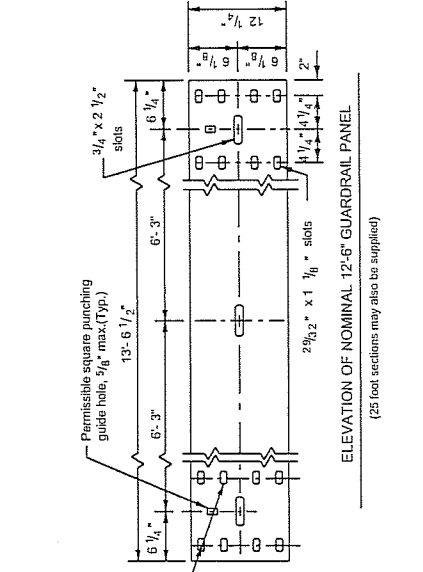
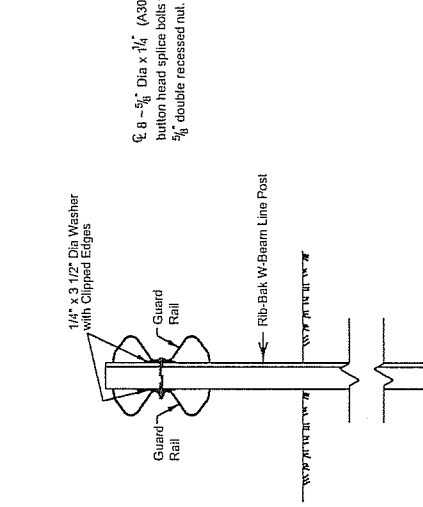


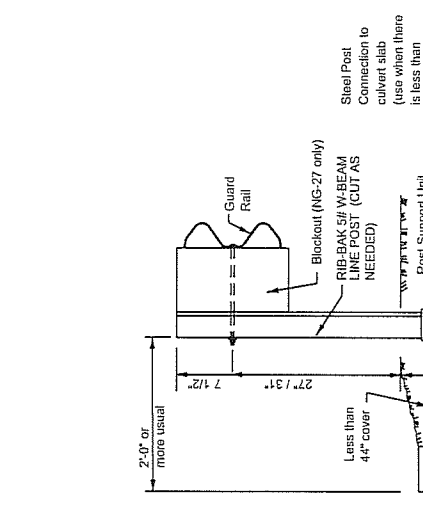
**RAIL SPLICE\***  
 \* See manufacturer's recommendation for post placement relative to splice.



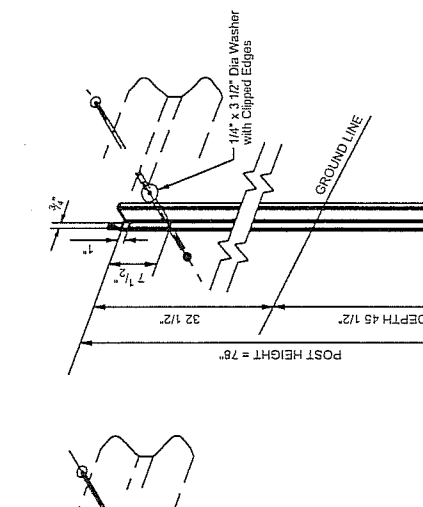
**ELEVATION OF NOMINAL 12'-6" GUARDRAIL PANEL**  
 (25 foot sections may also be supplied)



