FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
Hawaii	Haw	4C	1938	45	75

	BY	DATE
SURVEYED	J.L.P.	1-38
PLOTTED	"	"
TEMPLATE	"	"
AREAS		
AREAS CHECKED		

FULL SECTION OF IRRIGATION DITCH RELOCATED
FULL SECTION OF STONE LINED IRRIGATION DITCH
Exc = 35
Emb = 45
102.4
102.27
TO REMAIN
2+50
C = 13
F = 1
Exc = 89
Emb = 80
103.4
103.41
6+50
C = 37
F = 57
Exc = 20
Emb = 6
102.4
102.12
TO REMAIN
2+00
C = 9
F = 6
Exc = 107
Emb = 45
103.6
103.28
6+00
C = 59
F = 29
Exc = 15
Emb = 10
102.1
101.98
TO REMAIN
1+50
C = 7
F = 5
Exc = 89
Emb = 49
102.8
103.14
5+50
C = 57
F = 20
Exc = 24
Emb = 6
101.8
101.83
TO REMAIN
1+00
C = 19
F = 2
Exc = 70
Emb = 57
102.6
102.99
5+00
C = 39
F = 33
Exc = 37
Emb = 3
101.6
101.69
TO REMAIN
0+50
C = 21
F = 1
Exc = 81
Emb = 51
102.4
102.85
4+50
C = 37
F = 29
Exc = 33
Emb = 6
101.5
101.54
TO REMAIN
0+00
C = 15
F = 5
Exc = 79
Emb = 34
102.3
102.70
REMOVE
4+00
C = 50
F = 26
Exc = 56
Emb = 24
102.3
102.56
REMOVE
3+50
C = 35
F = 11
102.3
102.41
REMOVE
3+00
C = 25
F = 15
STA. 3+45.44
F.A.P.4C
F.A.P.4C NON PART.
100.0
℄
℄

PLATE — CROSS SECTION — P. R. & STANDARD
KEUFFEL & ESSER CO. NEW YORK
MADE IN U.S.A.

4449.45

4449.45✓

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	F.A.G.H. 4-C	1938	27	40

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	4-C	1938	46	75

102.9
102.0
102.90
10+00
C= 46
F- 36
Exc = ~~91~~ 66
Emb = ~~69~~ 38
103.4
103.12
+50
C= 25
F= 5
Exc = ~~31~~ 26
Emb = ~~75~~ 50
101.9
103.28
9+00
C= 3
F= 49
Exc = ~~16~~ 6
Emb = ~~11~~ 103
101.6
103.41
+50
C= 4
F= 62
Exc = ~~24~~ 13
Emb = ~~102~~ 86
102.3
103.47
8+00
24" Syphon - 80' Long
El. 98.0
El. 98.1
C- 10
F= 31
Exc = ~~63~~ 24
Emb = ~~116~~ 75
102.3
103.50
+50
C= 16
F= 50
Exc = ~~121~~ 47
Emb = ~~158~~ 84
103.0
103.47
Level Ground
7+00
C= 35
F= 41
Exc = ~~132~~ 67
Emb = ~~156~~ 91
99.6
99.5
98.61
13+50
C= 63
F- 0
Exc = ~~137~~ 98
Emb = ~~34~~ 0
Sta. 13+14.5
F.A.G.H. 4C
F.A.P. 4C
100.4
100.1
99.55
13+00
C= 43
F= 0
Exc = ~~101~~ 62
Emb = ~~48~~ 19
101.0
100.6
100.37
+50
C= 24
F= 0
Exc = ~~75~~ 40
Emb = ~~65~~ 28
101.2
100.8
101.09
12+00
C= 17
F= 20
Exc = ~~56~~ 29
Emb = ~~76~~ 49
101.0
100.8
101.70
103.6
+50
C= 14
F= 33
Exc = ~~37~~ 37
Emb = ~~87~~ 67
Connect to existing ditch
101.5
102.21
11+00
C= 26
F= 39
Exc = ~~76~~ 54
Emb = ~~88~~ 66
102.61
10+50
C= 32
F= 32
Exc = ~~95~~ 72
Emb = ~~86~~ 63
℄

NOTE TO RES. ENG.-
CROSS SECTIONS SHOWN THUS ARE APPROXIMATE ONLY, DUE TO HIGH CANE AND MUST BE CHECKED IN FIELD

ORIGINAL SURVEY
NOTE BOOK NO.
SURVEYED
PLOTTED
TEMPLATE
AREAS
J.L.P
8-36
11-37

PLATE 3 - CROSS SECTION O. P. R. & R. STANDARD
KEUFFEL & ESSER CO., NEW YORK
MADE IN U. S. A.

4449.46 **4450.27**

4449.46 4450.27

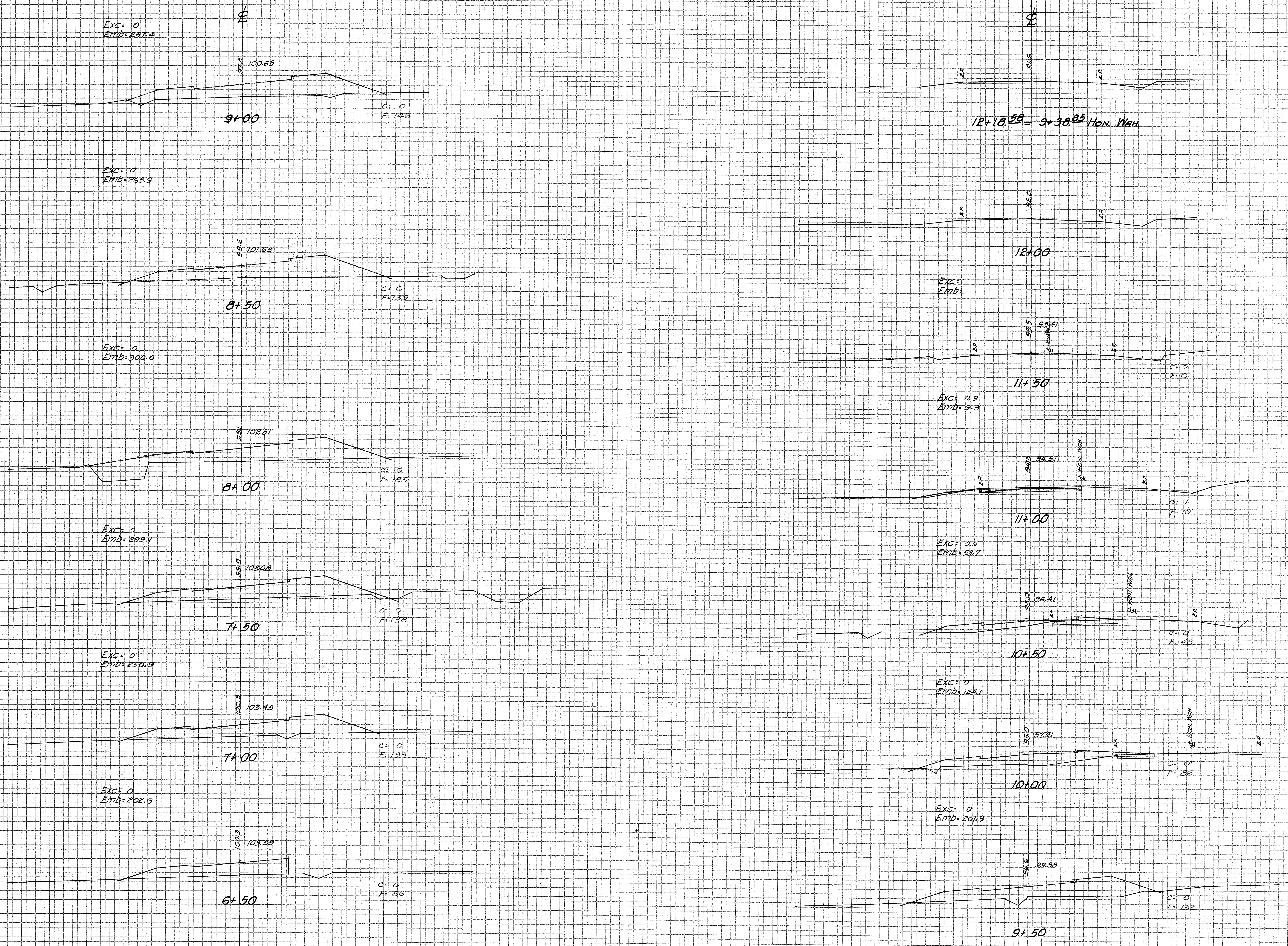
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	4-C(1)	1938	46 B	75

FINAL SURVEY

NOTE BOOK NO.	BY	DATE
SURVEYED	H. Kurio	
PLOTTED	L. Felix	
TEMPLATE	"	
AREAS	"	
AREAS CHECKED		

ORIGINAL SURVEY

NOTE BOOK NO.	BY	DATE
SURVEYED		
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		



℄
Exc= 0
Emb=257.4
97.5
100.65
C= 0
F= 146
9+00
Exc= 0
Emb=263.9
98.6
101.69
C= 0
F= 139
8+50
Exc= 0
Emb=300.0
99.1
102.51
C= 0
F= 135
8+00
Exc= 0
Emb= 299.1
99.8
103.08
C= 0
F= 138
7+50
Exc= 0
Emb= 250.9
100.3
103.45
C= 0
F= 133
7+00
Exc= 0
Emb= 202.8
100.3
103.58
C= 0
F= 86
6+50
℄
91.6
E.P.
E.P.
12+18.58 = 9+38.85 HON. WAH.
92.0
E.P.
E.P.
12+00
Exc=
Emb=
93.3
93.41
℄ HON. WAH.
E.P.
E.P.
C= 0
F= 0
11+50
Exc= 0.9
Emb= 9.3
94.5
94.91
℄ HON. WAH.
E.P.
E.P.
C= 1
F= 10
11+00
Exc= 0.9
Emb= 53.7
95.0
96.41
℄ HON. WAH.
E.P.
E.P.
C= 0
F= 48
10+50
Exc= 0
Emb= 124.1
95.0
97.91
E.P.
℄ HON. WAH.
E.P.
C= 0
F= 86
10+00
Exc= 0
Emb= 201.9
96.6
99.38
C= 0
F= 132
9+50

