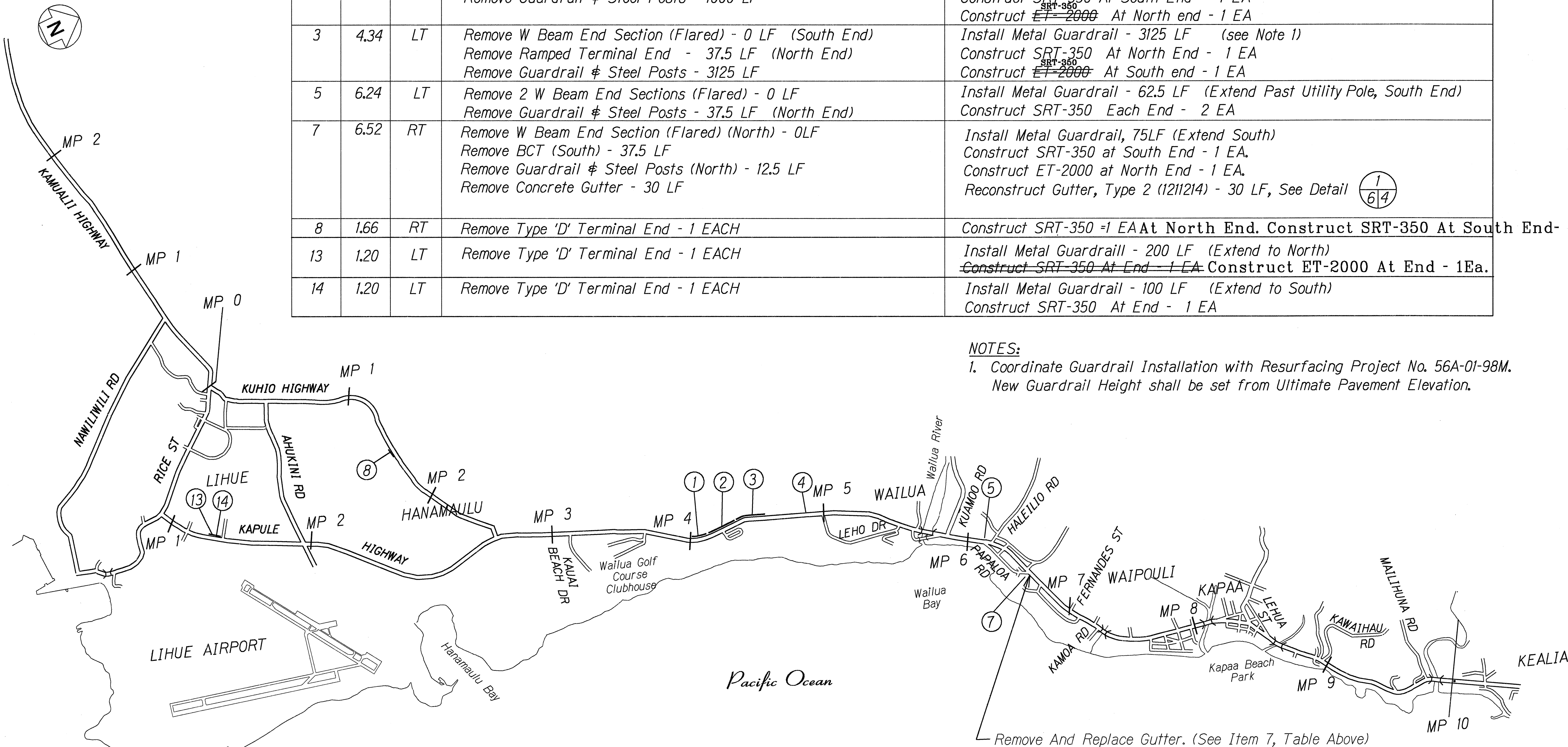


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0700(40)	1998	ADD.6	13

GUARDRAIL WORK ITEMS					
ITEM	MP	O/S	DEMOLITION	CONSTRUCTION	
1	4.03	LT	Remove 2 W Beam End Sections (Flared) - 0 LF Remove Guardrail & Steel Posts - 625 LF	Install Metal Guardrail - 625 LF (see Note 1) Construct SRT-350 Each ^{North} End - 1 EA Construct ET-2000 South End- 1 Ea.	
2	4.15	LT	Remove 2 W Beam End Sections (Flared) - 0 LF Remove Guardrail & Steel Posts - 1000 LF	Install Metal Guardrail - 1000 LF (see Note 1) Construct SRT-350 At South End - 1 EA Construct ET-2000 ^{SRT-350} At North end - 1 EA	
3	4.34	LT	Remove W Beam End Section (Flared) - 0 LF (South End) Remove Ramped Terminal End - 37.5 LF (North End) Remove Guardrail & Steel Posts - 3125 LF	Install Metal Guardrail - 3125 LF (see Note 1) Construct SRT-350 At North End - 1 EA Construct ET-2000 ^{SRT-350} At South end - 1 EA	
5	6.24	LT	Remove 2 W Beam End Sections (Flared) - 0 LF Remove Guardrail & Steel Posts - 37.5 LF (North End)	Install Metal Guardrail - 62.5 LF (Extend Past Utility Pole, South End) Construct SRT-350 Each End - 2 EA	
