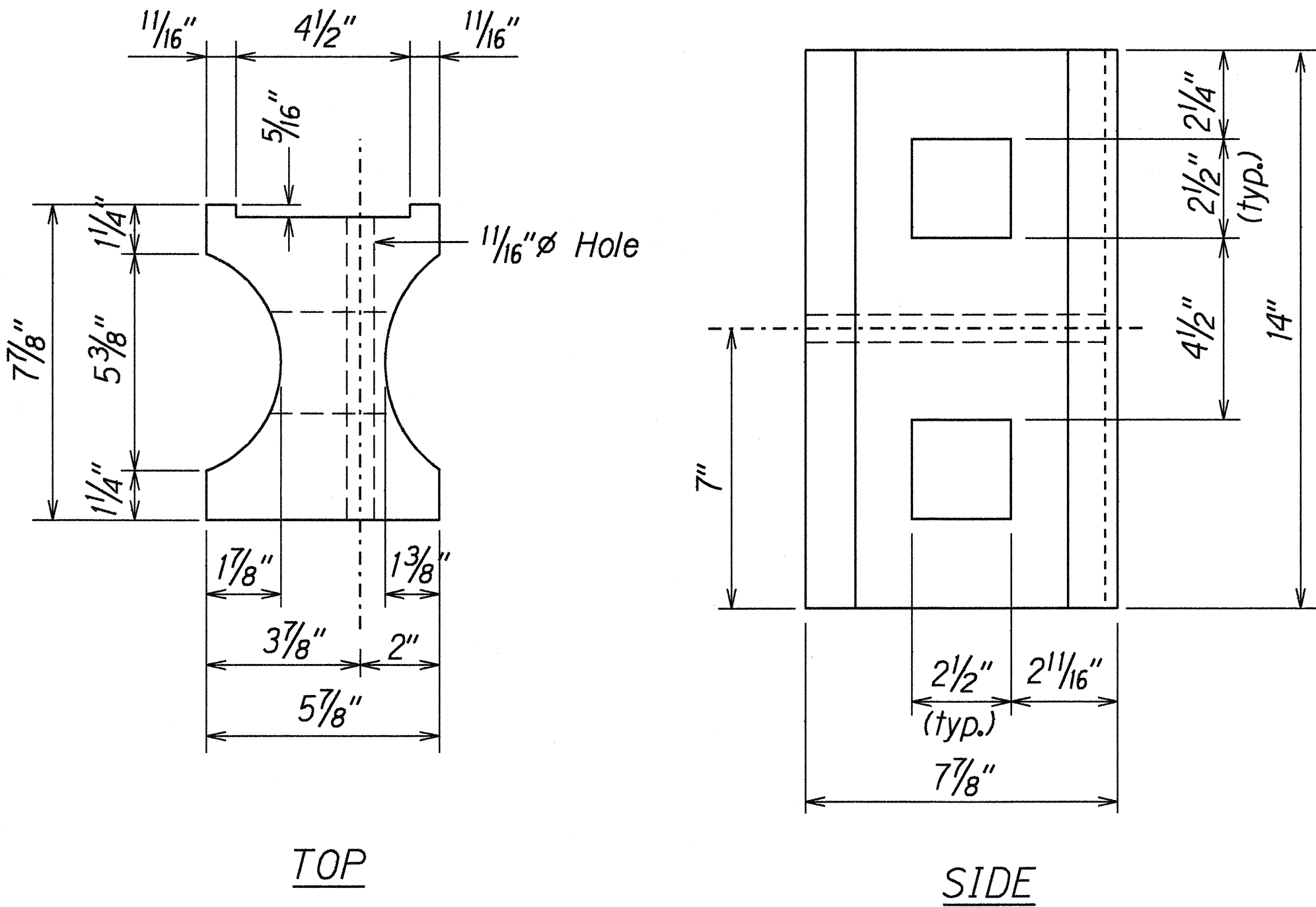
