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

Metric

Donald E Fogle
REGISTERED CIVIL ENGINEER

July 1, 1997
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER Donald E. Fogle No. C34637 Exp. 9-30-99 CIVIL STATE OF CALIFORNIA

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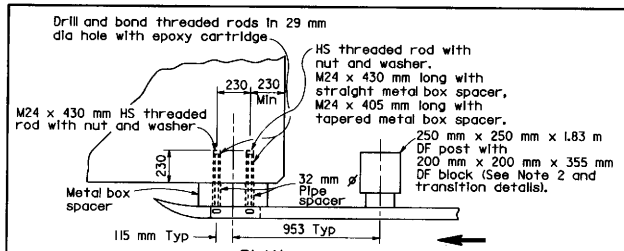
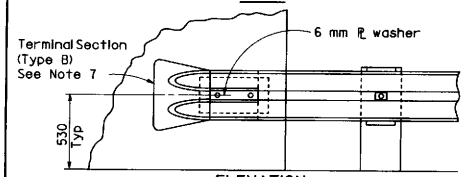
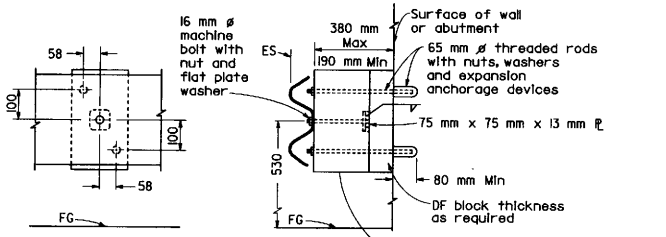


PLAN



ELEVATION

GUARD RAILING END CONNECTION TO WALL OR ABUTMENT FACE



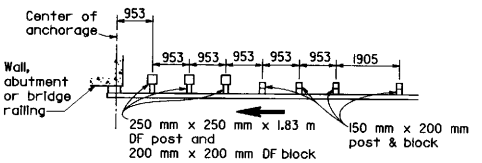
FRONT VIEW

SIDE VIEW

ELEVATION

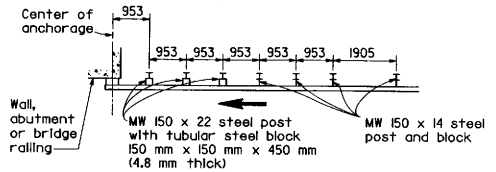
GUARD RAILING ANCHORAGE TO WALL OR ABUTMENT FACE

(Use this type of anchorage where guard railing is required across face of wall or abutment)
See Notes 9 and 10



APPROACH RAILING TRANSITION

Wood post and blocks



APPROACH RAILING TRANSITION

Steel post and blocks

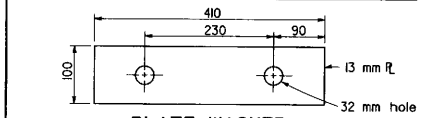
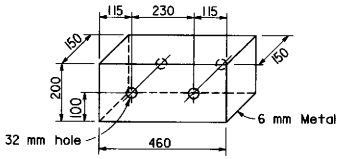


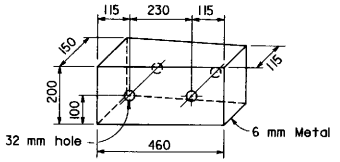
PLATE WASHER

(For backside of bridge railing)



STRAIGHT METAL BOX SPACER

Use where approach guard railing is parallel to bridge railing, wall or abutment face at the point of connection.
See Note 6



TAPERED METAL BOX SPACER

Use where approach guard railing is not parallel to bridge railing, wall or abutment face at the point of connection.
See Note 6

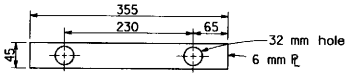
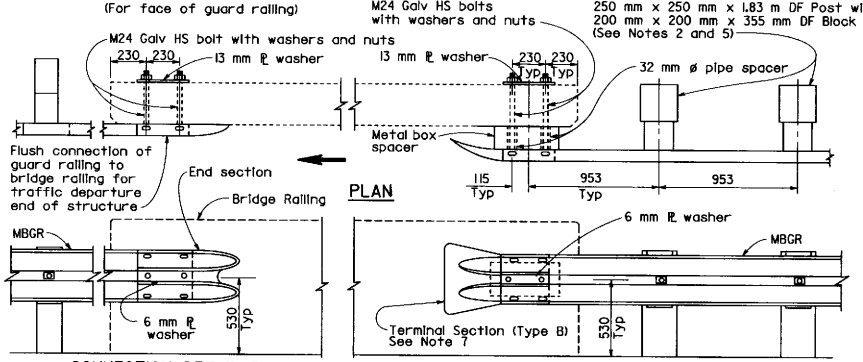


PLATE WASHER

(For face of guard railing)



PLAN

CONNECTION DETAIL B
See Note 8

CONNECTION DETAIL A
See Note 8

ELEVATION

GUARD RAILING CONNECTION TO BRIDGE RAILING

NOTES

1. These connection details apply to bridge railings, abutments and retaining walls. For additional connection details for bridge railing, see Standard Plan B11-53 and B11-54 and the project plans. See Standard Plan A77K for connection details to bridges with sidwalks or curbs.
2. Where 250 mm x 250 mm DF post and 200 mm x 200 mm DF blocks are shown, MW 150 mm x 22 steel posts and tubular steel blocks 150 mm x 150 mm x 450 mm (4.8 mm thick) may be used where applicable and when specified.
3. Additional details of post, blocks and hardware are shown on Standard Plans A77B, A77C and A77H.
4. Direction of traffic indicated by →
5. For traffic approach railing details, see Type 1 M flare on Standard Plan A77D and the "Approach Railing Transition Details" on this plan.
6. When metal box spacer is installed, place 32 mm ø x 125 mm and 32 mm ø x 100 mm pipe spacers on M24 bolts passing through interior of tapered box spacer and 32 mm ø x 130 mm pipe spacers on M24 bolts passing through interior of straight box spacer.
7. Terminal sections not to be installed on trailing end of approach guard railing constructed adjacent to one-way roadways. When terminal section is not installed, use backup plate between rail element and metal box spacer. See Standard Plan A77B for backup plate details.
8. In addition to the use of "Connection Detail B" for traffic departure ends of structure, "Connection Detail B" shall be used on the traffic approach ends of structures on two-way roadways which are 18 m or less in width. Where "Connection Detail B" is used at the traffic approach ends of structures, the guard railing shall be transitioned to the bridge railing as shown in the "Approach Railing Transition Details" on this plan.
9. Use timber shims without posts where clearance between rail element and wall or abutment is less than 380 mm.
10. Do Not attach railing to bridge columns. Use separate posts as shown on Standard Plan A77E.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

GUARD RAILING CONNECTIONS TO BRIDGE RAILINGS, RETAINING WALLS AND ABUTMENTS

NO SCALE

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

A77J

STD. PLAN A77J

Return to Table of Contents