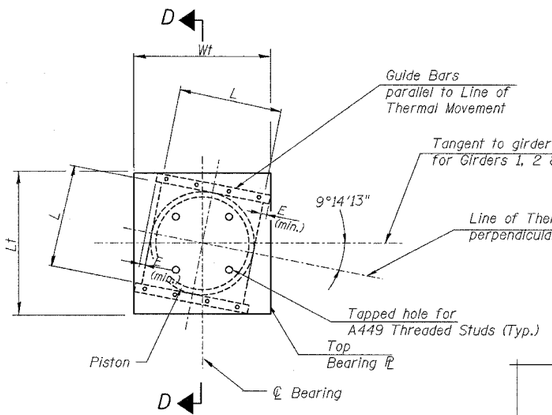
Contract No. 85427

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

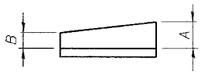
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	*	ROCK ISLAND	112	61	SHEET NO. 8
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-		19 SHEETS

* 05-00174-00-BT



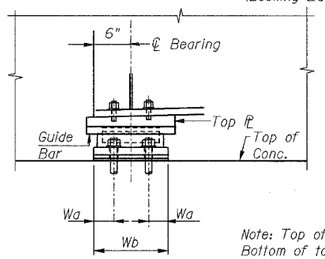
TOP BEARING ℙ AND PISTON PLAN FOR FLOATING BEARING, GUIDED EXPANSION

Girder not shown for clarity.
Plan Dimensions of Top Plate and Guide Bars to be determined by Bearing Fabricator.



TOP ℙ DETAIL

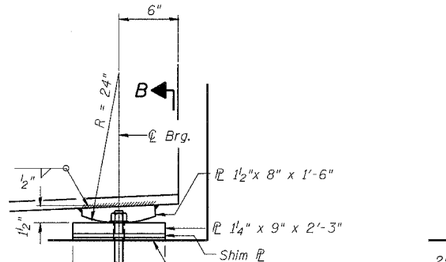
(Looking East)



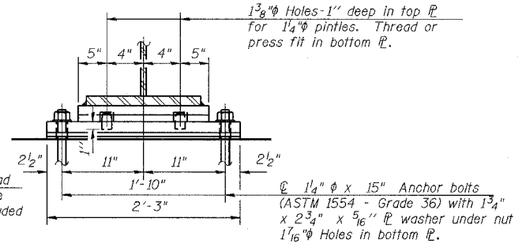
SECTION B-B

(Looking East)

Note: Top of top bearing ℙ is sloped.
Bottom of top bearing ℙ is to be level.



