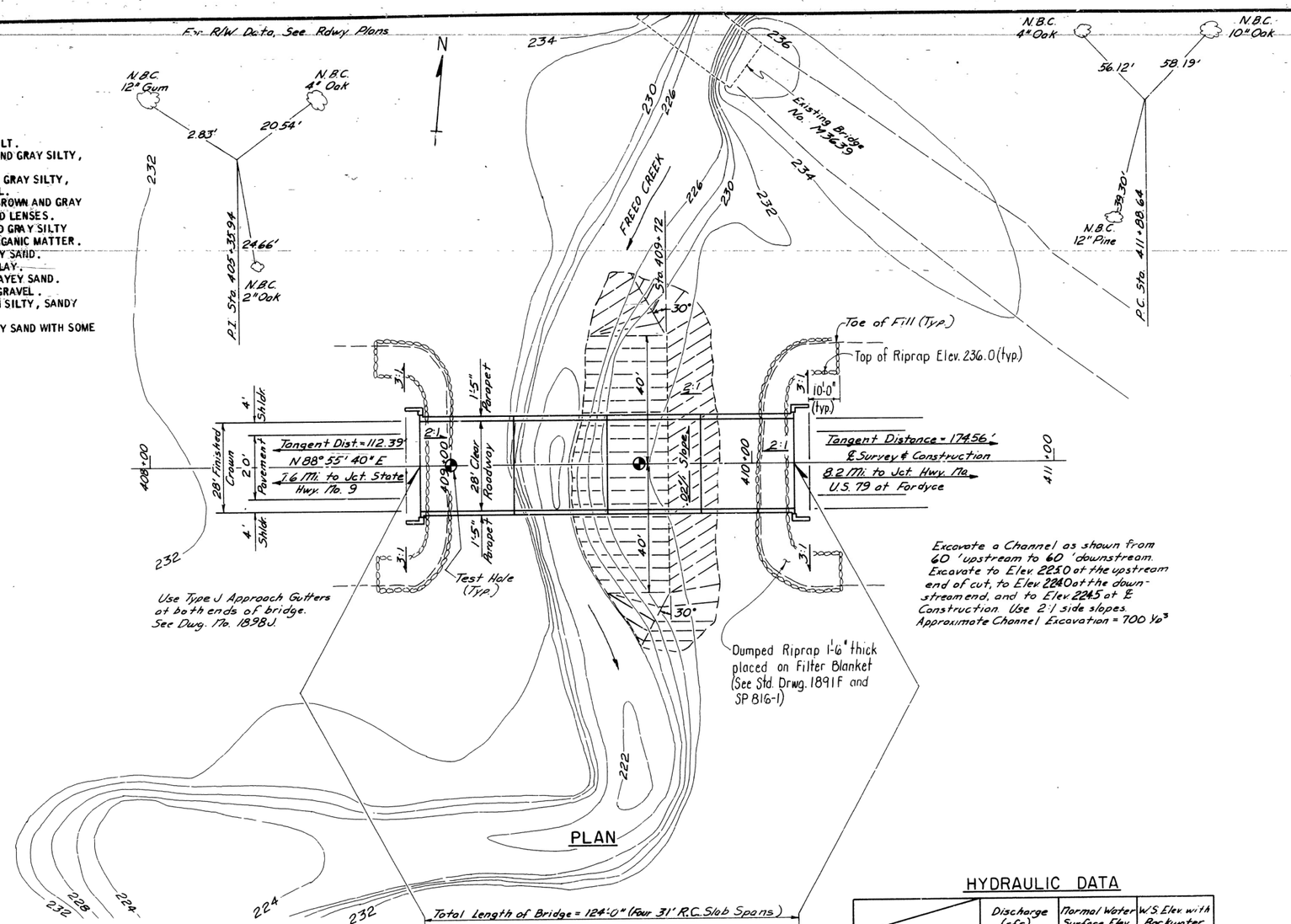
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		7928	21	77

