


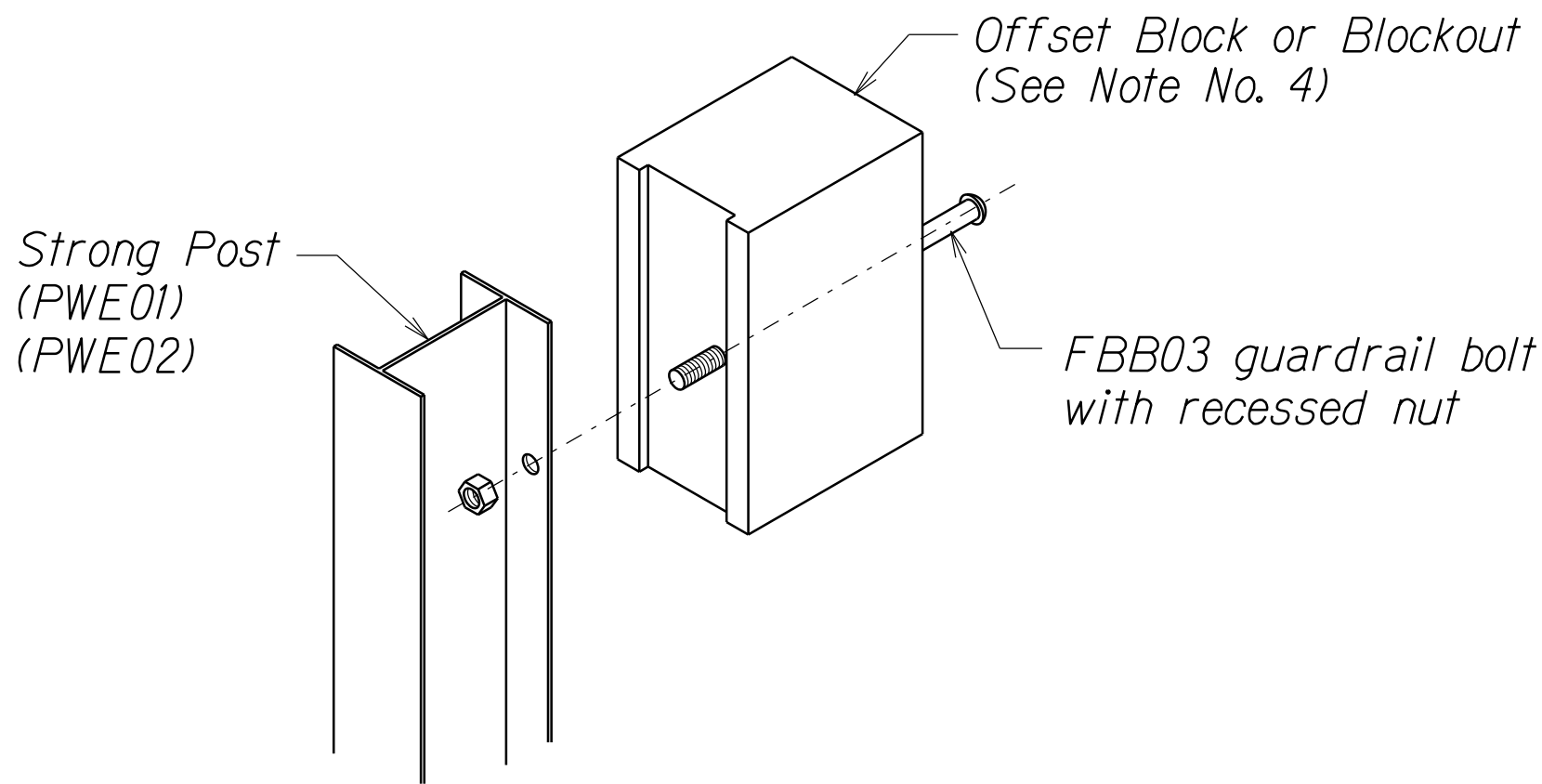
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	901A-01-19	2020	C.O.19	167

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 by the Engineer.
3. All fasteners, posts, and rail elements (i.e. FBB03, PWE01, RWM04b, 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 Blockout 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. Minimum working width (clear distance) between back of MGS post to any fixed object is 4'-1" (49").
9. New Hot Mix Asphalt (HMA) pavement at guardrails shall extend 6 feet longitudinally beyond terminal ends.
10. 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 guardrail system.

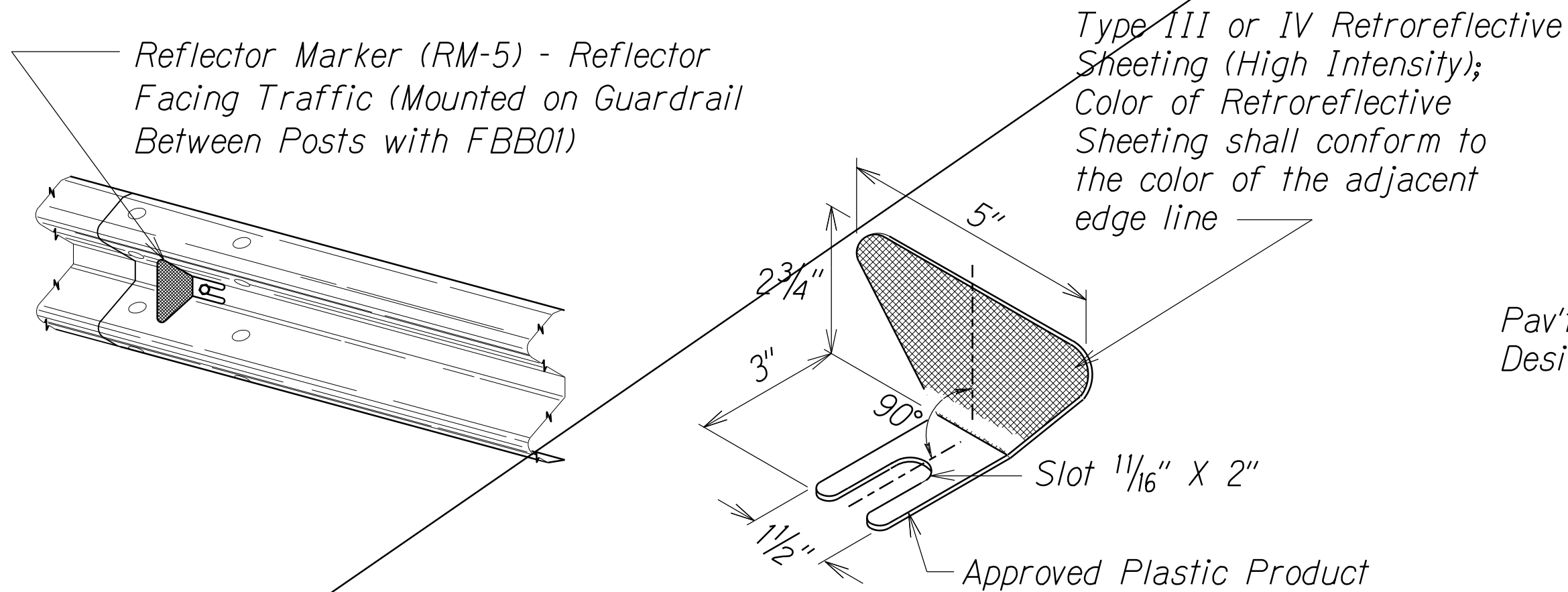
GUARDRAIL TYPE	DIMENSION	
	H	A
MGS w/ Standard 8" Offset Block	2'-1"	1'-6"
MGS w/ No Blockout	2'-7/8"	9 1/4"