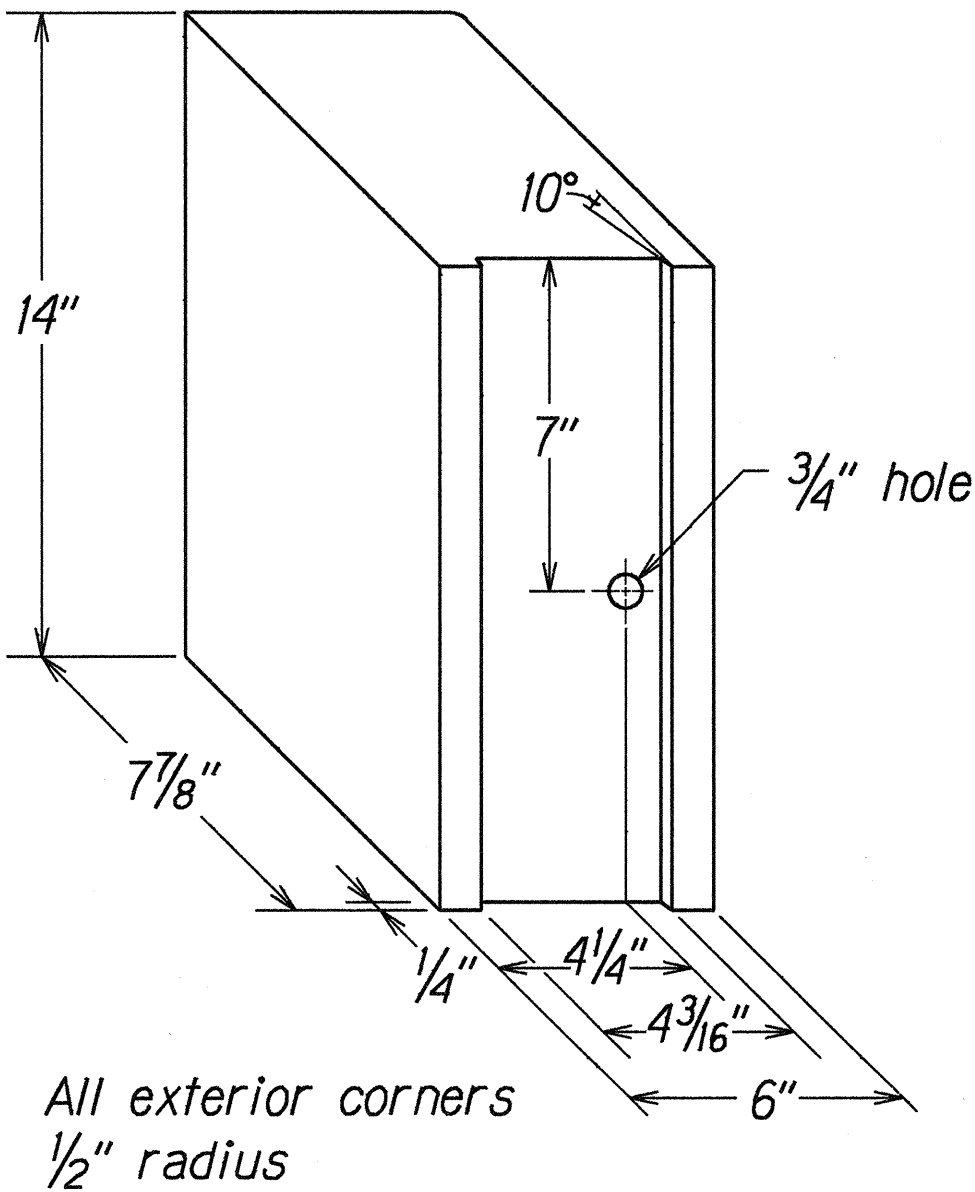


FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	51B-01-00M	2000	8	23

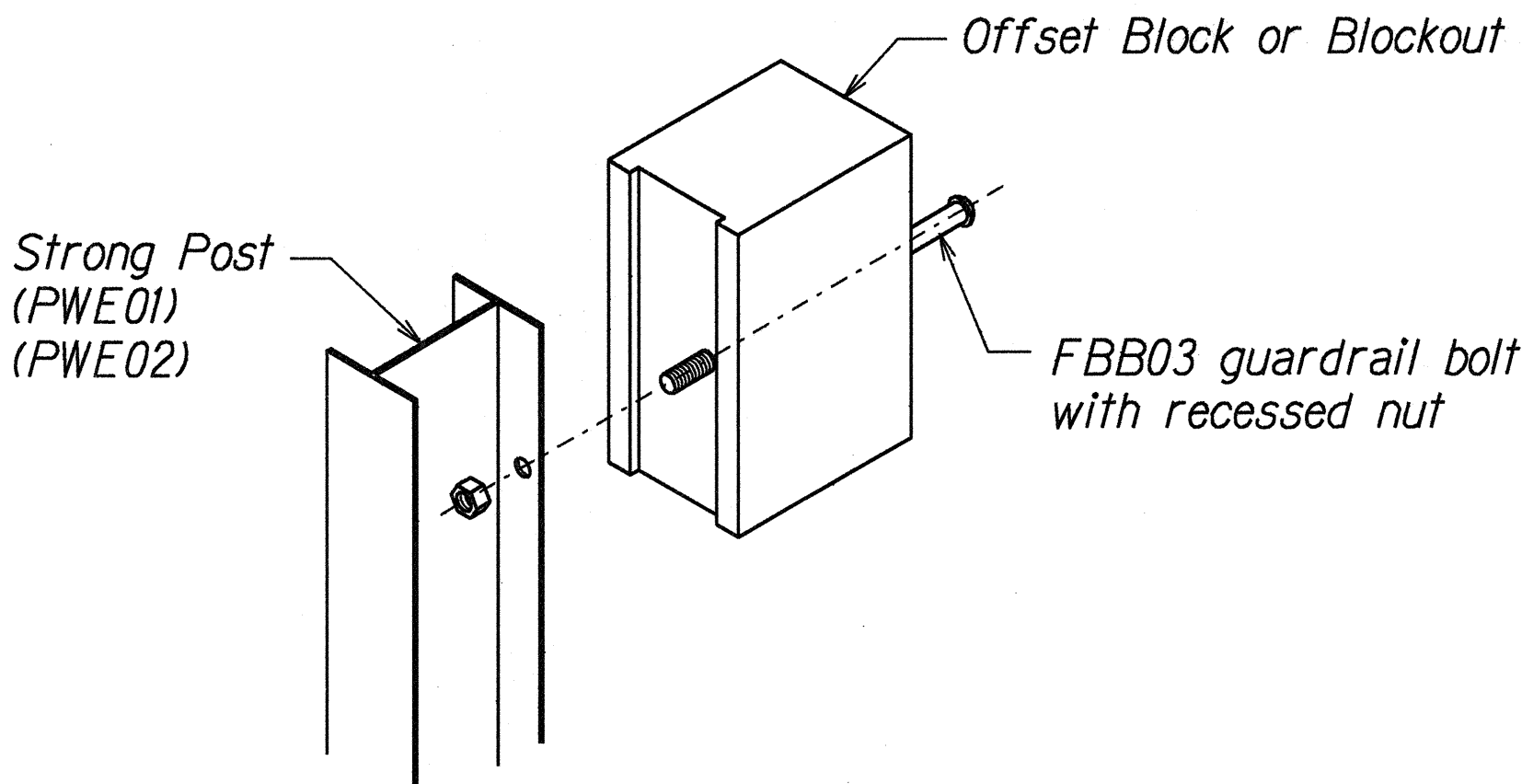


TOP
SIDE
RECYCLED PLASTIC BLOCKOUT (TYPE I)

