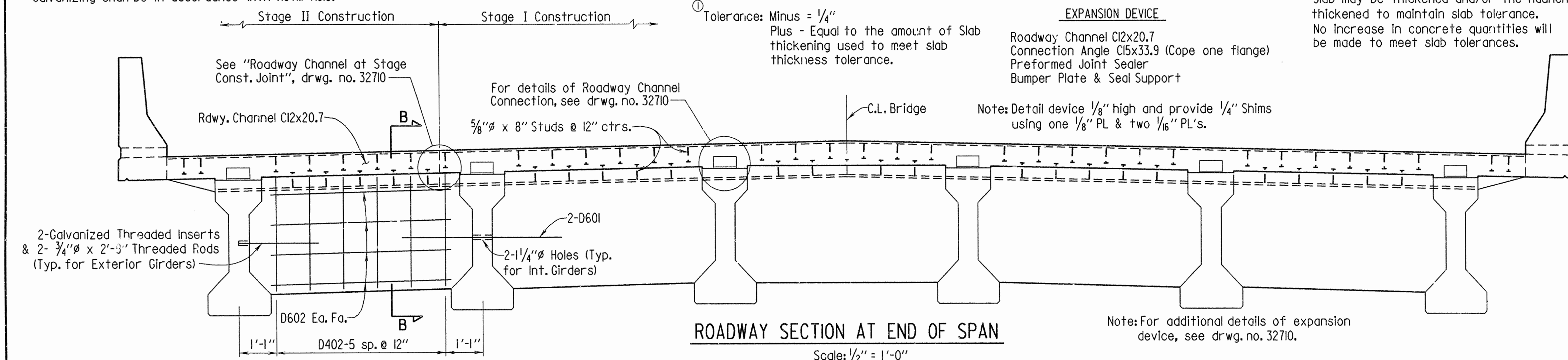


TABLE OF DEFLECTIONS

	1/4 SPAN		MID-SPAN	
	Ext. Gir.	Int. Gir.	Ext. Gir.	Int. Gir.
W	15/16"	15/16"	1 5/16"	1 5/16"
X	1/2"	7/16"	3/4"	9/16"
Z	3/16"	3/16"	7/16"	7/16"

BAR LIST - SPAN TOTAL (GIRDERS ONLY)

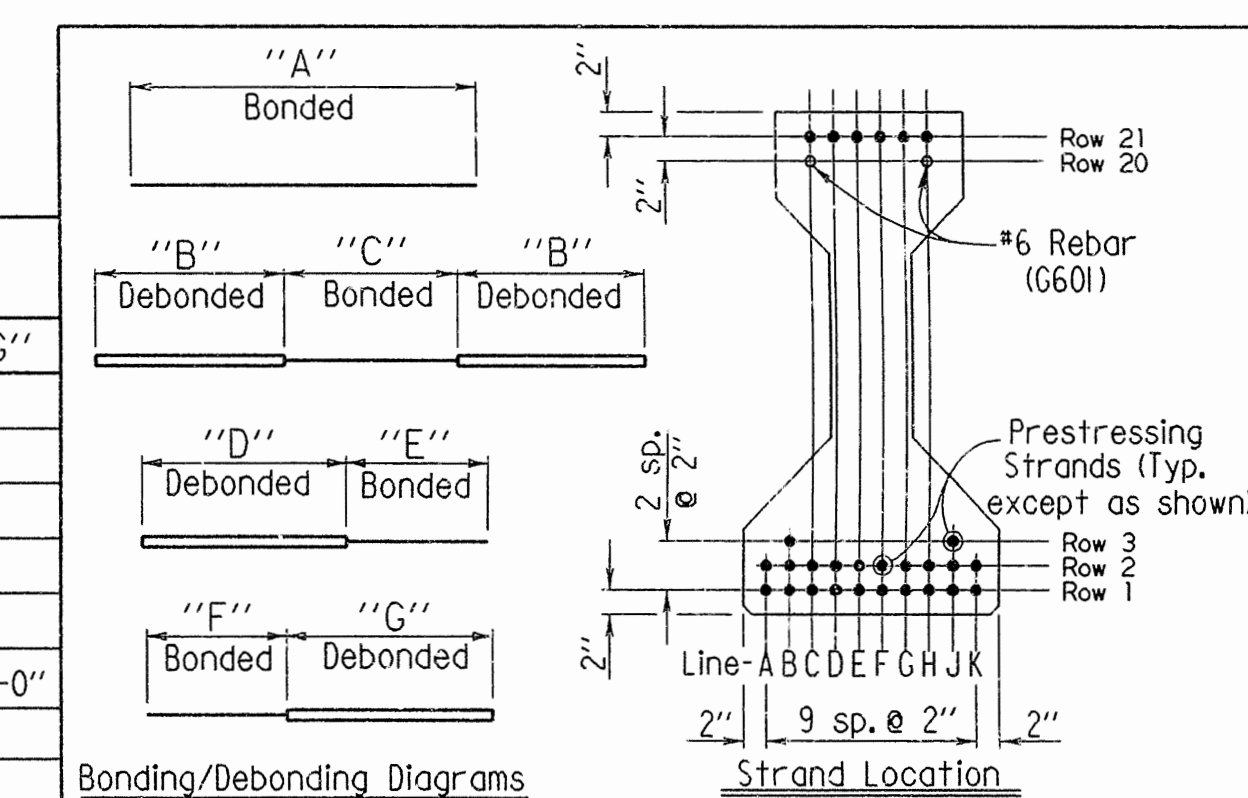
MARK	NO. REOD.	LENGTH	P.D.	BENDING DIAGRAMS
G401	48	8'-0"	2"	
G402	1008	5'-5"	2"	
G403	168	3'-4"	2"	
G404	84	5'-2"	2"	
G601	24	35'-11"	Str.	

