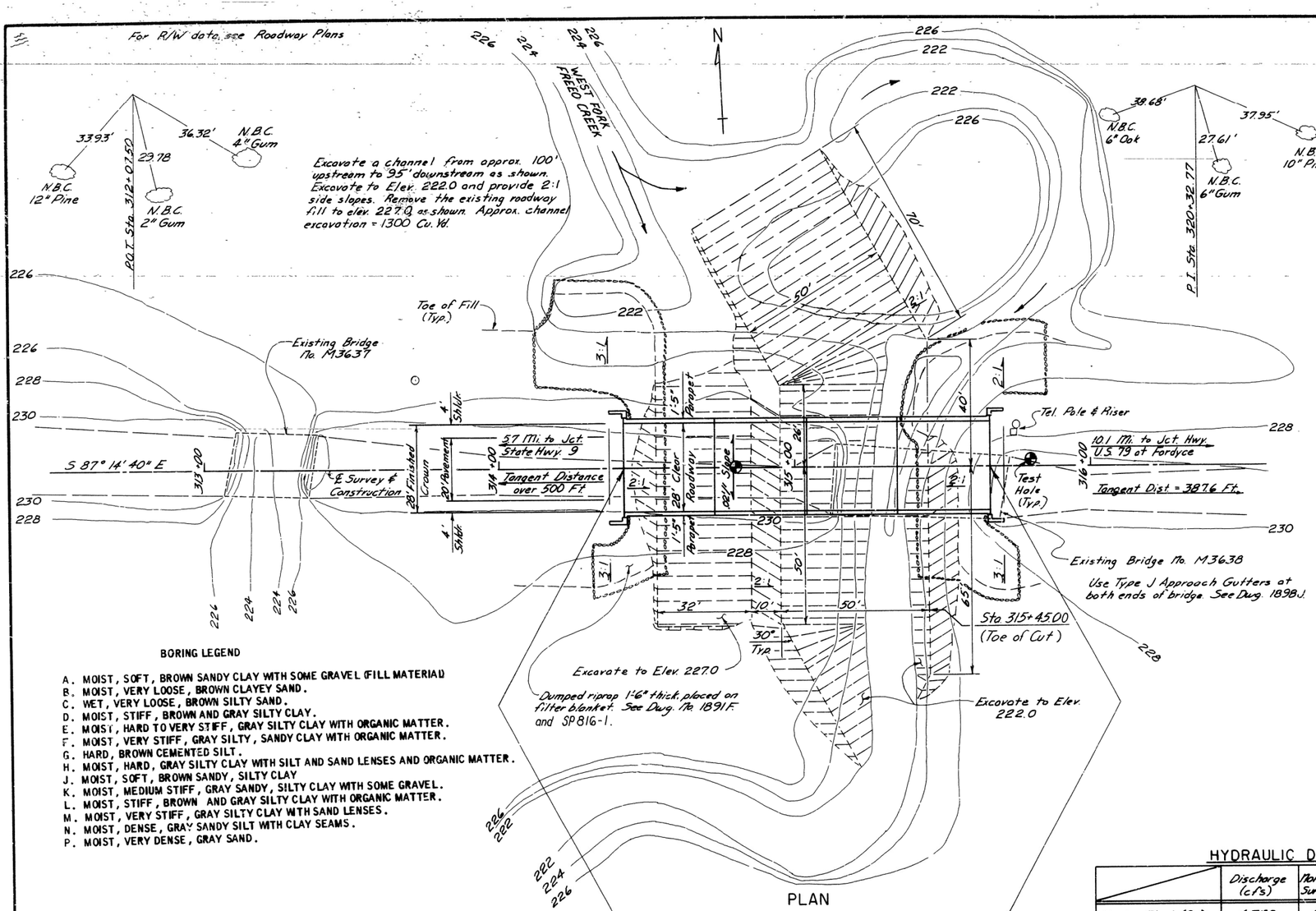
DATE REVISED	DATE PLOTTED	DATE REVISED	DATE PLOTTED	FED. ROAD NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		7928	18	77

