FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F.A.S. 2A(1)	1938	31	58

FINAL SURVEY
NOTE BOOK
NO.

	BY	DATE
SURVEYED	B.K.	Feb. 1939
PLOTTED	H.H.	"
TEMPLATE	H.H.	"
AREAS	H.H.	"
AREAS CHECKED		

ORIGINAL SURVEY
NOTE BOOK
NO.

	BY	DATE
SURVEYED		
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		

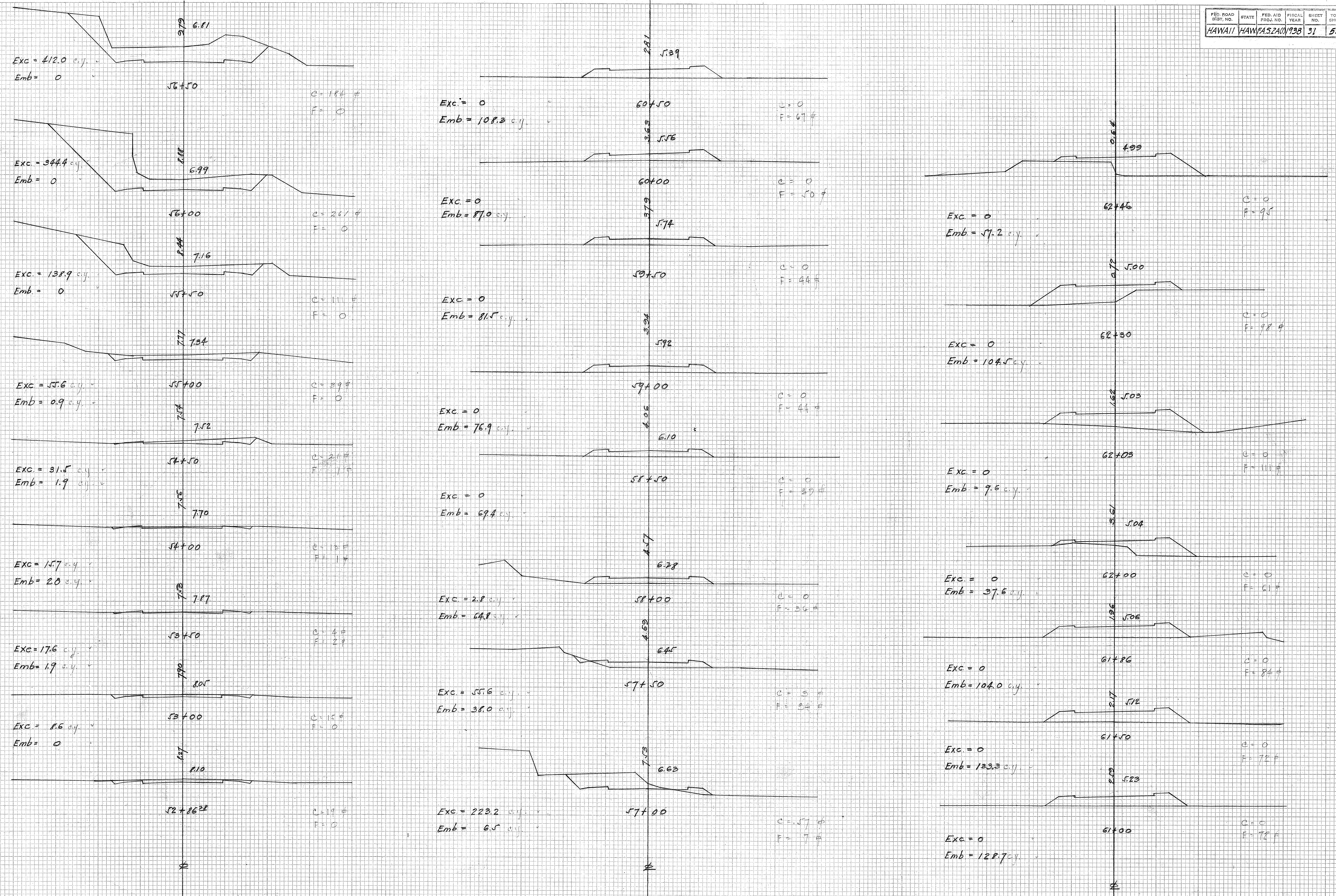

2.79
6.81
Exc = 412.0 c.y.
Emb = 0
56+50
C = 184 #
F = 0
8.88
6.99
Exc. = 344.4 c.y.
Emb. = 0
56+00
C = 261 #
F = 0
8.44
7.16
Exc. = 138.9 c.y.
Emb. = 0
55+50
C = 111 #
F = 0
7.77
7.34
Exc = 55.6 c.y.
Emb = 0.9 c.y.
55+00
C = 39 #
F = 0
7.54
7.52
54+50
Exc. = 31.5 c.y.
Emb = 1.9 c.y.
C = 21 #
F = 1 #
7.56
7.70
54+00
C = 13 #
F = 1 #
Exc = 15.7 c.y.
Emb = 2.8 c.y.
7.73
7.87
53+50
C = 4 #
F = 2 #
Exc = 17.6 c.y.
Emb = 1.9 c.y.
7.90
8.05
53+00
C = 15 #
F = 0
Exc = 8.6 c.y.
Emb = 0
8.27
8.10
52+86.28
C = 19 #
F = 0
℄
2.81
5.39
Exc. = 0
Emb = 108.3 c.y.
60+50
C = 0
F = 67 #
3.63
5.56
60+00
C = 0
F = 50 #
Exc. = 0
Emb. = 87.0 c.y.
3.79
5.74
59+50
C = 0
F = 44 #
Exc = 0
Emb = 81.5 c.y.
3.94
5.92
59+00
C = 0
F = 44 #
Exc. = 0
Emb. = 76.9 c.y.
4.06
6.10
58+50
C = 0
F = 39 #
Exc. = 0
Emb = 69.4 c.y.
4.57
6.28
Exc. = 2.8 c.y.
Emb. = 64.8 c.y.
58+00
C = 0
F = 36 #
4.69
6.45
57+50
Exc. = 55.6 c.y.
Emb = 38.0 c.y.
C = 3 #
F = 34 #
7.53
6.63
Exc = 223.2 c.y.
Emb = 6.5 c.y.
57+00
C = 57 #
F = 7 #
℄
0.64
4.99
62+46
C = 0
F = 95
Exc. = 0
Emb. = 57.2 c.y.
0.72
5.00
C = 0
F = 98 #
62+30
Exc = 0
Emb = 104.5 c.y.
1.62
5.03
62+03
C = 0
F = 111 #
Exc. = 0
Emb. = 9.6 c.y.
3.61
5.04
Exc. = 0
Emb = 37.6 c.y.
62+00
C = 0
F = 61 #
1.96
5.06
61+86
C = 0
F = 84 #
Exc = 0
Emb = 104.0 c.y.
2.17
5.12
61+50
Exc. = 0
Emb = 133.3 c.y.
C = 0
F = 72 #
2.59
5.23
61+00
C = 0
F = 72 #
Exc = 0
Emb = 128.7 c.y.
℄

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

4477.31

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F.A.S.2A(1)	1938	32	58

FINAL SURVEY		BY	DATE
NOTE BOOK	SURVEYED	B.K.	Feb. 1939
NO.	PLOTTED	H.H.	
	TEMPLATE	H.H.	
	AREAS	H.H.	
	AREAS CHECKED		

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

3.53
5.23
64+52
Exc. = 0
Emb. = 51.0 c.y.
C = 0
F = 84 #
3.34
5.18
64+34
C = 0
F = 69 #
Exc. = 0
Emb. = 68.9 c.y.
3.28
5.13
64+10
Exc. = 0
Emb. = 64.4 c.y.
C = 0
F = 86 #
3.04
5.09
63+91
C = 0
F = 97 #
Exc. = 0
Emb. = 87.0 c.y.
0.59
5.06
63+66
C = 0
F = 91
Exc. = 0
Emb. = 81.9 c.y.
0.66
5.03
63+44
C = 0
F = 110 #
Exc. = 0
Emb. = 112.4 c.y.
3.21
5.00
63+07
C = 0
F = 54 #
Exc. = 0
Emb. = 102.8 c.y.
3.44
4.99
62+70
C = 0
F = 96
Exc. = 0
Emb. = 84.9 c.y.
℄
5.20
6.44
C = 0
F = 28 #
67+50
Exc. = 3.7 c.y.
Emb. = 36.1 c.y.
5.55
6.23
C = 4 #
F = 11 #
67+00
Exc. = 3.7
Emb. = 52.8 c.y.
4.87
6.01
C = 0
F = 46 #
66+50
Exc. = 0
Emb. = 80.6 c.y.
4.22
5.80
66+00
C = 0
F = 41
Exc = 0
Emb. = 111.1 c.y.
2.60
5.58
C = 0
F = 79
65+50
Exc. = 0
Emb. = 75.0 c.y.
3.47
5.47
65+25
C = 0
F = 83
Exc. = 0.9 c.y.
Emb. = 94.2 c.y.
4.07
5.31
64+80
C = 1 #
F = 30 #
Exc = 0.5 c.y.
Emb = 59.1 c.y.
℄
15.74
7.95
71+00
Exc. = 40.9 c.y.
Emb. = 34.5 c.y.
C = 0
F = 77
9.48
7.86
70+77
C = 96
F = 4
Exc = 48.0 c.y.
Emb = 27.0 c.y.
5.65
7.74
70+50
C = 0
F = 50
Exc. = 0
Emb. = 88.9 c.y.
5.37
7.52
70+00
C = 0
F = 46
Exc. = 0
Emb. = 82.4 c.y.
5.27
7.30
69+50
C = 0
F = 43 #
Exc = 0
Emb. = 90.7 c.y.
4.62
7.09
69+00
C = 0
F = 55 #
Exc. = 0
Emb. = 100.9 c.y.
4.83
6.87
68+50
C = 0
F = 54 #
Exc. = 1.9 c.y.
Emb. = 88.9 c.y.
4.00
6.66
68+00
C = 2 #
F = 42 #
Exc. = 1.9 c.y.
Emb = 64.8 c.y.
℄

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

MADE IN U. S. A. 27188-3

4477.32

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F.A.S. 2A(1)	1938	33	58

FINAL SURVEY	BY	DATE
SURVEYED	B. K.	Feb 1939
PLOTTED	H. H.	"
TEMPLATE	H. H.	"
AREAS	H. H.	"
AREAS CHECKED		
NOTE BOOK NO.		

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

19.16
9.24
74+00
Exc. = 1017.6 c.y.
Emb. = 0
C = 480 #
F = 0
22.02
9.03
73+50
Exc. = 531.5 c.y.
Emb. = 0
C = 619 #
F = 0
20.35
8.92
73+25
Exc. = 334.8 c.y.
Emb. = 0
C = 539 #
F = 0
14.56
8.83
℄ stream
channel Exc
73+05
channel Exc
Exc. = 896.3 c.y.
Emb. = 0
C = 375 #
F = 0
19.56
8.60
72+50
Exc. = 976.9 c.y.
Emb. = 0
C = 505 #
F = 0
19.75
8.38
72+00
Exc. = 912.0 c.y.
Emb. = 0
C = 550 #
F = 0
17.70
8.17
71+50
Exc. = 402.8 c.y.
Emb. = 71.3 c.y.
C = 435 #
F = 0
℄
8.17
11.18
78+50
Exc = 0
Emb. = 126.9 c.y.
C = 0
F = 61 #
8.15
10.97
78+00
Exc. = 0
Emb. = 144.4 c.y.
C = 0
F = 76 #
8.22
10.75
77+50
Exc. = 0
Emb. = 145.4 c.y.
C = 0
F = 80 #
8.05
10.54
77+00
Exc. = 0
Emb. = 148.2 c.y.
C = 0
F = 77 #
7.05
10.32
76+50
Exc. = 0
Emb. = 143.5 c.y.
C = 0
F = 83 #
7.15
10.11
76+00
Exc. = 0
Emb. = 116.7 c.y.
C = 0
F = 72 #
7.14
9.89
75+50
Exc. = 0.9 c.y.
Emb. = 59.3 c.y.
C = 0
F = 54 #
8.46
9.67
75+00
Exc. = 257.4 c.y.
Emb. = 9.3 c.y.
C = 1 #
F = 10 #
15.28
9.46
74+50
Exc. = 700.9 c.y.
Emb. = 0
C = 277 #
F = 0
℄
13.23
12.69
82+00
Exc. = 55.6
Emb. = 0
C = 28
F = 0
13.61
12.48
81+50
Exc. = 60.2 c.y.
Emb. = 2.8 c.y.
C = 32 #
F = 0
13.35
12.26
81+00
Exc. = 20.2 c.y.
Emb. = 33.0 c.y.
C = 33 #
F = 3 #
9.71
12.12
80+67
℄ str.
Exc. = 3.1 c.y.
Emb. = 16.0 c.y.
C = 0
F = 51 #
11.70
12.05
80+50
Exc. = 9.3 c.y.
Emb. = 45.4 c.y.
C = 10 #
F = 0
11.19
11.83
80+00
Exc. = 0
Emb. = 89.8 c.y.
C = 0
F = 49 #
9.68
11.61
79+50
Exc. = 0
Emb. = 84.3 c.y.
C = 0
F = 48 #
9.31
11.14
79+00
Exc. = 0
Emb. = 96.3 c.y.
C = 0
F = 43 #
℄

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

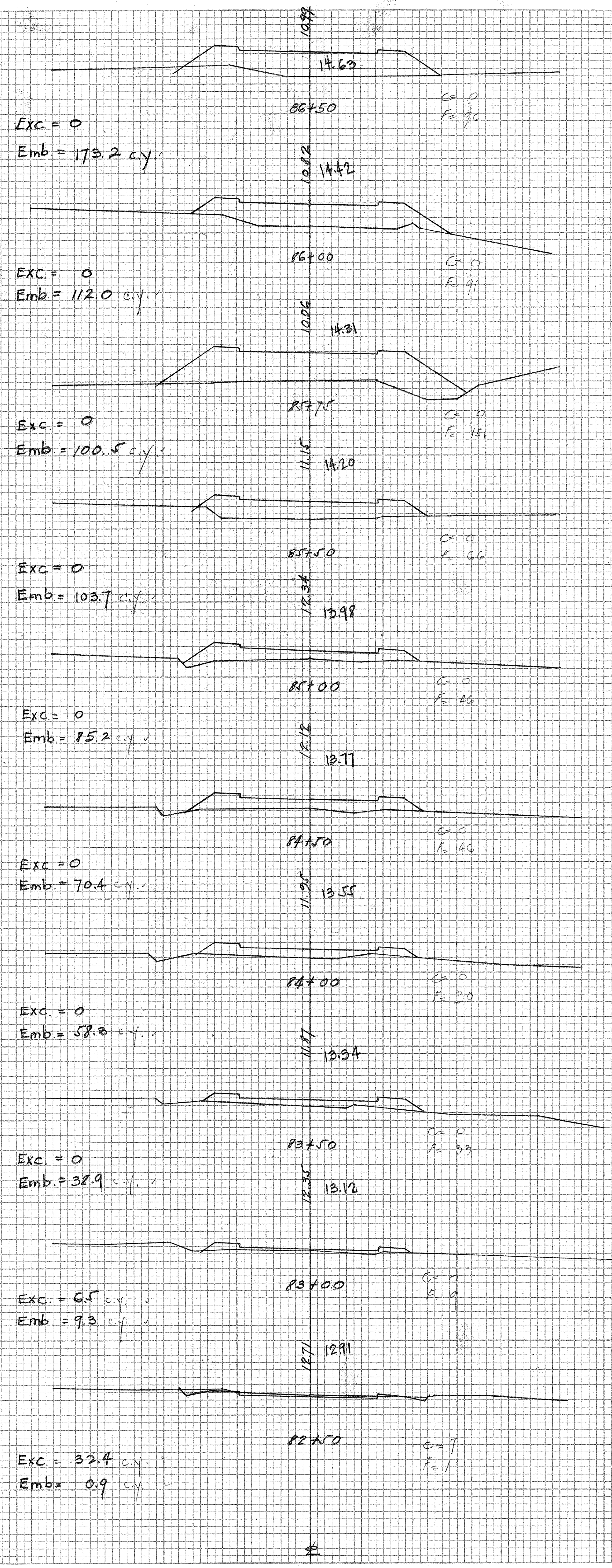
MADE IN U. S. A. 27188-3

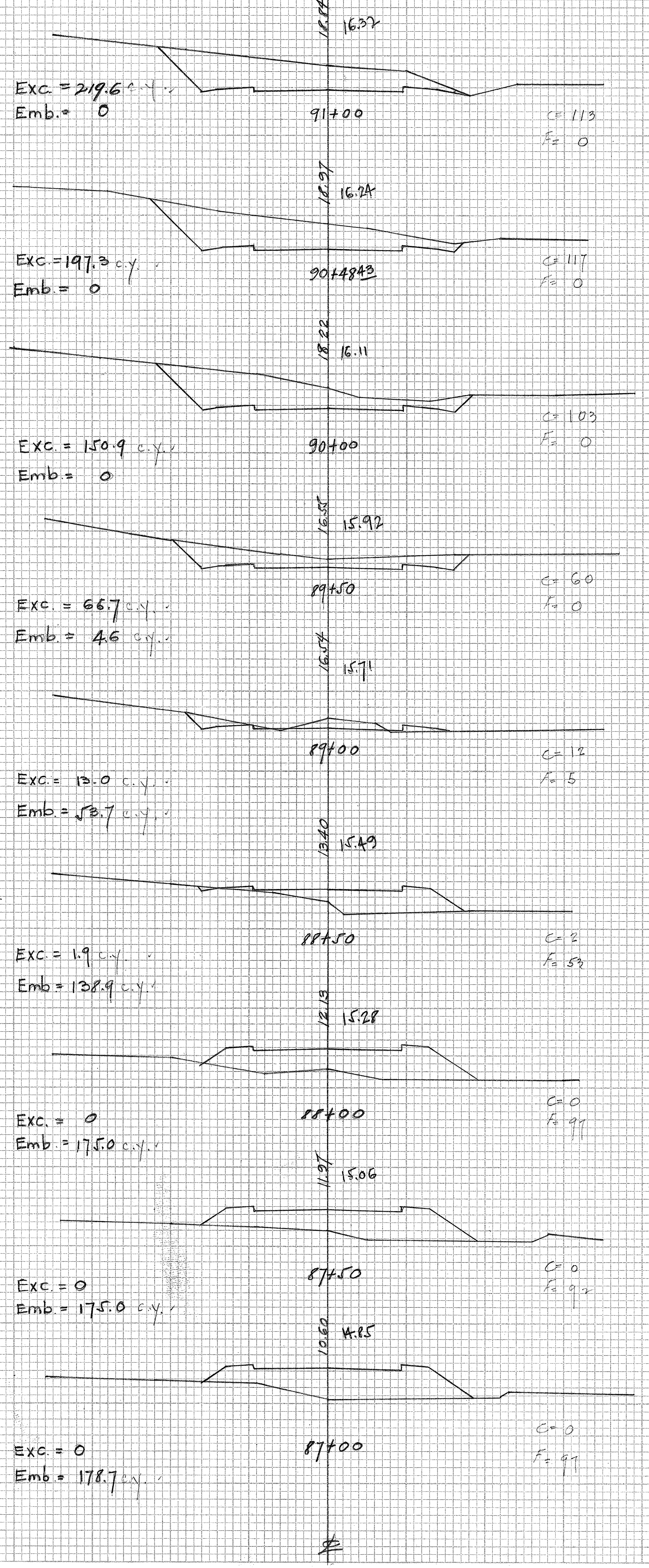
4477.33

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F.A.S. 2A(1)	1938	34	58

FINAL SURVEY		BY	DATE
NOTE BOOK	SURVEYED	B. K.	Feb 1939
NO.	PLOTTED	H. H.	"
	TEMPLATE	H. H.	"
	AREAS	J. A.	
	AREAS CHECKED		

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


10.99
14.63
86+50
C= 0
F= 96
Exc = 0
Emb. = 173.2 c.y. ✓
10.82
14.42
86+00
C= 0
F= 91
EXC. = 0
Emb = 112.0 c.y. ✓
10.06
14.31
85+75
C= 0
F= 151
Exc. = 0
Emb. = 100.5 c.y. ✓
11.15
14.20
85+50
C= 0
F= 66
Exc = 0
Emb. = 103.7 c.y. ✓
12.34
13.98
85+00
C= 0
F= 46
Exc. = 0
Emb. = 85.2 c.y. ✓
12.12
13.77
84+50
C= 0
F= 46
Exc = 0
Emb. = 70.4 c.y. ✓
11.95
13.55
84+00
C= 0
F= 30
Exc. = 0
Emb. = 58.8 c.y. ✓
11.87
13.34
83+50
C= 0
F= 33
Exc. = 0
Emb. = 38.9 c.y. ✓
12.35
13.12
83+00
C= 0
F= 9
Exc. = 6.5 c.y. ✓
Emb = 9.3 c.y. ✓
12.71
12.91
82+50
C= 7
F= 1
Exc. = 32.4 c.y. ✓
Emb= 0.9 c.y. ✓
℄


18.84
16.32
91+00
C= 113
F= 0
Exc. = 219.6 c.y. ✓
Emb. = 0
18.97
16.24
90+48.43
C= 117
F= 0
Exc. = 197.3 c.y. ✓
Emb. = 0
18.22
16.11
90+00
C= 103
F= 0
Exc. = 150.9 c.y. ✓
Emb. = 0
16.55
15.92
89+50
C= 60
F= 0
Exc. = 66.7 c.y. ✓
Emb. = 4.6 c.y. ✓
16.54
15.71
89+00
C= 12
F= 5
Exc. = 13.0 c.y. ✓
Emb. = 53.7 c.y. ✓
13.40
15.49
88+50
C= 2
F= 53
Exc. = 1.9 c.y. ✓
Emb = 138.9 c.y. ✓
12.13
15.28
88+00
C= 0
F= 97
Exc. = 0
Emb. = 175.0 c.y. ✓
11.97
15.06
87+50
C= 0
F= 92
Exc. = 0
Emb. = 175.0 c.y. ✓
10.60
14.85
87+00
C= 0
F= 97
Exc. = 0
Emb = 178.7 c.y. ✓
℄

