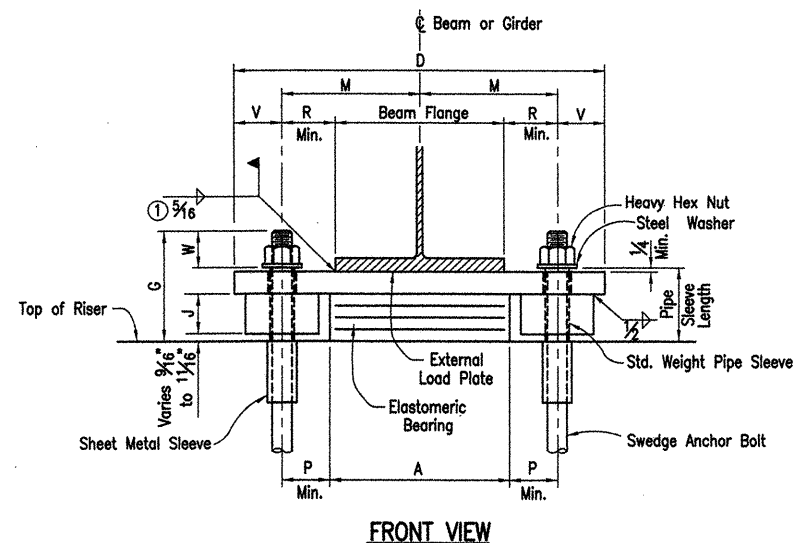


COMPANY\1999 JOBS\99-044 AHTD\WHITERIVER\JOB 110395\BrgPads3 Alt1 ACAD SCALE: 1 1/2"=1'-0"

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
7-20-11					ARK.			
				JOB NO.	110395	112	203	
				06830	ELAST. BEARINGS	47102		



- ① Care shall be taken to ensure that the external load plate is in full and complete contact with the beam or girder flange before welding begins.

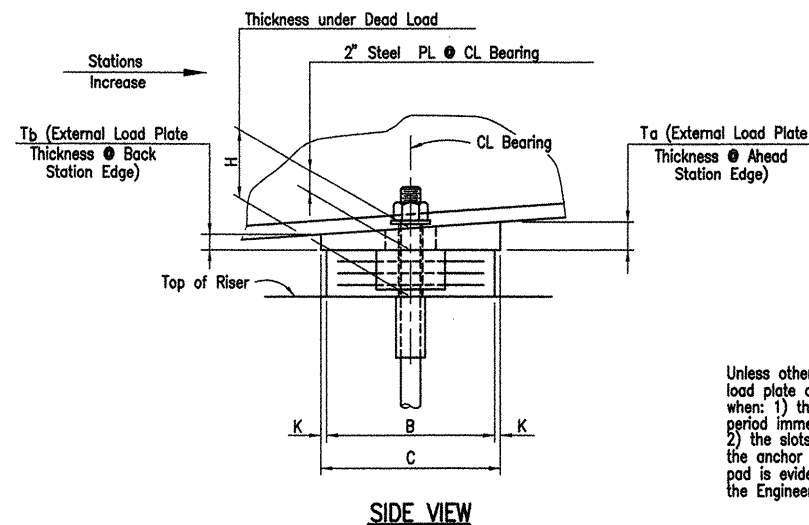
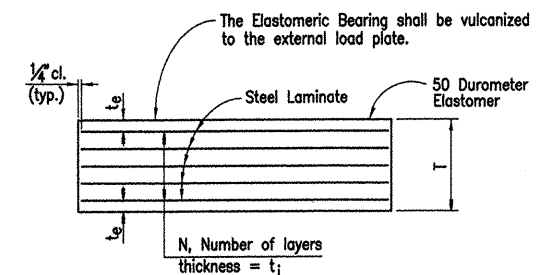


TABLE OF DESIGN VARIABLES

ANCHOR BOLT DIAMETER	PIPE SLEEVE NOMINAL DIAMETER	SHEET METAL SLEEVE DIA.	STANDARD WASHER SIZE (O.D.)	MINIMUM EMBEDMENT LENGTH	SLOT WIDTH "F"	P Min.	R Min.	V	W
1 3/4"	2"	4"	3 3/8"	18"	2 3/4"	5"	2 3/4"	4 1/2"	2 3/4"

Unless otherwise approved by the Engineer, welding of the external load plate at the expansion bearings to the girder will be allowed only when: 1) the approximate average air temperature during the 24 hour period immediately preceding welding is between 40°F and 80°F; and 2) the slots in the external load plate are positioned to center on the anchor bolts; and 3) no horizontal deformation of the elastomeric pad is evident. If welding at other temperatures is required, the Engineer will provide adjustment data.