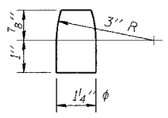
ELEVATION AT PIER



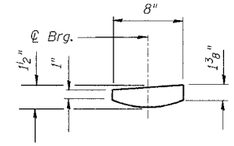
SECTION B-B

FIXED BEARING AT PIER #5

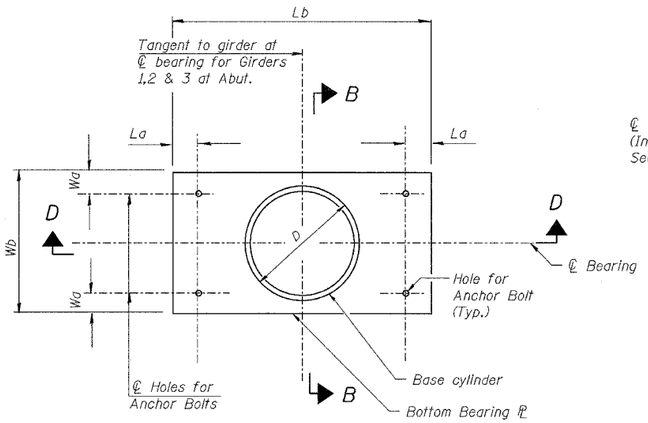
3 Required



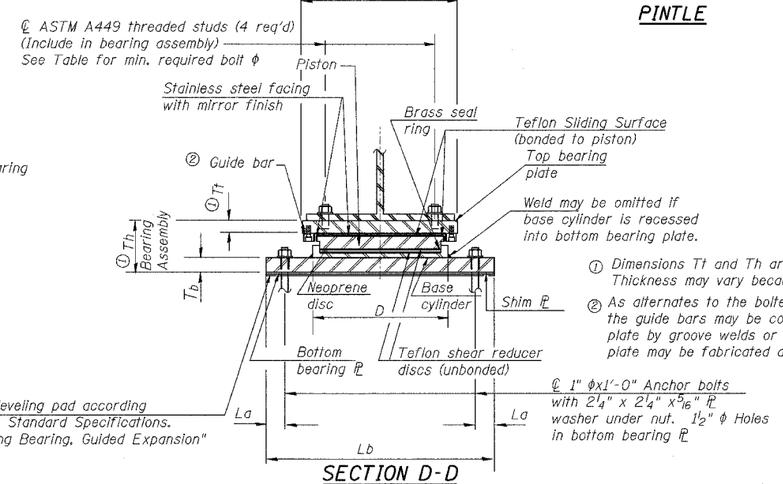
PINTLE



BEVELED TOP PLATE



BOTTOM BEARING ℙ AND BASE CYLINDER PLAN FOR FLOATING BEARING, GUIDED EXPANSION



SECTION D-D

① Dimensions Tt and Th are given at ℄ bearing. Thickness may vary because top ℙ slopes.

② 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 s single piece.

Notes:

See Sheet 63 of 112 for Anchor Bolt Installation.

The ⅛" TFE sheet shall be bonded directly to the piston with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specifications MMM-A-134, Type 1. The bond agent shall be applied to the full area of the contact surfaces.

Total Bearing Heights (Th) are based on values taken from a specific manufacturer's design tables. Actual bearing heights may differ from contract plans. Contractor to verify bearing heights and adjust girder seat elevations if required.

All structural steel for bearings shall be AASHTO M 270M, Grade 50.

All anchor bolts shall be ASTM F 1554 Grade 105.

"Total Vertical Reaction" in table is the actual controlling vertical factored load.

Anchor bolts at fixed bearings may be either cast in place or installed in holes drilled after the supported member is in place.

Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

EXPANSION BEARING SCHEDULE

Location	Type	Vertical Design Load kips	Total Vertical Reaction kips	Total Lateral Reaction kips	LL Rotation Range Radians	Total Required Thermal Movement -30°F to +130°F
Abut. Girder 1	Floating Bearing, Guided Expansion	150	106	21.2	0.0000 to -0.02	3"
Abut. Girder 2 & 3	Floating Bearing, Guided Expansion	75	60	12	0.0000 to -0.02	3"

Location	Top Plate Assembly								Bottom Plate Assembly						Total Bearing Height
	Tt	A	B	Wt	Lt	L	E	Threaded Stud ϕ	Tb	Wb	Lb	Wa	La	D	Th
Abut. Girder 1	1 7/8"	2 1/8"	1 1/2"	13"	14"	7 3/4"	1 1/2"	3/4"	1 3/4"	9 1/4"	21 1/4"	1 15/16"	1 15/16"	6 1/4"	5 15/16"
Abut. Girder 2 & 3	1 7/8"	2 1/8"	1 1/2"	13"	14"	6 3/4"	1 1/2"	3/4"	1 1/4"	9 1/4"	21 1/4"	1 15/16"	1 15/16"	5 1/4"	6"

BILL OF MATERIAL

Item	Unit	Total
High Load Multi-Rotation Bearings, Guided Expansion, 75 k	Each	2
High Load Multi-Rotation Bearings, Guided Expansion, 150 k	Each	1

DESIGNED	LRT
CHECKED	JBF
DRAWN	RAP
CHECKED	JBF

I-2-E1 11-1-06

BEARING DETAILS

AUGUSTANA COLLEGE PEDESTRIAN BRIDGE
SECTION 05-00174-00-BT
PROJECT NO. HPP-4113-(001)
CITY OF ROCK ISLAND
ROCK ISLAND COUNTY

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