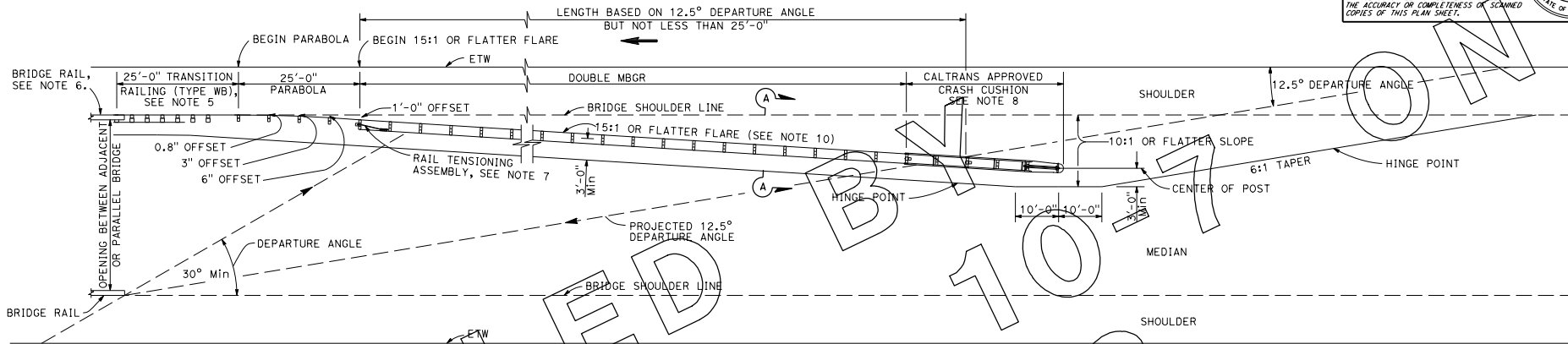


DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

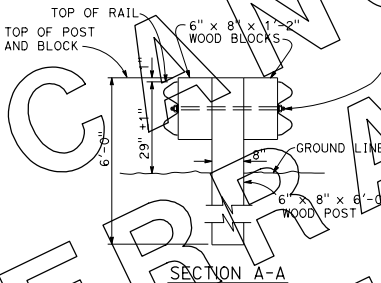
Randell D. Hiatt
 REGISTERED CIVIL ENGINEER
 No. C60200
 Exp. 6-30-11
 CIVIL
 STATE OF CALIFORNIA

May 20, 2011
 PLANS APPROVAL DATE

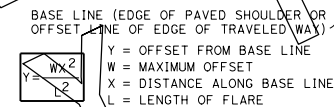
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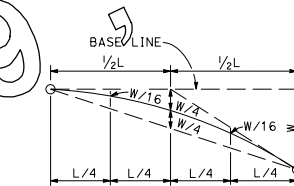
$\frac{5}{8}$ " ϕ BUTTON HEAD BOLT WITH HEX NUT OR $\frac{5}{8}$ " ϕ ROD, THREADED BOTH ENDS, WITH HEX NUTS, $\frac{1}{2}$ " MAX EXPOSED THREADS AFTER HEX NUT(S) TIGHTENED. NO WASHER ON RAIL FACES FOR BOLTED CONNECTION TO LINE POST



SECTION A-A
TYPICAL DOUBLE METAL BEAM GUARD RAILING



PARABOLIC FLARE OFFSETS



TYPICAL PARABOLIC LAYOUT

TYPE 12E LAYOUT

See Note 10

NOTES:

- Line post, blocks and hardware to be used are shown on Standard Plans A77A1, A77A3, A77B1, A77C1 and A77C2.
- Guard railing post spacing to be 6'-3" center to center, except as otherwise noted.
- 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 notched recycled plastic blocks may be used for 6" x 8" x 6'-0" wood line posts with 6" x 8" x 1'-2" wood blocks where applicable and when specified.
- Direction of adjacent traffic indicated by \rightarrow .
- For Transition Railing (Type WB) details, see Standard Plan A77J4.
- For additional details of a typical connection to bridge rail, see Connection Detail AA on Standard Plan A77J1.
- For Rail Tensioning Assembly details, see Standard Plan A77H2.
- The type of Crash Cushion to be used will be shown on the Project Plans.
- Type 12E Layout is typically used left of approaching traffic at the end of each structure on multi-lane freeways or expressways where a median type barrier is not constructed between separated roadbeds.
- The 15:1 or flatter flare is measured off of the edge of traveled way.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**METAL BEAM GUARD RAILING
TYPICAL LAYOUTS FOR
STRUCTURE APPROACH**

NO SCALE

A77F3

2010 STANDARD PLAN A77F3