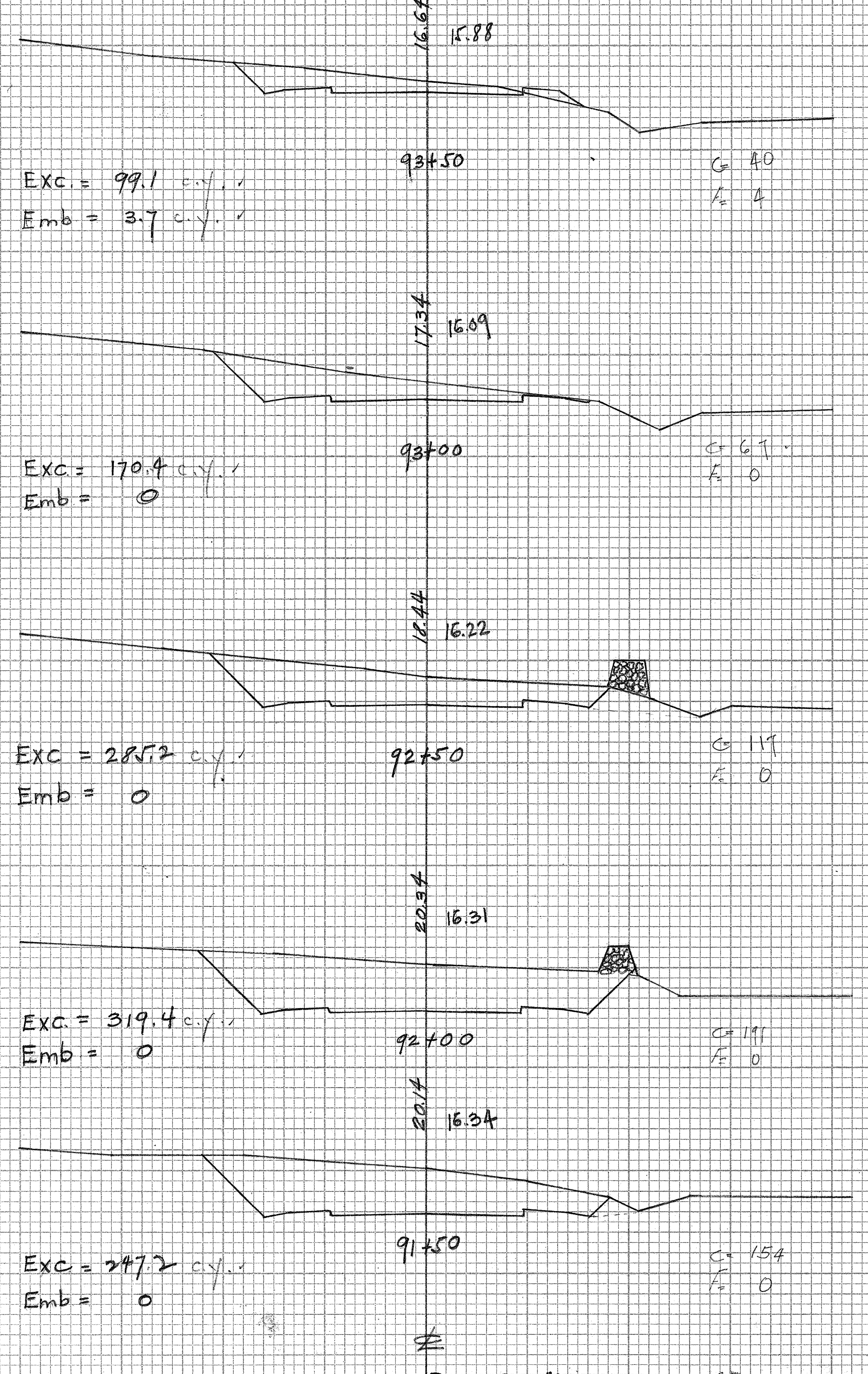

16.64
15.88
93+50
C= 40
F= 4
Exc. = 99.1 c.y. ✓
Emb = 3.7 c.y. ✓
17.34
16.09
93+00
C= 67
F= 0
Exc. = 170.4 c.y. ✓
Emb = 0
18.44
16.22
92+50
C= 117
F= 0
Exc = 285.2 c.y. ✓
Emb = 0
20.34
16.31
92+00
C= 191
F= 0
Exc. = 319.4 c.y. ✓
Emb = 0
20.14
16.34
91+50
C= 154
F= 0
Exc = 247.2 c.y. ✓
Emb = 0
℄

PLATE 3 — CROSS SECTION O. P. R. & R. E. STANDARD
KEUFFEL & ESSER CO., NEW YORK.
MADE IN U.S.A. 87195-E

4477.34

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	F.A.S. 2-A (1)	1938	35	58

FINAL SURVEY	BY	DATE
SURVEYED		
PLOTTED		April
TEMPLATE	H.Hayashi	1938
AREAS	|	
AREAS CHECKED	F de Mello.	
NOTE BOOK NO.		

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

13.34
12.67
98 + 50
Exc = 55.6
Emb = 5.6
C = 28
F = 6
13.64
13.00
98 + 00
Exc = 60.2
Emb = 0
C = 32
F = 0
13.54
13.33
97 + 50
Exc = 38.9
Emb = 3.7
C = 33
F = 0
13.04
13.67
97 + 00
Exc = 8.3
Emb = 24.1
C = 9
F = 4
12.34
14.00
96 + 50
Exc = 0
Emb = 64.8
C = 0
F = 22
11.74
14.33
96 + 00
Exc = 0
Emb = 63.0
C = 0
F = 48
14.04
14.67
95 + 50
Exc = 3.7
Emb = 36.1
C = 0
F = 20
14.84
15.00
95 + 00
Exc = 3.7
Emb = 55.6
C = 4
F = 19
13.94
15.33
94 + 50
Exc = 3.7
Emb = 65.7
C = 0
F = 41
14.14
15.63
94 + 00
Exc = 40.7 c.y.
Emb = 31.5 c.y.
C = 4
F = 30
C = 45
F = 3
℄
7.71
9.36
103 + 50
Exc = 0
Emb = 104.6
C = 0
F = 50
7.46
9.67
103 + 00
Exc = 0
Emb = 117.6
C = 0
F = 63
7.93
10.00
102 + 50
Exc = 0
Emb = 111.1
C = 0
F = 64
8.13
10.33
102 + 00
Exc = 0
Emb = 97.6
C = 0
F = 56
8.73
10.67
101 + 50
Exc = 0
Emb = 65.7
C = 0
F = 44
9.83
11.00
101 + 00
Exc = 22.2
Emb = 27.8
C = 0
F = 27
11.43
11.33
100 + 50
Exc = 67.6
Emb = 2.8
C = 24
F = 3
12.73
11.67
100 + 00
Exc = 81.5
Emb = 1.9
C = 49
F = 0
12.88
12.00
99 + 50
Exc = 63.0
Emb = 8.3
C = 39
F = 2
12.94
12.33
99 + 00
Exc = 52.8
Emb = 12.0
C = 29
F = 7
7.41
9.13
107 + 00
Exc = 0
Emb = 75.9
C = 0
F = 45
7.31
8.96
106 + 50
Exc = 0
Emb = 64.8
C = 0
F = 37
7.31
8.87
106 + 00
Exc = 0
Emb = 39.4
C = 0
F = 33
6.51
8.84
105 + 75
Exc = 0
Emb = 100.0
C = 0
F = 52
3.61
8.83
105 + 50
C = 0
F = 164
Exc = 0
Emb = 80.9
3.51
8.83
Bridge No 1
105+30 - 105+50
105 + 37
C = 0
F = 172
Exc = 0
Emb = 72.2
3.61
8.83
105 + 30
C = 0
F = 153
Exc = 0
Emb = 140.6
5.81
8.86
105 + 00
C = 0
F = 100
Exc = 0
Emb = 150.9
6.41
8.97
104 + 50
C = 0
F = 63
Exc = 0
Emb = 109.3
6.81
9.13
104 + 00
C = 0
F = 55
Exc = 0
Emb = 97.2

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

MADE IN U. S. A. 27188-3

4477.35

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F.A.S.2-A(1)	1938	36	58

FINAL SURVEY	BY	DATE
SURVEYED		April 1938
PLOTTED		
TEMPLATE	H. Hayashi	
AREAS	H. Hayashi	
AREAS CHECKED	F. de Mello.	
NOTE BOOK NO.		

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

9.65
10.11
110 + 50
Exc = 30.6
Emb = 15.7
C = 14
F = 12
10.35
10.46
110 + 00
Exc = 60.7
Emb = 4.6
C = 19
F = 5
11.65
10.53
109 + 50
Exc = 139.8
Emb = 0
C = 46
F = 0
12.25
10.33
109 + 00
Exc = 343.5
Emb = 0
C = 105
F = 0
15.96
10.00
108 + 50
C = 266
F = 0
Exc = 241.0
Emb = 0
17.26
9.84
108 + 27.41
C = 310
F = 0
Exc = 281.7
Emb = 0
15.96
9.66
108 + 00
C = 245
F = 0
Exc = 263.0
Emb = 1.9
10.01
9.37
107 + 50
Exc = 36.1
Emb = 43.5
C = 39
F = 2
5.21
8.00
114 + 80
C = 0
F = 76
Exc = 0
Emb = 11.4
6.31
8.00
114 + 75
C = 0
F = 47
Exc = 1.9
Emb = 75.0
7.31
8.00
114 + 50
C = 4
F = 9
Exc = 25.0
Emb = 9.3
8.91
8.00
114 + 00
C = 23
F = 1
Exc = 54.6
Emb = 0.9
8.61
8.00
113 + 50
C = 36
F = 0
Exc = 75.0
Emb = 0.9
9.01
8.00
113 + 00
C = 45
F = 1
Exc = 104.6
Emb = 0.9
9.81
8.09
112 + 50
C = 68
F = 0
Exc = 148.2
Emb = 0
9.99
8.37
112 + 00
C = 92
F = 0
Exc = 153.7
Emb = 0
10.19
8.84
111 + 50
C = 74
F = 0
Exc 98.2
Emb = 0
9.85
9.50
111 + 00
C = 32
F = 0
Exc = 42.6
Emb = 11.1
6.22
9.55
119 + 00
Exc = 0
Emb = 163.9
C = 0
F = 109
6.92
9.39
118 + 50
C = 0
F = 68
Exc = 0
Emb = 92.6
7.12
9.00
118 + 00
C = 0
F = 32
Exc = 0
Emb = 47.2
7.62
8.56
117 + 50
C = 0
F = 19
Exc = 13.0
Emb = 31.5
7.02
8.25
117 + 00
C = 14
F = 15
Exc = 15.7
Emb = 33.3
6.52
8.06
116 + 50
C = 3
F = 21
Exc = 53.7
Emb = 23.2
9.41
8.00
116 + 00
C = 55
F = 4
Exc = 83.3
Emb = 3.7
8.81
8.00
115 + 50
C = 35
F = 0
Exc = 60.2
Emb = 0
8.81
8.00
115 + 00
C = 30
F = 0
Exc = 10.7
Emb = 0
8.61
8.00
114 + 90
C = 28
F = 0
Exc = 5.2
Emb = 14.1

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

4477.36

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	FAS 2-A(1)	1938	37	58

FINAL SURVEY		BY	DATE
NOTE BOOK	SURVEYED		April 1938
	PLOTTED		
	TEMPLATE	H. Hayashi	
NO.	AREAS		
	AREAS CHECKED	F. de Mello	

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

5.12
6.20
124+00
C = 0
F = 5
Exc = 0
Emb = 14.8
5.32
6.45
123+50
C = 0
F = 11
Exc = 0
Emb = 33.3
5.32
6.80
123+00
C = 0
F = 25
Exc = 0
Emb = 51.9
5.12
7.20
122+50
C = 0
F = 31
Exc = 0
Emb = 63.9
5.32
7.60
122+00
C = 0
F = 38
Exc = 0
Emb = 72.2
5.72
8.00
121+50
C = 0
F = 40
Exc = 0
Emb = 90.7
5.82
8.40
121+00
C = 0
F = 58
Exc = 0
Emb = 109.3
6.22
8.80
120+50
C = 0
F = 60
Exc = 0
Emb = 131.5
6.42
9.20
120+00
C = 0
F = 82
Exc = 0
Emb = 155.6
6.42
9.49
119+50
C = 0
F = 86
Exc = 0
Emb = 180.6
6.12
6.80
129+00
C = 1
F = 10
Exc = 0.9
Emb = 20.4
5.62
6.45
128+50
C = 0
F = 12
Exc = 2.8
Emb = 14.8
5.82
6.20
128+00
C = 3
F = 4
Exc = 2.8
Emb = 10.2
5.42
6.05
127+50
C = 0
F = 7
Exc = 0
Emb = 37.0
4.32
6.00
127+00
C = 0
F = 33
Exc = 0
Emb = 70.4
4.12
6.00
126+50
C = 0
F = 43
Exc = 0
Emb = 66.7
4.02
6.00
126+00
C = 0
F = 29
Exc = 0
Emb = 50.0
4.42
6.00
125+50
C = 0
F = 25
Exc = 0
Emb = 39.8
4.82
6.00
125+00
C = 0
F = 18
Exc = 0
Emb = 25.9
5.12
6.05
124+50
C = 0
F = 10
Exc = 0
Emb = 13.9
4.85
7.69
130+75
C = 0
F = 52
Exc = 0
Emb = 13.7
5.70
7.66
130+67.88
C = 0
F = 52
Exc = 0
Emb = 7.6
6.42
7.66
130+63
C = 0
F = 32
Exc = 0
Emb = 19.3
5.73
7.63
130+50
C = 0
F = 48
Exc = 0
Emb = 6.6
5.42
7.62
130+47
C = 0
F = 70
Exc = 0
Emb = 8.5
2.62
7.61
130+45
C = 0
F = 160
Exc = 0
Emb = 78.1
3.02
7.56
130+30
C = 0
F = 121
Exc = 0
Emb = 24.4
5.52
7.53
130+22
C = 0
F = 54
Exc = 0
Emb = 34.2
5.72
7.43
130+00
C = 0
F = 30
Exc = 0
Emb = 36.1
6.42
7.16
129+50
C = 0
F = 9
Exc = 0.9
Emb = 17.6
℄

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

4477.37

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	F.A.S. 2-A (1)	1938	38	58

FINAL SURVEY
NOTE BOOK
NO.

	BY	DATE
SURVEYED		April 1938
PLOTTED	H. Hayashi	
TEMPLATE	H. Hayashi	
AREAS	F. de Mello	
AREAS CHECKED		

ORIGINAL SURVEY
NOTE BOOK
NO.

	BY	DATE
SURVEYED		
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		

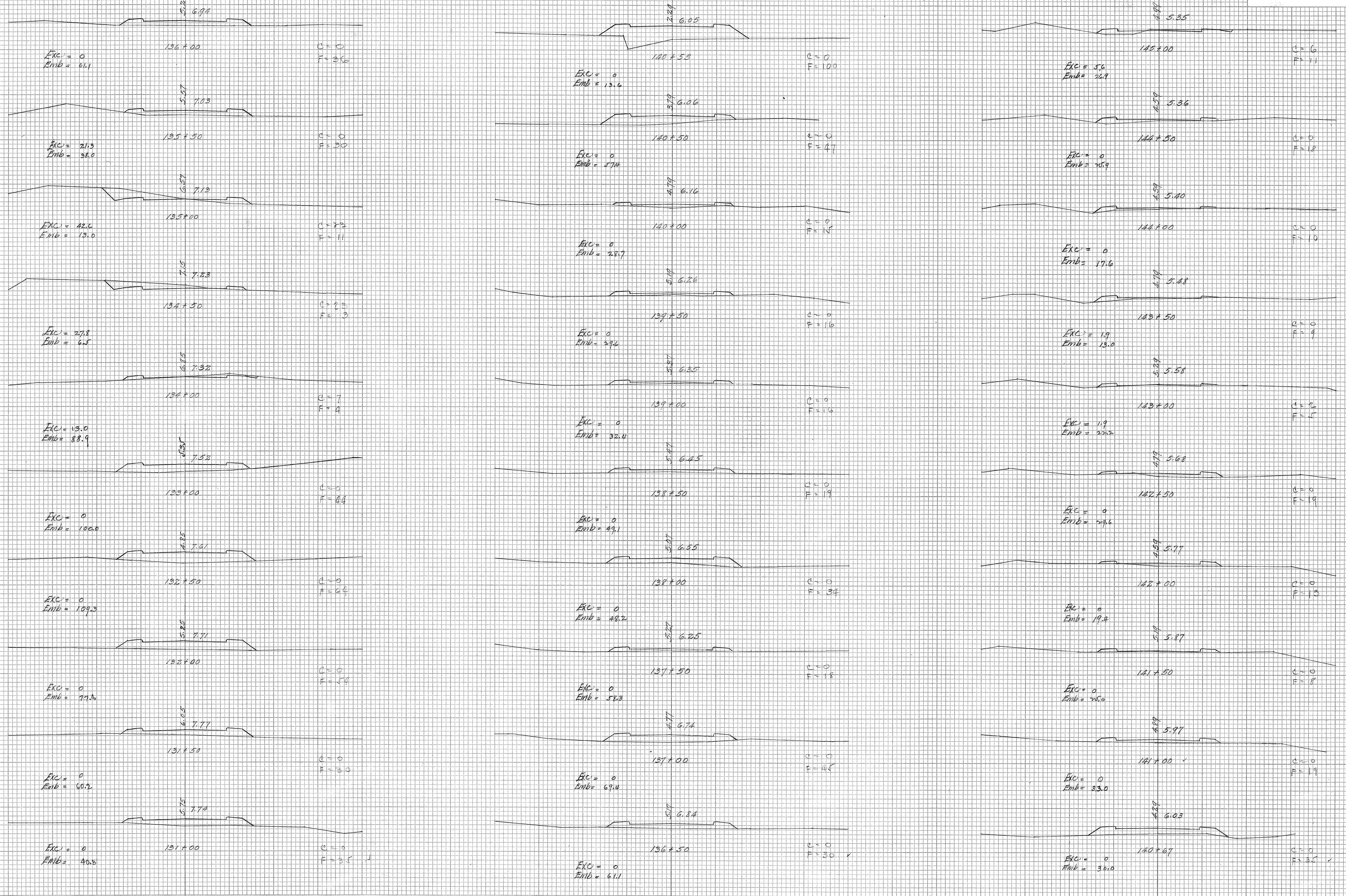

5.27
6.94
136+00
Exc = 0
Emb = 61.1
C = 0
F = 36
5.57
7.03
135+50
Exc = 21.3
Emb = 38.0
C = 0
F = 30
6.57
7.13
135+00
Exc = 42.6
Emb = 13.0
C = 23
F = 11
7.15
7.23
134+50
Exc = 27.8
Emb = 6.5
C = 23
F = 3
6.85
7.32
134+00
Exc = 13.0
Emb = 88.9
C = 7
F = 4
5.35
7.52
133+00
Exc = 0
Emb = 100.0
C = 0
F = 44
4.85
7.61
132+50
Exc = 0
Emb = 109.3
C = 0
F = 64
5.25
7.71
132+00
Exc = 0
Emb = 77.8
C = 0
F = 54
6.05
7.77
131+50
Exc = 0
Emb = 60.2
C = 0
F = 30
5.75
7.74
131+00
Exc = 0
Emb = 40.3
C = 0
F = 35
2.29
6.05
140+55
Exc = 0
Emb = 13.6
C = 0
F = 100
3.79
6.06
140+50
Exc = 0
Emb = 57.4
C = 0
F = 47
4.79
6.16
140+00
Exc = 0
Emb = 28.7
C = 0
F = 15
5.19
6.26
139+50
Exc = 0
Emb = 29.6
C = 0
F = 16
5.27
6.35
139+00
Exc = 0
Emb = 32.4
C = 0
F = 16
5.47
6.45
138+50
Exc = 0
Emb = 49.1
C = 0
F = 19
5.07
6.55
138+00
Exc = 0
Emb = 48.2
C = 0
F = 34
5.27
6.25
137+50
Exc = 0
Emb = 58.3
C = 0
F = 18
4.77
6.74
137+00
Exc = 0
Emb = 69.4
C = 0
F = 45
5.17
6.84
136+50
Exc = 0
Emb = 61.1
C = 0
F = 30
4.99
5.35
145+00
Exc = 5.6
Emb = 26.9
C = 6
F = 11
4.59
5.36
144+50
Exc = 0
Emb = 25.9
C = 0
F = 18
4.59
5.40
144+00
Exc = 0
Emb = 17.6
C = 0
F = 10
4.79
5.48
143+50
Exc = 1.9
Emb = 13.0
C = 0
F = 9
5.29
5.58
143+00
Exc = 1.9
Emb = 22.2
C = 2
F = 5
4.79
5.68
142+50
Exc = 0
Emb = 29.6
C = 0
F = 19
4.59
5.77
142+00
Exc = 0
Emb = 19.4
C = 0
F = 13
5.19
5.87
141+50
Exc = 0
Emb = 25.0
C = 0
F = 8
4.89
5.97
141+00
Exc = 0
Emb = 33.0
C = 0
F = 19
4.29
6.03
140+67
Exc = 0
Emb = 30.0
C = 0
F = 35

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

MADE IN U. S. A. 27188-3

4477.38

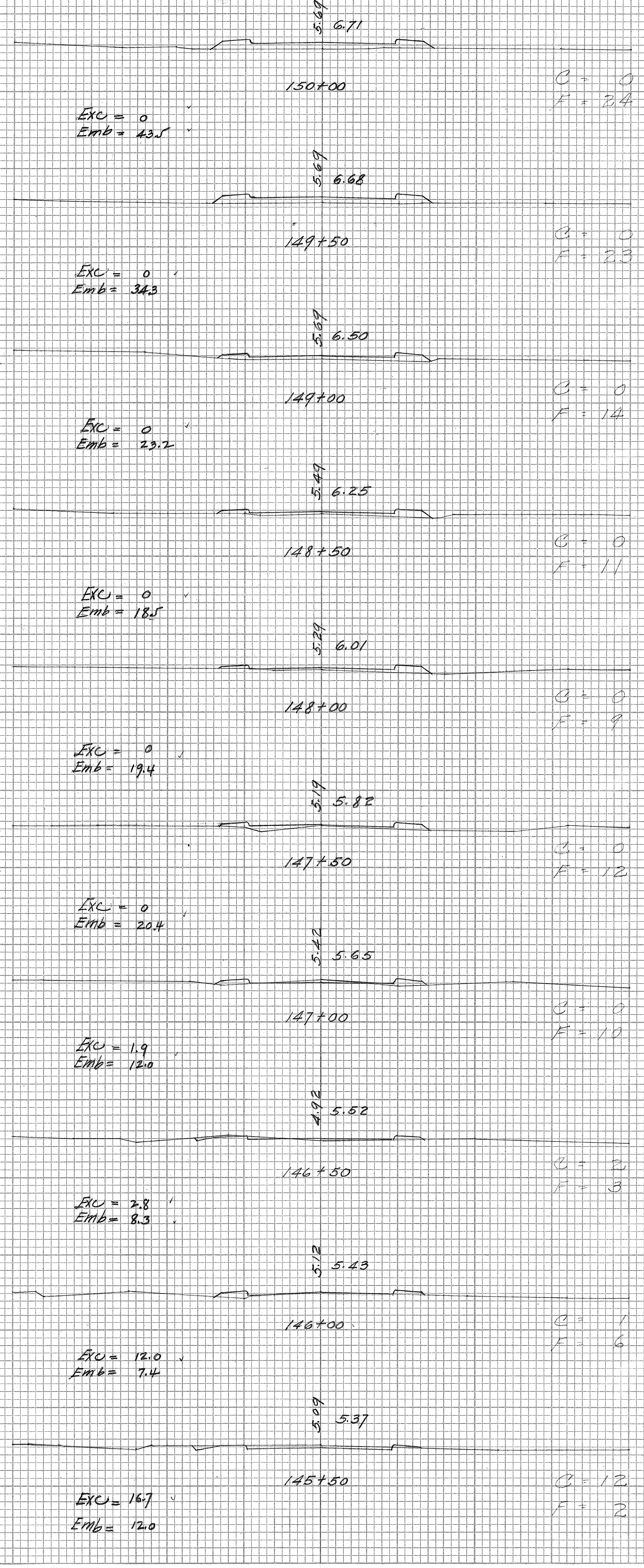
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	F.A.S. 2-A (1)	1938	39	58

FINAL SURVEY	BY	DATE
SURVEYED		
PLOTTED		April 1938
TEMPLATE	H. Hayashi	
AREAS		
AREAS CHECKED	F. de Mello	

NOTE BOOK NO.