All bars in this list shall be subsidiary to item "Prestressed Concrete Girders."

For Bar List of Span Reinforcing, See Dwg. No. 32711.

TABLE OF GIRDER VARIABLES

ROW	LINE	VARIABLES OF BONDING/DEBONDING						
		"A"	"B"	"C"	"D"	"E"	"F"	"G"
1	A B C D E F G H J K	69'-0"						
2	A B C D E F G H J K	69'-0"						
3	B	J	8'-0"	53'-0"				
21	E F				40'-0"	29'-0"		
21	C	H	69'-0"					
21	D	G				29'-0"	40'-0"	

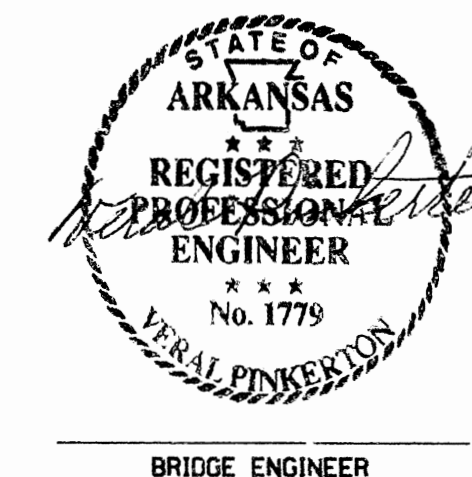


Note: For General Notes, see dwg. no. 32710 & 32711.

SHEET 1 OF 3  
DETAILS OF 70'-0" COMPOSITE  
PRESTRESSED CONC. GIRDER SPANS

ROUTE 82 SEC. 7  
ARKANSAS STATE HIGHWAY COMMISSION  
LITTLE ROCK, ARK.

DRAWN BY: KMG DATE: 25 Sept 91  
CHECKED BY: JLB DATE: Oct 91  
DESIGNED BY: CSL DATE: Jan 92  
BRIDGE NO. 6449-6451 DRAWING NO. 32709