7	6.52	RT	Remove W Beam End Section (Flared) (North) - 0LF Remove BCT (South) - 37.5 LF Remove Guardrail & Steel Posts (North) - 12.5 LF Remove Concrete Gutter - 30 LF	Install Metal Guardrail, 75LF (Extend South) Construct SRT-350 at South End - 1 EA. Construct ET-2000 at North End - 1 EA. Reconstruct Gutter, Type 2 (1211214) - 30 LF, See Detail 1 64	
8	1.66	RT	Remove Type 'D' Terminal End - 1 EACH	Construct SRT-350 =1 EAAt North End. Construct SRT-350 At South End- 1Ea.	
13	1.20	LT	Remove Type 'D' Terminal End - 1 EACH	Install Metal Guardrail - 200 LF (Extend to North) Construct SRT-350 At End - 1 EA Construct ET-2000 At End - 1Ea.	
14	1.20	LT	Remove Type 'D' Terminal End - 1 EACH	Install Metal Guardrail - 100 LF (Extend to South) Construct SRT-350 At End - 1 EA	

- NOTES:
- Coordinate Guardrail Installation with Resurfacing Project No. 56A-01-98M. New Guardrail Height shall be set from Ultimate Pavement Elevation.



LAYOUT PLAN
KAPULE HIGHWAY - ROUTE 51
KUHIO HIGHWAY - ROUTE 56

5/8/98	Revise Guardrail Work Item No. 7 and Deleted Note No. 2.
DATE	REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

KAPULE HWY & KUHIO HWY.

LAYOUT PLAN

Guardrail and Shoulder
Improvements at Various Locations
Fed. Aid Project No. STP-0700(40)

