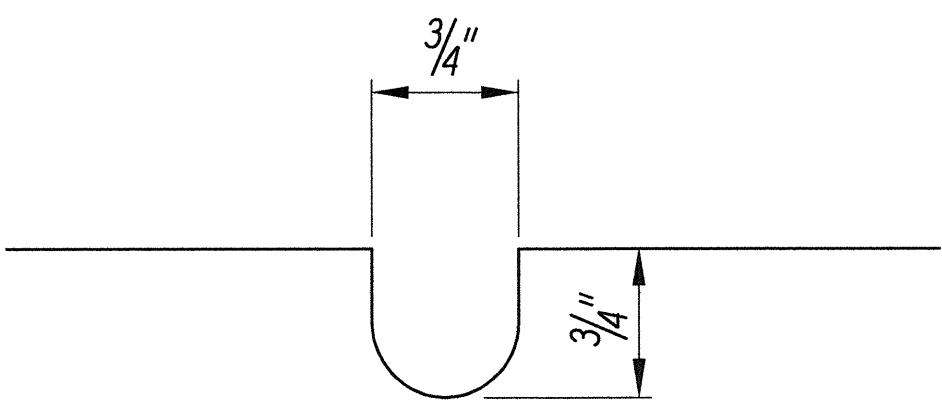


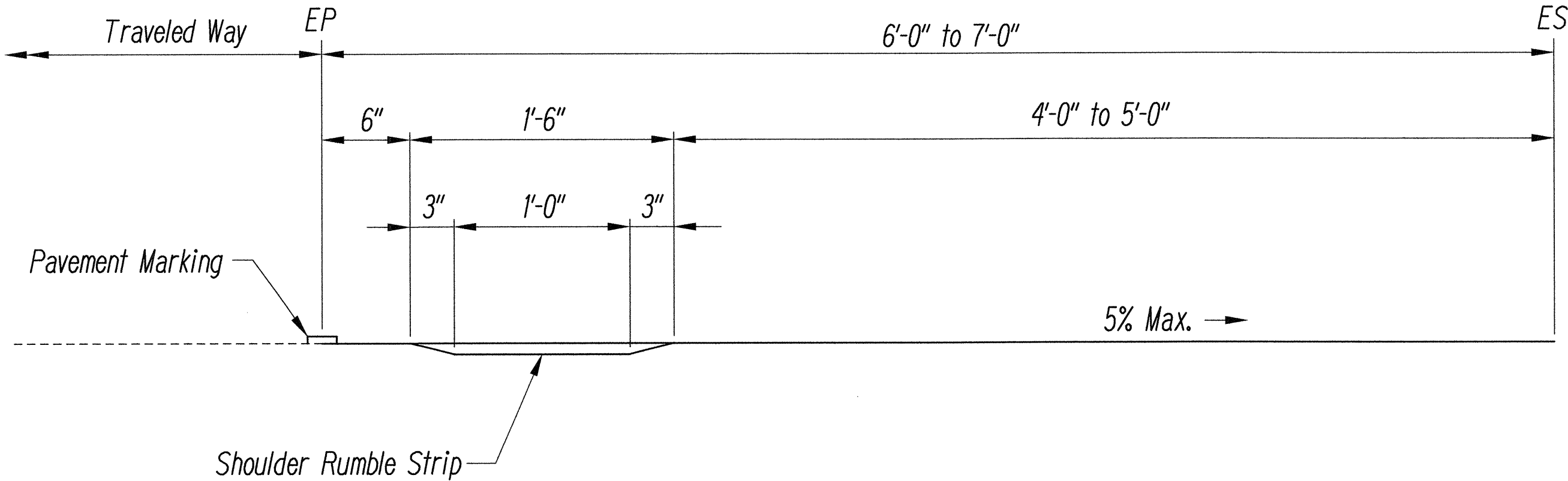
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	FLH-0270(16) & FLH-0270(17)	2001	8	41

Notes:

