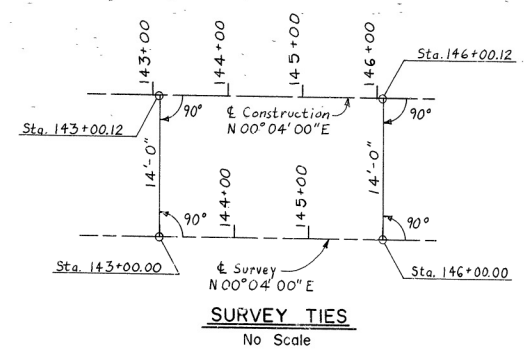
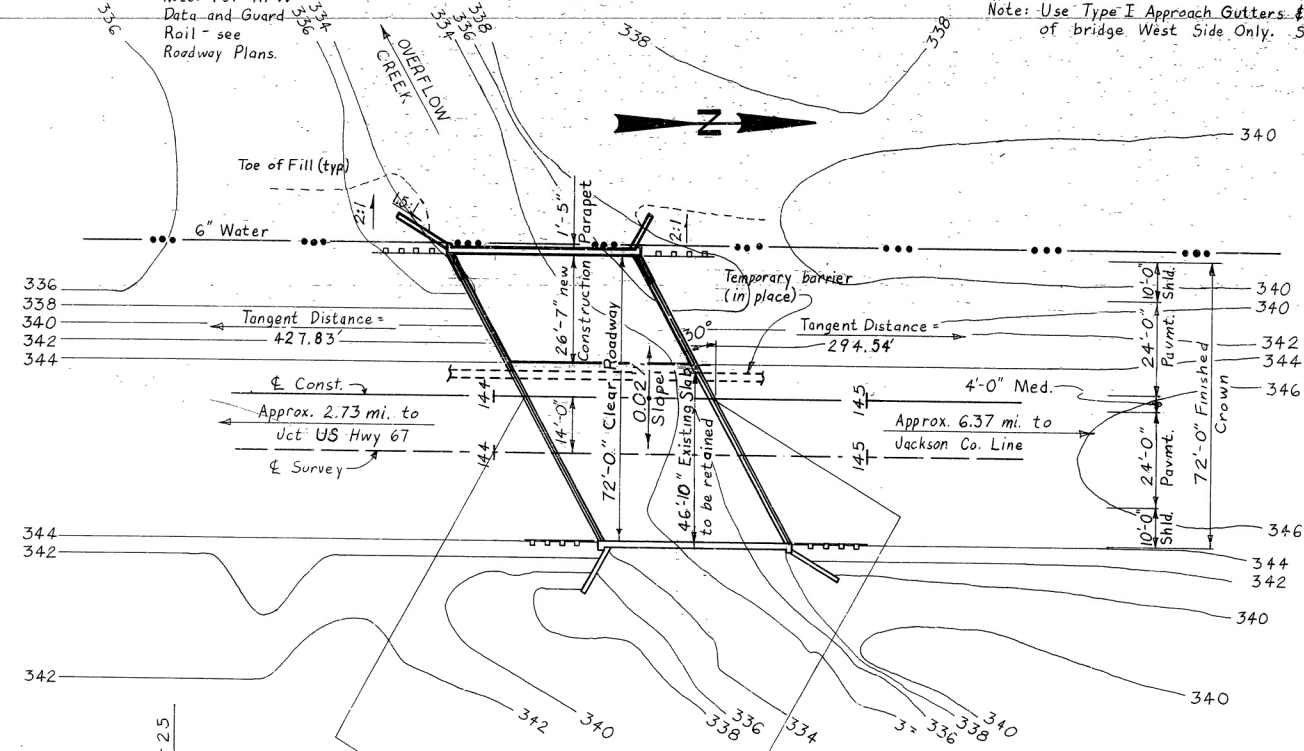


Note: Use Type I Approach Gutters & Slabs at both ends of bridge. West Side Only. See Drwg. No. 29410.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		37	149
				JOB NO.	R50030		2111R LAYOUT	29403



SURVEY TIES
No Scale

GENERAL NOTES

BENCH MARK: COTTON PICKER SPIKE IN SIDE 8" TWIN ELM 44' RT. STATION 143+66, ELEVATION 343.13.

