**TYPICAL RECTANGULAR STEEL LAMINATED ELASTOMERIC BEARING (TYPE E.L.)**

- **SECTION A-A**
  - (IF Tapered Bearing is Required)
  - **WEIGHTS**
  - **HEIGHTS OF TOP INTERNAL STEEL PLATE WILL VARY**
  - **S2** is the design load
  - **Weight of Steel Plate Will Vary**
  - **S2** is the design load
  - **SECTION B-B**
  - (IF Tapered Bearing is Required)
  - **WEIGHTS**
  - **HEIGHTS OF TOP INTERNAL STEEL PLATE WILL VARY**
  - **S2** is the design load
  - **SECTION C-C**
  - **DESIGNER NOTES:**
  - The bearing shall meet the requirements of N.Y.S. Standard Specification Section 565 unless otherwise noted.
  - Elastomer Shall be ______ Durometer Hardness on the Shore A Scale.

---

**PLAIN ELASTOMERIC BEARING (TYPE E.P.) TABLE**

<table>
<thead>
<tr>
<th>LOCATION</th>
<th>F/P</th>
<th>ITEM NO.</th>
<th>QUANTITY</th>
<th>SHEAR AREA</th>
<th>TOTAL AREA</th>
<th>SHAPE FACTOR</th>
<th>ELASTOMER LOADS</th>
<th>COMP. AREA</th>
<th>SHEAR AREA</th>
<th>ANCHOR DOWEL</th>
</tr>
</thead>
<tbody>
<tr>
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<tr>
<th>LOCATION</th>
<th>F/P</th>
<th>ITEM NO.</th>
<th>QUANTITY</th>
<th>SHAPE FACTOR</th>
<th>ELASTOMER LOADS</th>
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</thead>
<tbody>
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**STEEL LAMINATED ELASTOMERIC BEARING (TYPE E.L.) TABLE**

<table>
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<tr>
<th>LOCATION</th>
<th>F/P</th>
<th>ITEM NO.</th>
<th>QUANTITY</th>
<th>SHAPE FACTOR</th>
<th>ELASTOMER LOADS</th>
<th>SHEAR AREA</th>
<th>TOTAL AREA</th>
<th>ANCHOR DOWEL</th>
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</thead>
<tbody>
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</tbody>
</table>

**NOTES:**
- The bearing shall meet the requirements of N.Y.S. Standard Specifications Section 565 unless otherwise noted.
- Elastomer shall be ______ Durometer Hardness on the Shore A Scale.
- Installation alignment:
  - The minimum variation from perfect alignment under full load is to be ______ inches. The bearing shall be detailed to provide a minimum clearance of ______ inches along the centerline of the bearing pad.
  - The bearing shall be provided with a minimum clearance of ______ inches along the centerline of the bearing pad.
- Diameters shall be ______ inches equal to the bearing load and are numbered 1 to 10.

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**STATE OF NEW YORK**
**DEPARTMENT OF TRANSPORTATION**
**OFFICE OF STRUCTURES**

**ELASTOMERIC BEARING PLAN (TYPE E.P.) AND STEEL LAMINATED (TYPE E.L.)**

**APPROVAL:**
- 10/08/2014
- 10/08/2014

**STATE OF NEW YORK**
**DEPARTMENT OF TRANSPORTATION**
**OFFICE OF STRUCTURES**

**ELASTOMERIC BEARING PLAN (TYPE E.P.) AND STEEL LAMINATED (TYPE E.L.)**

**APPROVAL:**
- 10/08/2014
- 10/08/2014
ANCHOR STUDS SHALL BE 1" DIA. MINIMUM. FOR ANCHOR STUD DETAILS, SEE BD-BG6E.

MINIMUM EDGE DISTANCES FOR DESIGN:

\[ Ez = \text{STUD DIA.} + " \quad Et = 1.75 \times \text{STUD DIA.} + " \quad Wm = 1" \text{ MIN.} \]

MINIMUM THICKNESS OF SOLE PLATE.

CLEARANCE EQUAL TO TWO TIMES THE THICKNESS OF ANCHOR NUT PLUS 1"

THE BEARING PADS SHALL CONFORM TO ONE OF THE FOLLOWING MATERIAL SPECIFICATIONS: 728-01, 728-02 OR 728-03.