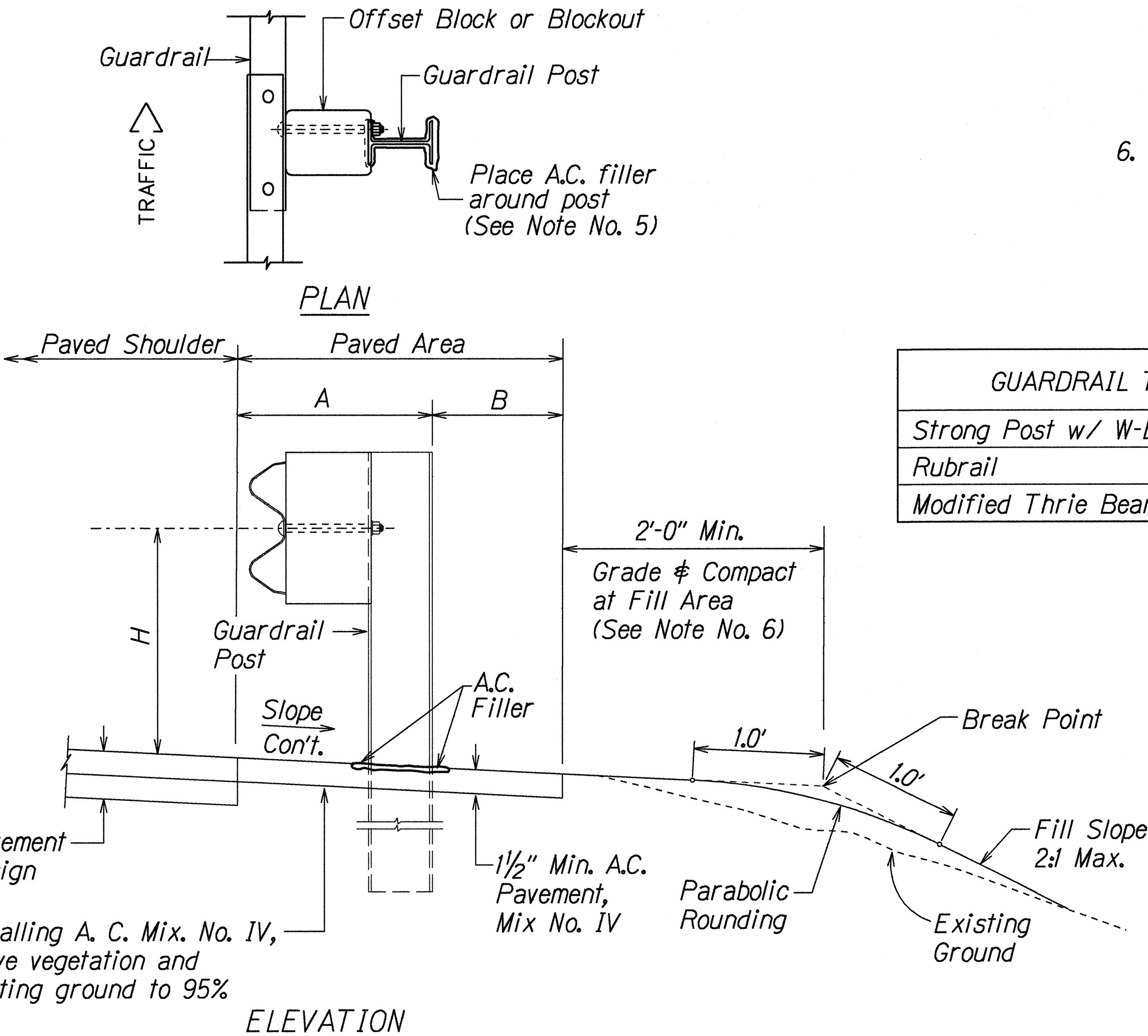


RECYCLED POLYETHYLENE
OFFSET BLOCK (TYPE II)

- 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. After the guardrail posts are installed in the paved area, the Contractor shall place A.C. filler 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 placing A.C. filler. The cost for this work shall not be paid for separately, but shall be considered incidental to the various guardrail items.
 6. When standards for the fill slope area cannot be met, a site specific, engineer approved design may be used.



