FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	E-12-A	1932	37	56

℄
13.82
3.9
7+00
C=0
F=423
423
Exc.= 0
Emb.=436.6
13.75
1.9
6+75
C=0
F=520
520
BRIDGE, Sta. 6+00 to 6+75
Yardage Exception
Exc.= 0
Emb.= 0
13.56
8.0
6+00
C=0
F=212
Exc.= 0
Emb.=618.5
13.30
09.9
5+00
C=0
F=122
Exc.= 0
Emb.=303.7
13.04
11.2
4+00
C=0
F=42
Exc.=7.4
Emb.=94.4
12.78
11.8
3+00
C=4
F=9
Exc.=24.1
Emb.=25.9
12.52
11.8
2+00
C=9
F=0
Exc.=20.4
Emb.=0
12.02
12.4
1+00
C=2
F=0
Exc.=3.7 Cu. Yds.
Emb.=0 Cu. Yds.
11.06
11.1
0+00
C=0
F=0
℄
℄
26.49
26.2
14+00
C=50
F=0
Exc.=105.6
Emb.= 3.7
22.65
21.6
13+00
C=7
F=2
Exc.= 94.4
Emb= 3.7
19.52
19.2
12+00
C=44
F=0
Exc.=161.1
Emb.=44.4
17.10
15.5
11+00
C=43
F=24
Exc.=103.7
Emb.=138.9
15.41
12.8
10+00
C=13
F=51
Exc.= 24.1
Emb.=172.2
14.43
12.6
9+00
C=0
F=42
Exc.= 0
Emb.=171.3
14.21
9.6
8+50
C=0
F=143
Exc.= 0
Emb.=413.9
14.08
6.4
8+00
C=0
F=304
304
Exc.= 0 Cu. Yds.
Emb.=1346.3 Cu. Yds.
℄
℄
66.25
65.5
21+00
C=26
F=20
Exc.= 87.0
Emb.= 57.4
60.25
59.6
20+00
C=21
F=11
Exc.= 57.4
Emb.=37.0
54.25
53.7
19+00
C=10
F=9
Exc.=200.0
Emb.=16.7
48.25
47.8
18+00
C=98
F=0
Exc.=574.1
Emb.= 0
42.25
44.3
17+00
C=212
F=0
Exc.=637.0
Emb.= 0
36.34
37.8
16+00
C=132
F=0
Exc.=457.4
Emb.= 0
31.06
32.2
15+00
C=115
F=0
Exc.= 305.6 Cu. Yds.
Emb.= 0 Cu. Yds.
℄
℄
102.25
99.1
27+00
C=9
F=92
Exc.=16.7
Emb.=279.6
96.25
94.1
26+00
C=0
F=59
Exc.= 0
Emb.=201.9
90.25
88.7
25+00
C=0
F=50
Exc.= 0
Emb.=174.1
84.25
82.6
24+00
C=0
F=44
Exc.= 0
Emb.=137.0
78.25
76.9
23+00
C=0
F=30
Exc.= 37.0
Emb.=118.5
72.25
71.2
22+00
C=20
F=34
Exc.= 85.2 Cu. Yds.
Emb.=100.0 Cu. Yds.

4258.37

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	S	TOTAL SHEETS
HAWAII	HAW	E-12-A	1932	38	56