 **N.I.C.**

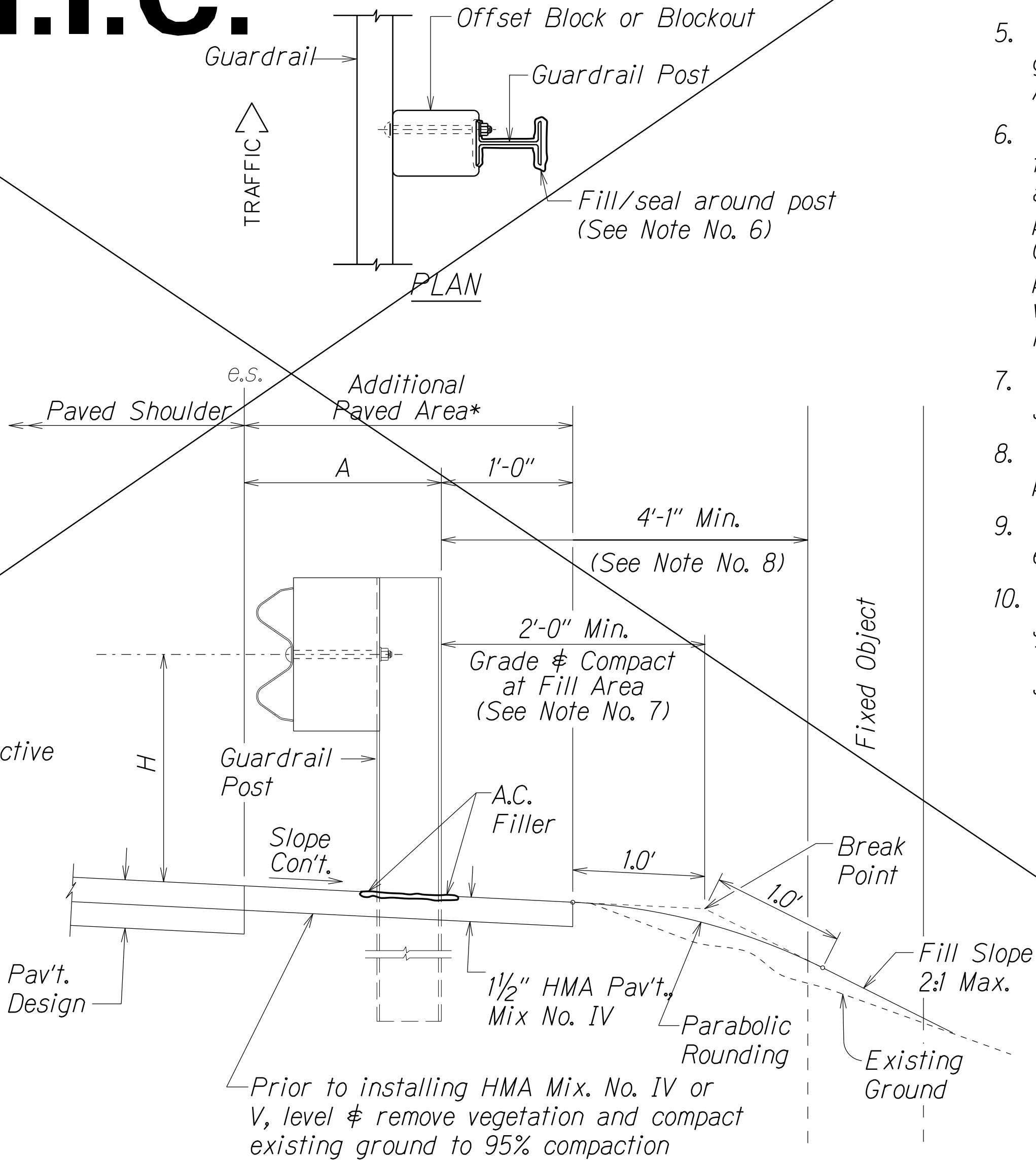


Exploded View
(Rail and washer not shown)

