

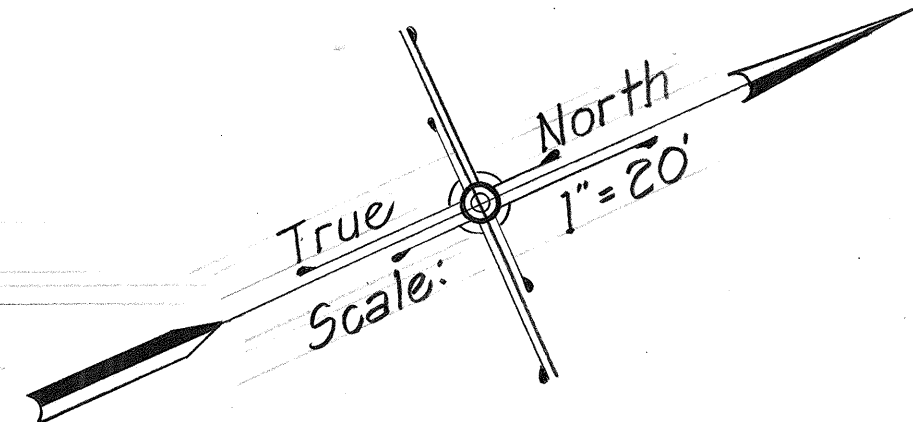
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	RS-0190(8)	1987	26	56

CURVE DATA						
	C-2	C-4	I-1	I-2	I-3	I-4
Δ	142°18'09.0"	25°53'21.1"	62°09'55.7"	48°44'37.1"	105°44'24.5"	52°10'42.8"
R	30.00'	150.00'	45.00'	45.00'	35.30'	45.00'
T	87.88'	34.48'	27.13'	20.39'	46.62'	22.03'
C	56.78'	67.20'	46.46'	37.14'	56.29'	39.58'
L.C.	74.51'	67.78'	48.82'	38.28'	65.15'	40.98'
± STA.	151+64.09	153+93.58	151+72.41	152+61.64	152+10.86	152+16.06
Δ/6	44.32'	161.00'	45.00'	45.00'	35.30'	34.00'

CURVE DATA			
	C-1	B-1	A-1
Δ	54°49'00"	02°13'32"	26°14'08"
R	44.00'	35.00'	150.00'
T	22.82'	21.12'	34.96'
C	40.51'	30.17'	68.09'
L	42.10'	38.01'	68.68'