℄
126.25
C=158
F=4
125.8
31+00
Exc.= 585.2
Emb.= 14.8
120.25
C=158
F=4
120.4
30+00
Exc.=366.7
Emb.=51.9
114.25
C=40
F=24
114.2
29+00
Exc.= 87.0
Emb.= 24.1
111.25
C=54
F=2
112.2
28+50
Exc.= 540.7
Emb.= 1.9
108.25
C=530
F=0
108.1
28+00
Exc.= 871.3
Emb.=12.0
105.25
C=411
F=13
104.7
27+50
Exc.=477.0
Emb.=51.0
103.15
C=322
F=66
100.6
27+15
Exc.= 119.7 Cu. Yds.
Emb.=43.9 Cu. Yds.
℄
℄
145.90
C=52
F=0
145.6
37+00
Exc.= 185.2
Emb.= 13.0
146.24
C=48
F=7
145.9
36+00
Exc.= 316.7
Emb.= 13.0
145.14
C=123
F=0
146.0
35+00
Exc.= 687.0
Emb.= 0
142.41
C=248
F=0
149.0
34+00
Exc.= 391.7
Emb.= 0
140.43
C=175
F=0
141.9
33+50
Exc.=250.0
Emb.=4.6
138.05
C=95
F=5
138.0
33+00
Exc.=213.0
Emb.=46.3
132.25
C=20
F=20
131.8
32+00
Exc.= 329.6 Cu. Yds.
Emb.= 44.4 Cu. Yds.
℄
℄
144.80
C=6
F=4
144.4
44+00
Exc.= 27.8
Emb.=20.4
144.00
C=9
F=7
143.6
43+00
Exc.=25.9
Emb.=27.8
143.54
C=5
F=8
142.4
42+00
Exc.=53.7
Emb.=27.8
143.74
C=24
F=7
143.2
41+00
Exc.= 87.0
Emb.= 38.9
144.28
C=23
F=14
144.4
40+00
Exc.=107.4
Emb.= 75.9
144.82
C=35
F=27
143.4
39+00
Exc.= 101.9
Emb.= 55.6
145.36
C=20
F=3
144.7
38+00
Exc.=133.3 Cu. Yds.
Emb.=5.6 Cu. Yds.
℄
℄
149.89
C=2
F=8
149.4
50+00
Exc.= 7.4
Emb.= 22.2
148.85
C=2
F=4
148.0
49+00
Exc.=29.6
Emb.=33.3
148.00
C=14
F=4
147.1
48+00
Exc.= 31.5
Emb.= 11.1
147.20
C=3
F=2
146.5
47+00
Exc.= 14.8
Emb.= 7.4
146.40
C=5
F=2
145.8
46+00
Exc.=20.4
Emb.=14.8
C=6
F=6
145.1
45+00
Exc.=22.2 Cu. Yds.
Emb.=18.5 Cu. Yds.
℄

