

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEET
4-27-87	4-27-87			6	ARK.			
				JOB NO.		R30007	19	129
				① 5877 & 5878 QUANTITIES 23710				

SCHEDULE OF BRIDGE QUANTITIES

205 & SP ①  
JOB NO. R30007

BRIDGE NUMBER	CODE NUMBER	NAME PLATE TITLE	UNIT OF STRUCTURE	ITEM NO.	801	SP # 802	SP # 802	803	804	▲ SP # 805	▲ SP # 805	SP # 807	SP # 809	812	SP # 816	SP # 816	SP 820	205	SP 603-5
				ITEM	UNCLASSIFIED EXCAVATION FOR STRUCTURES-BRIDGES	CLASS S CONCRETE	CLASS S (AE) CONCRETE	BOILED LINSEED OIL	REINFORCING STEEL (GRADE 60)	STEEL BEARING PILING (HP 10×42)	TEST PILES (HP 10×42)	STRUCTURAL STEEL IN BEAM SPANS (A588)	PREFORMED JOINT SEALER	BRIDGE NAME PLATES (TYPE C)	DUMPED RIPRAP	FILTER BLANKET	PILE ENCASEMENT	REMOVAL OF EXISTING BRIDGE STRUCTURES	TEMPORARY BRIDGE STRUCTURE (20' ROADWAY WIDTH)
				UNIT	CUBIC YARD	CUBIC YARD	CUBIC YARD	GALLON	POUND	LINEAR FOOT	LINEAR FOOT	POUND	LINEAR FOOT	EACH	CUBIC YARD	SQUARE YARD	LINEAR FOOT	LUMP SUM	LINEAR FOOT
5877	X071	BRUSHY CREEK																	
			END BENT NOS. 1 AND 6	20	40.42		0.2	4,089	180	25	1,202		1	411	822				
			INTERMEDIATE BENT NOS. 2 THRU 5		37.18			4,561	654	35						302			
			5-40'-0" COMPOSITE W-BEAM SPANS			236.70	21.0	47,980			137,528	258.0							
			TOTAL FOR BRIDGE NO. 5877	20	77.60	236.70	21.2	56,630	834	60	138,730	258.0	1	411	822	302	1.0 <sup>0</sup> 0.34	80	
5878	X071	BRUSHY CREEK RELIEF																	
			END BENT NOS. 1 AND 4	150	40.42		0.2	4,089	180	25	1,202		1	221	443				
			INTERMEDIATE BENT NOS. 2 AND 3		18.58			2,282	330	35						100			
			3-35'-0" COMPOSITE W-BEAM SPANS			124.70	11.1	25,029			67,478	172.0							
			TOTAL FOR BRIDGE NO. 5878	150	59.00	124.70	11.3	31,400	510	60	68,680	172.0	1	221	443	100	1.0 <sup>0</sup> 0.57	50	
TOTAL FOR JOB NO. R30007				170	136.60	361.40	32.5	88,030	1344	120	207,410	430.0	2	632	1265	402	2.0 <sup>0</sup> 0.91	130	

▲ REFERS TO SP 807-5

▲▲ REMAINING PORTION IS ROADWAY ITEM

① Revised for SP JOB NO. R30007, "Removal of Existing Bridge Structures". 4-27-87 div.

