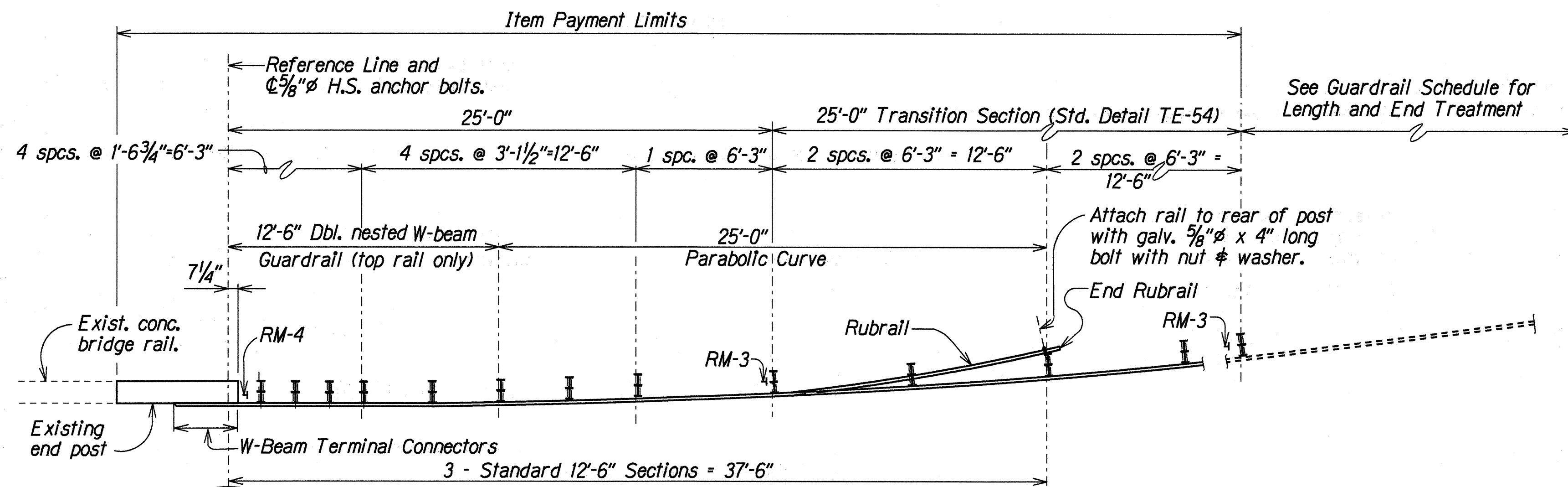
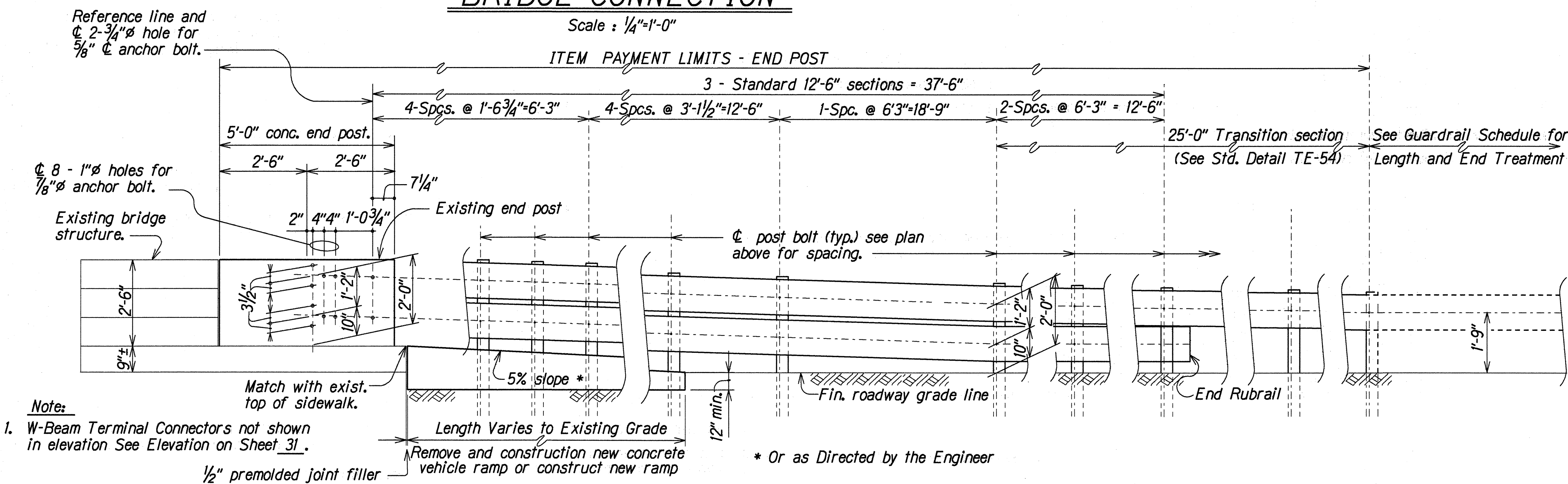