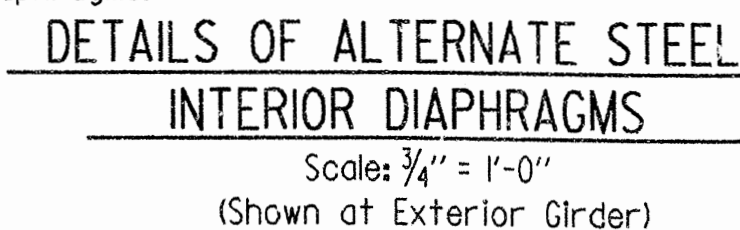
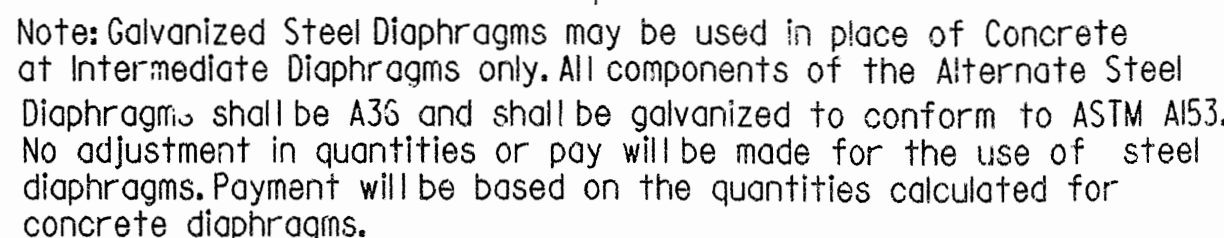
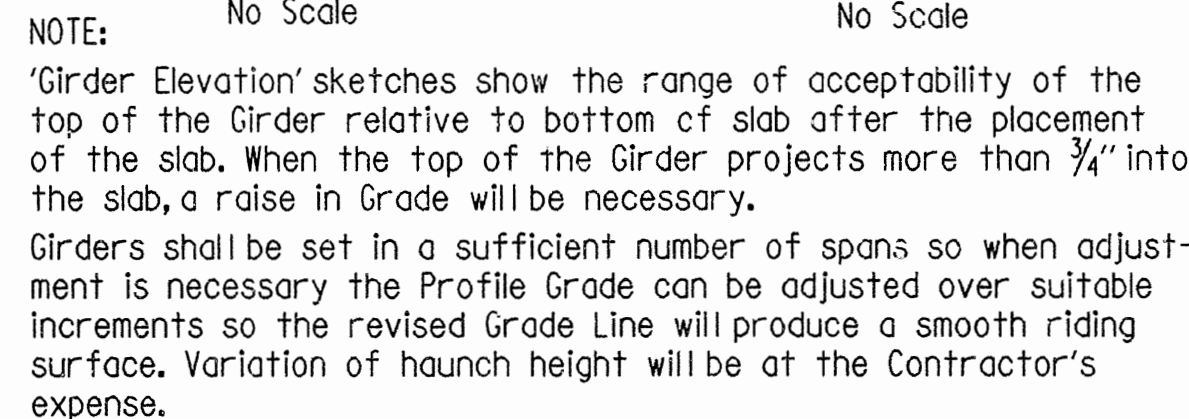
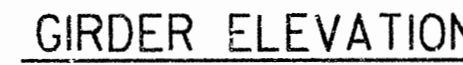
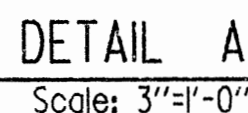
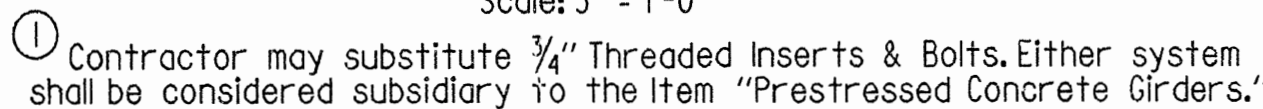
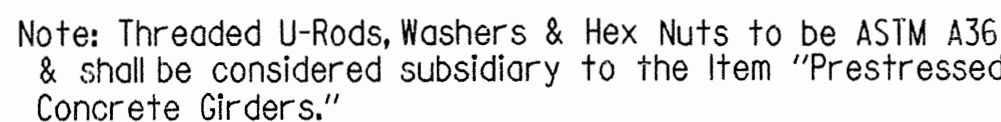
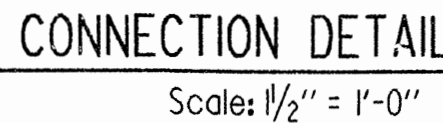
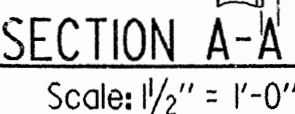
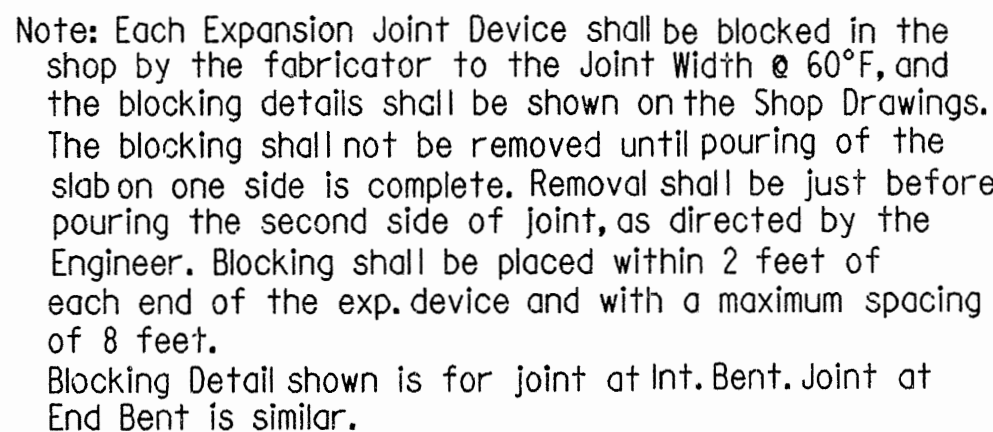
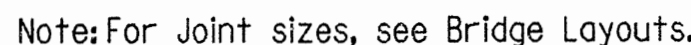
GENERAL NOTES - GIRDERS ONLY

Pretensioning steel shall be  $\frac{1}{2}" \text{ } \phi$  Low Relaxation strands with a minimum ultimate strength of 270 ksi, and shall conform to ASTM A416.

\* Installation is limited to 40° F. min. and 80° F. max.  
\* 1 3/4" Seal may be used.

Note: Dimension "D" shall conform to the recommendations of the Seal Manufacturer as approved by the Bridge Engineer.

Note: The Seal shall be in one piece (without splices) for the full length of the Joint, except that lengths 55 feet and longer may have a factory made splice. Splices, when required, shall be shown on the Shop Drawings and shall be placed near the high ends of the Roadway. Separation of the Splice during installation shall be cause for rejection of the Seal.



ROUTE 82 SEC. 7  
ARKANSAS STATE HIGHWAY COMMISSION  
LITTLE ROCK, ARK.  
DRAWN BY: KMG DATE: 25 Sept 91  
CHECKED BY: USB DATE: OCT 91 SCALE: As Shown  
DESIGNED BY: CSL DATE: Jan 90  
BRIDGE NO. 6449-6451 DRAWING NO. 32710



GENERAL NOTES

Concrete for Prestressed Girders shall be Class S and shall have a minimum 28 day compressive strength,  $f'_c = 5000$  psi. Concrete in slabs and diaphragms to be Class S(AE) and shall have a 28 day compressive strength,  $f'_c = 4000$  psi. All diaphragms shall be cast in place and shall be poured a minimum of 48 hours before the slab is poured. All exposed corners to be chamfered  $\frac{3}{4}"$  unless otherwise noted.