STEEL POST AND BLOCK DETAIL



REFLECTOR MARKER (RM-5) DETAIL AND TYPICAL INSTALLATION




ELEVATION

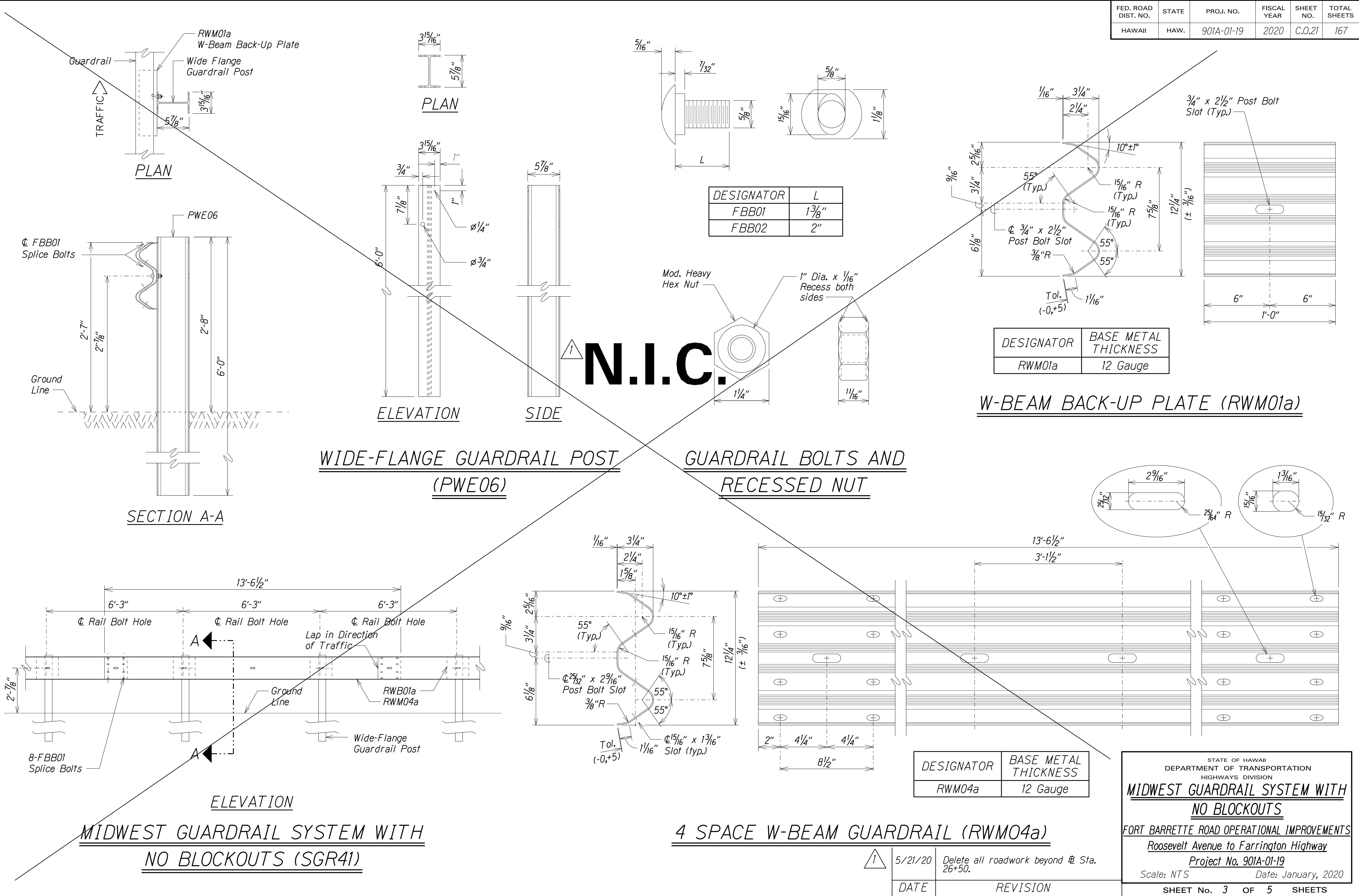
TYPICAL GUARDRAIL INSTALLATION

DATE	5/21/20
SURVEY PLOTTED BY	X
DRAWN BY	X
DESIGNED BY	X
CHECKED BY	X
ORIGINAL PLAN	NOTE BOOK
No.	No.

r05/03/18 Duser2/Ernest/standards/Traffic Guardrail Standards/ml_t650reudon

	5/21/20	Delete all roadwork beyond Sta. 26+50.
DATE	REVISION	
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION		
GUARDRAIL DETAILS & NOTES		
FORT BARRETTE ROAD OPERATIONAL IMPROVEMENTS <u>Roosevelt Avenue to Farrington Highway</u> <u>Project No. 901A-01-19</u>		
Scale: NTS		Date: January, 2020
SHEET No. 1 OF 5 SHEETS		

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	901A-01-19	2020	C.O.21	167



ORIGINAL PLAN	DATE
DRAWN BY	X
DESIGNED BY	X
CHECKED BY	X

NOTES: 1. All dimensions are in inches unless otherwise noted. 2. See standard details for guardrail systems.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

