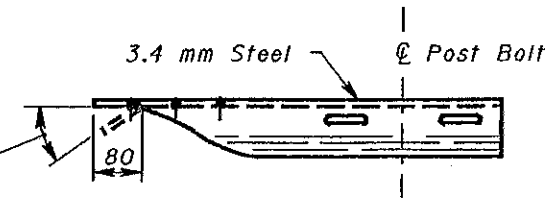
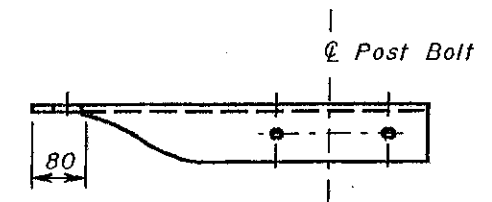


PLAN

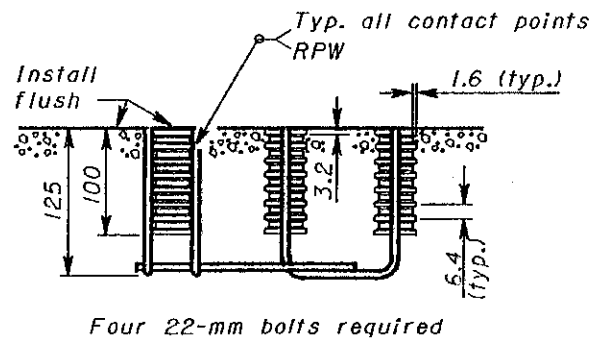
25.5° bend and additional  $\emptyset$  hole required only for use with Type B Anchor Assembly



PLAN

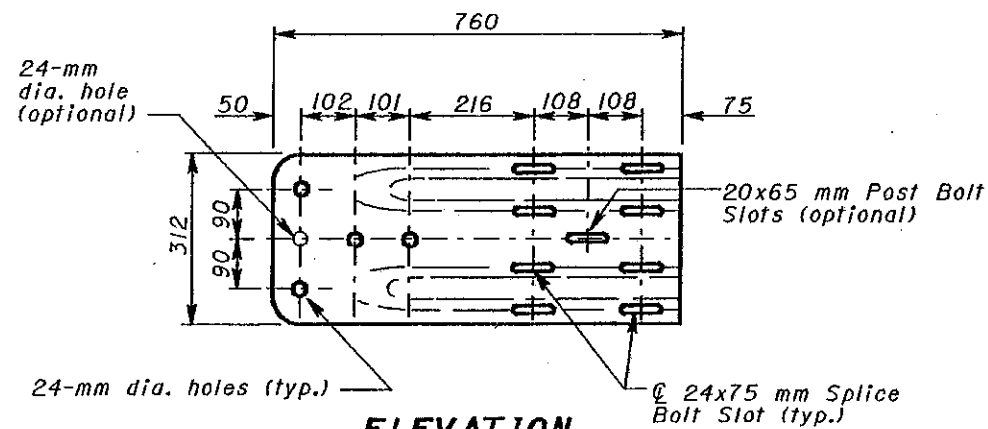


PLAN



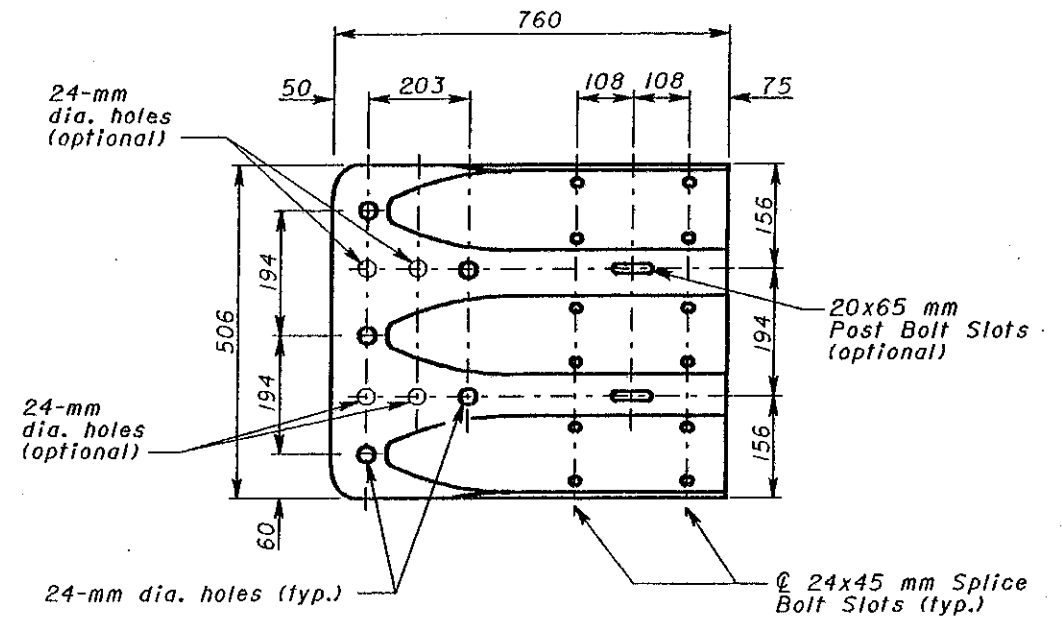
ELEVATION

**CONCRETE INSERT ANCHOR ASSEMBLY (W-BEAM ONLY)**



ELEVATION

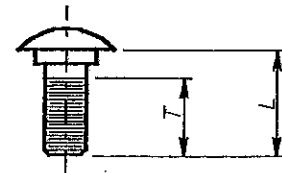
**W-BEAM TERMINAL CONNECTOR**



ELEVATION

**THRIE-BEAM TERMINAL CONNECTOR**

All dimensions are in millimeters unless otherwise noted.



| L (mm)              | T min. (mm) | Bolt Use                        |
|---------------------|-------------|---------------------------------|
| 455 (Standard Rail) | 85          | Type 5: WP/WB, PB               |
| 660 (Barrier Rail)  |             | Type 5: SP/WB, PB               |
| 255                 | 60          | Type 4: WP<br>Type 5: SP/WB, PB |
| 50                  | 35          | Type 4: SP                      |
| 32                  | Full        | Splice Bolt                     |

WP- wood post      WB- wood blackout  
 SP- steel post      PB- plastic blackout  
 Longer bolt may be needed for round WP larger than 200 mm dia.

**BUTTON HEAD BOLT**  
 (For post and splice bolts)

**NOTE**

Refer to AASHTO M 180 for dimensional details of W-Beam and Thrie-Beam rail elements, related buffer and end sections, beam splices, post and splice bolts and nuts, and Type I W-Beam to Thrie-Beam Transition section.



OHIO DEPARTMENT OF TRANSPORTATION

**GUARDRAIL DETAILS**

DATE  
 11-30-94  
 10-21-97

STANDARD CONSTRUCTION DRAWING **GR-1.1M**

APPROVED *Randy T. Sutherland*