(1) 6147 – LAYOUT – 27663

For R/W data, see Roadway Plans



PLAN

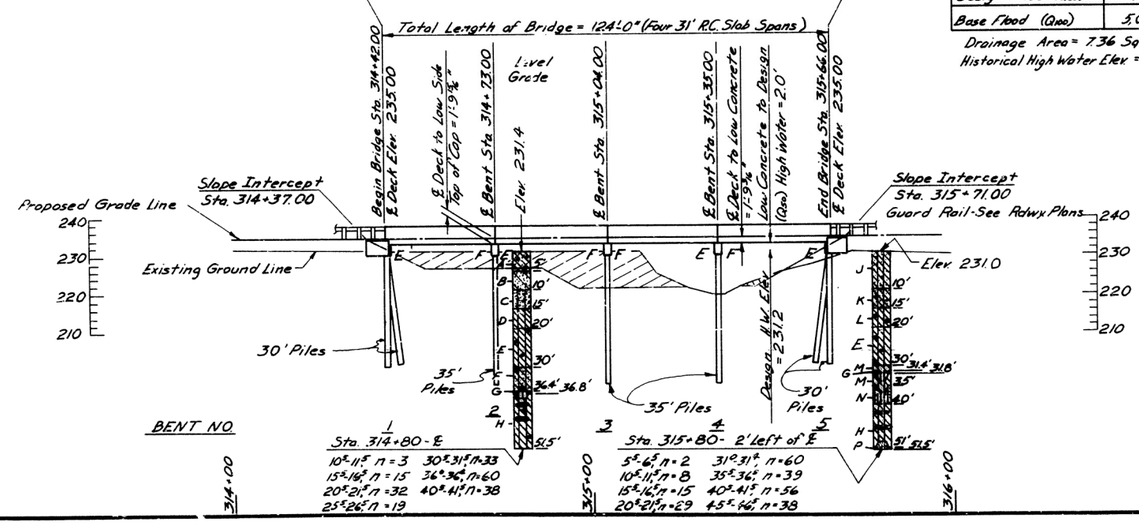
BORING LEGEND

A. MOIST, SOFT, BROWN SANDY CLAY WITH SOME GRAVEL (FILL MATERIAL)
B. MOIST, VERY LOOSE, BROWN CLAYEY SAND.
C. WET, VERY LOOSE, BROWN SILTY SAND.
D. MOIST, STIFF, BROWN AND GRAY SILTY CLAY.
E. MOIST, HARD TO VERY STIFF, GRAY SILTY CLAY WITH ORGANIC MATTER.
F. MOIST, VERY STIFF, GRAY SILTY, SANDY CLAY WITH ORGANIC MATTER.
G. HARD, BROWN CEMENTED SILT.
H. MOIST, HARD, GRAY SILTY CLAY WITH SILT AND SAND LENSES AND ORGANIC MATTER.
J. MOIST, SOFT, BROWN SANDY, SILTY CLAY
K. MOIST, MEDIUM STIFF, GRAY SANDY, SILTY CLAY WITH SOME GRAVEL.
L. MOIST, STIFF, BROWN AND GRAY SILTY CLAY WITH ORGANIC MATTER.
M. MOIST, VERY STIFF, GRAY SILTY CLAY WITH SAND LENSES.
N. MOIST, DENSE, GRAY SANDY SILT WITH CLAY SEAMS.
P. MOIST, VERY DENSE, GRAY SAND.

HYDRAULIC DATA

	Discharge (cfs)	Normal Water Surface Elev.	W.S. Elev. with Backwater
Design Flood (Q_{50})	4,330	231.2	233.0
Base Flood (Q_{100})	5020	231.6	233.7

Drainage Area = 7.36 Sq. Mi.
Historical High Water Elev. = 231.7



GENERAL NOTES

BENCH MARK: NAIL IN SIDE OF 10 INCH GUM 68 FT. LEFT OF STA. 313+91, ELEV. 228.31

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: HS 20-44

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 SHALL 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. 1 AND ONE 40 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.

THE CONTRACTOR SHALL CONSTRUCT A DETOUR BRIDGE 40 FT. DOWNSTREAM FROM THE PROPOSED BRIDGE. THE TEMPORARY BRIDGE SHALL BE DESIGNED FOR HS LIVE LOAD AND SHALL BE 80 FT. LONG WITH A 20 FT. CLEAR ROADWAY AND MINIMUM DECK ELEVATION OF 231.0. THE PROPOSED 50 FT. CHANNEL SHALL BE PROVIDED UNDER THE TEMPORARY BRIDGE BEFORE PLACING TRAFFIC ON THE DETOUR.

SEE STANDARD DWG. NOS. 2391 AND 2392 AND SPECIAL PROVISION 603-3. UNTREATED TIMBER PILING AND UNTREATED PINE TIMBER MAY BE USED IN THE CONSTRUCTION OF THE TEMPORARY BRIDGE.

