

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET	SHEET
FAI 72		MACON	88	42
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

Contract Number: 74171

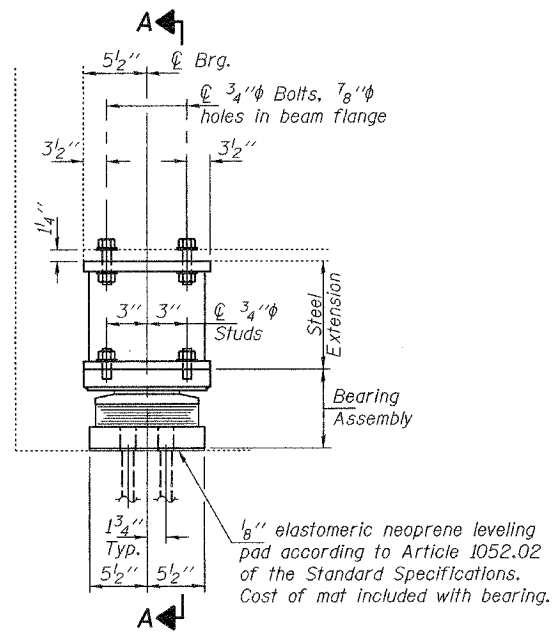
SHEET NO. 3

3 SHEETS

**BEAM REACTIONS**

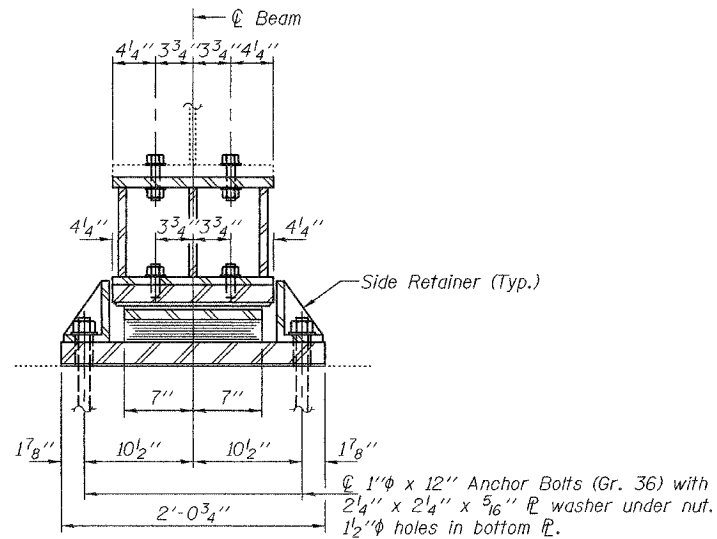
R <sub>P</sub>	(K)	55.4
R <sub>T</sub>	(K)	42.3
Imp.	(K)	8.9
R (Total)	(K)	106.6

Notes:  
Diaphragm removal and reinstallation may be required to facilitate drilling holes. Cost included with Furnishing and Erecting Structural Steel.  
New steel extensions, shim plates and connection bolts are included with Furnishing and Erecting Structural Steel.  
Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions. Min. jack capacity = 65 Tons.  
Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (F<sub>y</sub>=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.  
Anchor bolts for Type II bearings shall be placed in holes drilled through the bottom bearing plate after members are in place. Side retainers shall be placed after bolts are installed.  
Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.  
Side retainers shall be included in the cost of Elastomeric Bearing Assembly, Type II.  
The 1/8" TFE sheet shall be bonded directly to the top steel plate 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.  
Bonding of 1/8" TFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.