ORIGINAL SURVEY	BY	DATE
SURVEYED		
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		

NOTE BOOK NO.


5.69
6.71
5.69
6.68
5.69
6.50
5.49
6.25
5.29
6.01
5.19
5.82
5.42
5.65
4.92
5.52
5.12
5.43
5.09
5.37

150+00
C = 0
F = 24
Exc = 0
Emb = 43.5

149+50
C = 0
F = 23
Exc = 0
Emb = 34.3

149+00
C = 0
F = 14
Exc = 0
Emb = 23.2

148+50
C = 0
F = 11
Exc = 0
Emb = 18.5

148+00
C = 0
F = 9
Exc = 0
Emb = 19.4

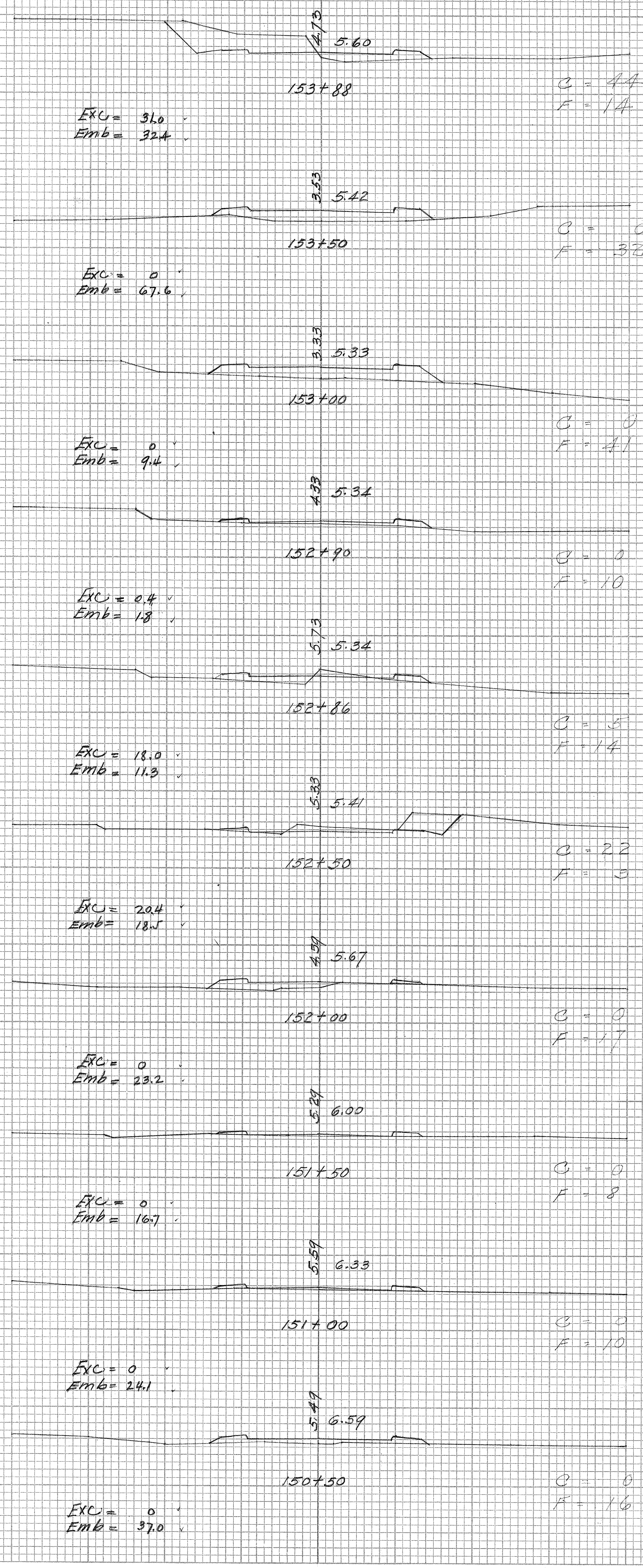
147+50
C = 0
F = 12
Exc = 0
Emb = 20.4

147+00
C = 0
F = 10
Exc = 1.9
Emb = 12.0

146+50
C = 2
F = 3
Exc = 2.8
Emb = 8.3

146+00
C = 1
F = 6
Exc = 12.0
Emb = 7.4

145+50
C = 12
F = 2
Exc = 16.7
Emb = 12.0


4.73
5.60
3.53
5.42
3.33
5.33
4.33
5.34
5.73
5.34
5.33
5.41
4.59
5.67
5.29
6.00
5.59
6.33
5.49
6.59

153+88
C = 44
F = 14
Exc = 31.0
Emb = 32.4

153+50
C = 0
F = 32
Exc = 0
Emb = 67.6

153+00
C = 0
F = 41
Exc = 0
Emb = 9.4

152+90
C = 0
F = 10
Exc = 0.4
Emb = 1.8

152+86
C = 5
F = 14
Exc = 18.0
Emb = 11.3

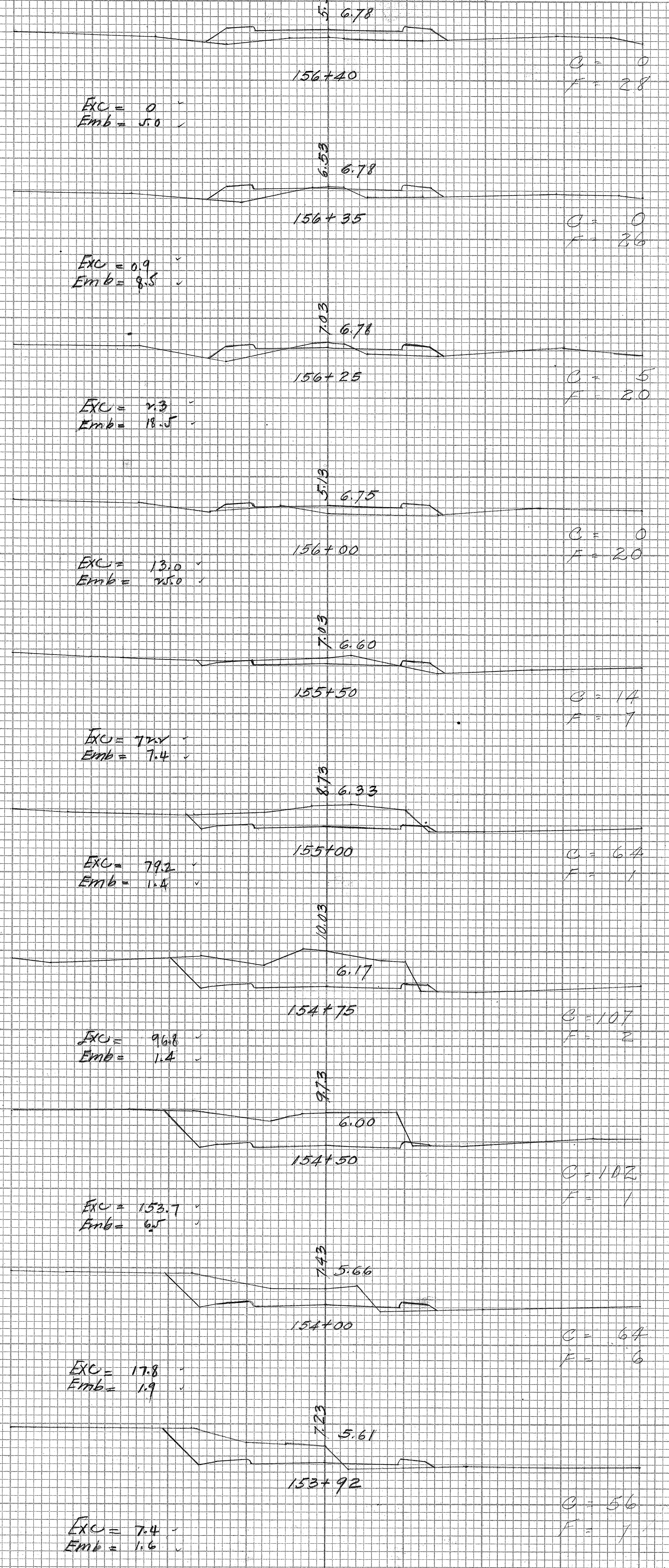
152+50
C = 22
F = 3
Exc = 20.4
Emb = 18.5

152+00
C = 0
F = 17
Exc = 0
Emb = 23.2

151+50
C = 0
F = 8
Exc = 0
Emb = 16.7

151+00
C = 0
F = 10
Exc = 0
Emb = 24.1

150+50
C = 0
F = 16
Exc = 0
Emb = 37.0


5.33
6.78
6.53
6.78
7.03
6.78
5.13
6.75
7.03
6.60
8.73
6.33
10.03
6.17
9.73
6.00
7.43
5.66
7.23
5.61

156+40
C = 0
F = 28
Exc = 0
Emb = 5.0

156+35
C = 0
F = 26
Exc = 0.9
Emb = 8.5

156+25
C = 5
F = 20
Exc = 2.3
Emb = 18.5

156+00
C = 0
F = 20
Exc = 13.0
Emb = 25.0

155+50
C = 14
F = 7
Exc = 72.2
Emb = 7.4

155+00
C = 64
F = 1
Exc = 79.2
Emb = 1.4

154+75
C = 107
F = 2
Exc = 96.8
Emb = 1.4

154+50
C = 102
F = 1
Exc = 153.7
Emb = 6.5

154+00
C = 64
F = 6
Exc = 17.8
Emb = 1.9

153+92
C = 56
F = 1
Exc = 7.4
Emb = 1.6

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

4477.39

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F.A.S. 2-A(1)	1938	40	58

FINAL SURVEY		BY	DATE
NOTE BOOK	SURVEYED		April 1938
	PLOTTED		
	TEMPLATE	H. Hayashi	
	AREAS	H. Hayashi	
NO.	AREAS CHECKED	F. Mello	

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

6.83
8.22
161+50
C = 0
F = 20
Exc = 0
Emb = 39.8
6.53
7.78
161+00
C = 0
F = 13
Exc = 0
Emb = 30.6
6.43
7.37
160+50
C = 0
F = 10
Exc = 0
Emb = 13.9
6.13
7.04
160+00
C = 0
F = 5
Exc = 1.9
Emb = 7.4
5.93
6.78
159+50
C = 2
F = 3
Exc = 3.7
Emb = 5.6
5.73
6.61
159+00
C = 2
F = 3
Exc = 4.6
Emb = 8.3
5.73
6.51
158+50
C = 3
F = 6
Exc = 2.8
Emb = 18.5
5.73
6.48
158+00
C = 0
F = 14
Exc = 0
Emb = 29.6
5.33
6.54
157+50
C = 0
F = 18
Exc = 0
Emb = 38.0
5.33
6.66
157+00
C = 0
F = 23
Exc = 0
Emb = 9.4
10.77
11.77
165+50
C = 1
F = 21
Exc = 0.2
Emb = 2.7
10.17
11.75
165+47
C = 3
F = 27
Exc = 0.5
Emb = 5.7
11.17
11.69
165+40
C = 1
F = 17
Exc = 6.7
Emb = 17.0
11.17
11.33
165+00
C = 8
F = 6
Exc = 7.4
Emb = 25.9
9.13
10.88
164+50
C = 0
F = 22
Exc = 0
Emb = 45.4
9.13
10.44
164+00
C = 0
F = 27
Exc = 0
Emb = 55.6
8.13
10.00
163+50
C = 0
F = 33
Exc = 6.5
Emb = 59.3
7.53
9.55
163+00
C = 7
F = 31
Exc = 11.1
Emb = 55.6
7.23
9.11
162+50
C = 5
F = 29
Exc = 4.6
Emb = 54.8
7.03
8.66
162+00
C = 0
F = 28
Exc = 0
Emb = 44.4
8.57
11.84
169+65
C = 3
F = 40
Exc = 30.6
Emb = 18.5
13.87
12.02
169+40
C = 63
F = 0
Exc = 79.3
Emb = 0
13.17
12.50
169+00
C = 44
F = 0
Exc = 50.9
Emb = 0.9
12.87
13.10
168+50
C = 11
F = 1
Exc = 11.1
Emb = 7.4
12.27
13.40
168+00
C = 1
F = 7
Exc = 0.9
Emb = 31.5
11.87
13.41
167+50
C = 0
F = 27
Exc = 6.5
Emb = 27.8
12.57
13.11
167+00
C = 7
F = 3
Exc = 8.3
Emb = 5.6
12.17
12.66
166+50
C = 2
F = 3
Exc = 3.7
Emb = 5.6
11.57
12.22
166+00
C = 2
F = 3
Exc = 2.8
Emb = 22.2

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

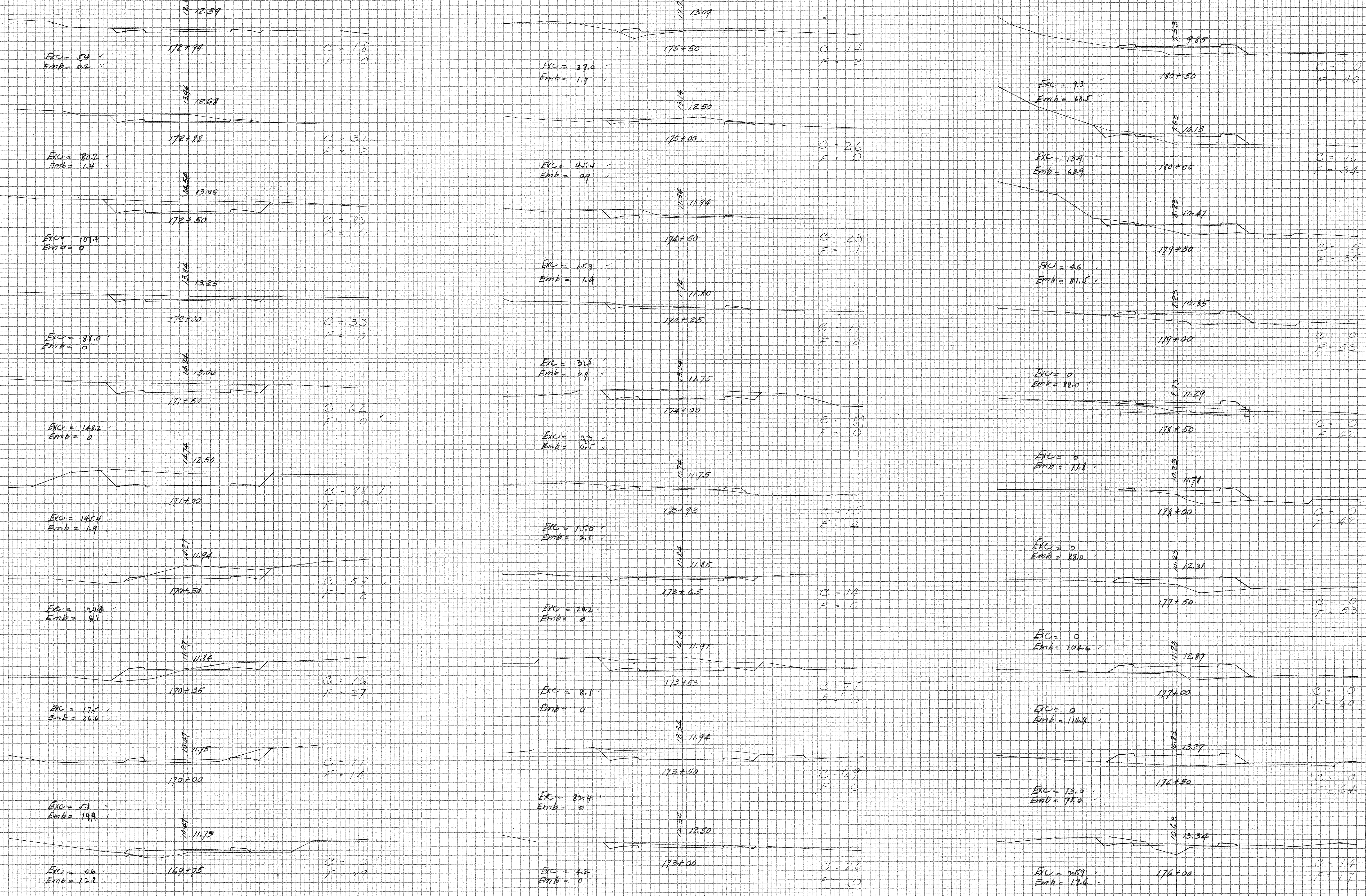
MADE IN U. S. A. 27188-3

4477.40

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	E.A.S. 2-A (1)	1938	41	58

FINAL SURVEY	BY	DATE
SURVEYED		April 1938
PLOTTED		
TEMPLATE	H. Hayashi	
AREAS	F. de Mello	
AREAS CHECKED		
NOTE BOOK NO.		

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


12.64
12.59
172+94
Exc = 5.4
Emb = 0.2
C = 18
F = 0
13.94
12.68
172+88
Exc = 80.2
Emb = 1.4
C = 31
F = 2
14.54
13.06
172+50
Exc = 107.4
Emb = 0
C = 83
F = 0
13.84
13.25
172+00
Exc = 88.0
Emb = 0
C = 33
F = 0
14.24
13.06
171+50
Exc = 148.2
Emb = 0
C = 62
F = 0
14.74
12.50
171+00
Exc = 145.4
Emb = 1.9
C = 98
F = 0
14.27
11.94
170+50
Exc = 20.8
Emb = 8.1
C = 59
F = 2
11.27
11.84
170+35
Exc = 17.5
Emb = 26.6
C = 16
F = 27
10.47
11.75
170+00
Exc = 5.1
Emb = 19.9
C = 11
F = 14
10.47
11.79
169+75
Exc = 0.6
Emb = 12.8
C = 0
F = 29
12.23
13.09
175+50
Exc = 37.0
Emb = 1.9
C = 14
F = 2
13.14
12.50
175+00
Exc = 45.4
Emb = 0.9
C = 26
F = 0
11.54
11.94
174+50
Exc = 15.8
Emb = 1.4
C = 23
F = 1
11.74
11.80
174+25
Exc = 31.5
Emb = 0.9
C = 11
F = 2
13.04
11.75
174+00
Exc = 9.3
Emb = 0.5
C = 51
F = 0
11.74
11.75
173+93
Exc = 15.0
Emb = 2.1
C = 15
F = 4
11.84
11.85
173+65
Exc = 20.2
Emb = 0
C = 14
F = 0
14.14
11.91
173+53
Exc = 8.1
Emb = 0
C = 77
F = 0
13.34
11.94
173+50
Exc = 82.4
Emb = 0
C = 69
F = 0
12.34
12.50
173+00
Exc = 4.2
Emb = 0
C = 20
F = 0
7.53
9.85
180+50
Exc = 9.3
Emb = 68.5
C = 0
F = 40
7.63
10.13
180+00
Exc = 13.9
Emb = 63.9
C = 10
F = 34
8.23
10.47
179+50
Exc = 4.6
Emb = 81.5
C = 5
F = 35
8.23
10.85
179+00
Exc = 0
Emb = 88.0
C = 0
F = 53
8.73
11.29
178+50
Exc = 0
Emb = 77.8
C = 0
F = 42
10.23
11.78
178+00
Exc = 0
Emb = 88.0
C = 0
F = 42
10.23
12.31
177+50
Exc = 0
Emb = 104.6
C = 0
F = 53
11.23
12.87
177+00
Exc = 0
Emb = 114.8
C = 0
F = 60
10.23
13.27
176+50
Exc = 13.0
Emb = 75.0
C = 0
F = 64
10.63
13.34
176+00
Exc = 25.9
Emb = 17.6
C = 14
F = 17

4477.41

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	FAS. 2A(1)	1938	42	58

FINAL SURVEY

	BY	DATE
SURVEYED		April 1938
PLOTTED	H. Hayashi	
TEMPLATE	H. Hayashi	
AREAS	F. de Mello	
AREAS CHECKED		
NOTE BOOK NO.		