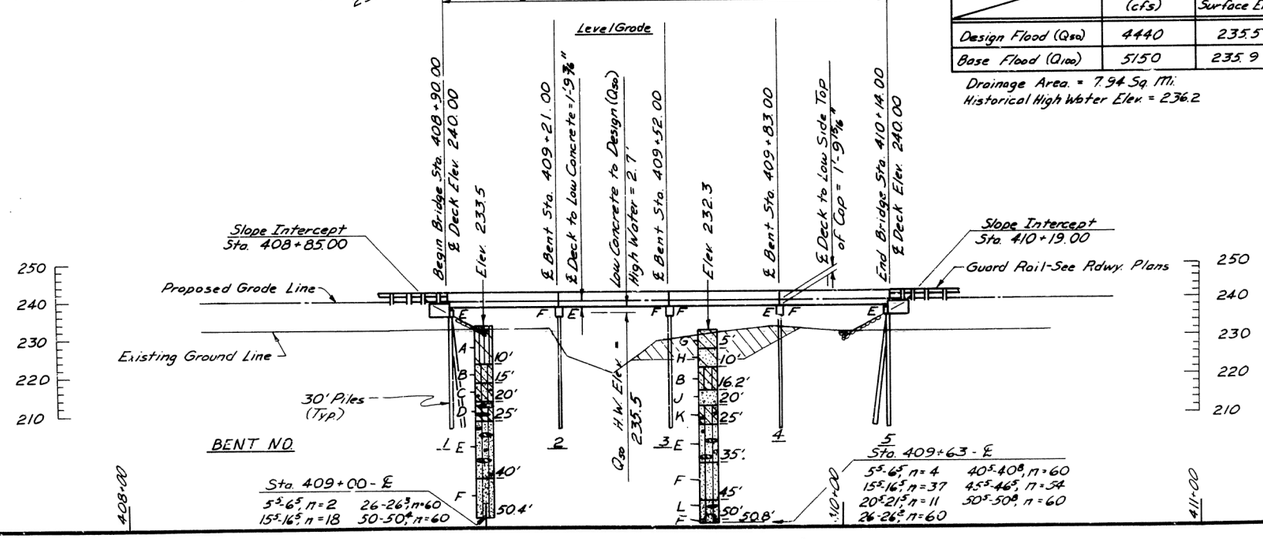
(I) 6148 - LAYOUT - 27666

BORING LEGEND

A. MOIST, SOFT, BROWN CLAYEY SILT.
B. MOIST, MEDIUM STIFF, BROWN AND GRAY SILTY, SANDY CLAY.
C. MOIST, VERY STIFF, BROWN AND GRAY SILTY, SANDY CLAY WITH SOME GRAVEL.
D. MOIST, VERY STIFF, MOTTLED BROWN AND GRAY SILTY CLAY WITH SILT AND SAND LENSES.
E. MOIST, VERY DENSE, BROWN AND GRAY SILTY SAND WITH CLAY SEAMS AND ORGANIC MATTER.
F. MOIST, VERY DENSE, GRAY SILTY SAND.
G. MOIST, SOFT, BROWN SANDY CLAY.
H. MOIST, VERY LOOSE, BROWN CLAYEY SAND.
J. WET, DENSE, BROWN SAND AND GRAVEL.
K. MOIST, STIFF, GRAY AND BROWN SILTY, SANDY CLAY WITH ORGANIC MATTER.
L. MOIST, VERY DENSE, GRAY SILTY SAND WITH SOME CLAY SEAMS.



Total Length of Bridge = 124'-0" (Four 31' R.C. Slab Spans)



HYDRAULIC DATA

	Discharge (cfs)	Normal Water Surface Elev.	W.S. Elev. with Backwater
Design Flood (Q_{50})	4440	235.5	238.0
Base Flood (Q_{100})	5150	235.9	238.7

Drainage Area = 7.94 Sq. Mi.
Historical High Water Elev. = 236.2

GENERAL NOTES

BENCH MARK: COTTON PICKER SPINDLE IN ROOT OF 30 INCH OAK 29 FEET LEFT OF STA. 409+80. ELEV. 234.50.

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

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

DESIGN LIVE LOADING: HS20

METHOD OF DESIGN: LOAD FACTOR

CONCRETE IN THE SUBSTRUCTURE SHALL BE CLASS "S". CONCRETE IN THE SUPERSTRUCTURE SHALL BE CLASS "S(AE)." ALL CONCRETE SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH, f'c = 3500 PSI, AND SHALL BE POURED IN THE DRY. EXPOSED CORNERS TO BE CHAMFERED 3/4 INCH UNLESS NOTED OTHERWISE.