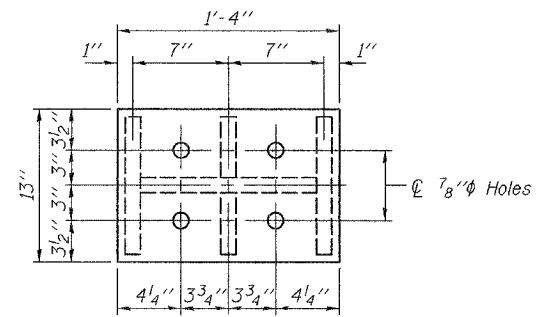


**ELEVATION AT E. ABUTMENT**

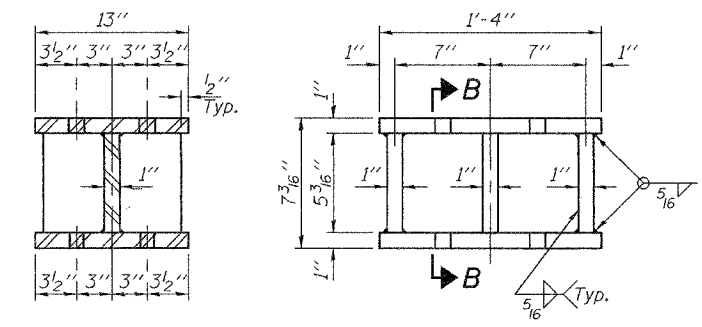
**TYPE II TFE ELASTOMERIC EXP. BRG.**



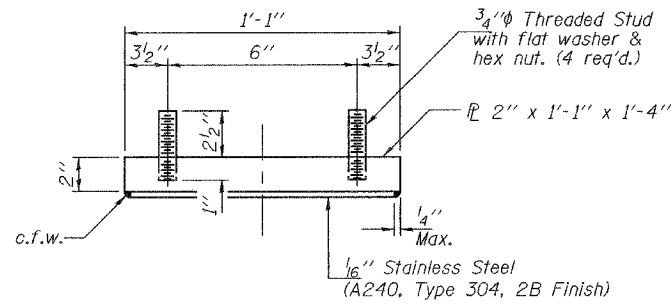
**SECTION A-A**



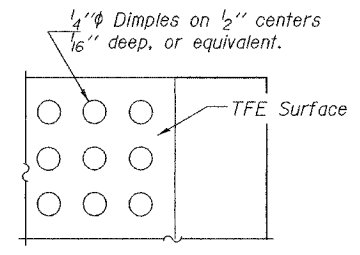
**PLAN TOP AND BOTTOM PLATE**



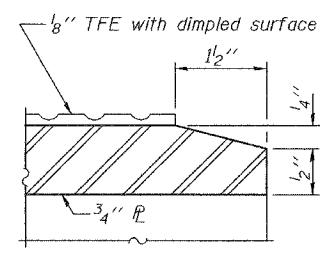
**STEEL EXTENSION DETAIL**



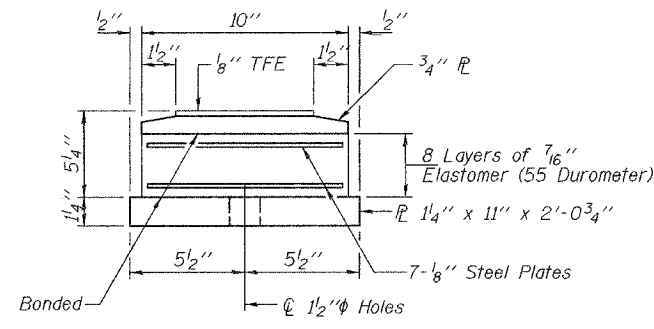
**TOP BEARING ASSEMBLY**



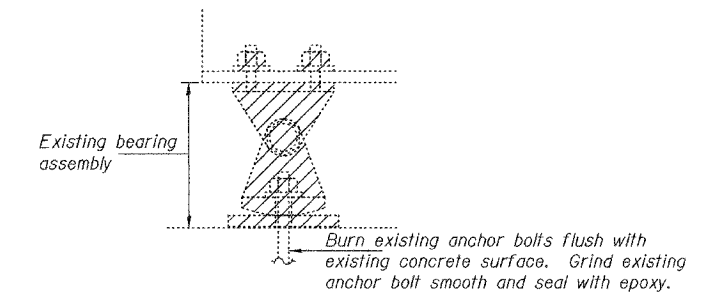
**PLAN-TFE SURFACE**



**SECTION THRU TFE**

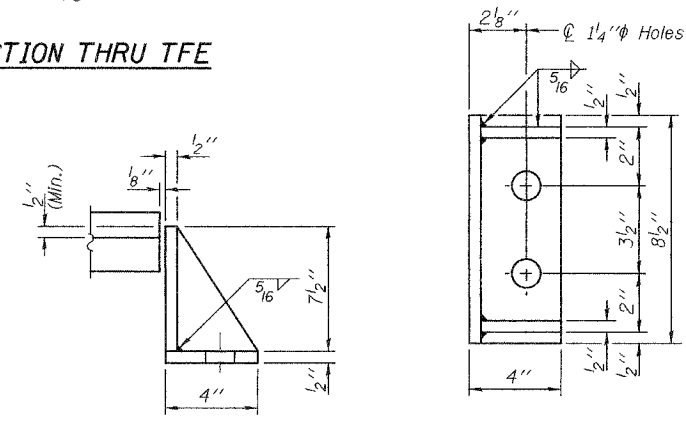


**BOTTOM BEARING ASSEMBLY**



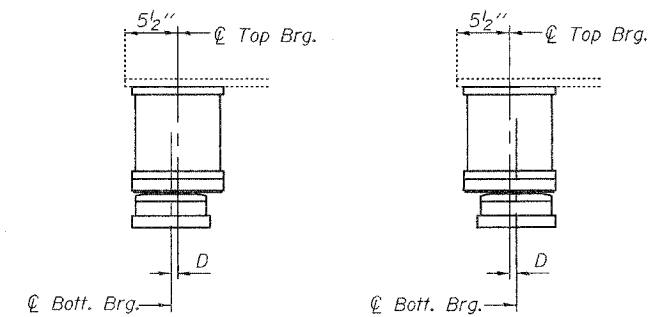
**EXISTING BEARING REMOVAL DETAIL**

Cost included with Jack and Remove Existing Bearings.



**SIDE RETAINER**

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.



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

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

D = 1/8" per each 100' of expansion for every 15° temp. change from the normal temp. of 50°F.

**BILL OF MATERIAL**

Item	Unit	Total
Elastomeric Bearing Assembly Type II	Each	12
Jack and Remove Existing Bearings	Each	12
Furnishing and Erecting Structural Steel	Pound	2330
Anchor Bolt 1"φ	Each	48

**EAST ABUTMENT BEARING REPLACEMENT DETAILS**  
FAI RT. 72 OVER FRIENDS CREEK  
MACON COUNTY  
SN 058-0093 & 0094

DESIGNED	AJB
CHECKED	SJB
DRAWN	baliva
CHECKED	AJB SJB

APRIL 18, 2008  
EXAMINED *Carl Perry*  
ENGINEER OF STRUCTURAL SERVICES  
PASSED *Ralph E. Anderson*  
ENGINEER OF BRIDGES AND STRUCTURES

TYII/REPS 11-01-2006