ORIGINAL SURVEY

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

7.69
8.31
7.39
8.58
7.49
8.79
7.39
8.97
7.29
9.09
7.19
9.17
7.19
9.23
7.33
9.30
7.43
9.43
7.53
9.61
8.64
8.33
9.34
8.00
8.79
7.72
8.79
7.56
7.89
7.51
5.39
7.50
9.39
7.52
9.99
7.55
8.69
7.72
7.79
8.00
13.09
9.06
15.89
9.04
15.49
8.99
13.34
8.91
8.34
8.85
6.04
8.71
7.84
8.63

185+50
C = 12
F = 3
EXC = 13.9 ✓
Emb = 20.4 ✓

185+00
C = 3
F = 19
EXC = 2.8 ✓
Emb = 45.4 ✓

184+50
C = 0
F = 30
EXC = 0
Emb = 60.2 ✓

184+00
C = 0
F = 35
EXC = 0
Emb = 67.6 ✓

183+50
C = 0
F = 38
EXC = 0
Emb = 74.1 ✓

183+00
C = 0
F = 42
EXC = 0
Emb = 74.1 ✓

182+50
C = 0
F = 38
EXC = 0
Emb = 72.2 ✓

182+00
C = 0
F = 40 ✓
EXC = 0
Emb = 78.9 ✓

181+50
C = 0
F = 45
EXC = 0
Emb = 82.4 ✓

181+00
C = 6
F = 44
EXC = 0
Emb = 77.8 ✓

189+50
C = 35
F = 0
EXC = 119.4
Emb = 0 ✓

189+00
C = 94
F = 0
EXC = 145.4 ✓
Emb = 0 ✓

188+50
C = 63
F = 0
EXC = 115.7 ✓
Emb = 0

188+00
C = 62
F = 0
EXC = 66.7 ✓
Emb = 0 ✓

187+64
C = 38
F = 0
EXC = 9.9 ✓
Emb = 10.9 ✓

187+50
C = 0
F = 42
EXC = 35.0 ✓
Emb = 25.0 ✓

187+20
C = 63
F = 3
EXC = 52.2 ✓
Emb = 1.9 ✓

187+00
C = 78
F = 2
EXC = 112.0 ✓
Emb = 1.9 ✓

186+50
C = 43
F = 0
EXC = 64.8 ✓
Emb = 0

186+00
C = 27
F = 0
EXC = 36.1 ✓
Emb = 2.8 ✓

191+50
C = 343
F = 0
EXC = 457.9 ✓
Emb = 0 ✓

191+31
C = 390
F = 0
EXC = 388.6 ✓
Emb = 0 ✓

191+00
C = 287
F = 0
EXC = 282.7 ✓
Emb = 0 ✓

190+68
C = 190
F = 0
EXC = 76.3 ✓
Emb = 5.7 ✓

190+50
C = 39
F = 17
EXC = 24.5 ✓
Emb = 41.0 ✓

190+17
C = 1
F = 50
EXC = 3.5 ✓
Emb = 18.3 ✓

190+00
C = 10
F = 8
EXC = 41.7 ✓
Emb = 7.4 ✓

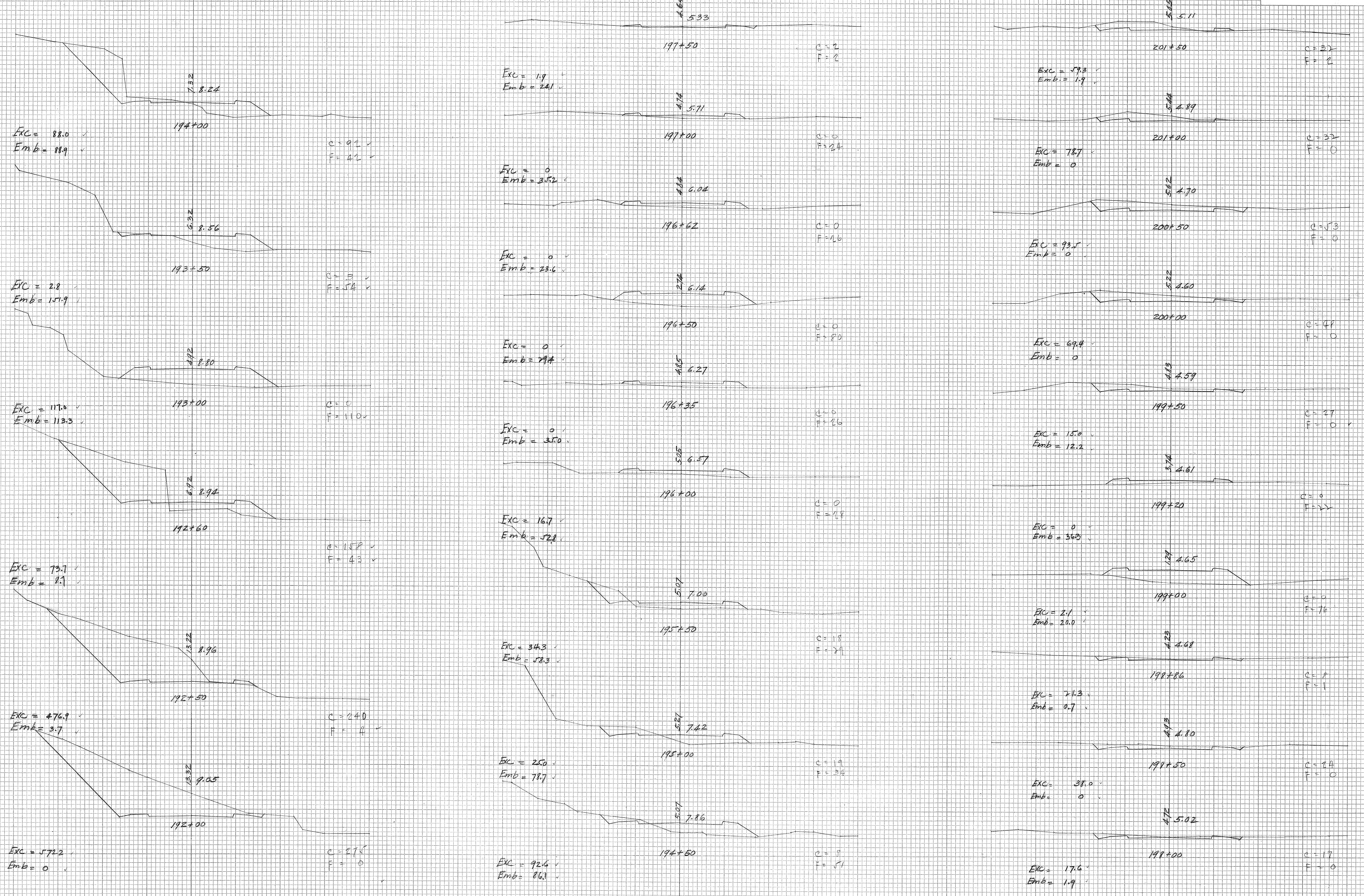
PLATE 3—CROSS SECTION O. P. R. & R. E. STANDARD
KEUFFEL & ESSER CO., NEW YORK.
MADE IN U.S.A. 27188-3

4477.42

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F.A.S. 2-A (1)	1938	43	58

FINAL SURVEY		BY	DATE
NOTE BOOK	SURVEYED		
NO.	PLOTTED		
	TEMPLATE	H. Hayashi	April 1938
	AREAS		
	AREAS CHECKED	F. de Mello.	

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



7.32 8.24
194+00
Exc = 88.0 ✓
Emb = 88.9 ✓
C = 91 ✓
F = 42 ✓

6.32 8.56
193+50
Exc = 2.8 ✓
Emb = 151.9 ✓
C = 3 ✓
F = 54 ✓

4.92 8.80
193+00
Exc = 117.0 ✓
Emb = 113.3 ✓
C = 0
F = 110 ✓

6.92 8.94
192+60
C = 158 ✓
F = 43 ✓
Exc = 73.7 ✓
Emb = 8.7 ✓

13.22 8.96
192+50
Exc = 476.9 ✓
Emb = 3.7 ✓
C = 240
F = 4 ✓

13.32 9.05
192+00
Exc = 572.2 ✓
Emb = 0 ✓
C = 275
F = 0 ✓

4.64 5.33
197+50
C = 2
F = 2
Exc = 1.9 ✓
Emb = 24.1 ✓

4.74 5.71
197+00
C = 0
F = 24
Exc = 0
Emb = 35.2 ✓

4.84 6.04
196+62
C = 0
F = 16
Exc = 0 ✓
Emb = 23.6 ✓

2.74 6.14
196+50
C = 0
F = 80
Exc = 0 ✓
Emb = 79.4 ✓

4.85 6.27
196+35
C = 0
F = 26
Exc = 0 ✓
Emb = 35.0 ✓

5.05 6.57
196+00
C = 0
F = 48
Exc = 16.7 ✓
Emb = 52.8 ✓

5.07 7.00
195+50
C = 18
F = 29
Exc = 34.3 ✓
Emb = 58.3 ✓

5.27 7.42
195+00
Exc = 25.0 ✓
Emb = 78.7 ✓
C = 19
F = 34

5.07 7.86
194+50
Exc = 92.6 ✓
Emb = 86.1 ✓
C = 8
F = 51

5.05 5.11
201+50
C = 32
F = 2
Exc = 59.3 ✓
Emb. = 1.9 ✓

5.44 4.89
201+00
C = 32
F = 0
Exc = 78.7 ✓
Emb = 0

5.62 4.70
200+50
C = 53
F = 0
Exc = 93.5 ✓
Emb = 0 ✓

5.22 4.60
200+00
C = 48
F = 0
Exc = 69.4 ✓
Emb = 0 ✓

4.13 4.59
199+50
C = 27
F = 0 ✓
Exc = 15.0 ✓
Emb = 12.2 ✓

3.74 4.61
199+20
C = 0
F = 22
Exc = 0 ✓
Emb = 36.3 ✓

1.29 4.65
199+00
C = 0
F = 76
Exc = 2.1 ✓
Emb = 20.0 ✓

4.23 4.68
198+86
C = 8
F = 1
Exc = 21.3 ✓
Emb = 0.7 ✓

4.93 4.80
198+50
C = 24
F = 0
Exc = 38.0 ✓
Emb = 0 ✓

4.72 5.02
198+00
Exc = 17.6 ✓
Emb = 1.9 ✓
C = 17
F = 0

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

4477.43

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	FAS2-A(1)	1938	44	58

FINAL SURVEY		BY	DATE
NOTE BOOK	SURVEYED		April 1938
NO.	PLOTTED		
	TEMPLATE	H. Hayashi	
	AREAS	H. Hayashi	
	AREAS CHECKED	F. de Mello	

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

7.04
7.50
6.56
7.30
5.80
7.10
5.14
6.89
5.70
6.67
6.26
6.44
6.00
6.22
6.06
6.00
6.15
5.78
5.24
5.56
6.12
5.33
6.90
8.42
6.61
8.33
6.45
8.23
6.60
8.10
6.60
7.97
6.20
7.90
3.80
7.89
4.45
7.83
6.95
7.80
7.02
7.67
6.78
7.85
6.59
8.14
8.40
8.36
8.41
8.54
8.42
8.66
8.30
8.72
7.48
8.72
7.04
8.67
7.06
8.58
7.14
8.50

207+00
C = 4
F = 11
Exc = 6.5 ✓
Emb = 21.3 ✓

206+50
C = 3
F = 12
Exc = 4.8 ✓
Emb = 38.9 ✓

206+00
C = 0
F = 30
Exc = 0
Emb = 57.9 ✓

205+50
C = 0
F = 26
Exc = 0
Emb = 40.7

205+00
C = 0
F = 18
Exc = 23.2 ✓
Emb = 16.7 ✓

204+50
C = 25
F = 0
Exc = 56.5 ✓
Emb = 0

204+00
C = 36
F = 0
Exc = 50.0 ✓
Emb = 0

203+50
C = 18
F = 0
Exc = 34.3 ✓
Emb = 0

203+00
C = 19
F = 0
Exc = 23.2 ✓
Emb = 8.3 ✓

202+50
C = 6
F = 9
Exc = 18.3 ✓
Emb = 13.9 ✓

202+00
C = 14
F = 6
Exc = 42.6 ✓
Emb = 7.4 ✓

210+50
C = 0
F = 34
Exc = 0
Emb = 67.6 ✓

210+00
C = 0
F = 39
Exc = 0
Emb = 70.4 ✓

209+50
C = 0
F = 37
Exc = 0
Emb = 64.8 ✓

209+00
C = 0
F = 33
Exc = 0
Emb = 68.5 ✓

208+50
C = 0
F = 41
Exc = 0
Emb = 42.2 ✓

208+25
C = 0
F = 50 ✓
Exc = 0
Emb = 14.8 ✓

208+19
C = 0
F = 110 ✓
Exc = 0
Emb = ~~44~~

Bridge No. 2
208+00 to 208+20

208+00
C = 0
F = 81 ✓
Exc = 0
Emb = 17.4 ✓

207+90
C = 0
F = 13
Exc = 0
Emb = 21.5 ✓

207+50
C = 0
F = 16
Exc = 3.7 ✓
Emb = 25.0 ✓

215+50
C = 0
F = 24
Exc = 0 ✓
Emb = 38.0 ✓

215+00
C = 0
F = 17
Exc = 23.2 ✓
Emb = 15.7 ✓

214+50
C = 15
F = 0
Exc = 40.7 ✓
Emb = 0 ✓

214+00
C = 19
F = 0
Exc = 25.9 ✓
Emb = 0.9 ✓

213+50
C = 9
F = 1
Exc = 9.3 ✓
Emb = 6.5 ✓

213+00
C = 1
F = 6
Exc = 09 ✓
Emb = 21.3 ✓

212+50
C = 0
F = 17
Exc = 0
Emb = 42.6 ✓

212+00
C = 0
F = 19
Exc = 0
Emb = 49.1 ✓

211+50
C = 0
F = 24
Exc = 0
Emb = 45.4

211+00
C = 0
F = 25
Exc = 0
Emb = 54.6 ✓

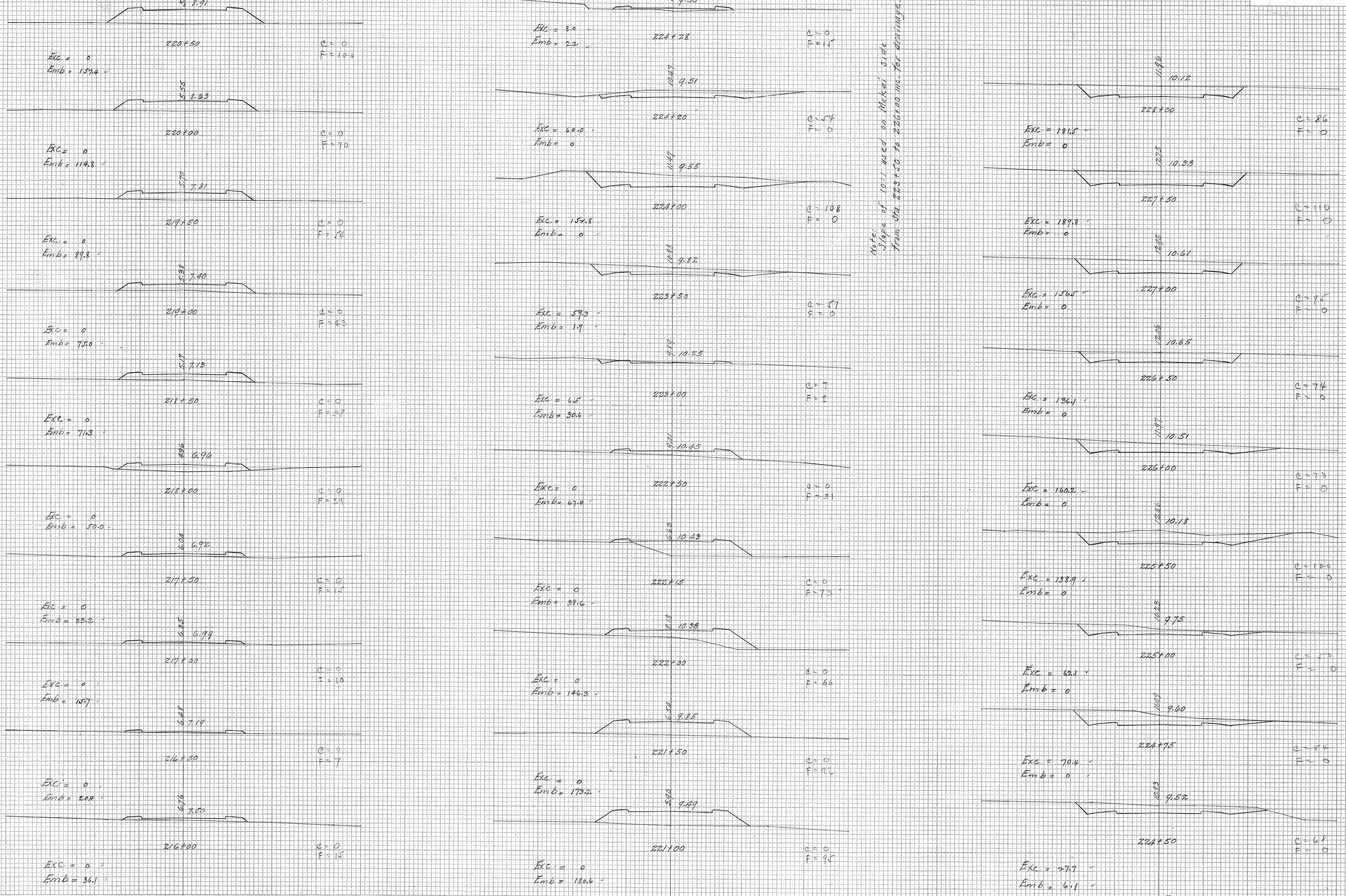
PLATE 3 – CROSS SECTION O. P. R. & R. E. STANDARD
KEUFFEL & ESSER CO., NEW YORK.
MADE IN U.S.A. 27188-3

4477.44

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F.A.S. 2-A(1)	1938	45	58

FINAL SURVEY		BY	DATE
NOTE BOOK	SURVEYED		
NO.	PLOTTED		
	TEMPLATE	H. Hayashi	April
	AREAS	H. Hayashi	1938
	AREAS CHECKED	F. DC RG 11/0	

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


5.05
8.91
220+50
Exc. = 0
Emb = 157.4
C = 0
F = 100
5.55
8.33
220+00
Exc = 0
Emb = 114.8
C = 0
F = 70
5.70
7.81
219+50
Exc = 0
Emb = 89.8
C = 0
F = 54
5.38
7.40
219+00
Exc = 0
Emb = 75.0
C = 0
F = 43
5.17
7.13
218+50
Exc = 0
Emb = 71.3
C = 0
F = 38
4.96
6.96
218+00
Exc = 0
Emb = 50.0
C = 0
F = 39
6.04
6.92
217+50
Exc = 0
Emb = 23.2
C = 0
F = 15
6.35
6.99
217+00
Exc = 0
Emb = 15.7
C = 0
F = 10
6.48
7.19
216+50
Exc = 0
Emb = 20.4
C = 0
F = 7
6.76
7.50
216+00
Exc = 0
Emb = 36.1
C = 0
F = 15
8.20
9.50
224+28
Exc = 8.0
Emb = 2.2
C = 0
F = 15
10.47
9.51
224+20
Exc = 60.0
Emb = 0
C = 54
F = 0
11.47
9.55
224+00
Exc = 157.8
Emb = 0
C = 108
F = 0
10.83
9.82
223+50
Exc = 59.3
Emb = 1.9
C = 57
F = 0
9.89
10.25
223+00
Exc = 6.5
Emb = 30.6
C = 7
F = 2
9.01
10.45
222+50
Exc = 0
Emb = 67.4
C = 0
F = 31
6.63
10.43
222+15
Exc = 0
Emb = 38.6
C = 0
F = 73
8.18
10.38
222+00
Exc = 0
Emb = 146.3
C = 0
F = 66
6.54
9.85
221+50
Exc = 0
Emb = 173.2
C = 0
F = 92
5.90
9.49
221+00
Exc = 0
Emb = 180.6
C = 0
F = 95
11.96
10.12
228+00
Exc = 181.5
Emb = 0
C = 86
F = 0
12.25
10.33
227+50
Exc = 189.8
Emb = 0
C = 110
F = 0
12.25
10.61
227+00
Exc = 156.5
Emb = 0
C = 95
F = 0
12.06
10.65
226+50
Exc = 136.1
Emb = 0
C = 74
F = 0
11.97
10.51
226+00
Exc = 160.2
Emb = 0
C = 73
F = 0
12.66
10.18
225+50
Exc = 138.9
Emb = 0
C = 100
F = 0
10.23
9.75
225+00
Exc = 62.1
Emb = 0
C = 50
F = 0
11.09
9.60
224+75
Exc = 70.4
Emb = 0
C = 84
F = 0
10.83
9.52
224+50
Exc = 77.7
Emb = 6.1
C = 68
F = 0

Note:
Slope of 10:1 used on Makai side
from Sta. 223+50 to 226+00 inc. for drainage.

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

4477.45

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	FA.S. 2-A(1)	1938	46	58

FINAL SURVEY		BY	DATE
NOTE BOOK	SURVEYED		
	PLOTTED		
NO.	TEMPLATE	H. Hayashi	April 1938
	AREAS	F. de Mello	
	AREAS CHECKED	F. de Mello	

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

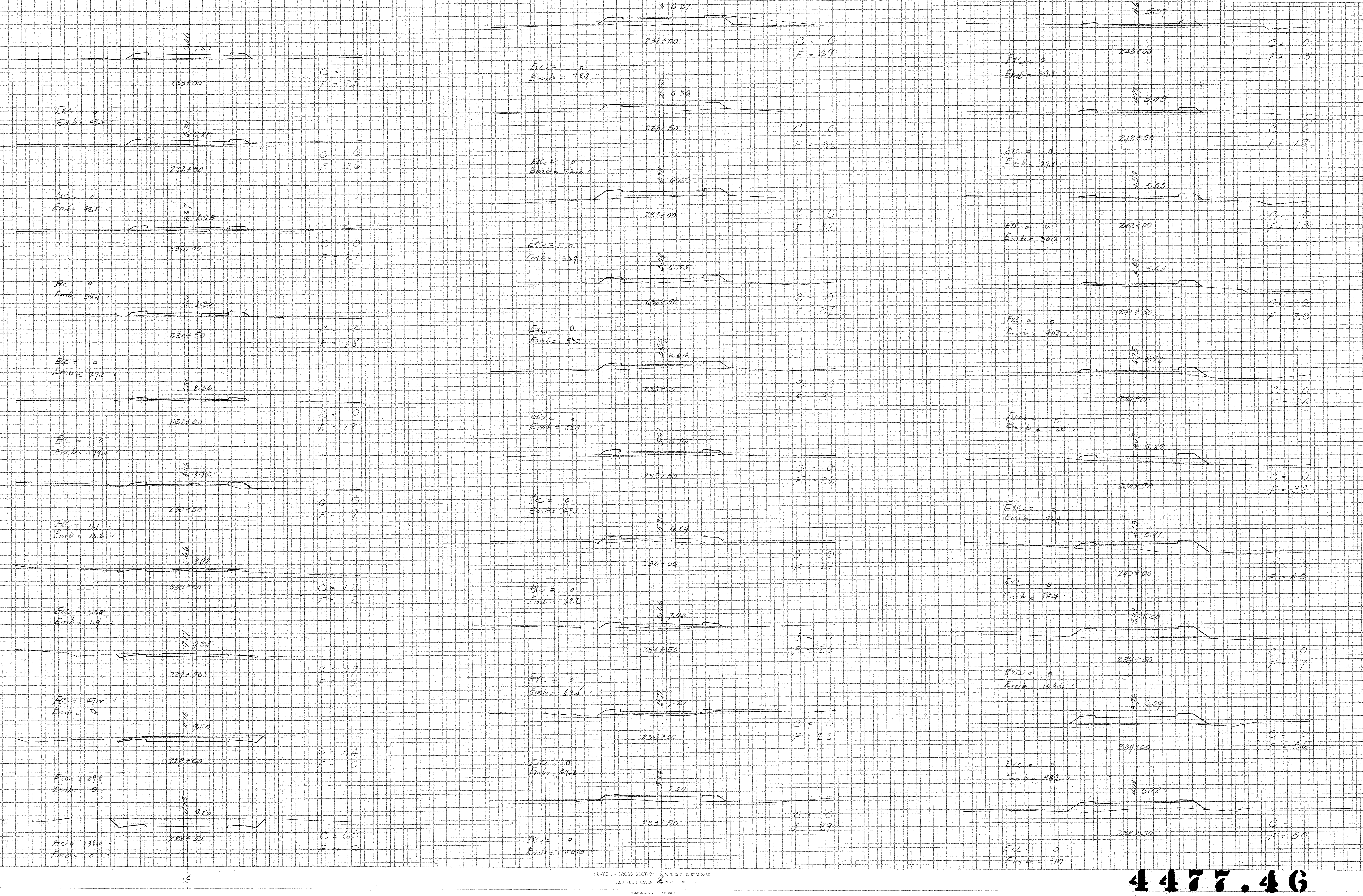

6.06
7.60
233+00
C = 0
F = 25
Exc = 0
Emb = 47.2 ✓
6.31
7.81
232+50
C = 0
F = 26
Exc = 0
Emb = 43.5 ✓
6.67
8.05
232+00
C = 0
F = 21
Exc = 0
Emb = 36.1 ✓
7.01
8.30
231+50
C = 0
F = 18
Exc = 0
Emb = 27.8
7.51
8.56
231+00
C = 0
F = 12
Exc = 0
Emb = 19.4 ✓
8.06
8.82
230+50
C = 0
F = 9
Exc = 11.1 ✓
Emb = 10.2 ✓
8.66
9.08
230+00
C = 12
F = 2
Exc = 26.9 ✓
Emb = 1.9 ✓
9.17
9.34
229+50
C = 17
F = 0
Exc = 47.2 ✓
Emb = 0
10.16
9.60
229+00
C = 34
F = 0
Exc = 89.8 ✓
Emb = 0
11.15
9.86
228+50
C = 63
F = 0
Exc = 138.0 ✓
Emb = 0 ✓
℄
4.23
6.27
238+00
C = 0
F = 49
Exc = 0
Emb = 78.7 ✓
4.60
6.36
237+50
C = 0
F = 36
Exc = 0
Emb = 72.2 ✓
4.74
6.46
237+00
C = 0
F = 42
Exc = 0
Emb = 63.9 ✓
5.00
6.55
236+50
C = 0
F = 27
Exc = 0
Emb = 53.7 ✓
5.29
6.64
236+00
C = 0
F = 31
Exc = 0
Emb = 52.8 ✓
5.61
6.76
235+50
C = 0
F = 26
Exc = 0
Emb = 49.1 ✓
5.71
6.89
235+00
C = 0
F = 27
Exc = 0
Emb = 48.2 ✓
5.66
7.04
234+50
C = 0
F = 25
Exc = 0
Emb = 43.5 ✓
5.71
7.21
234+00
C = 0
F = 22
Exc = 0
Emb = 47.2 ✓
5.84
7.40
233+50
C = 0
F = 29
Exc = 0
Emb = 50.0 ✓
℄
4.62
5.37
243+00
C = 0
F = 13
Exc = 0
Emb = 27.8 ✓
4.71
5.45
242+50
C = 0
F = 17
Exc = 0
Emb = 27.8 ✓
4.59
5.55
242+00
C = 0
F = 13
Exc = 0
Emb = 30.6 ✓
4.49
5.64
241+50
C = 0
F = 20
Exc = 0
Emb = 40.7 ✓
4.75
5.73
241+00
C = 0
F = 24
Exc = 0
Emb = 57.4 ✓
4.17
5.82
240+50
C = 0
F = 38
Exc = 0
Emb = 76.9 ✓
4.13
5.91
240+00
C = 0
F = 45
Exc = 0
Emb = 94.4 ✓
3.93
6.00
239+50
C = 0
F = 57
Exc = 0
Emb = 104.6 ✓
3.96
6.09
239+00
C = 0
F = 56
Exc = 0
Emb = 98.2 ✓
4.08
6.18
238+50
C = 0
F = 50
Exc = 0
Emb = 91.7 ✓

