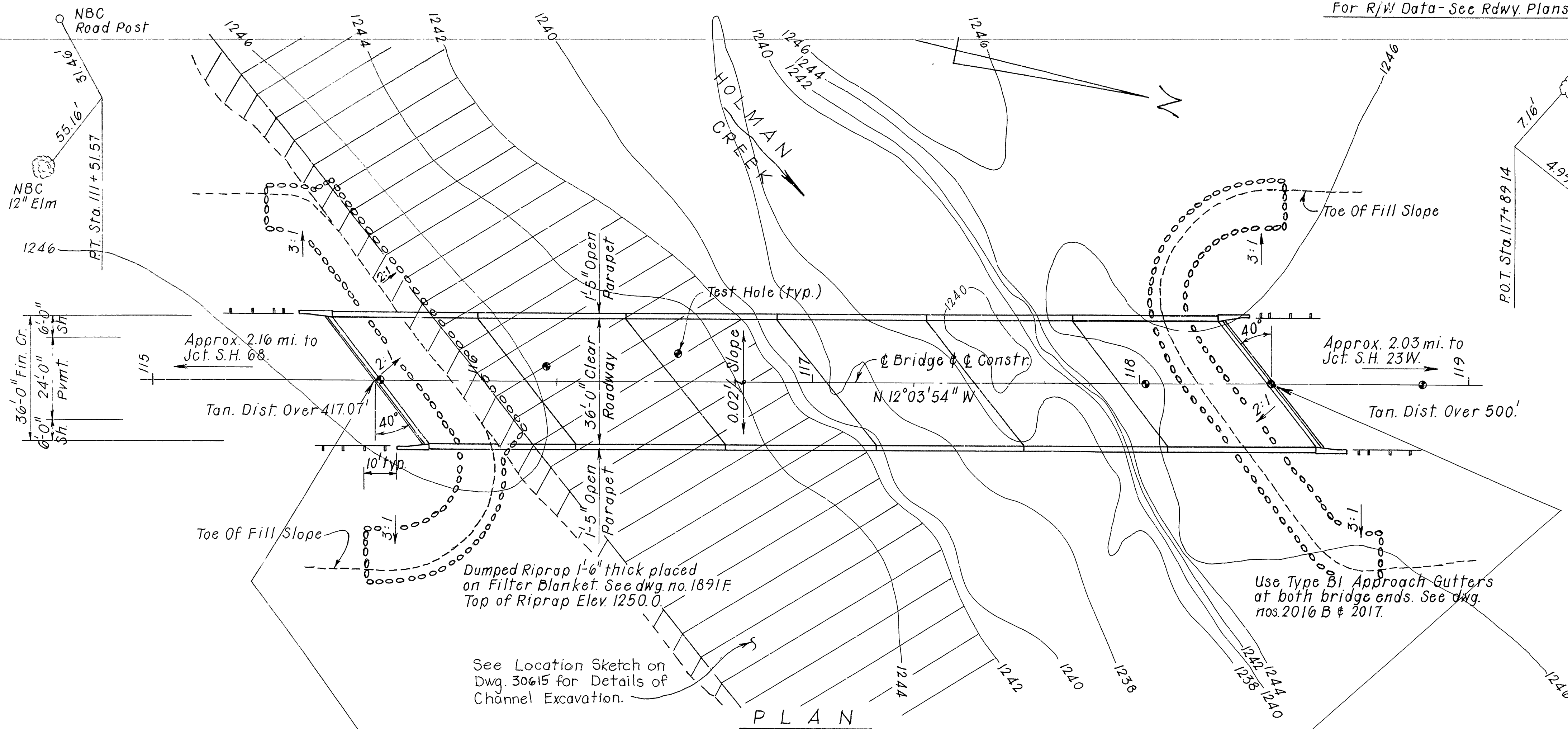


DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO.	9582	24
							6340	LAYOUT 30614



GENERAL NOTES

BENCH MARK: N.I.S. of 8' Ash 43' Lt. of centerline Sta. 117+55, Elev. 1247.11.

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
 Structural Steel (A36) $F_y = 50,000$ psi
 Structural Steel (A36) $F_y = 36,000$ psi

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

STEEL PILING: Piling in End Bents 1 and 7 shall be HP 10x42 and shall be driven with an approved air, steam, or diesel hammer to a min. safe bearing capacity of 55 tons per pile and into the material designated as hard, gray limestone on the boring legend. Lengths of piling shown are for estimating quantities and for use in determining payment for cut-off and build-up in accordance with the standard specifications. Piles in end bents to be driven after embankment to bottom of cap is in place.

FOOTINGS: Footings shall be set a minimum of 1'-6" into material designated as hard gray limestone on the boring legend.

The top of the intermediate bent footings shall be prepared in accordance with section 801.04 of the Standard Specifications. Rock excavations shall be made to meet lines of the concrete footings. Care shall be exercised to avoid shattering of rock faces by excessive blasting. Concrete in footings shall be poured directly against exposed surfaces.

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.

DETAIL DRAWINGS:

DRAWING NO.

End Bents 30614, 30617
 Intermediate Bents 30618
 45'-0" W-Beam Span 30619, 30620, 14995A
 Steel Piling 14995A
 Type B1 Approach Gutters 2016B & 2017

EXISTING BRIDGE: The existing bridge No. 00269 (log mile 2.16) is 16' wide and 152' long and consists of five concrete spans supported by a concrete substructure, and is located approximately 400 ft upstream of the proposed new bridge.

REMOVAL AND SALVAGE: After the new bridge is opened to traffic, the existing bridge (00269) 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.

BORING LEGEND

- A - Moist, Med. Stiff, Brown Silty Clay
- B - Moist, Med. Dense, Brown Clayey, Sandy Silt
- C - Wet, Med. Dense, Brown Clayey Sand with Sandstone Fragments
- D - Wet, Med. Dense, Gray Clayey Silt with Chert Fragments
- E - Hard, Gray Limestone
- F - Moist, Loose, Brown Sand with Sandstone and Chert Fragments
- G - Wet, Med. Dense, Brown Sand with Sandstone and Chert Fragments
- H - Moist, Very Stiff, Brown Silty Clay with Sandstone and Chert Fragments
- I - Wet, Very Stiff, Brown Silty Clay with Sandstone and Chert Fragments
- J - Wet, Med. Dense, Brown and Gray Clayey Sand with Chert Fragments
- K - Moist, Loose, Brown Silty Sand with Sandstone and Chert Fragments
- L - Moist, Med. Dense, Brown and Gray Clayey Sand with Sandstone Fragments
- M - Med. Hard, Brown Weathered Sandstone
- N - Moist, Very Stiff, Brown Silty Clay
- O - Moist, Loose, Brown Clayey Sand with Chert Fragments
- P - Moist, Med. Dense, Brown Clayey Sand with Chert Fragments
- Q - Moist, Med. Stiff, Brown Sandy Clay with Chert Fragments

SHEET 1 OF 2

LAYOUT OF BRIDGE OVER

HOLMAN CREEK

HOLMAN & SMYRNA CR. STRS. & APPRS.

MADISON COUNTY

ROUTE 23 SEC. 9

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: *Handwritten signature* DATE: 10-3-88

CHECKED BY: GEC DATE: 10-31-88

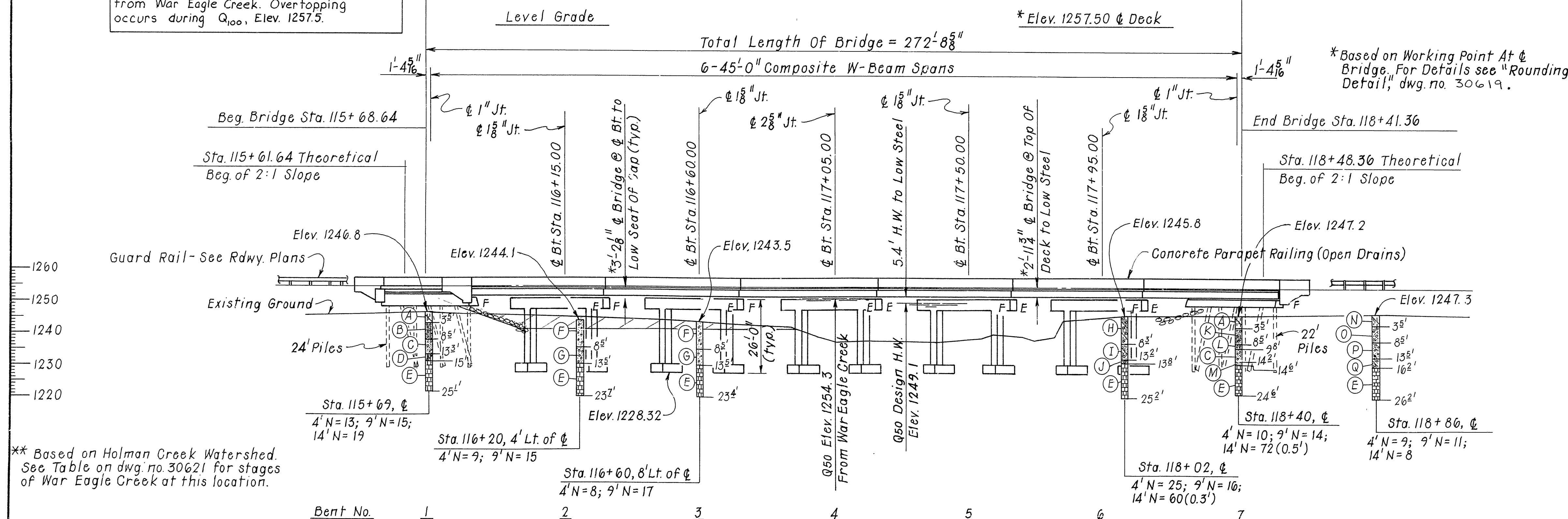
DESIGNED BY: SML DATE: 8-22-88

SCALE: 1" = 20'

BRIDGE NO. 6340

DRAWING NO. 30614

Overtopping Flood is due to Backwater from War Eagle Creek. Overtopping occurs during Q_{100} , Elev. 1257.5.



** Based on Holman Creek Watershed. See Table on dwg. no. 30621 for stages of War Eagle Creek at this location.

**DESIGN FLOOD

$Q_{50} = 13,230$ cfs
 Normal W.S. = Elev. 1249.1
 W.S. with Backwater = Elev. 1251.9

ELEVATION

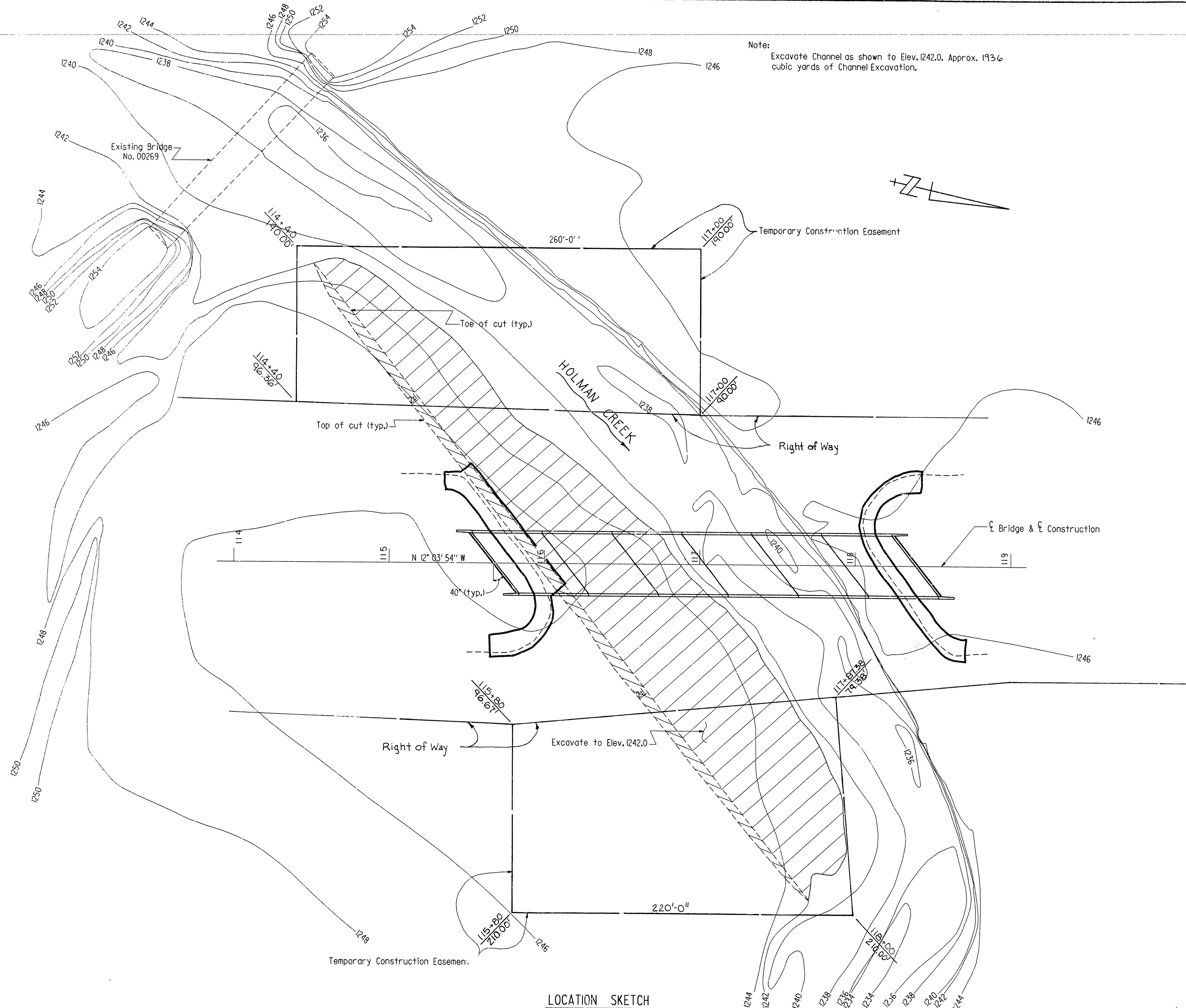
D. A. = 22.8 sq. mi.