WAIANAE WAHIAWA

4449.46B

PLATE 3—CROSS SECTION O. P. R. & R. E. STANDARD
KEUFFEL & ESSER CO., NEW YORK.
MADE IN U.S.A. 20947-3

WAIANAE WAHIAWA

Exc = 1.8 ✓
Emb = 1,963.1 ✓

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	4-C(1)	1938	46C	75

FINAL SURVEY		BY	DATE
NOTE BOOK	SURVEYED	H. Kurio	
NO.	PLOTTED	L. Felix	
	TEMPLATE	"	
	AREAS	"	
	AREAS CHECKED		

ORIGINAL SURVEY		BY	DATE
NOTE BOOK	SURVEYED		
NO.	PLOTTED		
	TEMPLATE		
	AREAS		
	AREAS CHECKED		

℄
Exc= 0
Emb= 126.9
℄ Wai. Wah.
100.4
103.44
C= 0
F= 60
3+11.92 P.T. Loop #1 = 0+00 P.C. Loop #2
Exc= 0
Emb= 28.5
℄ Wai. Wah.
100.6
103.44
C= 0
F= 69
3+00
Exc= 0
Emb= 145.4
℄ Wai. Wah.
101.2
103.44
C= 0
F= 88
2+50
Exc= 0.9
Emb= 154.6
101.5
103.44
101.3
C= 1
F= 79
2+00
Exc= 5.6
Emb= 129.6
101.9
103.44
101.4
C= 5
F= 61
1+50
Exc= 8.3
Emb= 101.9
102.3
103.44
101.5
C= 4
F= 49
1+00
Exc= 15.7
Emb= 56.5
℄ Hon. Wai.
103.44
101.6
C= 13
F= 12
0+50
Exc= 29.6
Emb= 15.7
℄ Hon. Wai.
103.44
101.7
C= 19
F= 5
0+00 P.C. Loop #1 = 3+95.57 Loop #3 = 8+25 Hon.-Wai.
℄
Exc= 6.3
Emb= 0.3
℄ Hon. Wah.
104.3
104.32
E.P.
102.6
C= 19
F= 1
4+50
Exc= 32.4
Emb= 2.8
℄ Hon. Wah.
104.6
104.61
E.P.
103.0
C= 16
F= 2
4+00
Exc= 57.5
Emb= 3.3
℄ Hon. Wah.
105.1
104.82
E.P.
C= 37
F= 1
3+41.44
Exc= 54.5
Emb= 1.5
℄ Hon. Wah.
105.2
104.83
E.P.
C= 34
F= 1
3+00
Exc= 33.3
Emb= 51.9
103.1
104.67
C= 2
F= 55
2+50
Exc= 3.7
Emb= 118.5
102.5
104.32
C= 2
F= 73
2+00
Exc= 2.8
Emb= 139.8
102.2
103.94
C= 1
F= 78
1+50
Exc= 0.9
Emb= 164.8
101.1
103.66
C= 0
F= 100
1+00
Exc= 0
Emb= 163.9
℄ Wai. Wah.
101.1
103.49
C= 0
F= 77
0+50
~LOOP~
℄
℄ Hon. Wai.
103.44
101.7
C= 19
F= 5
3+95.57 Loop #3 = 0+00 Loop #1 = 8+25 Hon.-Wai.
Exc= 36.3
Emb= 5.9
℄ Hon. Wai.
103.44
101.8
C= 24
F= 2
3+50
Exc= 47.2
Emb= 1.9
℄ Hon. Wai.
103.44
101.9
C= 27
F= 0
3+00
Exc= 52.8
Emb= 0
℄ Hon. Wai.
103.44
102.0
C= 30
F= 0
2+50
Exc= 52.8
Emb= 0
℄ Hon. Wai.
103.4
103.45
102.1
C= 27
F= 0
2+00
Exc= 45.4
Emb= 15.7
102.8
103.52
102.2
C= 22
F= 17
1+50
Exc= 34.3
Emb= 26.9
103.3
103.70
102.3
C= 15
F= 12
1+00
Exc= 41.7
Emb= 11.1
℄ Hon. Wah.
E.P.
104.4
103.97
102.4
C= 30
F= 0
0+50
Exc= 50.9
Emb= 0.9
℄ Hon. Wah.
104.2
104.27
E.P.
102.5
E.P.
C= 25
F= 1
4+57.79 Loop #2 = 0+00 P.C. Loop #3

PLATE 3 - CROSS SECTION O. P. R. & R. E. STANDARD
KEUFFEL & ESSER CO., NEW YORK.
MADE IN U.S.A. 86947-3

4449.46C

EXC = 612.9 ✓
EMB = 1468.3 ✓

①

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
Hawaii	Haw	F.A.G.H. 4C	1938	31	40

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
Hawaii	Haw	4-C	1938	47	75

FINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
BY
DATE

ORIGINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
BY
DATE

55.8
56.50
39+00
C = 4
F = 5
Exc = ~~46~~ 7
Emb = ~~128~~ 89
C = 0
F = 43
55.8
57.30
38+00
Exc = ~~17~~ 7
Emb = ~~146~~ 137
56.7
58.04
C = 4
F = 31
37+00
Exc = ~~20~~ 11
Emb = ~~128~~ 113
57.4
58.78
C = 2
F = 33
36+00
Exc = ~~39~~ 13
Emb = ~~115~~ 89
58.7
59.52
C = 5
F = 15
35+00
Exc = ~~35~~ 9
Emb = ~~189~~ 163
58.2
60.30
C = 0
F = 73
34+00
Exc = 0
Emb = 259
C = 0
F = 61
59.2
61.17
33+00
Exc = 0
Emb = 296
57.8
45+00
C = 511
F = 0
Exc = ~~1642~~ 1565
Emb = ~~78~~ 0
42.71
52.0
44+00
46.12
C = 334
F = 0
Exc = ~~1122~~ 1044
Emb = ~~78~~ 0
53.0
C = 230
F = 0
43+00
49.10
Exc = ~~691~~ 613
Emb = ~~78~~ 0
F.A.P. 4-C
STA. 43+14.5
F.A.G.H. 4-C
C = 101
F = 0
53.0
51.61
42+00
Exc = ~~186~~ 147
Emb = ~~39~~ 0
53.2
C = 58
F = 0
52.71
+50
Exc = ~~137~~ 98
Emb = ~~39~~ 0
54.0
C = 48
F = 0
53.69
41+00
Exc = ~~180~~ 102
Emb = ~~83~~ 6
54.9
55.32
C = 7
F = 3
40+00
Exc = ~~98~~ 20
Emb = ~~93~~ 15
℄
℄

PLATE 3 – CROSS SECTION O. P. R. & E. STANDARD
KEUFFEL & ESSER CO., NEW YORK
MADE IN U. S. A. 27188-3

4449.47 4450.31

4449.47 4450.31 2636 1167

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	YEAR	NO.	SHEET
Hawaii	Haw.	4-C	1938	48	75

FINAL SURVEY
NOTE BOOK NO.
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
BY
DATE

ORIGINAL SURVEY
NOTE BOOK NO.
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
BY
DATE

31.9
30.34
48+00
Exc = ~~363~~ 324
Emb = ~~39~~ 0
C = 87
F = 0
37.4
47+50
32.49
Exc = ~~781~~ 743
Emb = ~~39~~ 0
C = 363
F = 0
43.9
47+00
34.63
Exc = ~~1096~~ 1057
Emb = ~~39~~ 0
C = 539
F = 0
47.5
46+50
36.78
Exc = ~~1078~~ 1039
Emb = ~~39~~ 0
C = 603
F = 0
48.8
46+00
38.85
Exc = ~~1009~~ 970
Emb = ~~39~~ 0
C = 519
F = 0
50.4
45+50
40.83
Exc = ~~1002~~ 962
Emb = ~~39~~ 0
C = 529
F = 0
20.39
19.95
14.7
19.64
50+50
C = 0 0
F = 205 ~~263~~
C = 0
F = 236
Exc = 0 0
Emb = ~~412~~ ~~536~~ 511.1
22.09
21.83
15.9
21.74
50+00
C = 0 0
F = ~~40~~ 316
Exc = 0 0
Emb = ~~329~~ 424
Gr. Chg. Start Here
20.8
23.97
23.89
49+50
C = 0 0
F = 115 142
Exc = ~~13~~ ~~31~~ 23
Emb = ~~133~~ 134 176
26.1
26.04
49+00
C = ~~14~~ 23
F = ~~30~~ 48
Exc = ~~19~~ ~~46~~ 27
Emb = ~~70~~ 43 59
27.2
28.19
48+50
C = 6
F = 16
Exc = ~~115~~ 86
Emb = ~~44~~ 15

PLATE 3 – CROSS SECTION O. P. R. & R. E. STD.
KEUFFEL & ESSER CO., NEW YORK.
MADE IN U.S.A.