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

4477.46

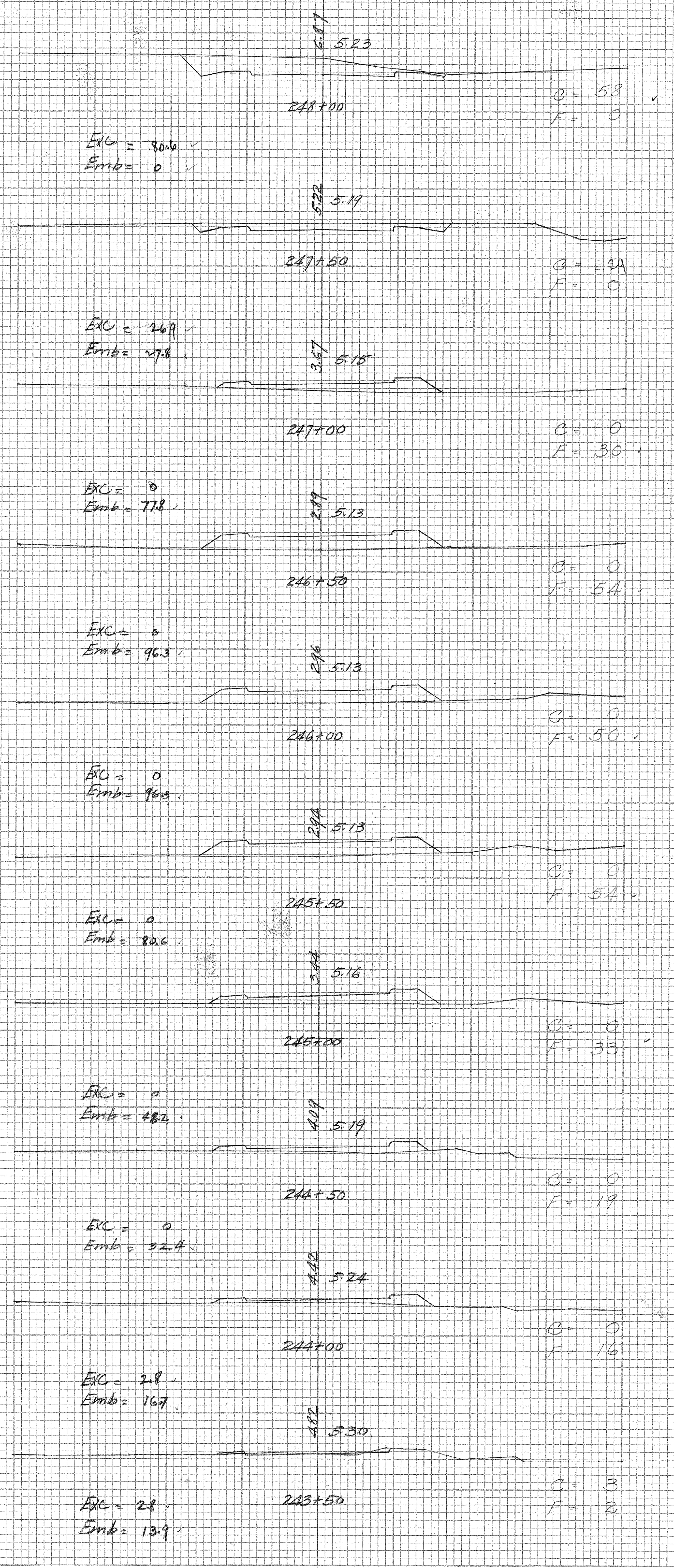
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F.A.S. 2-A(1)	1938	47	58

FINAL SURVEY
NOTE BOOK
NO.

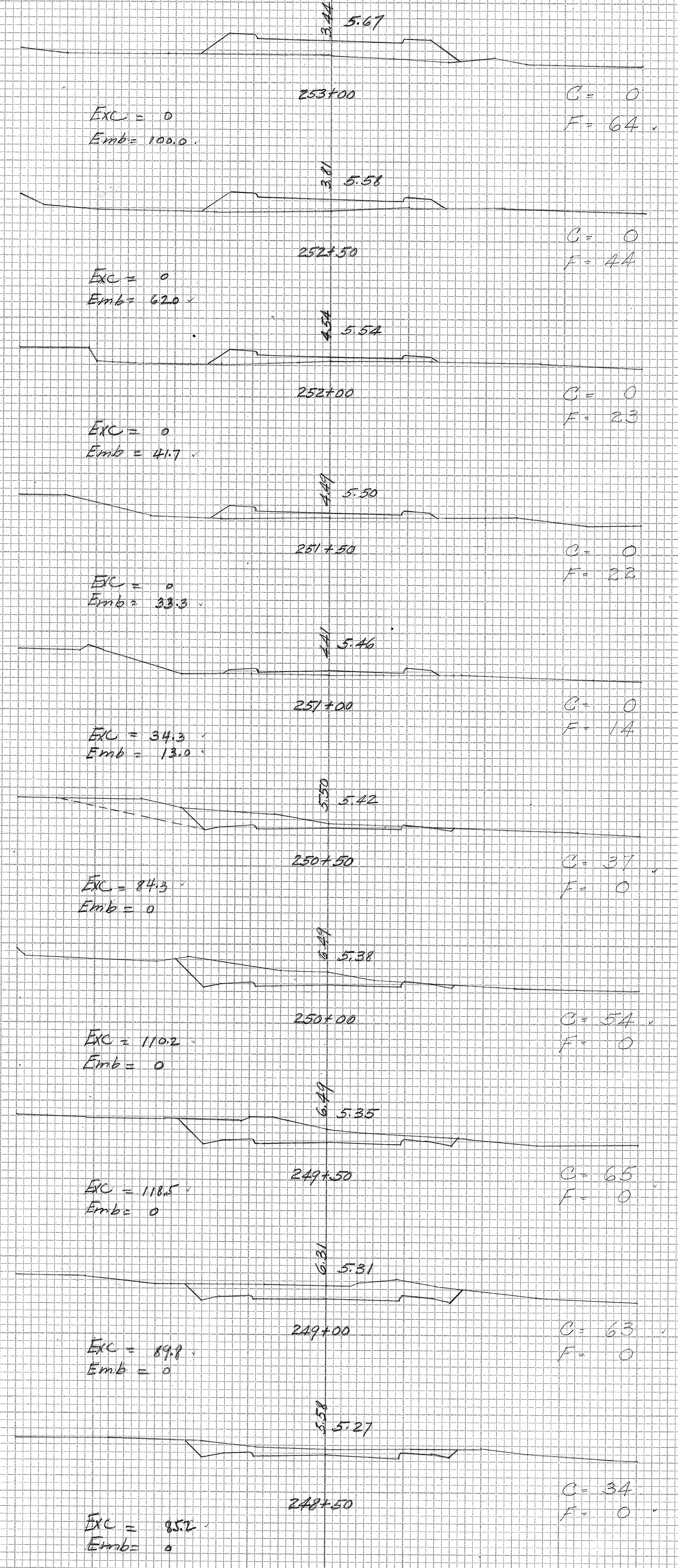
	BY	DATE
SURVEYED		April 1938
PLOTTED		
TEMPLATE	H. Hayashi	
AREAS	F. de Mello.	
AREAS CHECKED	F. de Mello.	

ORIGINAL SURVEY
NOTE BOOK
NO.

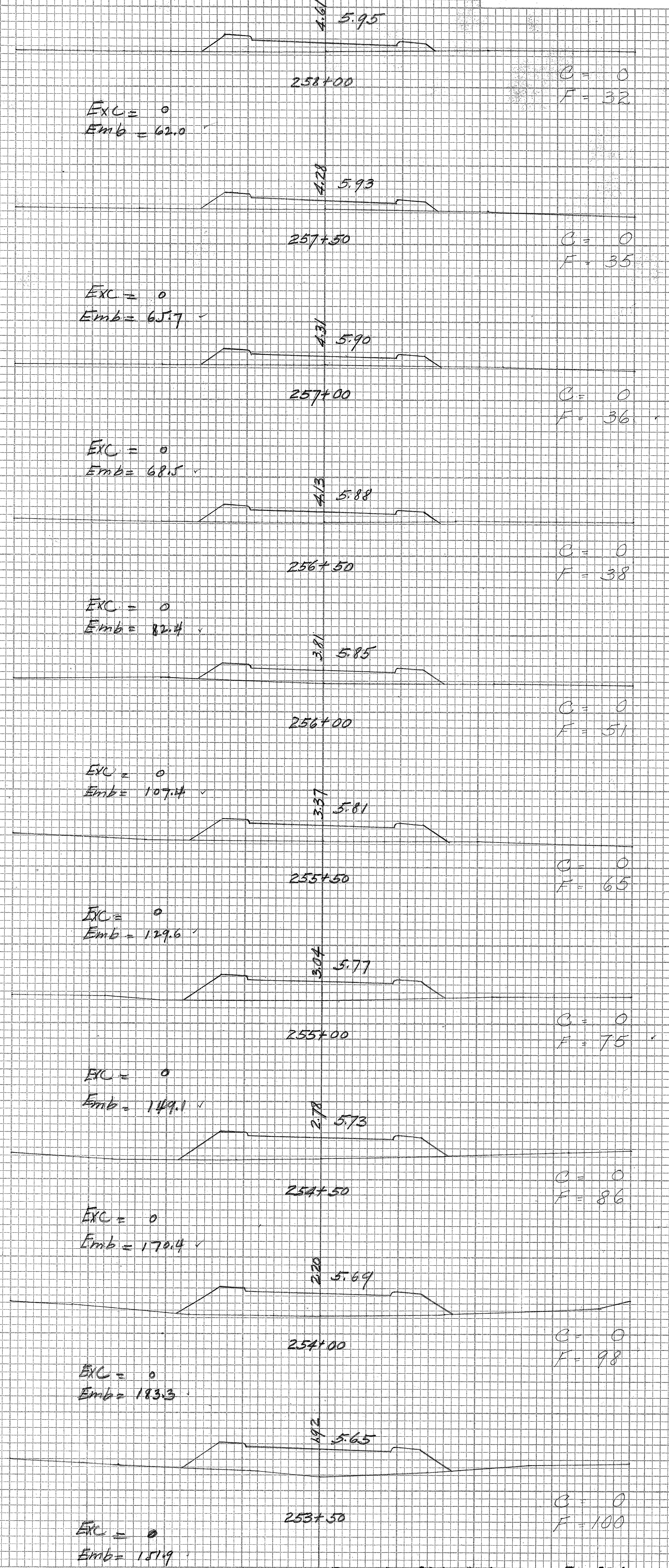
	BY	DATE
SURVEYED		
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		



6.87 5.23
248+00
C = 58
F = 0
Exc = 80.6
Emb = 0
5.22 5.19
247+50
C = 29
F = 0
Exc = 26.9
Emb = 27.8
3.67 5.15
247+00
C = 0
F = 30
Exc = 0
Emb = 77.8
2.89 5.13
246+50
C = 0
F = 54
Exc = 0
Emb = 96.3
2.96 5.13
246+00
C = 0
F = 50
Exc = 0
Emb = 96.3
2.94 5.13
245+50
C = 0
F = 54
Exc = 0
Emb = 80.6
3.44 5.16
245+00
C = 0
F = 33
Exc = 0
Emb = 48.2
4.09 5.19
244+50
C = 0
F = 19
Exc = 0
Emb = 32.4
4.42 5.24
244+00
C = 0
F = 16
Exc = 2.8
Emb = 16.7
4.82 5.30
243+50
C = 3
F = 2
Exc = 2.8
Emb = 13.9



3.44 5.67
253+00
C = 0
F = 64
Exc = 0
Emb = 100.0
3.81 5.58
252+50
C = 0
F = 44
Exc = 0
Emb = 62.0
4.54 5.54
252+00
C = 0
F = 23
Exc = 0
Emb = 41.7
4.49 5.50
251+50
C = 0
F = 22
Exc = 0
Emb = 33.3
4.41 5.46
251+00
C = 0
F = 14
Exc = 34.3
Emb = 13.0
5.50 5.42
250+50
C = 37
F = 0
Exc = 84.3
Emb = 0
6.49 5.38
250+00
C = 54
F = 0
Exc = 110.2
Emb = 0
6.49 5.35
249+50
C = 65
F = 0
Exc = 118.5
Emb = 0
6.31 5.31
249+00
C = 63
F = 0
Exc = 89.8
Emb = 0
5.58 5.27
248+50
C = 34
F = 0
Exc = 85.2
Emb = 0



4.61 5.95
258+00
C = 0
F = 32
Exc = 0
Emb = 62.0
4.28 5.93
257+50
C = 0
F = 35
Exc = 0
Emb = 65.7
4.31 5.90
257+00
C = 0
F = 36
Exc = 0
Emb = 68.5
4.13 5.88
256+50
C = 0
F = 38
Exc = 0
Emb = 82.4
3.81 5.85
256+00
C = 0
F = 51
Exc = 0
Emb = 107.4
3.37 5.81
255+50
C = 0
F = 65
Exc = 0
Emb = 129.6
3.04 5.77
255+00
C = 0
F = 75
Exc = 0
Emb = 149.1
2.78 5.73
254+50
C = 0
F = 86
Exc = 0
Emb = 170.4
2.20 5.69
254+00
C = 0
F = 98
Exc = 0
Emb = 183.3
1.92 5.65
253+50
C = 0
F = 100
Exc = 0
Emb = 151.9

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

4477.47

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	FAS.2-A(1)	1938	48	58

FINAL SURVEY		BY	DATE
NOTE BOOK	SURVEYED		April 1938
NO.	PLOTTED	H. Hayashi	
	TEMPLATE	H. Hayashi	
	AREAS	F. de Mello	
	AREAS CHECKED		

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

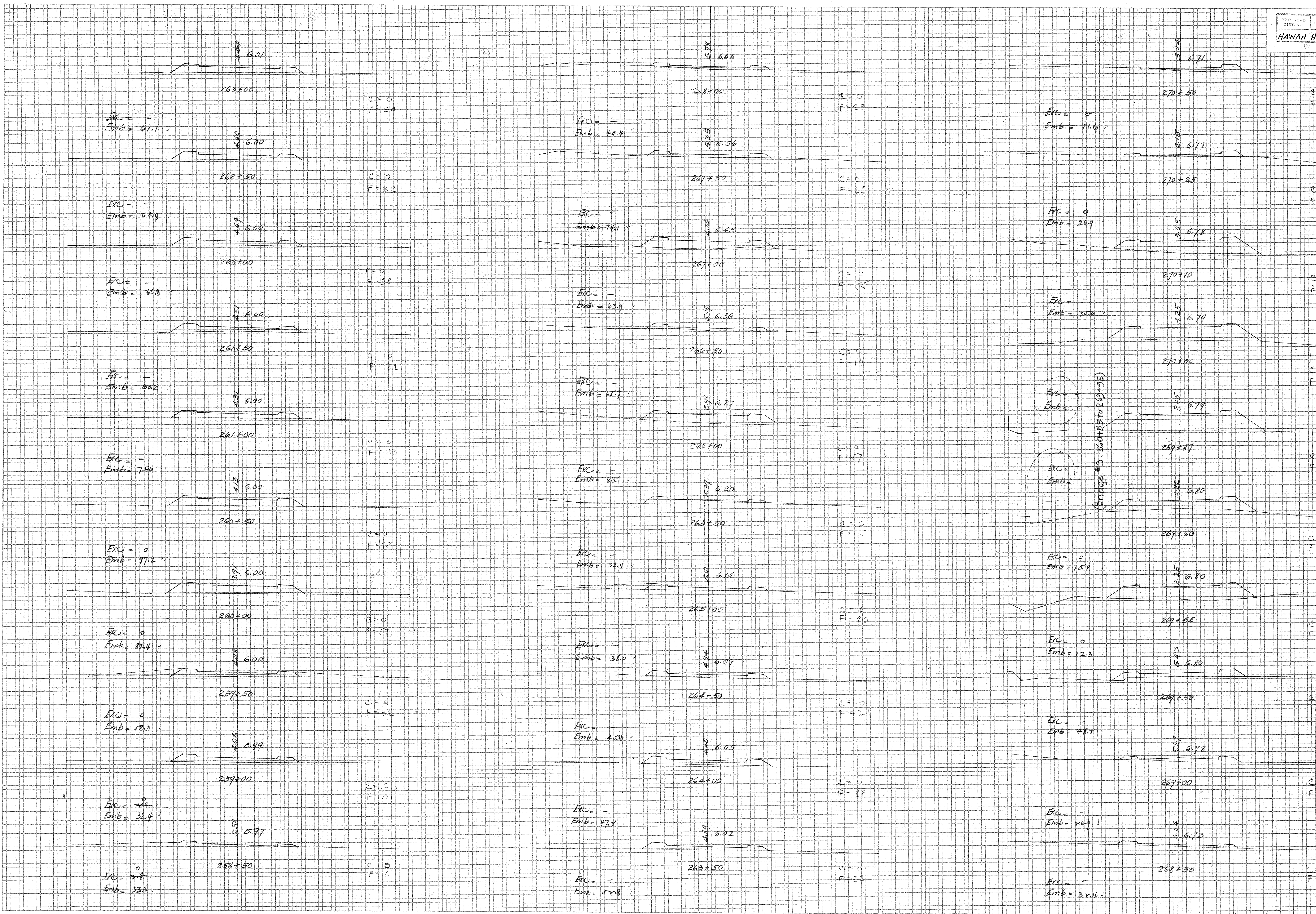

4.44
6.01
263+00
C = 0
F = 34
Exc = –
Emb = 61.1
4.60
6.00
262+50
C = 0
F = 32
Exc = –
Emb = 64.8
4.69
6.00
262+00
C = 0
F = 38
Exc = –
Emb = 64.8
4.51
6.00
261+50
C = 0
F = 32
Exc = –
Emb = 60.2
4.31
6.00
261+00
C = 0
F = 33
Exc = –
Emb = 75.0
4.13
6.00
260+50
C = 0
F = 48
Exc = 0
Emb = 97.2
3.91
6.00
260+00
C = 0
F = 57
Exc = 0
Emb = 82.4
4.48
6.00
259+50
C = 0
F = 32
Exc = 0
Emb = 58.3
4.66
5.99
259+00
C = 0
F = 51
Exc = ~~4.9~~ 0
Emb = 32.4
5.58
5.97
258+50
C = 0
F = 4
Exc = ~~2.8~~ 0
Emb = 33.3
5.78
6.66
268+00
C = 0
F = 23
Exc = –
Emb = 44.4
5.35
6.56
267+50
C = 0
F = 25
Exc = –
Emb = 74.1
4.14
6.45
267+00
C = 0
F = 55
Exc = –
Emb = 63.9
5.09
6.36
266+50
C = 0
F = 14
Exc = –
Emb = 65.7
3.91
6.27
266+00
C = 0
F = 57
Exc = –
Emb = 66.1
5.37
6.20
265+50
C = 0
F = 15
Exc = –
Emb = 32.4
5.01
6.14
265+00
C = 0
F = 20
Exc = –
Emb = 38.0
4.94
6.09
264+50
C = 0
F = 21
Exc = –
Emb = 45.4
4.40
6.05
264+00
C = 0
F = 28
Exc = –
Emb = 47.4
4.89
6.02
263+50
C = 0
F = 23
Exc = –
Emb = 5v.8
5.84
6.71
270+50
C = 0
F = 18
Exc = 0
Emb = 11.6
6.15
6.77
270+25
C = 0
F = 7
Exc = 0
Emb = 26.9
3.65
6.78
270+10
C = 0
F = 90
Exc = –
Emb = 35.0
3.25
6.79
270+00
C = 0
F = 99
Exc = –
Emb =
2.45
6.79
(Bridge #3: 260+55 to 269+95)
269+87
C = 0
F = 132
Exc =
Emb =
4.22
6.80
269+60
C = 0
F = 73
Exc = 0
Emb = 15.8
3.26
6.80
269+55
C = 0
F = 98
Exc = 0
Emb = 12.3
5.43
6.80
269+50
C = 0
F = 35
Exc = –
Emb = 48.v
5.67
6.78
269+00
C = 0
F = 17
Exc = –
Emb = v6.9
6.04
6.73
268+50
C = 0
F = 12
Exc = –
Emb = 3v.4

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

4477.48

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F.A.S. 2-A(1)	1938	49	58

FINAL SURVEY
NOTE BOOK
NO.