**BASIC FLOOD

$Q_{100} = 16,100$ cfs
 Normal W.S. = Elev. 1249.9
 W.S. with Backwater = Elev. 1253.3

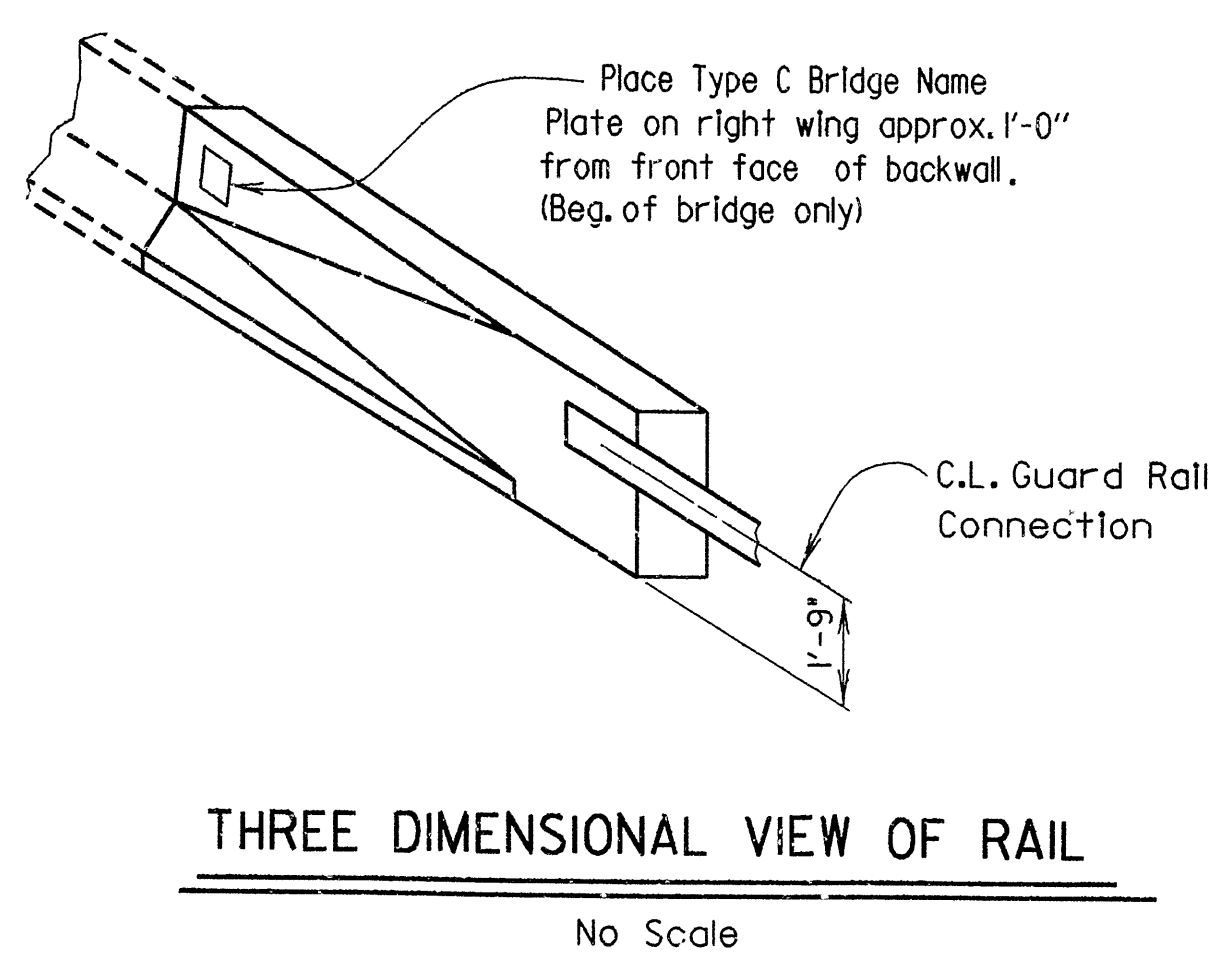
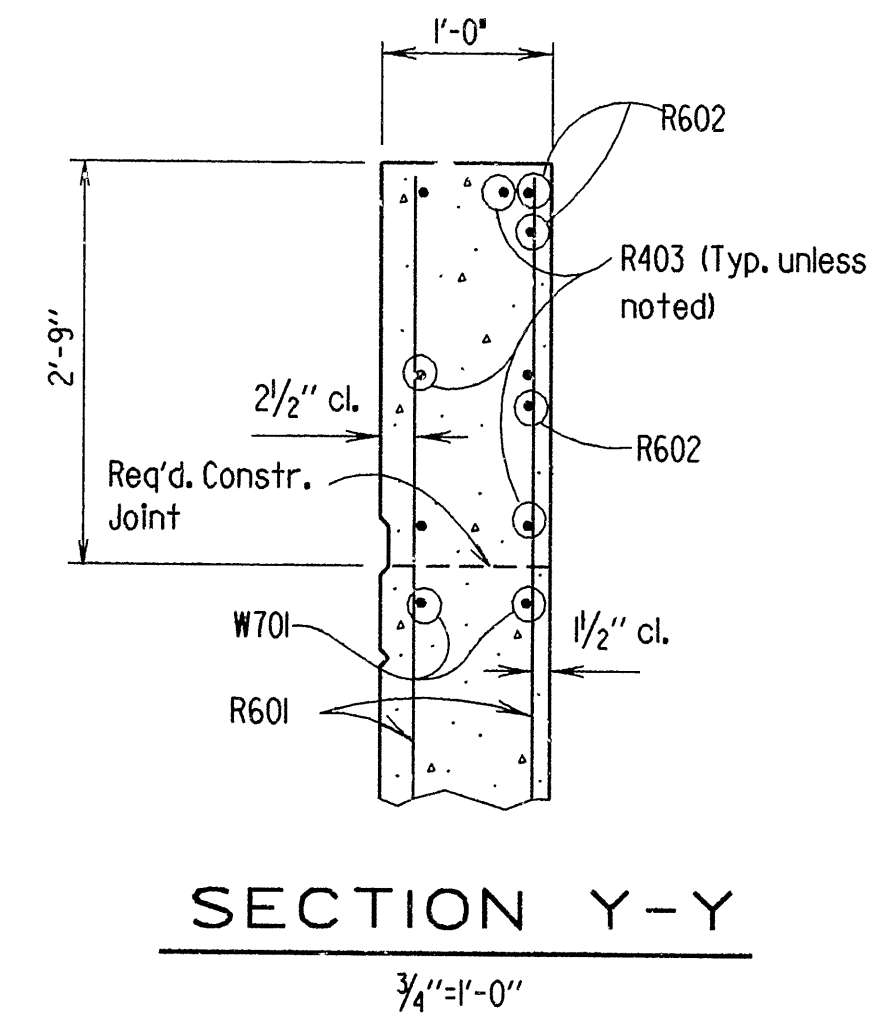
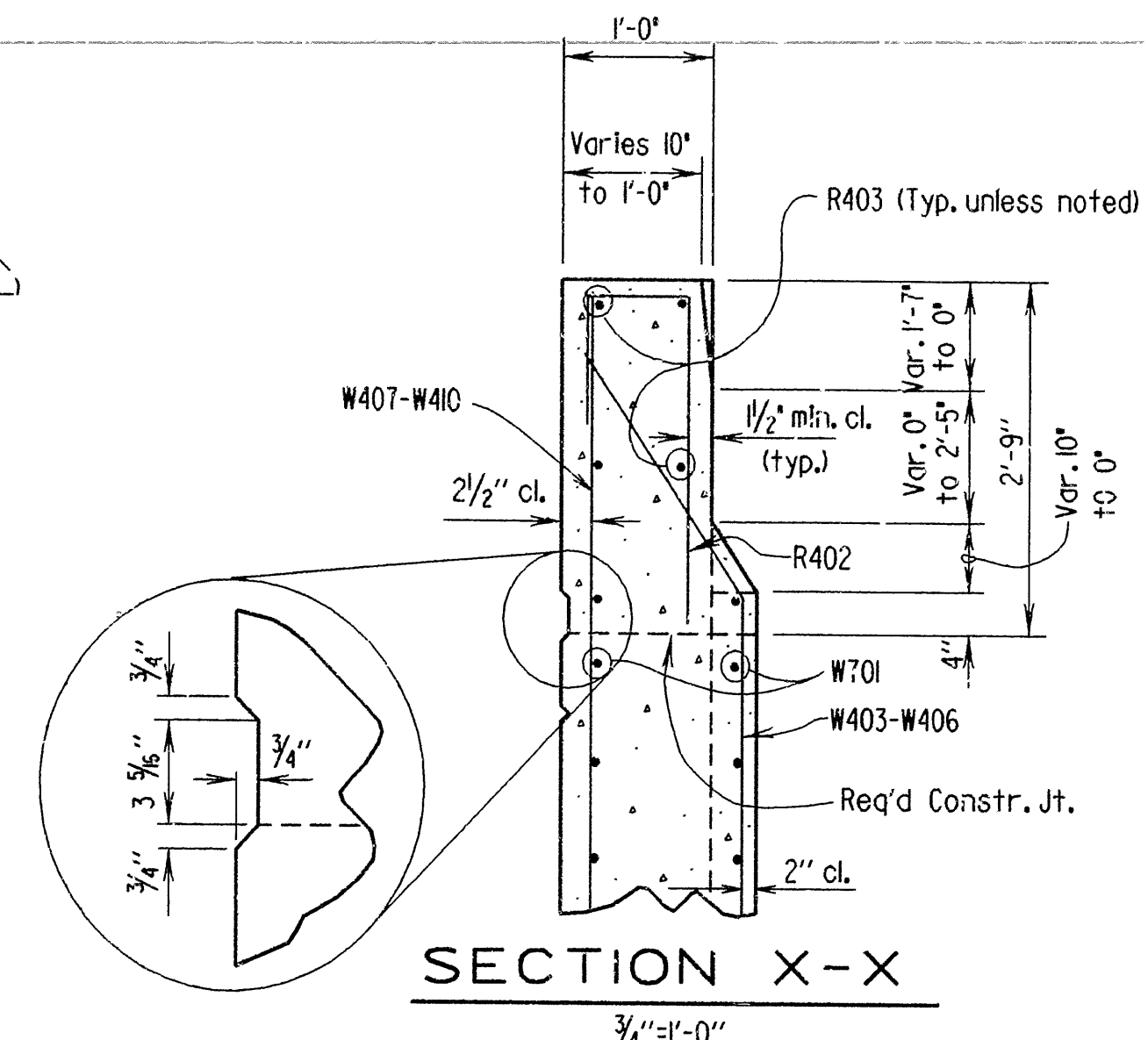
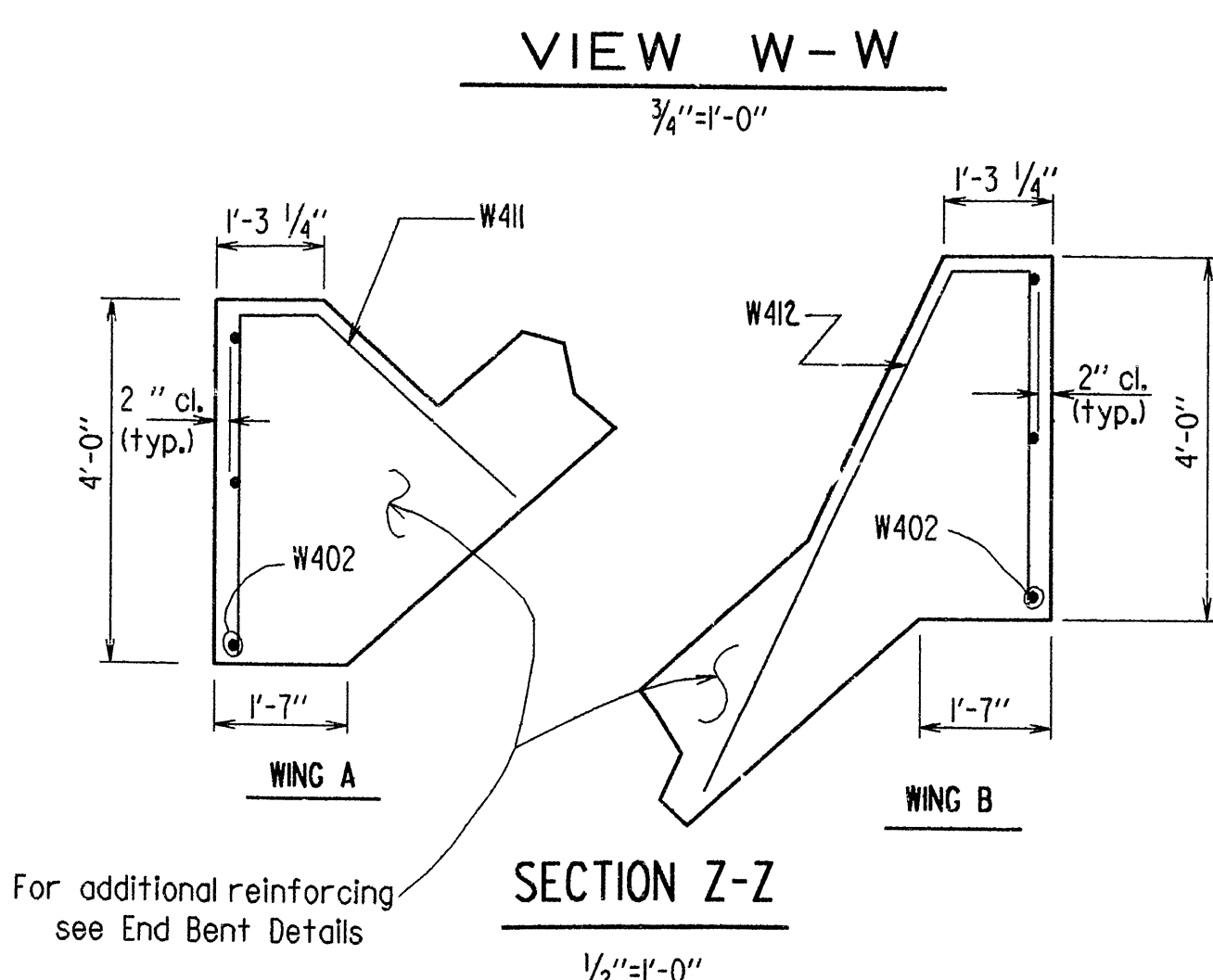