4449.48

Orig 1st Revision 2nd Revision
Exc = 58 50 12
Emb = 97 185 185

19.48

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	
Hawaii	Haw.	4-C	1938	48	75

C=0 ~~0~~ C=0
F=~~148~~ ~~96~~ F=165
57+00
0 Exc= ~~0~~ ~~0~~
709.2 Emb= ~~552~~ ~~367~~
C=0 ~~0~~ C=0
F=~~150~~ ~~103~~ F=218
56+00
0 Exc= ~~0~~ ~~0~~
968.6 Emb= ~~654~~ ~~452~~
C=0 ~~0~~ C=0
F=~~263~~ ~~142~~ F=305
55+00
0 Exc= ~~0~~ ~~0~~
1138.8 Emb= ~~778~~ ~~626~~
C=0 ~~0~~ C=0
F=~~214~~ ~~196~~ F=310
54+00
C=0 ~~0~~ C=0
F=~~276~~ ~~177~~ F=359
0 Exc= ~~0~~
1238.8 Emb= ~~913~~ ~~926~~
53+00
C=0 ~~0~~ C=0
F=~~360~~ ~~430~~ F=436
0 Exc= 0
1472.7 Emb= 1178 ~~1358~~
C=0 ~~0~~ C=0
F=~~481~~ ~~543~~ F=540
0 Exc= 0 ~~0~~
1807.4 Emb= ~~1359~~ ~~1476~~
52+00
0 Exc= 0 ~~0~~
718 Emb= ~~635~~ ~~783~~
51+00
"B" LINE
C=0 ~~0~~ C=0
F=~~312~~ ~~312~~ F=290
64+00
0 Exc= ~~0~~ ~~0~~
995.4 Emb= 1100 ~~1032~~
C=0 ~~0~~ C=0
F=~~282~~ ~~243~~ F=246
63+00
0 Exc= ~~0~~ ~~0~~
887.0 Emb= ~~1017~~ ~~894~~
C=0 ~~0~~ C=0
F=~~267~~ ~~238~~ F=232
62+00
0 Exc= ~~0~~ ~~0~~
861.2 Emb= ~~978~~ ~~865~~
C=0 ~~0~~ C=0
F=~~261~~ ~~229~~ F=232
61+00
0 Exc= ~~0~~ ~~0~~
827.8 Emb= ~~931~~ ~~844~~
C=0 ~~0~~ C=0
F=~~242~~ ~~209~~ F=214
60+00
0 Exc= 0 ~~0~~
731.4 Emb= ~~828~~ ~~661~~
C=0 ~~0~~ C=0
F=~~205~~ ~~148~~ F=180
59+00
C=0 ~~0~~ C=0
F=~~185~~ ~~164~~ F=185
0 Exc= ~~0~~ ~~0~~
676 Emb= ~~722~~ ~~578~~
58+00
DITCH
0 Exc= 0 ~~0~~
650 Emb= ~~617~~ ~~473~~

FINAL SURVEY NOTE BOOK NO. SURVEYED PLOTTED TEMPLATE AREAS AREAS CHECKED BY DATE

ORIGINAL SURVEY NOTE BOOK NO. SURVEYED PLOTTED TEMPLATE AREAS AREAS CHECKED BY DATE

PLATE 3—CROSS SECTION B. P. R. & R. E. STANDARD
KEUFFEL & ESSER CO., NEW YORK
MADE IN U.S.A.

4449.49

Exc = 0 0 0
Emb = 12460 13079 11,282

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
Hawaii	Haw	4-C	1938	50	75

FINAL SURVEY
SURVEYED
PLOTTED
TEMPLATE
NOTE BOOK
NO.
AREAS
AREAS CHECKED
BY
DATE

ORIGINAL SURVEY
SURVEYED
PLOTTED
TEMPLATE
NOTE BOOK
NO.
AREAS
AREAS CHECKED
BY
DATE

11.00 9.85
8.35
5.8
C = 0 F = 193 ~~0~~ ~~140~~ C = 0 F = 164
72+00
0 Exc = 0 0
620.4 Emb = ~~676~~ 472
11.00 9.85
8.35
6.1
C = 0 F = ~~172~~ ~~0~~ 115 C = 0 F = 171
71+00
0 Exc = ~~0~~ ~~0~~
711.1 Emb = ~~689~~ ~~535~~
11.00 9.85
8.35
5.5
C = 0 F = ~~222~~ ~~0~~ ~~174~~ C = 0 F = 213
70+00
0 Exc = ~~0~~ ~~0~~
825.9 Emb = ~~526~~ ~~484~~
275.7
35.384
11.00 9.85
69+66.62 LINE "A"
EQ= 71+28.44 " "B"
8.35
4.5
C = 0 F = ~~265~~ ~~0~~ ~~249~~ C = 0 F = 233
71+00
0 Exc = ~~0~~ ~~0~~
861.1 Emb = 967 ~~878~~
11.00 9.85
8.35
4.7
C = 0 F = ~~257~~ ~~0~~ ~~225~~ C = 0 F = 232
70+00
0 Exc = ~~0~~
846.3 Emb = ~~965~~ ~~848~~
11.00 9.85
8.35
4.6
C = 0 F = ~~0~~ 233 C = 0 F = 225
69+00
0 Exc = ~~0~~
870.4 Emb = ~~1013~~ ~~913~~
11.00 9.85
8.35
4.2
C = 0 F = ~~285~~ 260 C = 0 F = 245
68+00
0 Exc = ~~0~~
950 Emb = ~~1094~~ ~~1097~~
11.00 9.85
8.35
3.7
C = 0 F = ~~308~~ 0 ~~300~~ C = 0 F = 268
67+00
0 Exc = ~~0~~ ~~0~~
1033.3 Emb = ~~1163~~ ~~1172~~
9.85 11.00
8.35
3.4
C = 0 F = ~~320~~ 0 ~~333~~ 0 290
66+00
BRIDGE EXCEPTION STA. 65+40 TO STA. 65+61
0 Exc = 0
972.4 Emb = ~~860~~ 856
11.00 9.85
8.35
4.8
C = 0 F = ~~264~~ ~~252~~ 0 235
65+00
0 Exc = 0
972.2 Emb = ~~1074~~ ~~1044~~
11.00 9.85
8.35
5.5
C = 0 F = ~~207~~ ~~0~~ ~~126~~ C = 0 F = 188
79+00
0 Exc = 0 0
694.4 Emb = ~~756~~ 463
11.00 9.85
8.35
5.5
C = 0 F = ~~201~~ ~~0~~ ~~124~~ C = 0 F = 187
78+00
0 Exc = ~~0~~ ~~0~~
624.1 Emb = ~~706~~ ~~400~~
11.00 9.85
8.35
6.1
C = 0 F = ~~180~~ ~~0~~ ~~92~~ C = 0 F = 150
77+00
0 Exc = ~~0~~ ~~0~~
563.0 Emb = ~~676~~ ~~359~~
11.00 9.85
8.35
6.0
C = 0 F = ~~185~~ ~~0~~ ~~102~~ 0 F = 154
76+00
0 Exc = ~~0~~ ~~0~~
540.7 Emb = ~~652~~ ~~287~~
11.00 9.85
8.35
6.3
C = 0 F = ~~167~~ ~~0~~ ~~53~~ C = 0 F = 138
75+00
0 Exc = ~~0~~ ~~0~~
527.8 Emb = ~~643~~ ~~269~~
11.00 9.85
8.35
6.1
C = 0 F = ~~186~~ ~~0~~ ~~92~~ C = 0 F = 147
74+00
0 Exc = ~~0~~ ~~0~~
494.4 Emb = ~~596~~ ~~263~~
11.00 9.85
8.35
6.7
C = 0 F = ~~142~~ ~~0~~ ~~50~~ C = 0 F = 120
73+00
0 Exc = ~~0~~ ~~0~~
525.9 Emb = ~~620~~ ~~352~~

PLATE 3 — CROSS SECTION. O. P. R. & R. E. STANDARD
KEUFFEL & ESSER CO., NEW YORK.
MADE IN U. S. A. 27188-3

4449.50

Exc 0 0 0
Emb 13676 12845 10,632

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	F.A.G.H. 4C	1938	32	40

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	4C	1938	51	75

FINAL SURVEY
NOTE BOOK
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AREAS
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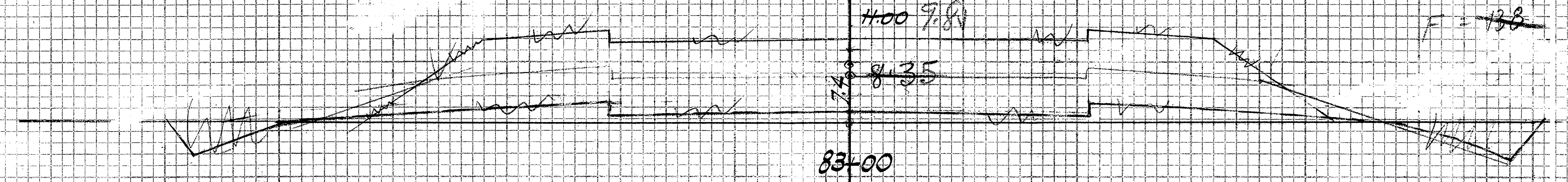
DATE

? 83+95.^{95} to 84+15.^{05}
~~83+87.^{13} to 85+26.^{87}~~ Bridge Exception

?
0 Exc = ~~0~~ ~~32~~
370 Emb = ~~445~~ ~~481~~ ~~78~~

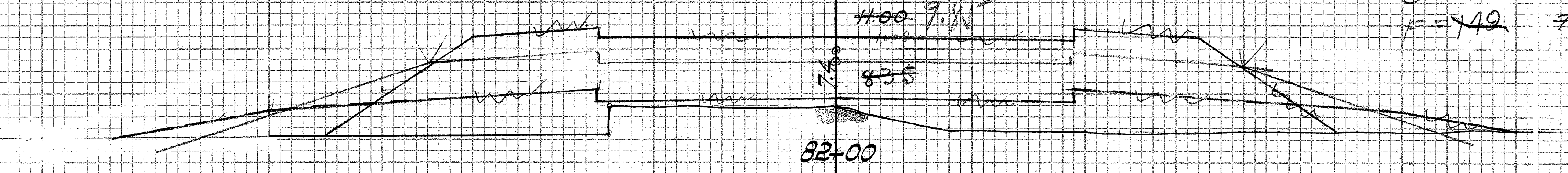
C = ~~0~~ • ~~9~~
F = ~~138~~ ~~48~~ ~~22~~ 90