Scale: 1" = 2000' Date: July, 1997

SHEET No. 1 OF 4 SHEETS

ORIGINAL PLAN	DATE
DRAWN BY	
DESIGNED BY	
CHECKED BY	
APPROVED BY	

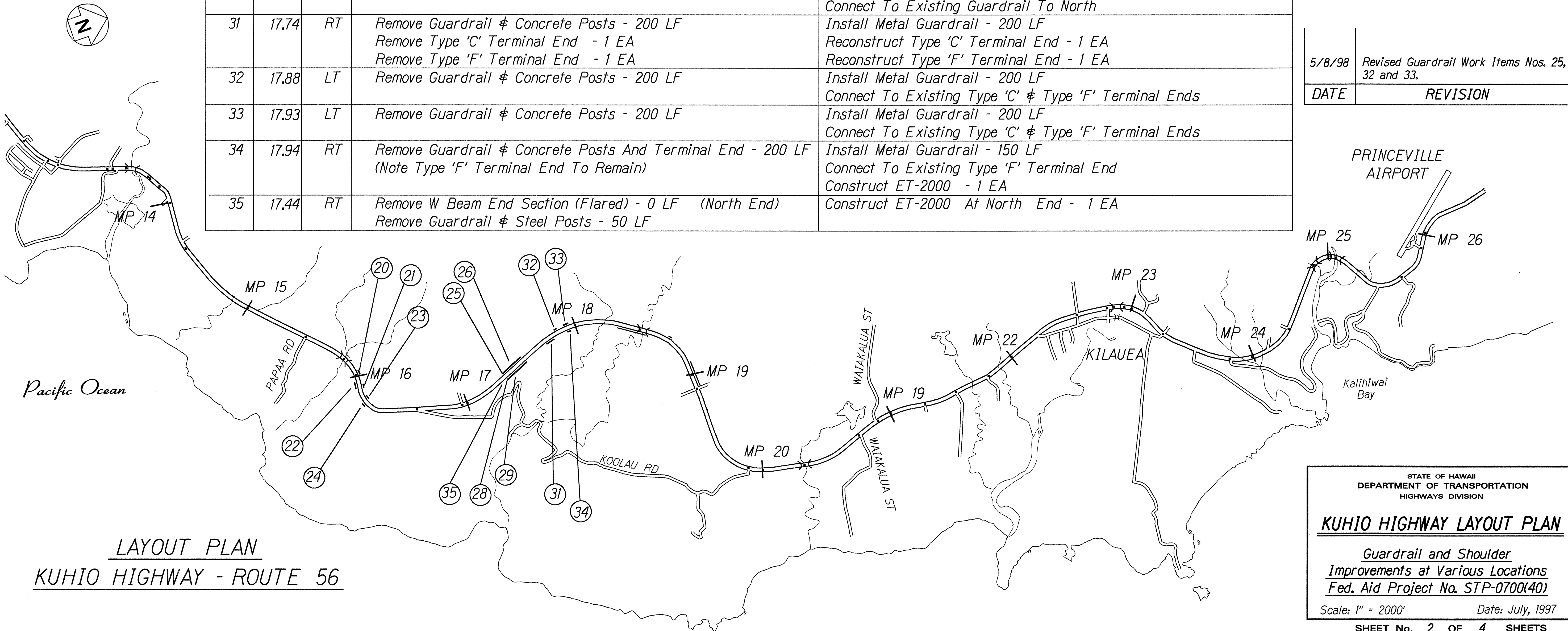
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0700(40)	1998	ADD.7	13