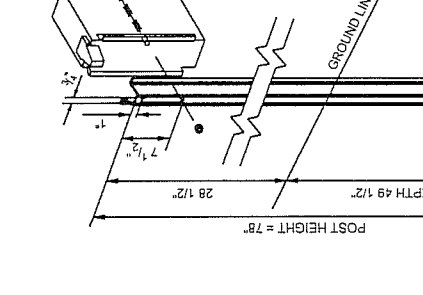
**MEDIAN APPLICATIONS**



**LOW FILL CULVERT POST**  
 MOUNTING OPTION FOR NG-27 OR NG-31



**RIB-BAK™ 5# W-BEAM LINE POST**  
 (NG-31 NO BLOCKOUT REQUIRED)

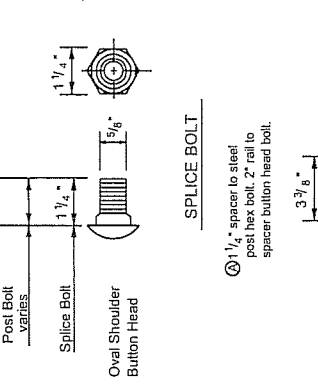


**RIB-BAK™ 5# W-BEAM LINE POST**  
 (NG-27)

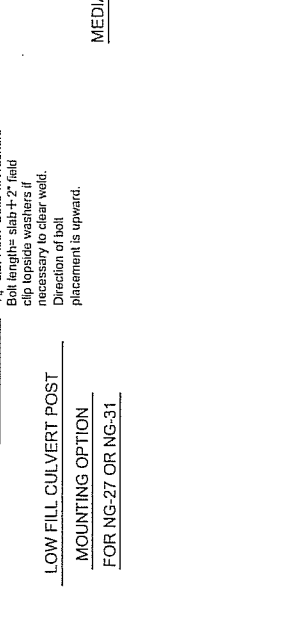
- GENERAL NOTES**
- The exact position of guard fence shall be as shown elsewhere on the plans or as directed by the Engineer. Guard fence shall be transitioned to a smooth connection with other guard fence, structure railing or approved ends as shown elsewhere on plans.
  - Rail element shall meet all requirements of AASHTO M-180 except as modified on the plans. The terminal connectors shall be of the same material, but shall not be less than 10 gauge. Contractor shall verify that the locations of bolt holes match those in the Terminal Connector prior to ordering of materials.
  - Unless otherwise shown in the plans, guard fence placed in the vicinity of curbs shall be blocked out so that the face of curb is located directly below or behind the face of the blockout. Rail placed over curbs shall be installed so that the post bolt is located approximately 21-inches above the gutter pan or roadway surface. (NG-27 Only)
  - Unless otherwise shown in the plans, MBGF shall be placed with the face of rail directly above the shoulder edge (or curbface) except for upstream end treatments.
  - At the option of the Contractor, the rail elements for the guard fence may be furnished in either 12.5 foot or 25 foot nominal lengths with post bolt slots for connection to posts.
  - The terminal anchor post shall be set in Class A concrete in (unless otherwise shown on plans) in accordance with Item, Portland Cement Concrete. Concrete shall be subsidiary to the bid item requiring construction of the terminal rail section and anchorage system.
  - An anchor other than a terminal anchor post shall consist of a connection similar to the rail splice or similar to the terminal connector.
  - Galvanized washers used with the eight splice bolts and nuts that are provided for terminal connectors and/or terminal anchor posts shall be 1 3/4 inch x 3 inch x 3/16 inch, or 1 inch d. and 2 inch o.d. x 0.134 (ANSI B27.2) narrow Type A plain washers.
  - Special fabrication will be required at installations having a curvature of less than 150' radius.
  - Button head post bolts (A307) shall be of sufficient length to extend through the full thickness of the nut and no more than 3/4 inch beyond it. Button head splice bolts (A307) are 3/4 inch x 1 1/2 inch with a 1/2 inch double recessed nut. Filings (bolts, nuts, and washers) shall be in accordance with Item, Metal for Structures. Filings shall be subsidiary.
  - Wing channel post must meet ASTM A449 new billet steel specification.
  - If guardrail is placed on a side slope away from the pavement edge, then the slope rate between the edge of the pavement and the face of the barrier will be 1V:10H or flatter.
  - Posts shall not be set full depth in concrete.
  - NG-27 posts may be used as a replacement in traditional guardrail installations. NG-27 system meets NCHRP-350 TL-3 standards. NG-31 system meets NCHRP-350 updated (MASH) standards.
  - Where solid rock is encountered or where shown on the plans, the diameter of the holes shall be approximately 6 inches, the backfilling shall be with a cohesionless material, and embedment depth shall be 1'-5" or more as directed by the Engineer.
  - Unless otherwise directed by the Engineer, a composite material post and/or blockout from the Department approved list of suppliers may be substituted for a post and/or blockout of similar dimensions.
  - Special washer required in NG-31 installations with no blockout.



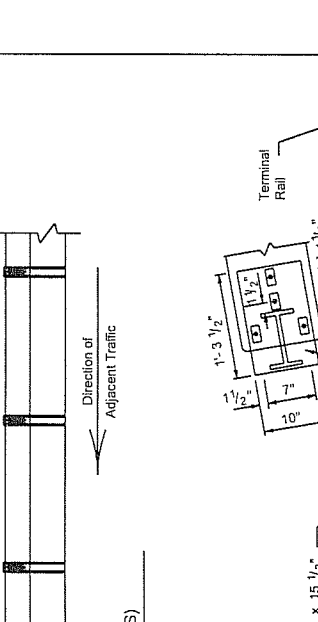
**SPLICE BOLT**  
 1/4 inch spacer to steel post hex bolt, 2 inch rail to spacer button head bolt.