~~11.00~~ 9.84
~~8.35~~
7.4
83+00

0 Exc = ~~0~~ ~~17~~
400 Emb = ~~331~~ ~~115~~

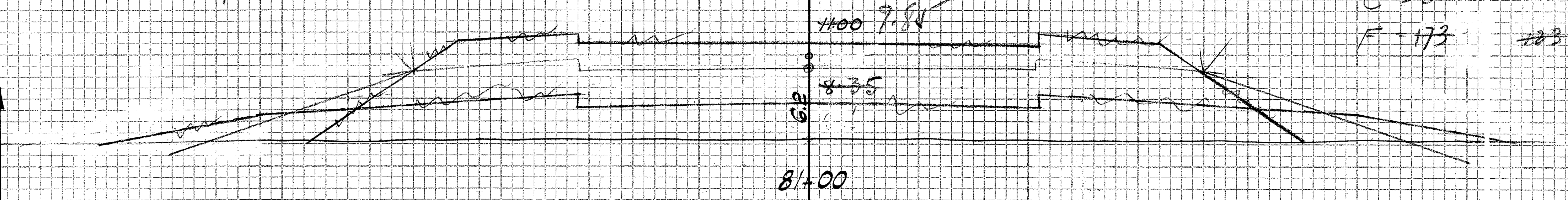
C = 0 0
F = ~~142~~ ~~71~~ ~~40~~ 126



~~11.00~~ 9.85
~~8.35~~
7.4
82+00

0 Exc = ~~0~~ ~~0~~
516.7 Emb = ~~596~~ ~~241~~

C = 0 0
F = 173 ~~123~~ ~~90~~ 153

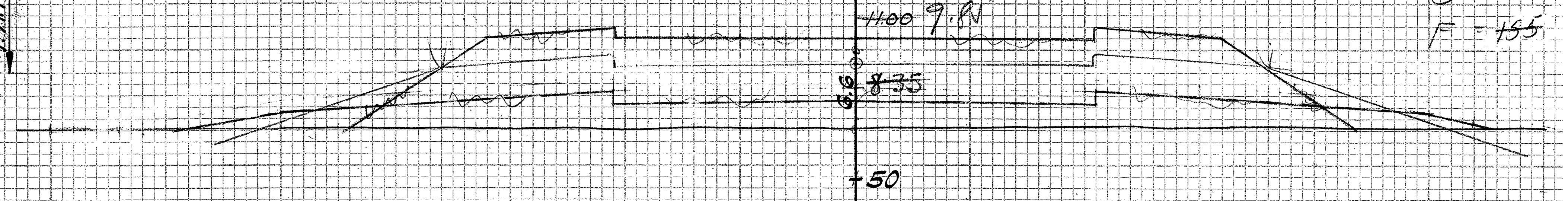


~~11.00~~ 9.85
~~8.35~~
6.2
81+00

F.A.P. 4C STA. 81+05.6 F.A.G.H. 4-C

0 Exc = ~~0~~ ~~0~~
279.0 Emb = ~~364~~ ~~143~~

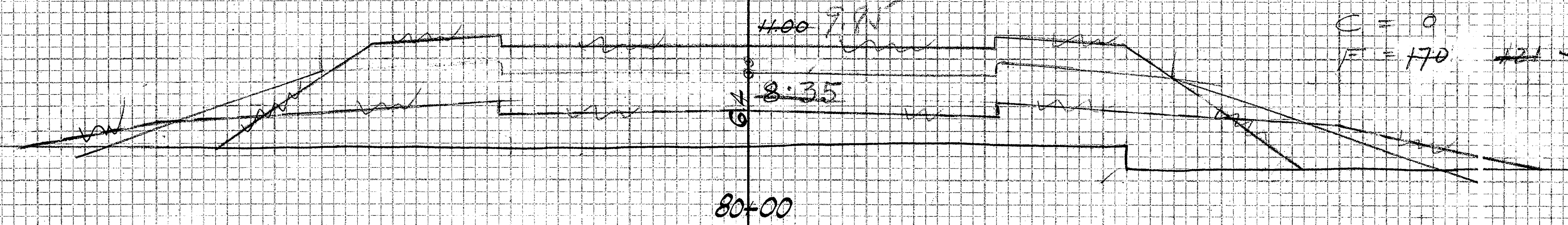
C = 0 0 0
F = ~~155~~ ~~94~~ ~~64~~ 127



~~11.00~~ 9.85
~~8.35~~
6.6
+50

0 Exc = ~~0~~ ~~0~~
256.5 Emb = ~~301~~ ~~141~~

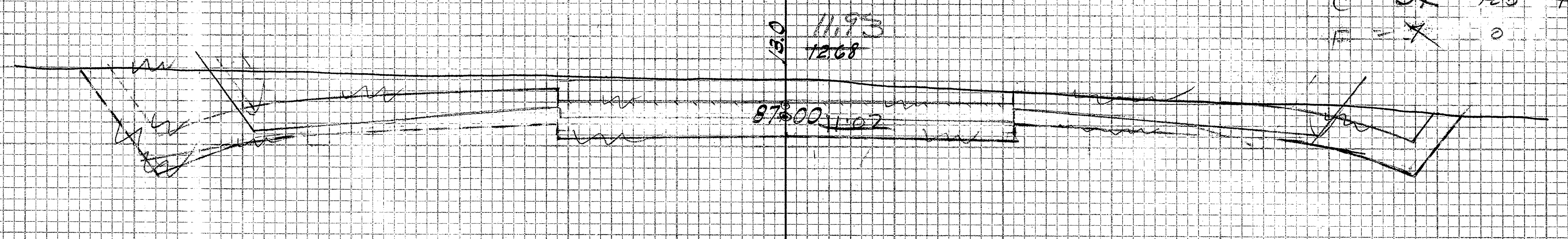
C = 0 0
F = 170 ~~121~~ ~~88~~ 150



~~11.00~~ 9.85
8.35
6.4
80+00

0 Exc = ~~0~~ ~~0~~
625.9 Emb = ~~698~~ ~~396~~

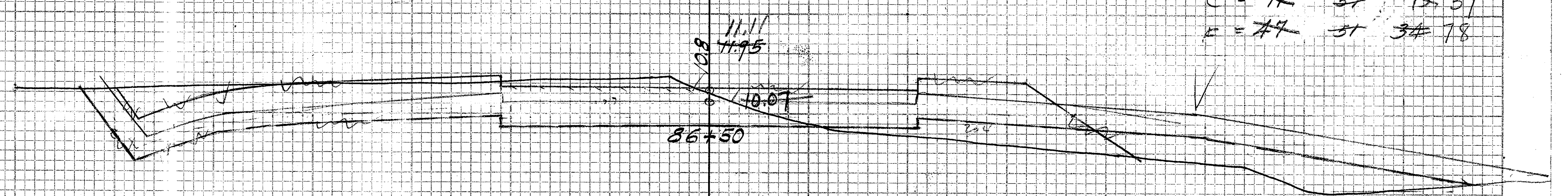
C = ~~39~~ ~~125~~ ~~145~~ 83
F = ~~7~~ 0 0



11.93
~~12.68~~
13.0
87+00
11.02

111.1 Exc = ~~46~~ ~~75~~ 204
72.2 Emb = ~~79~~ ~~50~~ 32

C = ~~41~~ ~~57~~ ~~75~~ 37
F = ~~47~~ ~~51~~ ~~34~~ 78

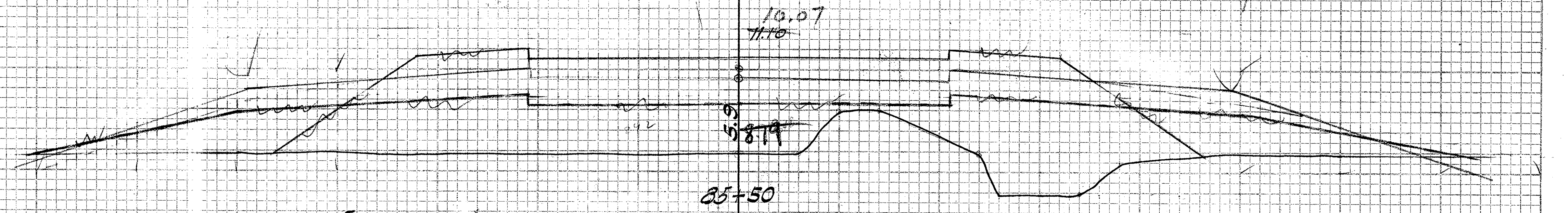


11.11
~~11.95~~
10.8
10.07
86+50

68.5 Exc = ~~20~~ ~~39~~ 63
544.4 Emb = ~~457~~ ~~438~~ 293

86+00 ℄ Gr. 10.48

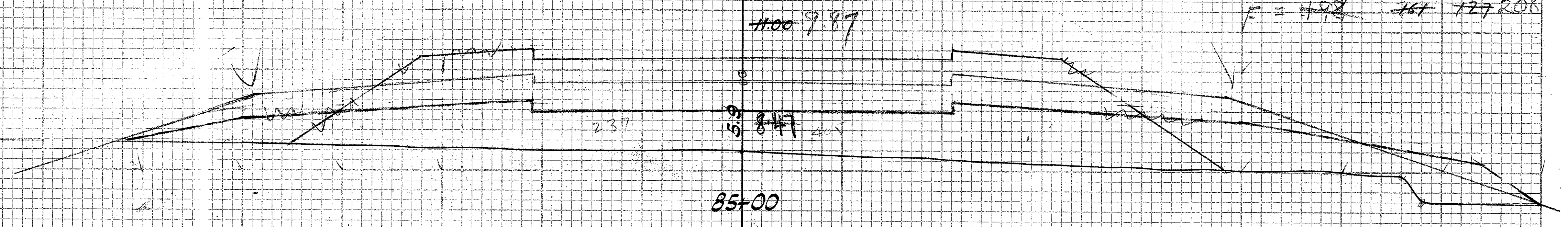
C = ~~0~~ 0
F = ~~190~~ ~~160~~ ~~134~~ 216