CONSTRUCTION SPECIFICATIONS: ARKANSAS STATE HIGHWAY COMMISSION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, EDITION OF 1976 AND APPLICABLE SPECIAL PROVISION.

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

LIVE LOADING: HS20 METHOD OF DESIGN: LOAD FACTOR

MATERIALS AND STRENGTHS:
CLASS (A)E CONCRETE (SUPERSTRUCTURE) f'c = 3,500 PSI
CLASS S CONCRETE (SUBSTRUCTURE) f'c = 3,500 PSI
REINFORCING STEEL (A615 OR A617, GR. 60) fy = 60,000 PSI
STRUCTURAL STEEL (A572-GR. 50) fy = 50,000 PSI
STRUCTURAL STEEL (A36) fy = 36,000 PSI

FOOTINGS: FOOTINGS FOR ABUTMENTS SHALL BE FOUNDED AT APPROXIMATELY THE SAME ELEVATION AS THE EXISTING FOOTINGS AND SHALL BE A MINIMUM OF 1'-6" INTO ROCK. FOUNDATIONS FOR FOOTINGS SHALL BE PREPARED IN ACCORDANCE WITH SUBSECTION 801.04 OF THE STANDARD SPECIFICATIONS.

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

THE WORK TO BE DONE CONSISTS OF WIDENING THE EXISTING ABUTMENTS AND COMPOSITE W-BEAM SUPERSTRUCTURE. TRAFFIC SHALL BE MAINTAINED ON THE EXISTING STRUCTURE DURING THE WIDENING. AFTER WIDENING IS COMPLETED THE TEMPORARY BARRIER SHALL BE REMOVED. SEE SP JOB NO. R50030 "WIDENING EXISTING BRIDGE STRUCTURE" FOR ADDITIONAL REQUIREMENTS.

PLANS OF THE EXISTING BRIDGE ARE AVAILABLE TO THE CONTRACTOR UPON REQUEST.

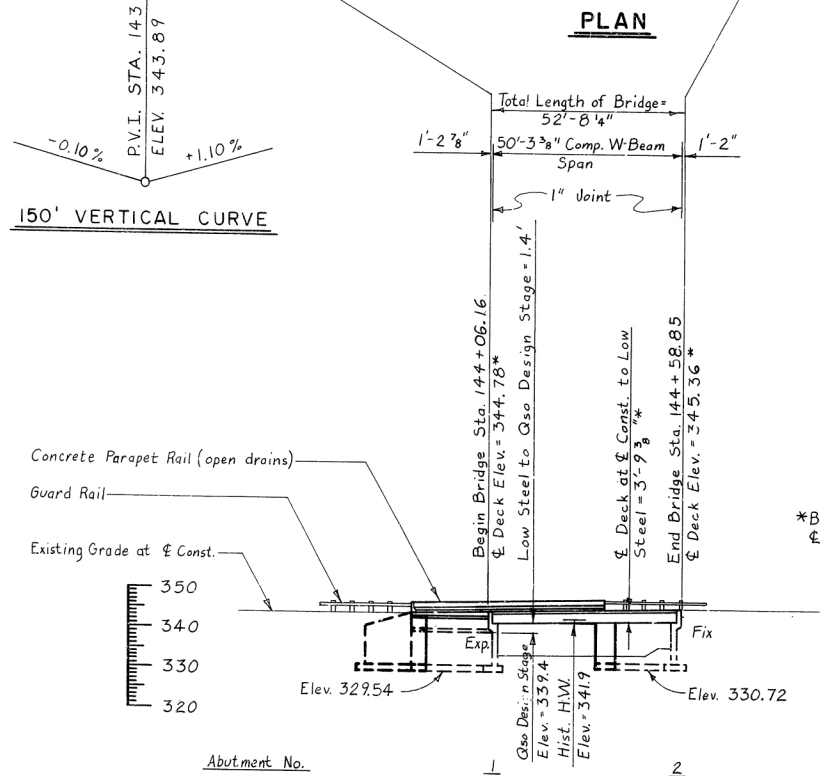
ALL DIMENSIONS RELATING TO EXISTING BRIDGE ARE TO BE VERIFIED IN THE FIELD AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING REMODELING TO EXISTING STRUCTURE.