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-019-2(37)	1995	30	36



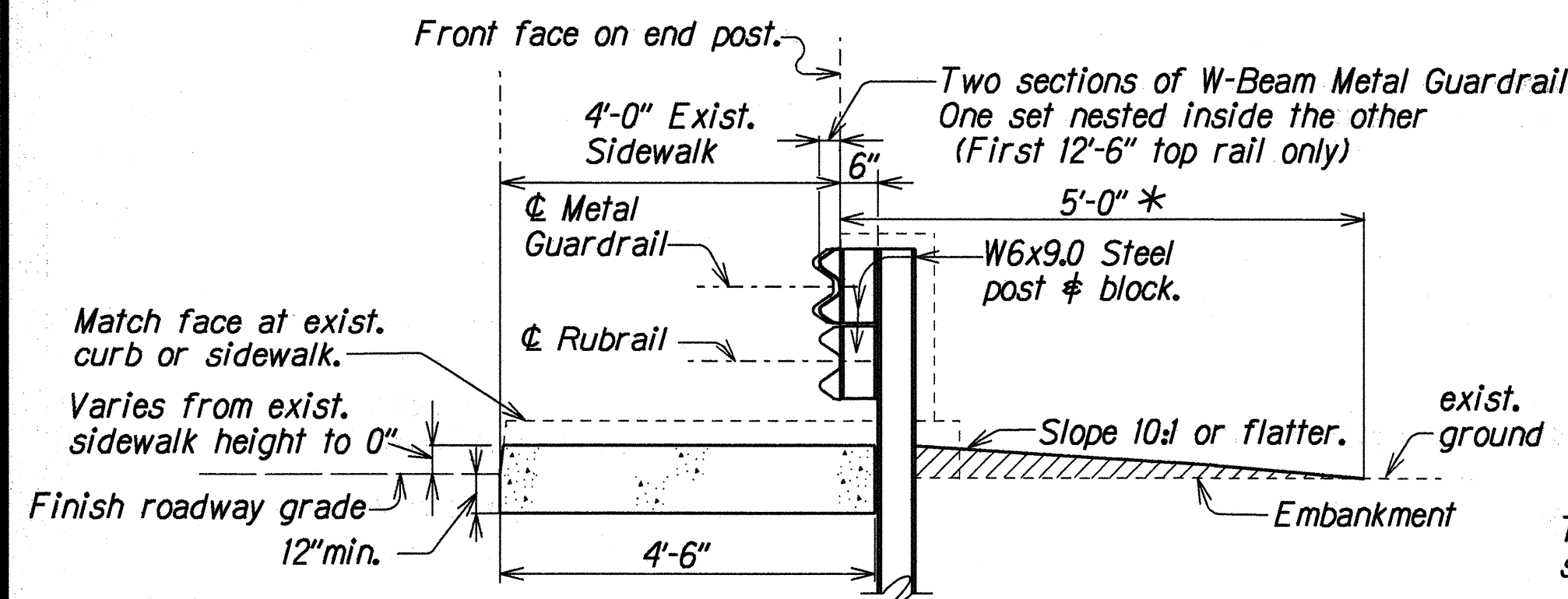
GUARDRAIL PLAN WITH BRIDGE CONNECTION

Scale: 1/4" = 1'-0"