DO NOT INCLUDE THE BEARING PAD THICKNESS WHEN CALCULATING THE BEARING HEIGHT (H).

LETTER OF 05/07/2015 EFFECTIVE WITH THE ISSUED UNDER EB 14-032

APPROVED: 10/08/2014 REVISED 10/08/14

STATE OF NEW YORK DEPARTMENT OF TRANSPORTATION OFFICE OF STRUCTURES

(STRUCTURES)

DEPUTY CHIEF ENGINEER

TYPICAL SLOTTED HOLE DETAIL

MASONRY PLATE

TYPICAL RECTANGULAR EXPANSION BEARING

TYPICAL CIRCULAR EXPANSION BEARING

EXPRESSION ELASTOMERIC BEARING (TYPE E.B.) TABLE

<table>
<thead>
<tr>
<th>LOCATION</th>
<th>ITEM NO.</th>
<th>QUANTITY REQUIRED</th>
<th>DIA. X LENGTH (IN.)</th>
<th>TYPICAL SLOTTED HOLE DETAIL</th>
<th>TYPICAL CIRCULAR HOLE DETAIL</th>
</tr>
</thead>
<tbody>
<tr>
<td>MASONRY PLATE</td>
<td>1&quot; WIDE X THICK</td>
<td>1&quot; WIDE X THICK</td>
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<td></td>
</tr>
</tbody>
</table>

NOTE: THE BEARINGS SHALL MEET THE REQUIREMENTS OF STANDARD SPECIFICATION SECTION 728. ALSO ADD OTHER NOTES.

ALL ELASTOMER SHALL BE FACTORY Vulcanized in the Typical SLOTTED HOLE DETAIL

ALL STEEL EXCEPT THE INTERNAL STEEL PLATES SHALL CONFORM TO ASTM A490, A325, OR A572.

INSTALLATION ALIGMENT:


