NOTE:
1. See Details C617-80 and C617-81 for timber, structural steel, and hardware details.
2. Extend the fill widening a minimum of 5 feet behind the guardrail, unless otherwise directed by the CO.
3. The guardrail flare shown in the plan view is the minimum length and rate required. As directed by the CO, flare the guardrail so that the terminal section is outside the clear zone. If the terminal section cannot be located outside the clear zone, it should be flared as far as practical from the road at the maximum rate indicated on the Guardrail Flare Rates table.

**GUARDRAIL FLARE RATE TABLE**

<table>
<thead>
<tr>
<th>Design Speed (mph)</th>
<th>Shy line offset (ft)</th>
<th>Flare rate inside shy line (a:b)</th>
<th>Flare rate outside shy line (a:b)</th>
</tr>
</thead>
<tbody>
<tr>
<td>60</td>
<td>8</td>
<td>26:1</td>
<td>14:1</td>
</tr>
<tr>
<td>50</td>
<td>6.5</td>
<td>21:1</td>
<td>11:1</td>
</tr>
<tr>
<td>40</td>
<td>5.5</td>
<td>16:1</td>
<td>8:1</td>
</tr>
<tr>
<td>30 and less</td>
<td>4.0</td>
<td>13:1</td>
<td>7:1</td>
</tr>
</tbody>
</table>

**ANGLED STEEL SPLICE PLATE**

**CONCRETE ANCHOR**

**SECTION A-A**

- 1/2" thick steel bearing plate
- 1/2" dia. hole (typ.)
- 3" dia. bolt slots (typ.)
- 3/8" x 22" carriage bolt with hex nut (typ.)
- 1 1/4" x 22" steel splice plate

**STEEL BEARING PLATE**

- 9" dia. hole (typ.)
- 1 3/8" thick steel bearing plate
- 3/8" thick hex nut (typ.)
- 3/8" x 5/8" bolt slots (typ.)

**APPROACH & DEPARTURE FLARE WITH FLARED ANCHOR TERMINAL (FAT)**

**PLAN**

- Standard post section
- Steel-backed log rail
- Edge of pavement
- Hinge line of foreslope
- Pay limits for
- Terminal section, type SBL-FAT
- See roadway typical section for offset distance

**ELEVATION**

- Shy line (a:b)
- Cut posts flush with top of rail
- See roadway (See Note 3)
- Steel splice plate
- Concrete anchor

**NOTE:**
- See roadway (See Note 2)
- See roadway (See Note 3)

**STATE PROJECT NUMBER**

- Central Federal Lands Highway Division
- Federal Highway Administration
- U.S. Department of Transportation
- Rev: 02/2019
- User: Christine Black

**DETAILS APPROVED FOR USE**

- C617-82
- Use: User: Christine Black

**CONTRACTOR:**

- U.S. Department of Transportation
- Central Federal Lands Highway Division
- U.S. Customary Details

**REVISIONS:**

- 02/2019
Steel-backed Log Rail Terminal Section, Type SBL-FAT

General Information

**Appropriate Applications.**
- Steel-backed log (SBL) guardrail is an aesthetic roadside barrier. This terminal provides an anchor to the SBL system.

<table>
<thead>
<tr>
<th>Crash Test Criteria</th>
<th>None</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test Level</td>
<td>None</td>
</tr>
<tr>
<td>FHWA Eligibility Letter</td>
<td>None</td>
</tr>
<tr>
<td>TF 13 Designator</td>
<td>Not posted</td>
</tr>
<tr>
<td>Crash Test Report</td>
<td>None</td>
</tr>
</tbody>
</table>

**Limitations.** Need to flare the terminal outside the clear zone since this is a non-crashworthy terminal.

**Layout Guidance.**
- See AASHTO Roadside Design Guide
- Use the FLH Barrier Length of Need Calculator available at [https://flh.fhwa.dot.gov/resources/design/tools/Barrier-LON.xlsx](https://flh.fhwa.dot.gov/resources/design/tools/Barrier-LON.xlsx)

**Applicable SCRs**
- None

**Typical Pay Item Used**
- NO PAY ITEM in list yet

**Updates**
February 2019
- New Detail drawing