SECTION 1701

BEARINGS AND PADS FOR STRUCTURES

1701.1 DESCRIPTION

This specification covers the following types of pads and bearings for use on bridge seats:

- Plain Elastomeric Pads
- Steel Reinforced Elastomeric Bearings
- PTFE/Elastomeric Sliding Bearings
- Steel Bearings
- Pot Bearings
- Disc Bearings
- Spherical Bearings

1701.2 REQUIREMENTS

a. General. Use only one type of pad throughout any one structure, unless otherwise noted in the Contract Documents.

Provide the type(s) of bearings shown in the Contract Documents.

Provide pads or bearings that comply with the Bearings section requirements of AASHTO's LRFD Bridge Design Specifications and LRFD Bridge Construction Specifications.

b. Plain Elastomeric Pads. Provide a virgin neoprene (Polychloroprene) pad. A Shore A Durometer hardness of 60 ± 5 and an AASHTO low temperature grade 3 elastomer is required, unless shown otherwise in the Contract Documents. Leveling pads used in Continuous Prestressed Beam Bridges are exempt from the low temperature grade requirements.

c. Steel Reinforced Elastomeric Bearings. Provide a virgin neoprene (polychloroprene) elastomer. A Shore A Durometer hardness of 60 ± 5 and an AASHTO low temperature grade 3 elastomer is required, unless shown otherwise in the Contract Documents. Additional testing associated with Design Method B is required.

Provide laminates for the bearings that comply with ASTM A 36, AASHTO M 270 (ASTM A 709) Grade 36, ASTM A 1011 SS Grade 36 or A 1008 SS Grade 40, unless otherwise specified in the Contract Documents.

d. PTFE/Elastomeric Sliding Bearings. Provide an elastomeric portion satisfying **subsection 1701.2(c)**.

Provide a sliding surface for the PTFE that is chromium-nickel stainless steel sheet or plate that complies with ASTM A 240, UNS S31600 or UNS S30400. Polish the surface to an 8 micro-inch RMS (#8 mirror) finish.

Provide special bearing quality polytetrafluoroethylene (PTFE) unfilled sheets having a static loading coefficient of friction of not more than 0.03 at a bearing pressure of 3.0 ksi or greater and a temperature of 68°F.

e. Steel Bearings. Face the bearing surfaces of the bearings as required by **DIVISION 700**.

When specified on the Contract Documents, provide structural steel that is hot dip galvanized in accordance with ASTM A 123.

When specified on the Contract Documents, paint the surfaces of the bearings as required by **DIVISION 700**.

f. Anchor Bolts. Provide Type I or II anchor bolts that comply with **DIVISION 1600**. When specified on the Contract Documents, provide anchor bolts, nuts, and washers that have been hot dip galvanized in accordance with ASTM A 153.

1701.3 TEST METHODS

As specified in the various AASHTO and ASTM standards cited in this specification.

1701.4 PREQUALIFICATION

None required.

1701.5 BASIS OF ACCEPTANCE

a. Plain Elastomeric Pads. Receipt and approval of a Type D certification as specified in **DIVISION 2600**.

b. Bearings (all types except Steel) Accepted on the basis of the following:

- Receipt and approval of a Type B certification as specified in **DIVISION 2600**
- Visual inspection for condition and compliance with the shop drawings by the Field Engineer at the project site.

c. Steel Bearings. Accepted on the basis of the following:

- Receipt and approval of a Type A certification as specified in **DIVISION 2600** for all steel components provided through this specification.
- Visual inspection for compliance with the shop drawings and fabrication requirements of **SECTION 703** at either the point of production, at the bridge fabricator's facility, or at the project site, as determined by the Field Engineer.