

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-056-1(34)	1995	6	9

Sta. 82+30 to Sta. 83+40 (L/S)
Sta. 83+10 O/S 145 Lf. to Sta. 89+35 (L/S)
Remove existing guardrail & posts
735 lin. ft.

Sta. 89+65 to Sta. 92+05 (L/S)
Sta. 90+10 to Sta. 91+70 (R/S)
Remove existing guardrail & posts
400 lin. ft.

Sta. 81+90 to Sta. 83+40, 1/2 70'L (L/S), 175 L.F.
Sta. 83+10, O/S 130'L to Sta. 89+35, 1/2 50'L (L/S)
Install 813 lin. ft. of metal guardrail, 638 L.F., type 3, single, w/ steel post 2-BCT terminal ends (50 lin. ft.), 1-Type F Flare and 1-Type G Flare
Total lin. ft. = 837.50 Lin. Ft.
Install reflector markers, type RM-1 & RM-3 as shown on sheet no. 7. RM-1=8 ea., RM-3=7 ea.
Sta. 81+90 - Sta. 83+40, "X" = 9.5'
Sta. 83+10 - Sta. 89+35, "X" = 8.0'

Sta. 89+65, 1/2 50'L to Sta. 91+90, (L/S) 225 L.F.
Sta. 90+05 to Sta. 91+55, (R/S) 150 L.F.
Install 375.0 lin. ft. of metal guardrail, type 3, single, w/ steel post 3-BCT terminal ends (75 lin. ft.) and 1-Type G Flare
Total lin. ft. = 450 Lin. Ft.
Install reflector markers, type RM-1 & RM-3 as shown on sheet no. 7. RM-1=5 ea., RM-3=5 ea.
Sta. 89+65 - Sta. 91+77.5, "X" = 8.5'
Sta. 90+35 - Sta. 91+47.5, "X" = 7.5'

Sta. 72+45.41 to Sta. 81+90± (L/S), W=9.0'
Sta. 72+45.41 to Sta. 80+80± (R/S), W=9.5'
Construct stabilized shoulder
see typical section at gutter on Sht. 4

