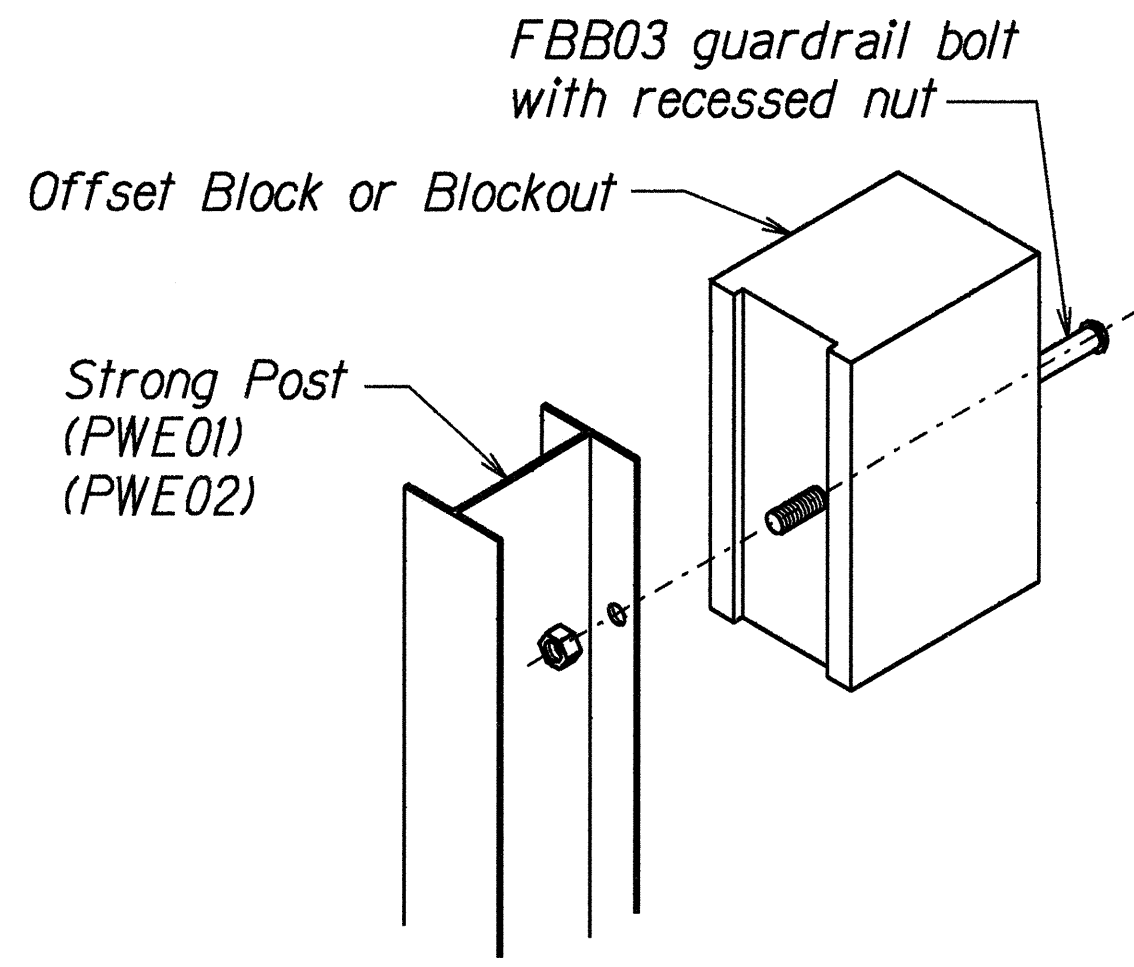
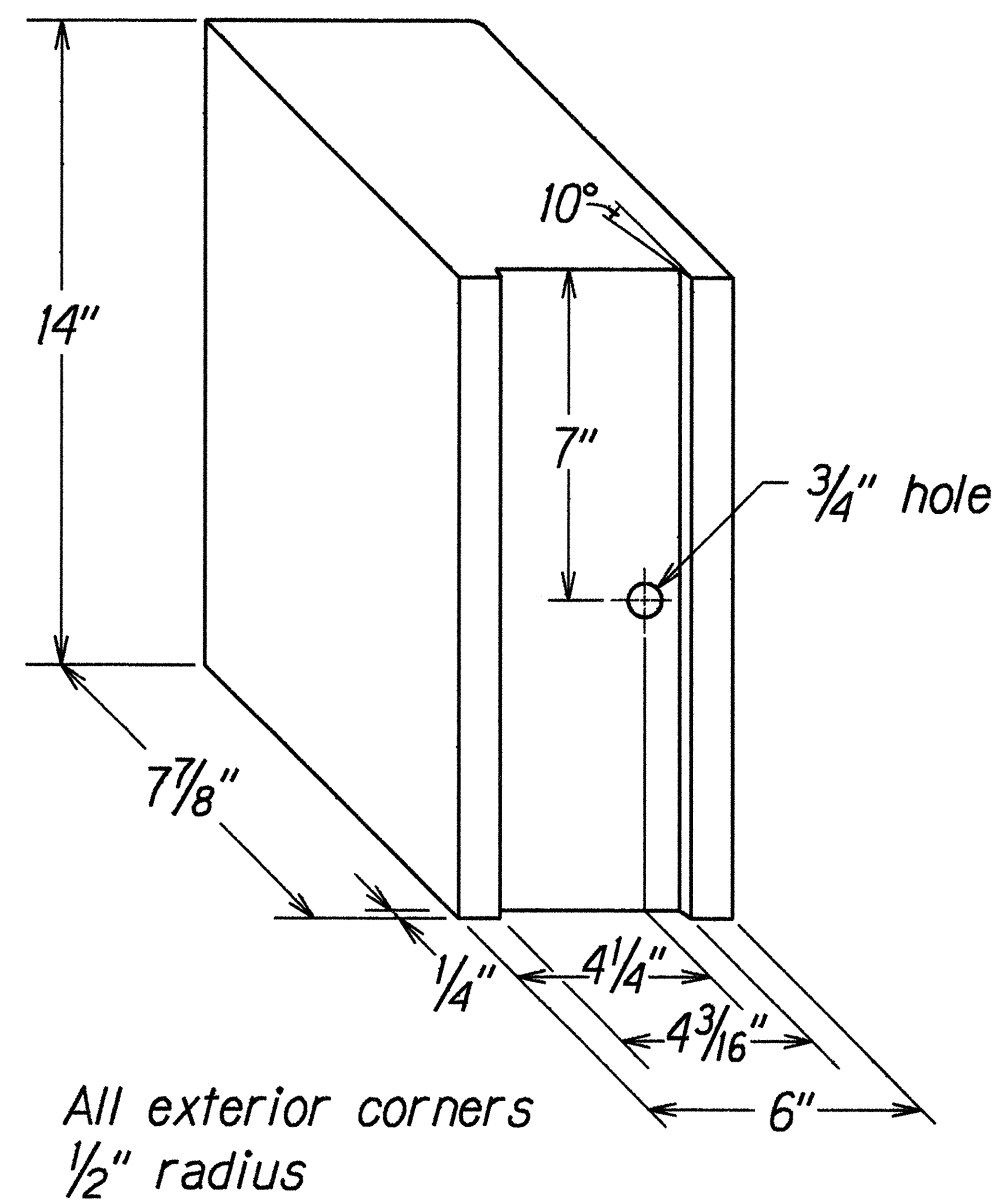