Movement of the finishing machine across new concrete shall be on planks placed on the surface and shall be prohibited for 72 hours after finishing the pour. Sufficient concrete must be placed ahead of the strike-off to fully load the girder. If a longitudinal strike-off is used, a vertical camber adjustment must be made in the strike-off to account for future dead load deflection due to the railing.

Reinforcing Steel to be ASTM A615 or A617, grade 60 (fy = 60,000 psi). The reinforcing steel is to be accurately located in the forms and firmly held in place by means of 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 subsidiary to the item "Reinforcing Steel".

All structural steel shall be ASTM A588 unless otherwise noted and shall be paid for as "Structural Steel in Beam Spans (A588)" Unless otherwise noted, Structural Steel completely embedded in concrete may be ASTM A36.

A588 Steel shall not be painted and all exposed surfaces are to be cleaned in accordance with 807.67(e) of the Standard Specifications.

Sole Plates shall be ASTM A588 steel and shall not be painted.  
Sole Plates shall be cleaned in accordance with 807.67(e) of the  
Standard Specifications.

Sole Plates and Elastomeric Pads shall be paid for under item 808 of the Standard Specifications.

All welding shall conform to subsection 807.24. All welding that is to be done during fabrication of structural steel, including temporary welds, shall be detailed on the shop drawings and submitted for approval.