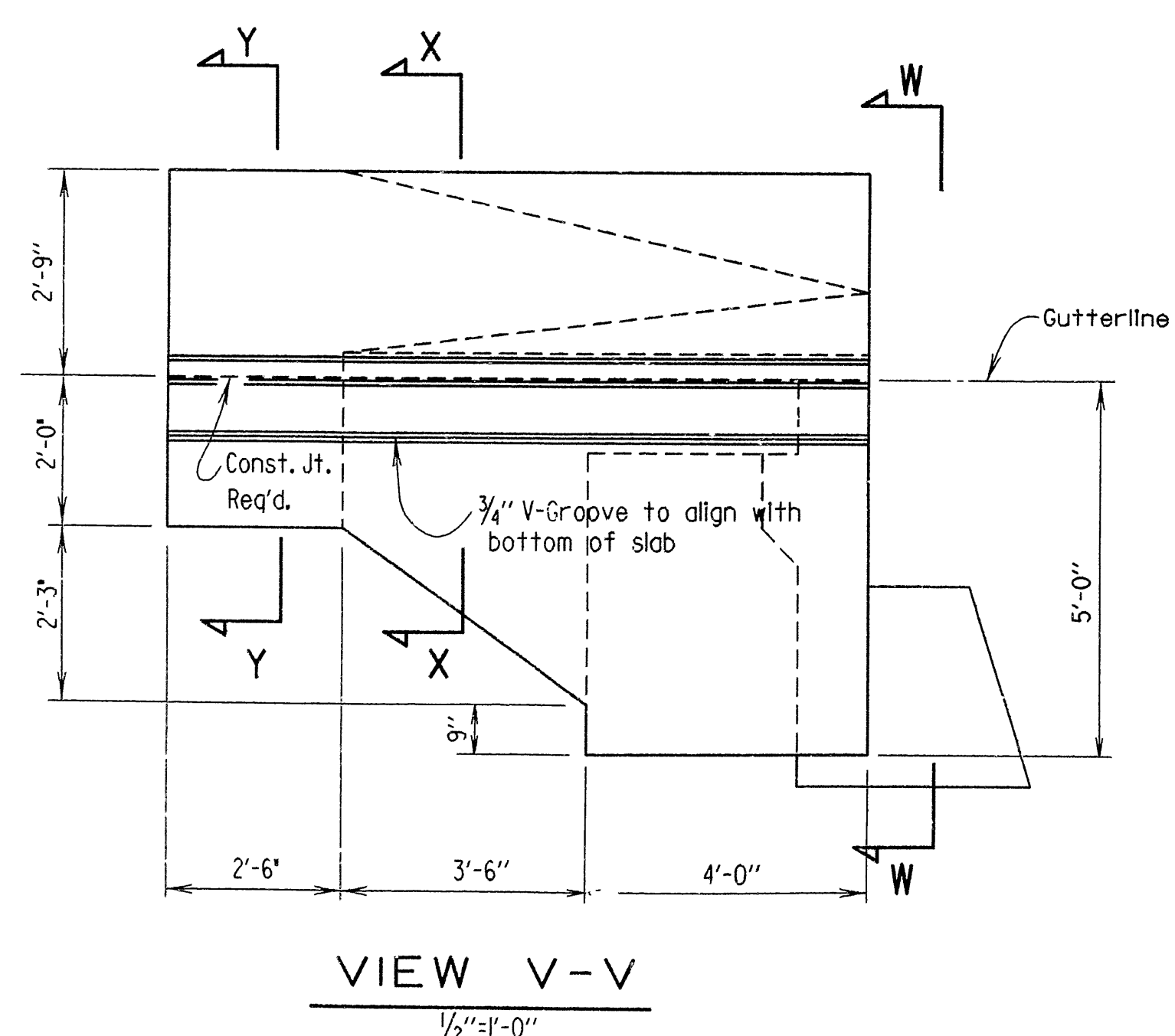
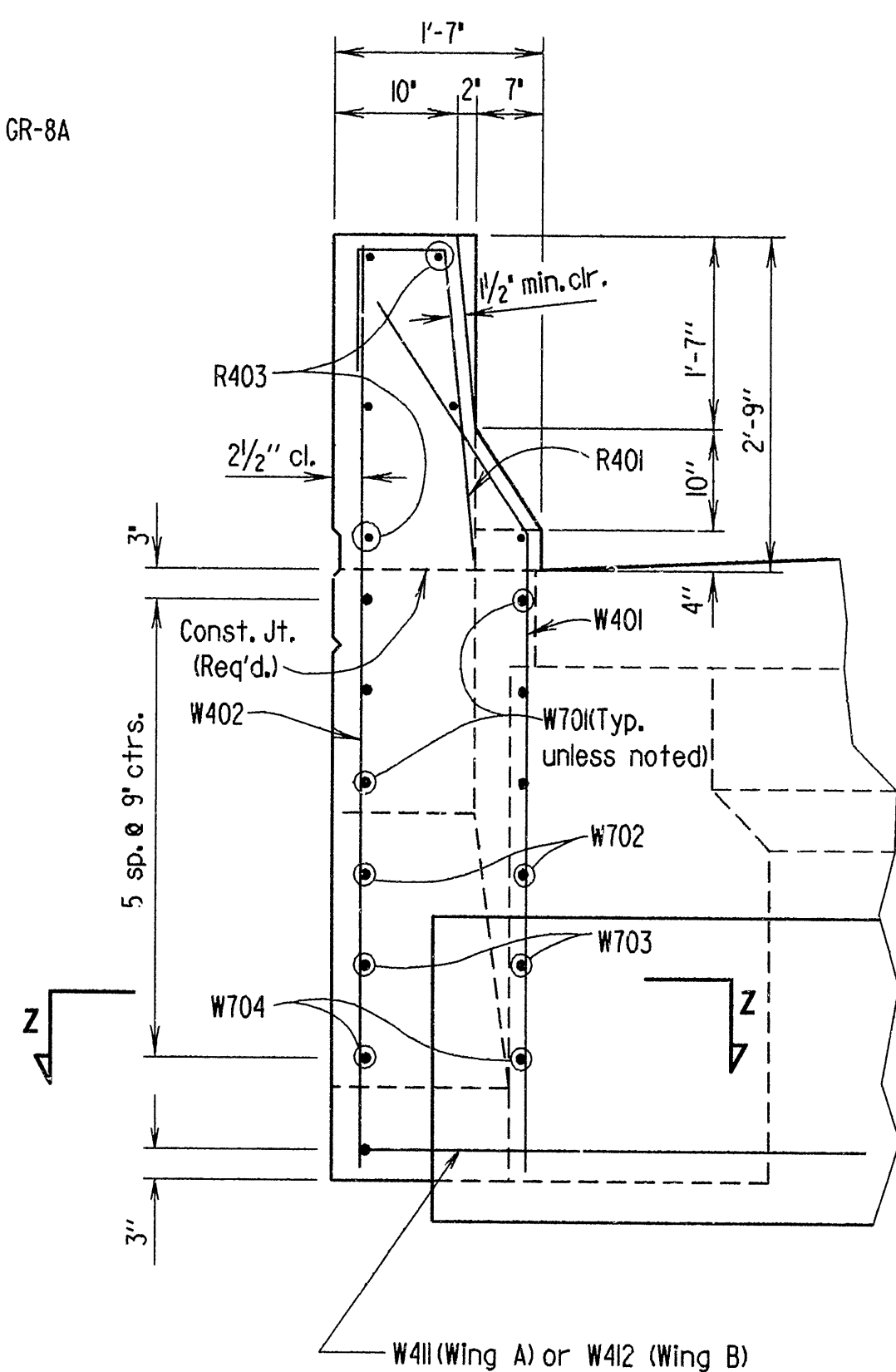
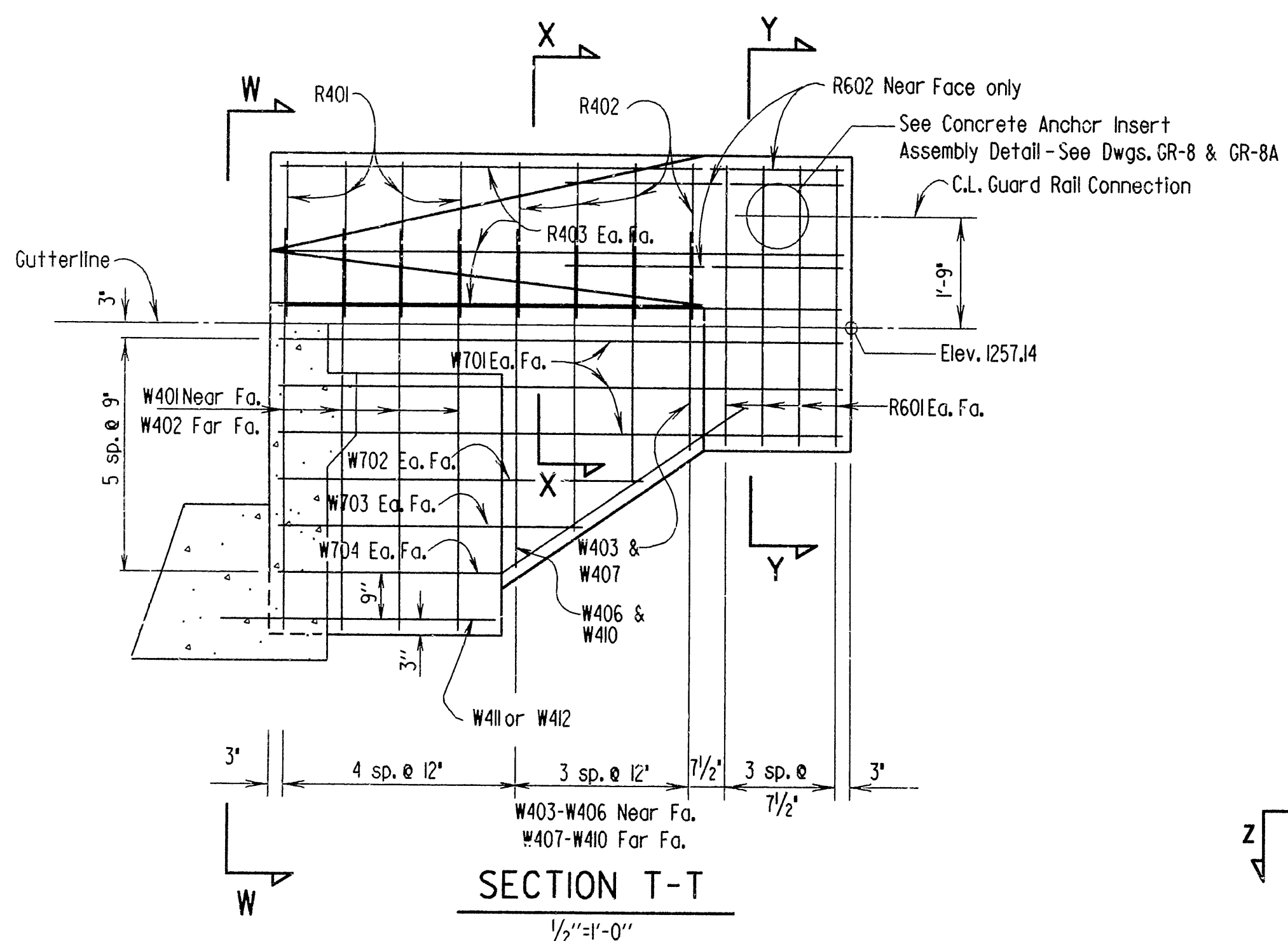
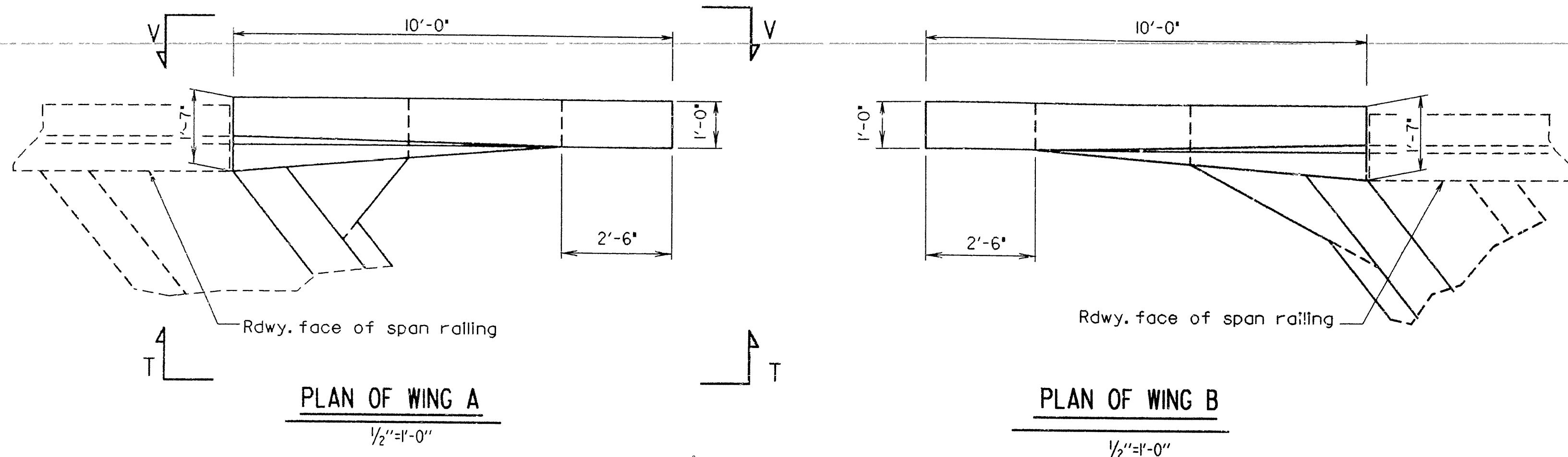
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				6	ARK.			
				JOB NO.		9582	25	80
				6340	LAYOUT		30615	

