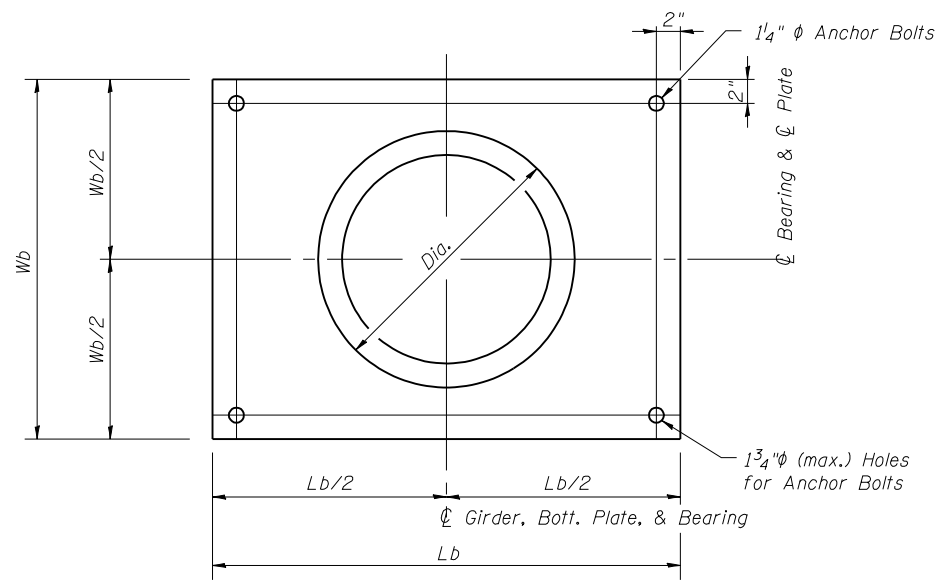
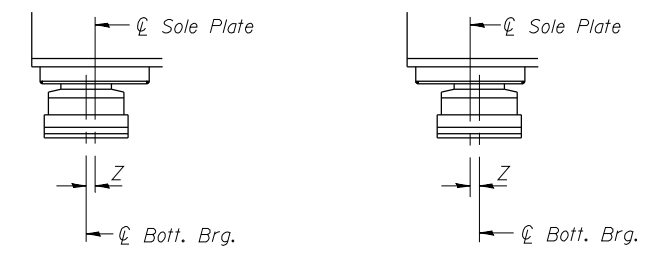


**TOP BEARING PLATE AND PISTON PLAN**



**BOTTOM BEARING PLATE AND BASE CYLINDER PLAN**

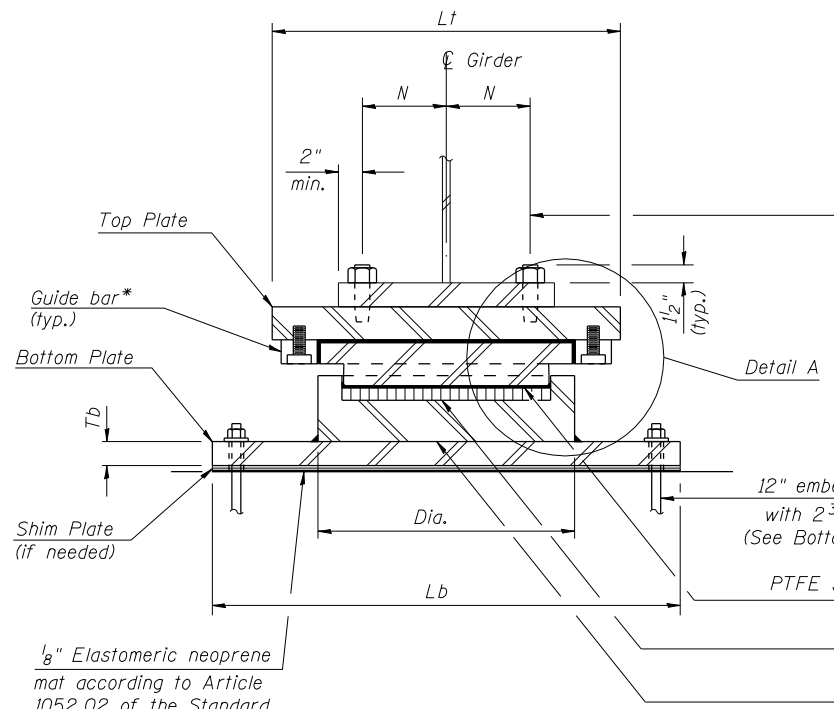
Notes:  
 The Structural Steel for the top & bottom bearing plates shall be AASHTO M270 Grade 50.  
 Top & bottom plates, threaded studs, washers & shim plates are included in the cost of the bearings.  
 Anchor bolts for bearings shall be placed in holes drilled in the concrete through holes in the bottom bearing plate after members are in place.  
 Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.  
 The 1/8" PTFE sheet shall be bonded directly to the piston with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.  
 Two 1/8" adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.  
 The anchor bolt sizes and grades shown constitute a calculated seismic structural fuse. Substitution of higher diameter and/or grade anchor bolts will not be allowed.  
 Bearing dimensions and details shown are for pot type HLMR bearings. Disc type HLMR bearing dimensions and details will vary.  
 Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.