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

ALL PILING SHALL BE 16" OCT. OR SQ. PRECAST CONCRETE AND SHALL BE DRIVEN WITH AN APPROVED AIR, STEAM, OR DIESEL HAMMER TO A MINIMUM BEARING CAPACITY OF 44 TONS PER PILE AND TO A MINIMUM PENETRATION OF 20 FEET BELOW THE GROUND LINE. LENGTHS OF PILING SHOWN ARE ASSUMED FOR ESTIMATING QUANTITIES ONLY; ACTUAL LENGTHS TO BE DETERMINED IN THE FIELD. DRIVE ONE 35 FT. TEST PILE IN BENT NO. 2 AND ONE 35 FT. TEST PILE IN BENT NO. 4. PILE SHAPES SHALL NOT BE MIXED ON THIS BRIDGE. PILES IN END BENTS TO BE DRIVEN AFTER EMBANKMENT TO BOTTOM OF CAP IS IN PLACE.

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

FOR DETAILS OF END BENTS, SEE DWG. NO. 27664
FOR DETAILS OF INT. BENTS, SEE DWG. NO. 27664
FOR DETAILS OF 31' R.C. SLAB SPANS, SEE DWG. NO. 27665.
FOR DETAILS OF APPROACH GUTTERS, SEE DWG. NO. 1898J

REMOVAL OF EXISTING BRIDGE: THE CONTRACTOR SHALL REMOVE EXISTING BRIDGE NO. M3639 IN ACCORDANCE WITH SECTION 205 OF THE STANDARD SPECIFICATIONS AFTER THE NEW BRIDGE IS OPEN TO TRAFFIC. THE EXISTING 18 FT. X 38 FT. BRIDGE LOCATED 130 FT. UPSTREAM OF THE PROPOSED BRIDGE, CONSISTS OF STEEL STRINGERS AND CONCRETE DECK SUPPORTED BY CONCRETE ABUTMENTS.

THE FOLLOWING STRUCTURAL STEEL FROM THE EXISTING BRIDGE SHALL BE RETAINED BY THE STATE:

2 - 19" X 45' I-BEAMS
5 - 15" X 45' I-BEAMS
2 - 15" X 45' CHANNELS

ALL OTHER MATERIAL SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

ALTERNATE NO. 1
LAYOUT OF BRIDGE
OVER
FREED CREEK
DALLAS COUNTY
ROUTE 273 SEC. 1

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

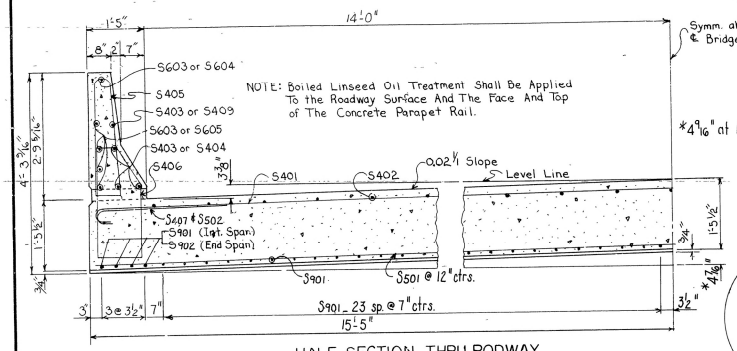
DRAWN BY: CES DATE: 4-18-85
CHECKED BY: AJD DATE: 7-30-85
DESIGNED BY: JAS DATE:
SCALE: 1" = 20'

BRIDGE ENGINEER

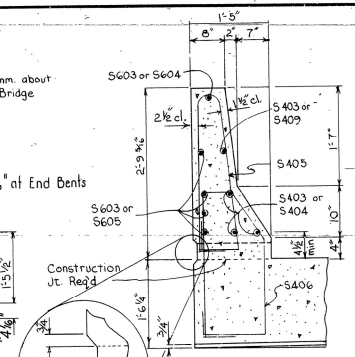
BRIDGE NO. 6148 **DRAWING NO.** 27666

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		7928	20	77

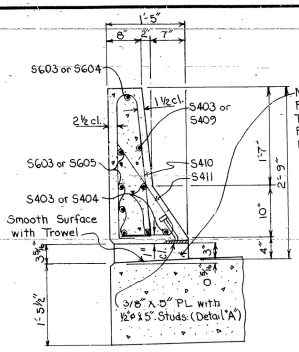
① 6147, 6148 - SPAN - 27665



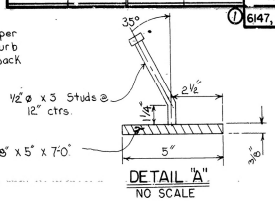
HALF SECTION THRU RODWAY
SCALE: 3/4" = 1'-0"