Note:
Excavate Channel as shown to Elev. 1242.0. Approx. 1936
cubic yards of Channel Excavation.



(SHEET 2 OF 2)
LAYOUT OF BRIDGE OVER
HOLMAN CREEK
HOLMAN & SMYRNA CR. STRS. & APPRS.
MADISON COUNTY
ROUTE 23 SEC. 9
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.
DRAWN BY: TEB DATE: 9 DEC 88
CHECKED BY: SML DATE: 12-13-88 SCALE: 1"=30'-0"
DESIGNED BY: SML DATE: 11-23-88
BRIDGE NO. 6340 DRAWING NO. 30615

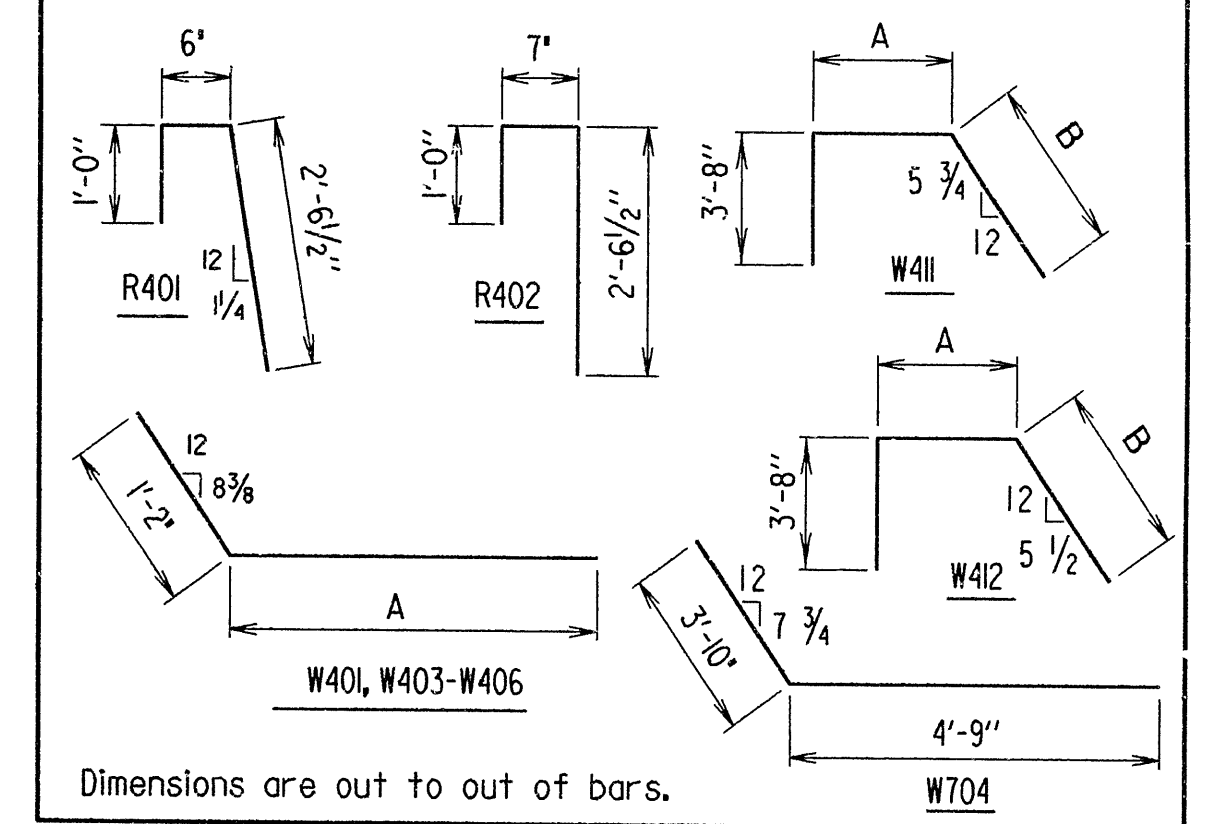
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				6	ARK.			
				JOB NO.		9582	27	80
① 6340 - END BENT - 30617								



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	4	6'-3"	5'-1"	1'-2"	2"
W402	4	7'-5"			Str.
W403	1 of each	Var. 3'-5" to 5'-5"	Var. 2'-3" to 4'-3"	1'-2"	2"
W406	1 of each	Var. 4'-6" to 6'-6"			Str.
W411	1	8'-4"	10 1/2"	3'-10"	2"
W412	1	10'-3"	10 1/2"	5'-9"	2"
W701	6	9'-8"			Str.
W702	2	6'-4"			Str.
W703	2	5'-2"			Str.
W704	2	8'-7"			5 1/4"

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).

Backwall shall not be poured before beams are in place.

Structural steel in end bents shall be ASTM A588 and shall be paid for as "Structural Steel in Beam Spans (A588)".

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

For additional information see layout.

Note: For details of guard rail connections, see drwg. nos. GR-8 and GR-8A.