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



ELEVATION
TYPICAL GUARDRAIL INSTALLATION

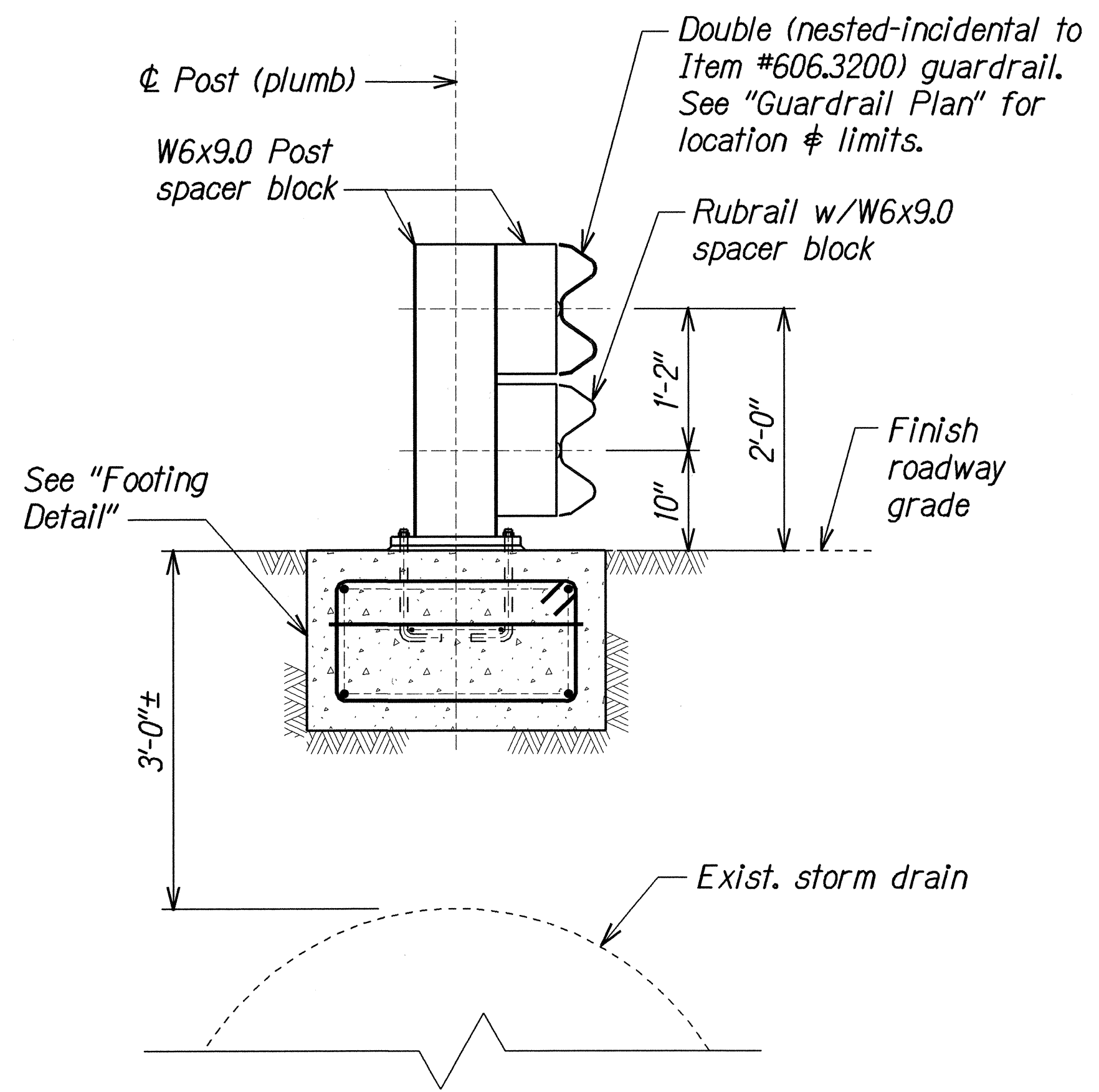
GUARDRAIL TYPE	DIMENSION		
	H	A	B
Strong Post w/ W-Beam	1'-9 5/8"	1'-6"	1'-0"
Rubrail	2'-0"	1'-6"	2'-0"
Modified Thrie Beam	2'-0"	2'-0"	1'-0"