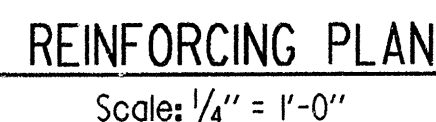
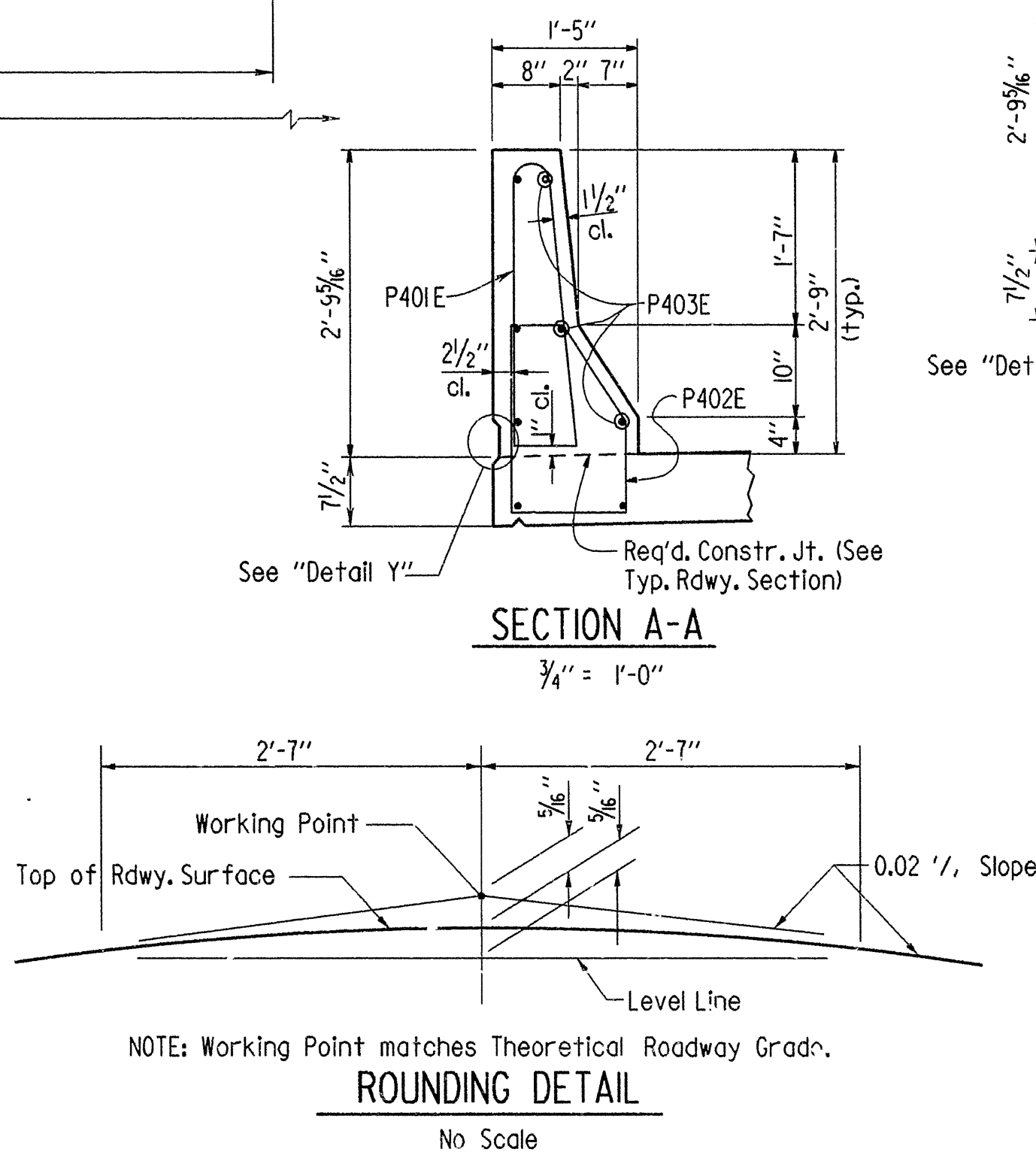
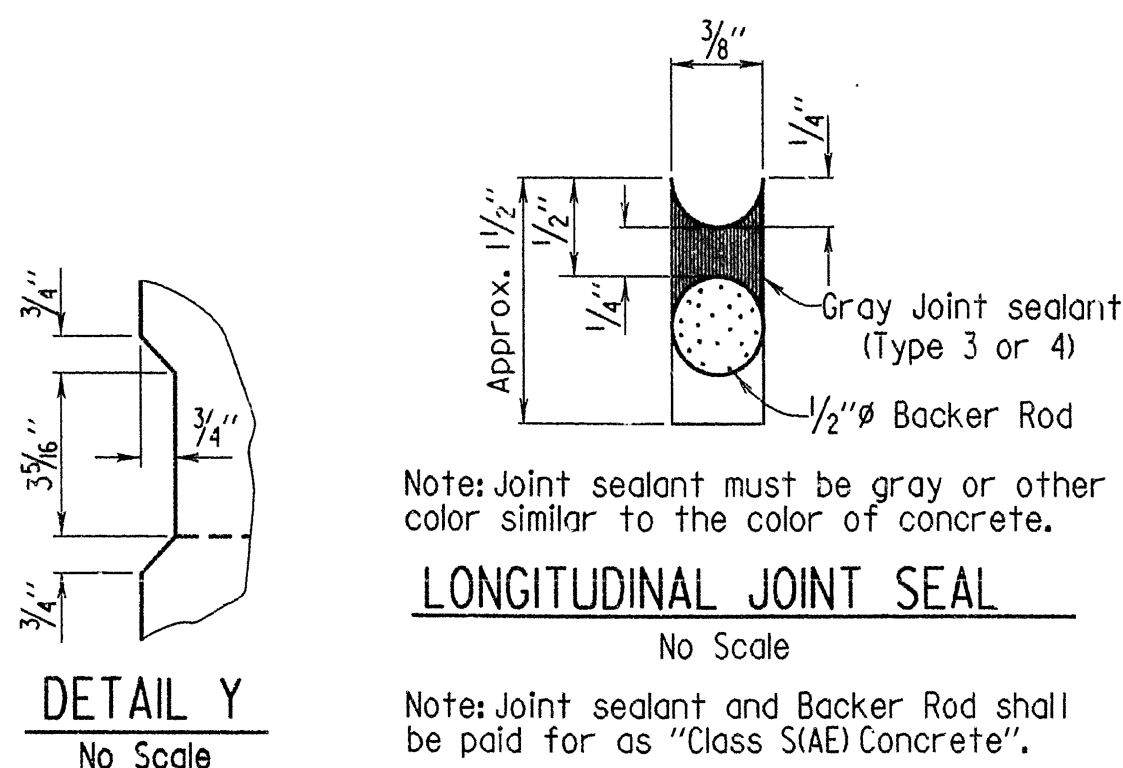
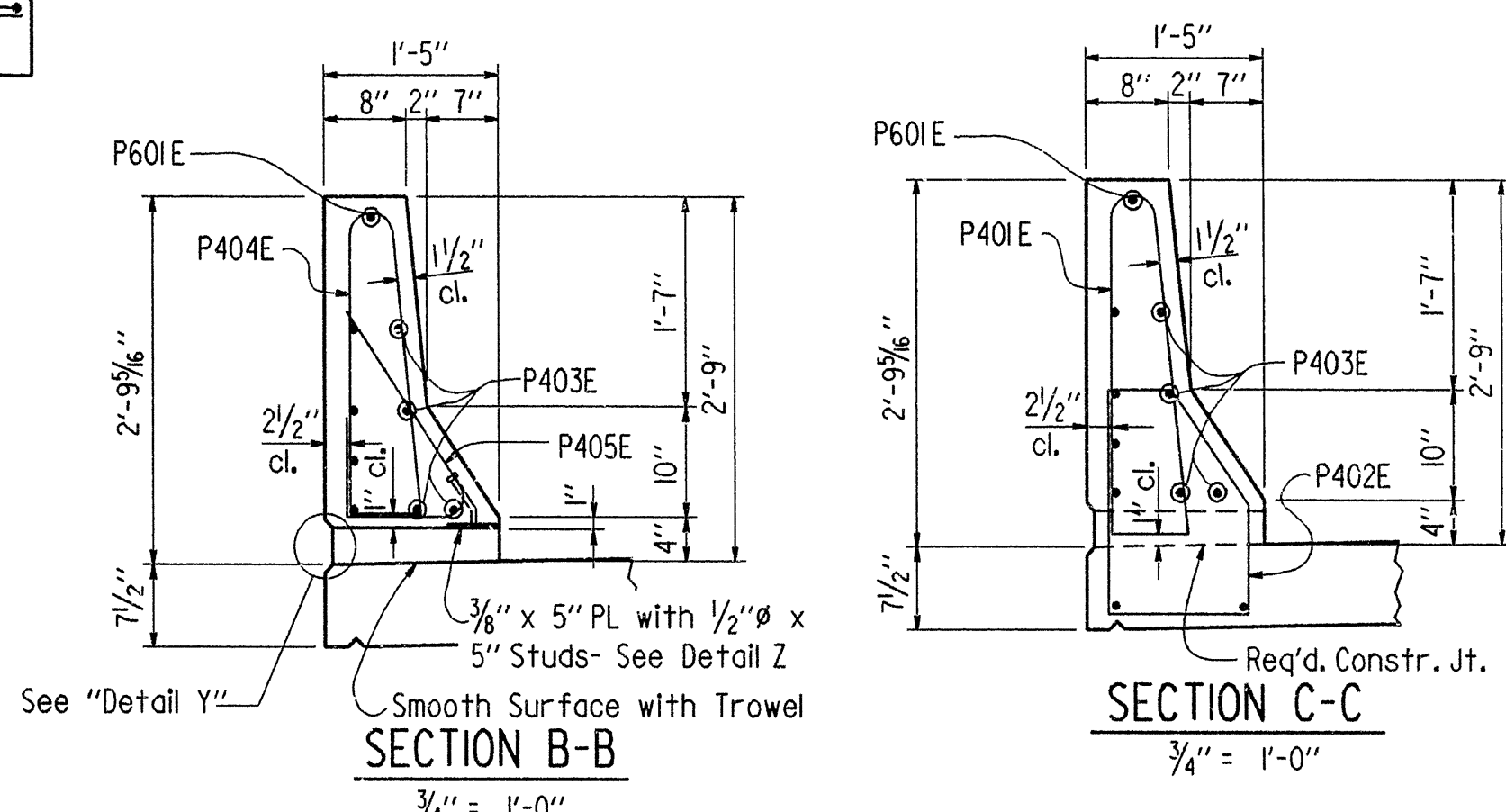
LOAD DISTRIBUTION TO GIRDER	INT. GIRDER	EXT. GIRDER
Noncomposite Action Dead Load:	1258 PLF	1241 PLF
Composite Action Dead Load:	307 PLF	354 PLF

