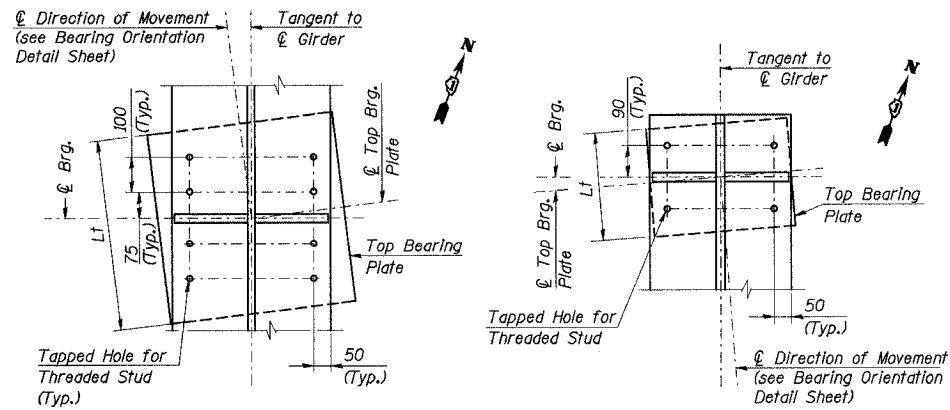


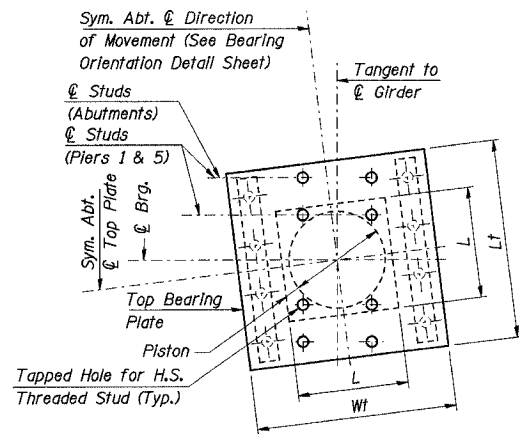
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 19
F. A. I. 80/94	*	COOK	90	76	21 SHEETS
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT-			
		2004-133F		CONTRACT NO. 62898	



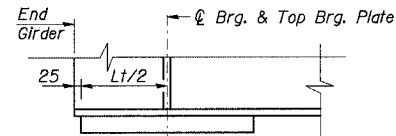
**SECTION A-A**  
(Brg. at Pier 1 shown;  
Pier 5 similar)

**SECTION A-A**  
(Brg. at West Abut. shown;  
East Abut. similar)

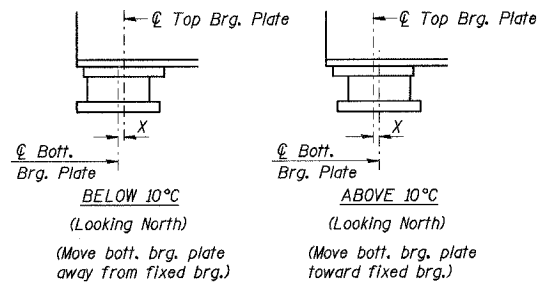


**TOP BEARING PLATE  
AND PISTON PLAN**

Note: Plate and piston are parallel to  $\phi$  Direction of Movement, and not parallel to  $\phi$  Girder.

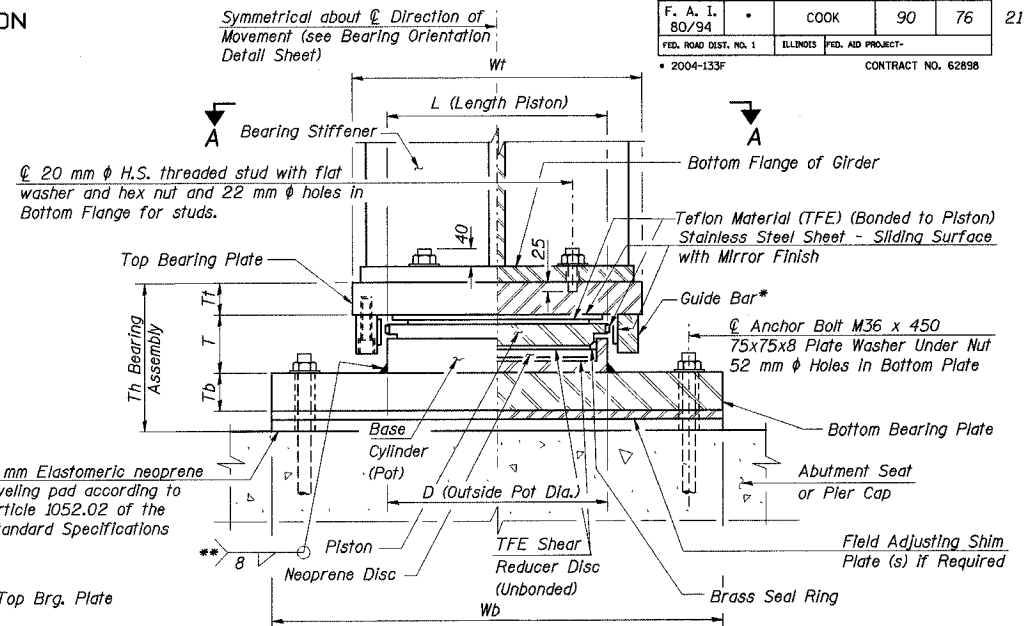


**TOP PLATE/END GIRDER  
DETAIL AT ABUTMENTS**



**ANCHOR BOLT SETTING DETAILS  
AT EXPANSION BEARINGS**

(Bearings at West Abut. Shown; Bearings at East Abut. & Piers Similar)  
 $X=1$  mm per each 10 m of expansion for every 8 °C temperature change from the normal temp. of 10 °C.