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

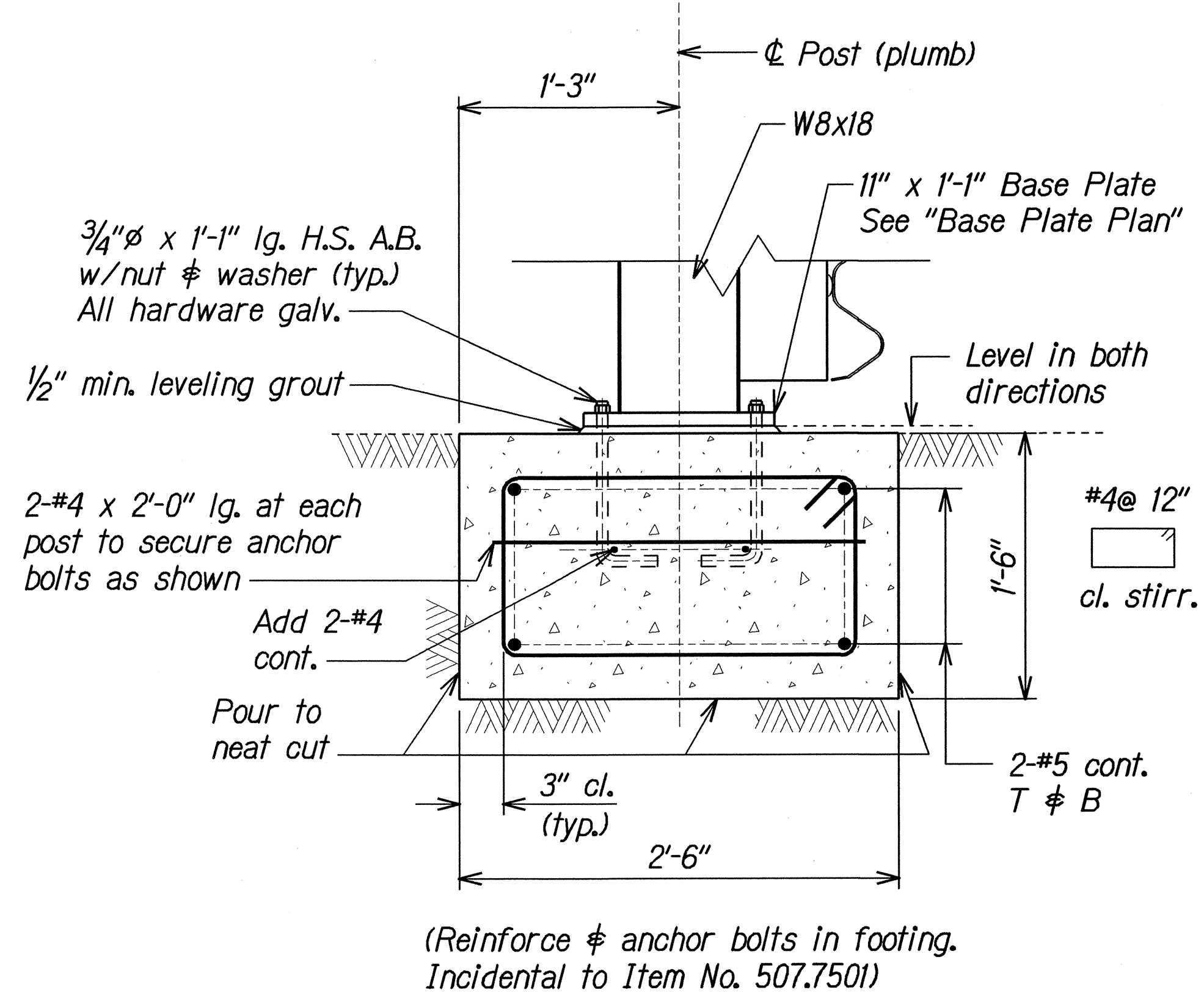
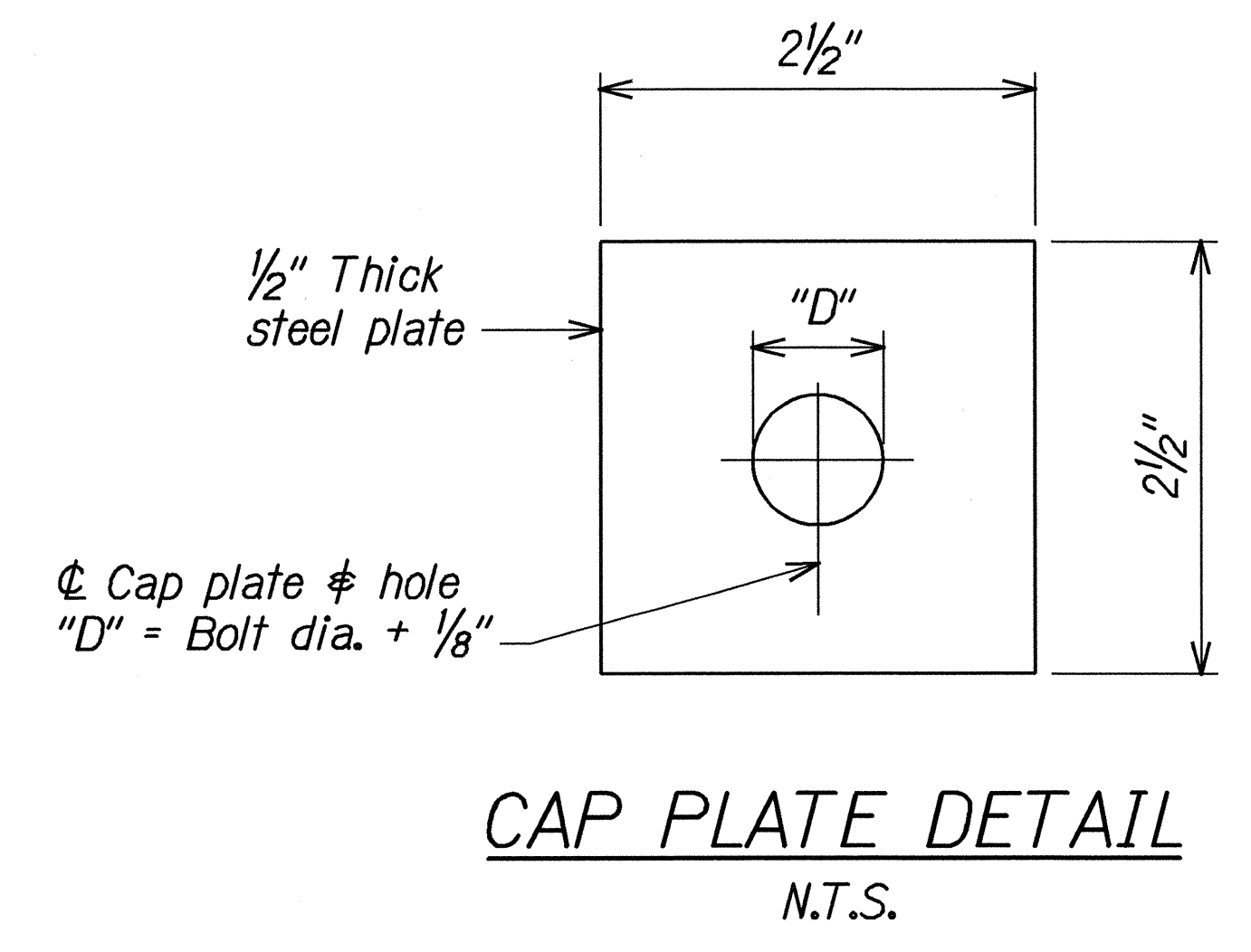
GUARDRAIL DETAILS & NOTES
KAPULE HIGHWAY,
MISCELLANEOUS IMPROVEMENTS
Vicinity of Ahukini Road to Kuhio Highway
Project No. 51B-01-00M
Scale: NTS Date: December, 1999
SHEET No. 1 OF 1 SHEETS