Composite Action Live Load:  
\* Includes 160 plf Future Wearing Surface

Live Load (Wheel + Impact)

For Additional Notes, See Dwg. No. 32710.

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.



MARK	NO. REQ'D.	LENGTH	P.T.D.	BENDING DIAGRAMS
S401E	184	35'-10"	Str.	<p>Dimensions are out to out of bars.</p>
S601E	210	36'-4"	Str.	
S602E	210	9'-2"	Str.	
S701E	72	13'-1"	7/8"	
D401	30	7'-7"	2"	
D402	60	8'-8"	2"	
D601	24	5'-2"	Str.	
D602	120	5'-4"	Str.	
P401E	120	6'-4"	2"	
P402E	120	5'-7"	2"	
P403E	64	9'-8"	Str.	
P404E	60	5'-10"	2"	
P405E	60	3'-2"	2"	
P601E	50	9'-8"	Str.	

SHEET 3 OF 3  
DETAILS OF 70'-0" COMPOSITE  
PRESTRESSED CONC. GIRDER SPANS

ROUTE 82 SEC. 7  
ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

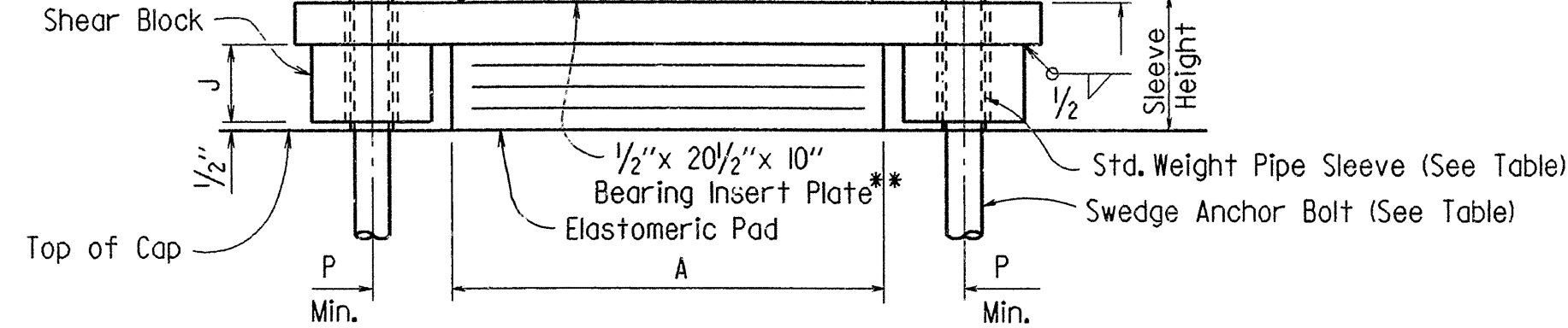
DRAWN BY: KMG DATE: 26 Sept 91  
 CHECKED BY: USB DATE: OCT 91 SCALE: As Shown  
 DESIGNED BY: PSL DATE: Jan 90