GUARDRAIL WORK ITEMS

ITEM	MP	O/S	DEMOLITION	CONSTRUCTION
20	15.95	LT	Remove 2 W Beam End Sections (Flared) - 0 LF Remove Guardrail & Concrete Posts - 75 LF	Install Metal Guardrail - 150 LF (Extend North 75') Construct Type 'C' Flare At North End - 1 EA Construct SRT-350 At South End - 1 EA Locate New Guardrail 3' Farther Back From Road Offset Posts as needed to Clear Gutter
21	16.08	LT	Remove 2 W Beam End Sections (Flared) - 0 LF Remove Guardrail & Concrete Posts - 400 LF	Install Metal Guardrail - 400 LF Construct SRT-350 Each End - 2 EA
22	16.09	RT	Remove 2 W Beam End Sections (Flared) - 0 LF Remove Guardrail & Concrete Posts - 200 LF	Install Metal Guardrail - 200 LF Construct SRT-350 Each End - 2 EA
23	16.20	LT	Remove 2 W Beam End Sections (Flared) - 0 LF Remove Guardrail & Concrete Posts - 150 LF	Install Metal Guardrail - 350 LF (Extend 100' North and South) Construct SRT-350 Each End - 2 EA
24	16.23	RT	Remove 2 W Beam End Sections (Flared) - 0 LF	Install Metal Guardrail - 200 LF (Extend 100' North and 100' South) Construct SRT-350 Each End - 2 EA
25	17.44	LT	Remove W Beam End Section (Flared) - 0 LF	Install Metal Guardrail - 100 LF (Extend South) Construct SRT-350 Each End - 1 EA
26	17.44	LT	Remove Guardrail & Concrete Posts - 125 LF Remove Guardrail & Steel Posts - 425 LF (Note 250 LF Guardrail to North And Type 'C' Terminal End To Remain)	Install Metal Guardrail - 550 LF Connect To Existing Guardrail
28	17.44	RT	Remove W Beam End Section (Flared) - 0 LF	Construct ET-2000 At End - 1 EA
29	17.44	RT	Remove Guardrail & Concrete Posts -675 LF	Install Metal Guardrail - 675 LF Connect To Existing Guardrail To North
31	17.74	RT	Remove Guardrail & Concrete Posts - 200 LF Remove Type 'C' Terminal End - 1 EA Remove Type 'F' Terminal End - 1 EA	Install Metal Guardrail - 200 LF Reconstruct Type 'C' Terminal End - 1 EA Reconstruct Type 'F' Terminal End - 1 EA
32	17.88	LT	Remove Guardrail & Concrete Posts - 200 LF	Install Metal Guardrail - 200 LF Connect To Existing Type 'C' & Type 'F' Terminal Ends
33	17.93	LT	Remove Guardrail & Concrete Posts - 200 LF	Install Metal Guardrail - 200 LF Connect To Existing Type 'C' & Type 'F' Terminal Ends
34	17.94	RT	Remove Guardrail & Concrete Posts And Terminal End - 200 LF (Note Type 'F' Terminal End To Remain)	Install Metal Guardrail - 150 LF Connect To Existing Type 'F' Terminal End Construct ET-2000 - 1 EA
35	17.44	RT	Remove W Beam End Section (Flared) - 0 LF (North End) Remove Guardrail & Steel Posts - 50 LF	Construct ET-2000 At North End - 1 EA

5/8/98 Revised Guardrail Work Items Nos. 25, 32 and 33.

DATE REVISION



DESIGNED BY	DATE
DRAWN BY	
CHECKED BY	
NOTED BY	
QUANTITIES BY	
DATE	

LAYOUT PLAN
KUHIU HIGHWAY - ROUTE 56

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

KUHIU HIGHWAY LAYOUT PLAN

Guardrail and Shoulder
Improvements at Various Locations
Fed. Aid Project No. STP-0700(40)

Scale: 1" = 2000' Date: July, 1997

SHEET No. 2 OF 4 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0700(40)	1998	ADD.8	13

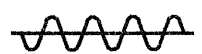
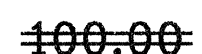
GUARDRAIL WORK ITEMS