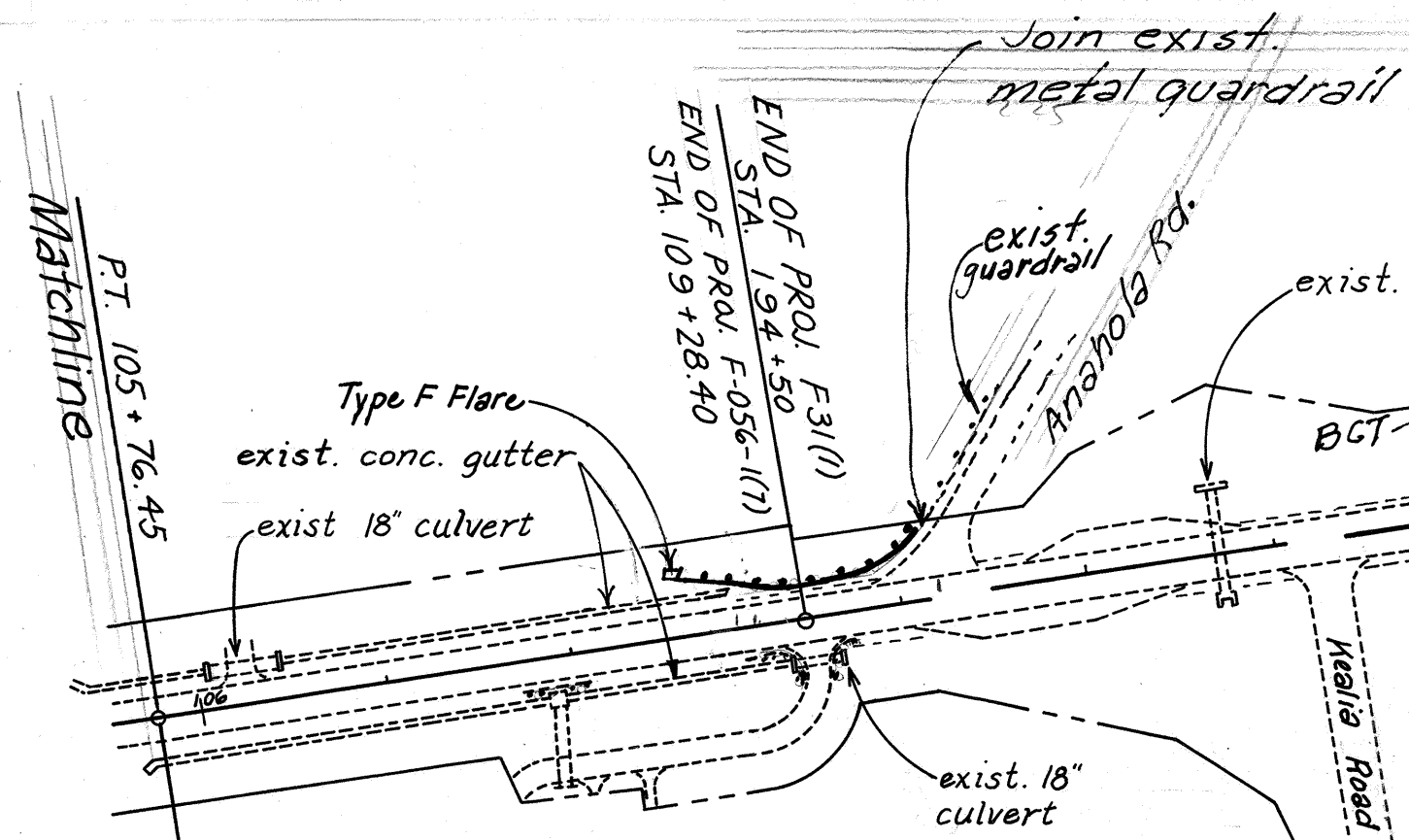
Sta. 80+80 to Sta. 82+40 (R/S)
Sta. 82+60 to Sta. 87+35 (R/S)
Remove existing guardrail & posts,
635 lin. ft.

Sta. 80+40 to Sta. 82+40, 1/2 70'R (R/S), 225 L.F.
Sta. 82+60, 1/2 70'R to Sta. 87+35, 1/2 60'R (R/S) 525 L.F.
Install 750 lin. ft. of metal guardrail, type 3, single, w/ steel post and 1-Type C flare terminal ends.
Total lin. ft. = 750 Lin. Ft.
Install reflector markers, type RM-1 & RM-3 as shown on sheet no. 7. RM-1=7 ea., RM-3=4 ea.
Sta. 80+40 - Sta. 82+40, "X" = 9.0'
Sta. 82+60 - Sta. 87+35, "X" = 9.0'

Sta. 87+50, 1/2 60'R to Sta. 87+80 (R/S)
Remove existing guardrail & posts
55 lin. ft.
Sta. 87+50, 1/2 60'R to Sta. 88+40 R/S
Install 150 lin. ft. of metal guardrail, type 3, single, w/ steel post and 1-BCT terminal ends (25 lin. ft.), "X" = 7.0'
Total lin. ft. = 175 Lin. Ft.
Install reflector markers, type RM-1 & RM-3 as shown on sheet no. 7. RM-1=1 ea., RM-3=2 ea.

Sta. 174+05 to Sta. 172+65 (L/S)
Remove existing guardrail & posts
140 lin. ft.

Sta. 174+30 (1/2 25'R) to Sta. 170+80 (L/S)
Install 375 lin. ft. of metal guardrail, type 3, single, w/ steel post 1-BCT terminal ends (25 lin. ft.) and 1-Modified Type G Flare, "X" = 7.0'
Total lin. ft. = 400 Lin. Ft.
Install reflector markers, type RM-1 & RM-3 as shown on sheet no. 7. RM-1=2 ea., RM-3=2 ea.