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-0190(13)	1999	61	75

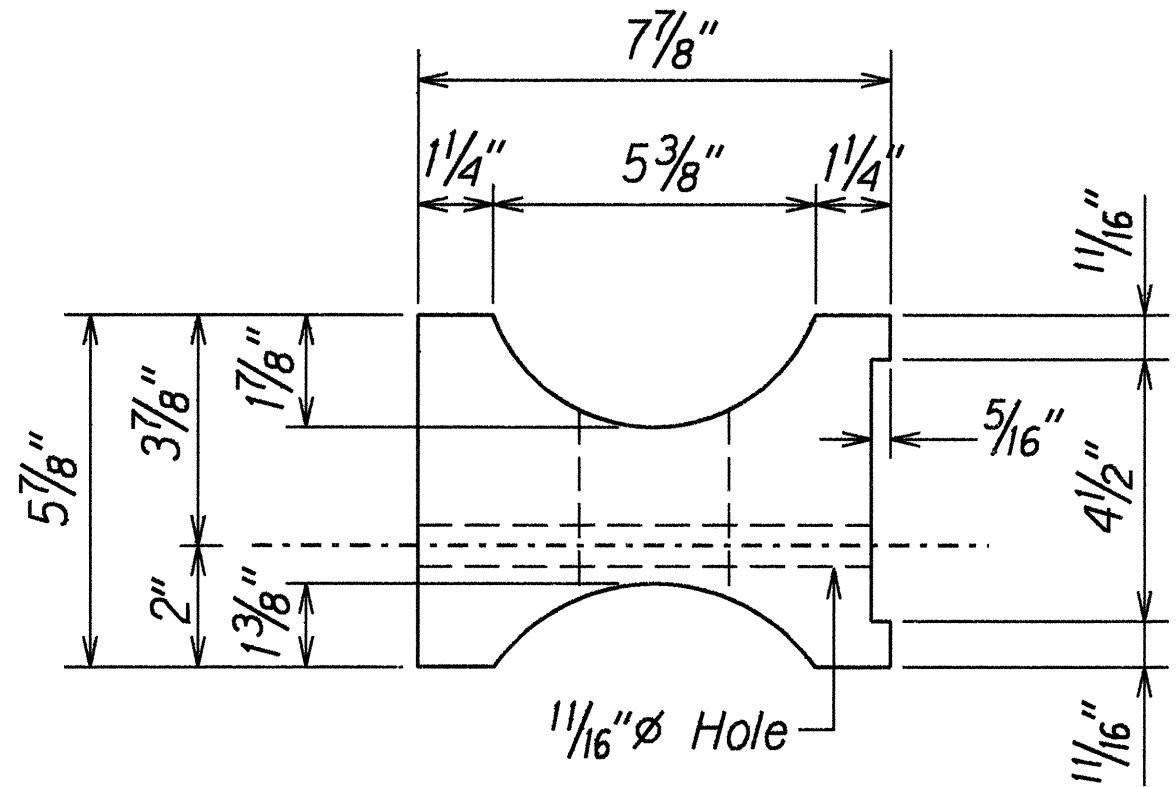


Exploded View  
(Rail and washer not shown)  
**STEEL POST AND BLOCK DETAIL**

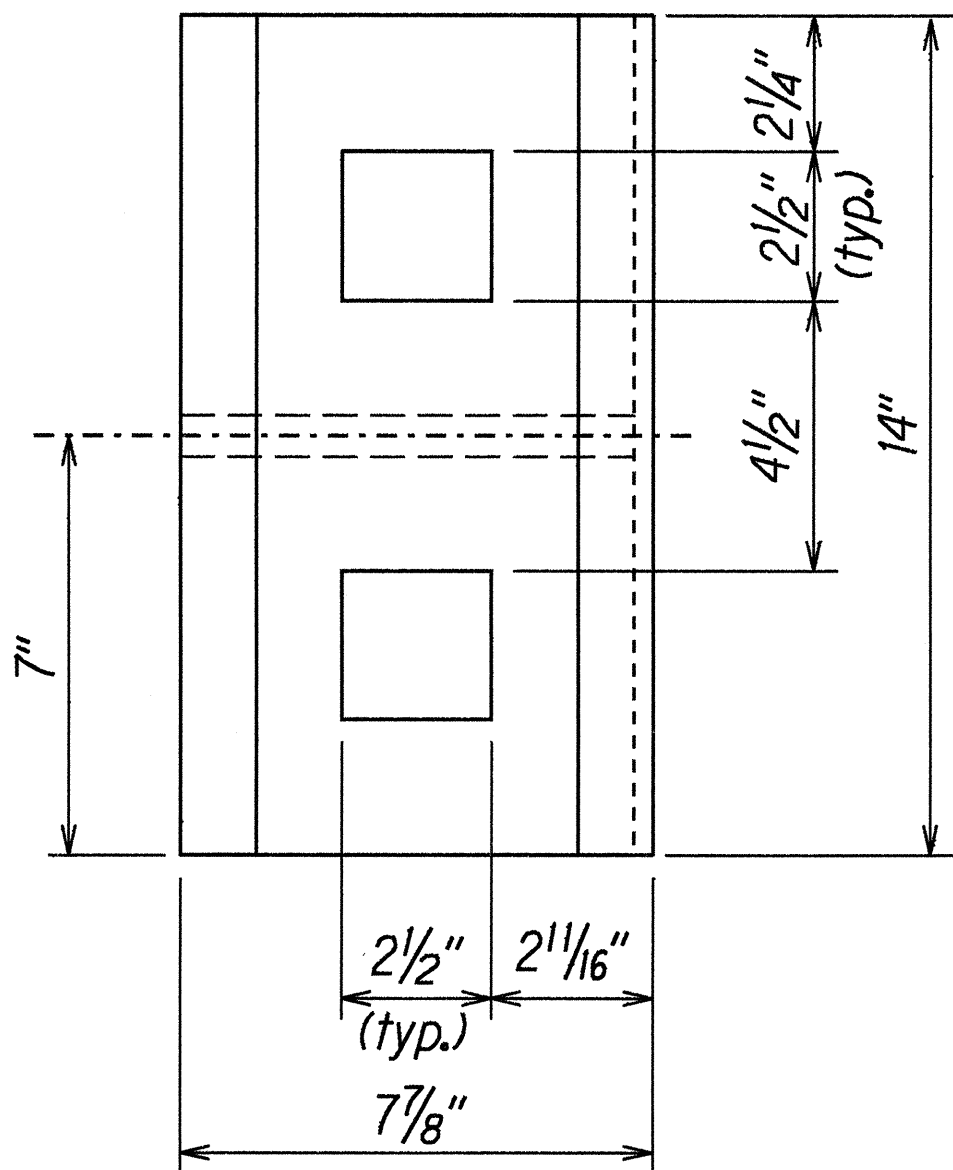


**RECYCLED POLYETHYLENE  
OFFSET BLOCK (TYPE II)**

- GENERAL NOTES**
- All hardware, posts and fasteners shall be hot-dip zinc coated galvanized after fabrication. No punching, drilling or cutting will be permitted after galvanizing.
  - Where conditions require, special post lengths in increments of 6 inches may be specified.
  - 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.
  - The Recycled Plastic Block or Offset Block shall be approved by the State.
  - After the guardrail posts are installed in the paved area, the Contractor shall grout around the guardrail post and seal all cracks in the paved area that was 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 grouting. The cost for this work shall not be paid for separately, but shall be considered incidental to the various guardrail items.
  - When standards for the fill slope area cannot be met, a site specific, engineer approved design may be used.