	BY	DATE
SURVEYED		
PLOTTED		April
TEMPLATE	H. Hayashi	1938
AREAS	E. de Mello	
AREAS CHECKED	E. de Mello	

ORIGINAL SURVEY
NOTE BOOK
NO.

	BY	DATE
SURVEYED		
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		

8.58
6.18
274+80
C = 83
F = 0
Exc = 64.4
Emb = 1.1
6.88
6.21
274+50
C = 33
F = 2
Exc = 15.3
Emb = 11.6
5.04
6.23
274+25
C = 0
F = 23
Exc = 0
Emb = 19.9
5.18
6.26
274+00
C = 0
F = 20
Exc = 0
Emb = 35.2
5.34
6.32
273+50
C = 0
F = 18
Exc = 0
Emb = 32.4
5.42
6.39
273+00
C = 0
F = 17
Exc = 0
Emb = 34.3
5.63
6.46
272+50
C = 0
F = 20
Exc = 0
Emb = 36.1
5.55
6.55
272+00
C = 0
F = 19
Exc = 0
Emb = 43.5
5.40
6.64
271+50
C = 0
F = 28
Exc = 0
Emb = 49.1
5.74
6.64
271+00
C = 0
F = 25
Exc = 0
Emb = 39.8
5.34
6.00
279+50
C = 0
F = 12
Exc = 0
Emb = 25.0
5.06
6.00
279+00
C = 0
F = 15
Exc = 0
Emb = 31.5
5.01
6.00
278+50
C = 0
F = 19
Exc = 0
Emb = 50.0
4.38
6.00
278+00
C = 0
F = 35
Exc = 0
Emb = 63.0
4.71
6.02
277+50
C = 0
F = 33
Exc = 0
Emb = 53.7
4.90
6.03
277+00
C = 0
F = 25
Exc = 0
Emb = 57.9
4.68
6.05
276+50
C = 0
F = 31
Exc = 0
Emb = 51.9
4.92
6.08
276+00
C = 0
F = 25
Exc = 0
Emb = 56.5
4.50
6.12
275+50
C = 0
F = 36
Exc = 38.9
Emb = 38.0
6.73
6.16
275+00
C = 42
F = 5
Exc = 46.3
Emb = 1.9
4.05
5.98
284+50
C = 0
F = 50
Exc = 0
Emb = 97.4
4.09
5.99
284+00
C = 0
F = 55
Exc = 0
Emb = 103.7
3.28
6.00
283+50
C = 0
F = 57
Exc = 0
Emb = 92.6
4.10
6.00
283+00
C = 0
F = 43
Exc = 0
Emb = 88.0
3.88
6.00
282+50
C = 0
F = 52
Exc = 0
Emb = 80.6
4.25
6.00
282+00
C = 0
F = 35
Exc = 0
Emb = 70.4
4.41
6.00
281+50
C = 0
F = 41
Exc = 0
Emb = 70.4
4.39
6.00
281+00
C = 0
F = 35
Exc = 0
Emb = 64.8
4.56
6.00
280+50
C = 0
F = 35
Exc = 0
Emb = 57.4
4.90
6.00
280+00
C = 0
F = 27
Exc = 0
Emb = 36.1

PLATE 3—CROSS SECTION O. P. R. & R. E. STANDARD
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MADE IN U. S. A. 27188-3

4477.49

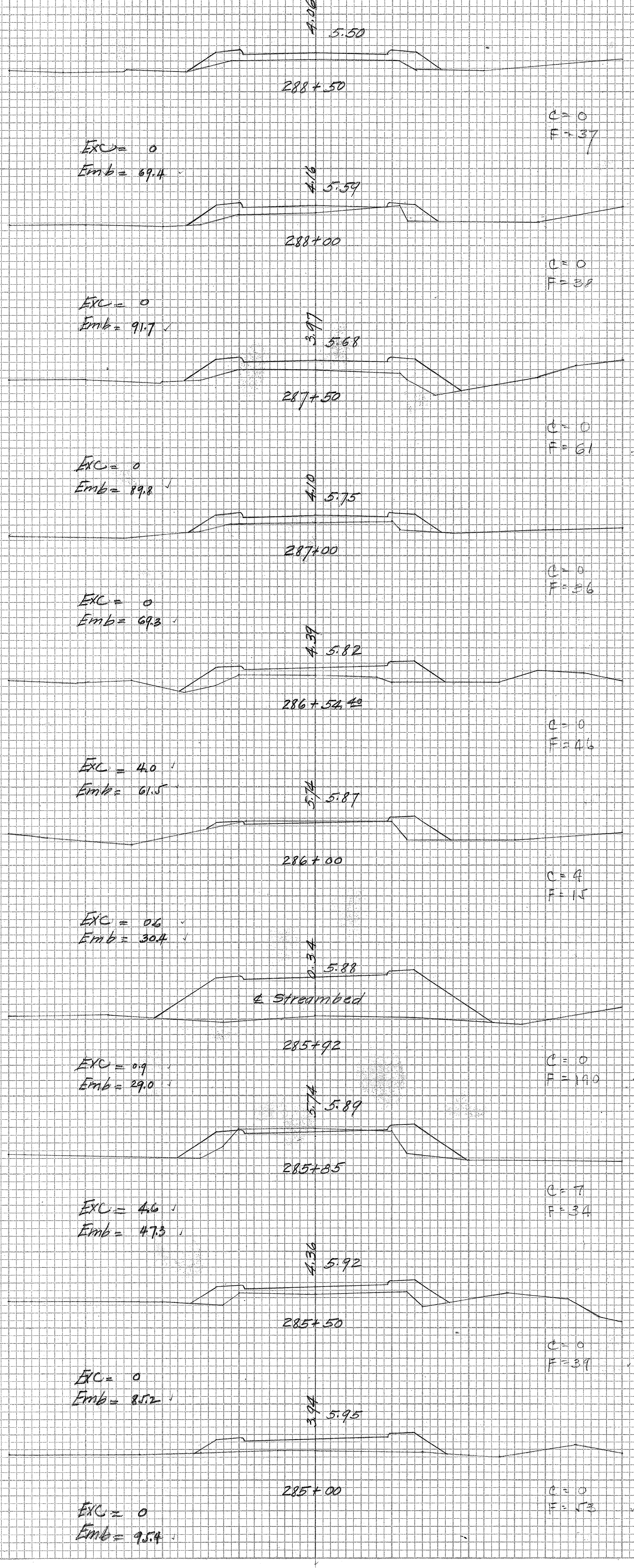
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F.A.S. 2-A(1)	1938	50	58

FINAL SURVEY

NOTE BOOK NO.	BY	DATE
SURVEYED		
PLOTTED	H. Hayashi	April 1938
TEMPLATE	H. Hayashi	
AREAS	F. de Mello	
AREAS CHECKED		

ORIGINAL SURVEY

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


4.06
5.50
288+50
4.16
5.59
288+00
3.97
5.68
287+50
4.10
5.75
287+00
4.37
5.82
286+54.40
5.74
5.87
286+00
0.34
5.88
℄ Streambed
285+92
5.74
5.89
285+85
4.36
5.92
285+50
3.94
5.95
285+00

C = 0
F = 37
Exc = 0
Emb = 69.4

C = 0
F = 38
Exc = 0
Emb = 91.7

C = 0
F = 61
Exc = 0
Emb = 89.8

C = 0
F = 36
Exc = 0
Emb = 69.3

C = 0
F = 46
Exc = 4.0
Emb = 61.5

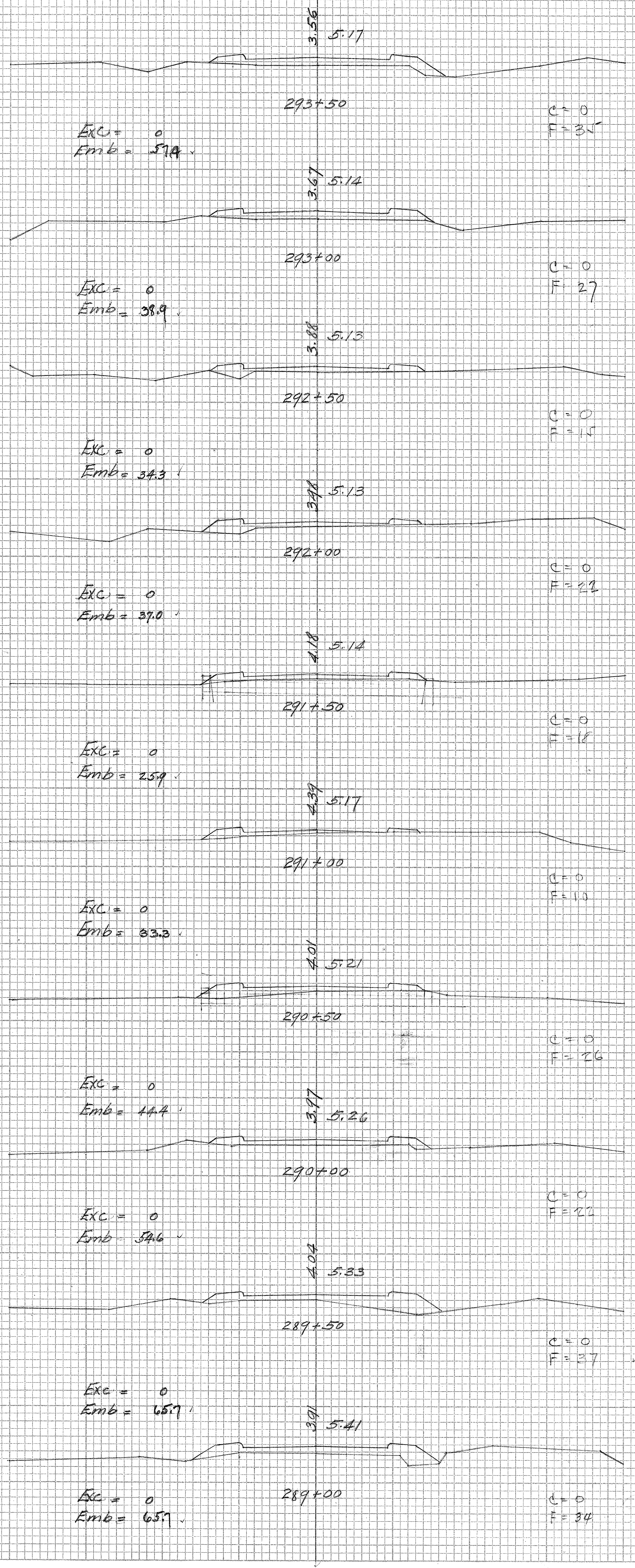
C = 4
F = 15
Exc = 06
Emb = 30.4

C = 0
F = 110
Exc = 0.9
Emb = 29.0

C = 7
F = 34
Exc = 4.6
Emb = 47.3

C = 0
F = 39
Exc = 0
Emb = 85.2

C = 0
F = 53
Exc = 0
Emb = 95.4


3.56
5.17
293+50
3.67
5.14
293+00
3.88
5.13
292+50
3.98
5.13
292+00
4.18
5.14
291+50
4.39
5.17
291+00
4.01
5.21
290+50
3.97
5.26
290+00
4.04
5.33
289+50
3.91
5.41
289+00

C = 0
F = 35
Exc = 0
Emb = 57.4

C = 0
F 27
Exc = 0
Emb = 38.9

C = 0
F = 15
Exc = 0
Emb = 34.3

C = 0
F = 22
Exc = 0
Emb = 37.0

C = 0
F = 18
Exc = 0
Emb = 25.9

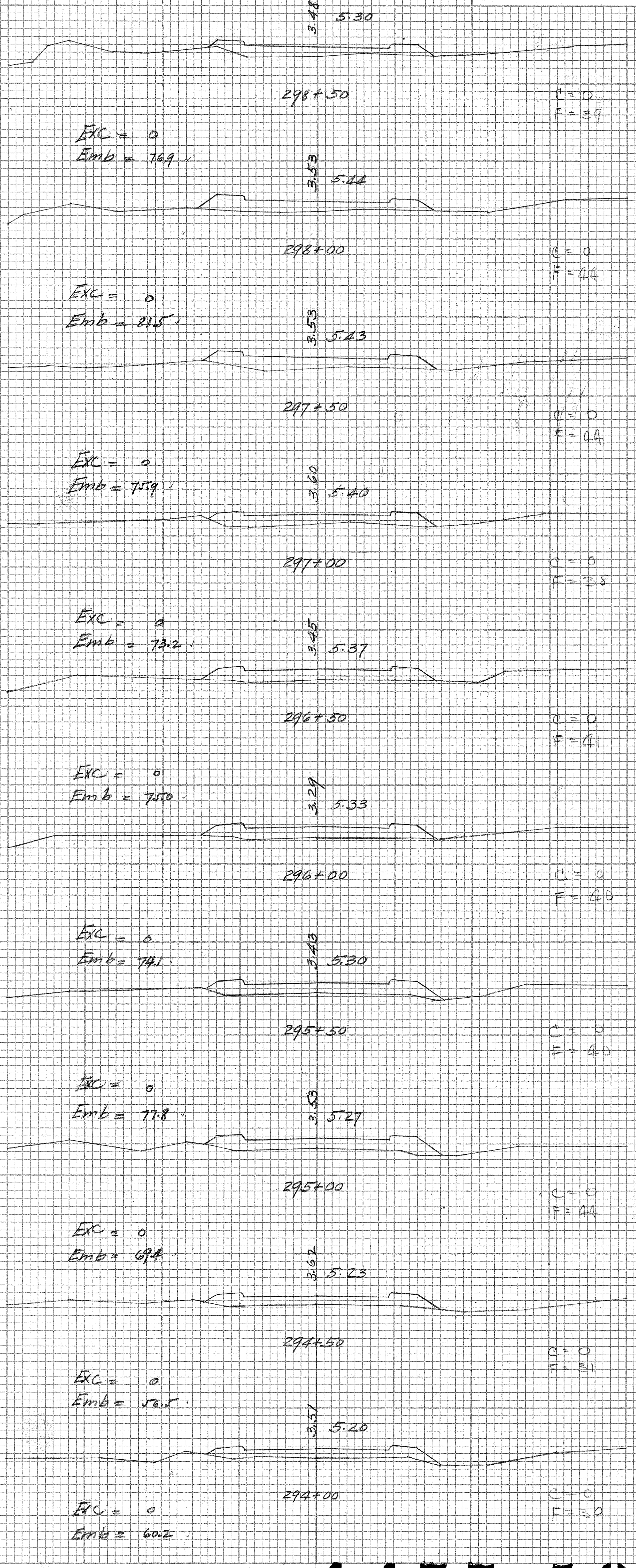
C = 0
F = 10
Exc = 0
Emb = 33.3

C = 0
F = 26
Exc = 0
Emb = 44.4

C = 0
F = 22
Exc = 0
Emb 54.6

C = 0
F = 27
Exc = 0
Emb = 65.7

C = 0
F = 34
Exc = 0
Emb = 65.7


3.48
5.30
298+50
3.53
5.44
298+00
3.53
5.43
297+50
3.60
5.40
297+00
3.45
5.37
296+50
3.29
5.33
296+00
3.43
5.30
295+50
3.53
5.27
295+00
3.62
5.23
294+50
3.51
5.20
294+00

C = 0
F = 39
Exc = 0
Emb = 76.9

C = 0
F = 44
Exc = 0
Emb = 81.5

C = 0
F = 44
Exc = 0
Emb = 75.9

C = 0
F = 38
Exc = 0
Emb = 73.2

C = 0
F = 41
Exc = 0
Emb = 75.0

C = 0
F = 40
Exc = 0
Emb = 74.1

C = 0
F = 40
Exc = 0
Emb = 77.8

C = 0
F = 44
Exc = 0
Emb = 69.4

C = 0
F = 31
Exc = 0
Emb = 56.5

C = 0
F = 30
Exc = 0
Emb = 60.2

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

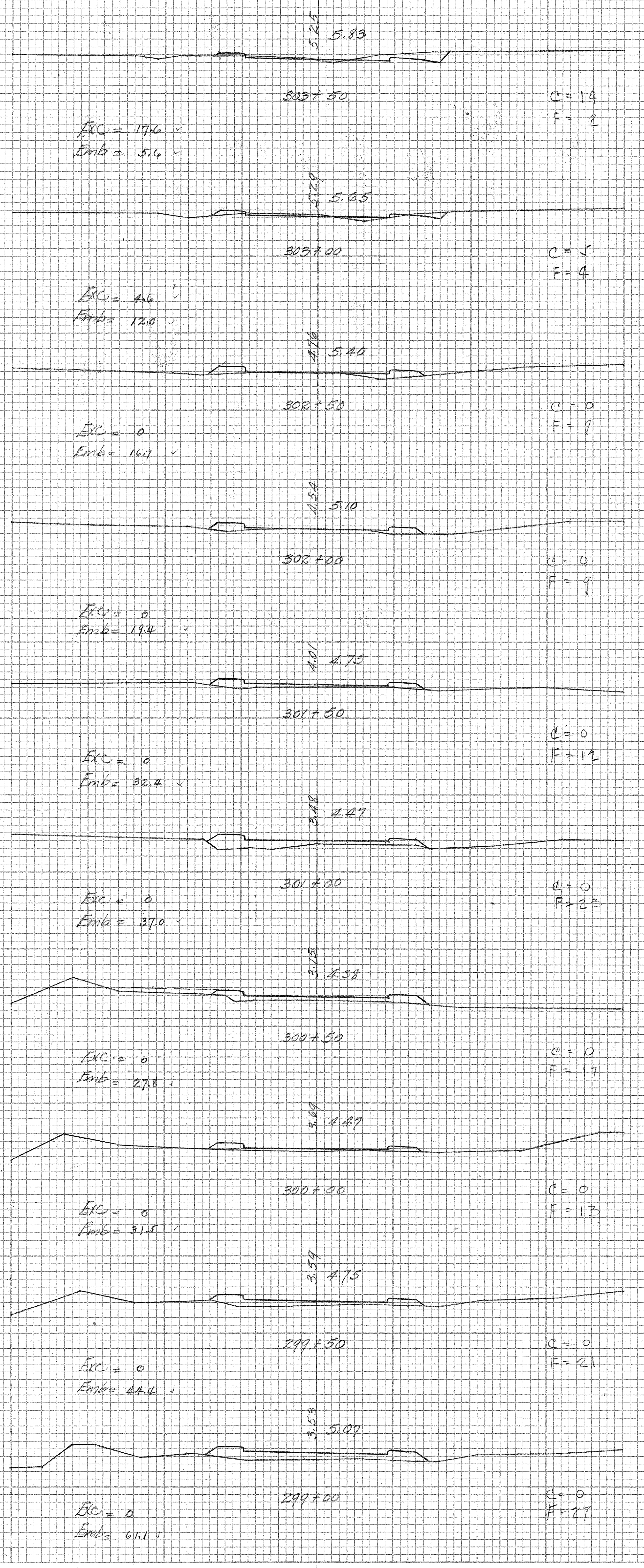
4477.50

21

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F.A.S. 2-A(1)	1938	51	58

FINAL SURVEY		BY	DATE
NOTE BOOK	SURVEYED		
NO.	PLOTTED		
	TEMPLATE	H. Hayashi	April 1938
	AREAS		
	AREAS CHECKED	F. de Mello	

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


5.25
5.83
303+50
5.29
5.65
303+00
4.76
5.40
302+50
4.54
5.10
302+00
4.01
4.75
301+50
3.48
4.47
301+00
3.15
4.38
300+50
3.69
4.47
300+00
3.59
4.75
299+50
3.53
5.07
299+00

303+50
C = 14
F = 2
Exc = 17.6 ✓
Emb = 5.6 ✓

303+00
C = 5
F = 4
Exc = 4.6 ✓
Emb = 12.0 ✓

302+50
C = 0
F = 9
Exc = 0
Emb = 16.7 ✓

302+00
C = 0
F = 9
Exc = 0
Emb = 19.4 ✓

301+50
C = 0
F = 12
Exc = 0
Emb = 32.4 ✓

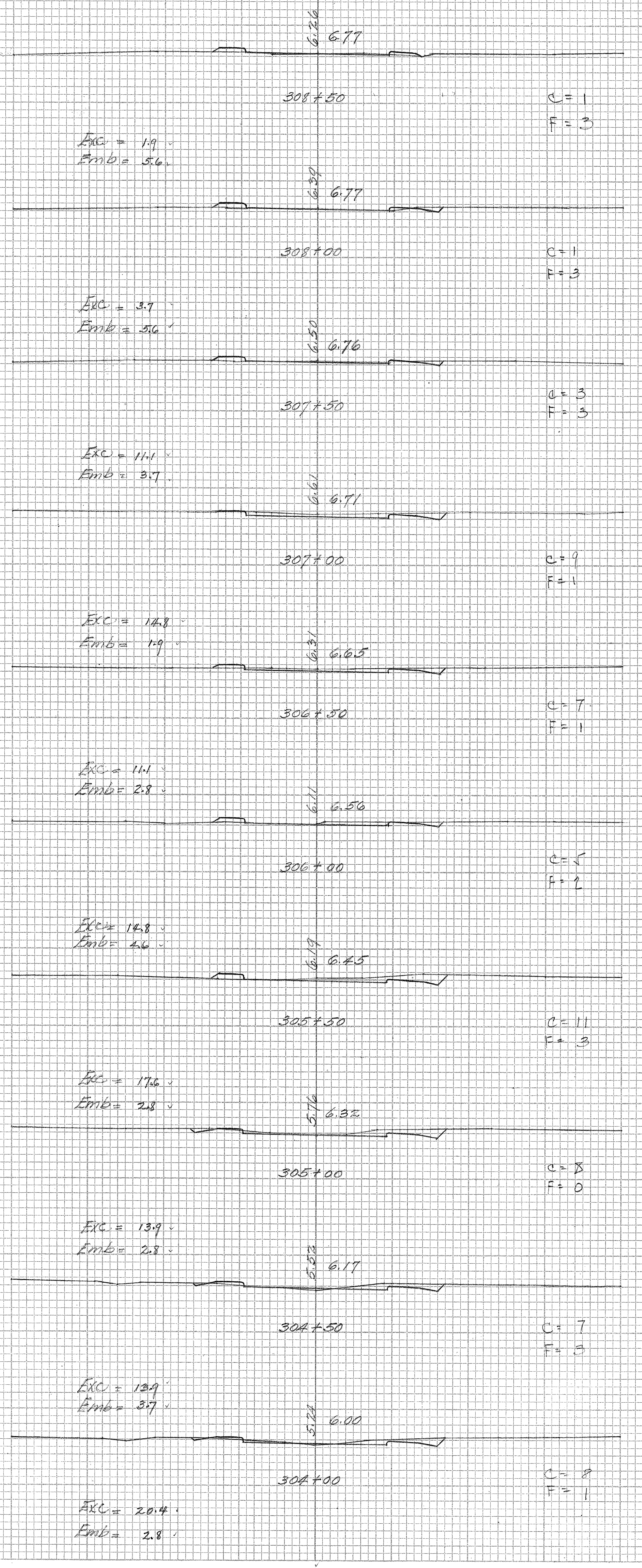
301+00
C = 0
F = 23
Exc = 0
Emb = 37.0 ✓