CONCRETE OR STEEL BEAMS OR GIRDERS SHALL CONTAIN CONCRETE OR STEEL BEAMS OR GIRDERS SHALL CONTAIN CONCRETE OR STEEL BEAMS OR GIRDERS SHALL CONTAIN CONCRETE OR STEEL BEAMS OR GIRDERS SHALL CONTAIN CONCRETE OR STEEL BEAMS OR GIRDERS SHALL CONTAIN CONCRETE OR STEEL BEAMS OR GIRDERS SHALL CONTAIN CONCRETE OR STEEL BEAMS OR GIRDERS SHALL CONTAIN CONCRETE OR STEEL BEAMS OR GIRDERS SHALL CONTAIN CONCRETE OR STEEL BEAMS OR GIRDERS SHALL CONTAIN CONCRETE OR STEEL BEAMS OR GIRDERS SHALL CONTAIN CONCRETE OR STEEL BEAMS OR GIRDERS SHALL CONTAIN CONCRETE OR STEEL BEAMS OR GIRDERS SHALL CONTAIN CONCRETE OR STEEL BEAMS OR GIRDERS SHALL CONTAIN CONCRETE OR STEEL BEAMS OR GIRDERS SHALL CONTAIN CONCRETE OR STEEL BEAMS OR GIRDERS SHALL CONTAIN CONCRETE OR STEEL BEAMS OR GIRDERS SHALL CONTAIN CONCRETE OR STEEL BEAMS OR GIRDERS SHALL CONTAIN CONCRETE OR STEEL BEAMS OR GIRDERS SHALL CONTAIN CONCRETE OR STEEL BEAMS OR GIRDERS SHALL CONTAIN CONCRETE OR STEEL BEAMS OR GIRDERS SHALL CONTAIN CONCRETE OR STEEL BEAMS OR GIRDERS SHALL CONTAIN CONCRETE OR STEEL BEAMS OR GIRDERS SHALL CONTAIN CONCRETE OR STEEL BEAMS OR GIRDERS SHALL CONTAIN CONCRETE OR STEEL BEAMS OR GIRDERS SHALL CONTAIN CONCRETE OR STEEL BEAMS OR GIRDERS SHALL CONTAIN CONCRETE OR STEEL BEAMS OR GIRDERS SHALL CONTAIN CONCRETE OR STEEL BEAMS OR GIRDERS SHALL CONTAIN CONCRETE OR STEEL BEAMS OR GIRDERS SHALL CONTAIN CONCRETE OR STEEL BEAMS OR GIRDERS SHALL CONTAIN CONCRETE OR STEEL BEAMS OR GIRDERS SHALL CONTAIN CONCRETE OR STEEL BEAMS OR GIRDERS SHALL CONTAIN CONCRETE OR STEEL BEAMS OR GIRDERS SHALL CONTAIN CONCRETE OR STEEL BEAMS OR GIRDERS SHALL CONTAIN CONCRETE OR STEEL BEAMS OR GIRDERS SHALL CONTAIN CONCRETE OR STEEL BEAMS OR GIRDERS SHALL CONTAIN CONCRETE OR STEEL BEAMS OR GIRDERS SHALL CONTAIN CONCRETE OR STEEL BEAMS OR GIRDERS SHALL CONTAIN CONCRETE OR STEEL BEAMS OR GIRDERS SHALL CONTAIN CONCRETE OR STEEL BEAMS OR GIRDERS SHALL CONTAIN CONCRETE OR STEEL BEAMS OR GIRDERS SHALL CONTAIN CONCRETE OR STEEL BEAMS OR GIRDERS SHALL CONTAIN CONCRETE OR STEEL BEAMS OR GIRDERS SHALL CONTAIN CONCRETE OR STEEL BEAMS OR GIRDERS SHALL CONTAIN CONCRETE OR STEEL BEAMS OR GIRDERS SHALL CONTAIN CONCRETE OR STEEL BEAMS OR GIRDERS SHALL CONTAIN CONCRETE OR STEEL BEAMS OR GIRDERS SHALL CONTAIN CONCRETE OR STEEL BEAMS OR GIRDERS SHALL CONTAIN CONCRETE OR STEEL BEAMS OR GIRDERS SHALL CONTAIN CONCRETE OR STEEL BEAMS OR GIRDERS SHALL CONTAIN CONCRETE OR STEEL BEAMS OR GIRDERS SHALL CONTAIN CONCRETE OR STEEL BEAMS OR GIRDERS SHALL CONTAIN CONCRETE OR STEEL BEAMS OR GIRDERS SHALL CONTAIN CONCRETE OR STEEL BEAMS OR GIRDERS SHALL CONTAIN CONCRETE OR STEEL BEAMS OR GIRDERS SHALL CONTAIN CONCRETE OR STEEL BEAMS OR GIRDERS SHALL CONTAIN CONCRETE OR STEEL BEAMS OR GIRDERS SHALL CONTAIN CONCRETE OR STEEL BEAMS OR GIRDERS SHALL CONTAIN CONCRETE OR STEEL BEAMS OR GIRDERS SHALL CONTAIN CONCRETE OR STEEL BEAMS OR GIRDERS SHALL CONTAIN CONCRETE OR STEEL BEAMS OR GIRDERS SHALL CONTAIN CONCRETE OR STEEL BEAMS OR GIRDERS SHALL CONTAIN CONCRETE OR STEEL BEAMS OR GIRDERS SHALL CONTAIN CONCRETE OR STEEL BEAMS OR GIRDERS SHALL CONTAIN CONCRETE OR STEEL BEAMS OR GIRDERS SHALL CONTAIN CONCRETE OR STEEL BEAMS OR GIRDERS SHALL CONTAIN CONCRETE OR STEEL BEAMS OR GIRDERS SHALL CONTAIN CONCRETE OR STEEL BEAMS OR GIRDERS SHALL CONTAIN CONCRETE OR STEEL BEAMS OR GIRDERS SHALL CONTAIN CONCRETE OR STEEL BEAMS OR GIRDERS SHALL CONTAIN CONCRETE OR STEEL BEAMS OR GIRDERS SHALL CONTAIN CONCRETE OR STEEL BEAMS OR GIRDERS SHALL CONTAIN CONCRETE OR STEEL BEAMS OR GIRDERS SHALL CONTAIN CONCRETE OR STEEL BEAMS OR GIRDERS SHALL CONTAIN CONCRETE OR STEEL BEAMS OR
1. The "α" expansion checking in the tables includes 1.0 for movement and 0.1 * for construction tolerance per axis. If the maximum allowable design movement exceeds 1.0, the "α" expansion must be increased by 0.1 for each increment. Construction tolerance may vary up to 0.1 performing the design check.