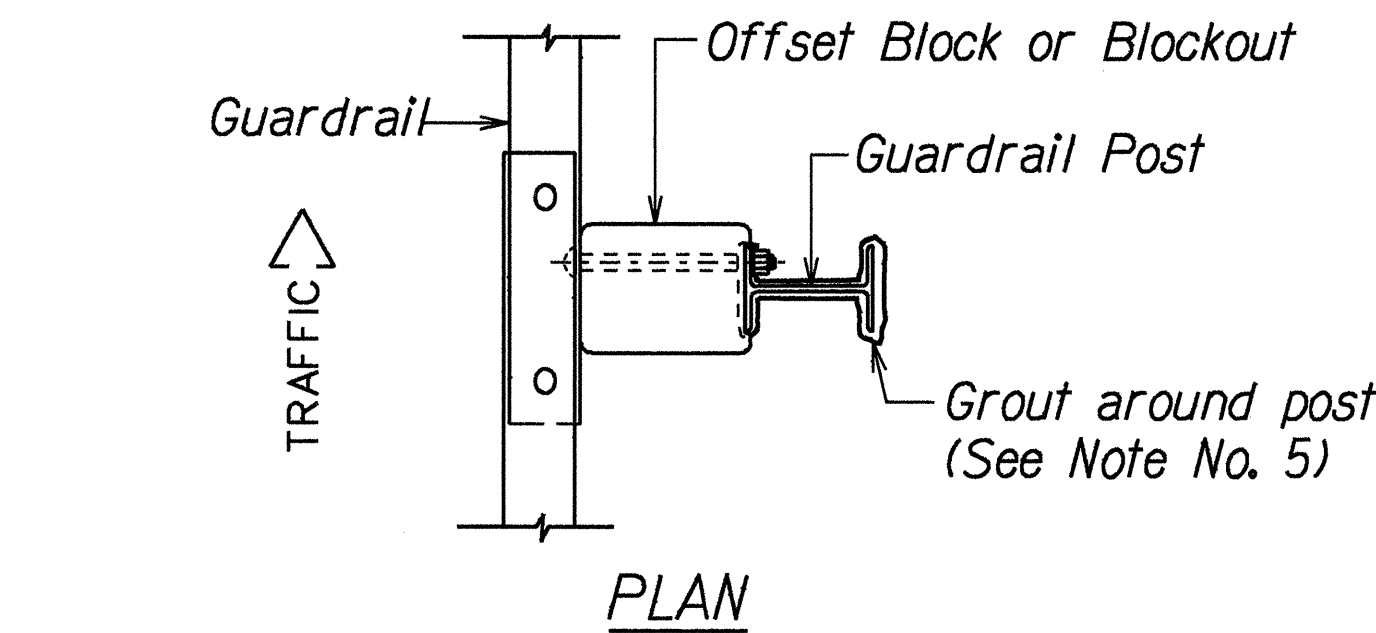


**TOP**



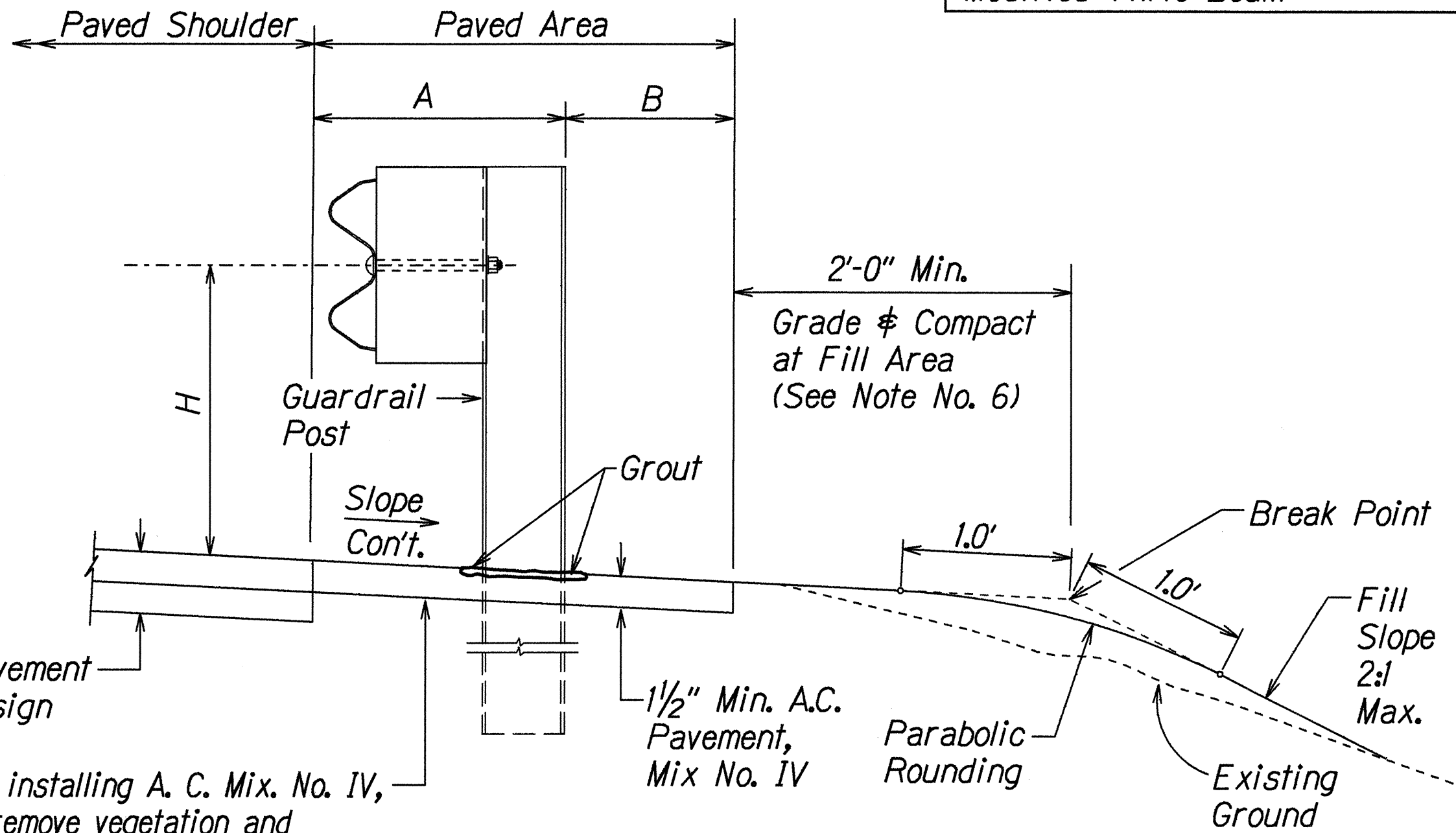
**SIDE**

**RECYCLED PLASTIC BLOCKOUT (TYPE I)**



**PLAN**

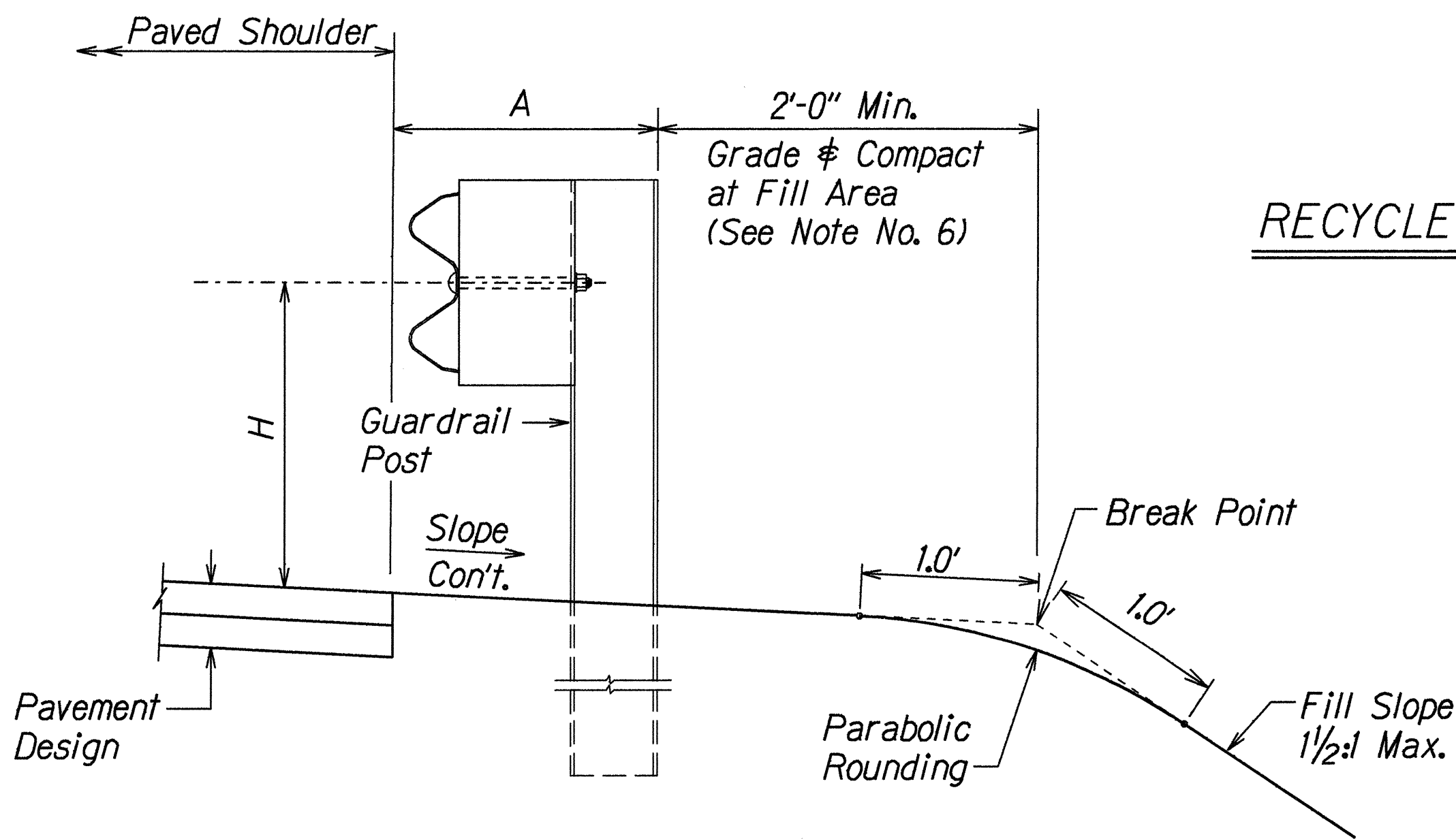
GUARDRAIL TYPE	DIMENSION		
	H	A	B
Strong Post w/W Beam (Perm. Installation)	1'-9 5/8"	1'-6"	1'-0"
Strong Post w/W Beam (Temp. Installation)	1'-9 5/8"	1'-6"	n/a
Rubrail	2'-0"	1'-6"	2'-0"
Modified Thrie Beam	2'-0"	2'-0"	1'-0"



Prior to installing A. C. Mix. No. IV, level & remove vegetation and compact existing ground to 95% compaction.