SURVEY PLOTTED BY	DATE
DRAWN BY	12-15-99
CHECKED BY	
NOTED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
INSTRUMENT	
BY	
CHECKED BY	

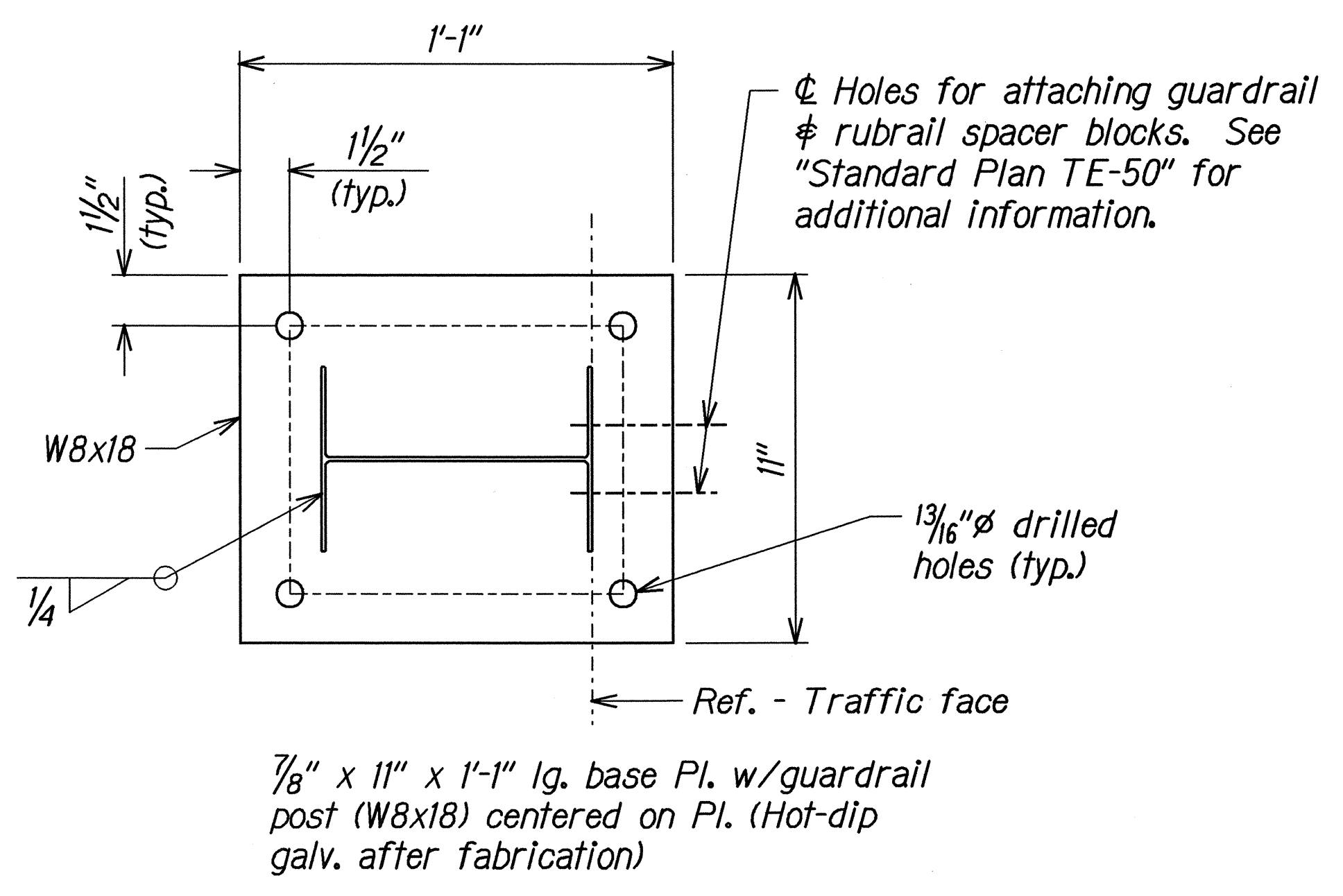
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	51B-01-00M	2000	8 S-1	23



POST ON FOOTING WITH RUBRAIL
Scale 1" = 1'



FOOTING DETAIL
Scale 1/2" = 1'



- NOTES**
1. "Terminal Connector" shall be fabricated from 10 gauge steel conforming to the requirements of AASHTO M 180.
 2. All anchor bolts shall be high strength bolts conforming to requirements of ASTM 325.
 3. Anchor bolt length shall be such that a snug fit of the elements and full thread engagement plus 1/4" is attained.
 4. The Contractor shall be solely responsible for the protection of utilities and existing and new structures from damage due to construction. Any damage shall be repaired at his expense to the satisfaction of the Engineer.
 5. The work necessary to connect the guardrail to the end post shall include all labor, materials, tools, equipment and incidentals necessary to complete the work. This work will bw measured and paid for in the unit of one.

Note: This tracing prepared during "As-Built" posting.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GUARDRAIL DETAILS & NOTES

KAPULE HIGHWAY,
MISCELLANEOUS IMPROVEMENTS
Vicinity of Ahukini Road to Kuhio Highway
Project No. 51B-01-00M
Scale: As Shown Date: August, 2004
SHEET No. 1 OF 1 SHEETS

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	
6/15/00	DESIGNED BY	
8/20/00	CHECKED BY	
8/20/00		