10.07
~~11.10~~
5.9
8.79
85+50

0 Exc = ~~0~~ ~~0~~
392.6 Emb = ~~359~~ ~~232~~

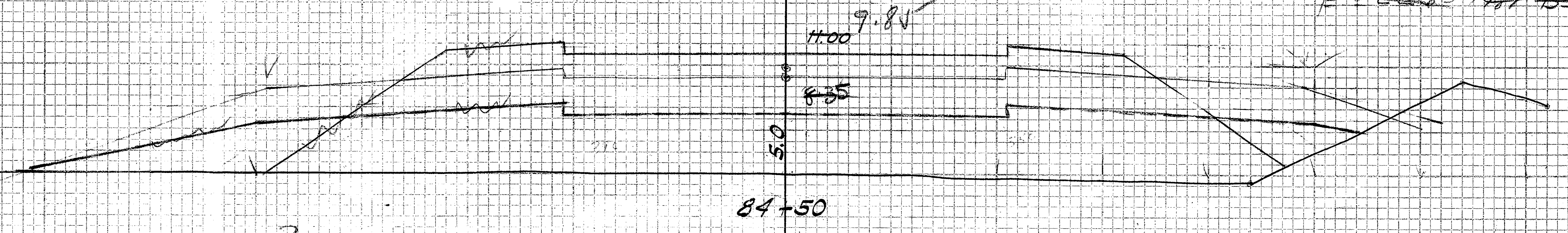
C = 0 0
F = ~~198~~ ~~161~~ ~~127~~ 208



~~11.00~~ 9.87
5.9
8.47
85+00

0 Exc = ~~0~~ ~~0~~
427.8 Emb = ~~399~~ ~~261~~

C = 0 0
F = ~~226~~ ~~187~~ ~~155~~ 254



~~11.00~~ 9.85
~~8.35~~
5.0
84+50

?
0 Exc = ~~0~~ ~~0~~
329.0 Emb = ~~193~~ ~~293~~ ~~169~~

℄ ℄

	Old	1st revision	2nd revision
Exc -	66	375	316
Emb -	4442	3397	2101

PLATE 3 — CROSS SECTION O. P. R. & R. E. STANDARD
KEUFFEL & ESSER CO. NEW YORK.
MADE IN U.S.A. 26279-3

4449.51 4450.32

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	F.A.G.H. 4·C	1938	40	40

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	4·C	1938	52	75

FINAL SURVEY
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ORIGINAL SURVEY
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F.A.P. 4-C
STA. 111+24.6
F.A.G.H. 4-C
58.8
56.67
111+00
C = 117
F = 0
289
Exc = ~~367~~
Emb = ~~122~~
41
R
R
56.3
56.00
110+00
C = 39
F = 22
76
Exc = ~~115~~
Emb = ~~250~~
211
53.1
55.33
109+00
C = 2
F = 97
Exc = 4
Emb = 385
52.0
54.67
108+00
C = 0
F = 116
4
Exc = ~~11~~
Emb = ~~446~~
339
52.6
54.00
107+00
C = 21
F = 67
11
Exc = ~~13~~
Emb = ~~237~~
230
55.5
56.67
116+00
C = 1
F = 34
128
Exc = ~~189~~
Emb = ~~126~~
63
58.5
57.47
115+00
C = 68
F = 0
413
Exc = ~~491~~
Emb = ~~89~~
0
60.6
57.84
114+00
C = 155
F = 0
539
Exc = ~~617~~
Emb = ~~85~~
0
60.2
57.79
113+00
C = 136
F = 0
511
Exc = ~~589~~
Emb = ~~89~~
0
60.0
57.33
112+00
C = 140
F = 0
476
Exc = ~~554~~
Emb = ~~85~~
0
℄
℄

PLATE 3 – CROSS SECTION O. P. & R. E. STANDARD
KEUFFEL & ESSER CO. NEW YORK.
MADE IN U. S. A. 27188-3

4449.52 **4450.40**

4449.52 4450.40

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
Hawaii	Haw	4-C	1938	53	75

FINAL SURVEY
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ORIGINAL SURVEY
NOTE BOOK
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AREAS CHECKED
BY
DATE

122+00
52.8
48.45
C = 243
F = 0
Exc = ~~874~~ 796
Emb = ~~78~~ 0
121+00
53.3
49.86
C = 187
F = 0
Exc = ~~672~~ 594
Emb = ~~78~~ 0
120+00
53.8
51.27
C = 134
F = 0
Exc = ~~394~~ 317
Emb = ~~80~~ 0
119+00
53.1
52.67
C = 37
F = 0
Exc = ~~107~~ 69
Emb = ~~678~~ 657
118+00
46.6
54.08
C = 0
F = 355
Exc = 0
Emb = 811
117+00
53.4
55.48
C = 0
F = 83
Exc = ~~24~~ 2
Emb = ~~239~~ 217
137+00
36.3
42.96
C = 0
F = 287
Exc = 0
Emb = 627
136+50
35.0
43.66
C = 0
F = 390
Exc = 0
Emb = 709
136+00
35.8
44.36
C = 0
F = 376
Exc = 0
Emb = ~~470~~ 256
41.3
~~44.50~~
C = 0
F = 180
EQ = 135+69.65
~~124+60.64~~
124+57.96
Exc = 184 ~~216~~ ~~161~~
Emb = ~~169~~ ~~226~~ 193
124+00
49.0
45.64
C = 171
F = 0
Exc = ~~907~~ 830
Emb = ~~78~~ 0
123+00
51.9
47.04
C = 277
F = 0
Exc = ~~1041~~ 963
Emb = ~~78~~ 0
℄
℄

PLATE 3—CROSS SECTION O. P. R. E. STANDARD
KEUFFEL & ESSER CO. NEW YORK.
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4449.53

4449.53

4235 ✓ 3100 ✓
3918 ✓ 347 ✓

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
Hawaii	Haw	4-C	1938	54	75

FINAL SURVEY
NOTE BOOK
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ORIGINAL SURVEY
NOTE BOOK
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Exc = ~~9~~ 8
Emb = 206
38.06
34.5
+50
C = 0
F = 183
Exc = 0
Emb = 308
38.76
34.8
140+00
C = 0
F = 180
Exc = 0
Emb = 237
39.46
37.5
+50
C = 0
F = 76
Exc = ~~69~~ 49
Emb = ~~93~~ 73
40.16
40.6
139+00
C = 53
F = 3
Exc = ~~69~~ 49
Emb = ~~784~~ 165
40.86
36.5
+50
C = 0
F = 175
Exc = 0
Emb = 472
41.56
33.5
138+00
C = 0
F = 335
Exc = 0
Emb = 581
42.26
35.5
+50
C = 0
F = 292
Exc = 0
Emb = 536
℄
Exc = ~~778~~ 739
Emb = ~~39~~ 0
37.5
+50
32.46
C = 259
F = 0
42.7
144+00
Exc = ~~1157~~ 1119
Emb = ~~39~~ 0
33.16
C = 539
F = 0
45.4
+50
Exc = ~~1349~~ 1310
Emb = ~~39~~ 0
C = 669
F = 0
47.3
33.86
143+00
Exc = ~~1369~~ 1329
Emb = ~~39~~ 0
C = 746
F = 0
46.8
34.56
+50
Exc = ~~957~~ 919
Emb = ~~39~~ 0
C = 689
F = 0
35.26
41.2
142+00
C = 303
F = 0
35.96
Exc = ~~364~~ 325
Emb = ~~43~~ 3
37.1
36.66
+50
C = 48
F = 3
Exc = ~~73~~ 53
Emb = ~~77~~ 67
35.4
37.36
141+00
C = 9
F = 69
℄

PLATE 3—CROSS SECTION E. P. R. E. STAND
KEUFFEL & ESSER CO., ORK.
MADE IN U.S.A. 26279-3

4449.54

44954

Exc ~~6193~~ ✓ 5900 ✓
Emb ~~2943~~ ✓ 2648 ✓

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
Hawaii	Haw	4-C	1938	55	75

FINAL SURVEY
NOTE BOOK NO.
SURVEYED
PLOTTED
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AREAS
AREAS CHECKED
BY
DATE

ORIGINAL SURVEY
NOTE BOOK NO. 392
SURVEYED
PLOTTED
TEMPLATE JL
AREAS
AREAS CHECKED
BY
DATE

30.15
C = 0
F = 536
19.3
147+00
Exc = 0
Emb = 1038
30.42
C = 0
F = 585
19.6
+50
Exc = 0
Emb = 1020
30.79
C = 0
F = 517
20.5
146+00
Exc = 0
Emb = 993
31.25
C = 0
F = 555
20.5
+50
Exc = 0
Emb = 898
31.81
C = 0
F = 415
22.8
145+00
Exc = ~~257~~ 240
Emb = ~~404~~ 384
℄
30.21
30.9
+50
C = 41
F = 7
Exc = ~~430~~ 391
Emb = ~~45~~ 6
37.2
149+00
30.01
C = 381
F = 0
Exc = ~~656~~ 618
Emb = ~~39~~ 0
34.8
+50
29.90
C = 286
F = 0
Exc = ~~274~~ 265
Emb = ~~257~~ 239
29.89
C = 0
F = 258
23.8
148+00
Exc = 0
Emb = 735
29.98
C = 0
F = 536
19.5
+50
Exc = 0
Emb = 993
℄