SCHEDULE OF BRIDGE QUANTITIES

I-30 - NORTH

NEVADA COUNTY

ROUTE 19 SEC. 5

ARKANSAS STATE HIGHWAY COMMISSION

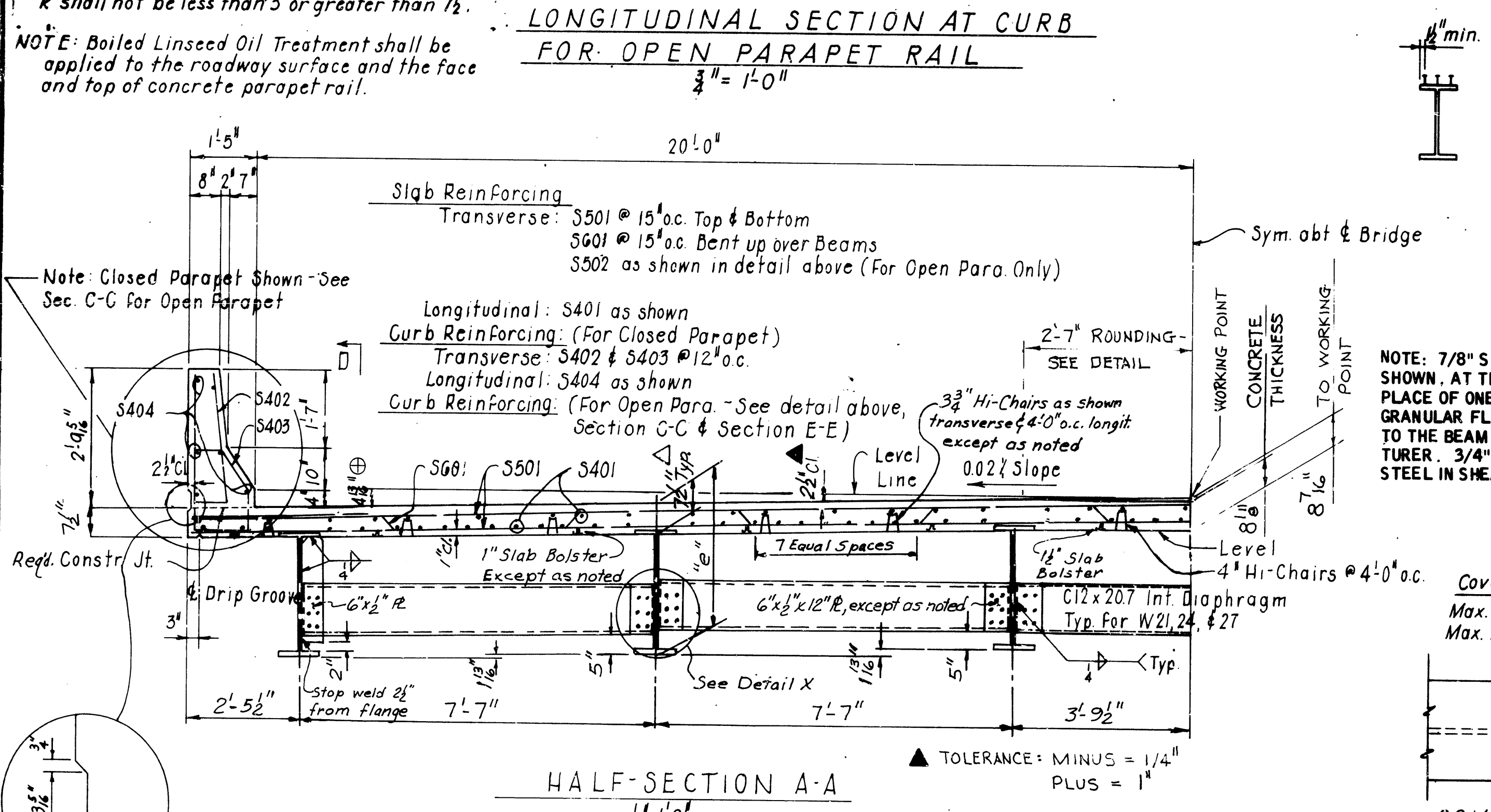
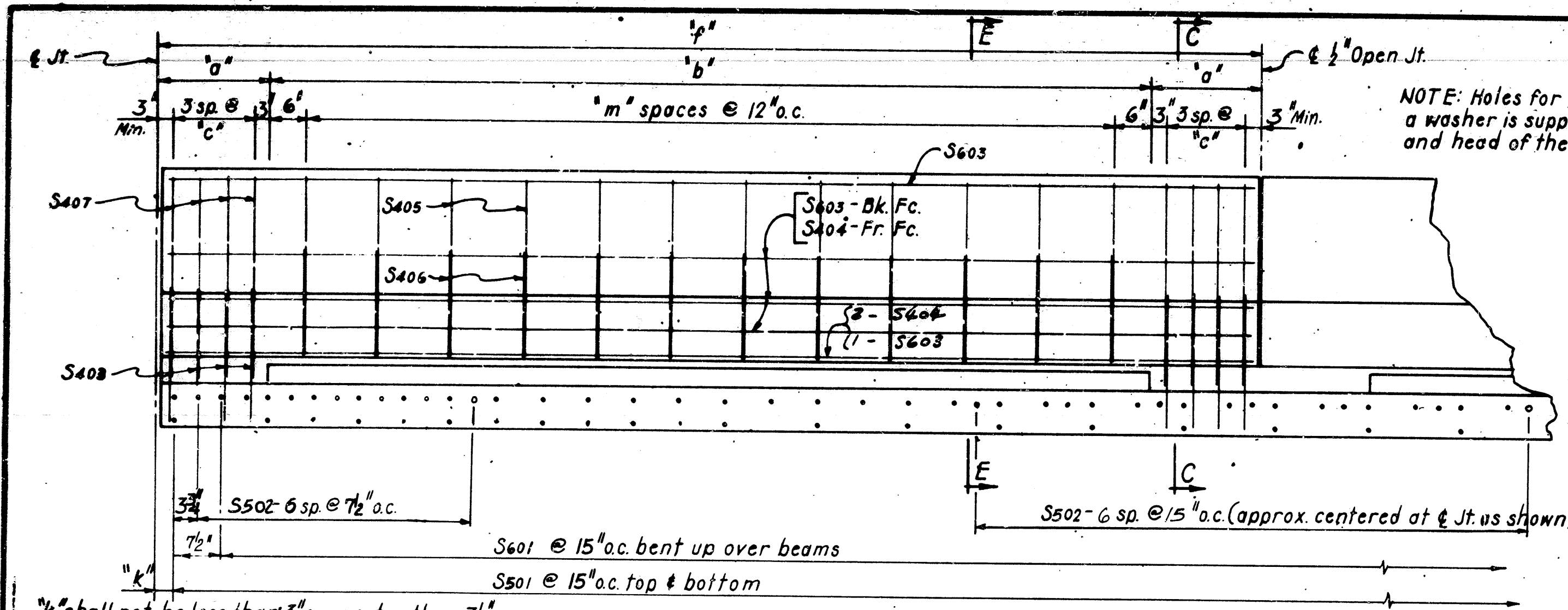
PHIL BRAND  
DESIGN SECTION SUPERVISOR