2. Design and detail the sole plate, masonry plate and anchor type spacing. Based on the bearing selected from the appropriate tables in this section.

3. The anchor type shown is for the sole plate and masonry plate. If the anchor type is set under the sole plate, a bearing clearance equals to the times of anchor web length will be separated between the top of the masonry plate and the bottom of the sole plate.

4. Four anchor types, type, number, and features shall be used for all types of masonry bearings.

5. The moment of the masonry plate is dependent on the anchor type location. The moment of the masonry plate shall be at least 1.0 larger than the moment calculated by the masonry plate. The moment of the masonry plate shall be determined by the designer.

6. In the location where masonry movements are expected, or where partial masonry movement is involved, the masonry plate shall be supported by a bearing placed between the masonry plate and the foundation. The masonry plate shall be attached to the foundation with an anchor type that will support the masonry plate.

7. In the location between the masonry and the bearing, for the expansion bearings and masonry plate of the bearing plate shall be at least 1.0 larger than the moment calculated by the masonry plate. The masonry plate shall be connected to the foundation with an anchor type that will support the masonry plate.

8. The top and bottom bearing plates shall be placed in the sole plate and masonry plate respectively. The size of the masonry plate shall be less than the size of the bearing plate.

9. The expansion joint in the masonry plate shall not be less than the size of the masonry plate.

10. All anchor types shown in the tables are to be used as a reference to assist the designer in selecting the sole plate and the masonry plate. These tables are to be used as a reference to assist the designer in selecting the sole plate and the masonry plate. The actual dimensions of the masonry plate supplied may vary especially if the masonry type bearing is used.

11. All the expansion joints shown in the tables are to be used as a reference to assist the designer in selecting the sole plate and the masonry plate. These tables are to be used as a reference to assist the designer in selecting the sole plate and the masonry plate. The actual dimensions of the masonry plate supplied may vary especially if the masonry type bearing is used.
The cross hatched components of the bearing are shown for representation only. The actual components of the bearing will be dependent upon the specific bearing condition to the type's specification.

The cross hatched components of the bearing are shown for representation only. The actual components of the bearing will be dependent upon the specific bearing condition to the type's specification.

BEARING TABLE

<table>
<thead>
<tr>
<th>LOCATION</th>
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<tr>
<td>ITEM NO.</td>
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<tr>
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<td>DIA.</td>
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<tr>
<td>BEARING STIFFENER</td>
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<td>LOAD</td>
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<td>PLATE</td>
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<tr>
<td>ANCHOR STUDS</td>
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<tr>
<td>MOLD</td>
</tr>
</tbody>
</table>

Notes:
- The contractor shall supply notional structural bearing system conforming to the provisions of the New York State Steel Construction Manual, and subject to the following conditions:
  1. The bearing device supplied shall be capable of transmitting the loads and movement shown on the plans.
  2. The bearing device supplied shall be capable of transmitting the loads and movement shown on the plans.
  3. All steel shall conform to ASTM A36, as specified.
  4. All steel fabrication shall conform to the provisions of the New York State Steel Construction Manual.
  5. All metal components of the bearing system must be welded to the rigid frame by the designer.
  6. All expansion joints shall have a minimum friction coefficient of 0.1.
  7. The bearing steel, weldment, plate, plate, and stud steel shall be included in the shop price for the expansion joint.
  8. If the anchor stud is set under the sole plate, a minimum clearance shall be included in the shop price for the expansion joint.
  9. For bearings of capacity 5,000 kips or more, an anchor bearing shall be included in the shop price for each.
  10. When the thickness of the washers or any other plate being defined exceeds 0.5", the plates shall be fabricated in accordance with the New York Steel Construction Manual.

When making notional structural bearings, the contractor shall submit a notional procedural document to the department for approval.

The contractor shall ensure that the design of the notional structural bearing is consistent with the specific bearing condition to the type's specification.

The contractor shall ensure that the design of the notional structural bearing is consistent with the specific bearing condition to the type's specification.

For typical sloped hole detail, see BD-BG3E.

For typical sloped hole detail, see BD-BG3E.