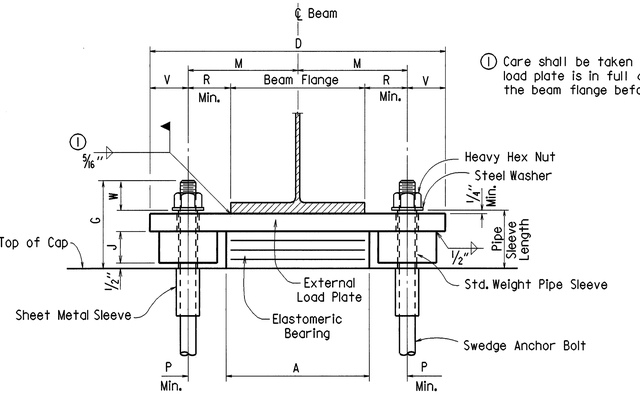
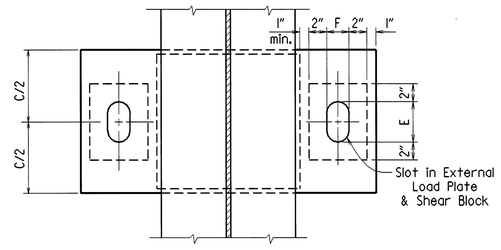
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		110387	46	96
				① 06978 - ELASTOMERIC BRGS. - 46126				

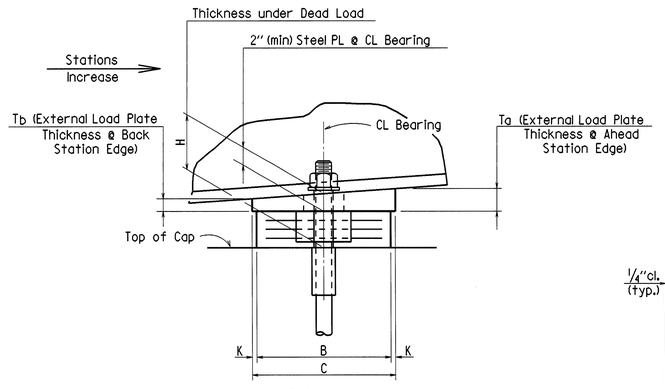


FRONT VIEW

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



PLAN VIEW

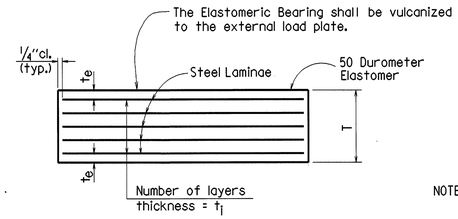


SIDE VIEW

Unless otherwise approved by the Engineer, welding of the external load plate at expansion bearings to the beam 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.

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 1/4"	1 1/4"	3"	2 1/2"	12"	2" ø	4"	2 1/4"	4"	2 1/4"
1 1/2"	1 1/2"	3"	3"	15"	2 1/4" ø	4 1/8"	2 1/2"	4 1/8"	2 1/2"
1 3/4"	2"	4"	3 3/8"	18"	2 5/8" ø	4 5/16"	2 3/4"	4 5/16"	2 3/4"
2"	2 1/2"	4"	3 3/4"	20"	3 1/8" ø	4 9/16"	3"	4 9/16"	3"
2 1/4"	2 1/2"	4"	4"	23"	3 1/8" ø	4 9/16"	3"	4 9/16"	3 1/4"
2 1/2"	3"	4"	4 1/2"	25"	3 3/4" ø	4 7/8"	3 1/4"	4 7/8"	3 1/2"

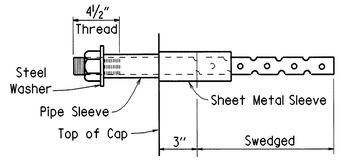


t_e = thickness of elastomer cover on top and bottom of pad

t_i = thickness of elastomer between steel laminae

N = number of elastomer layers of thickness t_i

ELASTOMERIC BEARING



ANCHOR BOLT DETAIL

NOTE: 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 Structural Steel, 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 Beam Spans, (M 270, Gr. 50W)"

TABLE OF FABRICATOR VARIABLES

BRIDGE NO.	LOCATION			BEARING TYPE	NO. of BEARINGS EACH BENT	*MAXIMUM DESIGN LOAD (KIPS)	G	H	ELASTOMERIC PAD							EXTERNAL LOAD PLATE									ANCHOR BOLT				
	BENT NO(S).	UNIT	BEAM NO.						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 (ø x L)	GRADE	PIPE SLEEVE SIZE (ø x L)	SHEET METAL SLEEVE SIZE (ø x L)	STEEL WASHER SIZE (O.D.)
06978	2 - 5	305'	All	Fix	5	176.62	7 3/4"	4 5/8"	16"	15"	4	1/2"	1/4"	5 @ 12 Gauge	3"	16"	32 1/2"	2 1/4"	2 1/4"	2 7/16"	1/2"	12 1/8"	2.000"	2.000"	1 1/2"ø x 25"	55	1 1/2"ø x 5 1/4"	3"ø x 7"	3"ø

*Maximum Design Load = Service Load

GENERAL NOTES

Elastomeric Bearings shall conform to Special Provision Job 110387 "Elastomeric Bearings" and Section 808 and shall be paid for at the unit price bid for "Elastomeric Bearings." Long-duration testing of random lot samples specified in subsection 808.05 is not required.

External load plates and shear blocks shall conform to AASHTO M270, Grade 50W. Pipe sleeves shall be ASTM A53, Grade B, and shall be galvanized to conform to AASHTO M 232, Class C or AASHTO M 298, Class 50.

External load plates and shear blocks shall be completely fabricated (including bevel and bolt holes) 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(e) for unpainted Grade 50W steel.

Anchor Bolts, washers and nuts shall conform to subsection 807.07. 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 Beam Spans (M270, Gr. 50W)". External load plates, shear blocks and masonry plates will not be measured or paid for separately but will be considered included in the unit bid price for "Elastomeric Bearings".

Tabular Data by : KDH Date: 5-21-03

Checked by : GVA Date: 7-23-03

Designed by : MWA Date: March 03

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 1337
9/15/03
CHARLES P. BRAND

BRIDGE ENGINEER

DETAILS OF ELASTOMERIC BEARINGS WITH SHEAR BLOCKS WALNUTE LAKE

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: MJT DATE: Nov.12,96 FILENAME: B110387.E1

CHECKED BY: AMS DATE: Nov.15,96 SCALE: NONE

DESIGNED BY: Std. DATE:

BRIDGE NO. 06978 DRAWING NO. 46126