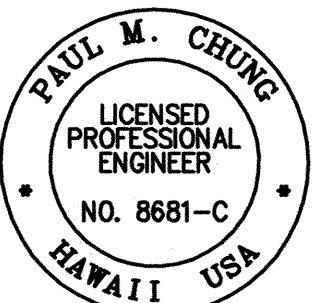


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-072-1(53)	2015	18	117

GENERAL NOTES:

1. All hardware, posts and fasteners shall be hot-dip zinc coated galvanized after fabrication. No punching, drilling or cutting will be permitted after galvanizing.
2. Where conditions require, special post lengths in increments of 6 inches may be specified.
3. All fasteners, posts, and rail elements (i.e. FBB03, PWE01, RWM02b, etc.) shall conform to the latest edition and amendments of "A Guide to Standardized Highway Barrier Rail Hardware", a report prepared and approved by the AASHTO-AGC-ARTBA Joint Cooperative Committee, Subcommittee On New Highway Materials, Task Force 13 Report. Dimensions of fastners, posts and rail elements have been converted from metric units into their present form.
4. The Recycled Plastic Block or Offset Block shall be approved by the State.
5. All new guardrail systems (system consists of total length of guardrail including both end treatments) shall include the Additional Paved Area.
6. After the guardrail posts are installed in the paved area, the Contractor shall fill/seal around each guardrail post and all cracks in the paved area caused during the guardrail post installation. If required by the inspector/engineer, the Contractor shall tamper the paved area around the guardrail post prior to filling/sealing. All costs associated with this work shall not be paid for separately, but shall be considered incidental to the various guardrail items.
7. When standards for the fill slope area cannot be met, a site specific, engineer approved design may be used.
8. New A.C. pavement at guardrails shall extend 6 feet longitudinally beyond terminal ends.
9. Reflector Markers (RM-5) mounted on guardrails shall be spaced every 25 feet. RM-5's shall not be installed on Terminal Sections. Furnishing and installing of each RM-5 shall be considered incidental to the adjacent guardrail system.

GUARDRAIL TYPE	DIMENSION	
	H	A
Strong Post W-Beam	1'-9 <sup>5</sup> / <sub>8</sub> "	1'-6"
Strong Post Rubrail (W-Beam)	2'-0"	1'-6"
Modified Or Strong Post Thrie Beam	2'-0"	2'-0"