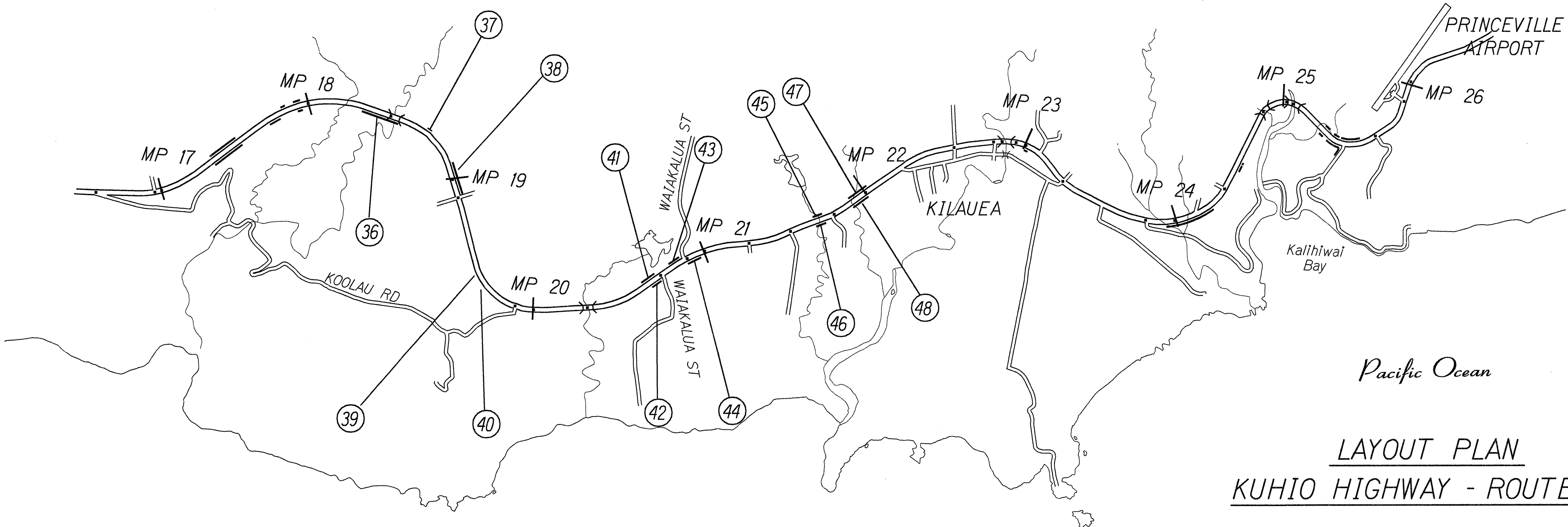
ITEM	MP	O/S	DEMOLITION	CONSTRUCTION
36	18.32	RT	Remove Guardrail & Concrete Posts - 600 LF Remove Type 'C' Terminal End - 1 EA Remove Type 'F' Terminal End - 1 EA	Install Metal Guardrail - 600 LF Reconstruct Type 'C' Terminal End - 1 EA Reconstruct Type 'F' Terminal End - 1 EA
37	18.76	LT	Remove Guardrail & Concrete Posts -262.5 LF (Existing BCTs To Remain.)	Install Metal Guardrail - 262.5 LF Connect To Existing BCT Each End.
38	18.92	LT	Remove Guardrail & Concrete Posts - 300 LF (Note : Guardrail With Steel Posts To Remain)	Install Metal Guardrail - 300 LF Connect To Existing Guardrail
39	19.57	RT	Remove Guardrail & Concrete Posts - 325 LF (Note : Guardrail With Steel Posts To Remain)	Install Metal Guardrail - 325 LF Connect To Existing Guardrail
40	19.72	RT	Remove Guardrail & Concrete Posts - 350 LF (Note : Guardrail With Steel Posts To Remain)	Install Metal Guardrail - 350 LF Connect To Existing Guardrail
41	20.63	RT	Remove Guardrail & Steel Posts - 250 (See Note 1) Remove W Beam End Sections (Flared) Each End - 0 LF	Install Metal Guardrail - 250 LF Construct SRT-350 Each End - 2 EA
42	20.67	LT	Remove Guardrail & Steel Posts - 300 LF Remove W Beam End Section (Flared) - 0 LF	Install Metal Guardrail - 300 LF Construct SRT-350 - 4 EA
43	20.86	RT	Remove W Beam End Sections (Flared) Each End - 0 LF	Construct SRT-350 At End - 2 EA
44	20.90	LT	Remove Guardrail & Steel Posts - 225 (See Note 1) Remove W Beam End Section (Flared) (South End) - 0 LF	Install Metal Guardrail - 225 LF Construct SRT-350 South End - 1 EA Connect To Existing BCT North End
45	21.66	RT	Remove Guardrail & Steel Posts - 125 (See Note 1) Remove W Beam End Sections (Flared) Each End - 0 LF	Install Metal Guardrail - 125 LF ¹ Construct SRT-350 Each End - 2 EA
46	21.66	LT	Remove Guardrail & Steel Posts - 125 (See Note 1) Remove South W Beam End Section (Flared) - 0 LF	Install Metal Guardrail - 125 LF And Connect To Existing Type 'F' Construct SRT-350 - 1 EA
47	21.89	RT	Remove Guardrail & Steel Posts - 200 (See Note 1) Remove W Beam End Sections (Flared) Each End - 0 LF	Install Metal Guardrail - 200 LF Construct SRT-350 - 2 EA
48	21.89	LT	Remove W Beam End Section (Flared) - 0 LF	Construct SRT-350 At End - 1 EA