LITTLE ROCK, ARK.  
2 SEPT 86  
DRAWN BY: TEB DATE: 9-8-86  
CHECKED BY: GEC DATE: 9-8-86  
DESIGNED BY: DATE: 9-8-86  
BRIDGE NO. 5877 & 5878  
DRAWING NO. 23710  
SCALE: NONE

W. A. Pinkerton  
BRIDGE ENGINEER







2'-1-0"

① WORKING POINT TO GUTTER LINE

COV

REINFORCING STEEL PER SPAN

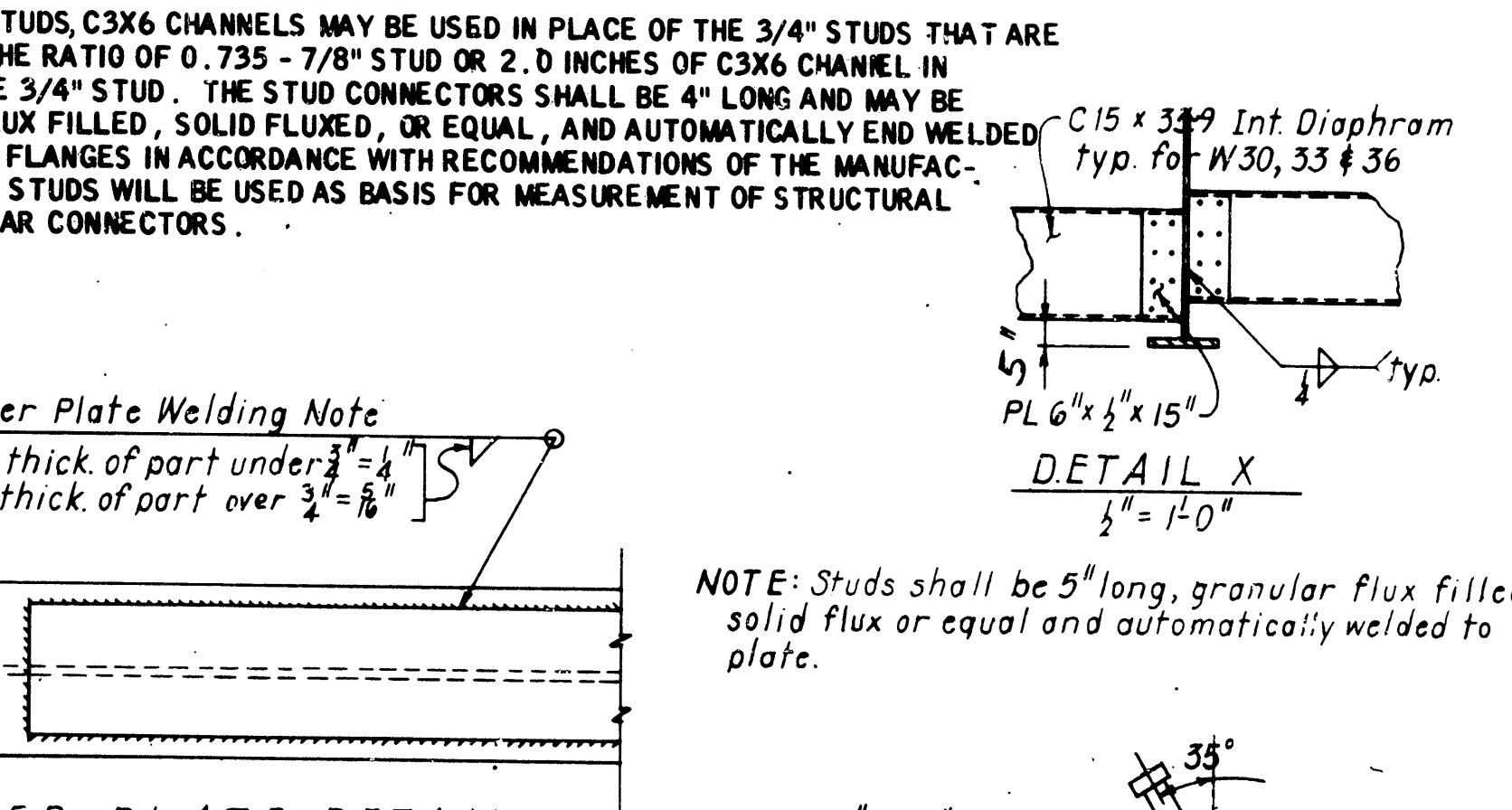
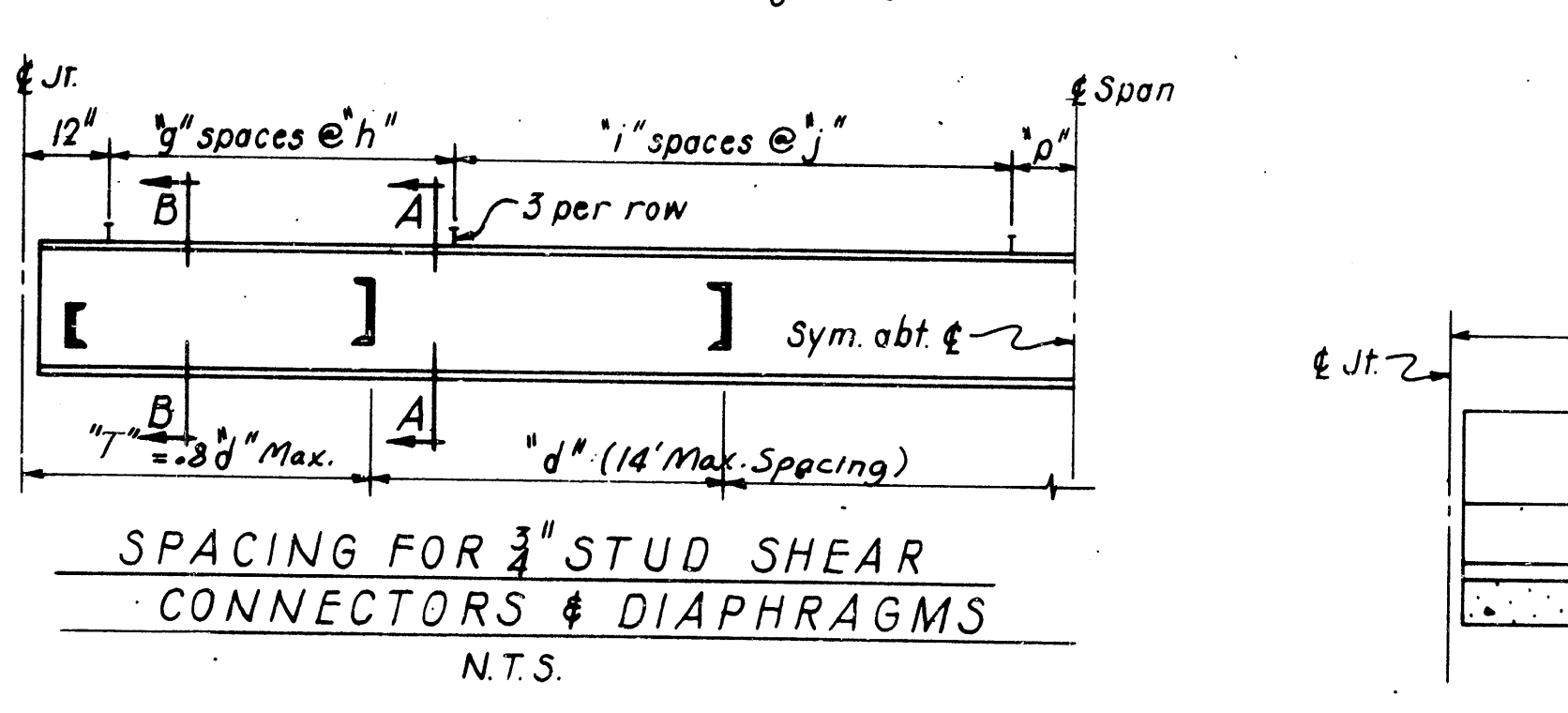
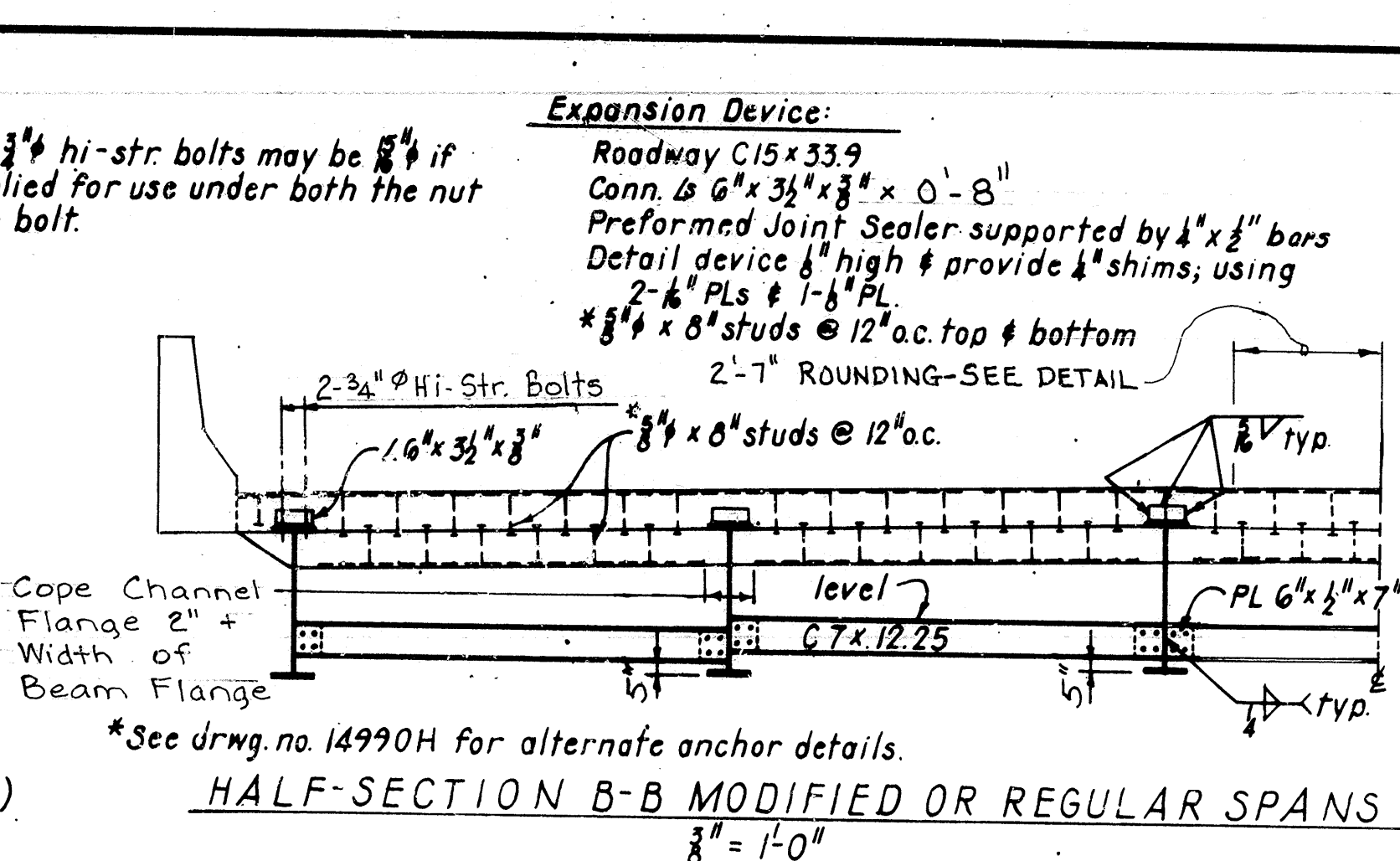
△ See 14990H

