**DETIAL NO.**

**STATE OF MINNESOTA**

**DEPARTMENT OF TRANSPORTATION**

**B311**

**CURVED PLATE BEARING ASSEMBLY**

(PRESTRESSED CONCRETE BEAMS)  
(EXPANSION)

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**NOTES:**

1. THE MIN. RADIUS IS 16", UNLESS OTHERWISE SPECIFIED IN THE TABLE. THE MAX. RADIUS IS 24", FINISH TO 250 MICRO. THE FINISHED THICKNESS OF THE PLATE MAY BE 1/8" LESS THAN SHOWN.

2. DO NOT GALVANIZE THESE PLATES.

3. THE TOTAL THICKNESS SHOWN INCLUDES THE STEEL PLATES.

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**TABLE**

<table>
<thead>
<tr>
<th>ASSEMBLY TYPE</th>
<th>LOCATION</th>
<th>BEAM SIZE</th>
<th>BEARING PAD SIZE</th>
<th>STEEL PLATES</th>
<th>LAMINATES</th>
<th>SHAPE FACTOR</th>
<th>BEARING PLATE SIZE</th>
<th>CURVED PLATE SIZE</th>
<th>ASSY.</th>
<th>HEIGHT</th>
<th>RESTRAINT PATTERN</th>
</tr>
</thead>
<tbody>
<tr>
<td>__RB, __M, <strong>MN</strong></td>
<td>12&quot; x 24&quot;</td>
<td>1/4&quot;</td>
<td>1/2&quot;</td>
<td>8.0</td>
<td>14&quot;</td>
<td>1/2&quot;</td>
<td>4/16&quot;</td>
<td>26&quot;</td>
<td>1/4&quot;</td>
<td>A-1</td>
<td></td>
</tr>
<tr>
<td><strong>WW</strong></td>
<td>16&quot; x 36&quot;</td>
<td>1/4&quot;</td>
<td>1/2&quot;</td>
<td>7.4</td>
<td>18&quot;</td>
<td>39&quot;</td>
<td>1/2&quot;</td>
<td>4/16&quot;</td>
<td>38&quot;</td>
<td>1/4&quot;</td>
<td>A-2</td>
</tr>
<tr>
<td><strong>MH</strong></td>
<td>12&quot; x 30&quot;</td>
<td>1/4&quot;</td>
<td>1/2&quot;</td>
<td>8.6</td>
<td>14&quot;</td>
<td>33&quot;</td>
<td>1/2&quot;</td>
<td>4/16&quot;</td>
<td>32&quot;</td>
<td>1/4&quot;</td>
<td>A-3</td>
</tr>
</tbody>
</table>

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**SECTION THROUGH ELASTOMERIC BEARING PAD**

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**PINTLE (TYP.)**

**HOLE FOR PINTLE (TYP.)**

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**PLAN**

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**SIDE ELEVATION**

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**SECTION X-X**

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**SECTION Y-Y**

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**SECTION THROUGH ELASTOMERIC BEARING PAD**

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**DESIGN DATA:**

- MAX. FACTORED SHEAR RESISTANCE: - 50.3 KIPS PER 1/2" DIA. PINTLE

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**APPROVED: DECEMBER 20, 2018**

**STATE BRIDGE ENGINEER**

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**PAYMENT FOR BEARING ASSEMBLY INCLUDES ALL MATERIAL ON THIS DETAIL.**

**FABRICATION IN ACCORDANCE WITH SPEC. 3394, EXCEPT AS NOTED.**

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**GALVANIZE STRUCTURAL STEEL BEARING ASSEMBLY AFTER FABRICATION IN ACCORDANCE WITH SPEC. 3309.**

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**DO NOT GALVANIZE THESE PLATES.**

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**REFERENCES:**

- DETAIL B307 AND PER NOTE 4 INCLUDE B307 AND MODIFY THIS DETAIL TO PROVIDE FOR PARAPET AND SEMI-INTEGRAL ABUTMENT BRIDGES ON GRADES EXCEEDING 3%. MODIFY THIS DETAIL TO PROVIDE A TAPERED BEARING PLATE PER DETAIL B309.

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**REVISED 10-22-2019**

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**DETAIL NO.**

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**STATE OF MINNESOTA**

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**DEPARTMENT OF TRANSPORTATION**

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**B311**

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**CURVED PLATE BEARING ASSEMBLY**

(PRESTRESSED CONCRETE BEAMS)  
(EXPANSION)