Sta. 108+90 to Sta. 109+28.40, Sta. 194+50 to Sta. 193+90 L/S
Remove existing guardrail & posts
98.4 lin. ft.

Sta. 108+75.00 to Sta. 109+28.40, Sta. 194+50 to Sta. 193+90 L/S
Install 113 lin. ft. of metal guardrail, type 3, single, w/ steel post and 1-Type F Flare, "X" = 8.5'
Install reflector markers, type RM-1 & RM-3 as shown on sheet no. 7. RM-1=1 ea., RM-3=1 ea.

Sta. 191+25 to Sta. 186+00 (L/S)
Remove existing guardrail & posts
525 lin. ft.

Sta. 191+00 to Sta. 185+00 (L/S)
Install 600 lin. ft. of metal guardrail, type 3, single, w/ steel post and 2-BCT terminal ends (50 lin. ft.), "X" = 6.5'
Total lin. ft. = 650 Lin. Ft.
Install reflector markers, type RM-1 & RM-3 as shown on sheet no. 7. RM-1=6 ea., RM-3=2 ea.

Sta. 182+30 to Sta. 179+20 (L/S)
Remove existing guardrail & posts
310 lin. ft.

Sta. 182+15 to Sta. 178+90 (L/S)
Install 325 lin. ft. of metal guardrail, type 3, single, w/ steel post and 1-BCT terminal ends (25 lin. ft.), 1-Type C Flare w/ 25' of Rubrail over Gutter
Total lin. ft. = 350 Lin. Ft., "X" = 7.0'
Install reflector markers, type RM-1 & RM-3 as shown on sheet no. 7. RM-1=4 ea., RM-3=2 ea.

Sta. 174+35 to Sta. 173+65 (R/S)
Remove existing guardrail & posts
70 lin. ft.

Sta. 174+40 (1/2 25'L) to Sta. 173+02 (R/S)
Install 138 lin. ft. of metal guardrail, type 3, single, w/ steel post and 1-Modified Type G Flare and 1-Type F Flare
Total lin. ft. = 138 Lin. Ft.
Install reflector markers, type RM-1 & RM-3 as shown on sheet no. 7. RM-1=1 ea., RM-3=2 ea.