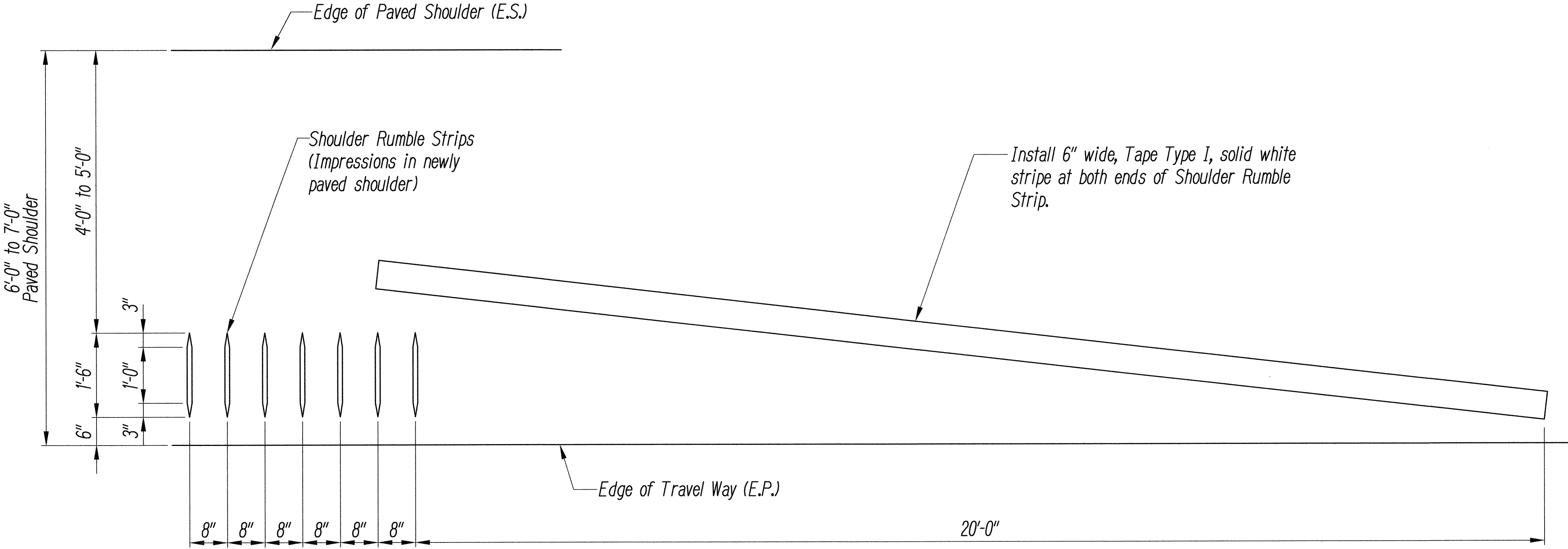
- Rumble Strip depressions must be placed after Breakdown Rolling, with Finish Rolling done after Rumble Strip Rolling but not on depressions unless otherwise directed by the Engineer.
- Rolling for Rumble Strip depressions shall be done when temperature of asphalt is about 180° F (when fines just stick to the palm of the hand). Discontinue rolling if mat begins to tear. The rolling of depressions or the stopping of rolling process shall be done in accordance to the preceding requirements unless otherwise directed by the Engineer.
- Priority is to complete full Breakdown Rolling in order to achieve the required density. Full depth depression is a secondary consideration unless otherwise directed by the Engineer.
- The method of constructing the Rumble Strip depressions shall be submitted to the Engineer for acceptance prior to the actual work.
- The construction of the Shoulder Rumble Strip, including the fabrication of the grooving apparatus and 6" white stripe, shall be considered incidental to Asphalt Concrete Pavement, Mix No. IV. and will not be paid for separately.



DETAIL - SHOULDER RUMBLE STRIP
Scale: 1"=1"



LONGITUDINAL SECTION - SHOULDER RUMBLE STRIP
Scale: 1 1/2"=1'-0"



PLAN
Scale: 3/4"=1'-0"

SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	

CLYDE T. SHIMIZU
LICENSED PROFESSIONAL ENGINEER
No. 5514-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

Clyde T. Shimizu

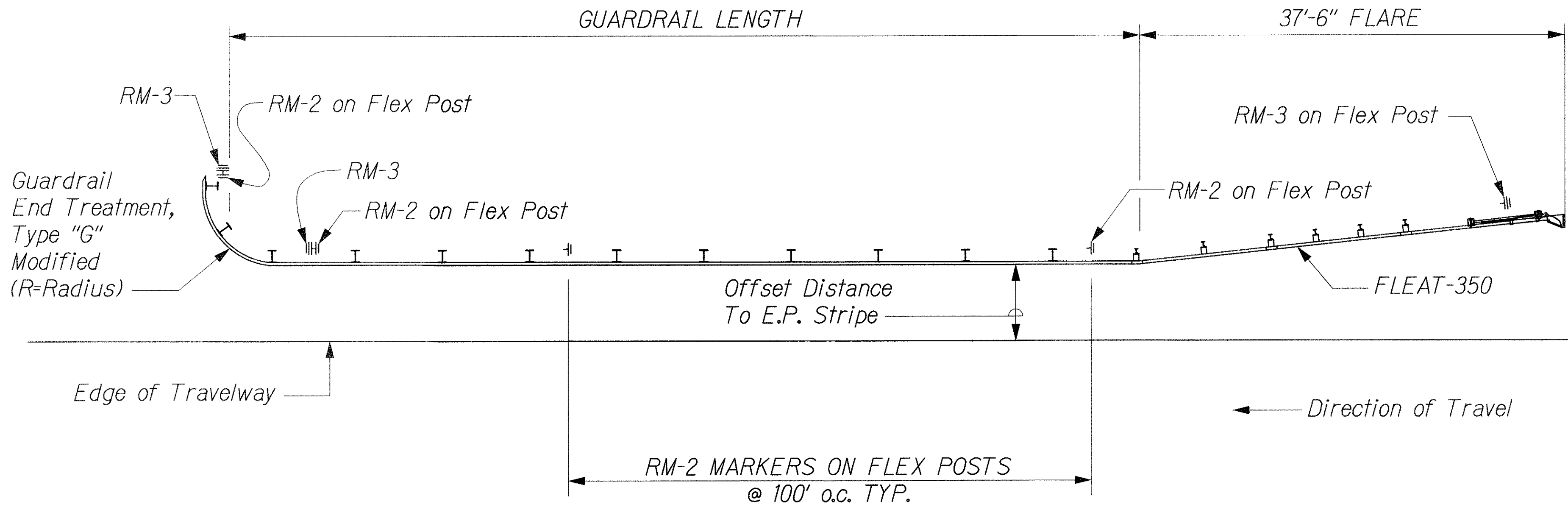
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