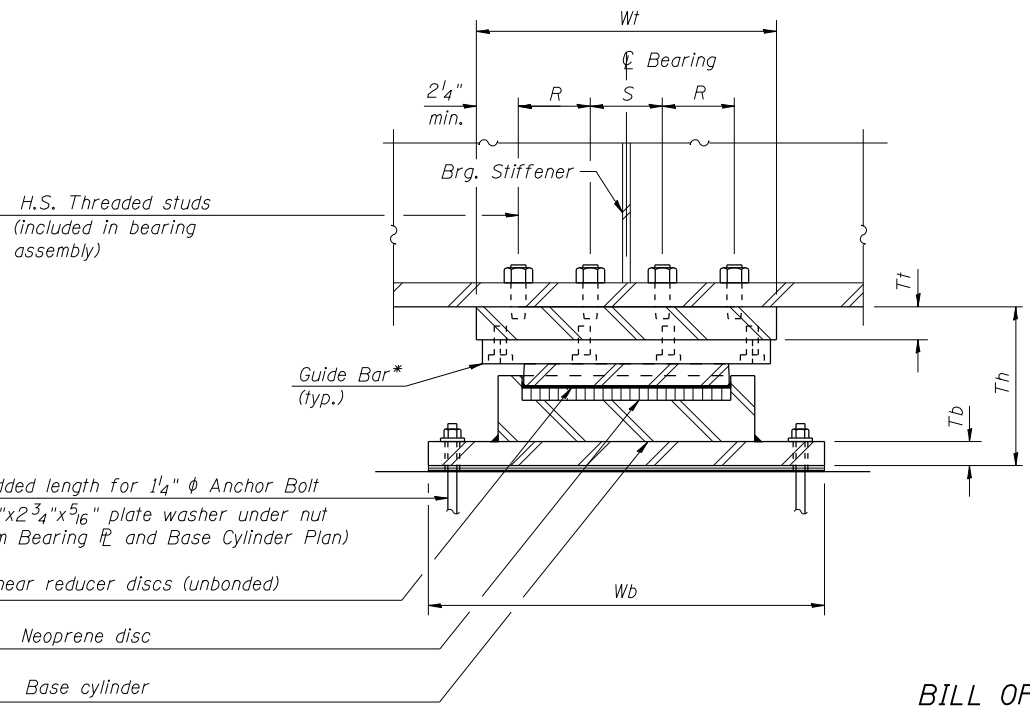
**BELOW 50° F.** (Move bottom brg. away from fixed brg.)  
**ABOVE 50° F.** (Move bottom brg. toward fixed brg.)