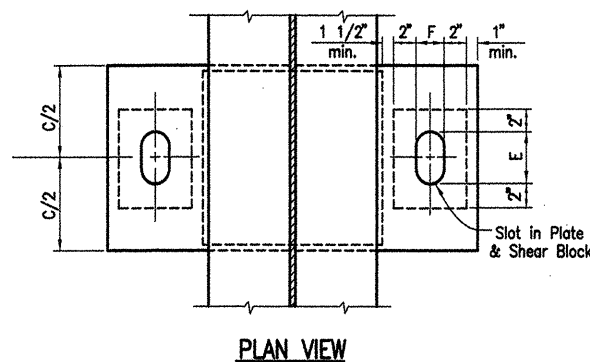


t_e = thickness of elastomer cover on top and bottom of pad
t_i = thickness of elastomer between steel laminates
N = number of elastomer layers of thickness t_i

TABLE OF FABRICATOR VARIABLES

* Maximum Design Load = Service Load Beam #1 is the Left Exterior Beam Looking Upstation																												
ELASTOMERIC PAD													EXTERNAL LOAD PLATE								ANCHOR BOLT							
UNIT NO.	BENT OR PIER NO.	BEAM NO.	BRG. TYPE	NO. OF BEARINGS EACH BENT	* MAXIMUM DESIGN LOAD (kips)	G	H	A	B	N	t _i	t _e	NO. & THICKNESS OF STEEL LAMINAE	T	C	D	E	F	J*	K	M	T _a	T _b	ANCHOR BOLT		PIPE SLEEVE SIZE (ø x L)	SHEET METAL SLEEVE SIZE (ø x L)	STEEL WASHER SIZE (O.D.)
																								(ø x L)	GRADE			
386	Bt. 62	1	Fix	1	326	13 5/8"	10 1/2"	28"	15"	15	1/16"	1/4"	16 @ 12 Ga.	8 3/4"	16"	47"	2 3/4"	2 3/4"	7 3/8" 7 1/8"	1/2"	19"	2.073"	1.927"	1 3/4" X 3 1/2"	55	2" X 10 5/8"	4" X 12"	3 3/8"
	Bt. 62	2	Fix	1	638	13 5/8"	10 3/8"	28"	15"	15	1/16"	1/4"	16 @ 12 Ga.	8 3/4"	16"	47"	2 3/4"	2 3/4"	7 3/8" 7 3/4"	1/2"	19"	2.076"	1.924"	1 3/4" X 3 1/2"	55	2" X 10 5/8"	4" X 12"	3 3/8"
	Bt. 62	3	Fix	1	596	13 5/8"	10 3/8"	28"	15"	15	1/16"	1/4"	16 @ 12 Ga.	8 3/4"	16"	47"	2 3/4"	2 3/4"	7 3/8" 7 3/4"	1/2"	19"	2.079"	1.921"	1 3/4" X 3 1/2"	55	2" X 10 5/8"	4" X 12"	3 3/8"
	Bt. 62	4	Fix	1	473	13 5/8"	10 7/16"	28"	15"	15	1/16"	1/4"	16 @ 12 Ga.	8 3/4"	16"	47"	2 3/4"	2 3/4"	7 3/8" 7 3/4"	1/2"	19"	2.082"	1.918"	1 3/4" X 3 1/2"	55	2" X 10 5/8"	4" X 12"	3 3/8"
	Bt. 63	1	Fix	1	487	13 5/8"	10 7/16"	28"	15"	15	1/16"	1/4"	16 @ 12 Ga.	8 3/4"	16"	47"	2 3/4"	2 3/4"	7 3/8" 7 3/4"	1/2"	19"	2.049"	1.951"	1 3/4" X 3 1/2"	55	2" X 10 5/8"	4" X 12"	3 3/8"
	Bt. 63	2	Fix	1	609	13 5/8"	10 3/8"	28"	15"	15	1/16"	1/4"	16 @ 12 Ga.	8 3/4"	16"	47"	2 3/4"	2 3/4"	7 3/8" 7 3/4"	1/2"	19"	2.052"	1.948"	1 3/4" X 3 1/2"	55	2" X 10 5/8"	4" X 12"	3 3/8"
	Bt. 63	3	Fix	1	661	13 5/8"	10 3/8"	28"	15"	15	1/16"	1/4"	16 @ 12 Ga.	8 3/4"	16"	47"	2 3/4"	2 3/4"	7 3/8" 7 3/4"	1/2"	19"	2.055"	1.945"	1 3/4" X 3 1/2"	55	2" X 10 5/8"	4" X 12"	3 3/8"
	Bt. 63	4	Fix	1	340	13 5/8"	10 1/2"	28"	15"	15	1/16"	1/4"	16 @ 12 Ga.	8 3/4"	16"	47"	2 3/4"	2 3/4"	7 3/8" 7 1/8"	1/2"	19"	2.058"	1.942"	1 3/4" X 3 1/2"	55	2" X 10 5/8"	4" X 12"	3 3/8"