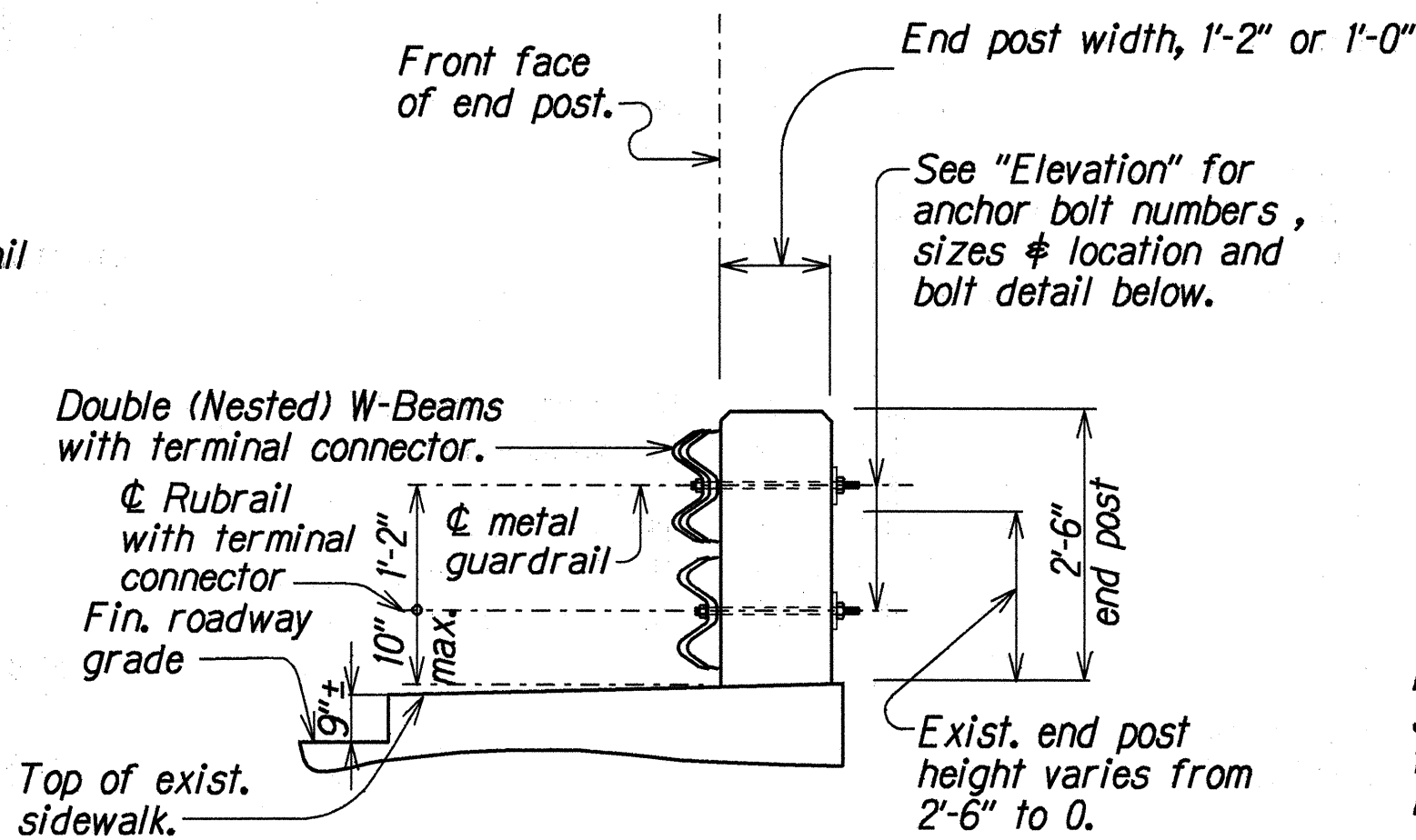
ELEVATION AT BRIDGE CONNECTION

Scale: 1/2" = 1'-0"