**ELEVATION**

**PERMANENT GUARDRAIL INSTALLATION ON HAWAII BELT ROAD**



**ELEVATION**

**TEMPORARY GUARDRAIL INSTALLATION ON DETOUR ROADS**

STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

HIGHWAYS DIVISION

**GUARDRAIL DETAILS & NOTES**

HAWAII BELT ROAD

Replacement of Auwaiakeakua and Popoo Bridges

Federal Aid Proj. No. BR-0190(13)

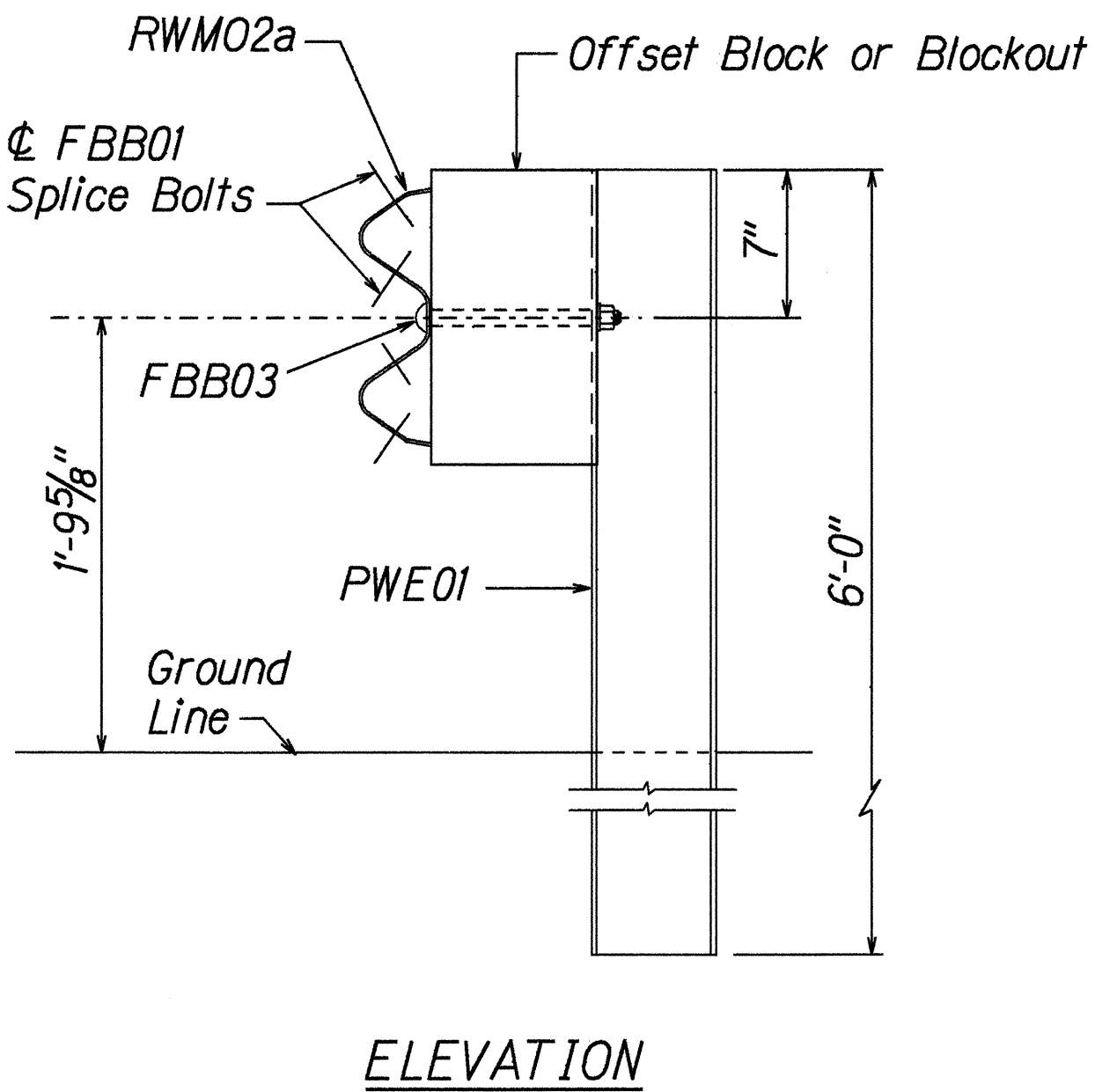
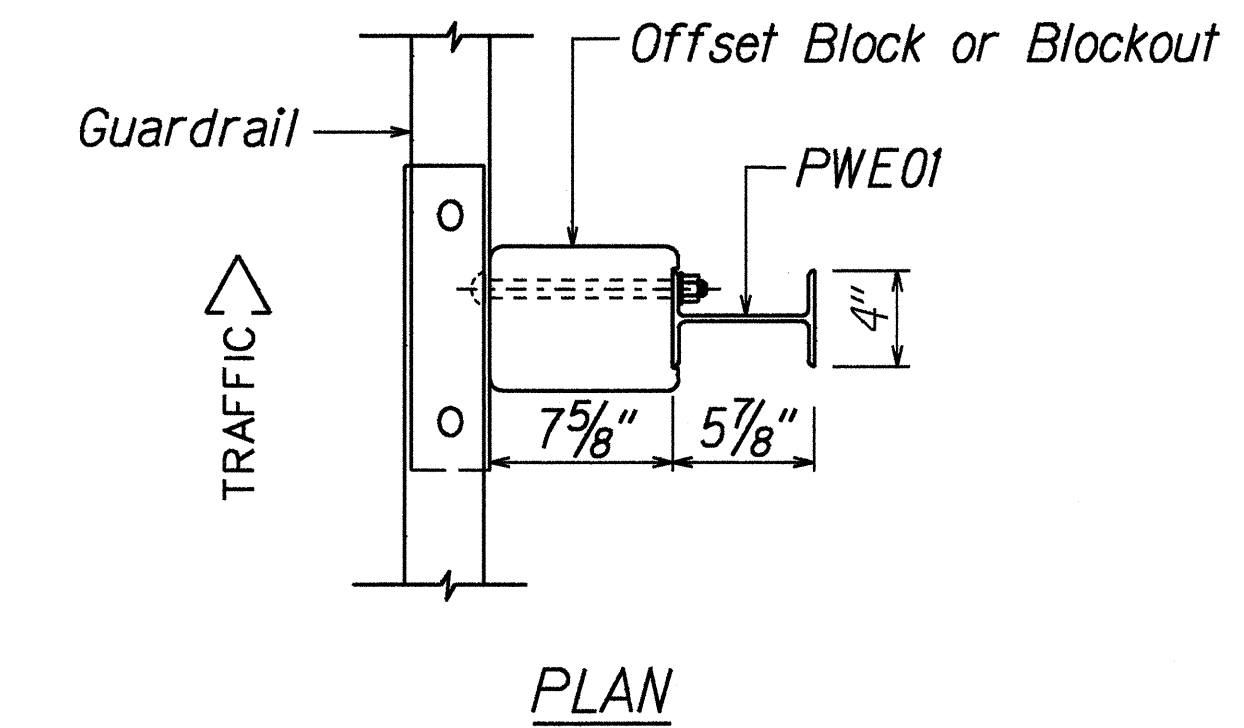
Scale: NTS