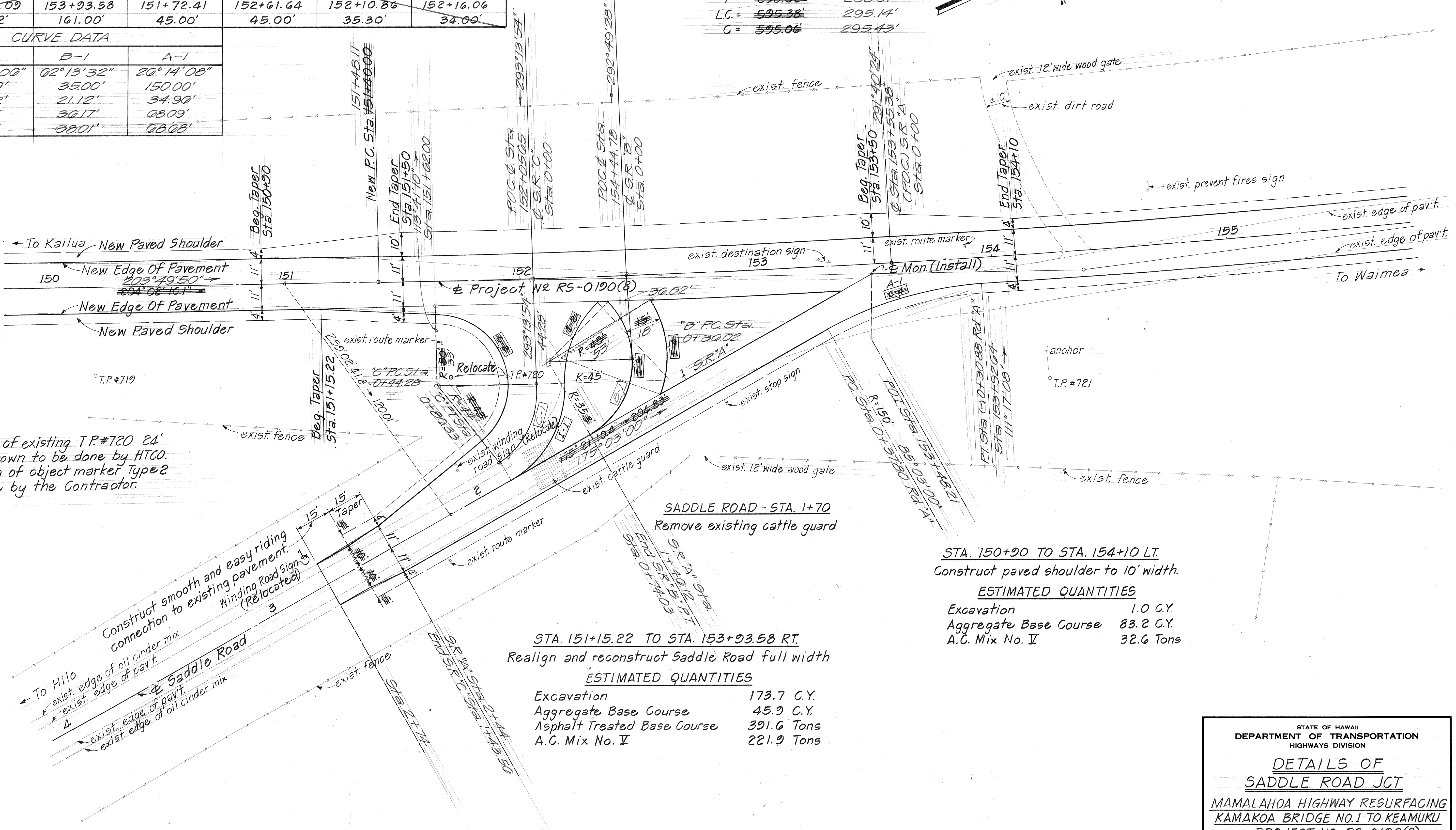
± Curve Data

Δ = ~~6°33'36.9"~~ 0°11'50"
D = ~~1°06'06.6"~~ 1°02'20.9"
R = ~~5,200.00'~~ 5,505.00'
T = ~~298.02'~~ 298.01'
L.C. = ~~595.38'~~ 295.14'
C = ~~595.06'~~ 295.43'



Relocation of existing T.P.#720 24' south as shown to be done by HTO. Installation of object marker type 2 to be done by the Contractor.