DETAIL DRAWINGS:	DRAWING NO.
WIDENING ABUTMENTS	29404 - 29407
WIDENING COMP. W-BEAM SPAN	29408 - 29409
APPROACH SLAB AND GUTTER	29410

**LAYOUT OF BRIDGE OVER
OVERFLOW CREEK
BALD KNOB - VELVET RIDGE (4R)
WHITE COUNTY**

ROUTE 167 SEC. 14
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: DLV DATE: 20 May 87
CHECKED BY: CES DATE: 9-24-87
DESIGNED BY: DLV DATE: May 87
SCALE: 1" = 20' or as Noted



DESIGN FLOOD

Q50 = 1960 c.f.s.
Normal W.S. Elev. 339.4
W.S. with Bkwtr. Elev. 340.4

ELEVATION

DA = 1320 acres

BASIC FLOOD

Q100 = 2280 c.f.s.
Normal W.S. Elev. 339.8
W.S. with Bkwtr. Elev. 341.1

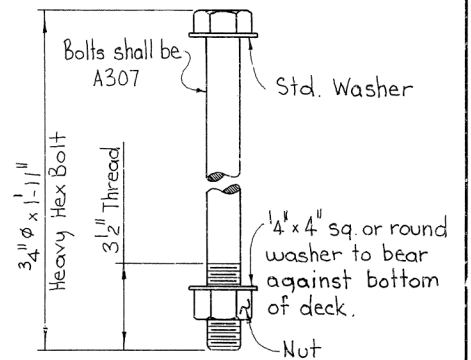
- △ Tolerance: Minus = $\frac{1}{4}''$; Plus = $1''$
- △ See Standard Drwg. No. 14990H; "Slab Thickening and/or Haunch Detail"
- △ Working Point to Gutter Line
- △ These dimensions are taken at $\frac{1}{4}''$ Bearing & $\frac{1}{4}''$ Beam

Slab Reinforcing:
Transverse: S501 @ 15" ctrs. top and bottom (Alternate) with S601 @ 15" ctrs. bent up over beams; S502 top and bottom as shown
Longitudinal: S401 as shown (18" max.)

Open Parapet Reinforcing:
See Section B-B, Section C-C and Longitudinal Section

Note
Boiled Linseed Oil Treatment shall be applied to the
Reinforcing Steel in the Form of the following

Note
Boiled Linseed Oil Treatment shall be applied to the Roadway Surface and to the Face and top of the Parapet Rail.



SCALE: $1/2'' = 1'-0''$

Expansion Device

Note
Holes for $3/4"$ ϕ bolts may be $15/16"$ ϕ if a washer is supplied for use under both the nut and head of bolt.



SCALE: NONE

Note: Bolt, washers and nut to be painted before installation.

VIEW AT CENTERLINE JOINT

SCALE: $1/2" = 1'-0"$

DETAILS OF

ROUTE	SEC.
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LITTLE ROCK, ARK.