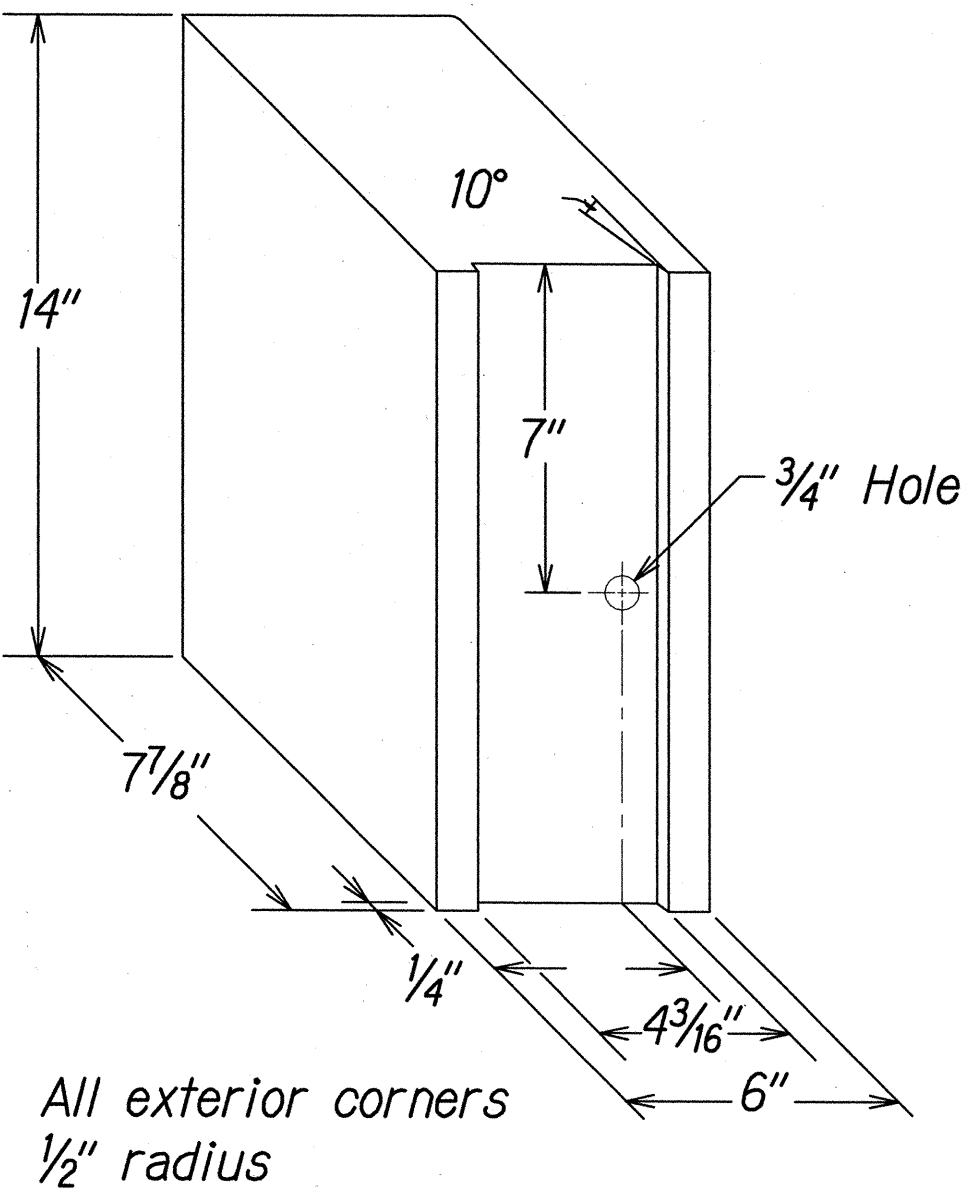


THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

SIGNATURE: [Signature] EXPIRATION DATE OF THE LICENSE: 04/30/16

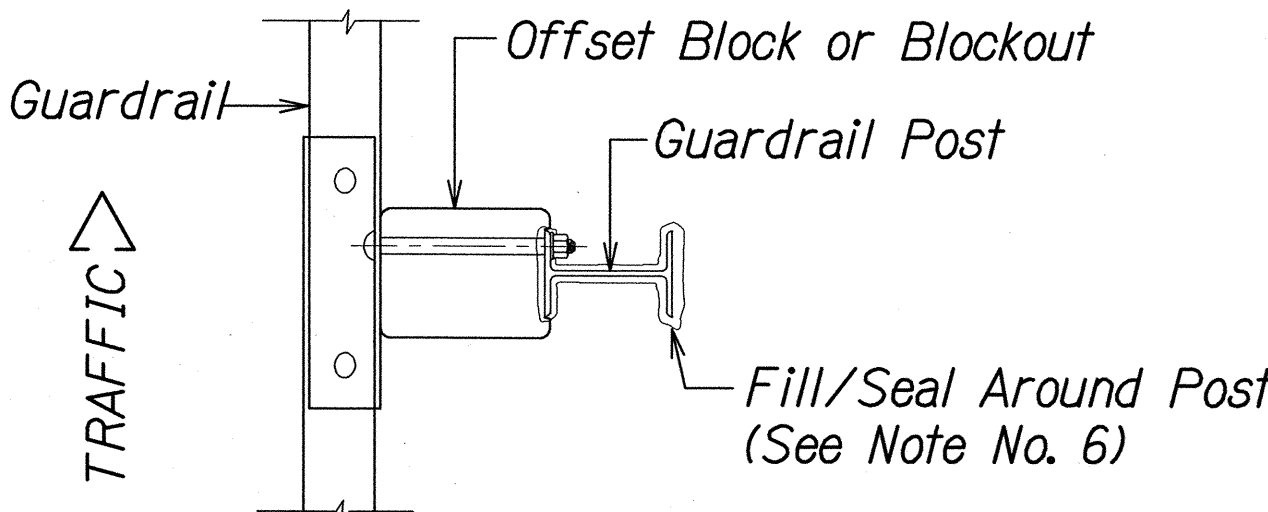
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**GUARDRAIL DETAILS AND NOTES**  
KALANIANA'OLE HIGHWAY IMPROVEMENTS, PHASE 1  
Olomana Golf Course To Vicinity of Poalima St.  
Federal Aid Project No. NH-072-1(53)  
Scale: AS NOTED Date: July, 2015  
SHEET No. C18 OF 71 SHEETS