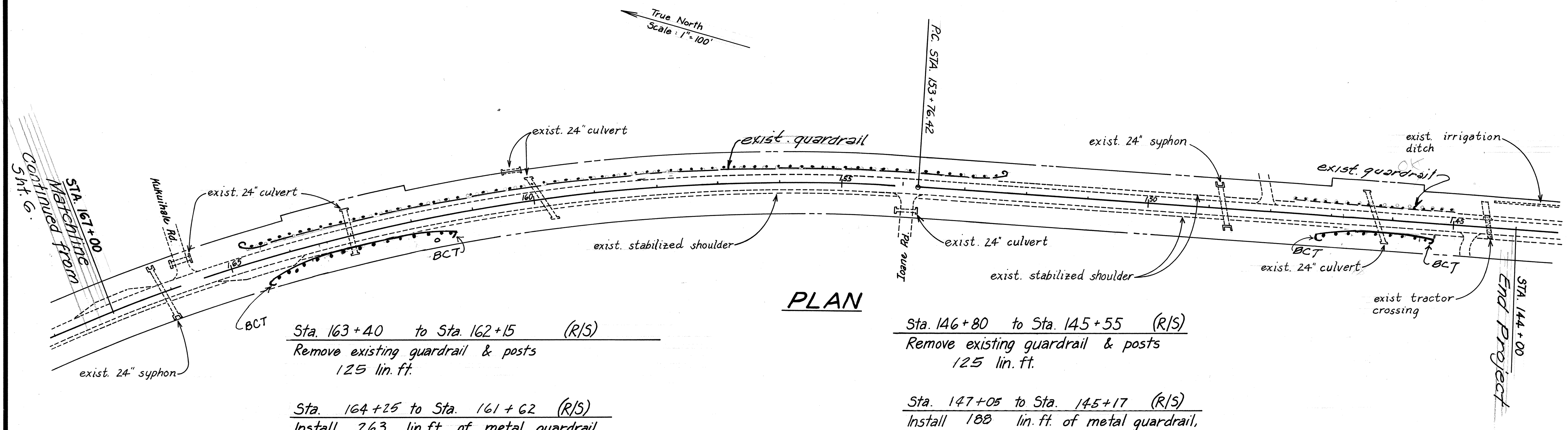
PLAN

PLAN

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
PLAN
ROUTE 56, KUHIO HIGHWAY
GUARDRAIL & SHOULDER IMPROVEMENTS
AT VARIOUS LOCATIONS
F.A. Proj. No. STP-056-1(34)
Scale: As Shown June, 1994
SHEET NO. 6 OF 9 SHEETS

DATE	_____
SURVEY PLOTTED BY	_____
DESIGNED BY	_____
TRACED BY	_____
NOTE BOOK	_____
CHECKED BY	_____
NO.	_____

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-056-1(34)	1995	7	9



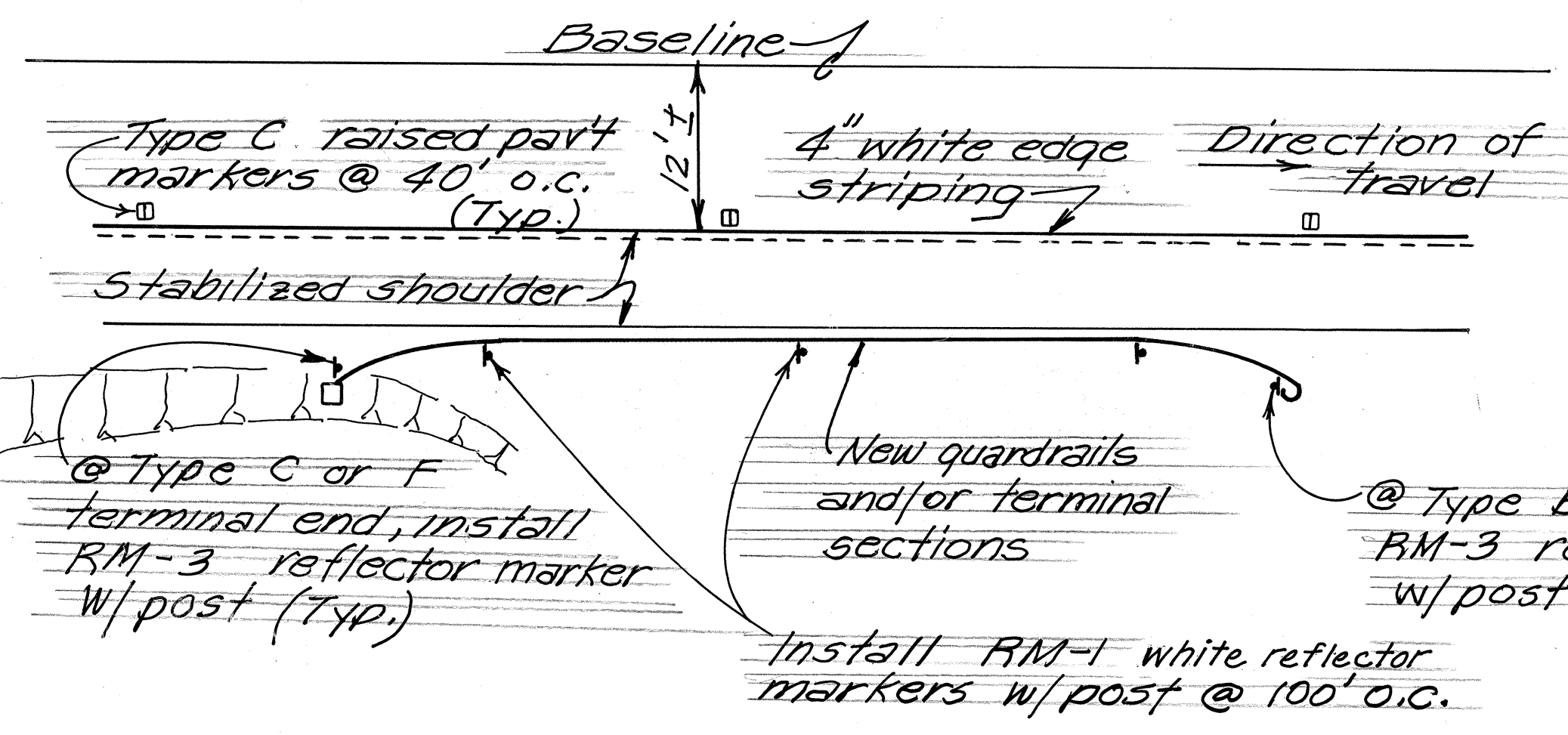
Sta. 163+40 to Sta. 162+15 (R/S)
Remove existing guardrail & posts
125 lin. ft.