SECTION A-A
SCALE: 1" = 1'-0"

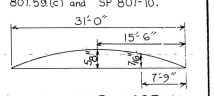


SECTION B-B
SCALE: 1" = 1'-0"

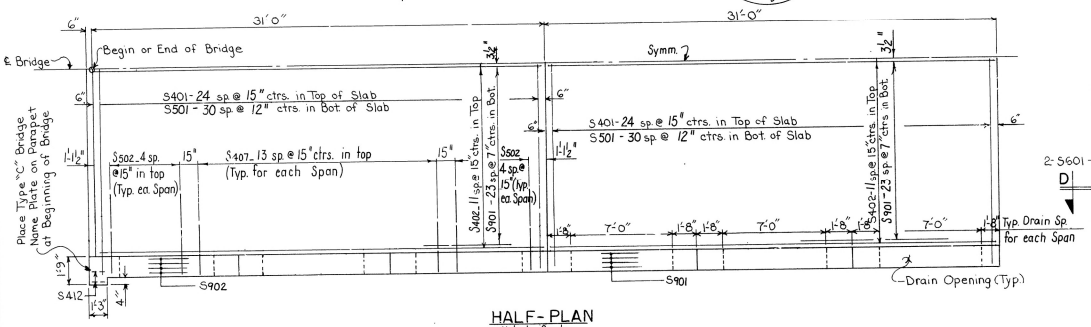


DETAIL "A"
NO SCALE

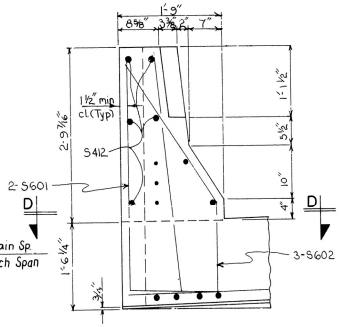
NOTE: The surfaces of the 3/8" Plate which will not be in contact with concrete shall receive two coats of paint in the shop. These coats shall be those specified as first Shop Coat & Second Field coat in Sect. 807.59(a) and 807.59.(c) and SP 807-10.



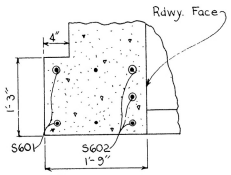
D.L. CAMBER DIAGRAM



HALF-PLAN
Not to Scale



VIEW C-C
SCALE: 1" = 1'-0"

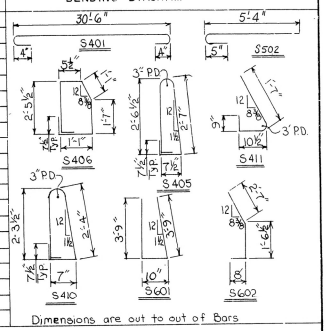


SECTION D-D
SCALE: 1" = 1'-0"

BAR LIST - EA. SPAN

MARK	NO. REQ'D. END	NO. REQ'D. INT.	LENGTH	PIN DIA.
S401	25	25	31'-6"	3"
S402	23	23	30'-8"	Str.
S403	16	24	9'-10"	Str.
S404	6	—	10'-4"	Str.
S405	44	48	6'-10"	2"
S406	44	48	7'-6"	2"
S407	28	28	3'-3"	Str.
S501	31	31	30'-6"	Str.
S409	2	—	9'-5"	Str.
S410	42	42	6'-4"	2"
S411	42	42	3'-2"	2"
S412	10	—	0'-11"	Str.
S601	4	—	8'-1"	3 3/4"
S602	6	—	4'-7"	3 3/4"
S603	20	30	9'-10"	Str.
S604	2	—	9'-5"	Str.
S605	8	—	10'-4"	Str.
S901	48	56	30'-8"	Str.
S902	8	—	31'-2"	Str.
S502	20	20	5'-11"	3 3/4"

BENDING DIAGRAM



GENERAL NOTES

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

REINFORCING STEEL TO BE ASTM A615 OR A617, GR. 60.

BAR SUPPORTS FOR REINFORCING BARS WILL NOT BE PAID FOR DIRECTLY, BUT WILL BE CONSIDERED SUBSIDIARY TO THE ITEM "REINFORCING STEEL." SHOP LISTS AND BENDING DIAGRAMS OF REINFORCING STEEL, INCLUDING WIRE SUPPORTS, MAY BE SUBMITTED FOR APPROVAL BEFORE FABRICATION IS BEGUN.