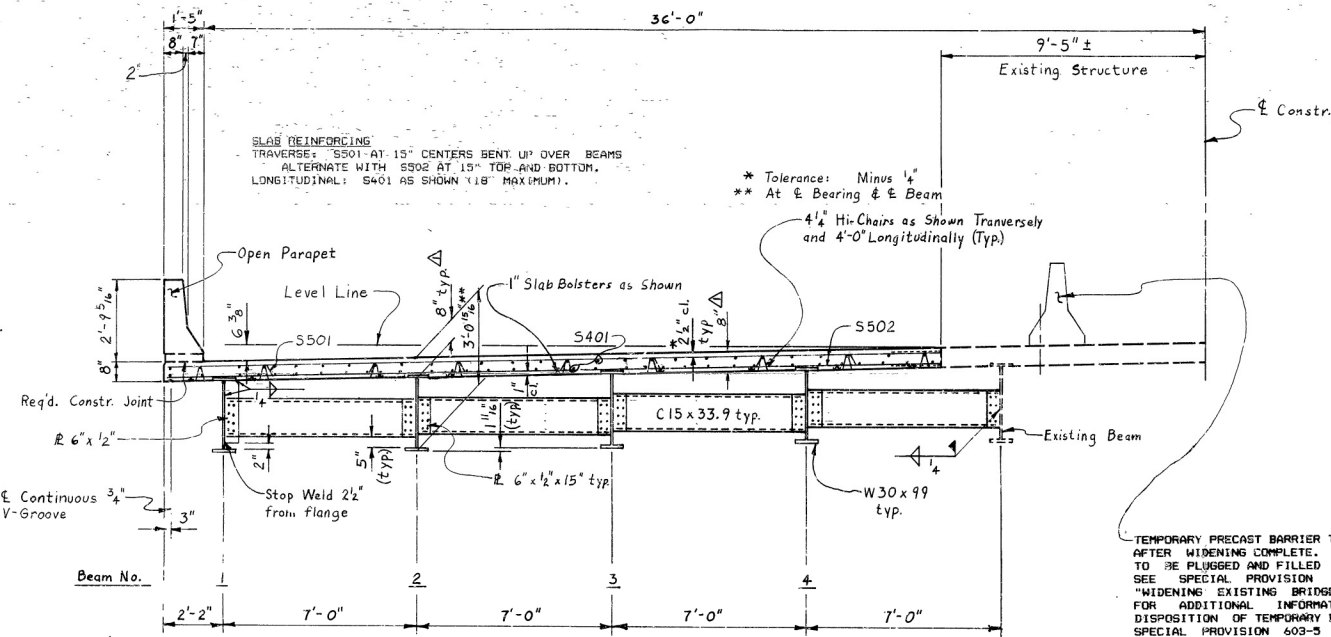
LITTLE ROCK, ARK.
DRAWN BY: TEB DATE: 17 APR 87
CHECKED BY: CPB DATE: 4/24/87 SCALE: AS NOTED

DESIGNED BY: _____ DATE: _____
BRIDGE NO. 211R DRAWING NO. 28518A

NOTE: BOILED LINSEED OIL TREATMENT SHALL BE APPLIED TO THE ROADWAY SURFACE AND TO THE FACE AND TOP OF THE CONCRETE PARAPET RAIL OF NEW CONSTRUCTION ONLY.

NOTE: AT THE CONTRACTOR'S OPTION, IN LIEU OF PROVIDING THE S501 BAR, ONE NO. 5 BAR TOP AND BOTTOM MAY BE SUBSTITUTED. PAYMENT FOR REINFORCING WILL BE BASED ON THE S501 BAR.

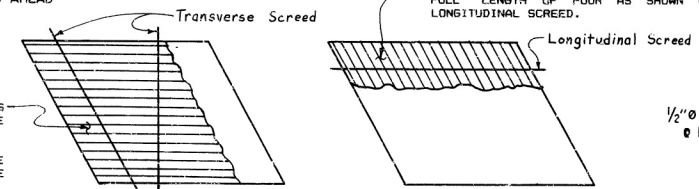
SEE "SLAB THICKENING AND/OR HAUNCH DETAIL" DRAWING NO. 14990H.



EXPANSION DEVICE: ROADWAY CHANNEL: C15 X 33.9 X 28'-8 1/16" (CLIP AS REQUIRED FOR SKEW). CONNECTION ANGLES: 6" X 3 1/2" X 3/8" X 0'-8". STUDS: 5/8" X 8" STUDS AT 12" CENTERS TOP AND BOTTOM. DETAIL DEVICE 1/8" HIGH AND PROVIDE 1/4" SHIMS USING ONE 1/8" PLATE AND TWO 1/16" PLATES. FOR FURTHER DETAILS AND BUMPER PLATE SIZE SEE DRAWING 14990H.