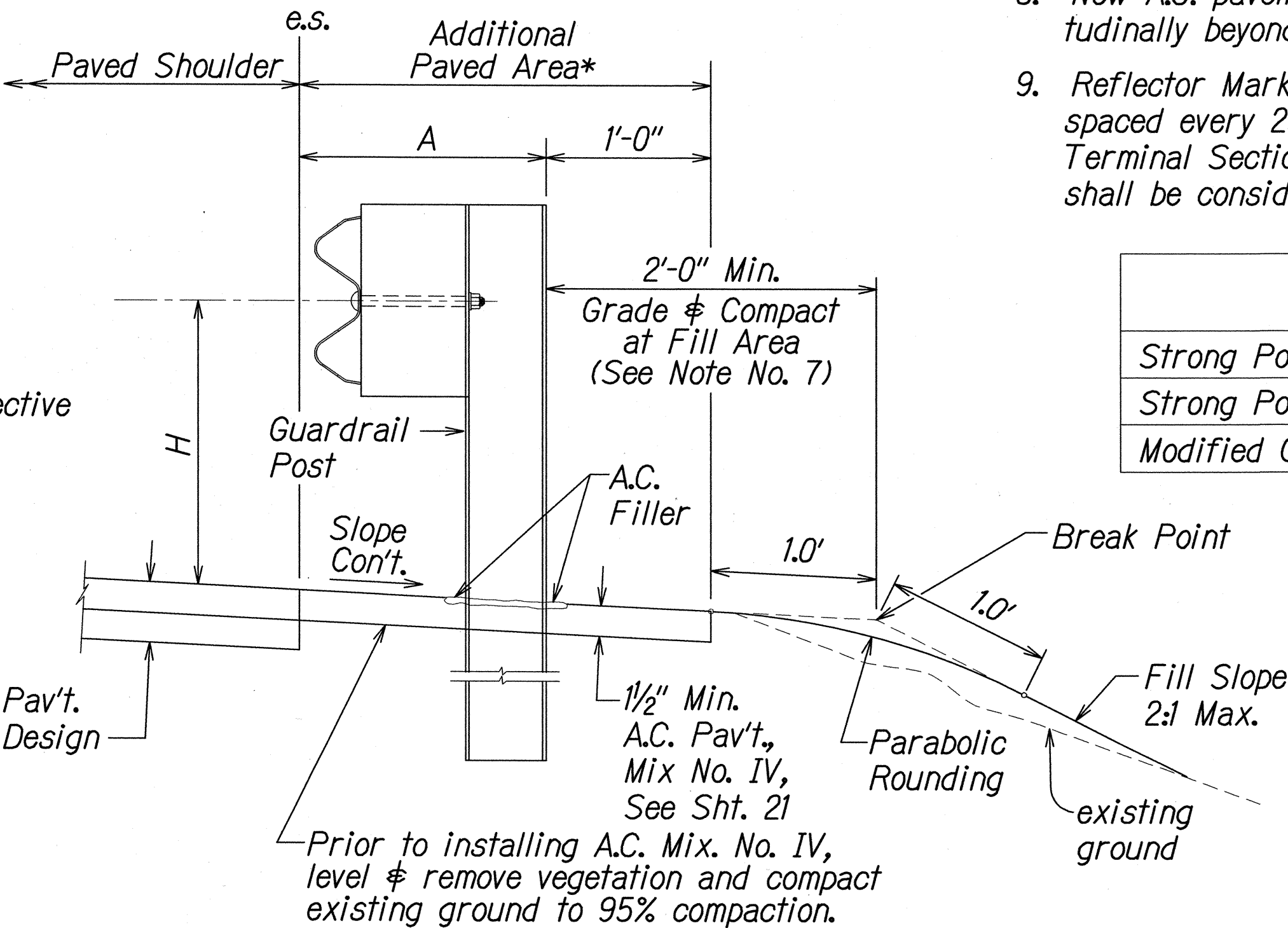


RECYCLED POLYETHYLENE  
OFFSET BLOCK (TYPE II)

Scale: N.T.S.