300+50
C = 0
F = 17
Exc = 0
Emb = 27.8 ✓

300+00
C = 0
F = 13
Exc = 0
Emb = 31.5 ✓

299+50
C = 0
F = 21
Exc = 0
Emb = 44.4 ✓

299+00
C = 0
F = 27
Exc = 0
Emb = 61.1 ✓


6.26
6.77
308+50
6.39
6.77
308+00
6.50
6.76
307+50
6.61
6.71
307+00
6.31
6.65
306+50
6.11
6.56
306+00
6.19
6.45
305+50
5.76
6.32
305+00
5.52
6.17
304+50
5.24
6.00
304+00

308+50
C = 1
F = 3
Exc = 1.9 ✓
Emb = 5.6 ✓

308+00
C = 1
F = 3
Exc = 3.7 ✓
Emb = 5.6 ✓

307+50
C = 3
F = 3
Exc = 11.1 ✓
Emb = 3.7 ✓

307+00
C = 9
F = 1
Exc = 14.8 ✓
Emb = 1.9 ✓

306+50
C = 7
F = 1
Exc = 11.1 ✓
Emb = 2.8 ✓

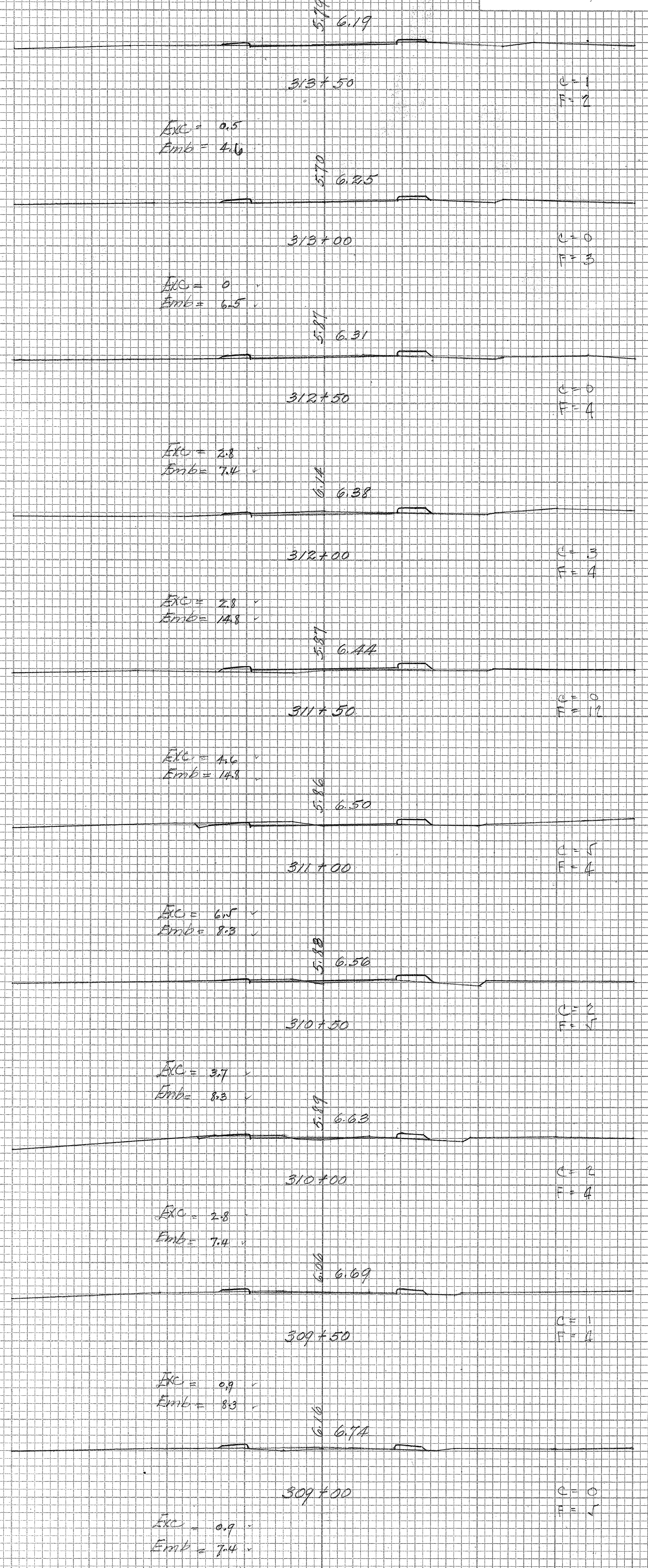
306+00
C = 5
F = 2
Exc = 14.8 ✓
Emb = 4.6 ✓

305+50
C = 11
F = 3
Exc = 17.6 ✓
Emb = 2.8 ✓

305+00
C = 8
F = 0
Exc = 13.9 ✓
Emb = 2.8 ✓

304+50
C = 7
F = 3
Exc = 13.9 ✓
Emb = 3.7 ✓

304+00
C = 8
F = 1
Exc = 20.4 ✓
Emb = 2.8 ✓


5.79
6.19
313+50
5.70
6.25
313+00
5.87
6.31
312+50
6.14
6.38
312+00
5.87
6.44
311+50
5.86
6.50
311+00
5.88
6.56
310+50
5.89
6.63
310+00
6.06
6.69
309+50
6.16
6.74
309+00

313+50
C = 1
F = 2
Exc = 0.5
Emb = 4.6

313+00
C = 0
F = 3
Exc = 0 ✓
Emb = 6.5 ✓

312+50
C = 0
F = 4
Exc = 2.8 ✓
Emb = 7.4 ✓

312+00
C = 3
F = 4
Exc = 2.8 ✓
Emb = 14.8 ✓

311+50
C = 0
F = 12
Exc = 4.6 ✓
Emb = 14.8 ✓

311+00
C = 5
F = 4
Exc = 6.5 ✓
Emb = 8.3 ✓

310+50
C = 2
F = 5
Exc = 3.7 ✓
Emb = 8.3 ✓

310+00
C = 2
F = 4
Exc = 2.8 ✓
Emb = 7.4 ✓

309+50
C = 1
F = 6
Exc = 0.9 ✓
Emb = 8.3 ✓

309+00
C = 0
F = 5
Exc = 0.9 ✓
Emb = 7.4 ✓

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

4477.51

22

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F.A.S. 2-A(1)	1938	52	58

FINAL SURVEY		BY	DATE
NOTE BOOK	SURVEYED		
NO.	PLOTTED	H. Hayashi	April
	TEMPLATE	E. de Mello	1938
	AREAS	E. de Mello	
	AREAS CHECKED		

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

2.87 5.79
318+50
C = 0
F = 80
Exc = 0
Emb = 113.9
3.98 5.75
318+00
C = 0
F = 43
Exc = 0
Emb = 75.9
3.98 5.75
317+50
C = 0
F = 39
Exc = 0
Emb = 70.4
4.16 5.76
317+00
C = 0
F = 37
Exc = 0
Emb = 61.1
4.54 5.81
316+50
C = 0
F = 29
Exc = 0
Emb = 42.6
5.02 5.86
316+00
C = 0
F = 17
Exc = 0
Emb = 28.7
4.77 5.94
315+50
C = 0
F = 14
Exc = 0
Emb = 17.6
5.49 6.00
315+00
C = 0
F = 5
Exc = 6.5
Emb = 5.6
5.67 6.06
314+50
C = 7
F = 1
Exc = 10.2
Emb = 3.7
5.77 6.13
314+00
C = 4
F = 3
Exc = 4.6
Emb = 4.6
3.83 7.52
323+50
C = 0
F = 102
Exc = 0
Emb = 184.3
3.93 7.30
323+00
C = 0
F = 97
Exc = 0
Emb = 177.8
3.68 7.07
322+50
C = 0
F = 95
Exc = 0
Emb = 176.9
3.66 6.84
322+00
C = 0
F = 96
Exc = 0
Emb = 174.1
3.46 6.62
321+50
C = 0
F = 92
Exc = 0
Emb = 161.1
3.37 6.54
321+00
C = 0
F = 82
Exc = 0
Emb = 145.4
3.27 6.23
320+50
C = 0
F = 76
Exc = 0
Emb = 130.6
3.13 6.07
320+00
C = 0
F = 66
Exc = 0
Emb = 118.5
3.58 5.96
319+50
C = 0
F = 62
Exc = 0
Emb = 126.9
3.16 5.86
319+00
C = 0
F = 75
Exc = 0
Emb = 143.5
9.01 10.03
328+50
C = 0
F = 13
Exc = 0
Emb = 48.2
8.34 9.69
328+00
C = 0
F = 39
Exc = 0
Emb = 61.1
7.93 9.38
327+50
C = 0
F = 27
Exc = 0
Emb = 57.4
7.24 9.12
327+00
C = 0
F = 35
Exc = 0
Emb = 100.0
5.40 8.87
326+50
C = 0
F = 73
Exc = 0
Emb = 131.5
4.41 8.65
326+00
C = 0
F = 69
Exc = 0
Emb = 139.8
4.16 8.42
325+50
C = 0
F = 82
Exc = 0
Emb = 160.2
3.95 8.20
325+00
C = 0
F = 91
Exc = 0
Emb = 185.2
3.98 7.97
324+50
C = 0
F = 109
Exc = 0
Emb = 209.3
3.20 7.75
324+00
C = 0
F = 117
Exc = 0
Emb = 202.8

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

MADE IN U.S.A. 371SS-3

4477.52

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F.A.S. 2-A(1)	1938	53	58

FINAL SURVEY	BY	DATE
SURVEYED		
PLOTTED		
TEMPLATE	H. Hayashi	April 1938
AREAS	F. de Mello	
AREAS CHECKED	F. de Mello	
NOTE BOOK NO.		

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

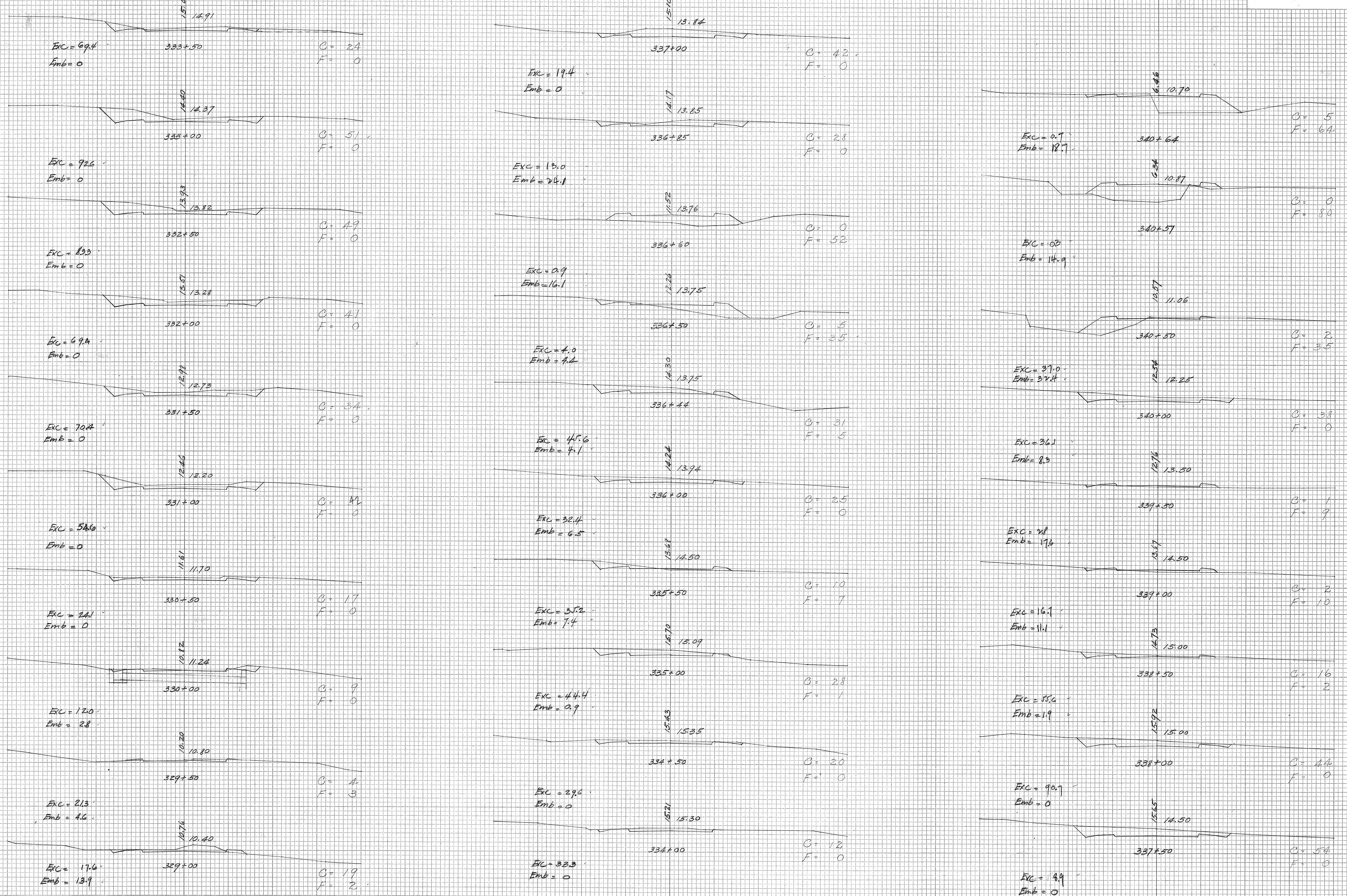

15.02
14.91
Exc = 69.4
Emb = 0
333+50
C = 24
F = 0
14.40
14.37
333+00
C = 51
F = 0
Exc = 92.6
Emb = 0
13.93
13.82
332+50
C = 49
F = 0
Exc = 83.3
Emb = 0
13.51
13.28
332+00
C = 41
F = 0
Exc = 69.4
Emb = 0
12.98
12.73
331+50
C = 34
F = 0
Exc = 70.4
Emb = 0
12.66
12.20
331+00
C = 42
F = 0
Exc = 54.6
Emb = 0
11.61
11.70
330+50
C = 17
F = 0
Exc = 24.1
Emb = 0
10.82
11.24
330+00
C = 9
F = 0
Exc = 12.0
Emb = 2.8
10.20
10.80
329+50
C = 4
F = 3
Exc = 21.3
Emb = 4.6
10.76
10.40
329+00
Exc = 17.6
Emb = 13.9
C = 19
F = 2
15.10
13.84
337+00
C = 42
F = 0
Exc = 19.4
Emb = 0
14.17
13.85
336+85
C = 28
F = 0
Exc = 13.0
Emb = 24.1
11.52
13.76
336+60
C = 0
F = 52
Exc = 0.9
Emb = 16.1
12.26
13.75
336+50
C = 5
F = 35
Exc = 4.0
Emb = 4.4
14.30
13.75
336+44
C = 31
F = 5
Exc = 45.6
Emb = 4.1
14.24
13.94
336+00
C = 25
F = 0
Exc = 32.4
Emb = 6.5
13.68
14.50
335+50
C = 10
F = 7
Exc = 35.2
Emb = 7.4
15.70
15.09
335+00
C = 28
F = 1
Exc = 44.4
Emb = 0.9
15.43
15.35
334+50
C = 20
F = 0
Exc = 29.6
Emb = 0
15.21
15.30
334+00
C = 12
F = 0
Exc = 33.3
Emb = 0
6.46
10.70
C = 5
F = 64
340+64
Exc = 0.7
Emb = 18.7
6.34
10.87
C = 0
F = 80
340+57
Exc = 0.3
Emb = 14.9
10.57
11.06
340+50
C = 2
F = 35
Exc = 37.0
Emb = 37.4
12.34
12.25
340+00
C = 38
F = 0
Exc = 36.1
Emb = 8.3
12.76
13.50
339+50
C = 1
F = 9
Exc = 7.8
Emb = 17.6
13.67
14.50
339+00
C = 2
F = 10
Exc = 16.7
Emb = 11.1
14.73
15.00
338+50
C = 16
F = 2
Exc = 55.6
Emb = 1.9
15.92
15.00
338+00
C = 44
F = 0
Exc = 98.9
Emb = 0
15.65
14.50
337+50
C = 54
F = 0
Exc = 8.9
Emb = 0

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

4477.53

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F.A.S. 2-A(1)	1938	54	58

FINAL SURVEY		BY	DATE
NOTE BOOK	SURVEYED		April 1938
NO.	PLOTTED	H. Hayashi	
	TEMPLATE	H. Hayashi	
	AREAS		
	AREAS CHECKED	F de Mello	

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

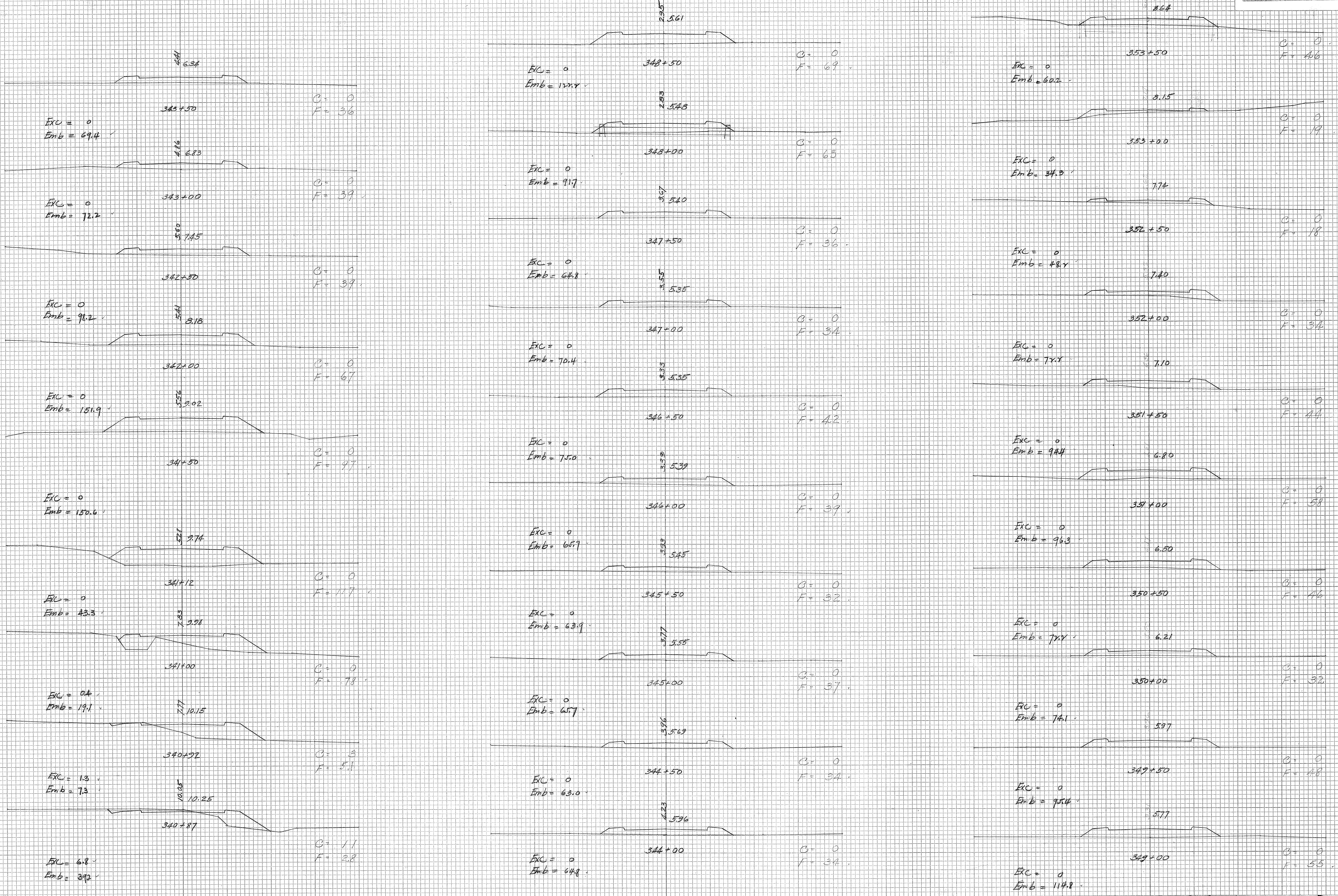

4.41
6.34
343+50
C = 0
F = 36
Exc = 0
Emb = 69.4
4.86
6.83
343+00
C = 0
F = 39
Exc = 0
Emb = 72.2
5.60
7.45
342+50
C = 0
F = 39
Exc = 0
Emb = 98.2
5.41
8.18
342+00
C = 0
F = 67
Exc = 0
Emb = 151.9
5.56
9.02
341+50
C = 0
F = 97
Exc = 0
Emb = 150.6
5.28
9.74
341+12
C = 0
F = 117
Exc = 0
Emb = 43.3
7.83
9.98
341+00
C = 0
F = 78
Exc = 0.4
Emb = 19.1
7.77
10.15
340+92
C = 3
F = 5.1
Exc = 1.3
Emb = 7.3
10.05
10.25
340+87
C = 11
F = 28
Exc = 6.8
Emb = 39.2
2.95
5.61
348+50
C = 0
F = 69
Exc = 0
Emb = 124.4
2.83
5.48
348+00
C = 0
F = 63
Exc = 0
Emb = 91.7
3.67
5.40
347+50
C = 0
F = 36
Exc = 0
Emb = 64.8
3.55
5.35
347+00
C = 0
F = 34
Exc = 0
Emb = 70.4
3.33
5.35
346+50
C = 0
F = 42
Exc = 0
Emb = 75.0
3.39
5.39
346+00
C = 0
F = 39
Exc = 0
Emb = 65.7
3.93
5.45
345+50
C = 0
F = 32
Exc = 0
Emb = 63.9
3.77
5.55
345+00
C = 0
F = 37
Exc = 0
Emb = 65.7
3.96
5.69
344+50
C = 0
F = 34
Exc = 0
Emb = 63.0
4.23
5.96
344+00
C = 0
F = 34
Exc = 0
Emb = 64.8
8.64
353+50
C = 0
F = 46
Exc = 0
Emb = 60.2
8.15
353+00
C = 0
F = 19
Exc = 0
Emb = 34.3
7.74
352+50
C = 0
F = 18
Exc = 0
Emb = 48.4
7.40
352+00
C = 0
F = 34
Exc = 0
Emb = 74.4
7.10
351+50
C = 0
F = 44
Exc = 0
Emb = 94.4
6.80
351+00
C = 0
F = 58
Exc = 0
Emb = 96.3
6.50
350+50
C = 0
F = 46
Exc = 0
Emb = 74.4
6.21
350+00
C = 0
F = 32
Exc = 0
Emb = 74.1
5.97
349+50
C = 0
F = 48
Exc = 0
Emb = 95.4
5.77
349+00
C = 0
F = 55
Exc = 0
Emb = 114.8

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

MADE IN U. S. A. 27188-3

4477.54

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F.A.S. 2-A(1)	1938	55	58

FINAL SURVEY		BY	DATE
NOTE BOOK	SURVEYED		
NO.	PLOTTED		
	TEMPLATE	H Hayashi	April 1938
	AREAS		
	AREAS CHECKED	F. de Mello.	