Date: March 1999

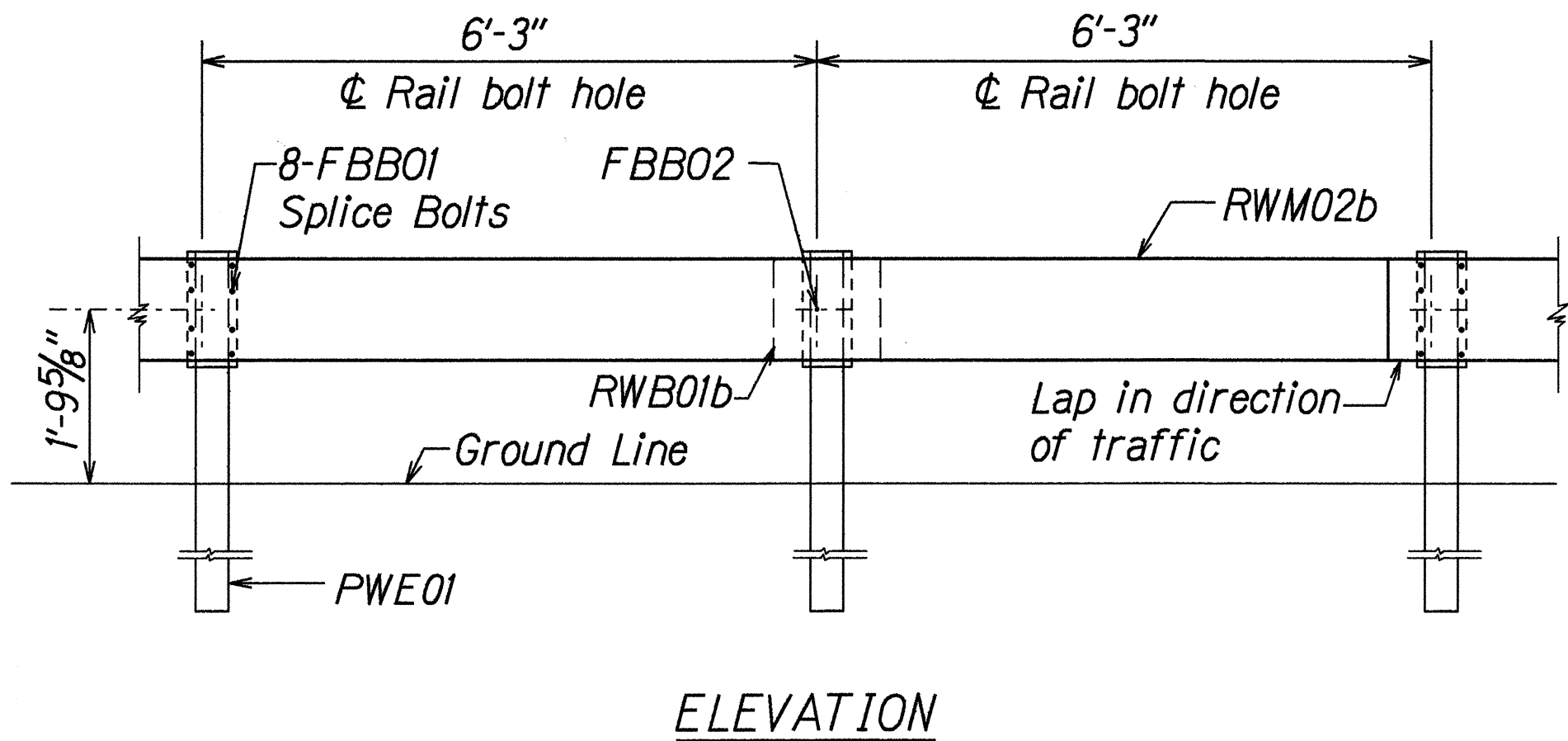
SHEET No. 1 OF 1 SHEETS

ORIGINAL PLAN	DATE	3-30-99
DRAWN BY		
CHECKED BY		
NOTES		
DESIGNED BY		
QUANTITIES BY		
CHECKED BY		
NO. 1550/rev		

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-0190(13)	1999	62	75

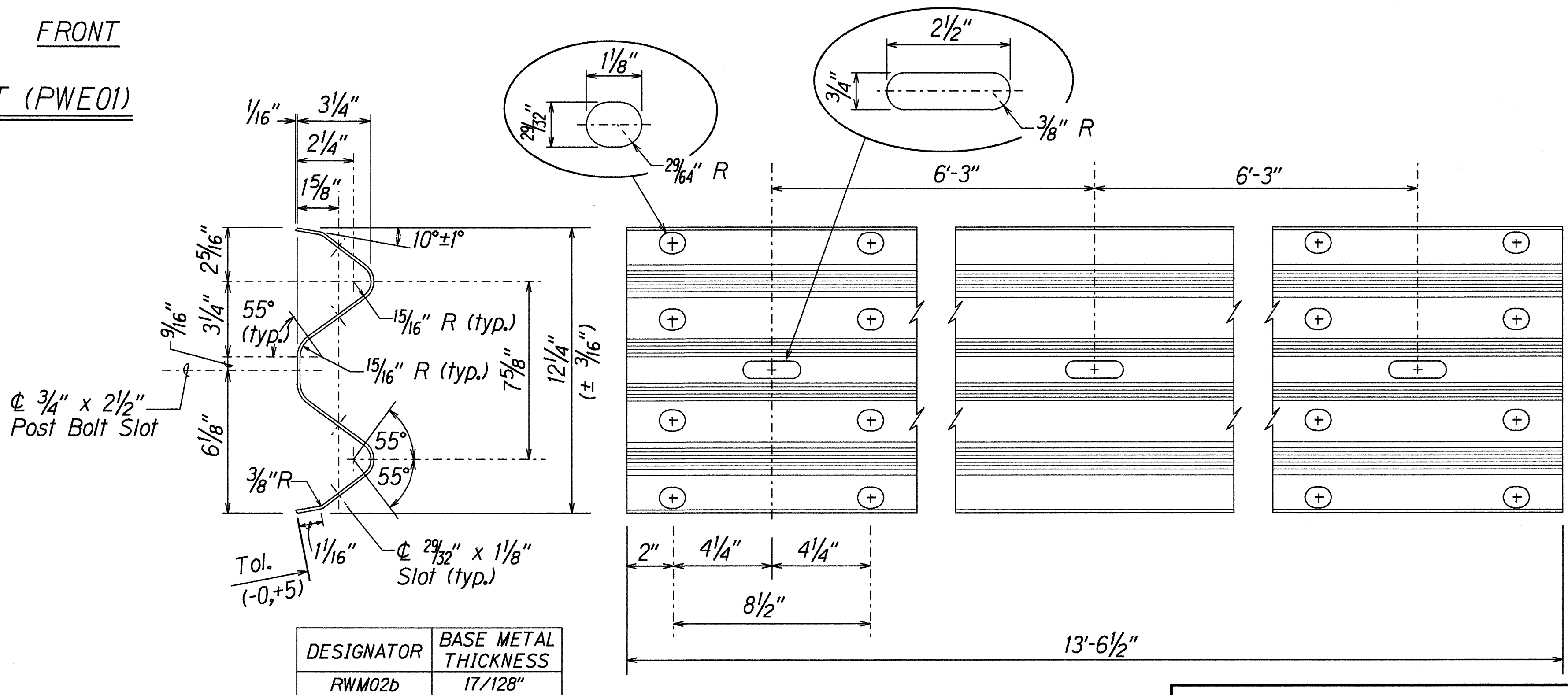