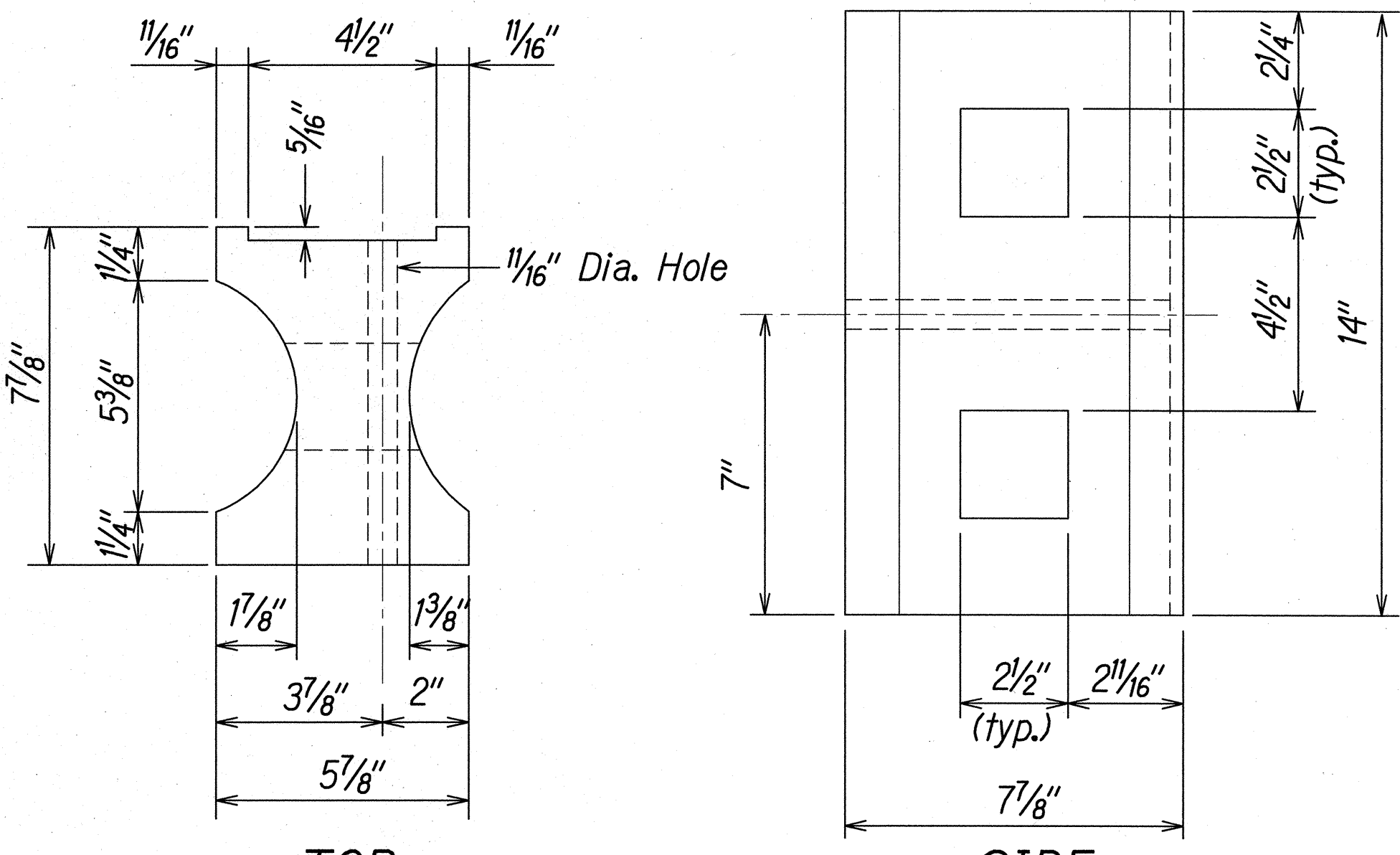
PLAN



ELEVATION