4 Note: The surfaces of ft  
with Concrete shall  
These coats shall be  
Second Field Coat in J

MK	Size	Length		Pin Dia.	Span Length					
		Closed Parapet Rail	Open Parapet Rail		40'-0"	35'-0"				
S502	5	-	4'-9"	Str.	70	56				
S601	6	43'-6"	43'-6"	3 1/2"	31	27				
S603	6	-	4'-6"	Str.	40	30				
S501	5	42'-6"	42'-6"	Str.	64	56				
S401*	4	5'-6"	5'-6"	Str.	105	105				
S401**	4	5'-7"	5'-7"	Str.	-	-				
S401***	4	5'-12"	5'-12"	Str.	-	-				
S402	4	5'-6"	-	2"	-	-				
S403	4	5'-6"	5'-6"	2"	64	48				
S404	4	5'-6"	5'-6"	Str.	32	24				
S405	4	-	5'-10"	2"	56	48				
S406	4	-	3'-2"	2"	56	48				
S407	4	-	6'-4"	2"	64	48				

Bending Diagrams

Dimens. are out to out of bars.



**DETAIL X**

**DETAIL Y**

**DETAIL Z**

**DETAIL W**

**DETAIL V**

**DETAIL U**

**DETAIL T**

**DETAIL S**

**DETAIL R**

**DETAIL Q**

**DETAIL P**

**DETAIL O**

**DETAIL N**

**DETAIL M**

**DETAIL L**

**DETAIL K**

**DETAIL J**

**DETAIL I**

**DETAIL H**

**DETAIL G**

**DETAIL F**

**DETAIL E**

**DETAIL D**

**DETAIL C**

**DETAIL B**

**DETAIL A**

**GENERAL NOTES**

ALL STRUCTURAL STEEL SHALL BE ASTM DESIGNATION A588 UNLESS OTHERWISE NOTED AND SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER POUND BID FOR "STRUCTURAL STEEL IN BEAM SPANS A588." A588 STEEL SHALL NOT BE PAINTED. ALL EXPOSED SURFACES TO BE CLEANED IN ACCORDANCE WITH SP 807-12, "UNPAINTED WEATHERING STRUCTURAL STEEL." STRUCTURAL STEEL COMPLETELY EMBEDDED IN CONCRETE MAY BE ASTM A36.

THIS DRAWING TO BE USED WITH DRAWING NO. 14990H

LOADING: HS20  
DESIGN SPECIFICATIONS: AASHTO 1985 WITH CURRENT INTERIMS.

**DEAD LOAD:**

	INTERIOR BEAM	EXTERIOR BEAM
a. TO WF BEAM	715 #/ft + 1.30 (#/FT OF WF)	580 #/ft + 1.30 (#/FT OF WF)
b. TO COMPOSITE BEAM*	277 #/ft (OPEN BARRIER)	277 #/ft (OPEN BARRIER)
LIVE LOAD:	290 #/ft (CLOSED BARRIER)	290 #/ft (CLOSED BARRIER)
TO EACH COMPOSITE BEAM	1.379 WHEELS + IMPACT	1.286 WHEELS + IMPACT

CLASS (SAE) CONCRETE (N=9)  $f_c$  = 3500 PSI  
STRUCTURAL STEEL (A588)  $f_y$  = 50,000 PSI  
REINFORCING STEEL (A615, GRADE 60)  $f_y$  = 60,000 PSI

ALL REINFORCING STEEL SHALL BE A615 OR A617 GRADE 60.  
\*INCLUDES 60#/FT FUTURE SURFACE.