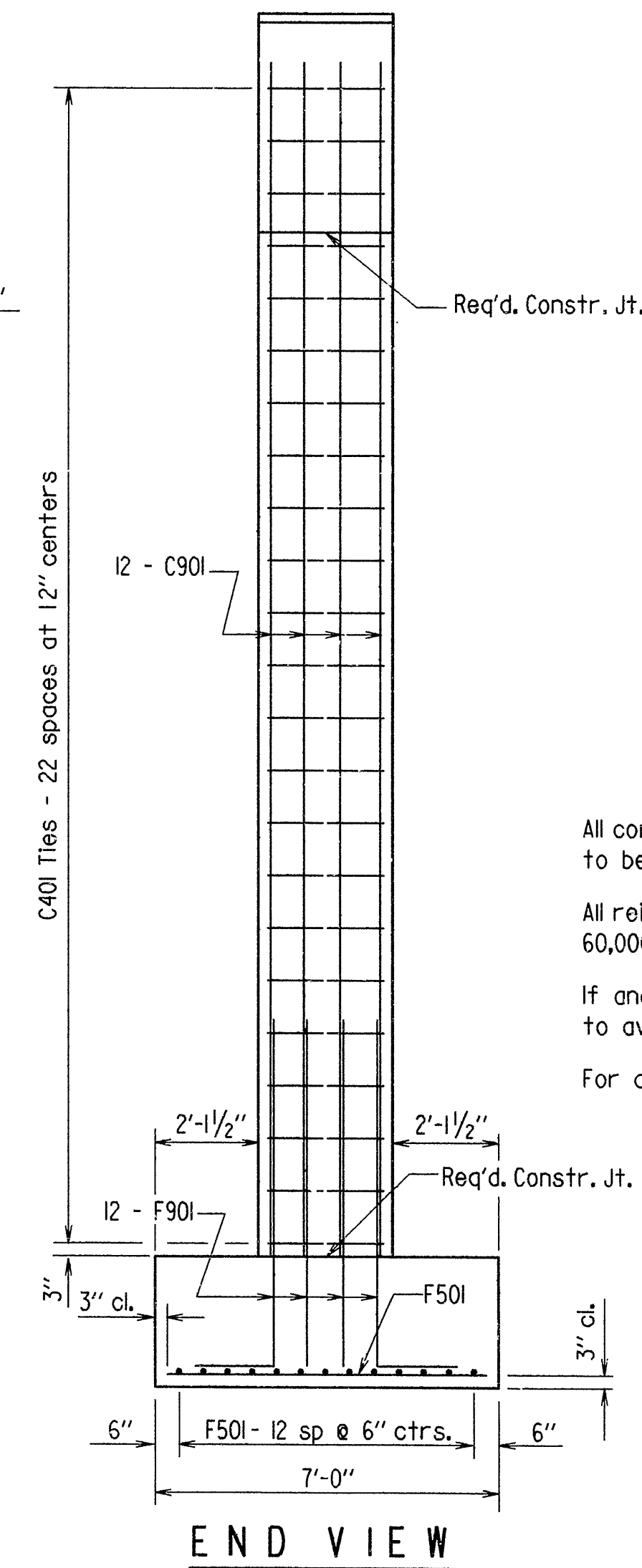
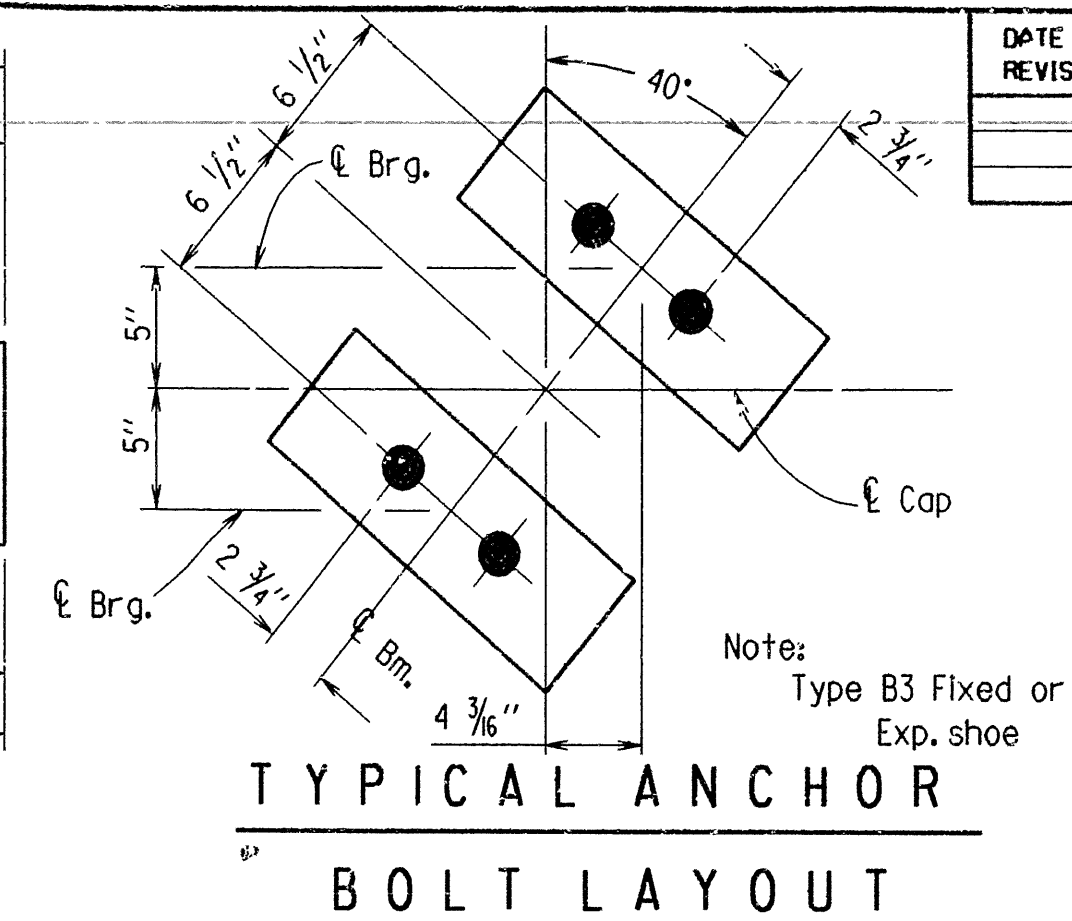
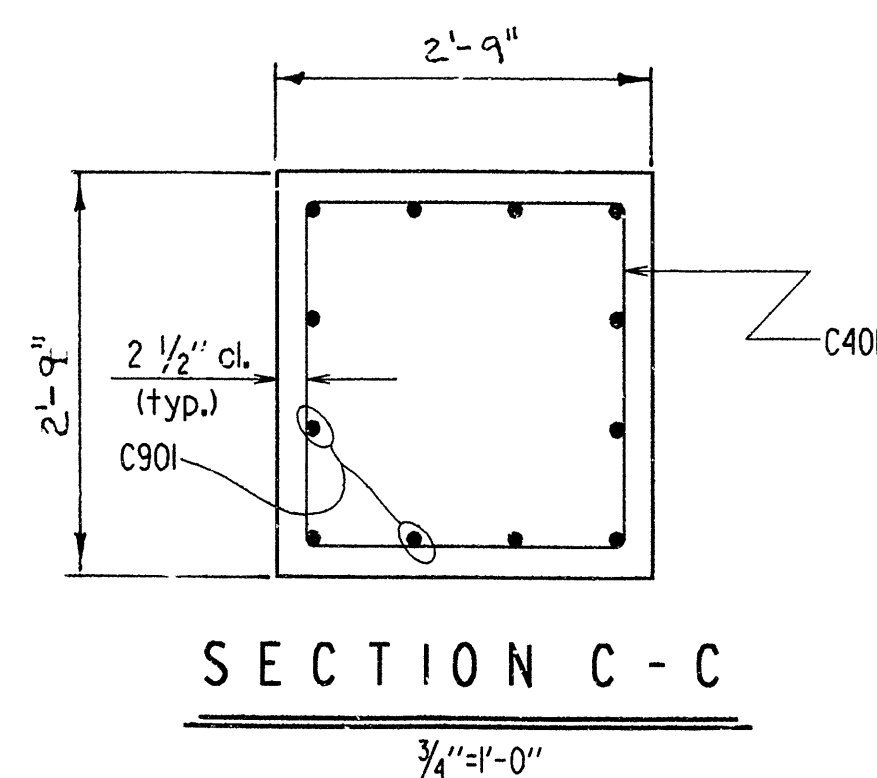
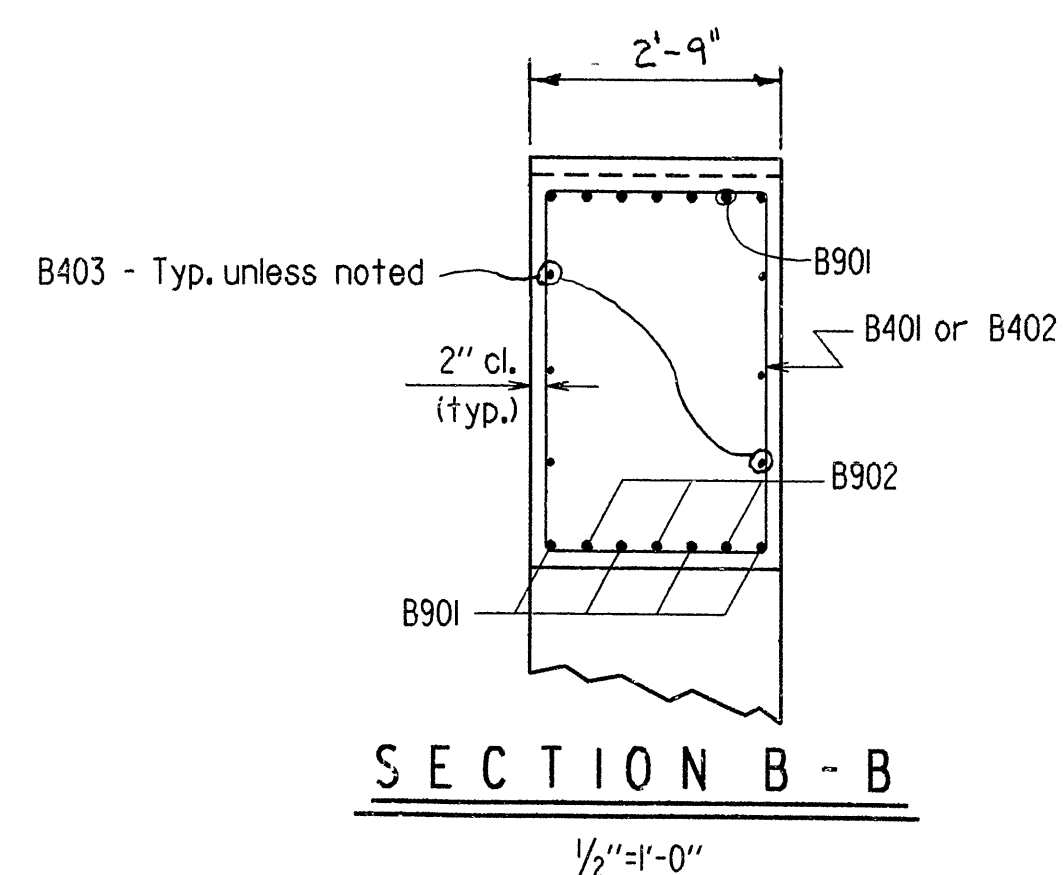
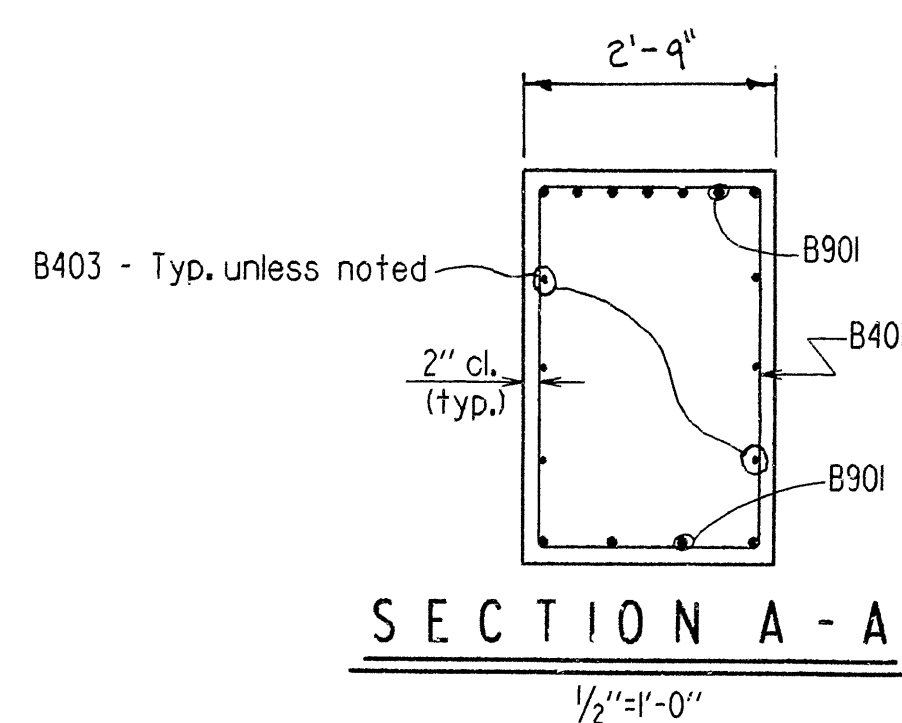
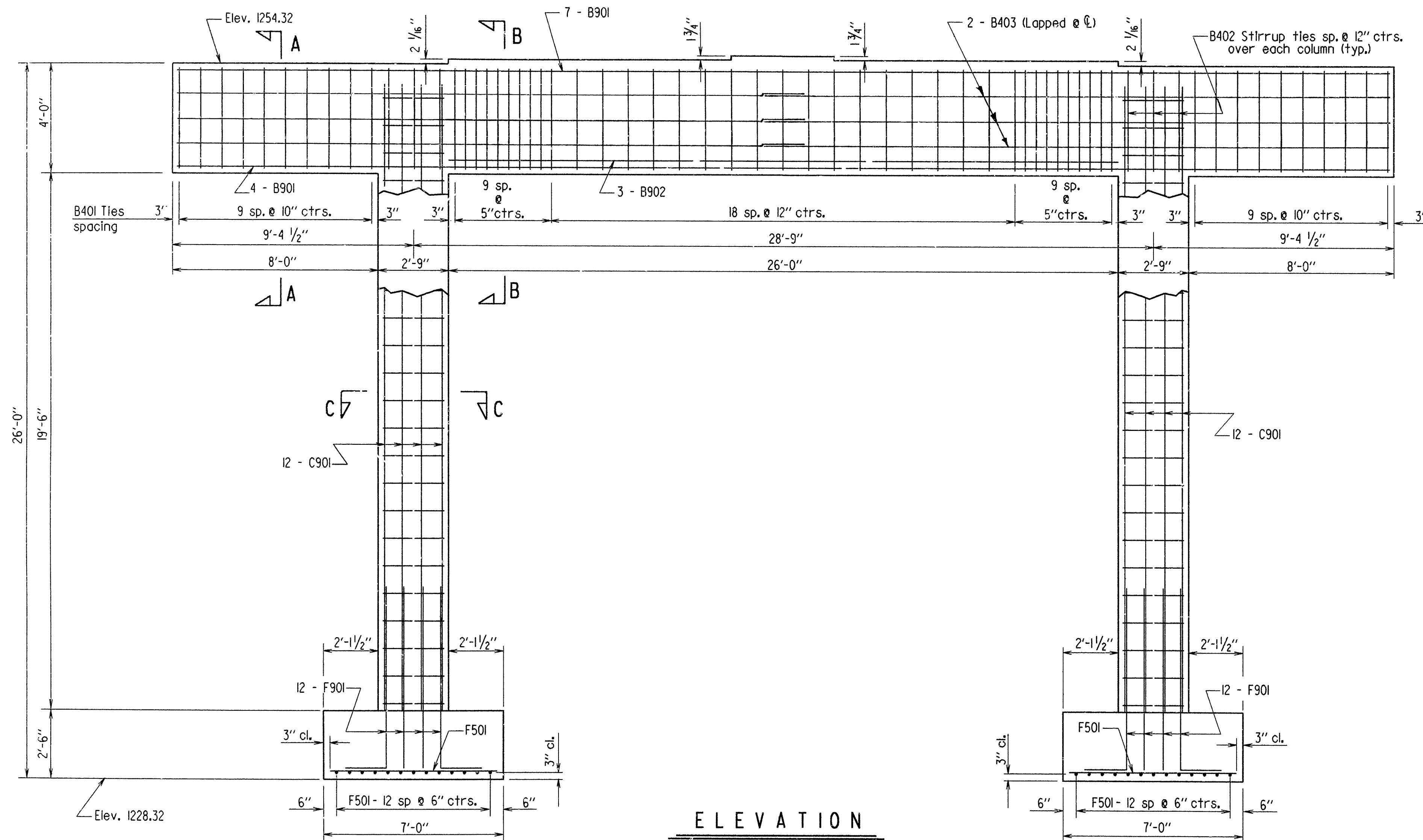
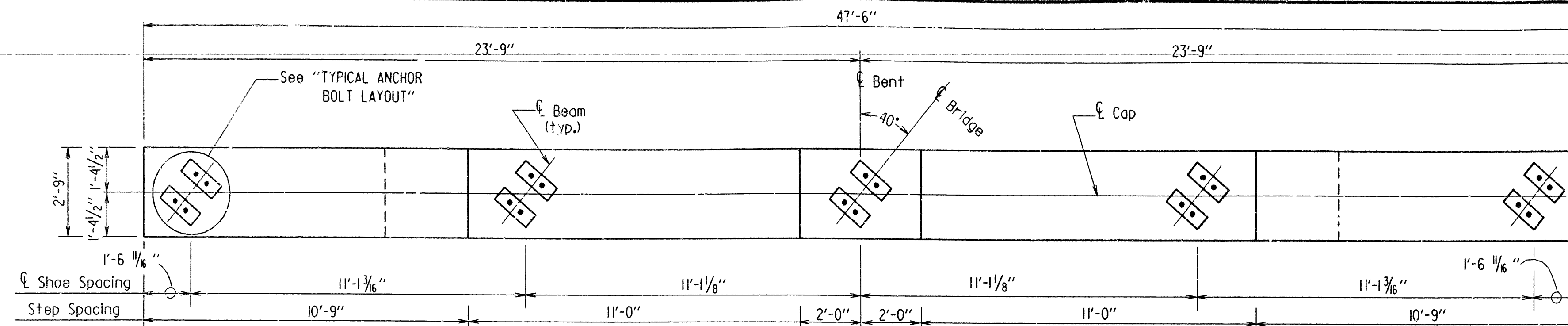
SHEET 2 OF 2