* Shear blocks 4" or thicker may be fabricated from built-up plates with a 5/16" groove weld on all sides. No plate shall be less than 2" nominal thickness.



Elastomeric Bearings shall conform to Section 808 of the Standard Specifications and shall be paid for at the unit price bid for "Elastomeric Bearings."

External load plates & shear blocks shall conform to AASHTO M270, Grade 50W and will not be paid for separately, but will be included in the price bid for "Elastomeric Bearings". Pipe sleeves shall be ASTM A53, Grade B, and shall be galvanized to conform to AASHTO M232, Class C or AASHTO M298, Class 50.

External load plates with shear blocks shall be completely fabricated (including bevel, bolt holes and all shop welding) and shall be cleaned before vulcanizing to the elastomeric bearing. The surface in contact with the elastomeric bearing shall be cleaned in accordance with subsection 808.03. Other surfaces shall be blast cleaned in accordance with subsection 807.84(b) for painted steel and 807.84(e) for unpainted Grade 50W steel.

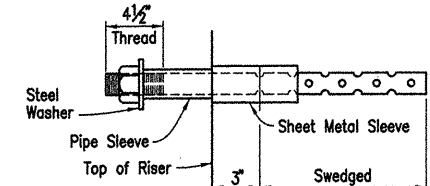
GENERAL NOTES

Anchor bolts, washers and nuts shall conform to subsection 807.07 of the Standard Specifications. The anchor bolt grade of steel shall be as specified in the "Table of Fabricator Variables". Indentations shall be circular with rounded bottoms and staggered as shown in the details.

Pipe sleeves, Anchor bolts, washers and nuts shall be paid for at the unit price bid for "Structural Steel in Plate Girder Spans (M270, Gr. 50W)".

Bearings shall be seated in accordance with subsection 808.08. This work and materials are considered as subsidiary to the item "Elastomeric Bearings" and will not be paid for directly.

ELASTOMERIC BEARING



ANCHOR BOLT DETAIL

Anchor Bolts may be cast in place or drilled and grouted into place. If Anchor Bolts are to be cast in place, the Galvanized Sheet Metal Sleeves will not be required. If Anchor Bolts are to be drilled and grouted in place, the Galvanized Sheet Metal Sleeves shall be cast in place as shown. Sleeves shall be dry packed with styrofoam, urethane foam or approved equal prior to pouring of concrete. After pouring of the cap and prior to erection of prestressed girders, the dry pack shall be removed and holes for the anchor bolts shall be accurately drilled into the masonry. Bolts placed in drilled holes shall be accurately set and fixed using a QPL approved epoxy or non-shrink grout that completely fills the holes. Galvanized Sheet Metal Sleeves will not be paid for directly, but will be considered subsidiary to the item "STRUCTURAL STEEL IN PLATE GIRDER SPANS (M 270, Gr. 50W)

ALTERNATE NO. 1

DETAILS OF ELASTOMERIC BEARINGS WITH SHEAR BLOCKS (SHEET 3 OF 3)

WHITE RIVER STR. & APPRS.
(CLARENDON) (PH III) (F)
MONROE COUNTY

ROUTE 79 SEC. 13

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

Engstrom/Modjeski and Masters, Inc.

DRAWN BY: JDB DATE: Sep. 10 FILENAME: b1103951_e08
CHECKED BY: YO DATE: Nov. 01 SCALE: 1 1/2"=1'-0"
DESIGNED BY: FS DATE: Nov. 01
BRIDGE NO. 06830 DRAWING NO. 47102



BRIDGE ENGINEER