PLATE 3—CROSS SECTION O. P. R. & E. STANDARD
KEUFFEL & ESSER CO., NEW
MADE IN U.S.A. 26279-3

4449.55

44955

Ex ~~1620~~ 1514
Em ~~6422~~ 6206

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
Hawaii	Haw	4-C	1938	56	75

FINAL SURVEY
NOTE BOOK NO.
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ORIGINAL SURVEY
NOTE BOOK NO.
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PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
BY
DATE

Exc = 2162 ~~2201~~
Emb = ~~39~~ 0
49.8
152+00
C=1143
F= 0
Exc = 1972 ~~2011~~
Emb = ~~39~~ 0
31.46
47.5
+50
C= 987
F= 0
Exc = 1284 ~~1323~~
Emb = ~~39~~ 0
31.21
38.8
151+00
C=400
F= 0
30.96
Exc = 377 ~~402~~
Emb = ~~61~~ 36
30.71
30.1
+50
C= 7
F=39
Exc = 6 ~~12~~
Emb = ~~115~~ 109
30.46
29.7
150+00
C= 0
F= 79
Exc = 38 ~~37~~
Emb = ~~99~~ 92
℄
38.2
+50
32.57
C=341
F= 0
Exc = 1113 ~~1152~~
Emb = ~~39~~ 0
42.0
154+00
C=861
F= 0
Exc= 1921 ~~1960~~
Emb = ~~39~~ 0
32.40
C=1214
F= 0
Exc = 2244 ~~2283~~
Emb = ~~39~~ 0
51.4
32.19
153+50
C=1210
F= 0
Exc = 2224 ~~2263~~
Emb = ~~39~~ 0
Existing 2" Water Main
Existing 2" Water Main
Relocated Water Main
Relocated Water Main
153+00
51.3
31.96
C= 1192
F= 0
30.7
31.71
+50

PLATE 3—CROSS SECTION O. P. R. & R. E. STANDARD
KEUFFEL & ESSER CO., NEW YORK.
MADE IN U.S.A. 26279-3

4449.56

44 48.56

Ex 7366
Em 44
13,941
237

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
Hawaii	Haw.	4-C	1938	57	75

34.10
26.4
C = 0
F = 392
+53
43.0
157+00
32.96
C = 445
F = 0
Exc = 37 ~~45~~
Emb = ~~544~~ 536
Exc = 440 ~~474~~
Emb = ~~61~~ 27
32.1
33.58
159+00
C = 38
F = 154
32.8
32.94
+50
C = 30
F = 29
Exc = 148 ~~175~~
Emb = ~~174~~ 147
Exc = 28 ~~43~~
Emb = ~~332~~ 318
35.1
33.24
158+50
32.90
25.6
C = 0
F = 314
C = 122
F = 5
156+00
Exc = 1278 ~~1355~~
Emb = ~~88~~ 9
Exc = 0
Emb = 502
32.82
27.3
C = 0
F = 448
+50
43.4
+50
C = 568
F = 0
Exc = 2 ~~8~~
Emb = ~~250~~ 244
31.5
32.71
32.96
155+00
C = 2
F = 35
Exc = 318 ~~344~~
Emb = ~~59~~ 32
Exc = 938 ~~977~~
Emb = ~~39~~ 0
℄
℄

FINAL SURVEY
NOTE BOOK NO.
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
BY
DATE

ORIGINAL SURVEY
NOTE BOOK NO.
SURVEYED
PLOTTED
TEMPLATE
AREAS M. S.
AREAS CHECKED
BY
DATE 17/9/37

PLATE 3—CROSS SECTION & R. E. ARD
KEUFFEL & ESSER CO. YORK.
MADE IN U. S. A. 26279-3

4449.57

4449.57

C ~~3421~~ ✓ 3187 ✓
Cu ~~2048~~ ✓ 1815 ✓

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
Hawaii	Haw	4-C	1938	58	75.

FINAL SURVEY
NOTE BOOK NO.
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ORIGINAL SURVEY
NOTE BOOK NO.
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
BY
DATE

42.91
30.0
163+50
C = 0
F = 633
Exc = 0
Emb = 1275
41.33
27.6
38.56
163+00
C = 0
F = 744
Exc = 0
Emb = 3326
21.0
162+00
C = 0
F = 1054
36.35
Exc = 0
Emb = 3415
22.0
161+00
C = 0
F = 794
Exc = 0
Emb = 2539
34.69
20.9
160+00
C = 0
F = 579
R/W
Exc = 0
Emb = 845
0
971
56.8
52.87
166+00
C = 239
F = 0
Exc = 424 ~~463~~
Emb = ~~39~~ 0
53.8
50.66
165+50
C = 219
F = 0
Exc = 297 ~~317~~
Emb = ~~230~~ 210
± 57'
48.52
43.2
BEHIND
AHEAD
165+00
C = 104 AHEAD
F = 447 AHEAD
F = 314 BEHIND
C = 0 "
Exc = 94
Emb = 552
46.52
± 40'
39.1
164+50
C = 0
F = 384
Exc = 0
Emb = 531
± 26'
44.65
33.9
164+00
C = 0
F = 194
Exc = 0
Emb = 764

PLATE 3—CROSS SECTION O. P. R. & R. E. STANDARD
KEUFFEL & ESSER CO., NEW YORK.
MADE IN U. S. A. 26279-3

4449.58

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
Hawaii	Haw	4-C	1938	59	75

C = 55
F = 0
67.41
68
± 30°
170+00
Exc = ~~576~~ 448
Emb = ~~71~~ 0
C = 187 Ahead
C = 99 Behind
F = 0
64.40
66
± 62°
BEHIND
AHEAD
169+00
Exc = ~~680~~ 604
Emb = ~~71~~ 0
C = 227
F = 0
64
60.94
52°
168+00
Exc = ~~882~~ 804
Emb = ~~71~~ 0
C = 207
F = 0
61
57.10
167+00
Exc = ~~437~~ 398
Emb = ~~39~~ 0
C = 223
F = 0
59
55.02
166+50
Exc = ~~467~~ 428
Emb = ~~39~~ 0
C = 1
F = 67
77.73
176+00
Exc = 7
Emb = 300
C = 0
F = 100
77.00
175+00
Exc = 2
Emb = 335
C = 1
F = 81
75.87
174+00
Exc = 2
Emb = 298
C = 0
F = 80
74.35
173+00
Exc = 2
Emb = 259
C = 1
F = 60
72.44
172+00
Exc = ~~124~~ 52
Emb = ~~206~~ 133
C = 27
F = 12
70.15
171+00
Exc = ~~263~~ 162
Emb = ~~133~~ 22
℄
℄

FINAL SURVEY | SURVEYED | PLOTTED | TEMPLATE | AREAS | AREAS CHECKED | NOTE BOOK NO. | BY | DATE

ORIGINAL SURVEY | SURVEYED | PLOTTED | TEMPLATE | AREAS | AREAS CHECKED | NOTE BOOK NO. | BY | DATE

PLATE 3—CROSS SECTION O. P. R. ... STANDARD
KEUFFEL & ESSER CO. NEW YORK
MADE IN U.S.A. 26279-3

4449.59

4449.59

E ~~3344~~ 2899
Em ~~1803~~ 1245

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
Hawaii	Haw	4-C	1938	60	75

FINAL SURVEY	BY	DATE
SURVEYED		
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		
NOTE BOOK NO.		

ORIGINAL SURVEY	BY	DATE
SURVEYED		
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		
NOTE BOOK NO.		

℄ EWA SPUR
4C
81.01
81½
182+00
C = ~~33~~ 43
F = 9
⑰
Exc = ~~85~~ ~~152~~ 115
Emb = ~~130~~ 63
C = ~~73~~ 19
F = 25
79.8
80.66
⑧
181+00
Exc = ~~65~~ ~~126~~ 89
Emb = ~~139~~ 78
C = ~~22~~ 29
F = 17
79.6
79.91
⑨
180+00
Exc = ~~61~~ ~~117~~ 53
Emb = ~~130~~ 74
C = ~~4~~ 16
F = 23
78.5
79.37
⑦
179+00
Exc = ~~35~~ ~~94~~ 55
Emb = ~~150~~ 91
C = ~~8~~ 17
F = 26
78.4
78.82
⑥
178+00
Exc = ~~17~~ ~~69~~ 27
Emb = ~~176~~ 124
C = 1
F = 41
77.0
78.28
177+00
Exc = ~~9~~ ~~24~~
Emb = ~~206~~ 191
℄
98½
188+00
C = ~~811~~ 1018
F = 0
Exc = ~~3781~~ ~~2532~~ ~~2667~~
Emb = ~~78~~ 0
109
94.2
84.28
187+00
C = ~~587~~ 754
F = 0
Exc = ~~1856~~ ~~1930~~ 2276
Emb = ~~78~~ 0
8
90.8
83.74
85° ±
BEHIND
AHEAD
186+00
C = ~~884~~ 1011 behind
F = 0
C = ~~413~~ ahead 475
83.19
Exc = ~~2213~~ ~~2271~~ 2737
Emb = ~~78~~ 0
C = ~~308~~ 359
F = 0
88.3
50° ±
82.64
185+00
53
℄ EWA SPUR
Exc = ~~1131~~ ~~1248~~ 1288
Emb = ~~117~~ 0
C = 303 ahead 377
C = 315 behind 349
F = 0 ahead
F = 0 behind
85.5
AHEAD
BEHIND
82.10
184+00
36
℄ EWA SPUR
Exc = ~~730~~ ~~919~~ 831
Emb = ~~189~~ 0
C = ~~79~~ 100
F = 0
82.7
81.55
71
183+00
Exc = ~~207~~ ~~315~~ 264
Emb = ~~424~~ 17
℄