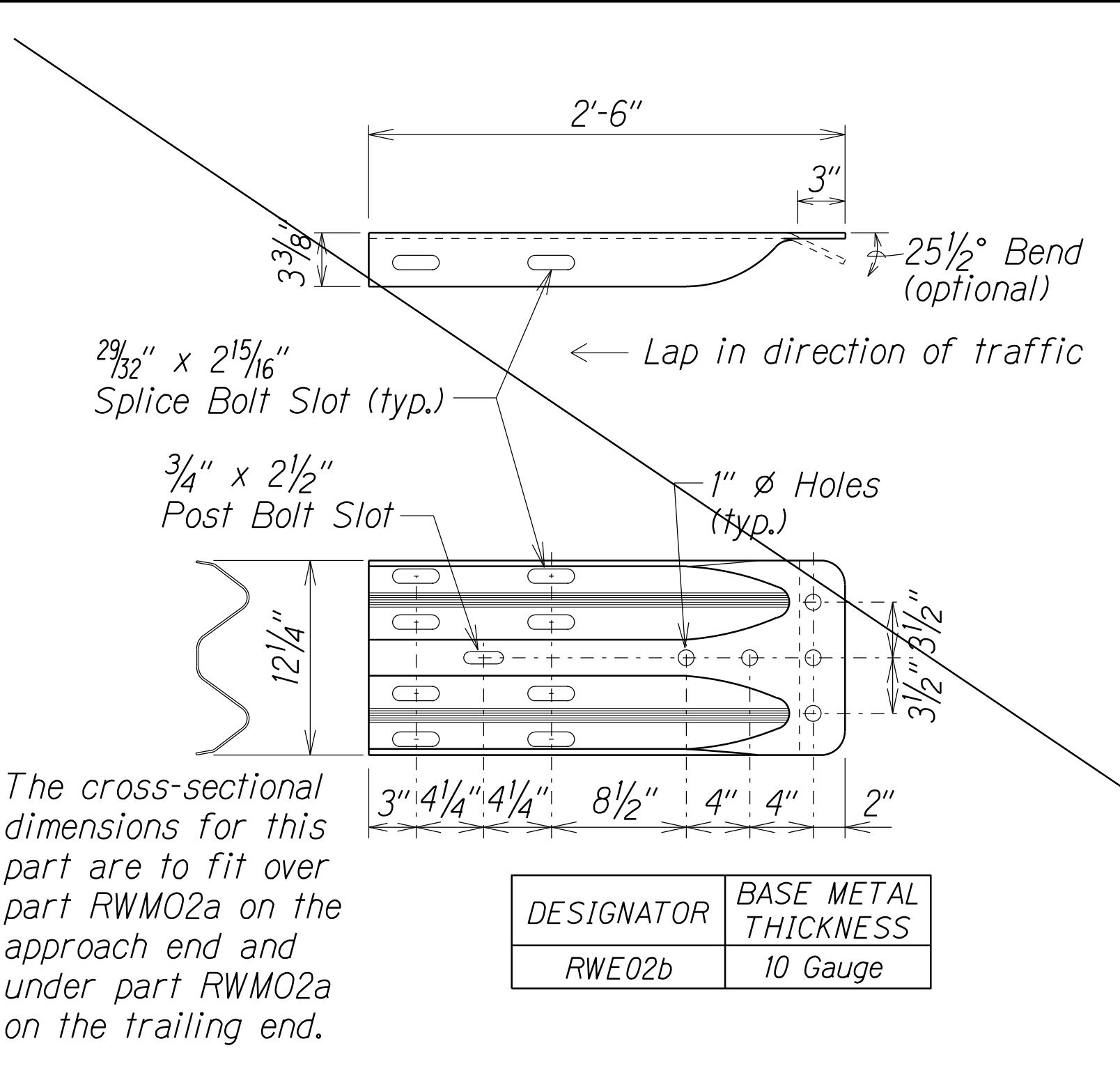
MIDWEST GUARDRAIL SYSTEM WITH NO BLOCKOUTS

FORT BARRETTE ROAD OPERATIONAL IMPROVEMENTS
Roosevelt Avenue to Farrington Highway
Project No. 901A-01-19
Scale: NTS Date: January, 2020

SHEET No. 3 OF 5 SHEETS

5/21/20	Delete all roadwork beyond Sta. 26+50.
DATE	REVISION

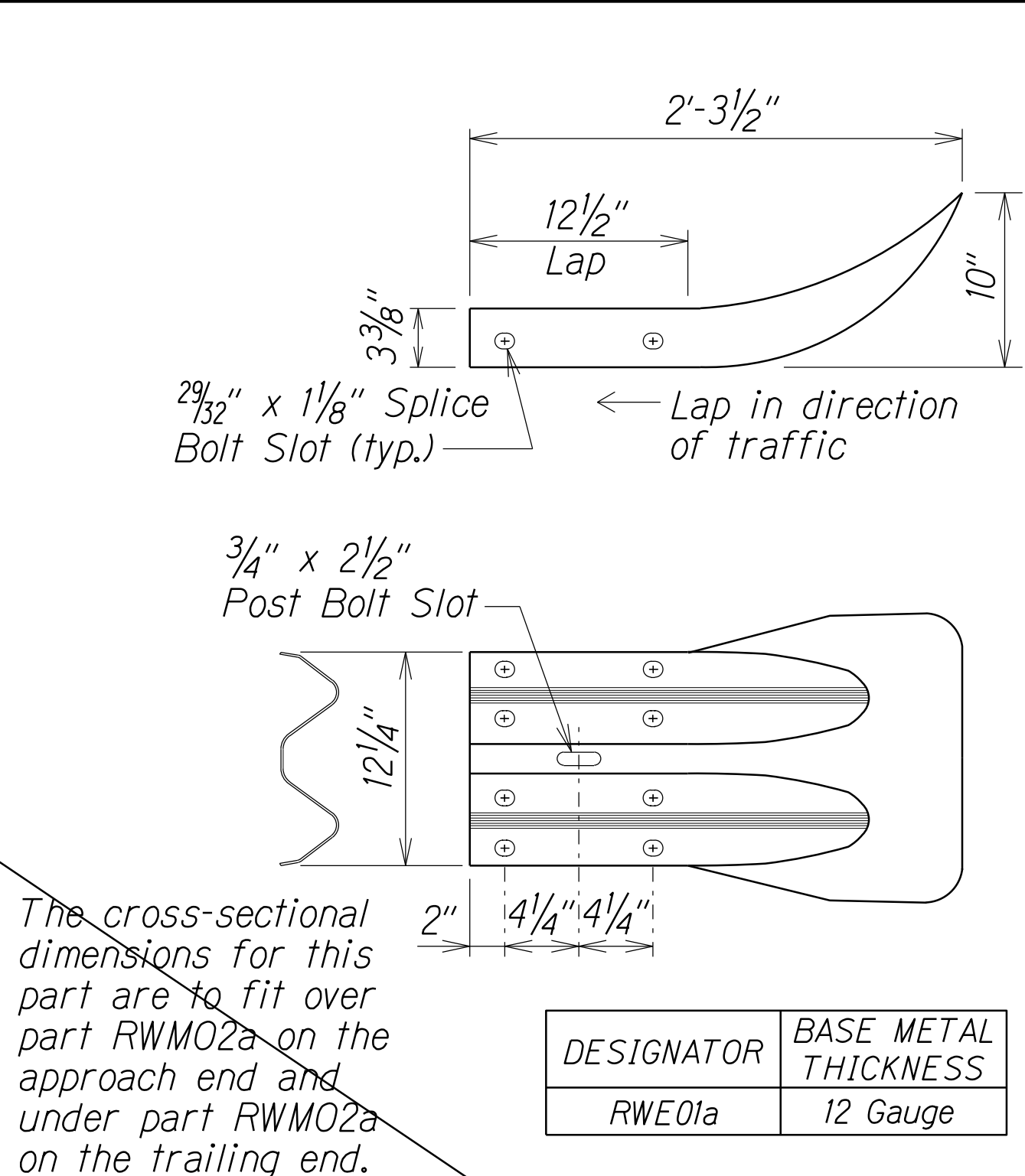
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	901A-01-19	2020	C.O.22	167



The cross-sectional dimensions for this part are to fit over part RWM02a on the approach end and under part RWM02a on the trailing end.