REMOVAL OF EXISTING BRIDGE: THE CONTRACTOR SHALL REMOVE EXISTING BRIDGE NOS. M3637 AND M3638 IN ACCORDANCE WITH SECTION 205 OF THE STANDARD SPECIFICATIONS. THE EXISTING 20 FT. X 28 FT. AND 20 ft. x 59 FT. BRIDGES CONSIST OF TIMBER STRINGERS AND DECK SUPPORTED BY TIMBER BENTS.

THE FOLLOWING TREATED TIMBER FROM THE EXISTING BRIDGE SHALL BE RETAINED BY THE STATE:
30 - 4" X 12" X 16' (BR. M3637)
40 - 6" X 10" X 16' (BR. M3638)

ALL OTHER MATERIAL SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

ALTERNATE NO. 1
LAYOUT OF BRIDGE
OVER
WEST FORK OF FREEO CREEK
DALLAS COUNTY
ROUTE 273 SEC. 1

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

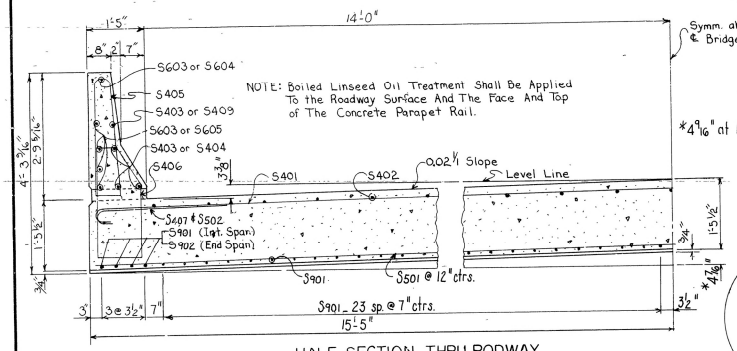
DRAWN BY: CES DATE: 4-17-85
CHECKED BY: AJD DATE: 7-30-85
DESIGNED BY: JAS DATE:
SCALE:

BRIDGE ENGINEER

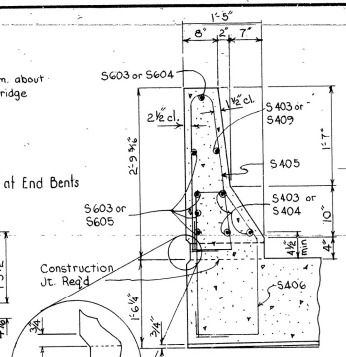
BRIDGE NO. 6147 **DRAWING NO.** 27663

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

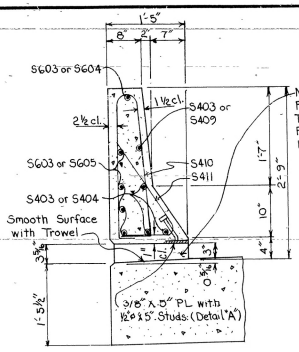
① 6147, 6148 - SPAN - 27665



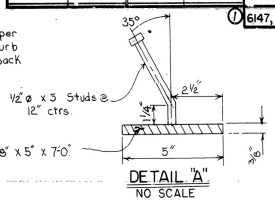
HALF SECTION THRU RODWAY
SCALE: 3/4" = 1'-0"



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

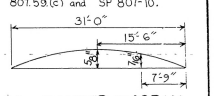


SECTION B-B
SCALE: 1" = 1'-0"