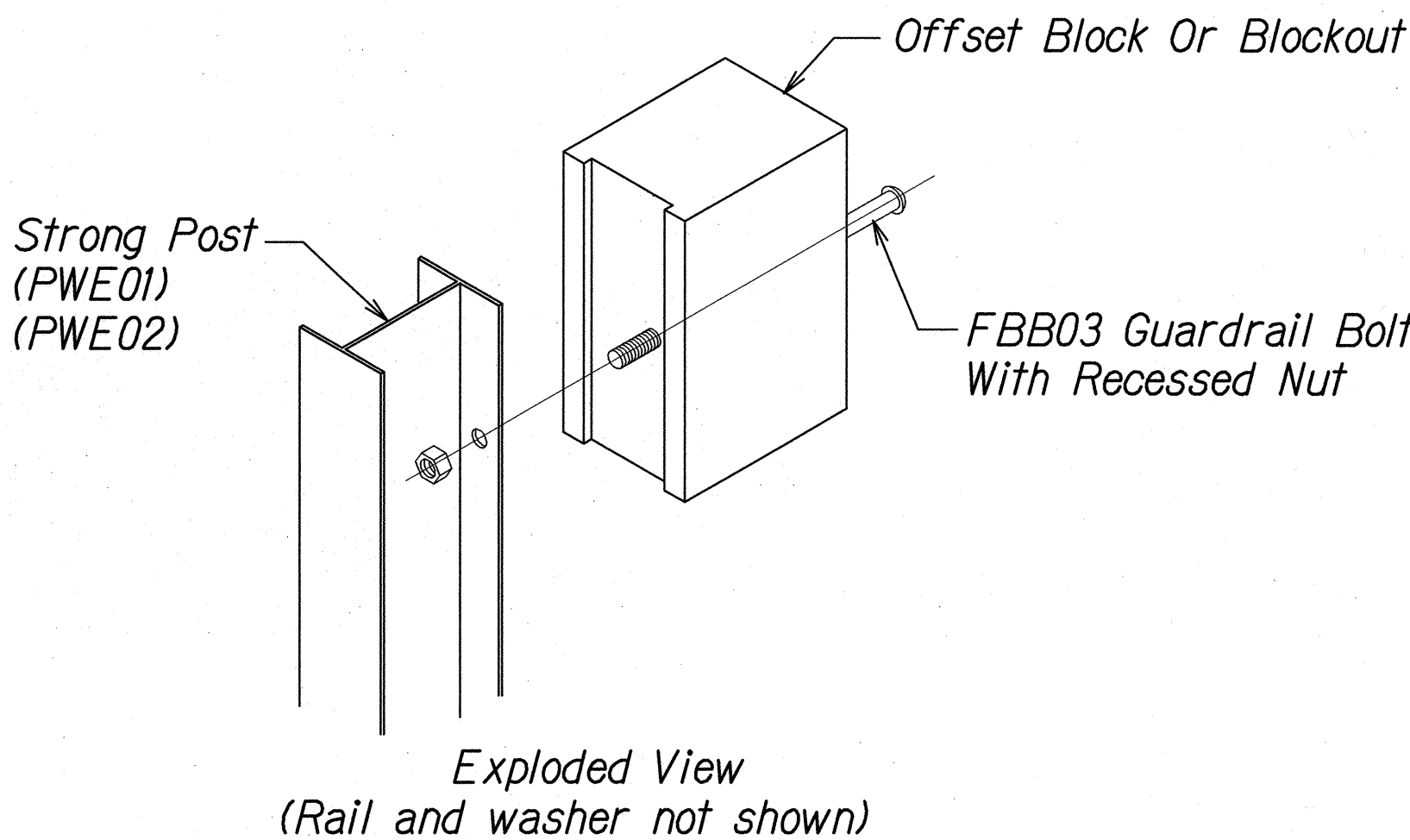
TYPICAL GUARDRAIL INSTALLATION

Scale: N.T.S.