DESIGNATOR	BASE METAL THICKNESS
RWE02b	10 Gauge

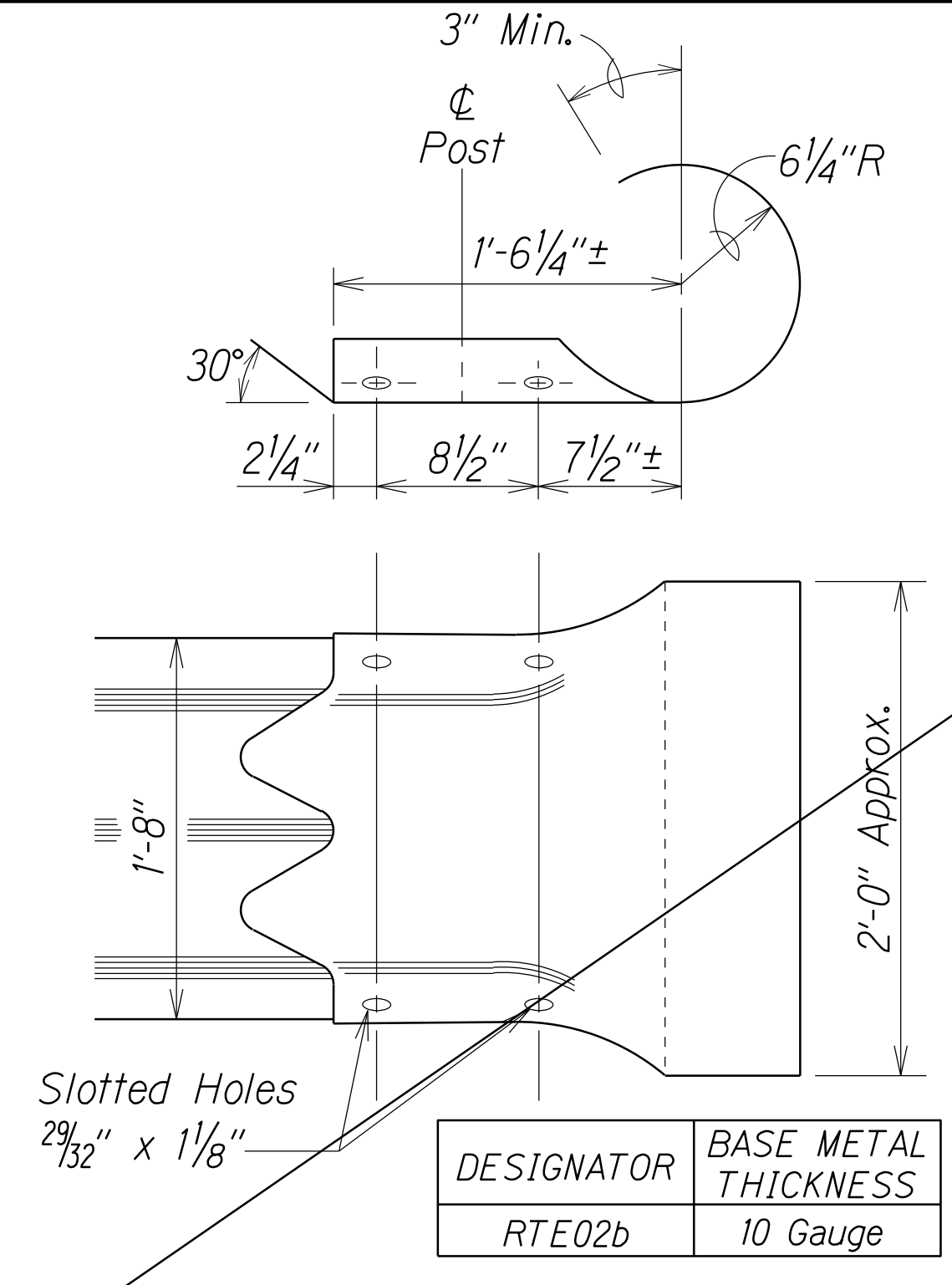
W-BEAM TERMINAL CONNECTOR (RWE02b)



The cross-sectional dimensions for this part are to fit over part RWM02a on the approach end and under part RWM02a on the trailing end.