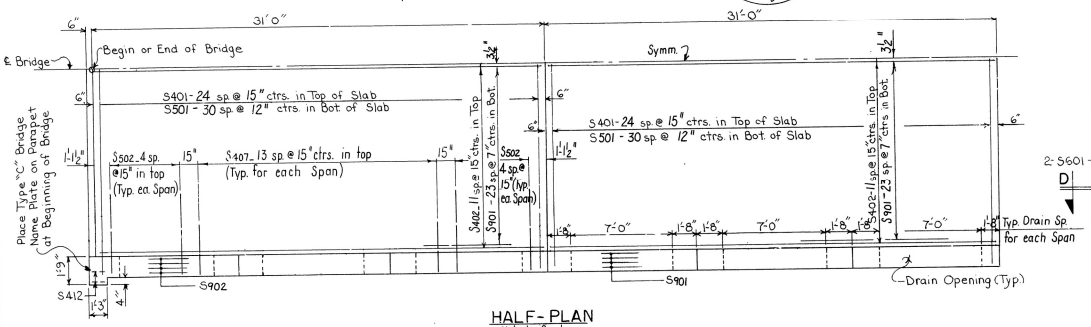


DETAIL "A"
NO SCALE

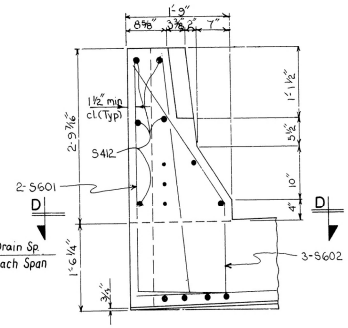
NOTE: The surfaces of the 3/8" Plate which will not be in contact with concrete shall receive two coats of paint in the shop. These coats shall be those specified as first Shop Coat & Second Field coat in Sect. 807.59(a) and 807.59.(c) and SP 807-10.



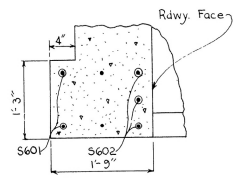
D.L. CAMBER DIAGRAM



HALF-PLAN
Not to Scale



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

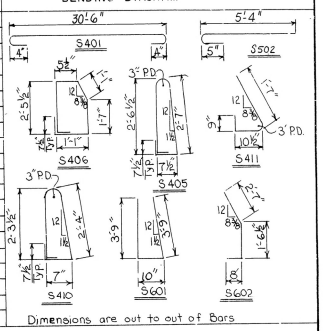


SECTION D-D
SCALE: 1" = 1'-0"

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



Dimensions are out to out of Bars

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.

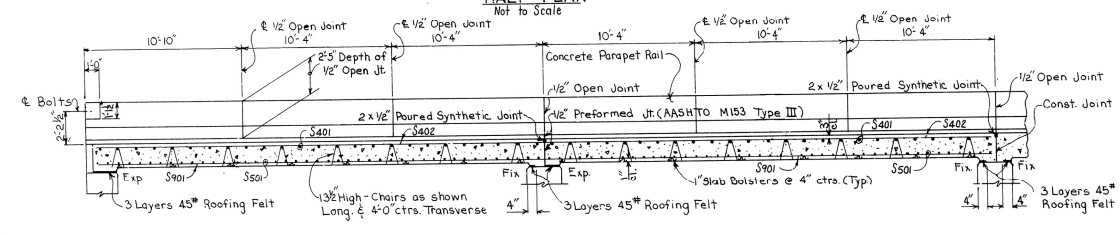
DESIGN SPECIFICATIONS: AASHTO 1983 WITH CURRENT INTERIM SPECIFICATIONS.

DESIGN LIVE LOADING: HS 20-44

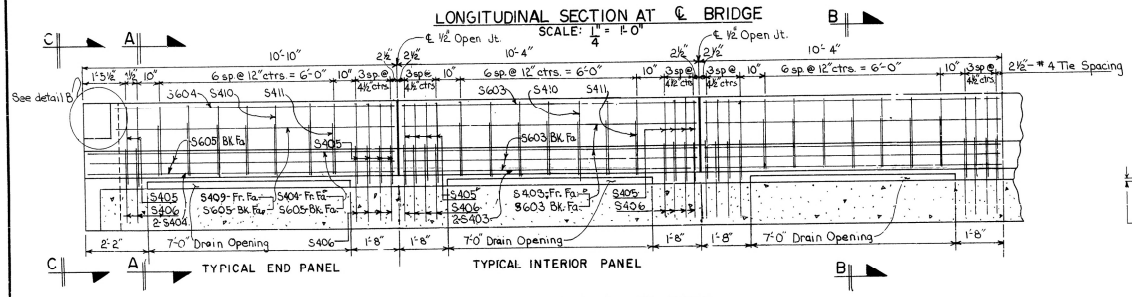
LOAD DISTRIBUTION TO SLAB: DEAD LOAD - 263 PSF; LIVE LOAD - 0.172 WHEELS/FT. OF WIDTH PLUS 30% IMPACT.

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

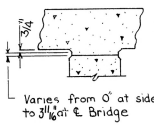
LOAD FACTOR USED FOR DESIGN OF SLAB.



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

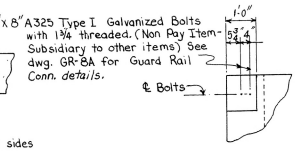


LONGITUDINAL SECTION AT CURB
SCALE: 1/2" = 1'-0"



Varies from 0" at sides to 3 11/16" at ℄ Bridge

RISER DETAIL
NO SCALE



DETAIL - B

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