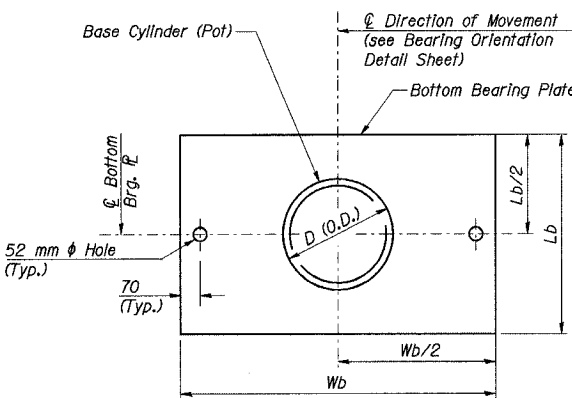


**HALF SECTION THRU GUIDED EXPANSION BEARING**

Note:  $T_t$  and  $T_h$  are measured at  $\phi$  Bearing  
 $T_h$  includes 3mm elastomeric neoprene mat.

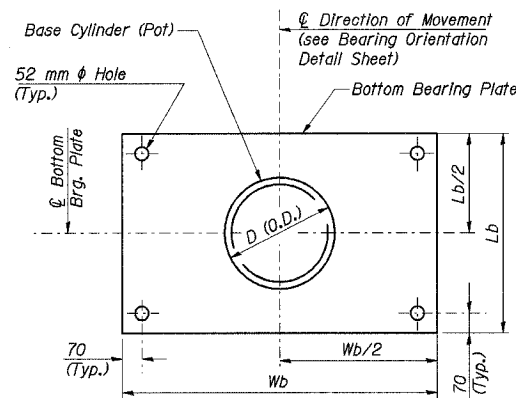
\* As alternatives to the bolted connection shown, the guide bars may be connected to the top bearing plate by groove welds or the guide bars and top bearing plate may be fabricated as a single piece.

\*\* Weld may be omitted if base cylinder is recessed into bottom bearing plate.



**BOTTOM BEARING PLATE  
AND BASE CYLINDER PLAN**  
(Abutments)

Note: Bottom Plate and cylinder are parallel to  $\phi$  Direction of Movement, and not parallel to  $\phi$  Girder.



**BOTTOM BEARING PLATE  
AND BASE CYLINDER PLAN**  
(Piers 1 & 5)

Note: Bottom Plate and cylinder are parallel to  $\phi$  Direction of Movement, and not parallel to  $\phi$  Girder.

**BEARING ASSEMBLY DIMENSIONS**

Member	Dimension	Location			
		W. Abut.	Pier 1	Pier 5	E. Abut.
Top Plate	Wt	480	510	510	480
	Lt	450	580	580	450
	Tt	40	55	55	40
Bearing	D	255	350	350	255
	L	255	350	350	255
	T	130	150	150	130
Bottom Plate	Wb	750	750	750	750
	Lb	310	400	400	310
	Tb	55	65	65	60
Bearing Assembly	Th	228	273	273	233

**BEARING DESIGN INFORMATION**

Design Information	Location			
	W. Abut.	Pier 1	Pier 5	E. Abut.
Vertical Design Load (kN)	519	1346	1332	556
Pay Item Size (kN)	750	1500	1500	750
Total Required Movement (mm)	130	101	74	105

Note:  
Vertical Design Load = Total Vertical Dead Load + Live Load (No Impact)

**BILL OF MATERIAL**

ITEM	UNIT	QUANTITY
Furnishing Floating Bearings, Guided Expansion, 750 kN	Each	12
Furnishing Floating Bearings, Guided Expansion, 1,500 kN	Each	12

- Notes:
- All dimensions are in millimeters (mm) except as shown.
  - The structural steel for the top and bottom bearing plates shall be AASHTO M 270M Grade 345.
  - Cost of top and bottom bearing plates, 3mm Elastomeric Neoprene, shim plates and threaded studs with washer shall be included with Floating Bearings.
  - For anchor bolt type and details, see Anchor Bolt Details Sht. No. 21 of 21 Shts.

ILLINOIS DEPARTMENT OF TRANSPORTATION  
I-94 EAST BOUND / IL 394 SOUTH BOUND  
**FLOATING EXPANSION BEARINGS**  
EB I-94 OVER THORN CREEK  
F.A.I. 94 SECTION 2004-133F  
COOK COUNTY  
STA. 20+509.000 STRUCTURE NO. 016-2807  
DATE 05/16/05  
SCALE ---

**HNTB**

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20-MAY-2005 14:31

DESIGNED	TRL
CHECKED	JJK
DRAWN	LK
CHECKED	JJK