PLATE 3 – CROSS SECTI[ON] O. P. R. & [R.] E. STANDARD

KEUFFEL & [E]SSER [C]O., NEW YO[RK]

4449.60

MADE IN U. S. A. 26279-3

4449.60

Ex ~~9952~~ 8774

Em ~~1195~~ 638

61

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
Hawaii	Haw	4-C	1938	61	75

FINAL SURVEY	DATE	BY
SURVEYED		
PLOTTED		
NOTE BOOK TEMPLATE		
AREAS		
NO. AREAS CHECKED		

ORIGINAL SURVEY	DATE	BY
SURVEYED		
PLOTTED		
NOTE BOOK TEMPLATE		
AREAS		Cor
NO. AREAS CHECKED		

82.93 ℄ Grade 194+50
183.00
C = 0
F = 799
C = 0
F = 1098
+50
84.5
194+00
83.27
BRIDGE EXCEPTION STA. 193+74.71 TO STA. 194+30.20
C = 0
F = 1081
85.4
+50
C = ~~10~~ 27
F = 296
83.57
15√
76.2
193+00
C = ~~231~~ 288
F = 0
87.8
+50
83.87
√7
√ √9
C = ~~208~~ 517
F = 0
91.2
192+00
84.17
63
℄
Exc = 0
Emb = 586
~~Exc = 0~~
~~Emb = 1049~~
C = ~~880~~ 807
F = 0
97
C = ~~761~~ 970
F = 0
110
Exc = ~~12~~ 0
Emb = 1905
C = ~~847~~ 1116
F = 0
128
C = ~~954~~ 1197
F = 0
146
Exc = ~~282~~ ~~243~~ 306
Emb = ~~294~~ 274
Exc = ~~586~~ ~~625~~ 764
Emb = ~~39~~ 0
C = ~~878~~ 1085
F = 0
107
√√
Exc = ~~946~~ ~~985~~ 1223
Emb = ~~39~~ 0
95.2
+50
84.43
97.5
191+00
84.62
99.0
+50
84.75
100.5
190+00
84.79
92.9
189+00
84.69
℄
1676
Exc = ~~1274~~ ~~1318~~
Emb = ~~39~~ 0
93
1
out
Exc = 1931 ~~1514~~ ~~1556~~
Emb = ~~39~~ 0
10√
1
Exc = 2143 ~~1695~~ ~~1734~~
Emb = ~~39~~ 0
117
1
Exc = 4220 ~~3393~~ ~~3432~~
Emb = ~~78~~ 0
128
1
Exc = 3885 ~~3128~~ ~~3167~~
Emb = ~~78~~ 0
101
1
PLATE — CROSS SECTION ... O. P. R. & E. STANDARD
KEUFFEL & ESSER CO., NEW YORK
MADE IN U.S.A. 26279-3

4449.61

4449.61√

6 ~~12271~~ 1277
~~3136~~ 2765

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	4C	1938	62	75

87.29
74.5
+50
C = 0
F = 650
Exc = 0
Emb = 1213
86.07
73.4
197
C = 0
F = 660
Exc = 0
Emb = 1160
84.99
73.3
+50
C = 0
F = 593
Exc = 0
Emb = 1134
84.12
71.8
196
C = 0
F = 632
Exc = 0
Emb = 1196
83.49
70.5
+50
C = 0
F = 660
Exc = 0
Emb = 1289
83.10
69.4
195
C = 0
F = 732
Exc = 0
Emb = 1418
℄
99.94
92.9
+50
C = 0
F = 297
Exc = 0
Emb = 631
97.46
89.5
200
C = 0
F = 385
Exc = 0
Emb = 616
95.02
88.4
+50
C = 0
F = 280
Exc = 0
Emb = 466
92.76
87.3
199
C = 0
F = 273
Exc = 0
Emb = 377
90.72
86.6
+50
C = 0
F = 184
Exc = 0
Emb = 419
88.95
84.3
198
C = 0
F = 268
Exc = 0
Emb = 850
℄

FINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
BY
DATE

ORIGINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
BY
DATE

PLATE 3—CROSS SECTION O. R. & R. E. STANDARD
KEUFFEL & ESSER CO. NEW YORK
MADE IN U.S.A. 26279-3

4449.62

4449.62

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	4C	1938	63	75

FINAL SURVEY
NOTE BOOK NO.
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
BY
DATE

ORIGINAL SURVEY
NOTE BOOK NO.
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
BY
DATE

123.8
114.84
+50
C = 491
F = 0
Exc = 876 ~~915~~
Emb = ~~39~~ 0
FEC
122.6
129.74
+50
C = 107
F = 0
P
Exc = 293 ~~332~~
Emb = ~~39~~ 0
120.7
203+00
C = 455
F = 0
112.36
Exc = 648 ~~687~~
Emb = ~~39~~ 0
133.3
206+00
127.25
C = 209
F = 0
P
Exc = 523 ~~563~~
Emb = ~~39~~ 0
114.5
+50
C = 245
F = 0
109.88
Exc = 247 ~~286~~
Emb = ~~40~~ 1
130.6
+50
124.78
C = 356
F = 0
C = 22
F = 1
107.40
F
106.3
202+00
Exc = 735 ~~774~~
Emb = ~~39~~ 0
Exc = 23 ~~43~~
Emb = ~~97~~ 78
130.8
C = 438
F = 0
205+00
122.29
C = 0
F = 83
Exc = 881 ~~919~~
Emb = ~~39~~ 0
104.91
P
102.8
+50
C = 513
F = 0
128.6
+50
119.80
Exc = 3
Emb = 268
C = 0
F = 200
Exc = 892 ~~931~~
Emb = ~~39~~ 0
102.43
97.6
201+00
Exc = 0
Emb = 466
C = 450
F = 0
126.1
204+00
117.32
Exc = 871 ~~910~~
Emb = ~~39~~ 0

PLATE 3 — CROSS SECTION — P. R. & R. STANDARD
KEUFFEL & ESSER CO. NEW YORK
MADE IN U.S.A. 26279-3

4449.63

4449.63

Ex ~~1363~~ ✓ 5992 H
Em ~~1183~~ ✓ 813 H

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	F4-C	1938	64	75

FINAL SURVEY		BY	DATE
NOTE BOOK NO.	SURVEYED		
	PLOTTED		
	TEMPLATE		
	AREAS		
	AREAS CHECKED		

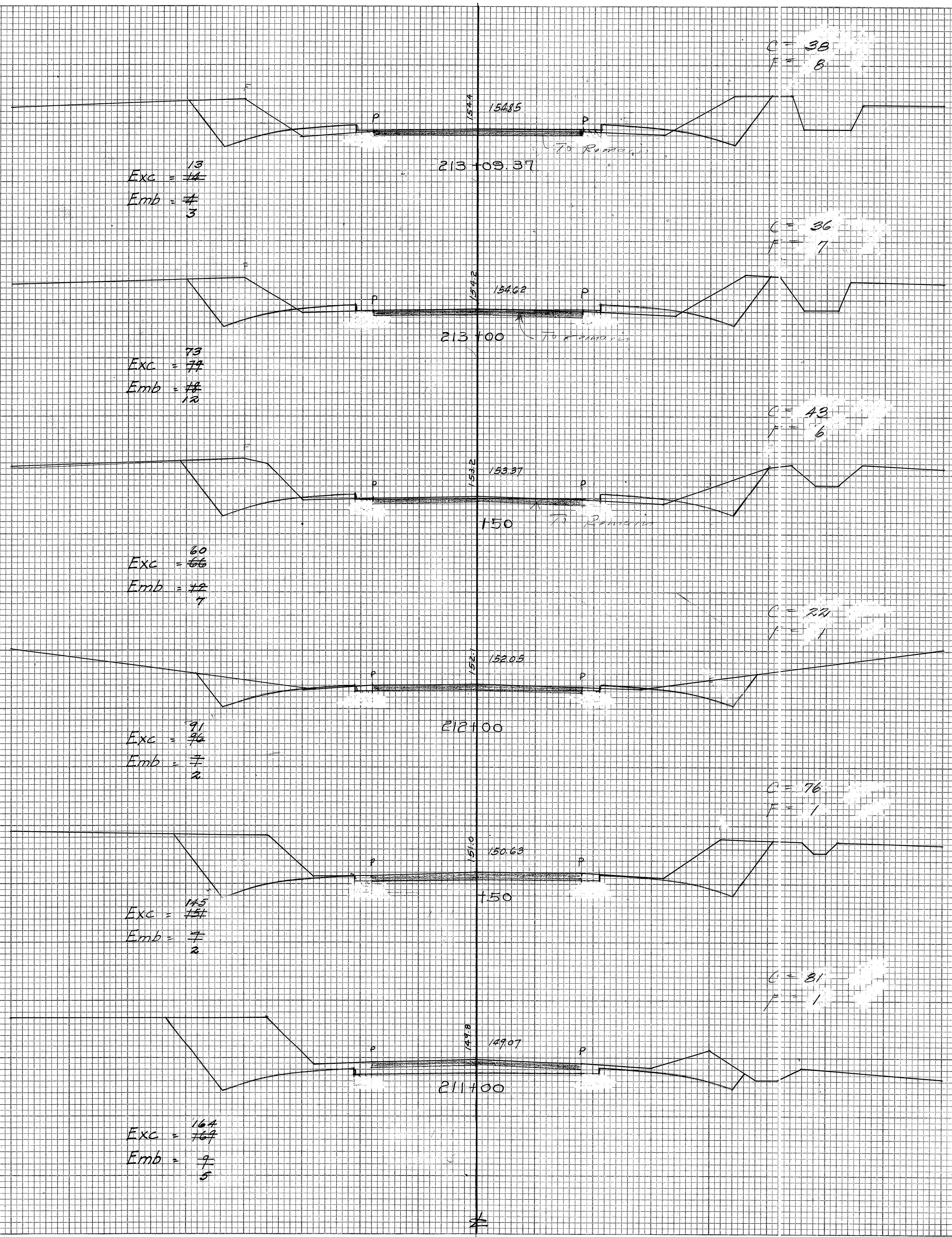
ORIGINAL SURVEY		BY	DATE
NOTE BOOK NO.	SURVEYED		
	PLOTTED		
	TEMPLATE		
	AREAS		
	AREAS CHECKED		