SECTION NEAR MIDSPAN

LOOKING AHEAD

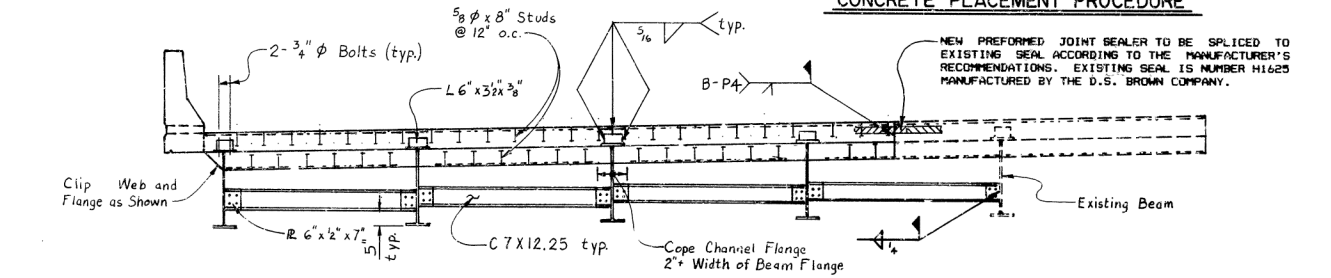


CONCRETE PLACEMENT PROCEDURE

*** Clips Req'd for Skew.

PLACE CONCRETE TO APPROXIMATE SLAB THICKNESS PARALLEL TO SKEW AS SHOWN WHEN USING TRANSVERSE Screenshot.

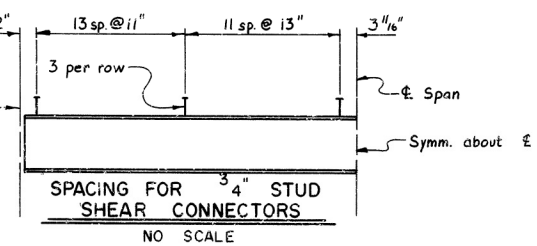
NOTE: AT THE CONTRACTOR'S OPTION, THE TRANSVERSE Screenshot MAY BE PLACED PARALLEL TO THE SKEW OR PERPENDICULAR TO CENTERLINE BRIDGE.



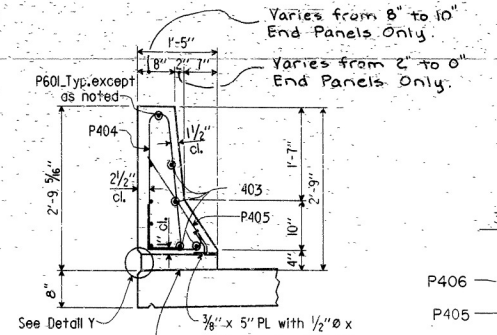
VIEW AT CENTERLINE JOINT

DEAD LOAD DEFLECTIONS

LOADING	LOCATION					
	BM. NO. 1		BM. NO. 2 & 3		BM. NO. 4	
	1/4 PT	1/2 PT	1/4 PT	1/2 PT	1/4 PT	1/2 PT
BEAM & DIAPHRAM	1/16"	1/8"	1/8"	1/8"	1/8"	1/8"
BEAM, DIAPH. & SLAB	9/16"	13/16"	5/8"	15/16"	3/4"	1 1/16"
BM, DIAPH, SLAB & PARAPET	5/8"	7/8"	1 1/16"	15/16"	3/4"	1 1/16"

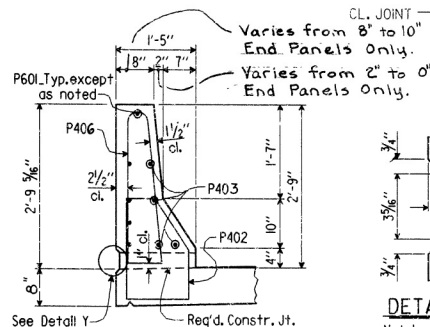


NOTE: HOLES FOR 3/4" BOLTS MAY BE 13/16" IF A WASHER IS SUPPLIED FOR USE UNDER BOTH THE NUT AND



SECTION A-A

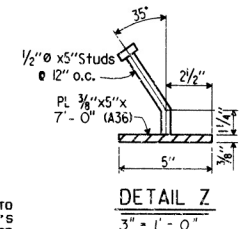
3/4" = 1'-0"



SECTION B-B

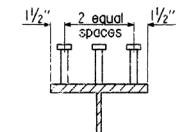
3/4" = 1'-0"

NOTE: Parapet Studs shall be 5' long, granular flux filled, solid fluxed, or equal, and automatically end welded to the plate. Studs and plate shall meet the requirements of Section 807.5 of the STANDARD SPECIFICATIONS. STUDS AND PLATE SHALL BE MEASURED AND PAID FOR AS "STRUCTURAL STEEL IN BEAM SPANS (A572)". The surfaces of the 3/4" plates 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 and Second Field Coat in Subsection 807.59 (a) and (c). For Alternate Paint System, See SP 807-10.