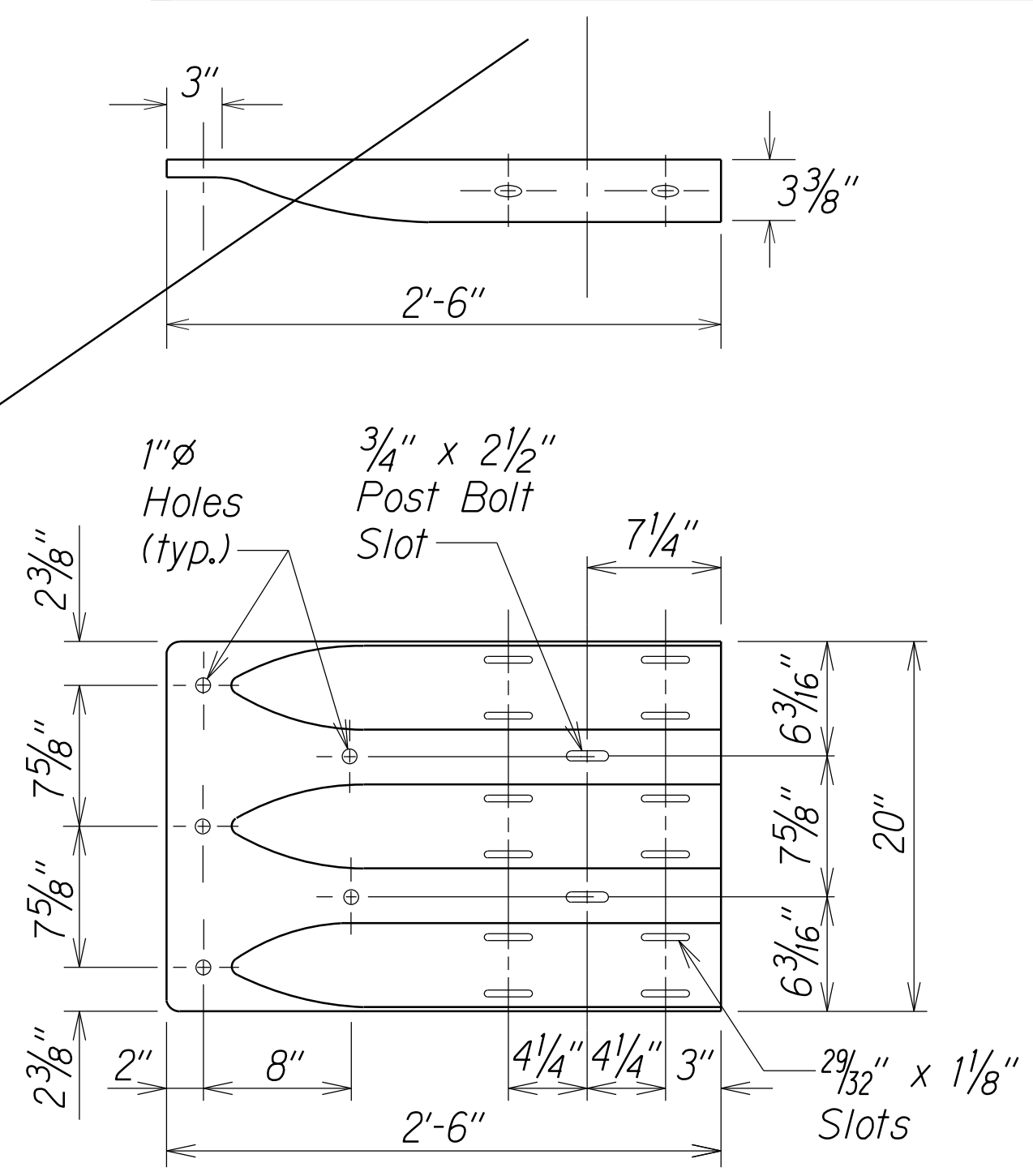
DESIGNATOR	BASE METAL THICKNESS
RWE01a	12 Gauge

W-BEAM END SECTION (FLARED RWE01a)



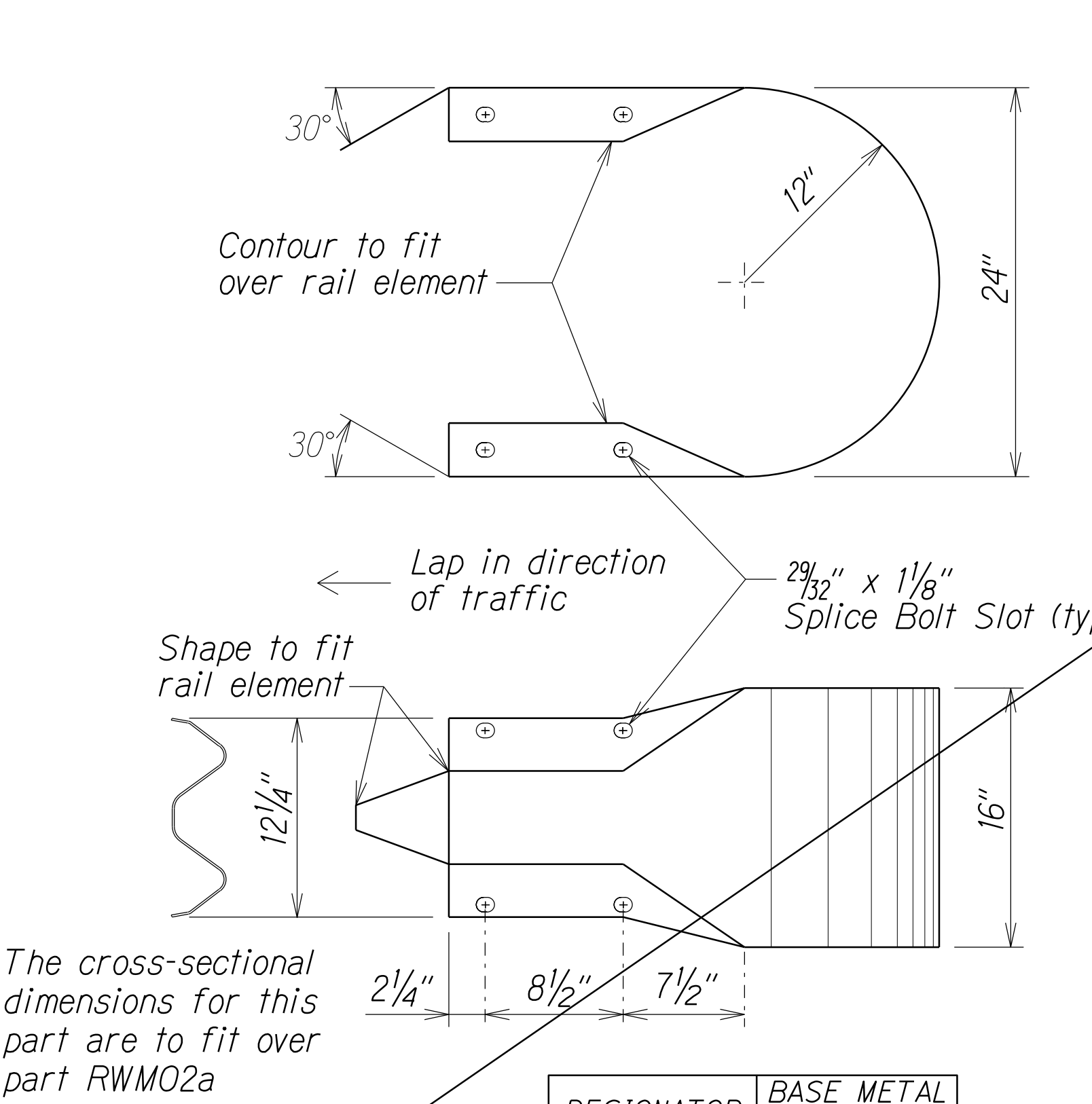
DESIGNATOR	BASE METAL THICKNESS
RTE02b	10 Gauge