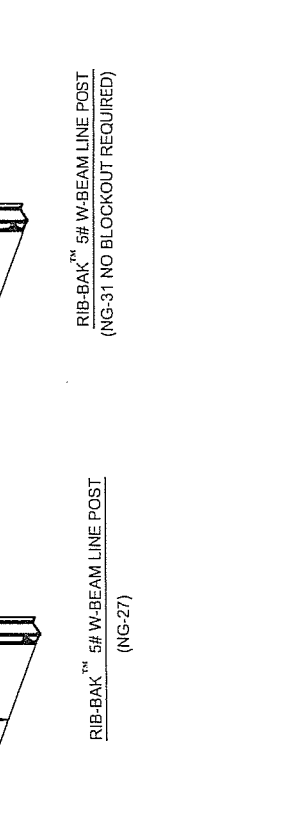
**TERMINAL CONNECTOR**  
 3/4 inch x 2 1/2 inch Long Post Bolt Slots



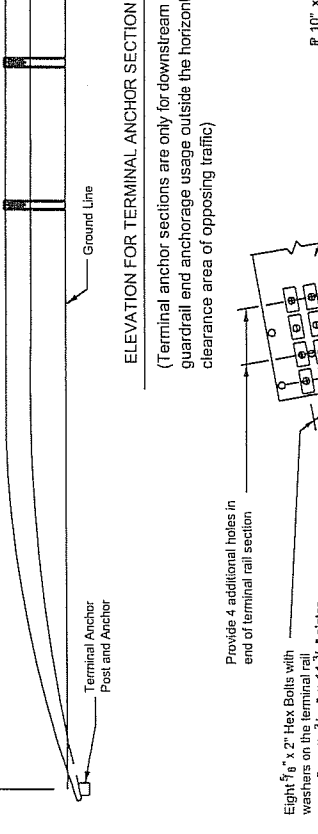
**ELEVATION FOR TERMINAL ANCHOR SECTION (TAS)**  
 (Terminal anchor sections are only for downstream guardrail end anchorage usage outside the horizontal clearance area of opposing traffic)



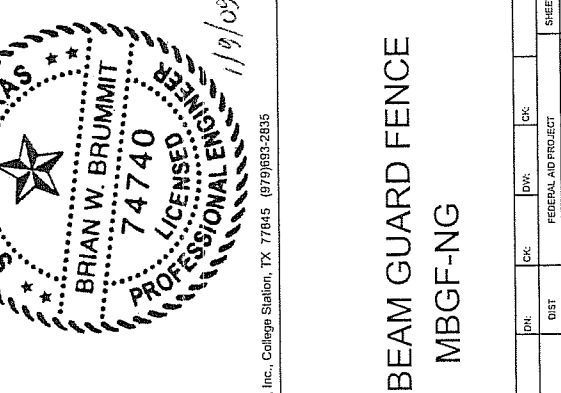
**TERMINAL ANCHOR OPTIONS**



**TERMINAL CONNECTOR**  
 3/4 inch x 2 1/2 inch Long Post Bolt Slots



**TERMINAL CONNECTOR**  
 3/4 inch x 2 1/2 inch Long Post Bolt Slots



Brazos Valley Engineering, Inc., College Station, TX 77845 (979)693-2835

FILE	DIST	DC	DC	DC	DC	DC	DC
FEDERAL AID PROJECT							
REVISIONS							
COUNTY	CONTROL	BECT	JOB	HIGHWAY			

**METAL BEAM GUARD FENCE**  
**MBGF-NG**

R = Radius  
 D = Diameter

**TERMINAL ANCHOR POST OPTIONS**

Notes:

- Either post may be used with either anchor.
- No construction joint is allowed in the concrete anchor.
- Terminal rail may be bolted to post and in level position prior to placing concrete anchor.
- If concrete anchor is precast, the area should be compacted as directed by the Engineer, when placed in the field.

**TERMINAL CONCRETE ANCHOR OPTIONS**

Notes:

- This post requires four additional holes (shop or field) in the terminal rail member with eight 5/16 inch bolts and washer plates as shown for attachment.
- Place face of post approx. on C of anchor