DETAILS OF END BENTS HOLMAN CREEK

ROUTE 23 SEC. 9
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: TEB DATE: 5/2/89
CHECKED BY: GEC DATE: 6-6-89 SCALE: As Shown
DESIGNED BY: SML DATE: 4-4-89
BRIDGE NO. 6340 DRAWING NO. 30617

Frank P. Dink
BRIDGE ENGINEER

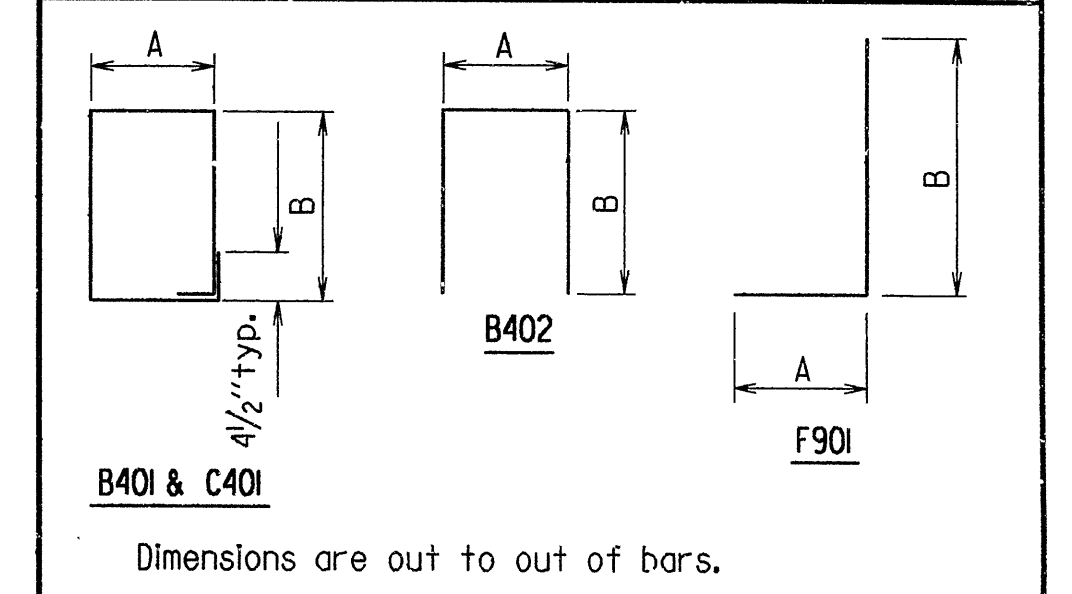


DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. AID ORIG. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		9582	28	80
				(1) 6340		INT. BT. DTL'S.	30618	

BAR LIST-PER BENT

MARK	NO. REQ'D.	LENGTH	'A'	'B'	P.D.
B401	57	12'-6"	2'-5"	3'-8"	2"
B402	6	9'-7"	2'-5"	3'-8"	2"
B403	12	24'-5"			Str.
B901	11	47'-2"			Str.
B902	3	26'-0"			Str.
C401	46	9'-8"	2'-4"	2'-4"	2"
C901	24	22'-9"			Str.
F501	52	6'-6"			Str.
F901	24	8'-4"	1'-7 1/4"	7'-0"	9"

BENDING DIAGRAMS



General Notes

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

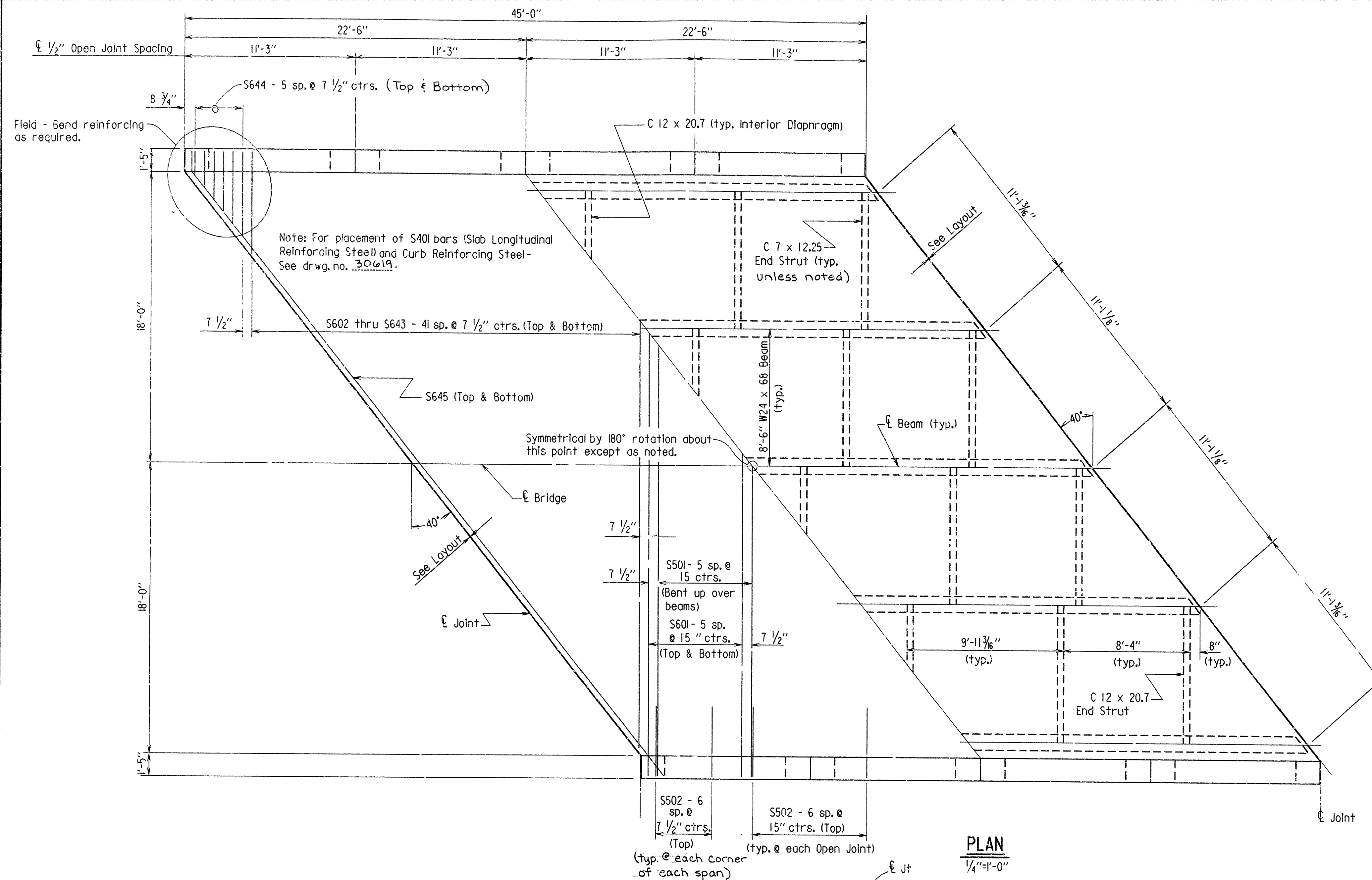
All reinforcing steel shall conform to ASTM A615 or A617, Grade 60 (yield strength = 60,000 psi).

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

For additional information, see layout.

DETAILS OF
 INTERMEDIATE BENTS
 HOLMAN CREEK
 ROUTE 23 SEC. 9
 ARKANSAS STATE HIGHWAY COMMISSION
 LITTLE ROCK, ARK.
 DRAWN BY: TEB DATE: 5/2/89
 CHECKED BY: GEC DATE: 6-6-89
 DESIGNED BY: SML DATE: 3-28-89
 BRIDGE NO. 6340 DRAWING NO. 30618

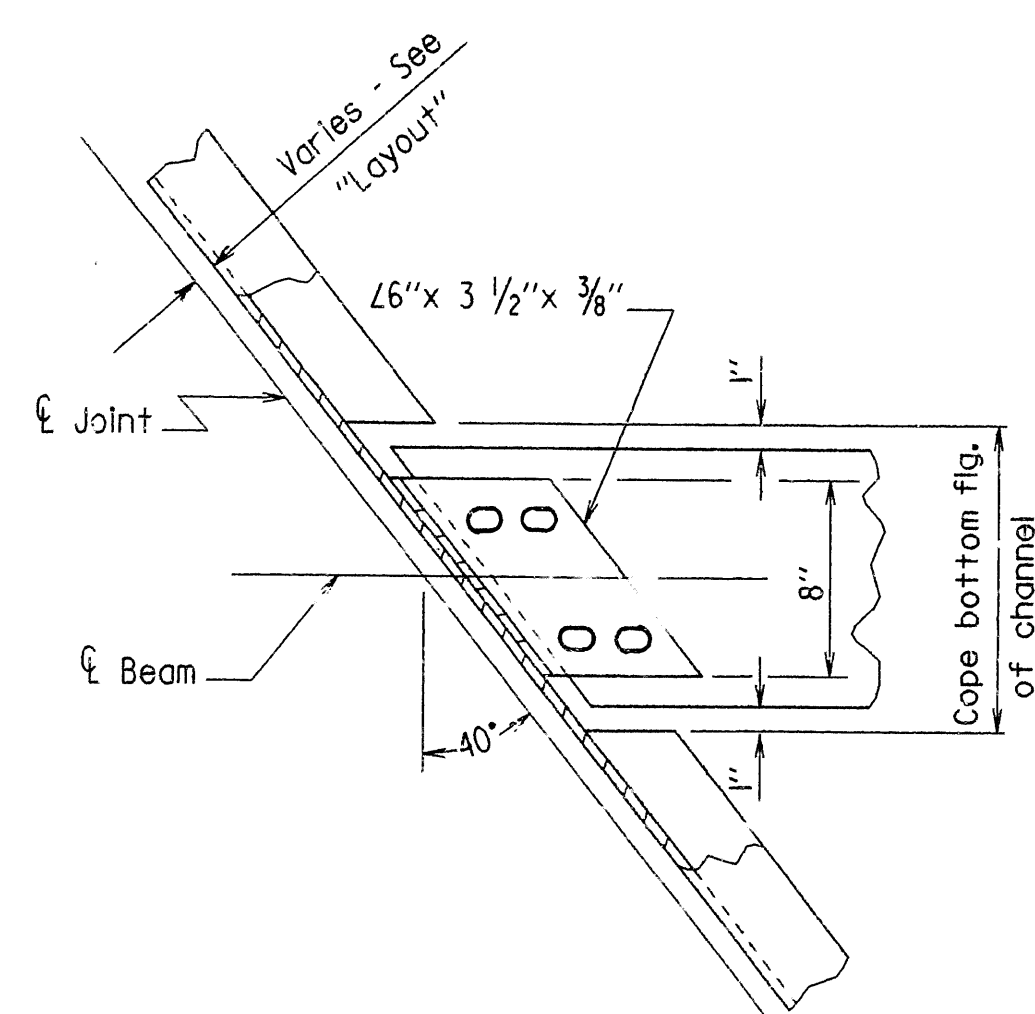
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				6	ARK.			
				JOB NO.		9582	30	80
				6340		SPAN DETAILS	30620	