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

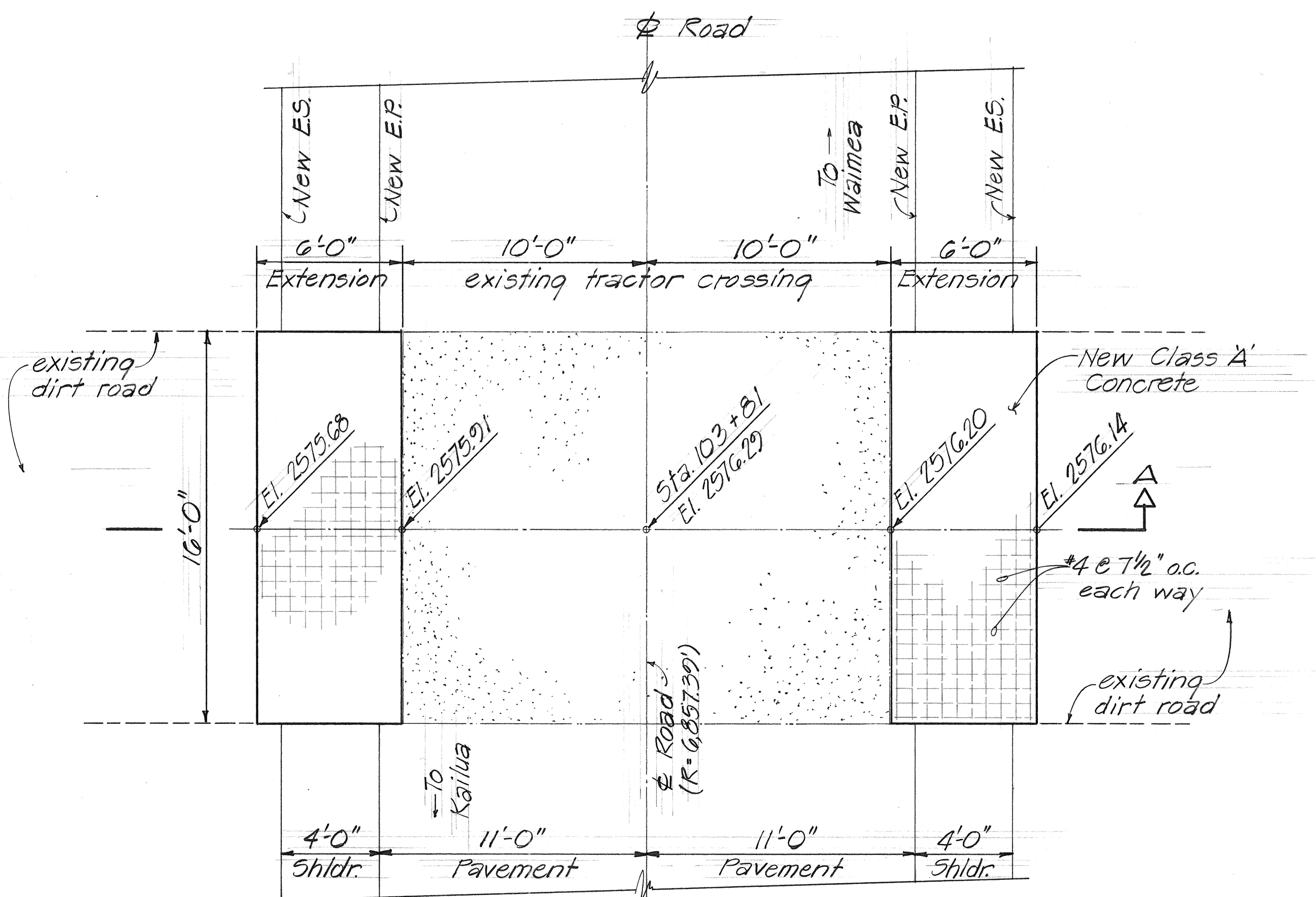


STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DETAILS OF
SADDLE ROAD JCT
MAMALAHOA HIGHWAY RESURFACING
KAMAKOHA BRIDGE NO.1 TO KEAMUKU
PROJECT NO. RS-0190(8)

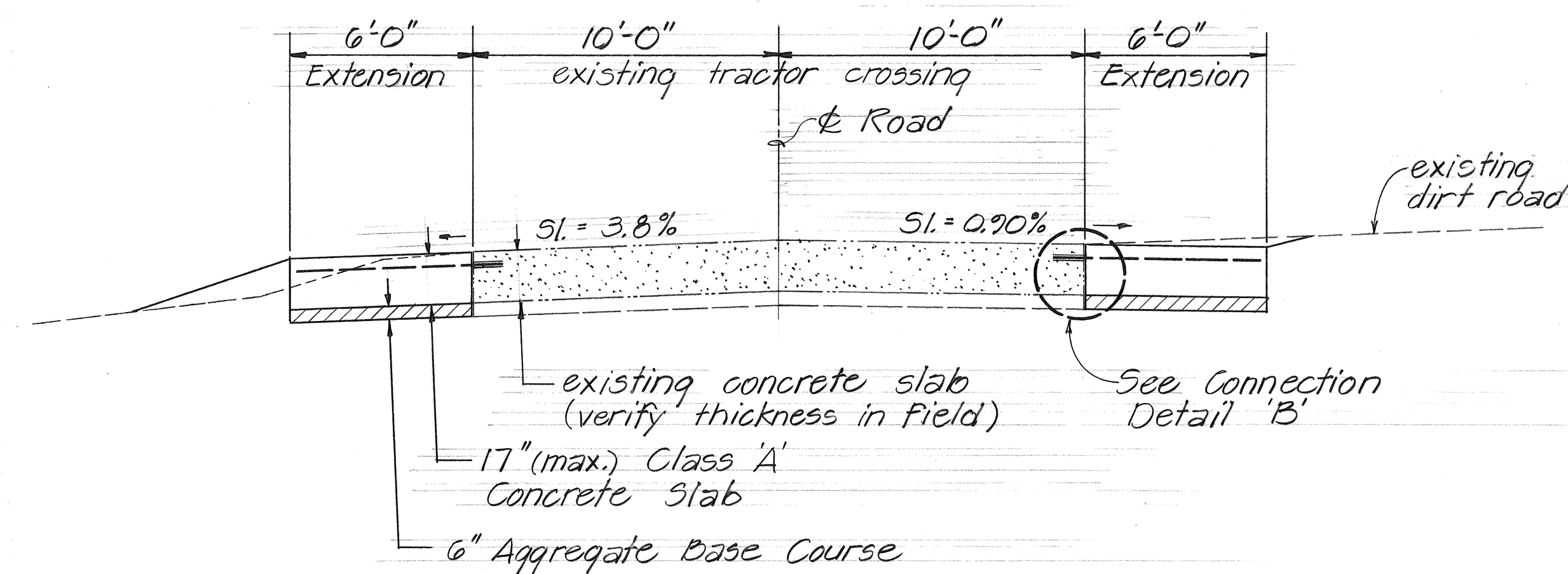
Scale: As Noted Date: Jan. 1987
SHEET NO. 1 OF 3 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	R5-0190(B)	1987	27	56