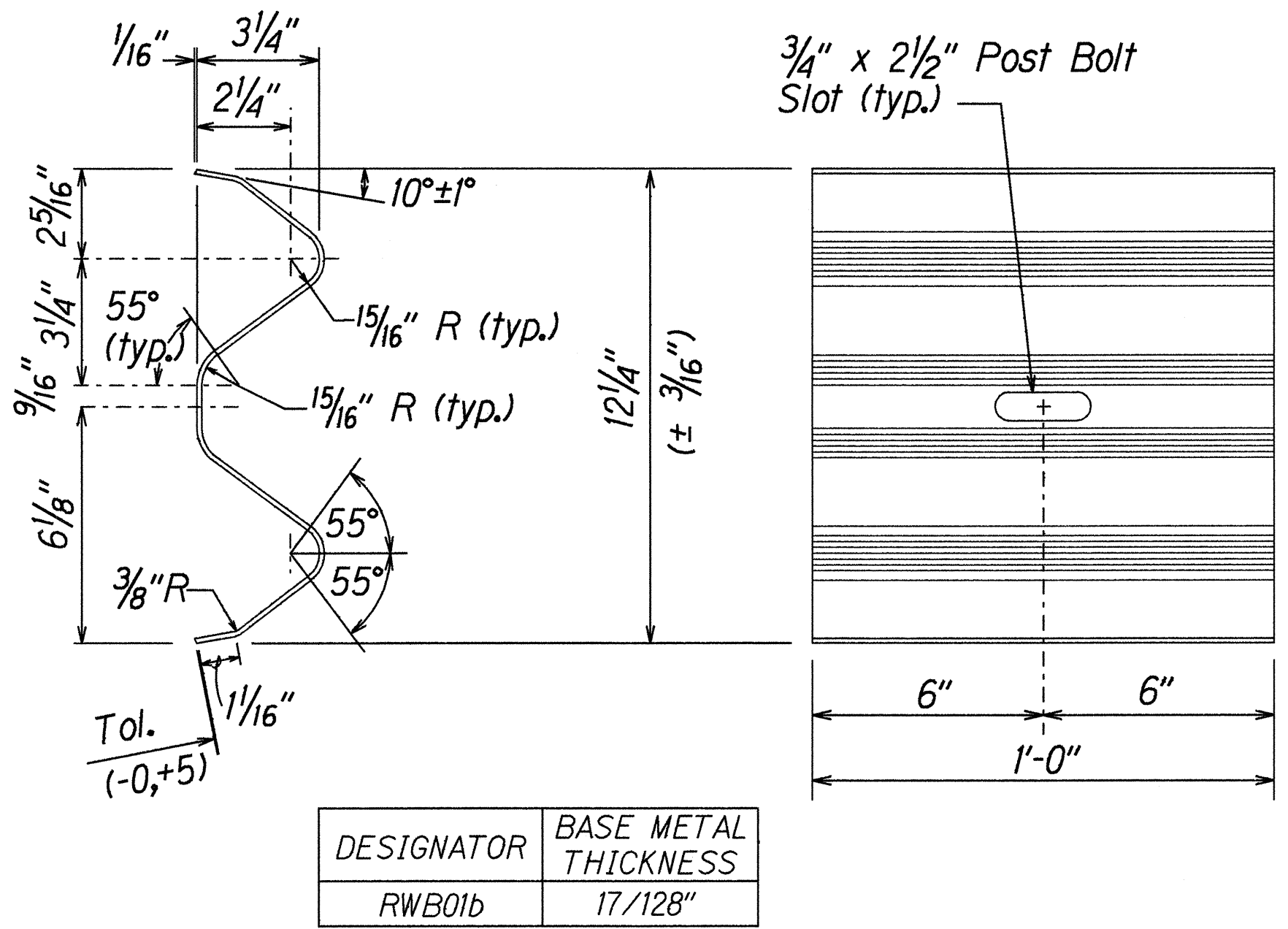
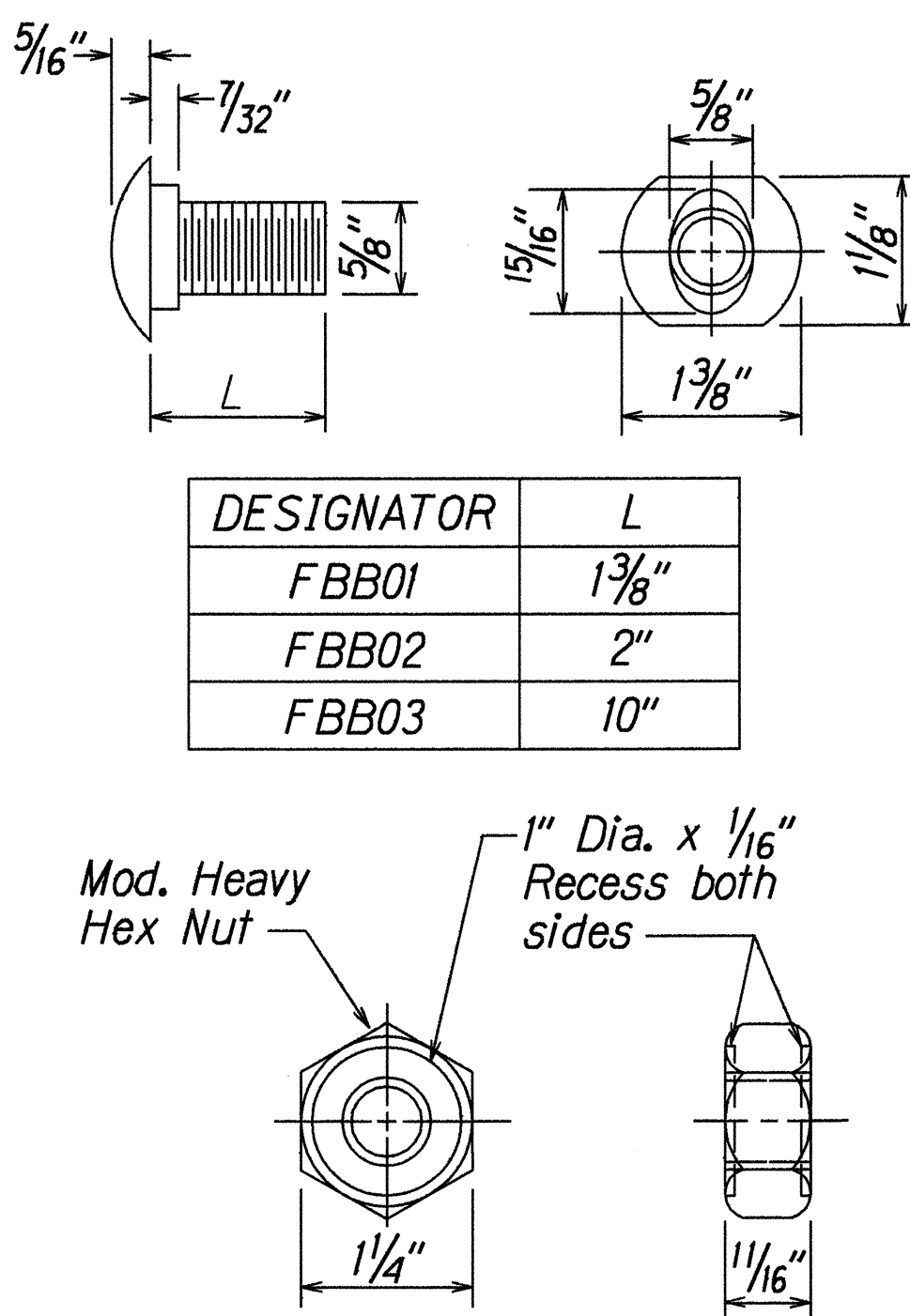
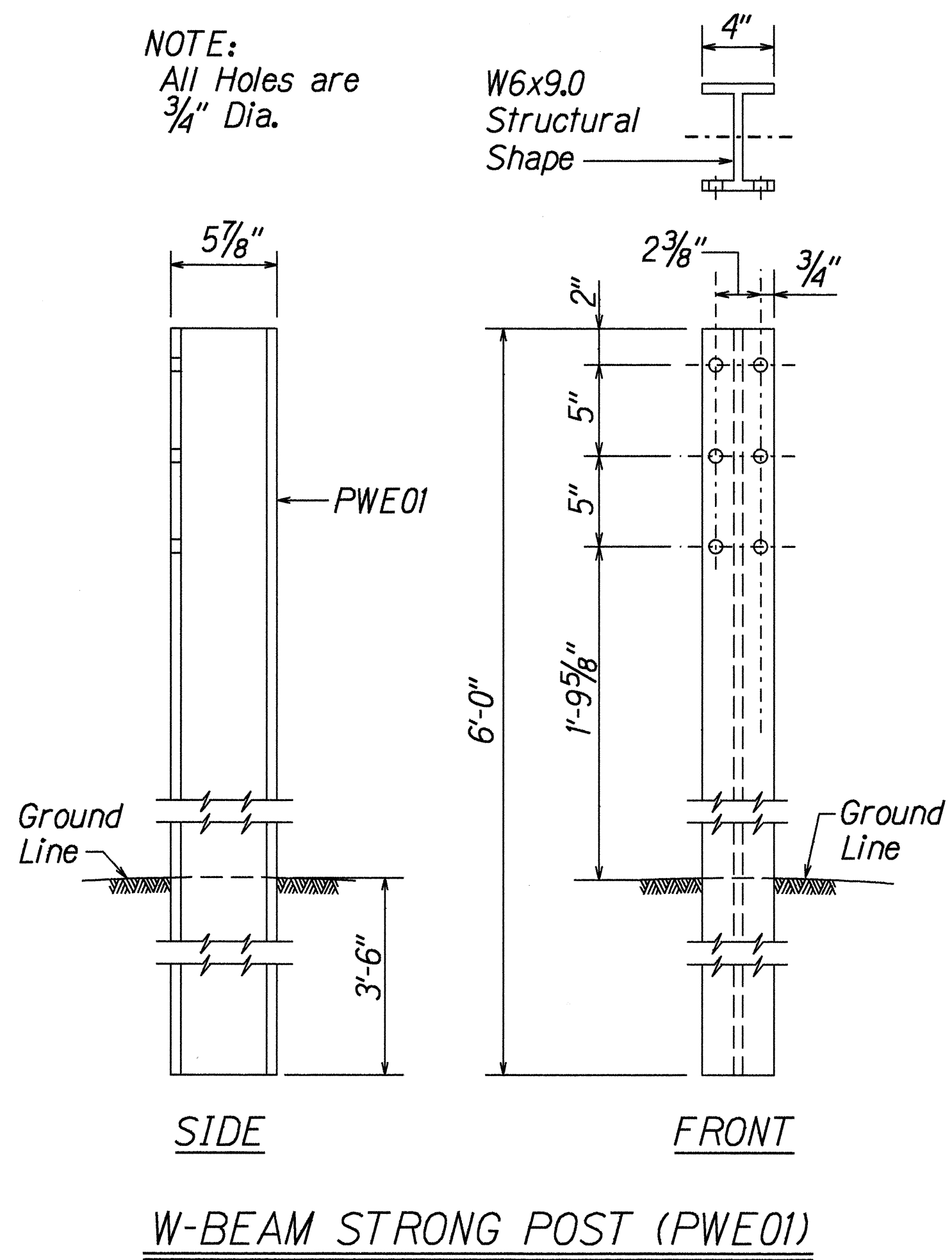


**STRONG POST W-BEAM GUARDRAIL**  
**(SGR04a)**



**STRONG POST W-BEAM GUARDRAIL WITH**  
**RECYCLED OFFSET BLOCK OR PLASTIC BLOCKOUT**

NOTE:  
All Holes are  
3/4" Dia.



STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

HIGHWAYS DIVISION

**STRONG POST W-BEAM GUARDRAIL**

HAWAII BELT ROAD

Replacement of Auwaiakeakua

and Popoo Bridges

Federal Aid Proj. No. BR-0190(13)

Scale: NTS

Date: March 1999

SHEET No. 1

OF 1

SHEETS

ORIGINAL PLAN	DATE	3-29-99
DESIGNED BY	TRACED BY	
NOTE BOOK	DESIGNED BY	
QUANTITIES BY	QUANTITIES BY	
CHECKED BY	CHECKED BY	