THRIE-BEAM SECTION (ROUNDED) (RTE02b)



DESIGNATOR	BASE METAL THICKNESS
RTE01b	10 Gauge

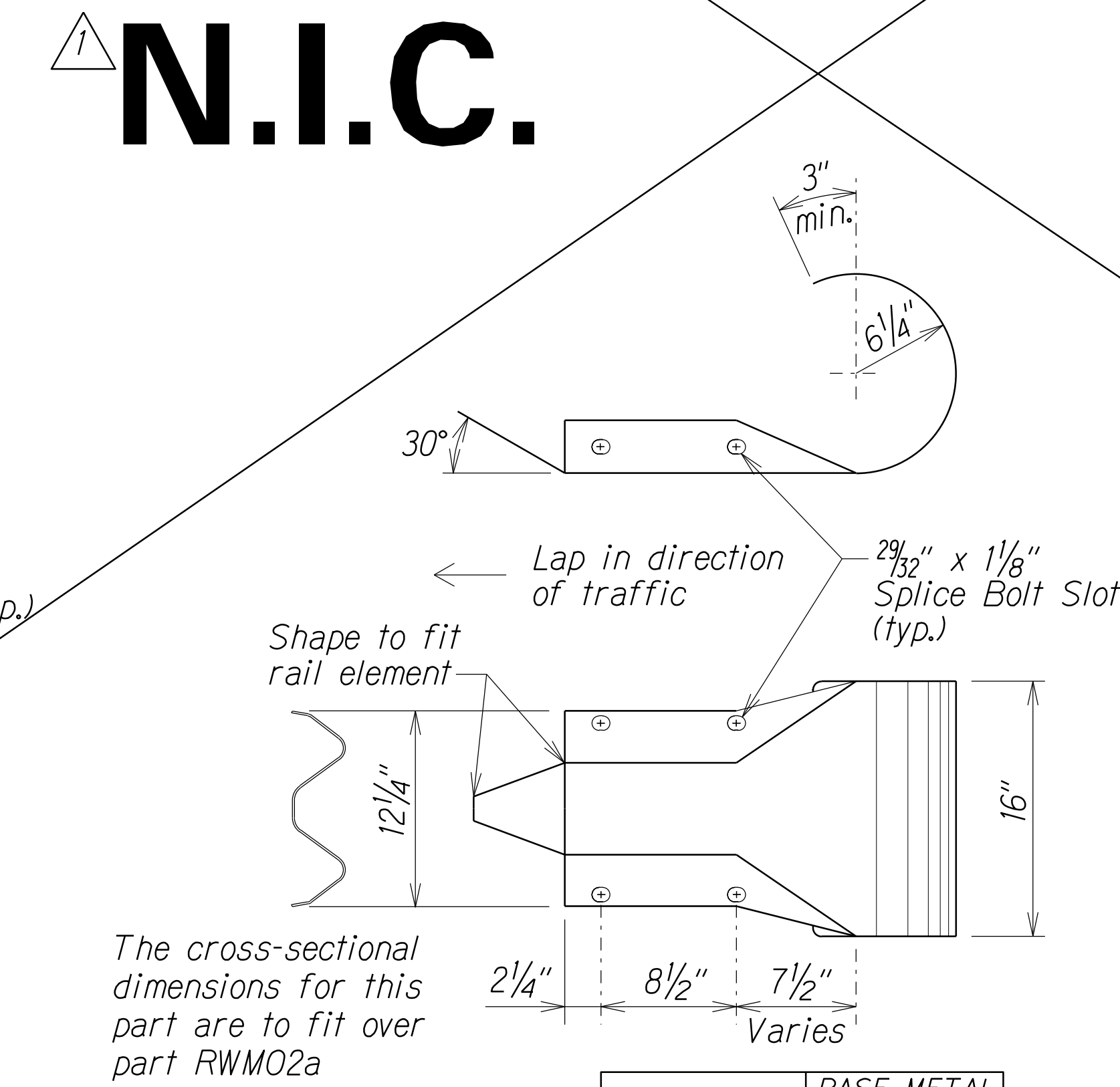
THRIE-BEAM TERMINAL CONNECTOR (RTE01b)