Note:

1. Portions of low or damaged existing Guardrail shall be replaced. Exact Limits to be determined by the Engineer during construction. Length of guardrail run removed and replaced shall be a minimum run of 100 L.F.

LEGEND FOR
AS-BUILT POSTINGS

	Squiggly line for as-built deletion
	Double line for as-built deletion
Roadway	Text for as-built posting



DATE	
SURVEY PLOTTED BY	
DRAWN BY	
DESIGNED BY	
CHECKED BY	
NOTE BOOK	
QUANTITIES BY	
NO.	

5/8/98 Revised Guardrail Work Items Nos. 45 through 48 and Revised Note.

DATE REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

KUHIO HIGHWAY LAYOUT PLAN

Guardrail and Shoulder
Improvements at Various Locations
Fed. Aid Project No. STP-0700(40)

Scale: 1" = 2000' Date: July, 1997

SHEET No. 3 OF 4 SHEETS

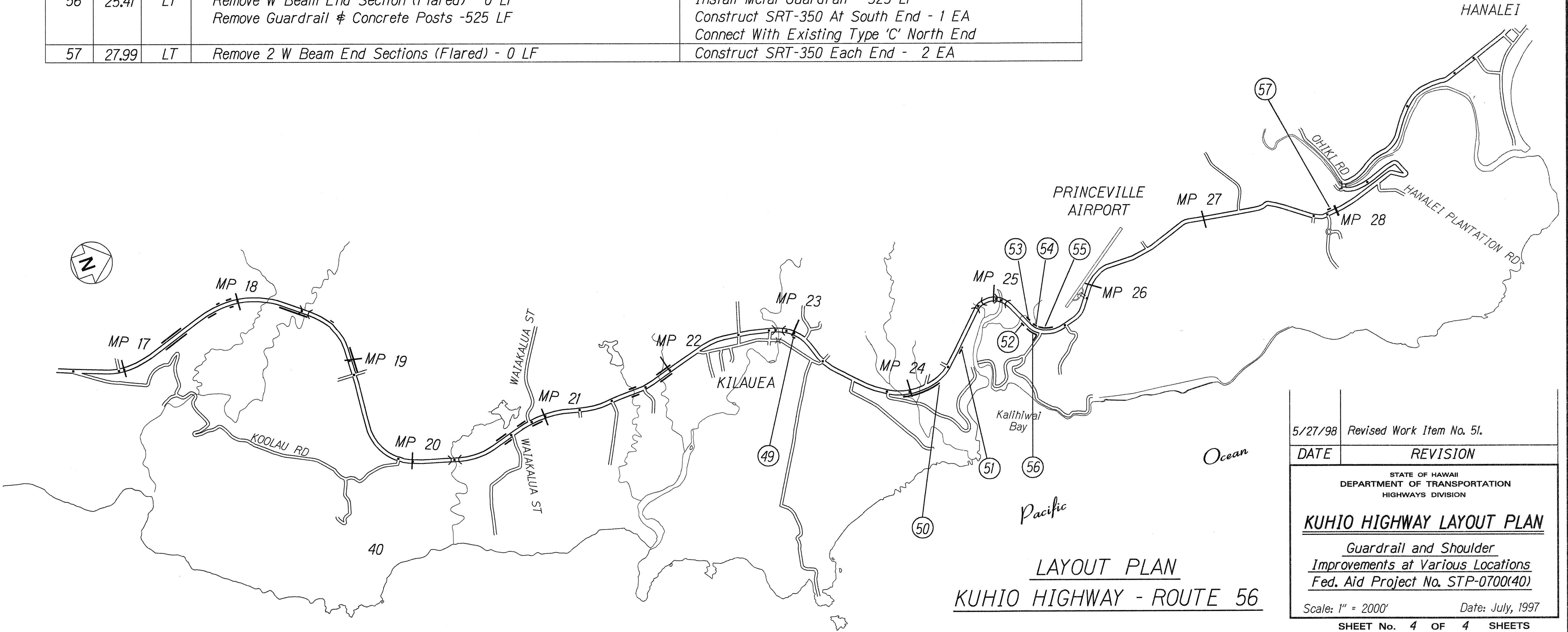
"AS-BUILT"