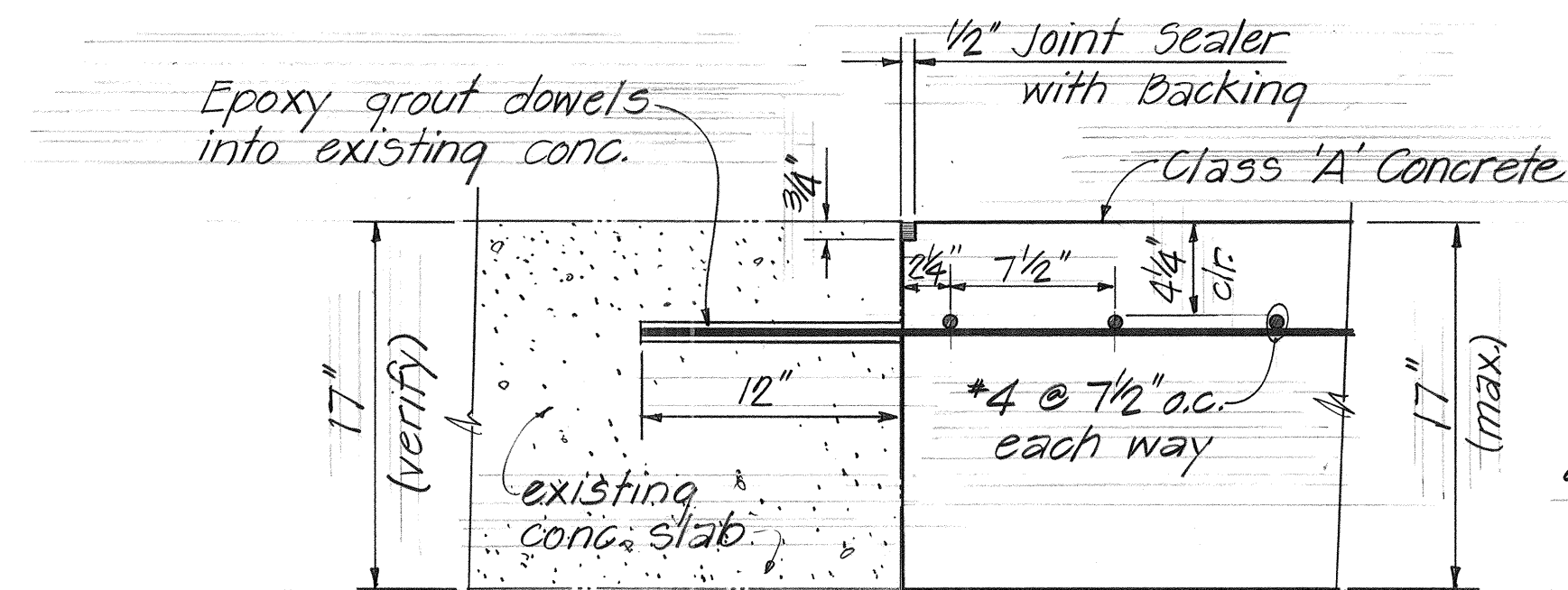
TRACTOR CROSSING PLAN

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



TYPICAL SECTION 'A'

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



CONNECTION DETAIL 'B'

Scale: 1 1/2" = 1'-0"

NOTE

1. Allow 72-hours concrete curing period prior to routing traffic.
2. Drilling of holes, epoxy grout, and joint sealer shall be incidental to Class A Concrete.

ESTIMATED QUANTITIES

* Structure Excavation	14 C.Y.
* Aggregate Base	4 C.Y.
* Concrete In Tractor Crossing	10 C.Y.
* Reinforcing Steel	442 LBS.

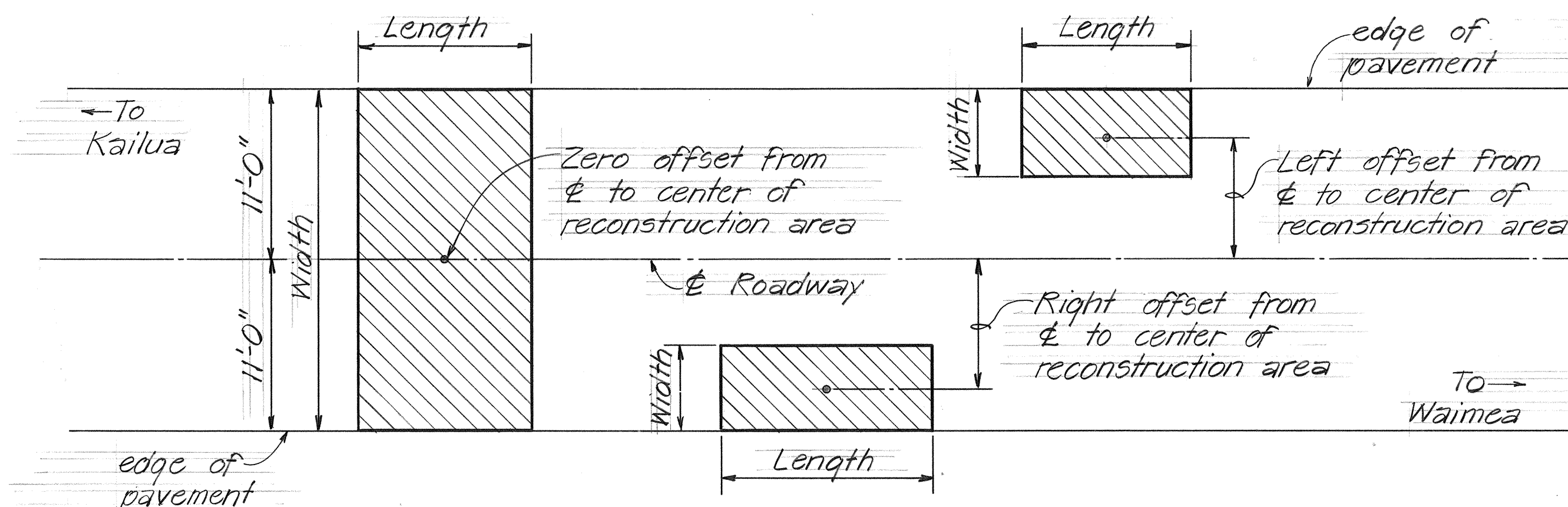
* Incidental to Item no. 503.1050, Concrete in Tractor Crossing.