**SETTING ANCHOR BOLTS AT EXP. BRG.**

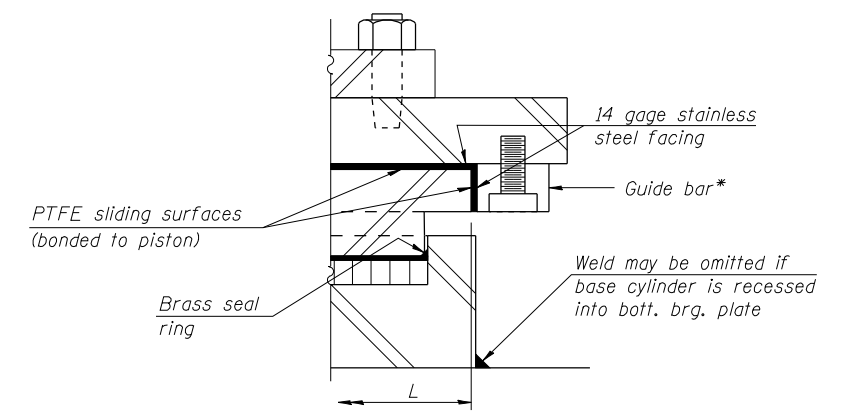
Z = 1/8" per each 100' of expansion for every 15° temp. change from the normal temp. of 50° F. See Bearing Orientation Details for Expansion/Contraction lengths.



**SECTION A-A**



**SECTION B-B**



**DETAIL A**

\*As alternates to the bolted connection shown, the guide bars may be connected to the top bearing plate by groove welds or the guide bars and top bearing plate may be fabricated as a single piece. Avoid interference with guide bar bolts and top plate mounting bolts.

**BILL OF MATERIAL**

Item	Unit	Total
High Load Multi-Rotational Bearings, Guided Expansion 550k	Each	24
Anchor Bolts, 1/4"	Each	96

**GUIDED EXPANSION BEARING TABLE - WB BRIDGE**

Bearing Location	HLMR Bearing Capacity (kips)	Vertical Design Load (kips)	Lateral Design Load (kips)	**Maximum Factored Ultimate Design Rotation (Radians)	Total Required Movement (In.)	Bottom Bearing Plate			Top Bearing Plate							Anchor Bolt Size & Grade		
						Tb (In.)	Lb (In.)	Wb (In.)	Tt (In.)	Lt (In.)	Wt (In.)	N (In.)	R (In.)	S (In.)	Th (In.)		L (In.)	Dia. (In.)
Pier 1 WB	550	485	97***	0.03	2 3/8	2 1/4	39	30	2 3/4	29	25	7	6	6	13 1/4	21	21 3/8	1 1/4" Diameter Grade 36
Pier 2 WB	550	486	97***	0.03	1 1/4	2 1/4	39	30	2 3/4	29	25	7	6	6	13 1/4	21	21 3/8	1 1/4" Diameter Grade 36
Pier 4 WB	550	484	97***	0.03	1 1/4	2 1/4	39	30	2 3/4	29	25	7	6	6	13 1/4	21	21 3/8	1 1/4" Diameter Grade 36
Pier 5 WB	550	546	110***	0.03	2 3/8	2 1/8	40	35	3	30	26	7	6	6	13 1/4	22	23 5/8	1 1/4" Diameter Grade 55

\*\* Includes rotation allowances for fabrication tolerances (0.005 radians) and installation uncertainties (0.005 radians)

\*\*\*The Lateral Design Loads are greater than 10% of the Vertical Design Loads. The Fabricator shall modify components of the bearings as required to meet the lateral load demands.



USER NAME = hos	DESIGNED - RDP	08/13	REVISED -
ESCA PROJECT NO. 1070.09	CHECKED - SHL	08/13	REVISED -
PLOT DATE = 3/18/2014	DRAWN - DWH	08/13	REVISED -
1:32:15 PM	CHECKED - RDP	03/14	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**EXPANSION POT BEARING DETAILS - WB  
STRUCTURE NO. 026-0106**

SHEET NO. 69 OF 113 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	(26-3B-1, 3B-1(3))BR	FAYETTE	277	149
CONTRACT NO. 74175			ILLINOIS FED. AID PROJECT AID	