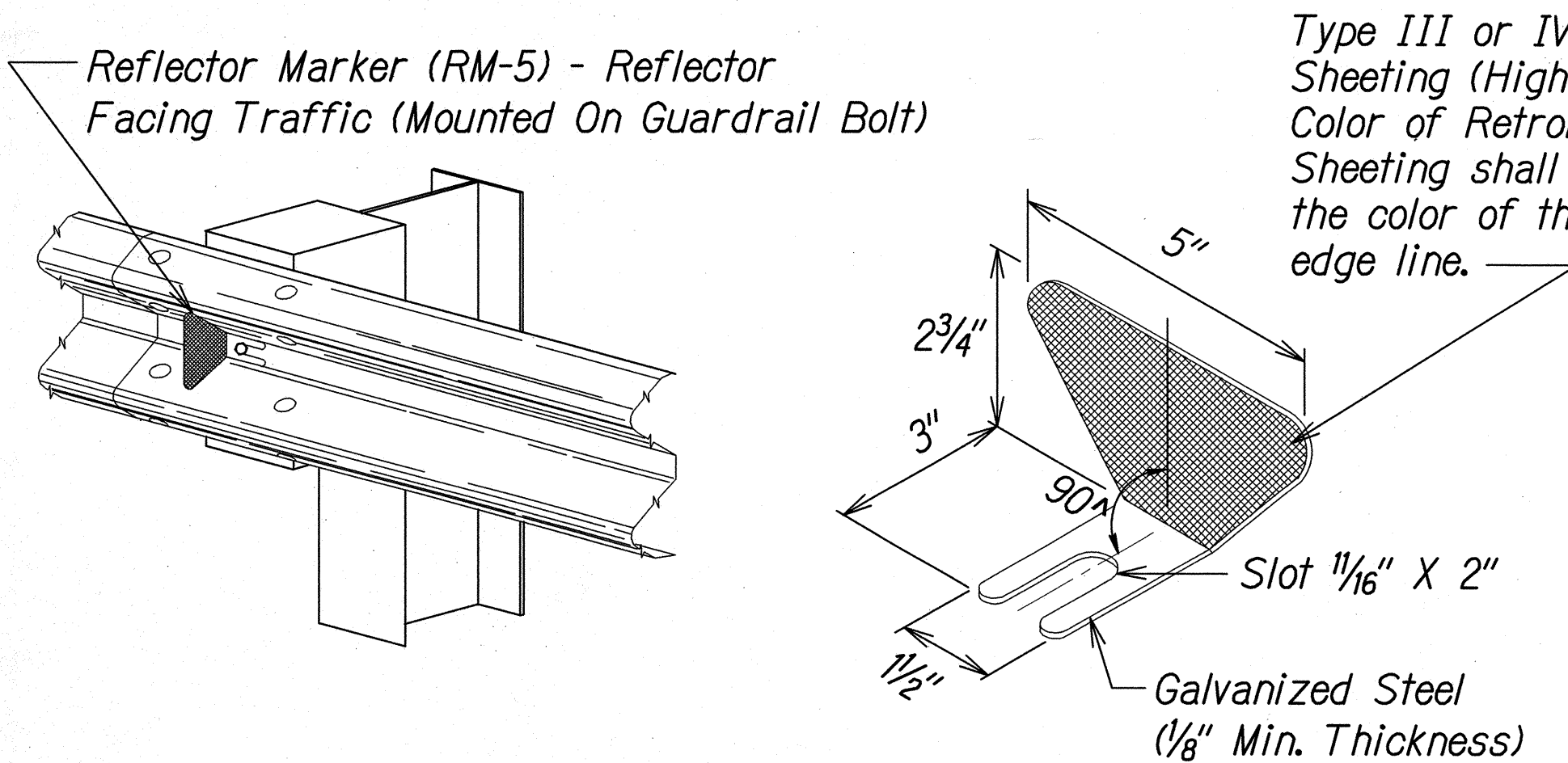
TOP  
RECYCLED PLASTIC BLOCKOUT (TYPE I)

Scale: N.T.S.



STEEL POST AND BLOCK DETAIL

Scale: N.T.S.



REFLECTOR MARKER (RM-5) DETAIL  
AND TYPICAL INSTALLATION

Scale: N.T.S.

DATE	_____
SURVEY PLOTTED BY	_____
DRAWN BY	_____
DESIGNED BY	_____
CHECKED BY	_____
ORIGINAL PLAN	_____
NOTE BOOK	_____
QUANTITIES BY	_____
NO.	_____

W:\\_CIVIL 3D PROJECTS\2008\_008\_000 DOT-HWY KAL HWY IMP WAIMANALO PH 1\C18 - GUARDRAIL DETAILS AND NOTES.DWG 9/30/2015 4:36 PM