ADD.8

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0700(40)	1998	ADD.9	13

GUARDRAIL WORK ITEMS				
ITEM	MP	O/S	DEMOLITION	CONSTRUCTION
49	23.01	RT	Remove Ramped Terminal End - 37.5 LF	Construct SRT-350 ^{ET-2000} At End - 1 EA
50	24.16	RT	Remove Guardrail & Steel Posts -25 LF (North End) Remove Type 'D' Terminal End - 1 EACH	Construct SRT-350 At End - 1 EA
51	24.52	RT	Remove 2 W Beam End Sections (Flared) At Driveway - 0 LF Remove Guardrail & Steel Posts -62.5 LF (50' South & all North) Remove Type "F" Terminal End - 1 EACH	Construct ET-2000 - 1 EA.
52	25.32	RT	Remove 2 W Beam End Sections (Flared) - 0 LF Remove Guardrail & Concrete Posts -150 LF	Install Metal Guardrail - 150 LF Construct SRT-350 Each End - 2 EA
53	25.32	LT	Remove 2 W Beam End Sections (Flared) - 0 LF Remove Guardrail & Concrete Posts -150 LF	Install Metal Guardrail - 150 LF Construct SRT-350 Each End - 2 EA
54	25.32	RT	Remove W Beam End Section (Flared) - 0 LF Remove Guardrail & Concrete Posts -475 LF	Install Metal Guardrail - 475 LF Construct SRT-350 ^{TYPE-F} At South End - 1 EA Connect With Existing County Rail Around Curve
55	25.37	LT	Remove W Beam End Section (Flared) - 0 LF Remove Guardrail & Concrete Posts -200 LF	Install Metal Guardrail - 200 LF Construct SRT-350 ^{TYPE-F} At South End - 1 EA Connect With Existing MELT North End
56	25.41	LT	Remove W Beam End Section (Flared) - 0 LF Remove Guardrail & Concrete Posts -525 LF	Install Metal Guardrail - 525 LF Construct SRT-350 At South End - 1 EA Connect With Existing Type 'C' North End
57	27.99	LT	Remove 2 W Beam End Sections (Flared) - 0 LF	Construct SRT-350 Each End - 2 EA

LEGEND FOR AS-BUILT POSTINGS	
	Squiggly line for as-built deletion
	Double line for as-built deletion
Roadway	Text for as-built posting



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

5/27/98	Revised Work Item No. 51.
DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
KUHIO HIGHWAY LAYOUT PLAN	
Guardrail and Shoulder Improvements at Various Locations Fed. Aid Project No. STP-0700(40)	
Scale: 1" = 2000'	Date: July, 1997
SHEET No. 4 OF 4 SHEETS	

"AS-BUILT"

ADD.9