FEC
142.0
141.60
209+00
C = 87
F = 23
Exc = 140 ~~144~~
Emb = ~~46~~ 42
FEC
139.6
139.43
+50
C = 64
F = 22
Exc = 101 ~~105~~
Emb = ~~49~~ 45
FEC
137.1
137.13
208+00
C = 45
F = 27
Exc = 88 ~~92~~
Emb = ~~54~~ 50
FEC
134.7
134.70
+50
C = 50
F = 27
Exc = 114 ~~120~~
Emb = ~~31~~ 25
FEC
132.3
132.22
207+00
C = 73
F = 0
Exc = 167 ~~171~~
Emb = ~~24~~ 0
FEC
142.5
V O I D +90.4
FEC
148.3
147.38
+50
C = 96
F = 4
Exc = 175 ~~179~~
Emb = ~~15~~ 11
FEC
146.5
145.58
210+00
C = 93
F = 8
Exc = 167 ~~171~~
Emb = ~~40~~ 35
FEC
144.4
143.66
+50
C = 87
F = 30
Exc = 161 ~~167~~
Emb = ~~55~~ 49

PLATE 3 — CROSS SEC... E. STANDA...
KEUFFEL ... CO. ...
MADE IN U.S.A.

4449.64

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	4C	1938	65	75


C = 38
F = 8
F
154.4
154.85
P
P
To Remain
213+09.37
Exc = ~~14~~ 13
Emb = ~~4~~ 3
C = 36
F = 7
F
154.2
154.62
P
P
To Remain
213+00
Exc = ~~77~~ 73
Emb = ~~18~~ 12
C = 43
F = 6
F
153.2
153.37
P
P
To Remain
+50
Exc = ~~66~~ 60
Emb = ~~12~~ 7
C = 22
F = 1
152.1
152.05
P
P
212+00
Exc = ~~96~~ 91
Emb = ~~7~~ 2
C = 76
F = 1
151.0
150.63
P
P
+50
Exc = ~~151~~ 145
Emb = ~~7~~ 2
C = 81
F = 1
148.8
149.07
P
P
211+00
Exc = ~~167~~ 164
Emb = ~~9~~ 5
℄

FINAL SURVEY	BY	DATE
SURVEYED		
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		
NOTE BOOK NO.		

ORIGINAL SURVEY	BY	DATE
SURVEYED		
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		
NOTE BOOK NO.		

PLATE 3 – CROSS SECTION O. & R. E. STANDARD
KEUFFEL & ESSER CO. NEW YORK.
MADE IN U. S. A. 27188-3

4449.65

444965

Ex 895 546 4
Em 49 31 4

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
Hawaii	Haw	4-C	1938	66	75

FINAL SURVEY
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
NOTE BOOK
NO.
BY
DATE

ORIGINAL SURVEY
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
NOTE BOOK
NO.
BY
DATE

F.A.P. 4-C EWA CONNECTION

6+00
C = 1159 Ahead
C = 415 Behind
F = 0
BEHIND
AHEAD
See Next sheet
664
Exc = 2378 ~~2437~~
Emb = ~~78~~ 0
5+00
C = 789
F = 0
Exc = 2807 ~~2867~~
Emb = ~~78~~ 0
4+00
C = 727
F = 0
Exc = 546 ~~565~~
Emb = ~~36~~ 17
3+75
C = 1570
F = 36
Exc = 761 ~~776~~
Emb = ~~178~~ 150
3+00
C = 94
F = 12
Exc = 248
Emb = 200
2+00
C = 40
F = 36
Exc = 80 ~~104~~
Emb = ~~207~~ 169
1+00
C = 3
F = 85
Exc = 96 ~~157~~
Emb = ~~204~~ 126
0+00
C = 49
F = 13

PLATE 3—CROSS SECT... O. P. R. & ...E. STANDARD
KEUFFEL & ESSE... ...O., NEW Y...
MADE IN U. S. A. 27188-3

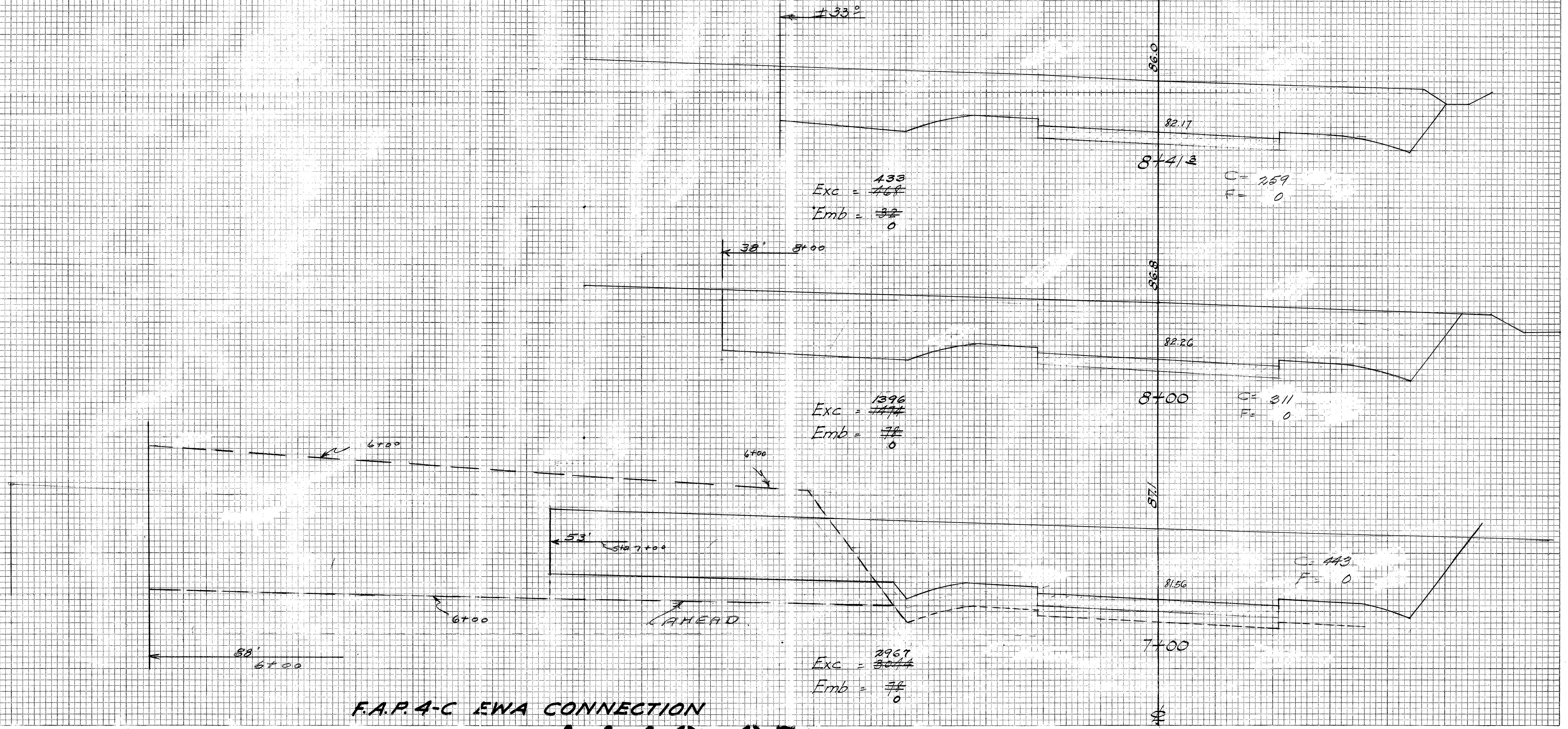
4449.66

4449.66

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	Haw	4C	1938	67	75

FINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK NO.	PLOTTED		
	TEMPLATE		
	AREAS		
	AREAS CHECKED		

ORIGINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK NO.	PLOTTED		
	TEMPLATE		
	AREAS		
	AREAS CHECKED		


±33'
86.0
82.17
8+41.3
Exc = 433 ~~468~~
Emb = ~~32~~ 0
C = 259
F = 0
38' 8+00
86.8
82.26
8+00
Exc = 1396 ~~1474~~
Emb = ~~78~~ 0
C = 311
F = 0
6+00
6+00
87.1
53' Sta 7+00
81.56
C = 443
F = 0
6+00
AHEAD
7+00
88' 6+00
Exc = 2967 ~~3044~~
Emb = ~~78~~ 0
℄

F.A.P. 4-C EWA CONNECTION

PLATE 3 – CROSS SECT[illegible] E. STANDA[illegible]
KEUFFEL & ES[illegible] CO., N[illegible]
MADE IN U.S.A. 27128-3

4449.67

1449.67

℄ ~~4596~~ 4796
℄ ~~188~~ 0