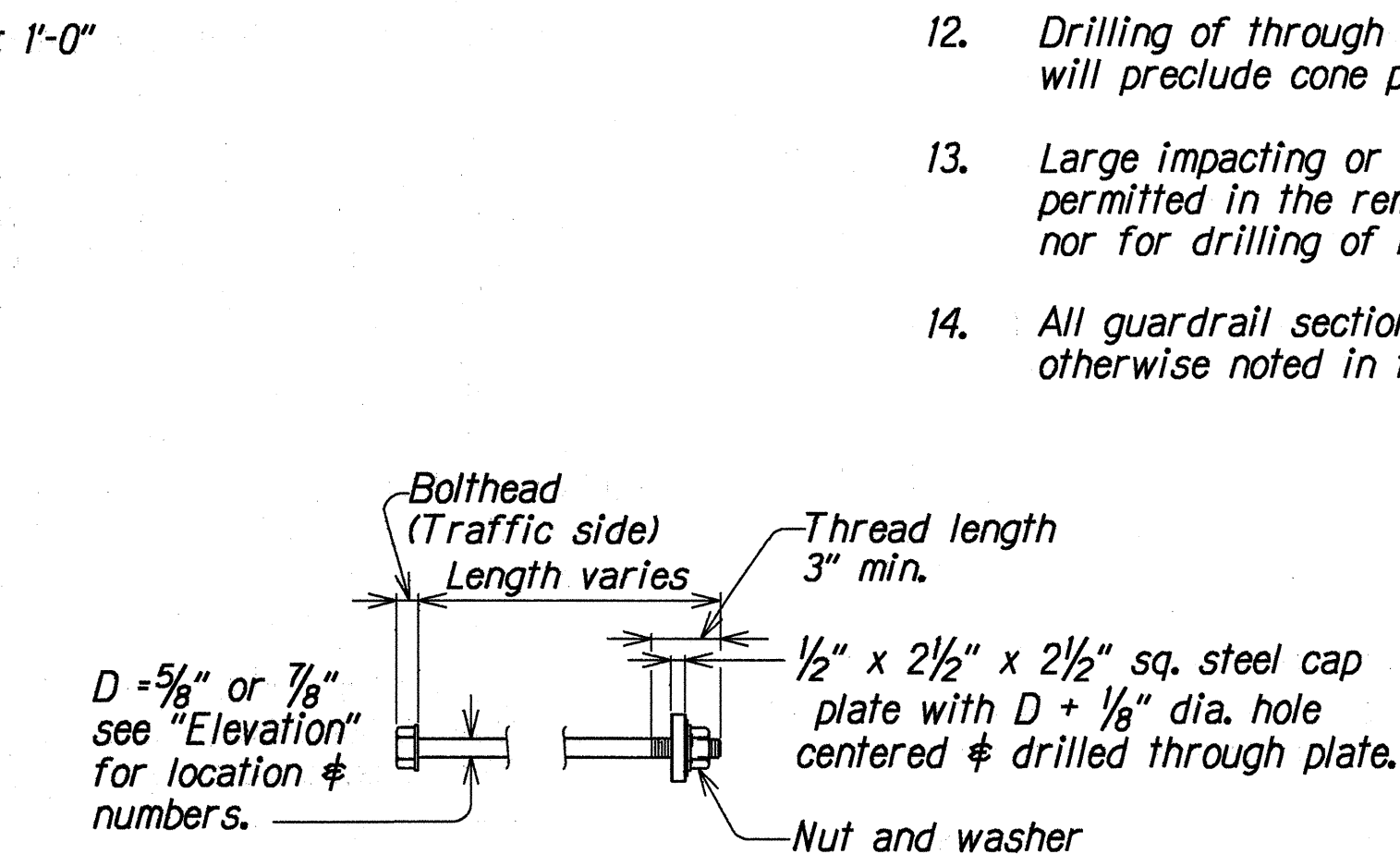
TYPICAL SECTION THRU RAMP

Scale: 1/2" = 1'-0"



SECTION A

Not to scale



END POST ANCHOR BOLT

Not to scale

GUARDRAIL NOTES:

- See Standard Specifications for Road, Bridge and Public Works Construction (Hawaii 1994) and special provisions.
- Anchor bolts shall be high strength bolts conforming to the requirements of ASTM A 325. Bolt length shall be such that a snug fit of the elements and full thread engagement plus 1/4" (Max.) is attained.
- "Terminal Connector," anchor bolts, nuts and washers shall be hot-dip galvanized after fabrication.
- Construction of ramp shall conform to the requirements of Section 608-Sidewalks, of the Standard Specifications.
- Any damage to existing structures or roadway due to the Contractor's operation shall be repaired at his expense, to the satisfaction of the Engineer.
- The work necessary to connect guardrail to concrete end post shall include all labor, materials, tools, equipment and incidentals necessary to complete the work.
- The Contractor shall verify all dimensions in field before commencing with work.
- The Contractor is responsible to locate and avoid damage to any underground utilities or structures that will be affected by his operations. The Contractor shall be responsible for any and all damages to utilities or structures arising from his operations.
- The contractor shall install 2 - #6 X 2'-0" dowels per ramp between the existing concrete sidewalk or curb and new concrete ramp. Dowels shall be installed in 1-1/4" diameter drilled holes 12" into existing concrete walk or curb and sealed with epoxy grout, with a minimum of 3" clear from outside edges of sidewalk or curb.
- The work involved in the bridge connection consists of all preparations for the connection, including but not limited to drilling of holes, removal and reconstruction of portion of concrete, erection of concrete support block, guardrail materials, concrete and reinforcing for ramps, premolded joint filler, excavation, and grading work within the pay limits specified on the plans. The various type of connections shall be paid for as provided in Section 606 - Guardrail of the Special Provisions.
- For additional information, and/or information not shown on this plan see State of Hawaii, Department of Transportation Standard Plan Nos. TE-50, TE-51, TE-52, TE-54, TE-57, TE-58, TE-59, TE-60, TE-61, AND TE-62.
- Drilling of through holes shall be done in such a manner that will preclude cone puncturing of the daylight end.
- Large impacting or vibratory type of equipment will not be permitted in the removal operation of the designated items nor for drilling of holes.
- All guardrail sections shall be 12'-6" in length, unless otherwise noted in the plans or directed by the Engineer.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BRIDGE CONNECTION-TYPE I
DETAILS AND NOTES

HAWAII BELT ROAD RESURFACING
Kaala Bridge to Kaawalii Gulch
F.A. PROJECT NO. STP-019-2(37)

Scale: As Shown Date: Nov., 1994

SHEET No. 1 OF 1 SHEETS