### Steel Beam Posts

<table>
<thead>
<tr>
<th>Size</th>
<th>Beam Depth</th>
<th>Flange Width</th>
<th>Flange Thickness</th>
<th>Web Thickness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rolled W8</td>
<td>5.8&quot;</td>
<td>3.34&quot;</td>
<td>0.173&quot;</td>
<td>0.101&quot;</td>
</tr>
<tr>
<td>Rolled W8</td>
<td>6.5&quot;</td>
<td>3.34&quot;</td>
<td>0.173&quot;</td>
<td>0.101&quot;</td>
</tr>
<tr>
<td>Welded W8</td>
<td>6.5&quot;</td>
<td>3.34&quot;</td>
<td>0.173&quot;</td>
<td>0.101&quot;</td>
</tr>
</tbody>
</table>

Welded W8 beams may be used in lieu of rolled W8's. All beams are to be pressure treated as specified in CMS 710.14. Bore bolt holes, where required, are to be drilled in accordance with ASTM A 769, Class 1, using Grade 36 steel [250 MPa yield point] with the following exceptions:

- Welded W-beam guardrail posts may be used for Item 606, Guardrail, provided the web and flange sizes are as shown here. Welding of the web to the flanges must comply with ASTM A 769, Class 1, using Grade 36 steel [250 MPa yield point] with the following exceptions:
  - List.
  - Instructions and within the limitations shown on the Approved Alternate List are permitted as an equal NCHRP 350 criteria, and listed on the Approved List by the Laboratory.
- Alternate guardrail posts having met NCHRP 350 criteria, and listed on the Approved Alternate List are permitted as an equal. Random samples shall be tested by the Department from materials delivered to the project site, or other locations designated by the Department from materials delivered to the project site. Test reports of tensile properties for each lot shall accompany each shipment.

**MISCELLANEOUS**

- Use W-Beam rail meeting AASHTO M 180 Type II Class A, as specified in CMS 506.
- POSTS: Posts may be constructed of wood or steel. Wood posts may be round or bored square-sawed. Use round wood posts on runs of single-sided rail. The round posts shall be 8" in diameter at the top and not more than 3" larger at the butt with a uniform taper.
- Fabricated wood posts with square base. Posts shall be pressure-treated as per CMS 710.4. Bore bolt holes, if required, from the tops of posts after the posts are set.
- Steel posts are to be 8" or Rolled 6x8 galvanized steel. Use the same type of post throughout the length of the project unless otherwise specified in the plans or permitted by the Engineer.
- All posts are 6'-0" long unless specified otherwise in the Contract Documents. Posts may be set in drilled holes or may be driven to grade.

**WELDED BEAM POSTS**

Welded beam guardrail posts may be used for Item 606, guardrail. The web and flange sizes are as shown here. Welding of the web to the flanges must comply with ASTM A 769, Class 1, using Grade 36 steel [250 MPa yield point] with the following exceptions:

- Welded W-beam guardrail posts may be used for Item 606, Guardrail, provided the web and flange sizes are as shown here. Welding of the web to the flanges must comply with ASTM A 769, Class 1, using Grade 36 steel [250 MPa yield point] with the following exceptions:
  - List.
  - Instructions and within the limitations shown on the Approved Alternate List are permitted as an equal NCHRP 350 criteria, and listed on the Approved Alternate List by the Laboratory.
- **Alternate Posts:** Engineered guardrail posts having met AASHTO M 180 Type II Class A criteria, and listed on the Approved Alternate List are permitted as an equal. Random samples shall be tested by the Department from materials delivered to the project site, or other locations designated by the Department from materials delivered to the project site. Test reports of tensile properties for each lot shall accompany each shipment.

**Wood Blockouts**

Wood blockouts are to be pressure treated as specified in CMS 710.4. Bore bolt holes, Approved alternate blockouts, may be used in lieu of the wood blockouts shown. The approved list is maintained by the Office of Roadway Engineering.

**WASHERS**

Install appropriate sized standard galvanized steel washers on the nut side of bolts installed on wood posts.

**DELINEATION**

For barrier reflectors, see CMS 626.
**Guardsrail Type 5 & 5A**

**Barrier Design**

**Standard Design**

- Old Common Coated Nail to prevent blockout rotation. Drive at center of block and post after installing post bolts.

- See POSTS and BLOCKOUTS Notes on Sheet 1

**SQUARE WOOD POST**

- 6"x8" Post

**STEEL POST**

- See POSTS Note, Sheet 1

**NOTCHED BLOCKOUTS**

- Steel posts: Notched Blockouts (See NOTCHED BLOCKOUT Details)

- 5"x7" notched

**PLAN**

- Permitable radius on exterior corners

**ELEVATION**

- Existing Wood Post

**RAISING EXISTING GUARDRAIL HEIGHT**

- Wood Blockouts (See NOTCHED BLOCKOUTS)

**Wood Blockouts**

- 6"x8" Post

**Routed Blockout**

- Method 1

- Old rail required to prevent blockout rotation

- New or reusable 6"x8" Wood Blockout

- Old bolt hole

**Notched Post**

- Method 2

- Old rail required to prevent blockout rotation

- New or reusable 6"x8" Wood Blockout

- Old bolt hole

**ROUND WOOD POSTS**

- Single Sided runs only (Standard Design)

- Alternate methods of placing the Blockouts on round posts may be submitted for consideration and approved by the Engineer.

- Splice Bolts, 2 per splice

- 1/2" Post Bolts

- 3/8" dia. hole

- 5/8" (+0,-0.04"

- 2.165" (+0,-0)