The cross-sectional dimensions for this part are to fit over part RWM02a

DESIGNATOR	BASE METAL THICKNESS
RWE06a	12 Gauge

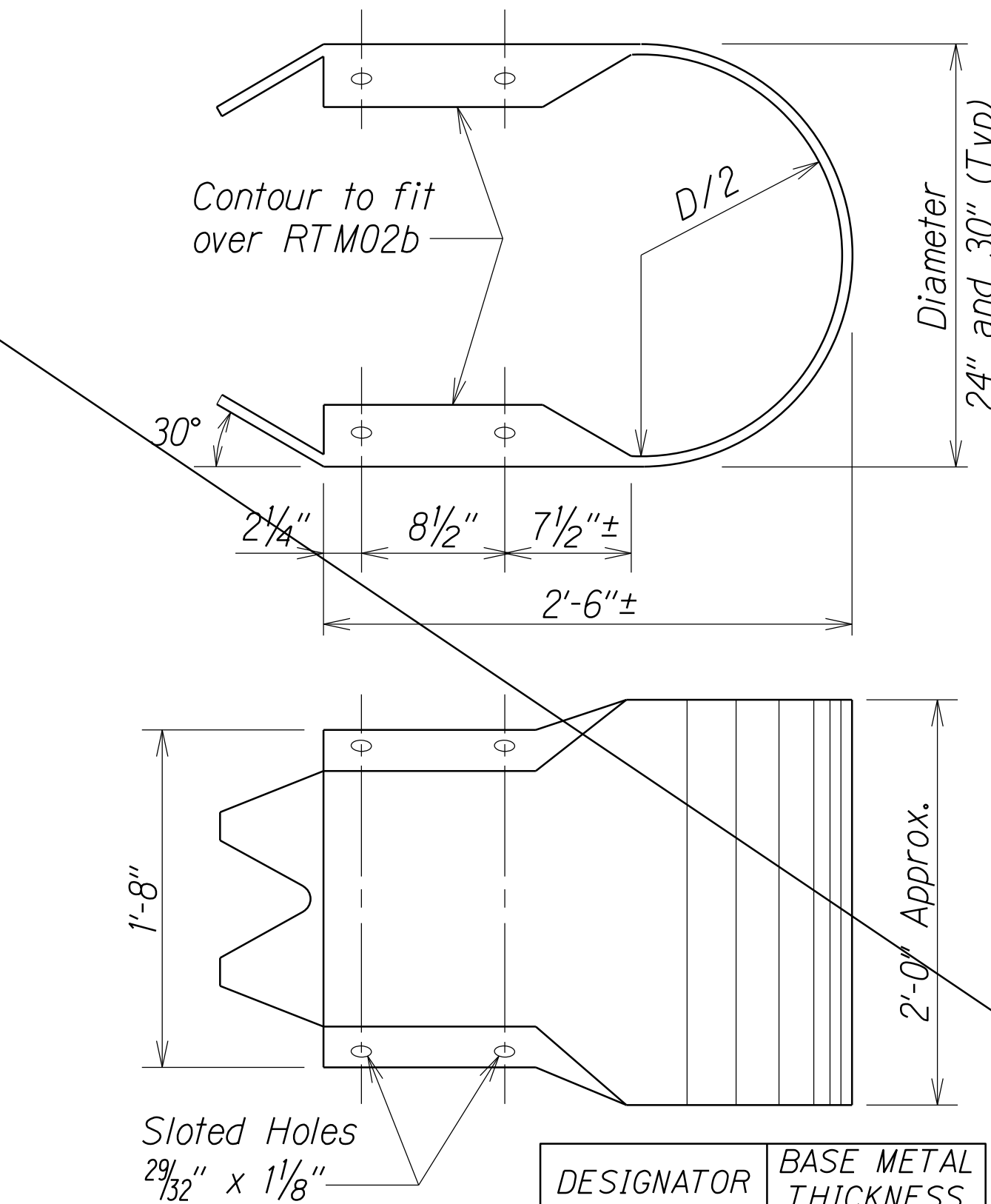
W-BEAM END SECTION (BUFFER RWE06a)



The cross-sectional dimensions for this part are to fit over part RWM02a

DESIGNATOR	BASE METAL THICKNESS
RWE03a	12 Gauge

W-BEAM END SECTION (ROUNDED RWE03a)



DESIGNATOR	BASE METAL THICKNESS
RTE03b & RTE04b	10 Gauge

THRIE-BEAM END SECTION (BUFFER RTE03b or RTE04b)

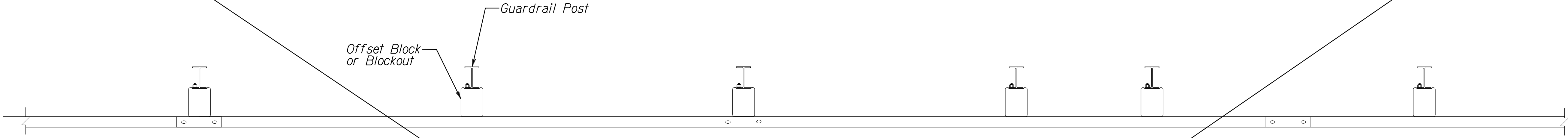
N.I.C.

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	
	DESIGNED BY	
	CHECKED BY	

ROT/28/17 Duser2/Ernest/Standards/Traffic/Guardrail Standards/m4_b51reudon

5/21/20	Delete all roadwork beyond Sta. 26+50.
DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
GUARDRAIL TERMINAL CONNECTORS AND END SECTIONS	
FORT BARRETTE ROAD OPERATIONAL IMPROVEMENTS Roosevelt Avenue to Farrington Highway Project No. 901A-01-19 Scale: NTS Date: January, 2020	
SHEET No. 4 OF 5 SHEETS	

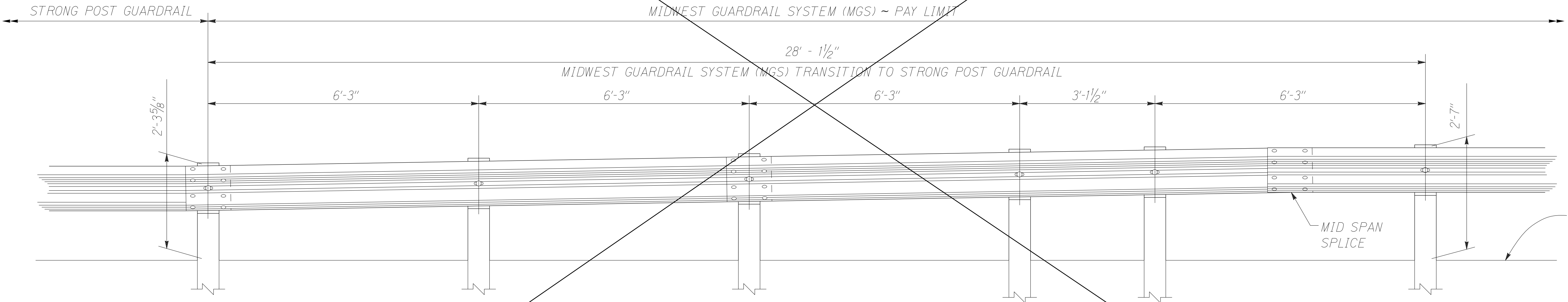
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	901A-01-19	2020	C.O.23	167



PLAN



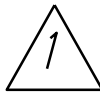
N.I.C.



ELEVATION

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	X
DESIGNED BY	DESIGNED BY	X
CHECKED BY	CHECKED BY	X
N _o X.dgn	CHECKED BY	X.dgn

r09/06/16 D:\usr2\Ernest\standards\Traffic Guardrail Standards\mt7_midwest.dgn



5/21/20	Delete all roadwork beyond # Sta. 26+50.
DATE	REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**MGS TRANSITION TO
STRONG POST GUARDRAIL**

FORT BARRETTE ROAD OPERATIONAL IMPROVEMENTS
Roosevelt Avenue to Farrington Highway
Project No. 901A-01-19
Scale: NTS Date: January, 2020

SHEET No. 5 OF 5 SHEETS