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION
TRACTOR CROSSING DETAILS AT STA. 103+81
MAMALAHOA HIGHWAY RESURFACING KAMAKOA BRIDGE NO. 1 TO KEAMUKU PROJECT NO. R5-0190(B)
Scale: As Noted Date: March 1987
SHEET NO. 2 OF 3 SHEETS

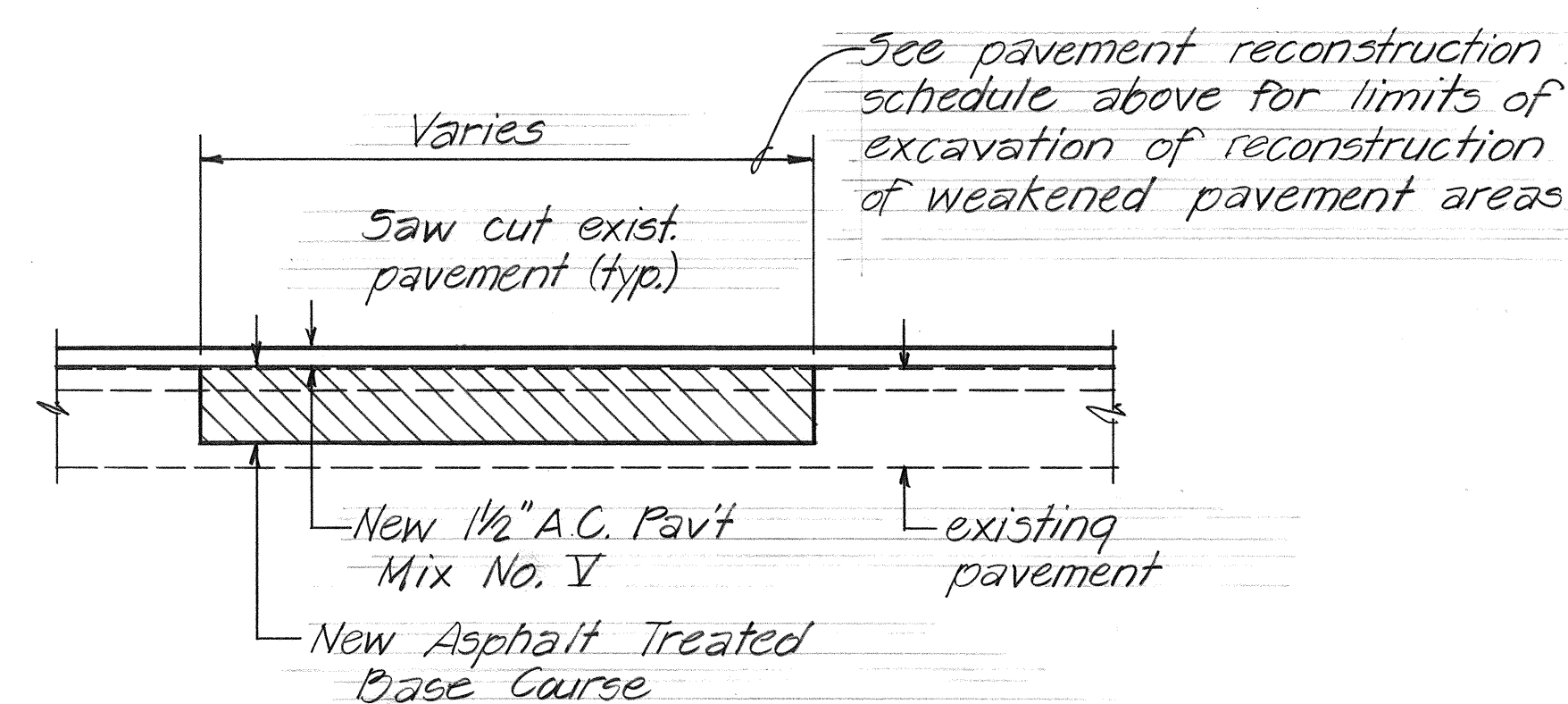
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	RS-0190(8)	1987	28	56