MISCELLANEOUS DETAILS

KAWAIHAE ROAD PU'UKOHOLA HEIAU NHS
INTERSECTION IMPROVEMENTS
FAP NOS. FLH-0270(16) & FLH-0270(17)
Scale: As Shown Date: Nov, 2000

GUARDRAIL SCHEDULE

Item	Begin Sta.	End Sta.	W-Beam Length	Thrie Length
Guardrail End Treatment, Type "G" Modified (R=40')	62+52 Lt.	62+52 Lt. =	each	each
Strong Post W-Beam	62+52 Lt.	63+88 Lt. =	136'	
Strong Post Modified Thrie Beam	63+88 Lt.	66+31 Lt. =		243'
FLEAT-350 Guardrail End Treatment, Modified "G"	66+31 Lt.	66+68 Lt. =	each	each
FLEAT-350 GR End Treatment	72+26 Lt.	72+64 Lt. =		
Guardrail End Treatment, Type "G" Modified (R=40')	67+41 Lt.	67+41 Lt. =	each	each
Strong Post Modified Thrie Beam	67+41 Lt.	67+82 Lt. =	each	77+0
Strong Post W-Beam	72+64 Lt.	67+82 Lt. =	75+19 Lt. =	73+300'
FLEAT-350 Guardrail End Treatment, Modified "G"	75+19 Lt.	75+56 Lt. =	each	each
Guardrail End Treatment, Type "G" Modified (R=40')	76+17 Lt.	76+17 Lt. =	each	each
Strong Post Modified Thrie Beam	76+17 Lt.	76+73 Lt. =	each	56'
Strong Post W-Beam	76+73 Lt.	77+37 Lt. =	each	64'
FLEAT-350 Guardrail End Treatment	77+37 Lt.	77+74 Lt. =	each	each
Guardrail End Treatment, Type "G" Modified (R=40')	77+92 Lt.	77+92 Lt. =	each	each
Strong Post W-Beam	78+02 Lt.	77+92 Lt. =	78+28 Lt. =	36+62.5'
FLEAT-350 Guardrail End Treatment, Modified "G"	78+28 Lt.	78+65 Lt. =	each	each
Guardrail End Treatment, Type "G" Modified (R=40')	78+85 Lt.	78+85 Lt. =	each	each
Strong Post W-Beam	78+85 Lt.	78+81 Lt. =	79+44 Lt. =	63+75'
FLEAT-350 Guardrail End Treatment, Quadguard QS3605Y	79+44 Lt.	79+81 Lt. =	each	each
Guardrail End Treatment, Type "G" Modified (R=60')	68+06 Rt.	68+06 Rt. =	each	each
Strong Post Modified Thrie Beam	68+06 Rt.	68+97 Rt. =	each	97+0
Strong Post W-Beam	68+97 Rt.	69+89 Rt. =	each	92+0
Strong Post Modified Thrie Beam	69+89 Rt.	75+77 Rt. =	each	588+0
Strong Post W-Beam FLEAT-350 G/R End Treatment	77+78 Rt.	75+77 Rt. =	78+08 Rt. =	23+0
Strong Post Modified Thrie Beam	78+16 Rt.	78+08 Rt. =	79+08 Rt. =	100'
Strong Post W-Beam	79+16 Rt.	79+08 Rt. =	79+78 Rt. =	70+50'
Guardrail End Treatment, Type "G" Modified (R=40')	79+78 Rt.	79+78 Rt. =	each	each
FLEAT-350	79+66 Rt.	80+03 Rt. =	each	each
			811'	618'



TYPE "G" MODIFIED & "FLEAT 350" END TREATMENT
Not To Scale

NOTES

- All reflector markers located behind guardrail and other locations shall be installed with flexible delineator posts.
- Exact location of Reflector Markers shall be determined in the field by the Engineer.
- Color of flexible delineator posts shall be white except for RM-3, RM-3 bidirectional, and RM-3/RM-2 combinations shall be yellow posts.
- RM-2 shall be white.

ORIGINAL PLAN	DATE
SURVEY PLOTTED BY	
DRAWN BY	
TRACED BY	
DESIGNED BY	
NOTED BY	
CHECKED BY	
No.	

CLYDE T. SHIMIZU
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No. 5514-C
HAWAII, U.S.A.

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Scale: None Date: Nov, 2000

SHEET No. 1 OF 1 SHEETS