BRIDGE NO. 6449-6451 DRAWING NO. 32711

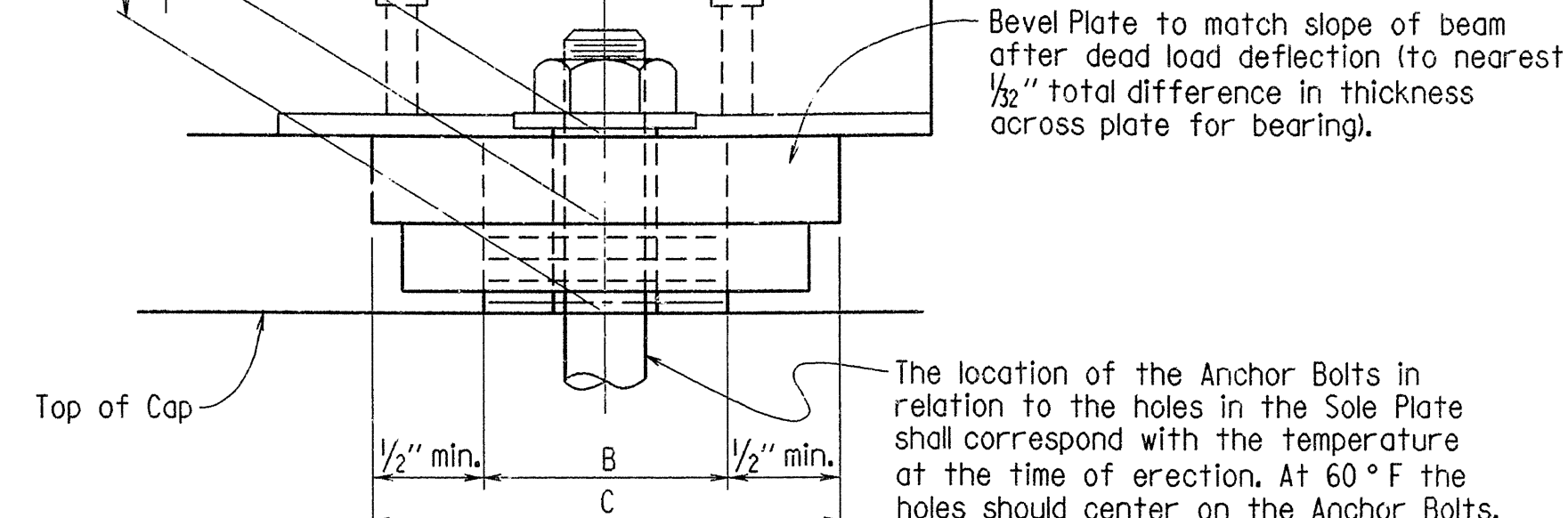
B1588, S13



①	6449-6451	ELAST. BRGS.	32712
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\*\*Bearing Insert Plate & Studs shall be considered subsidiary to the item 'Prestressed Concrete Girders (Type III).' For details, see drwg. no.