PAVEMENT RECONSTRUCTION SCHEDULE																													
STATION - STATION	LENGTH	LEFT			±		RIGHT			STATION - STATION	LENGTH	LEFT			±		RIGHT			STATION - STATION	LENGTH	LEFT			±		RIGHT		
		± %	WIDTH	AREA	WIDTH	AREA	± %	WIDTH	AREA			± %	WIDTH	AREA	WIDTH	AREA	± %	WIDTH	AREA			± %	WIDTH	AREA	WIDTH	AREA	± %	WIDTH	AREA
(PROJ. NO. 19DE-01-68)																													
										114 + 50 - 115 + 25	75	8	6	450			8.5	5	375	210 + 00 - 212 + 75	275	9	4	1,100			9.5	3	825
42 + 10 - 43 + 00	90	9.5	3	270			8	6	540	115 + 25 - 115 + 75	50	8	6	300			8	6	300	212 + 75 - 213 + 60	85	8.5	5	425			9	4	340
43 + 00 - 44 + 50	150				22 *	3,300				115 + 75 - 116 + 35	60	8	6	360			8	6	360	213 + 60 - 216 + 00	240	9.5	3	720			9	4	360
44 + 50 - 48 + 50	400	9.5	3	1,200			8	6	2,400	116 + 35 - 118 + 00	165	8	6	990			8.5	5	825	216 + 00 - 220 + 00	400	10	2	800			9	4	1,600
48 + 50 - 50 + 50	200				22 *	4,400				118 + 00 - 122 + 00	400				22 *	8,800				220 + 00 - 221 + 50	150	9.5	3	450			9.25	3.5	525
50 + 50 - 57 + 08	650	7.5	7	4,550			9	4	2,600	122 + 00 - 122 + 35	35	7.5	7	245			8.5	5	175	221 + 50 - 224 + 00	250	9.5	3	750			8.75	4.5	1,125
57 + 00 - 62 + 00	494				22 *	10,868				122 + 35 - 124 + 00	165	7.5	7	1,155			10	2	330	224 + 00 - 225 + 50	150	9.5	3	450			9.5	3	450
62 + 00 - 66 + 00	400	9	4	1,600			8.5	5	2,000	124 + 00 - 128 + 00	400				22 *	8,800				225 + 50 - 226 + 20	70	8.5	5	350			9.5	3	210
66 + 00 - 67 + 00	100	9	4	400			9.5	3	300	128 + 00 - 130 + 00	200	8	6	1,200			8.5	5	1,000	226 + 20 - 228 + 00	180	9.5	3	540			9.5	3	540
67 + 00 - 68 + 00	100	9	4	400			8	6	600	130 + 00 - 138 + 00	800				22 *	17,600				228 + 00 - 229 + 00	100	5.5	11	1,100			9.5	3	300
68 + 00 - 76 + 50	850	9	4	3,400			9.5	3	2,550	138 + 00 - 142 + 00	400	8	6	2,400			8.5	5	2,000	229 + 00 - 230 + 50	150	8.5	5	750			9.5	3	450
76 + 50 - 77 + 50	100	9	4	400			8.5	5	500	142 + 00 - 145 + 00	300				22 *	6,600				230 + 50 - 231 + 50	100	9.5	3	300			9.5	3	300
86 + 00 - 87 + 00	100	8	6	600			8	6	600	145 + 00 - 145 + 50	50	6.5	9	450			10	2	100	231 + 50 - 233 + 50	200	10	2	400			9.5	3	600
87 + 00 - 91 + 50	450				22 *	9,900				145 + 50 - 146 + 10	60	9.5	3	180						233 + 50 - 234 + 30	80	10	2	160			8.5	5	400
91 + 50 - 94 + 00	250	8	6	1,500			9.5	3	750	146 + 10 - 148 + 00	190	7.25	7.5	1,425			10	2	380	234 + 30 - 236 + 35.7	205	10	2	410			10	2	410
94 + 00 - 100 + 00	600	8	6	3,600			8	6	3,600	148 + 00 - 149 + 50	150	8.25	5.5	825			10	2	300	236 + 56.7 - 237 + 00	43.3	9.5	3	130			8.25	5.5	238
100 + 00 - 101 + 50	150	8	6	900			9.5	3	450	149 + 50 - 172 + 00	2237				22 *	49,214				237 + 00 - 237 + 85	85	9.5	3	255			8.25	5.5	467.5
101 + 50 - 103 + 50	200	8	6	1,200			7	8	1,600	172 + 00 - 172 + 50	50	9	4	200			8	6	300	237 + 85 - 239 + 00	115	9.5	3	345			9.5	3	345
103 + 50 - 103 + 95	45	5.5	11	495			5.5	11	495	172 + 50 - 175 + 50	300	9	4	1,200			8	6	1,800	239 + 00 - 239 + 75	75	9.5	3	225			9.5	3	225
104 + 15 - 104 + 65	50	5.5	11	550			5.5	11	550	175 + 50 - 177 + 00	150	9	4	600			9.5	3	450	239 + 75 - 243 + 00	325	8.5	5	1,625			9.5	3	975
106 + 50 - 107 + 25	75	7.5	7	525			8.5	5	375	177 + 00 - 179 + 00	200	9	4	800			9.5	3	600										
107 + 25 - 109 + 25	200	7.5	7	1,400			10	2	400	179 + 00 - 183 + 00	400				22 *	8,800				(PROJ. NO. FAP 10-C(11))									
109 + 25 - 110 + 50	125	7.5	7	875			8.5	5	625	183 + 00 - 190 + 30	730	8.5	5	3,650			9.5	3	2,190	141 + 75 - 144 + 75	300	9	4	1,200					
110 + 50 - 111 + 50	100	8	6	600			8.5	5	500	190 + 30 - 192 + 50	220	8.5	5	1,100			8	6	1,320										
111 + 50 - 111 + 75	25	8	6	150			8.5	5	125	192 + 50 - 193 + 50	100	8.5	5	500			9.5	3	300										
111 + 75 - 113 + 50	175	8	6	1,050			8.5	5	875	193 + 50 - 202 + 00	837				22 *	18,414													
113 + 50 - 113 + 90	40	8	6	240			8.5	5	200	202 + 00 - 207 + 80	580	10	2	1,160			9.5	3	1,740										
113 + 90 - 114 + 50	60	8	6	360			8.5	5	300	207 + 80 - 210 + 00	220	9.5	3	660			8.5	5	1,100										
																						TOTALS			58,600	146,696		50,168	