ALL W-BEAMS AND COVER PLATES ARE CONSIDERED MAIN LOAD CARRYING MEMBERS AND SHALL MEET THE LONGITUDINAL CHARTER V-NOTCH TEST SPECIFIED IN SECTION 807.05 OF THE STANDARD SPECIFICATIONS.  
METHOD OF DESIGN: LOAD FACTOR

**ROUNDING DETAIL**

NOTE: SCALE: NONE  
WORKING POINT MATCHES THEORETICAL ROADWAY GRADE.

**DETAILS OF STANDARD 35'-90' COMPOSITE W-BEAM SPANS**

CONC. PARAPET RAIL (OPEN OR CLOSED)

40'-0" CL. RDWY. 0.02% PEAKED CROWN

ROUTE 19 SEC. 5

**ARKANSAS STATE HIGHWAY COMMISSION**

LITTLE ROCK, ARK.

DRAWN BY: L.M. DATE: 6-28-78  
CHECKED BY: M.C. DATE: 6-29-78  
DESIGNED BY: G.V. DATE: 6-28-78

BRIDGE NO. 5877  
5878

DRAWING NO. 23713



DATE REVISION	DATE FILMED	DATE REVISION	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
4-27-87	6-27-87			6	ARK.			
						JOB NO. R30007	43	129
				① 5878 LAYOUT 23714				

**Notes**

For Guard Rail and R/W Data, See Roadway Plans.  
Use Type IA Approach Gutters at both ends of Bridge, See Drwg. Nos. 1898U-1 and 1898U-2.

**GENERAL NOTES**

BENCH MARK: C.P.S. IN COMB. POLE 45' RIGHT OF STA. 591+86, ELEV. 256.59.

CONSTRUCTION SPECIFICATIONS: ARKANSAS STATE HIGHWAY COMMISSION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, EDITION OF 1978 AND APPLICABLE SPECIAL PROVISIONS.

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

LIVE LOADING: HS20

METHOD OF DESIGN: LOAD FACTOR

MATERIALS AND STRENGTHS:  
CLASS 8 CONCRETE (SUBSTRUCTURE)  $f'_c = 3,500$  PSI  
CLASS 5 (AE) CONCRETE (SUPERSTRUCTURE)  $f'_c = 3,500$  PSI  
REINFORCING STEEL (A615 OR A617, GRADE 60)  $f_y = 60,000$  PSI  
STRUCTURAL STEEL (A588)  $f_y = 50,000$  PSI  
STRUCTURAL STEEL (A36)  $f_y = 36,000$  PSI

BORING LOGS: ORIGINAL BRIDGE SITE BORING LOGS MAY BE OBTAINED FROM THE PROGRAMS AND CONTRACTS DIVISION UPON REQUEST.

ALL PILING SHALL BE HP10X42. PILING IN BENTS 1 AND 4 SHALL BE DRIVEN TO A MINIMUM BEARING CAPACITY OF 44 TONS PER PILE. PILING IN BENTS 2 AND 3 SHALL BE DRIVEN TO A MINIMUM BEARING CAPACITY OF 55 TONS PER PILE. ALL PILING SHALL BE DRIVEN WITH AN APPROVED AIR, STEAM, OR DIESEL HAMMER TO A MINIMUM PENETRATION OF 15' BELOW THE GROUND LINE INTO MATERIAL DESIGNATED ON THE BORING LOGS AS VERY HARD CALCAREOUS CLAY OR VERY HARD CHALKY CLAY. LENGTHS OF PILING SHOWN ARE ASSUMED FOR ESTIMATING QUANTITIES ONLY. ACTUAL LENGTHS TO BE DETERMINED IN THE FIELD. DRIVE ONE 25' TEST PILE IN BENT NO. 1 AND ONE 35' TEST PILE IN BENT NO. 3.

PREDRILLING MAY BE REQUIRED TO OBTAIN 15' MINIMUM PENETRATION. BACKFILL WITH CLASS 8 CONCRETE, SB-2, OR OTHER SUITABLE MATERIAL AS DIRECTED BY THE ENGINEER. ANY COST FROM PREDRILLING AND BACKFILLING SHALL BE CONSIDERED SUBSIDIARY TO THE ITEM "STEEL BEARING PILING (HP10X42)."