BAR LIST (PER SPAN)

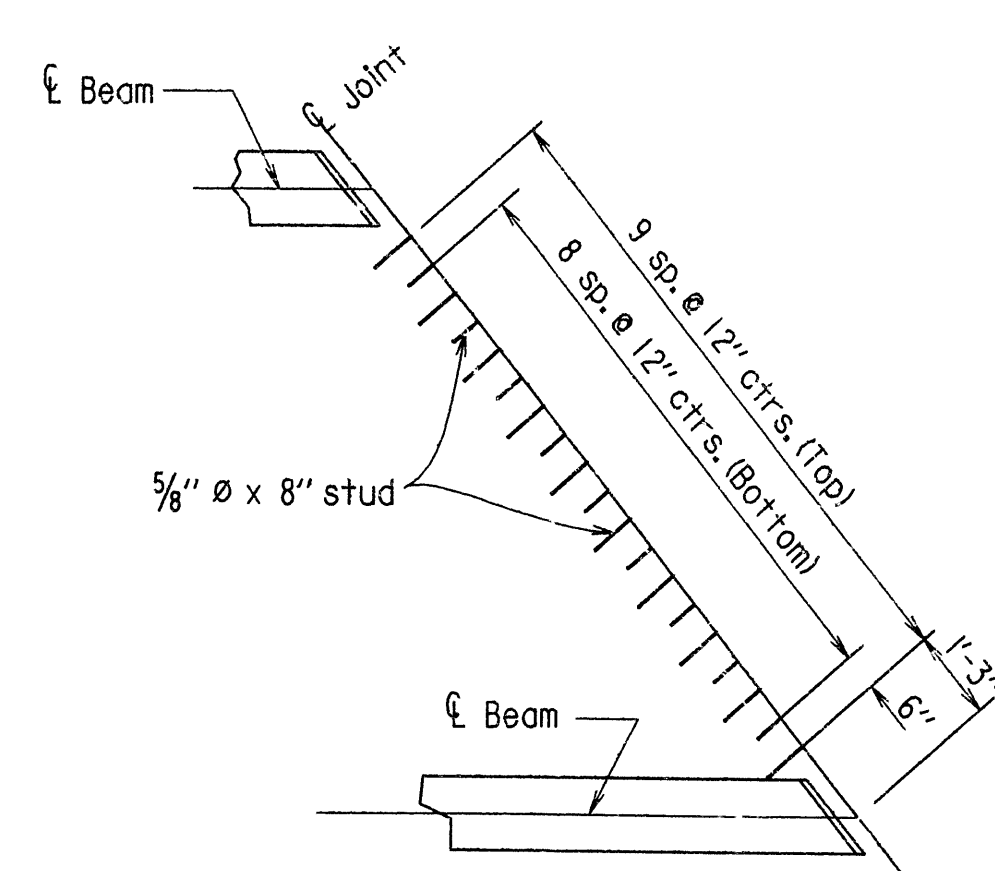
MARK	NO. REQ'D.	LENGTH	PIN DIA.
S401	164	23'-1"	Str.
S501 *	11	39'-4"	2"
S502	70	4'-4"	Str.
S601	24	38'-6"	Str.
S602-S643	4 of each	var. 6'-4" to 36'-10"	Str.
S644	24	5'-7"	Str.
S645	4	49'-6"	Str.
P401 *	64	6'-4"	2"
P402 *	64	5'-7"	2"
P403	32	10'-9"	Str.
P404 *	64	5'-10"	2"
P405 *	64	3'-2"	2"
P601	40	10'-9"	Str.

* For "Bending Diagrams", see Drwg. No. 30619.



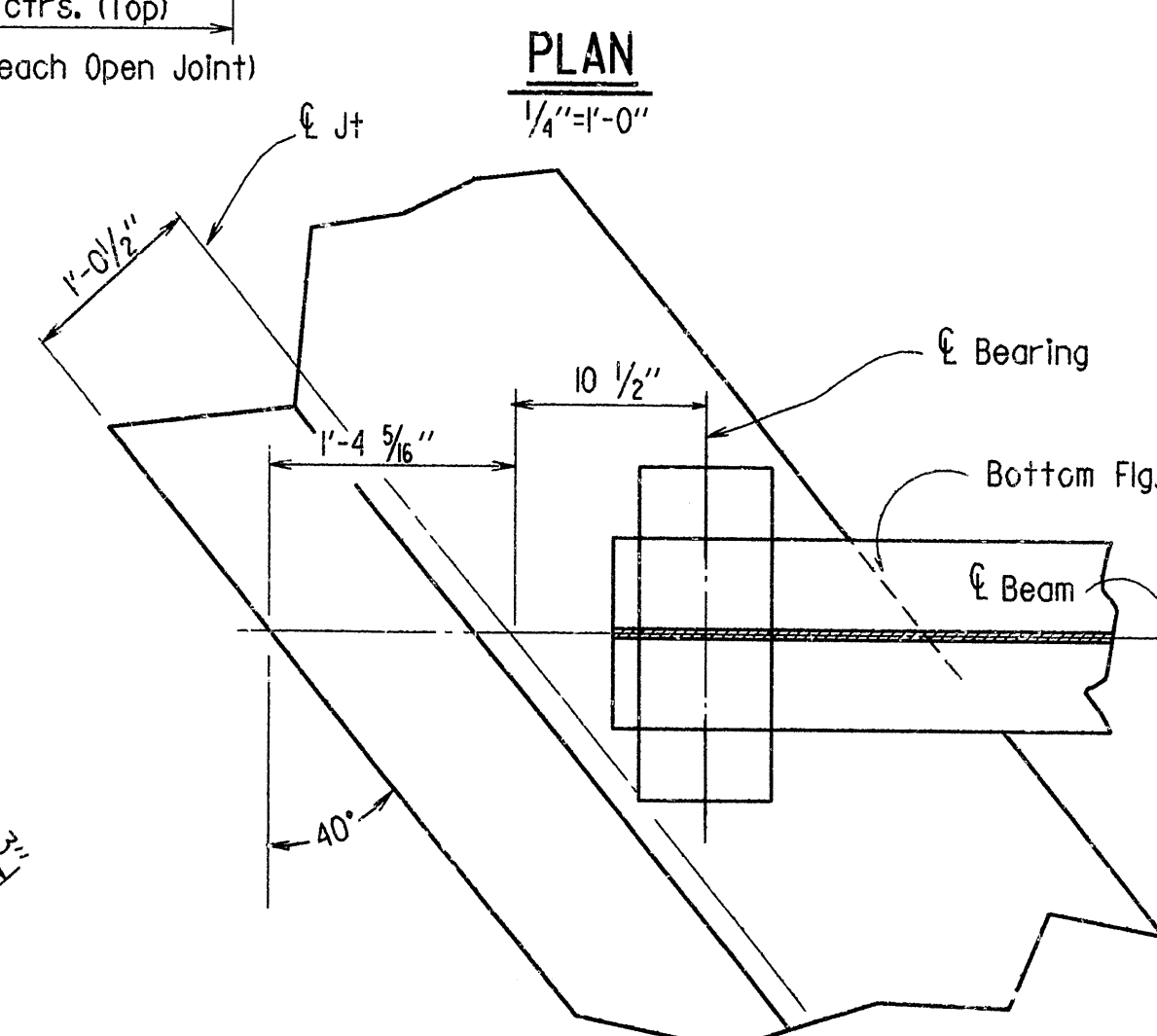
CHANNEL CONNECTION DETAIL

No Scale



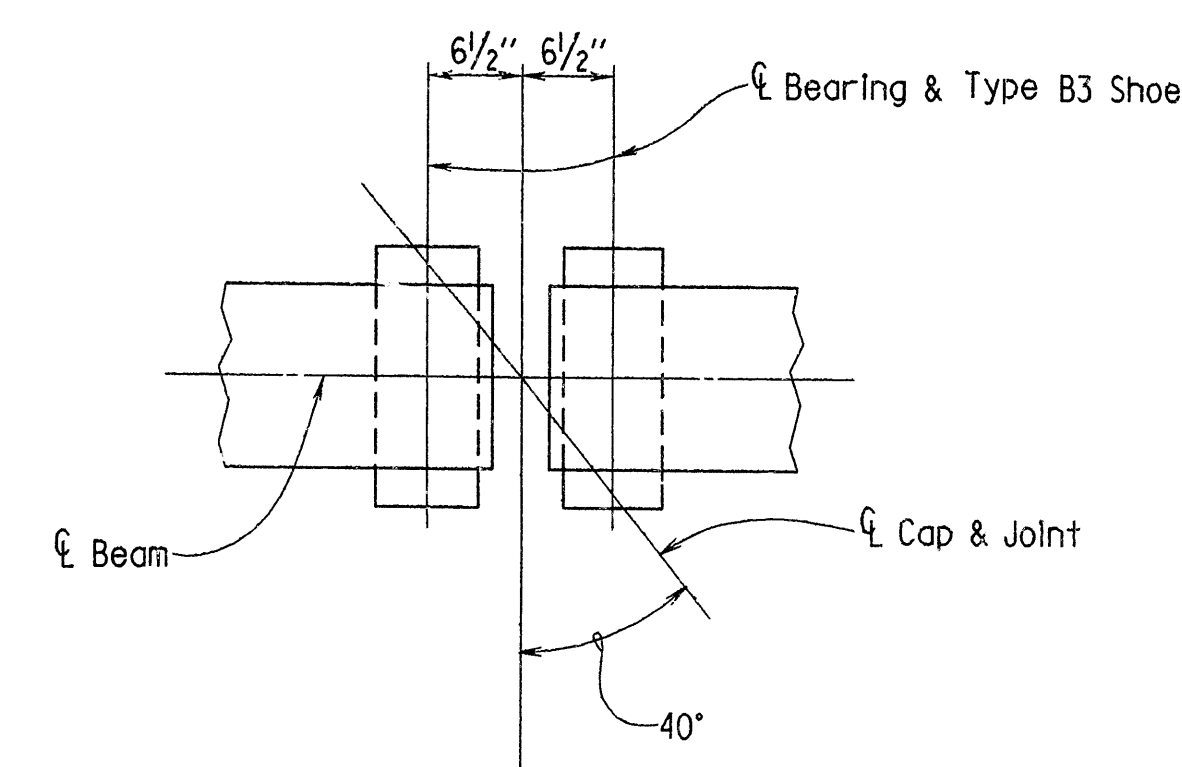
STUD DETAIL AT EXPANSION DEVICE

3/8"=1'-0"