N.I.C.



TYPICAL PLAN



TYPICAL SECTION

* NOTE
Realign and reconstruct
full roadway width.

Note:
See Plan Sht. No. 285-1 for
Pavement Reconstruction Schedule

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PAVEMENT RECONSTRUCTION
SCHEDULE & DETAILS

MAMALAHOA HIGHWAY RESURFACING
KAMAKOA BRIDGE NO. 1 TO KEAMUKU
PROJECT NO. RS-0190(8)

Not to Scale Date: March 1987

SHEET No. 3 OF 3 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	RS-0190(8)	1987	288-1	56

PROJ. NO. RS-0190(8)

PAGE 1 of 2

PAVEMENT RECONSTRUCTION SCHEDULE

STATION - STATION	LENGTH	LEFT			RIGHT		
		O/S	WIDTH	AREA	O/S	WIDTH	AREA
41+80 - 43+00	120				8	6	720
41+80 - 42+50	70	8	6	420			
42+50 - 43+00	50	9	4	200			
43+00 - 44+50	150				22 *	3,300	
44+50 - 47+00	250				7.5	7	1,750
47+00 - 47+50	50				8	6	300
44+50 - 46+50	200	8.5	5	1,000			
46+50 - 47+50	100	7.5	7	700			
47+50 - 50+50	300				22 *	6,600	
50+50 - 53+00	250				8.5	5	1,250
53+00 - 54+00	100				9	4	400
54+00 - 55+50 **	144.69				8	6	868.14
55+50 - 56+50	100				8.5	5	500
50+50 - 55+50 **	494.69	7.5	7	3,462.83			
55+50 - 56+50	100	8	6	600			
56+50 - 61+50	500				22 *	11,000	
61+50 - 67+20	570				8.5	5	2,850
67+20 - 68+00	80				8	6	480
68+00 - 69+18	118				9	4	472
69+18 - 69+50	32				7.5	7	224
69+50 - 70+00	50				9	4	200
70+00 - 71+70	170				10	2	340
71+70 - 72+00	30				8.5	5	150
72+62 - 75+06 **	321.33				9.5	3	963.99
75+06 - 76+34	48				8.5	5	240
76+34 - 76+75	41				9.5	3	123
76+75 - 77+70	95				8	6	570
61+50 - 64+00	250	7.5	7	1,750			
64+00 - 67+00	300	8	6	1,800			
67+00 - 70+00	300	8.5	5	1,500			
70+00 - 71+50	150	7.5	7	1,050			
71+50 - 74+00	250	7	8	2,000			
74+00 - 75+00 **	97.33	7.5	7	681.31			
75+00 - 77+70	270	8	6	1,620			
86+00 - 87+00	100	8	6	600			
87+00 - 91+50	450				22 *	9,900	
91+50 - 94+00	250				9.5	3	750
94+00 - 95+33 **	131.41				8.5	5	657.05
95+33 - 96+20	87				22 *	1,914	
96+20 - 96+50	30				9	4	120
96+50 - 97+00	50				8	6	300
91+50 - 95+33 **	381.41	8	6	2,288.46			
96+20 - 97+00	80	8	6	480			
97+00 - 104+25 **	709.10				22 *	15,600.20	
104+25 - 107+28	303				8	6	1,818
107+28 - 109+30	202				9	4	808
109+30 - 116+50	720				8	6	4,320
116+50 - 118+00	150	7.5	7	1,050			
104+25 - 107+00	275	7.5	7	1,925			
107+00 - 116+50	950	8	6	5,700			
118+00 - 122+00	400				22 *	8,800	
122+00 - 122+33	33				8.5	5	165
122+33 - 123+68	135				10	2	270
123+68 - 124+00	32				8.5	5	160
122+00 - 124+00	200	7.5	7	1,400			
124+00 - 127+52.22BK	352.22				22*	7,748.84	
127+55.78AH - 130+00	244.22	8	6	1,465.32			
130+00 - 138+00	796.96				22 *	17,533.12	
138+00 - 142+00	400	8	6	2,400			
142+00 - 145+50	350				22 *	7,700	
TOTAL				34,092.92			90,096.16

NOTE: * REALIGN and RECONSTRUCT full roadway width.
** Equation Station in this Areas.