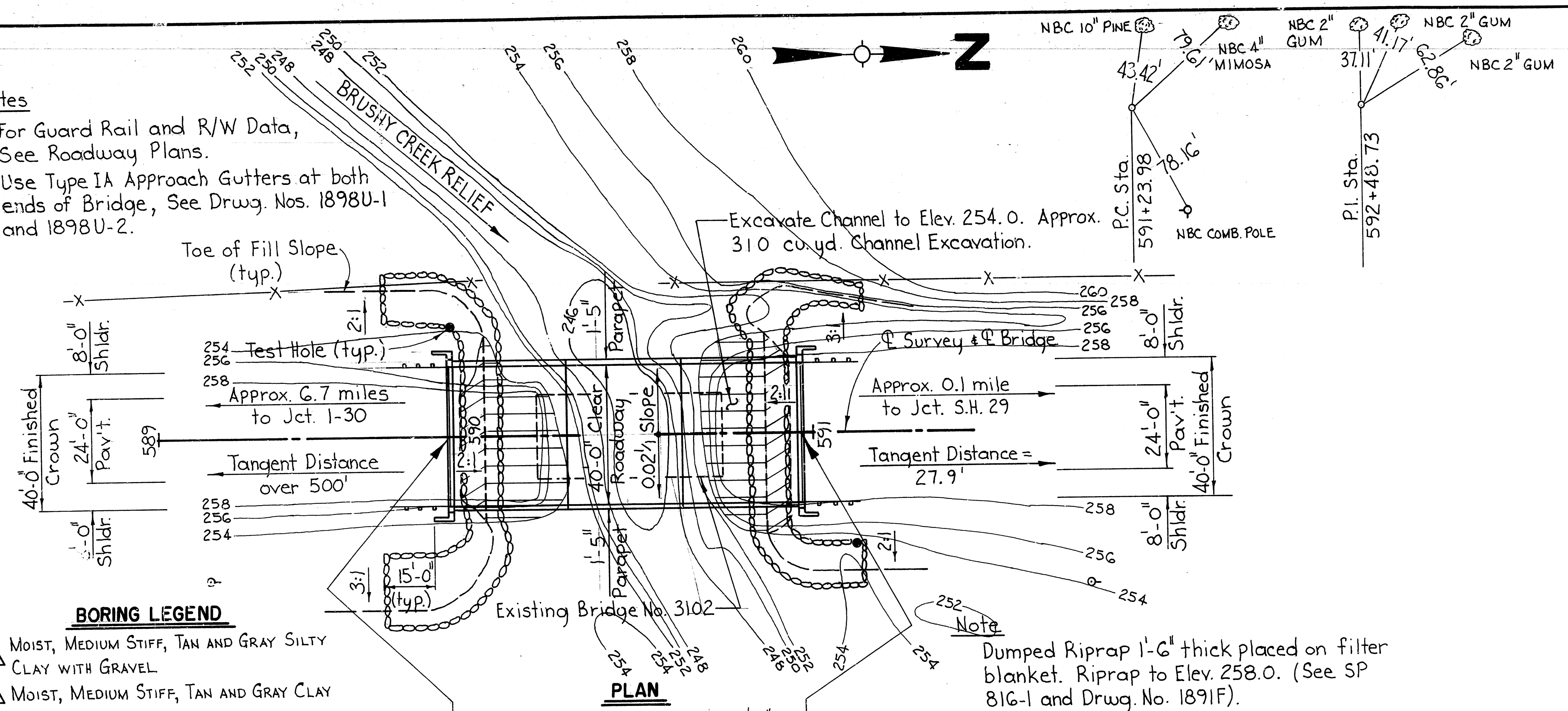
THE CONCRETE BRIDGE DECK SHALL BE GIVEN A TINE FINISH AS SPECIFIED FOR FINAL FINISHING IN SUBSECTION 802.23 FOR CLASS 6, ROADWAY SURFACE FINISH.

FOR DETAILS OF BENTS, SEE DWG. NO. 23712  
FOR DETAILS OF 35' COMP. W-BEAM SPANS, SEE DWG. NO. 23713  
FOR DETAILS OF STEEL BEARING PILING, SEE DWG. NO. 14995A

THE CONTRACTOR SHALL REMOVE THE EXISTING 57' BRIDGE IN ACCORDANCE WITH SECTION 205 OF THE STANDARD SPECIFICATIONS. THE BRIDGE (NO. 3102) CONSISTS OF THREE 19' SPANS WITH PRECAST CONCRETE DECK UNITS AND ASPHALT OVERLAY ON CONCRETE PILE BENTS. ALL MATERIAL FROM THE EXISTING BRIDGE SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

THE CONTRACTOR SHALL CONSTRUCT A TEMPORARY BRIDGE APPROXIMATELY 50' EAST OF CENTERLINE CONSTRUCTION. THE BRIDGE SHALL HAVE A MINIMUM LENGTH OF 50', A MINIMUM ROADWAY WIDTH OF 20', A MINIMUM DECK ELEVATION OF 257.0 AND H15 DESIGN LIVE LOAD CAPACITY. SEE SPECIAL PROVISION 603-5 AND STANDARD DRAWINGS 2391 AND 2392. TIMBER PILING AND PINE TIMBER ARE USED ON THIS TEMPORARY BRIDGE, THE "TERIALS SHALL BE TREATED WITH A PRESERVATIVE ACCORDING TO THE STANDARD SPECIFICATIONS."