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

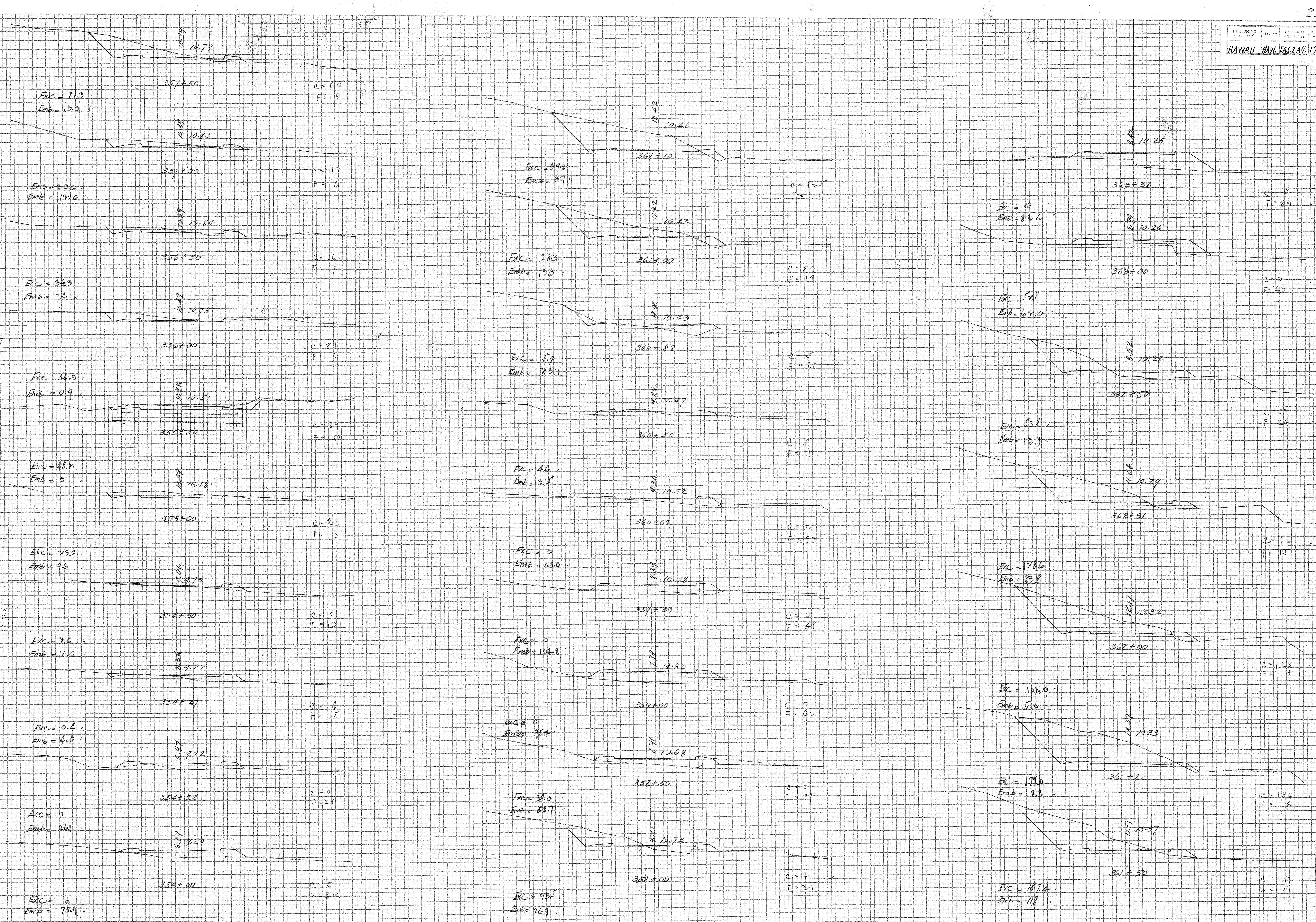

10.89
10.79
357+50
C = 60
F = 8
Exc = 71.3
Emb = 13.0
10.89
10.84
357+00
C = 17
F = 6
Exc = 30.6
Emb = 12.0
10.69
10.84
356+50
C = 16
F = 7
Exc = 34.3
Emb = 7.4
10.49
10.73
356+00
C = 21
F = 1
Exc = 46.3
Emb = 0.9
10.73
10.51
355+50
C = 29
F = 0
Exc = 48.2
Emb = 0
10.49
10.18
355+00
C = 23
F = 0
Exc = 23.7
Emb = 9.3
9.06
9.75
354+50
C = 2
F = 10
Exc = 2.6
Emb = 10.6
8.36
9.22
354+27
C = 4
F = 15
Exc = 0.4
Emb = 4.0
6.97
9.22
354+22
C = 0
F = 28
Exc = 0
Emb = 26.1
6.87
9.20
354+00
C = 0
F = 36
Exc = 0
Emb = 75.9
13.42
10.41
361+10
Exc = 39.8
Emb = 3.7
C = 135
F = 8
11.42
10.42
361+00
Exc = 28.3
Emb = 13.3
C = 80
F = 12
9.08
10.43
360+82
Exc = 5.9
Emb = 23.1
C = 5
F = 28
9.86
10.47
360+50
C = 5
F = 11
Exc = 4.6
Emb = 31.5
9.30
10.52
360+00
C = 0
F = 23
Exc = 0
Emb = 63.0
8.89
10.58
359+50
C = 0
F = 45
Exc = 0
Emb = 102.8
7.79
10.63
359+00
C = 0
F = 66
Exc = 0
Emb = 95.4
8.91
10.68
358+50
C = 0
F = 37
Exc = 38.0
Emb = 53.7
9.21
10.73
358+00
C = 41
F = 21
Exc = 93.5
Emb = 26.9
8.42
10.25
363+38
C = 0
F = 80
Exc = 0
Emb = 86.6
8.79
10.26
363+00
C = 0
F = 43
Exc = 52.8
Emb = 62.0
8.52
10.28
362+50
C = 57
F = 24
Exc = 53.8
Emb = 13.7
11.66
10.29
362+31
C = 96
F = 15
Exc = 172.6
Emb = 13.8
12.17
10.32
362+00
C = 128
F = 9
Exc = 102.0
Emb = 5.0
14.37
10.33
361+82
C = 184
F = 6
Exc = 179.0
Emb = 8.3
11.17
10.37
361+50
C = 118
F = 8
Exc = 187.4
Emb = 11.8

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

4477.55

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F.A.S. 2-A(1)	1938	56	58

FINAL SURVEY
NOTE BOOK NO.

	BY	DATE
SURVEYED		April 1938
PLOTTED		
TEMPLATE	H. Hayashi	
AREAS	H. Hayashi	
AREAS CHECKED	F. de Mello	

ORIGINAL SURVEY
NOTE BOOK NO.

	BY	DATE
SURVEYED		
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		

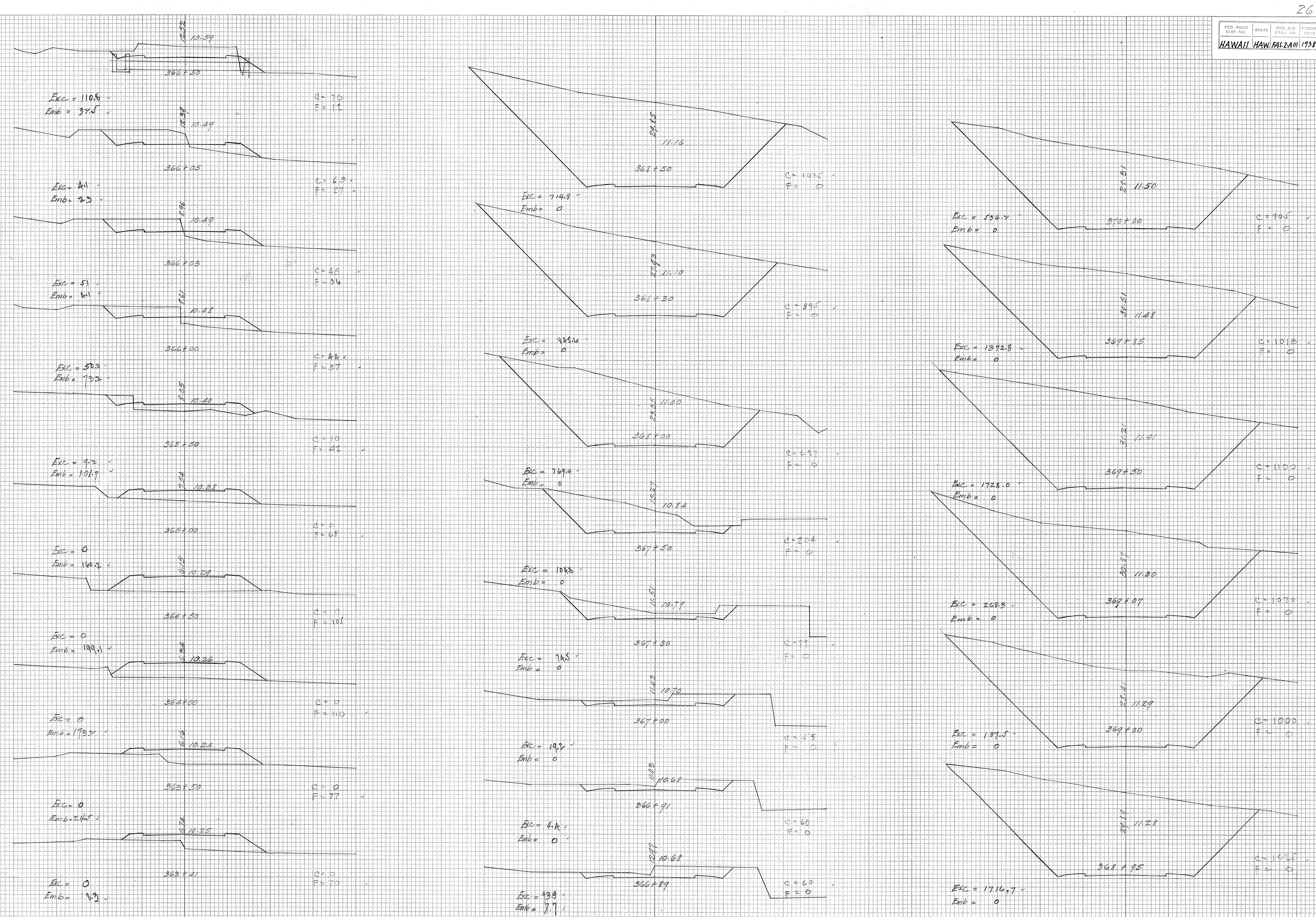

12.52
10.59
366+50
Exc = 110.8
Emb = 37.5
C = 70
F = 12
12.39
10.49
366+05
Exc = 4.1
Emb = 2.3
C = 63
F = 27
8.96
10.49
366+03
Exc = 5.1
Emb = 4.1
C = 46
F = 36
8.61
10.48
366+00
Exc = 50.0
Emb = 73.2
C = 44
F = 37
8.05
10.40
365+50
Exc = 9.3
Emb = 101.9
C = 10
F = 42
7.54
10.38
365+00
Exc = 0
Emb = 160.2
C = 0
F = 68
6.15
10.29
364+50
Exc = 0
Emb = 199.1
C = 0
F = 105
6.34
10.26
364+00
Exc = 0
Emb = 173.7
C = 0
F = 110
6.16
10.24
363+50
Exc = 0
Emb = 24.5
C = 0
F = 77
6.74
10.25
363+41
Exc = 0
Emb = 8.3
C = 0
F = 70
29.85
11.16
368+50
C = 1035
F = 0
Exc = 714.8
Emb = 0
27.93
11.10
368+30
C = 895
F = 0
Exc = 845.6
Emb = 0
23.35
11.00
368+00
C = 627
F = 0
Exc = 769.4
Emb = 0
15.27
10.84
367+50
C = 204
F = 0
Exc = 104.8
Emb = 0
11.51
10.79
367+30
C = 79
F = 0
Exc = 74.5
Emb = 0
11.43
10.70
367+00
C = 55
F = 0
Exc = 19.2
Emb = 0
11.03
10.68
366+91
C = 60
F = 0
Exc = 4.4
Emb = 0
12.97
10.68
366+89
C = 60
F = 0
Exc = 93.9
Emb = 8.7
28.31
11.50
370+00
Exc = 534.2
Emb = 0
C = 905
F = 0
30.51
11.48
369+85
Exc = 1372.8
Emb = 0
C = 1018
F = 0
31.21
11.41
369+50
C = 1100
F = 0
Exc = 1728.0
Emb = 0
30.87
11.30
369+07
Exc = 268.3
Emb = 0
C = 1070
F = 0
28.41
11.29
369+00
C = 1000
F = 0
Exc = 187.5
Emb = 0
29.80
11.28
368+95
C = 1025
F = 0
Exc = 1716.7
Emb = 0
℄
℄

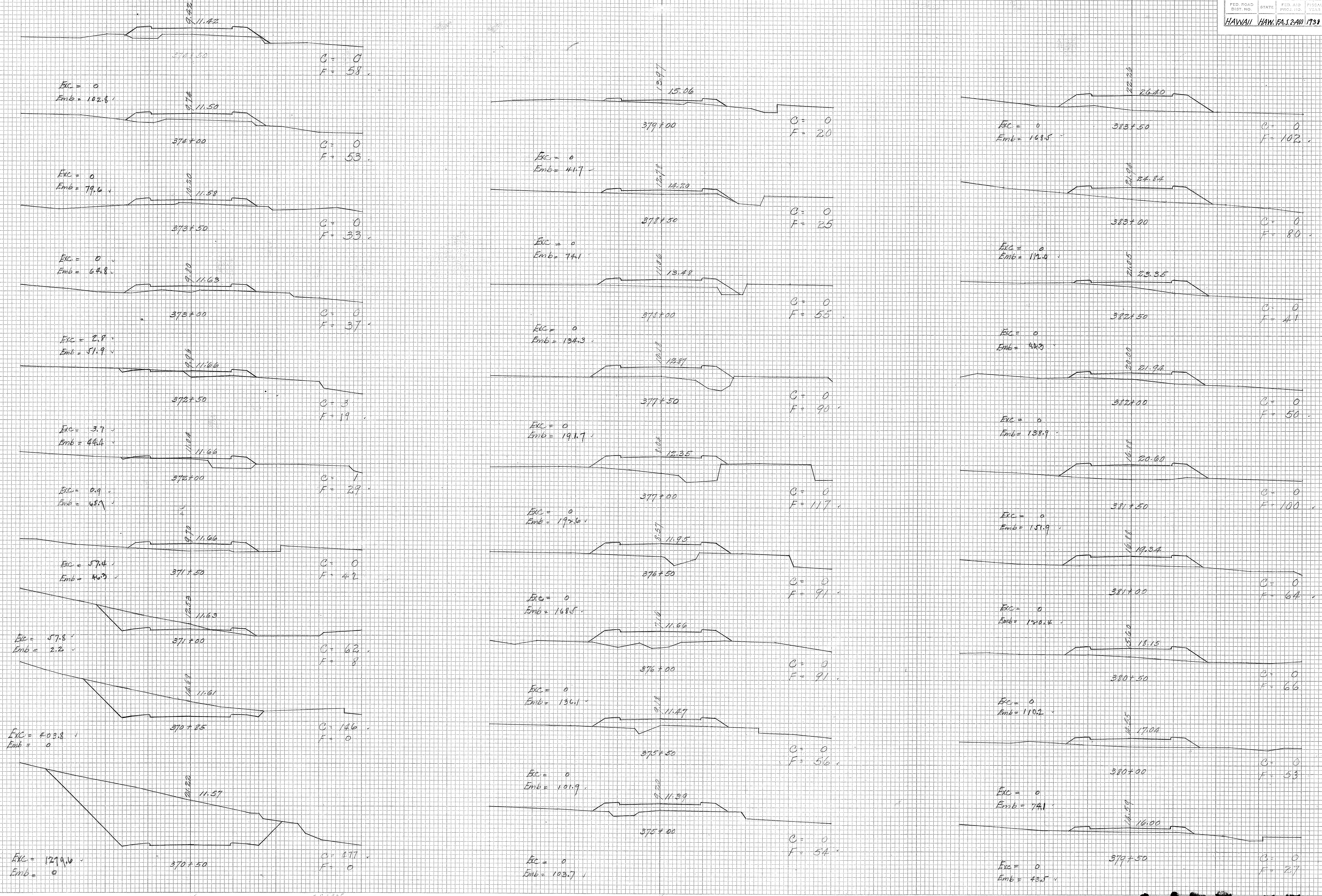
PLATE 3—CROSS SECTION O. P. R. & R. E. STANDARD
KEUFFEL & ESSER CO., NEW YORK.
MADE IN U.S.A. 27188-3

4477.56

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F.A.S. 2-A(1)	1938	57	58

FINAL SURVEY	BY	DATE
SURVEYED		
PLOTTED		April
TEMPLATE	H. Hayashi	1938
AREAS		
AREAS CHECKED	F. de Mello	
NOTE BOOK NO.		

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


9.42
11.42
374+50
C = 0
F = 58
Exc = 0
Emb = 102.8
9.74
11.50
374+00
C = 0
F = 53
Exc = 0
Emb = 79.6
10.20
11.58
373+50
C = 0
F = 33
Exc = 0
Emb = 64.8
9.80
11.63
373+00
C = 0
F = 37
Exc = 2.8
Emb = 51.9
9.96
11.66
372+50
C = 3
F = 19
Exc = 3.7
Emb = 44.4
11.04
11.66
372+00
C = 1
F = 29
Exc = 0.9
Emb = 65.7
9.70
11.66
371+50
C = 0
F = 42
Exc = 57.4
Emb = 46.3
12.53
11.63
371+00
C = 62
F = 8
Exc = 57.8
Emb = 2.2
14.68
11.61
370+85
C = 146
F = 0
Exc = 403.8
Emb = 0
21.22
11.57
370+50
C = 477
F = 0
Exc = 1279.6
Emb = 0
13.97
15.06
379+00
C = 0
F = 20
Exc = 0
Emb = 41.7
12.78
14.20
378+50
C = 0
F = 25
Exc = 0
Emb = 74.1
11.06
13.48
378+00
C = 0
F = 55
Exc = 0
Emb = 134.3
10.18
12.87
377+50
C = 0
F = 90
Exc = 0
Emb = 191.7
8.02
12.35
377+00
C = 0
F = 117
Exc = 0
Emb = 192.6
8.57
11.95
376+50
C = 0
F = 91
Exc = 0
Emb = 168.5
7.16
11.66
376+00
C = 0
F = 91
Exc = 0
Emb = 136.1
9.18
11.47
375+50
C = 0
F = 56
Exc = 0
Emb = 101.9
9.20
11.39
375+00
C = 0
F = 54
Exc = 0
Emb = 103.7
22.36
26.40
383+50
Exc = 0
Emb = 168.5
C = 0
F = 102
21.94
24.84
383+00
C = 0
F = 80
Exc = 0
Emb = 112.0
21.05
23.35
382+50
C = 0
F = 41
Exc = 0
Emb = 84.3
20.00
21.94
382+00
C = 0
F = 50
Exc = 0
Emb = 138.9
16.88
20.60
381+50
C = 0
F = 100
Exc = 0
Emb = 151.9
16.88
19.34
381+00
C = 0
F = 64
Exc = 0
Emb = 120.4
15.60
18.15
380+50
C = 0
F = 66
Exc = 0
Emb = 110.2
14.55
17.04
380+00
C = 0
F = 53
Exc = 0
Emb = 74.1
14.59
16.00
379+50
C = 0
F = 27
Exc = 0
Emb = 43.5
℄
℄

370+60 { C = 905 F = 0

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

4477.57

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F.A.S. 2-(2)	1938	58	58

FINAL SURVEY		BY	DATE
NOTE BOOK	SURVEYED		
NO.	PLOTTED	H. Hayashi	April
	TEMPLATE	H. Hayashi	1938
	AREAS	H. Hayashi	
	AREAS CHECKED	F. de Mello.	

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

36.26
33.25
388+00
EXC = 530.6
Emb = 0
C = 290
F = 0
36.30
33.56
387+50
EXC = 263.0
Emb = 20.4
C = 283
F = 0
32.67
34.00
387+00
EXC = 27.8
Emb = 77.8
C = 1
F = 22
34.47
34.22
386+50
EXC = 27.8
Emb = 13.9
C = 29
F = 8
33.06
33.87
386+00
EXC = 124.1
Emb = 6.5
C = 1
F = 7
35.97
32.97
385+50
EXC = 123.2
Emb = 30.6
C = 133
F = 0
29.74
31.50
385+00
EXC = 0
Emb = 125.9
C = 0
F = 33
25.59
29.75
384+50
EXC = 0
Emb = 81.9
C = 0
F = 103
25.26
28.91
384+30
EXC = 0
Emb = 151.1
C = 0
F = 118
23.69
28.04
384+00
EXC = 0
Emb = 237.0
C = 0
F = 154
35.51
34.06
391+07
EXC = 44.2
Emb = 0
C = 106
F = 0
35.82
34.00
391+00
EXC = 198.1
Emb = 0
C = 235
F = 0
37.53
33.81
390+80
EXC = 119.3
Emb = 0
C = 300
F = 0
35.38
33.71
390+68
EXC = 183.0
Emb = 0
C = 237
F = 0
36.16
33.36
390+50
EXC = 793.5
Emb = 0
C = 312
F = 0
End of Project F.A.S. 2-A(1)
37.75
32.25
390+00
EXC = 507.3
Emb = 0
C = 545
F = 0
35.14
33.12
389+68
EXC = 222.0
Emb = 0
C = 311
F = 0
36.75
33.06
389+50
EXC = 725.0
Emb = 0
C = 355
F = 0
37.43
33.00
389+00
EXC = 803.7
Emb = 0
C = 428
F = 0
37.69
33.06
388+50
EXC = 675.9
Emb = 0
C = 440
F = 0
28.38
30.50
393+50
EXC = 0
Emb = 88.0
C = 0
F = 73
29.69
32.00
393+00
EXC = 0
Emb = 41.2
C = 0
F = 60
31.33
32.69
392+75
EXC = 0
Emb = 57.4
C = 0
F = 66
29.88
33.75
392+50
EXC = 79.2
Emb = 51.9
C = 0
F = 100
34.59
33.83
392+15
EXC = 26.4
Emb = 0
C = 62
F = 0
34.99
34.00
392+00
EXC = 132.4
Emb = 0
C = 70
F = 2
36.55
34.25
391+50
EXC = 73.3
Emb = 0
C = 128
F = 0
36.68
34.21
391+30
EXC = 23.8
Emb = 0.9
C = 137
F = 0
33.13
34.15
391+18
EXC = 0.8
Emb = 1.1
C = 11
F = 4
33.30
34.11
391+12
EXC = 10.3
Emb = 0.6
C = 18
F = 10

Note: Material excavated from sta. 387+00 to sta. 391+12 is to be used for base course of this project.

383+50 { C = 0
F = 102

PLATE 3—CROSS SECTION O. P. R. & R. E. STANDARD
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