ROOFING FELT, BITUMINOUS FELT, PREFORMED JOINT, STRUCTURAL STEEL, AND POURED SYNTHETIC POLYMER JOINTS SHALL BE MEASURED AND PAID FOR AS CLASS S(AE) CONCRETE.

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

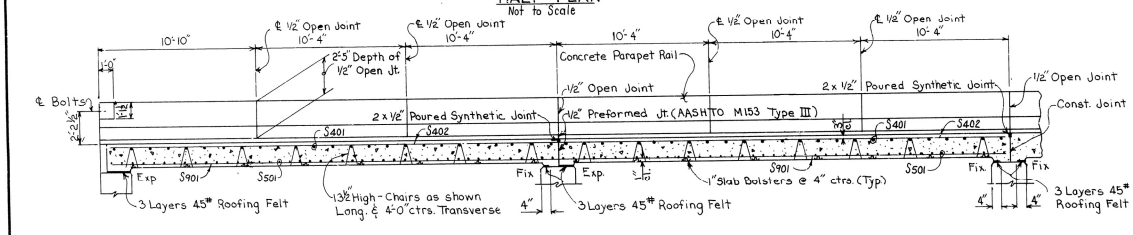
DESIGN SPECIFICATIONS: AASHTO 1983 WITH CURRENT INTERIM SPECIFICATIONS.

DESIGN LIVE LOADING: HS 20-44

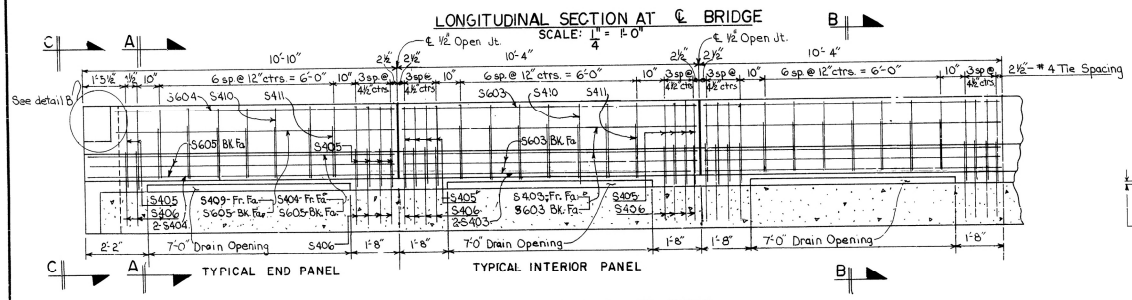
LOAD DISTRIBUTION TO SLAB: DEAD LOAD - 263 PSF; LIVE LOAD - 0.172 WHEELS/FT. OF WIDTH PLUS 30% IMPACT.

COMPRESSIVE STRENGTH OF CLASS S(AE) CONCRETE, f'c = 3,500 PSI
YIELD STRENGTH OF REINFORCEMENT = 60,000 PSI

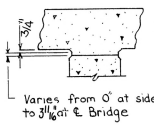
LOAD FACTOR USED FOR DESIGN OF SLAB.



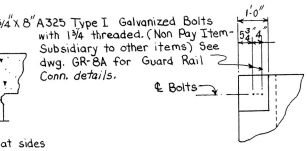
LONGITUDINAL SECTION AT ℄ BRIDGE
SCALE: 1/4" = 1'-0"



LONGITUDINAL SECTION AT CURB
SCALE: 1/2" = 1'-0"



RISER DETAIL
NO SCALE



DETAIL - B

SPAN	REINFORCING	CLASS S CONCRETE	STRUCTURAL STEEL
End	9411 Lbs.	58.05 Cu yds	282 lbs
Int.	9333 Lib	57.60 Cu yds	282 lbs

ALTERNATE NO. 1

DETAILS OF STANDARD
31'-0" R.C. SLAB SPAN
28'-0" CL. RDWY. - CONC. PARAPET RAIL

ROUTE 273 SEC. 1

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: MRJ DATE: 4 JUNE 84
CHECKED BY: MCC DATE: 6-25-84
DESIGNED BY: Std. DATE:
SCALE: AS SHOWN

BRIDGE ENGINEER

BRIDGE NO. 6147, 6148 DRAWING NO. 27665