Sta. 164+25 to Sta. 161+62 (R/S)
Install 263 lin. ft. of metal guardrail,
type 3, single, w/ steel post and
2-BCT terminal ends (50 lin. ft.), "x" = 6.0'
Total lin. ft. = 313 Lin. Ft.
Install reflector markers, type RM-1 & RM-3
as shown on sheet no. 7, RM-1 = 2 ea., RM-3 = 2 ea.

Sta. 146+80 to Sta. 145+55 (R/S)
Remove existing guardrail & posts
125 lin. ft.

Sta. 147+05 to Sta. 145+17 (R/S)
Install 188 lin. ft. of metal guardrail,
type 3, single, w/ steel post and
2-BCT terminal ends (50 lin. ft.), "x" = 7.0'
Total lin. ft. = 238 Lin. Ft.
Install reflector markers, type RM-1 & RM-3
as shown on sheet no. 7, RM-1 = 2 ea., RM-3 = 2 ea.

Construction Sign Data			
Sign No.	Location	Message	w/posts
CW20-1d	Sta. 26+30 L.T.	ROAD CONSTRUCTION AHEAD	1
CG20-2	Sta. 26+30 R.T.	END CONSTRUCTION	1
CG20-1(10.5)	Sta. 31+30 L.T.	ROAD CONSTRUCTION NEXT 10.5 MILES	1
TOTAL			3



PLAN
TYPICAL PAVEMENT MARKINGS
& REFLECTOR MARKER INSTALLATION
Scale: 1"=10'

Restoration of edge striping
New edge striping shall be thermoplastic extrusion or Tape, Type II
Existing taped edge striping that is damaged, shall be removed prior to installation of new striping.
Damaged portions of painted striping shall be eradicated prior to installation of new striping.

Estimated Quantities	
Removal of guardrail & Posts	= 7795 Lin. Ft.
Roadway Excavation	= 2087 Cu. Yd.
Aggregate base	= 1558 Cu. Yd.
Asphalt Conc. Pavt. Mix V	= 1228 Ton
Guardrail, Type 3, single w/steel post & spacer	= 9830 Lin. Ft.
Terminal Section, Type BCT	= 32 Each
Reflector Marker (RM-1) w/post	= 101 Each
Reflector marker (RM-3) w/post	= 103 Each
Type C Pavement marker	= 291 Each
4-Inch white edge striping, (Tape, Type II or Thermo-plastic extrusion)	= 8,513 Lin. Ft.
8-inch white edge striping at bridge approaches (Tape, Type II or Thermoplastic extrusion	= 3,000 L.F.
Guardrail, Type 3, single, w/rubrail	= 100 L.F.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PLANS & SCHEDULES
ROUTE 56, KUHIO HIGHWAY
GUARDRAIL & SHOULDER IMPROVEMENTS
AT VARIOUS LOCATIONS
F.A. Proj. No. STP-056-1(34)
Scale: As Shown June, 1994
SHEET No. 7 OF 9 SHEETS

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