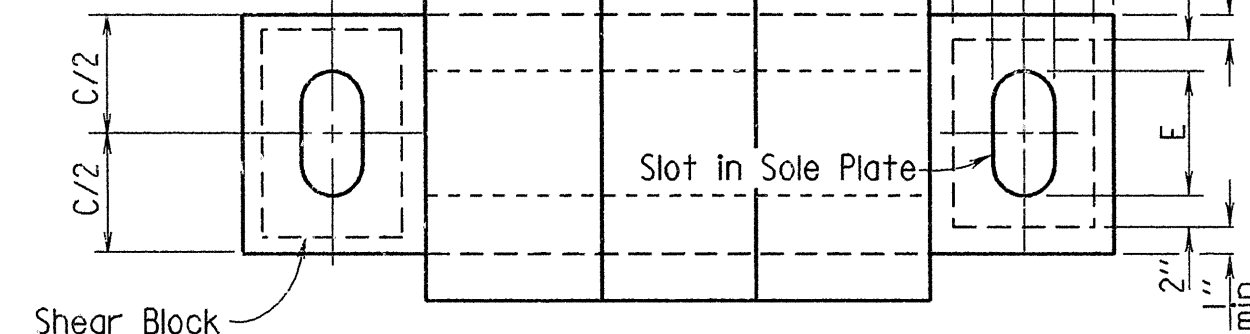
SIDE VIEW



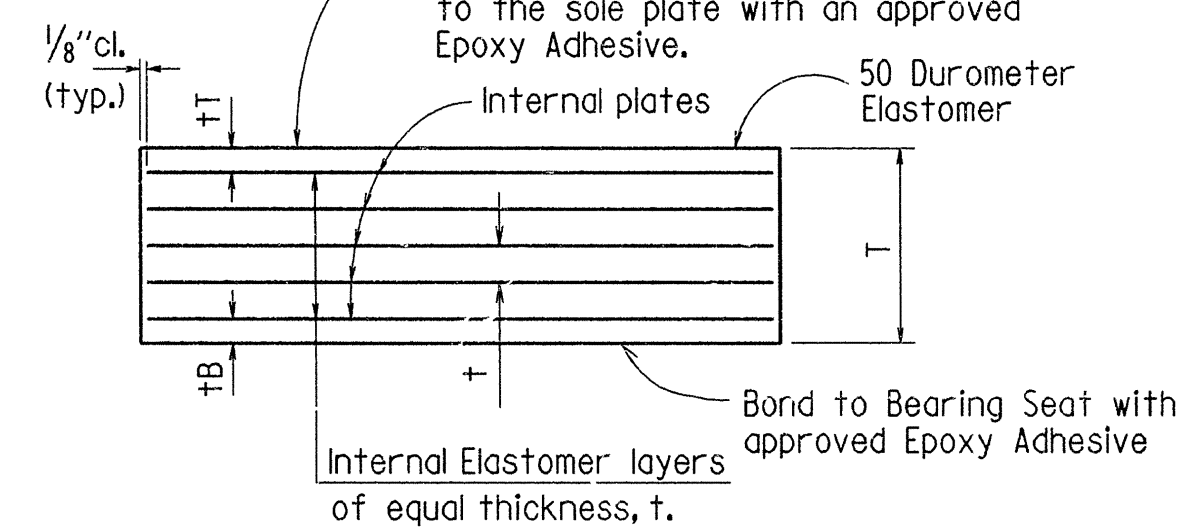
### ANCHOR BOLT DETAIL

If anchor bolts are to be cast in place, the 3/2" Ø Galvanized Sheet Metal Sleeve will not be required. Galvanized Sheet Metal Sleeves are to be considered subsidiary to the item "Structural Steel in Beam Spans (A588)."

If anchor bolts are to be cast in place, the 3/2" Ø Galvanized Sheet Metal Sleeve will not be required. Galvanized Sheet Metal Sleeves are to be considered subsidiary to the item "Structural Steel in Beam Spans (A588)."



PLAN VIEW



ELASTOMERIC PAD

### TABLE OF ANCHOR BOLT VARIABLES

ANCHOR BOLT DIAMETER	PIPE SLEEVE NOMINAL DIAMETER	STANDARD WASHER SIZE (O.D.)	MINIMUM EMBEDMENT LENGTH	SLOT WIDTH "F"	P Min.	R Min.	V	W
1"	1 1/4"	2 1/2"	10"	2" ø	4"	2"	4"	1 1/2"
1 1/4"	1 1/4"	3"	12"	2" ø	4"	2 1/4"	4"	1 3/4"
1 1/2"	1 1/2"	3 1/2"	15"	2 1/4" ø	4 1/8"	2 1/2"	4 1/8"	2"
1 3/4"	2"	4"	18"	2 5/8" ø	4 3/16"	2 3/4"	4 7/8"	2 1/2"
2"	2 1/2"	4 1/2"	20"	3 1/8" ø	4 9/16"	3"	4 11/16"	2 1/2"
2 1/4"	2 1/2"	4 3/4"	23"	3 1/8" ø	4 9/16"	3"	4 11/16"	2 3/4"
2 1/2"	3"	5"	25"	3 3/4" ø	4 7/8"	3 1/4"	4 13/16"	3"

GENERAL NOTES

Pipe Sleeves shall be ASTM A53, Grade B, and shall be galvanized to conform to ASTM A153. Sleeves shall be paid for at the unit price bid for "Structural Steel in Beam Spans (A588)."

Anchor Bolts, Nuts and Washers shall be ASTM A36 Steel Galvanized to conform to ASTM A153 and shall be paid for at the unit price bid for "Structural Steel in Beam Spans (A588)."

Sole Plates & Shear Blocks shall be ASTM A588 Steel. Sole plates & Shear blocks will not be paid for directly, but will be considered as part of the item "Elastomeric Bearings."

Sole Plates & Shear Blocks shall not be painted. A588 Sole Plates and Shear Blocks shall be cleaned in accordance with Section 807.67(e) of the Standard Specifications.

Elastomeric Pads shall conform to Section 808 of the Standard Specifications and shall be paid for at the unit price bid for "Elastomeric Bearings."

Internal plates shall have a minimum yield strength of 25,000 psi.

## TABLE OF VARIABLES

[illegible]

Tabular Data by: KMG Date: 2 Oct 91  
Checked by: JSB Date: Oct 91



**BRIDGE ENGINEER**

# DETAILS OF ELASTOMERIC FIXED AND EXPANSION BEARINGS FOR PRESTRESSED CONCRETE GIRDERS

ROUTE 82 SEC. 7  
~ ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: KMG DATE: 2 Oct 91  
CHECKED BY: LSB DATE: OCT 91 SCALE: None

DESIGNED BY: CSL DATE: Jan 90  
BRIDGE NO. 6449-6451 DRAWING NO. 32712