Page 2 of 2

PAVEMENT RECONSTRUCTION SCHEDULE

STATION - STATION	LENGTH	LEFT			RIGHT		
		O/S	WIDTH	AREA	O/S	WIDTH	AREA
145+50 - 146+00	50				12	600	
146+00 - 147+00	100				11	1,100	
147+00 - 148+00	100	6	9.5	950			
148+00 - 149+00	100	6.5	8.5	850	//	1	100
149+00 - 149+50	50	7.5	7	300	/0	2	100
149+50 - 173+50	2,400				22 *	52,800	
173+50 - 174+30	80				7	8	640
174+30 - 175+00	70				7.5	7	490
175+00 - 175+50	50				8.5	5	250
175+50 - 175+77	27				9	4	108
175+77 - 177+00	123				10	2	246
177+00 - 179+00 **	198.22				9.5	3	594.66
173+00 - 175+00	150	9	4	600			
175+00 - 175+77	77	8.25	5.5	423.50			
175+77 - 179+00 **	321.22	7.5	7	2,248.54			
179+00 - 183+00	400				22 *	8,800	
183+00 - 185+00	200				8.5	5	1,000
185+00 - 187+50	250				8	6	1,500
187+50 - 193+50 **	598.91				8.5	5	2,994.55
183+00 - 187+76	476	8	6	2,855			
187+76 - 193+50	575.09	8.5	5	2,875.45			
193+50 - 201+88.39BK	888.39				22 *	19,544.58	
202+02.29AH - 202+62	59.71				8	6	358.26
202+62 - 204+38	176				9.75	2.5	440
204+38 - 204+78	40				8.25	5.5	220
204+78 - 207+33	255				9.75	2.5	637.50
207+33 - 210+27	294				8	6	1,764
210+27 - 212+17	190				9.75	2.5	475
212+17 - 212+48.86BK	31.86				8	6	191.16
212+51.98AH - 212+86	34.02				9.5	3	102.06
212+86 - 213+29	43				8	6	258
212+29 - 213+78	49				9.75	2.5	122.50
213+78 - 214+23	45				8.25	5.5	247.50
214+23 - 221+68	745				9.5	3	2,235
221+68 - 222+00	32				9	4	128
222+00 - 223+95.52BK	195.52				8	6	1,173.12
223+97.72AH - 227+50	352.28				9.5	3	1,056.84
227+50 - 232+00	450				9	4	1,800
232+00 - 233+50	150				8	6	900
233+50 - 234+30	80				6.5	9	720
234+30 - 235+50	120				8	6	720
235+50 - 236+32.05	82.05				9	4	328.20
202+02.29AH - 205+00	297.71	8	6	1,786.26			
205+00 - 206+50	150	9	4	600			
206+50 - 207+50	100	9.5	3	300			
207+50 - 222+00	1,446.88	8	6	8,681.28			
222+00 - 223+00	100	9	4	400			
223+00 - 233+00 **	997.80	8.5	5	4,989			
233+00 - 236+32.05	332.05	9	4	1,328.20			
236+53.05 - 236+75	21.95				9.5	3	65.85
236+75 - 237+78	103				8.25	5.5	566.50
237+78 - 240+00	222				8.75	4.5	999
240+00 - 242+90	290				8.25	5.5	1,595
236+53.05 - 237+06	52.95	8.5	5	264.75			
237+06 - 239+50	244	9.5	3	732			
239+50 - 240+38	88	8	6	528			
240+38 - 241+28	90	9.75	2.5	225			
241+28 - 242+90	162	8.25	5.5	891			
TOTAL THIS PAGE =				33,527.98			81,144.58
TOTAL PAGE 1 =				34,092.92			90,096.16
TOTAL =				67,620.90			171,240.74

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

STATE OF HAWAII	
DEPARTMENT OF TRANSPORTATION	
HIGHWAYS DIVISION	
<u>PAVEMENT RECONSTRUCTION</u>	
<u>SCHEDULE</u>	
<u>MAMALAHOA HIGHWAY RESURFACING</u>	
<u>KAMAKOIA BRIDGE NO. 1 TO KEAMUKU</u>	
<u>PROJECT NO. RS-0190(8)</u>	
Not to Scale	Date: March 1987
SHEET No. OF SHEETS	