BEARING PLAN AT END BENT

No Scale



PLAN OF BEARING AT INT. BENT

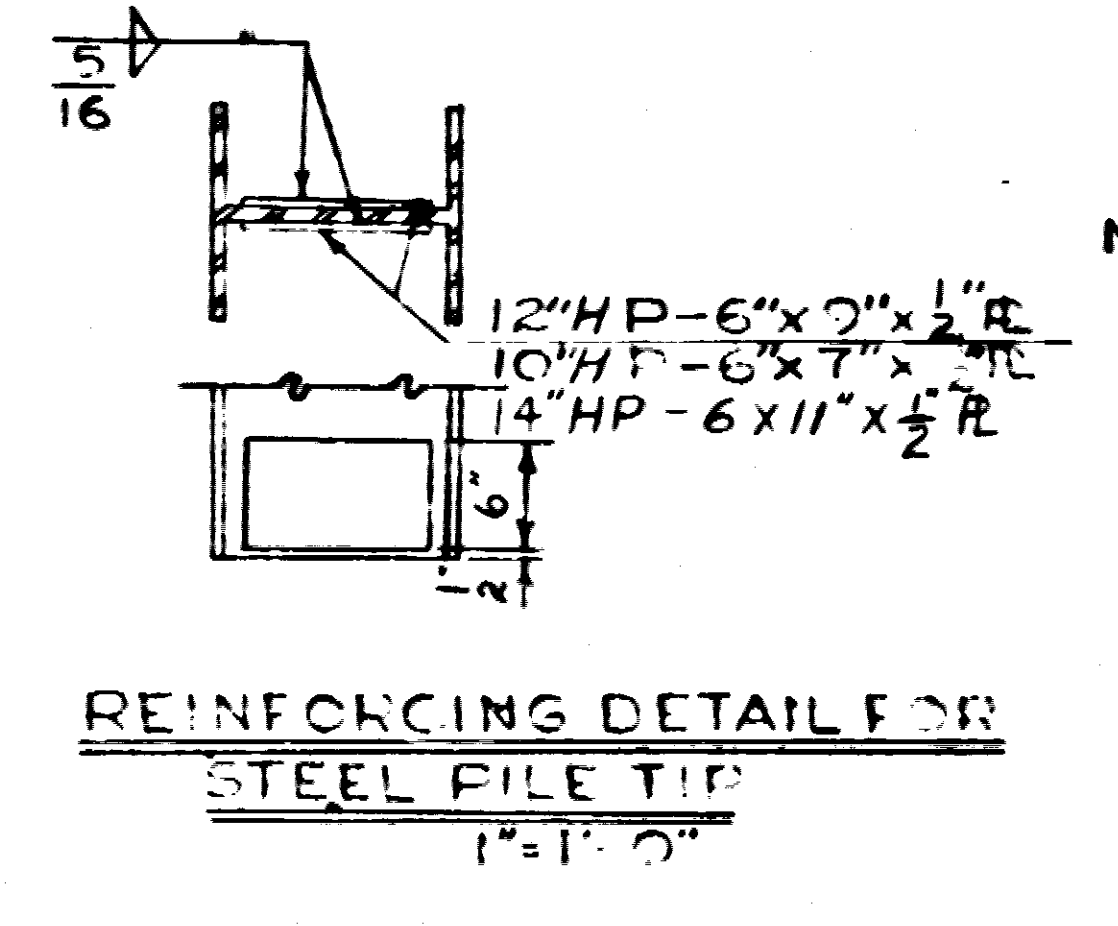
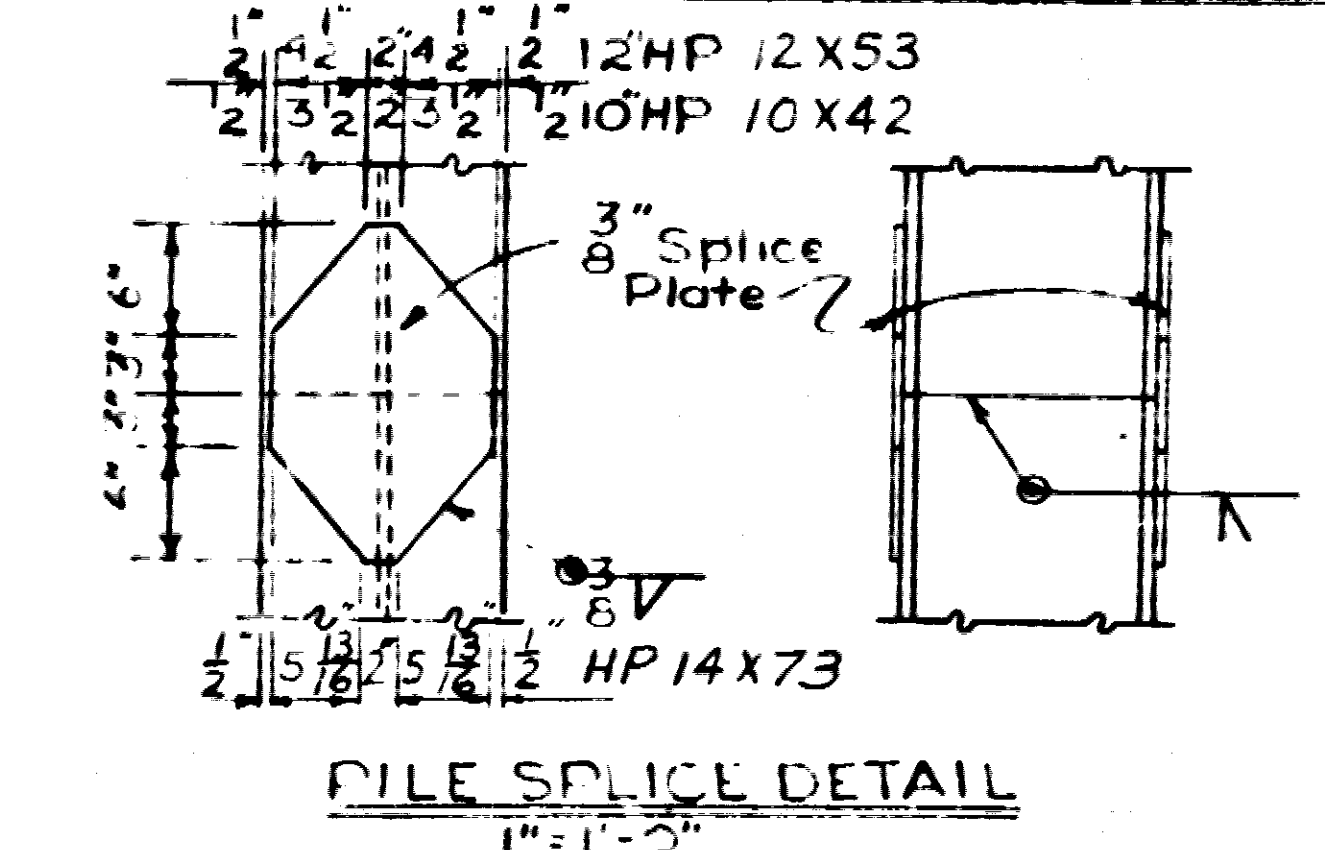
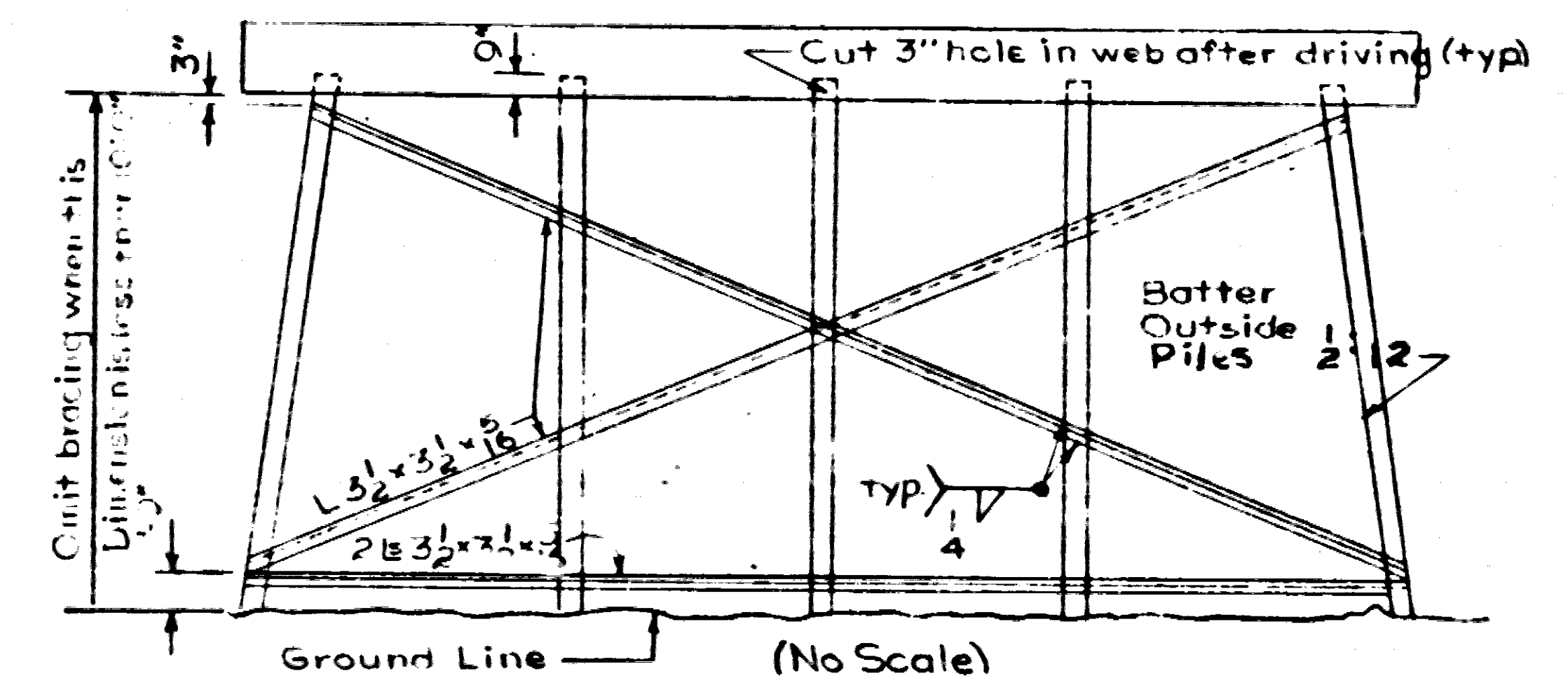
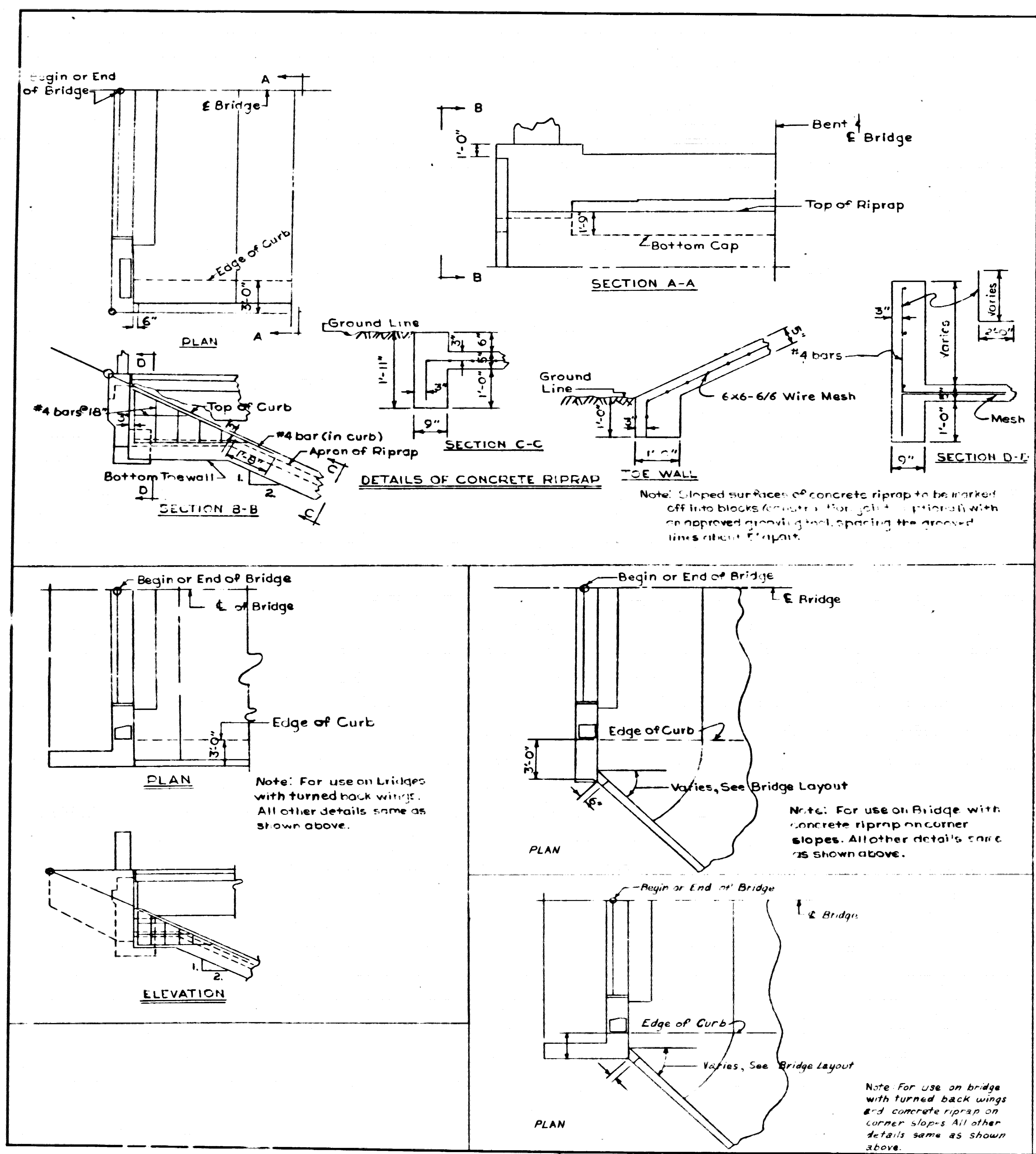
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Small Print
BRIDGE ENGINEER

SUPPLEMENTAL DETAILS
45'-0" COMPOSITE W - BEAM SPANS
HOLMAN CREEK
ROUTE 23 SEC. 9
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: TEB DATE: 5/2/89
CHECKED BY: GEC DATE: 6-6-89 SCALE: As Shown
DESIGNED BY: SML DATE: 3-22-89
BRIDGE NO. 6340 DRAWING NO. 30620

DATE	REVISION	DATE	REVISION	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
2/16/78	1	2/16/78	2	6	ARK.			18	
4-21-76	2	4-21-76	3						



NOTE: Drawing Adapted from Drawing No. 14995, With Detail Drawing - concrete Riprap on Corner Slopes - L.E.G. 2/16/78

Revised 4-21-76 Added HP14x73 Pile. GVA

DETAILS OF CONCRETE RIPRAP AND MISC. DETAILS OF STEEL PILING

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: JH DATE: 6-6-68

TRACED BY: DATE: 6-6-68

CHECKED BY: FMH DATE: 6-24-68

BRIDGE NO. DRAWING NO. 14995A