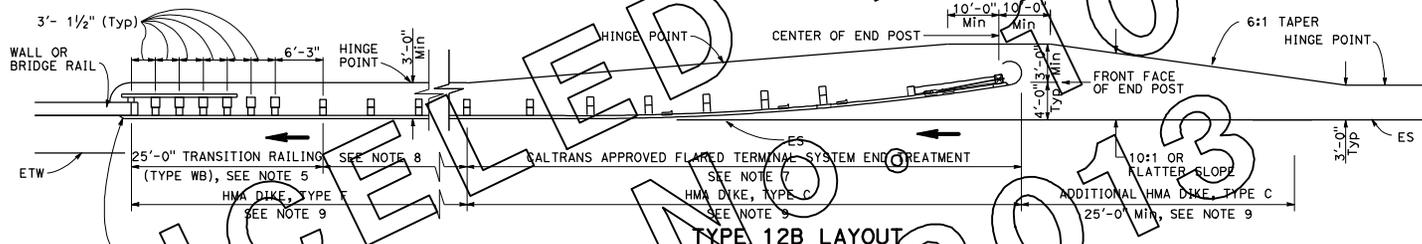


**TYPE 12A LAYOUT**

(Guard railing installation at structure approach with an in-line end treatment at traffic approach end of railing)  
See Notes 10



**TYPE 12B LAYOUT**

(Guard railing installation at structure approach with a flared end treatment at traffic approach end of railing)  
See Notes 10

**NOTES:**

1. Line post, blocks and hardware to be used are shown on Standard Plans A77A1, A77A2, A77B1, A77C1 and A77C2.
2. Guard rail post spacing to be 6'-3" center to center, except as otherwise noted.
3. Except as noted, line posts are 6" x 8" x 6'-0" wood with 6" x 8" x 1'-2" wood blocks. W6 x 9 steel posts, 6'-0" in length, with 6" x 8" x 1'-2" notched wood blocks or plastic blocks may be used for 6" x 8" x 6'-0" wood posts with 6" x 8" x 1'-2" wood blocks where applicable and when specified.
4. Direction of adjacent traffic indicated by →.
5. For Transition Railing (Type WB) details for Types 12A and 12B Layouts, see Standard Plan A77J4.
6. In-Line Terminal System End Treatments are used where site conditions will not accommodate a flared end treatment.
7. The type of terminal system end treatment to be used will be shown on the Project Plans.
8. Dependent on site conditions (embankment height, side slopes, or other fixed objects), it may be advisable to construct additional guard railing (a length equal to multiples of 12'-6" with 6'-3" post spacing) between the transition railing and end treatment.
9. Where placement of dike is required with guard railing installations, see Standard Plan A77C4 for dike positioning details.
10. Type 12A or Type 12B Layouts are typically used:
  - a. To the right of approaching traffic, at the end of a structure, on two-lane conventional highway where the roadbed width across the structure is less than 40 feet.
  - b. To the left of approaching traffic, at the end of a structure, on two-lane conventional highway where the roadbed width across the structure is less than 40 feet.
  - c. To the right of approaching traffic at the end of each structure on multilane freeways or expressways with separate adjacent or parallel bridges.
  - d. To the right of approaching traffic at the end of the structure on multilane freeways or expressways with decked median on the bridge.
11. See Standard Plan A77F3 for typical layout used left of approaching traffic at the ends of each structure on multilane freeways or expressways with separate adjacent or parallel bridges.
12. For additional details of typical connections to bridge rail, see Connection Detail AA on Standard Plans A77J1 and A77J2 and Connection Detail FF on Standard Plans A77K1 and A77K2.
13. For additional details of a typical connection to walls or abutments, see Standard Plan A77J3.

**METAL BEAM GUARD RAILING  
TYPICAL LAYOUTS FOR  
STRUCTURE APPROACH**

NO SCALE

**A77F1**

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET TOTAL SHEETS

*Randell D. Hiatt*  
REGISTERED CIVIL ENGINEER

May 20, 2011  
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER  
Randell D. Hiatt  
No. CS0200  
Exp. 6-30-11  
CIVIL  
STATE OF CALIFORNIA

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2010 STANDARD PLAN A77F1