



BEARING DIMENSIONS

Location	Pay Item Designation (kips)	** Vert. Design Load (kips)	** Horizontal Design Load (kips)	*** Required Rotation Range (radians)	**** Total Required Movement	Top Plate			Bearing Assembly		Bottom Plate			Total Ht.
						Wt	Lt	Tt	L	D	*Wb	*Lb	Tb	
W. Abut. Girders 7, 8, 9, 10, 11	250	777	76	0.02	3/4"	1'-2 1/4"	1'-8"	1 3/4"	10 1/4"	11 3/4"	1'-4"	1'-11"	1 3/8"	6 1/2"
W. Abut. Girders 4, 5, 6	250	262	76	0.02	1"	1'-2 1/4"	1'-8"	1 3/4"	10 1/4"	11 3/4"	1'-4"	1'-11"	1 3/8"	6 1/2"

* To be verified by the contractor for proper access of the drilling tool.
 ** Design Loads are the governing service loads.
 *** Rotation allowances for fabrication tolerances (0.005 radians) and installation uncertainties (0.005 radians) excluded.
 **** Total required movement is based on one way expansion (or contraction) of the superstructure perpendicular to the centerline of girder when bearings are set at 50°F. Bearing movement tolerances are excluded.

FILL PLATE SCHEDULE

(In addition to adjustment shims, see General Notes)
 Cost included with Structural Steel

Abutment	Girder	Plate Thickness
West	4	3/4"
West	7	1/2"

BILL OF MATERIAL

Item	Unit	Total
High Load Multi-Rotational Bearings, Guided Expansion, 250K	Ea.	8
Anchor Bolts, 1 1/2"	Ea.	32

NOTES:

- All steel for bearings shall conform to the requirements of AASHTO M210 Grade 50, unless otherwise noted.
- 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. Anchor bolts 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.
- PTFE and stainless steel materials shall conform to AASHTO requirements and the Special Provision for High Load Multi-Rotational Bearings.
- All (embedded and separate) bearing components shall be galvanized according to AASHTO M111 or M232 as applicable.
- Bearings shall be assembled at the plant and delivered to the site as a complete unit. All bearings shall be marked prior to shipping. The marks shall include the bearing location on the bridge, an arrow indicating orientation, and the normal position of the bearing. All marks shall be permanent and be visible after the bearing is installed. All components of the bearing, including anchor bolts and sockets, shall be provided by a single manufacturer.
- Disc bearings will be permitted as a substitute at no additional cost. Inverted pot bearings are not allowed.
- Total bearing height (Th) is estimated based on manufacturer data. Actual bearing height may differ from contract plans. The Contractor shall be responsible for verifying bearing heights and adjusting seat elevations, if required, prior to placing pier concrete.
- Bearing assemblies shall be designed and assembled to allow for replacement by jacking the superstructure.
- Two 1/8 in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

HLMR GUIDED EXPANSION BEARING DETAILS
STRUCTURE NO. 090-0167

SHEET NO. 5830 OF 5865 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	90-114R(14HB-4,14,14HB)BR	TAZEWELL	2433	1941
				CONTRACT NO. 68620
ILLINOIS FED. AID PROJECT				