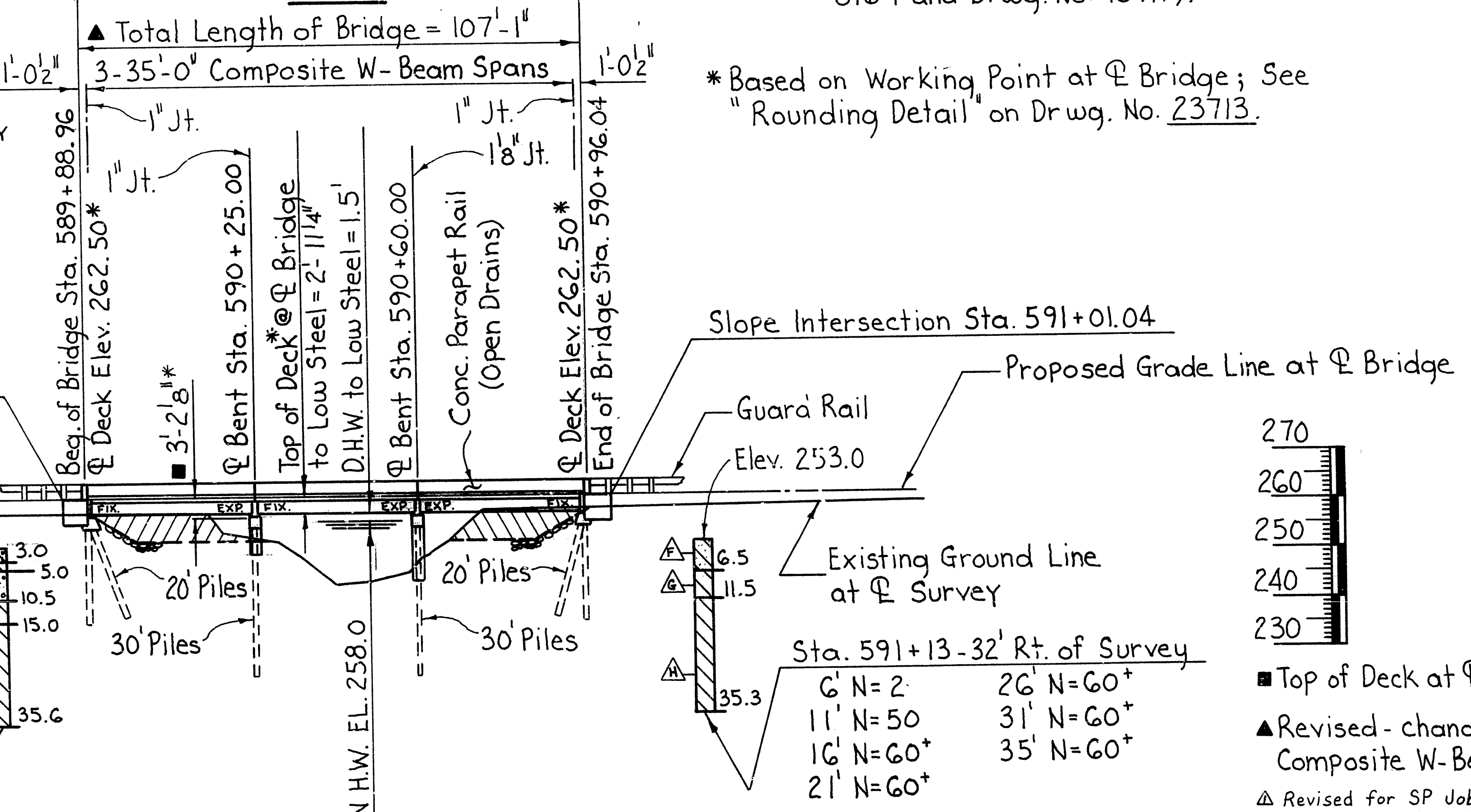
\*\* See also SP Job R30007 "Removal of Existing Bridge Structures"



**BORING LEGEND**

- ▲ MOIST, MEDIUM STIFF, TAN AND GRAY SILTY CLAY WITH GRAVEL
- ▲ MOIST, MEDIUM STIFF, TAN AND GRAY CLAY
- ▲ MOIST, DENSE, BROWN SANDY GRAVEL
- ▲ MOIST, HARD, TAN AND GRAY CALCAREOUS CLAY
- ▲ MOIST, VERY HARD, TAN AND GRAY CALCAREOUS CLAY
- ▲ MOIST, VERY SOFT, GRAY AND BROWN SANDY CLAY
- ▲ MOIST, HARD, LIGHT GRAY CHALKY CLAY
- ▲ MOIST, VERY HARD, LIGHT GRAY CHALKY CLAY

**PLAN**



\* Based on Working Point at  $\Phi$  Bridge; See "Rounding Detail" on Drwg. No. 23713.

Note: Pile Encasements shall extend 3' into the ground and to the bottom of Cap. See Drawing No. 14995A.

**LAYOUT OF BRIDGE OVER BRUSHY CREEK RELIEF**

I-30 - NORTH

NEVADA COUNTY

ROUTE 19 SEC. 5

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: TEB DATE: 31 JUL 86

CHECKED BY: CES DATE: 2-8-86

DESIGNED BY: C.P.B. DATE: 7/86

SCALE: 1" = 20'-0"

BRIDGE NO. 5878

DRAWING NO. 23714

*Visual Inspection*  
BRIDGE ENGINEER