DETAIL Z

3" = 1'-0"



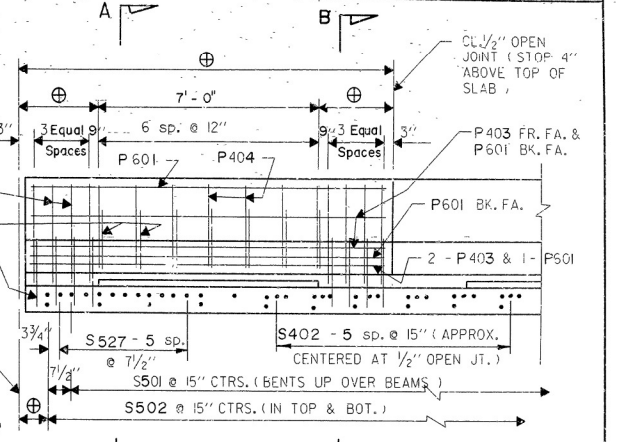
Stud Shear Connectors shown shall be 3/4" x 4" long, granular flux filled, solid fluxed or equal, and automatically end welded to the beam flange in accordance with the recommendations of the Manufacturer. The 3/4" studs are estimated at 61.5 lbs. per 100 as a basis of payment. 1/2" studs may be substituted for the 3/4" studs shown at the ratio of 0.73-1/2" studs in place of 1-3/4" stud. Maximum stud spacing shall be 24".

SHEAR CONNECTOR DETAIL

No Scale

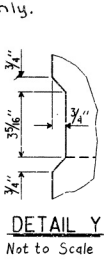
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		42	149

JOB NO. R50030 SPANS 29408



LONGITUDINAL SECTION AT CURB FOR OPEN PARAPET RAILING

SCALE 1/2" = 1'-0"



DETAIL Y

Not to Scale

GENERAL NOTES

BEAMS SHALL BE A572, GRADE 50. ALL OTHER STRUCTURAL STEEL SHALL BE A36. ALL STRUCTURAL STEEL SHALL BE PAID FOR AT THE PRICE BID PER POUND FOR "STRUCTURAL STEEL IN BEAM SPANS (A572, GRADE 50)".

BEAMS ARE CONSIDERED MAIN LOAD CARRYING MEMBERS AND SHALL MEET THE LONGITUDINAL CHARTY V-NOTCH TEST SPECIFIED IN SECTION 807.05 OF THE STANDARD SPECIFICATIONS.

DESIGN SPECIFICATIONS: AASHTO 1993 WITH INTERIM SPECIFICATIONS.

LIVE LOADING: HS20

METHOD OF DESIGN: LOAD FACTOR

DEAD LOAD:

INTERIOR BEAM

EXTERIOR BEAM

A. TO W-BEAM

** 700 PLF +
1.3 (WT/FT OF W-BM)

567 PLF +
1.3 (WT/FT OF W-BM)

B. TO COMPOSITE BEAM
OPEN PARAPETS

217 PLF*

350 PLF*

LIVE LOAD TO EACH
COMPOSITE BEAM

1.273 WHEELS + IMPACT

1.217 WHEELS + IMPACT

* INCLUDES 173 PLF FUTURE WEARING SURFACE

** 833 PLF FOR BEAM NO. 4

MATERIAL STRENGTH:

CLASS SPEC CONCRETE (N-3)

F'C = 3500 P.S.I.

REINFORCING STEEL (A615 OR A617)

FY = 60,000 P.S.I.

STRUCTURAL STEEL (A36)

FY = 36,000 P.S.I.

STRUCTURAL STEEL (A572, GRADE 50)

FY = 50,000 P.S.I.

FOR ADDITIONAL DETAILS, SEE STD. DWG. NO. 14990H.

SHEET NO. 1 OF 2

DETAILS OF

WIDENING OF COMP. W-BEAM SPAN OVERFLOW CREEK

ROUTE 167 SEC. 14

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: DLV DATE: 7-1-87

CHECKED BY: GEC DATE: 7-20-87

DESIGNED BY: DLV DATE: June 87

SCALE: 3/8" = 1'-0" or as noted

Veral Pinkerton
BRIDGE ENGINEER