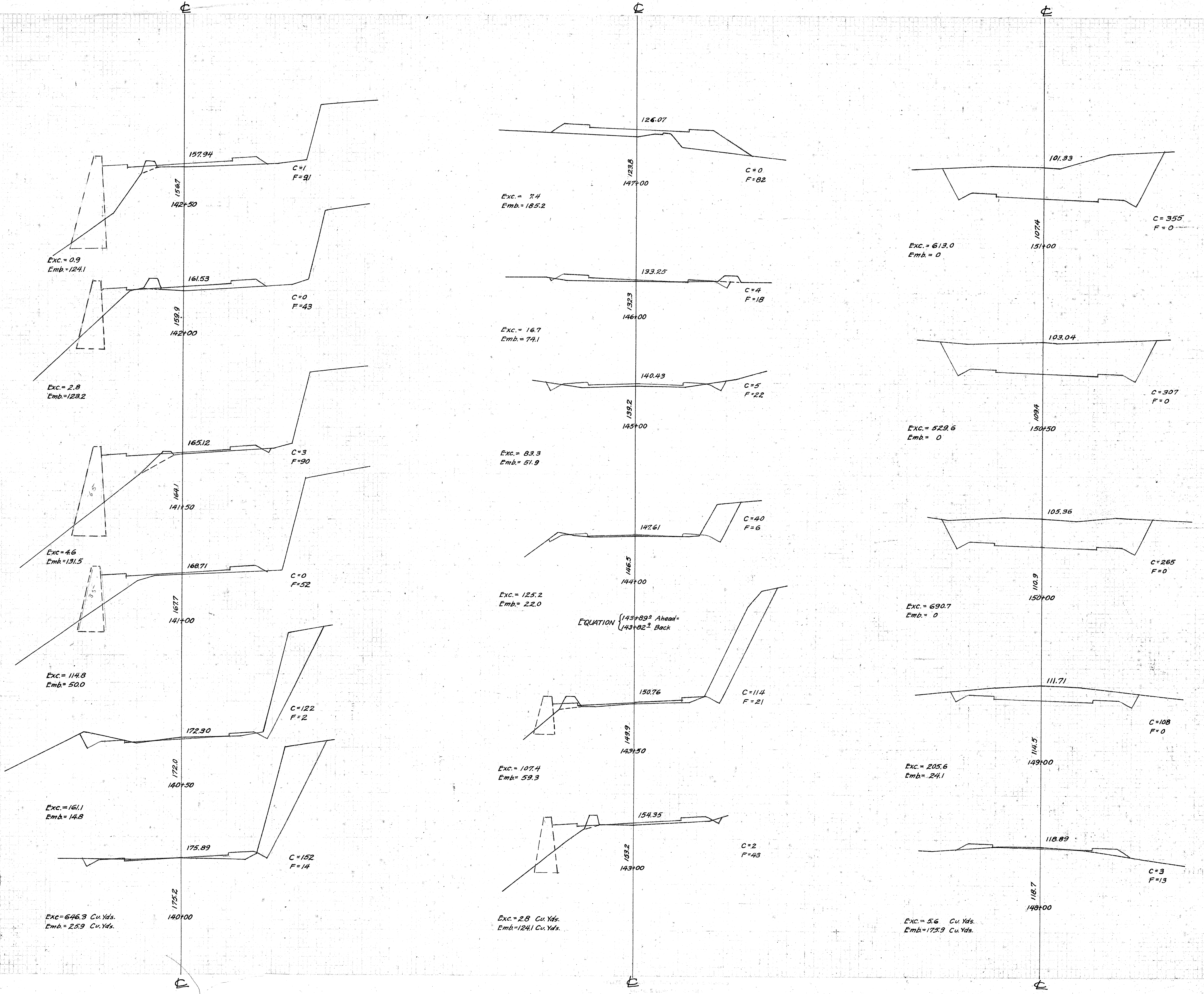
42558.38 ②

FED. ROAD DIST. NO.	STATE	FED. AID PR	[illegible]	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	E-12-A	1932	39	56

℄
221.92
220.5
115+00
C=4
F=5
Exc.=31.5
Emb.=18.5
TAN
220.16
219.5
114+00
C=13
F=5
Exc.=66.7
Emb.=9.3
219.00
218.6
113+00
C=23
F=0
EXCEPTION No. 1. LIHUE
Sta. 55+00 to 113+00
161.34
161.5
55+00
C=27
F=0
Exc.=68.5
Emb.=0
158.82
SW
158.5
54+00
C=10
F=0
Exc.=18.5
Emb.=35.2
TAN
156.30
156.7
53+00
C=0
F=19
Exc.=14.8
Emb.=72.2
153.83
153.3
52+00
C=8
F=20
Exc.=44.4 Cu. Yds.
Emb.=40.7 Cu. Yds.
151.75
151.5
51+00
C=16
F=2
Exc.=33.3
Emb.=18.5
222.34
SW
221.6
125+00
C=5
F=6
Exc.=20.4
Emb.=20.4
222.52
221.8
124+00
C=6
F=5
Exc.=25.9
Emb.=18.5
222.70
222.2
123+00
C=8
F=5
Exc.=66.7
Emb.=16.7
222.88
222.6
122+00
C=28
F=4
Exc.=77.8
Emb.=14.8
TAN
223.06
222.5
121+00
C=14
F=4
Exc.=40.7
Emb.=20.4
223.24
222.5
120+00
C=8
F=7
Exc.=31.5
Emb.=20.4
223.42
222.8
119+00
C=9
F=4
Exc.=24.1
Emb.=14.8
223.60
223.1
118+00
C=4
F=4
Exc.=64.8
Emb.=7.4
223.57
223.7
117+00
C=31
F=0
Exc.=63.0
Emb.=25.9
TAN
222.48
221.8
116+00
C=3
F=14
Exc.=130 Cu. Yds.
Emb.=35.2 Cu. Yds.
R=1000'L
216.29
217.2
134+00
C=212
F=0
Exc.=638.9
Emb.=0
219.53
221.4
133+00
C=133
F=0
Exc.=394.4
Emb.=0
221.03
221.3
132+00
C=80
F=0
Exc.=255.6
Emb.=0
221.26
221.0
131+00
C=58
F=0
Exc.=187.0
Emb.=0
TAN
221.44
221.1
130+00
C=43
F=0
Exc.=98.2
Emb.=1.9
221.62
221.3
129+00
C=10
F=2
Exc.=40.7
Emb.=11.1
221.80
221.3
128+00
C=12
F=4
Exc.=44.4
Emb.=16.7
221.98
221.4
127+00
C=12
F=5
Exc.=46.3
Emb.=14.8
TAN
222.16
221.7
126+00
C=13
F=3
Exc.=33.3 Cu. Yds.
Emb.=16.7 Cu. Yds.
TAN
182.07
182.3
139+00
C=197
F=8
Exc.=775.9
Emb.=0
R 600'RT.
190.25
188.8
138+00
C=222
F=8
Exc.=959.3
Emb.=7.4
197.43
197.0
137+00
C=296
F=4
Exc.=964.8
Emb.=16.7
TAN
204.61
203.9
136+00
C=225
F=5
Exc.=666.7
Emb.=14.8
R1000'L
211.30
211.2
135+00
C=135
F=3
Exc.=642.6
Emb.=5.6
F
P
SW

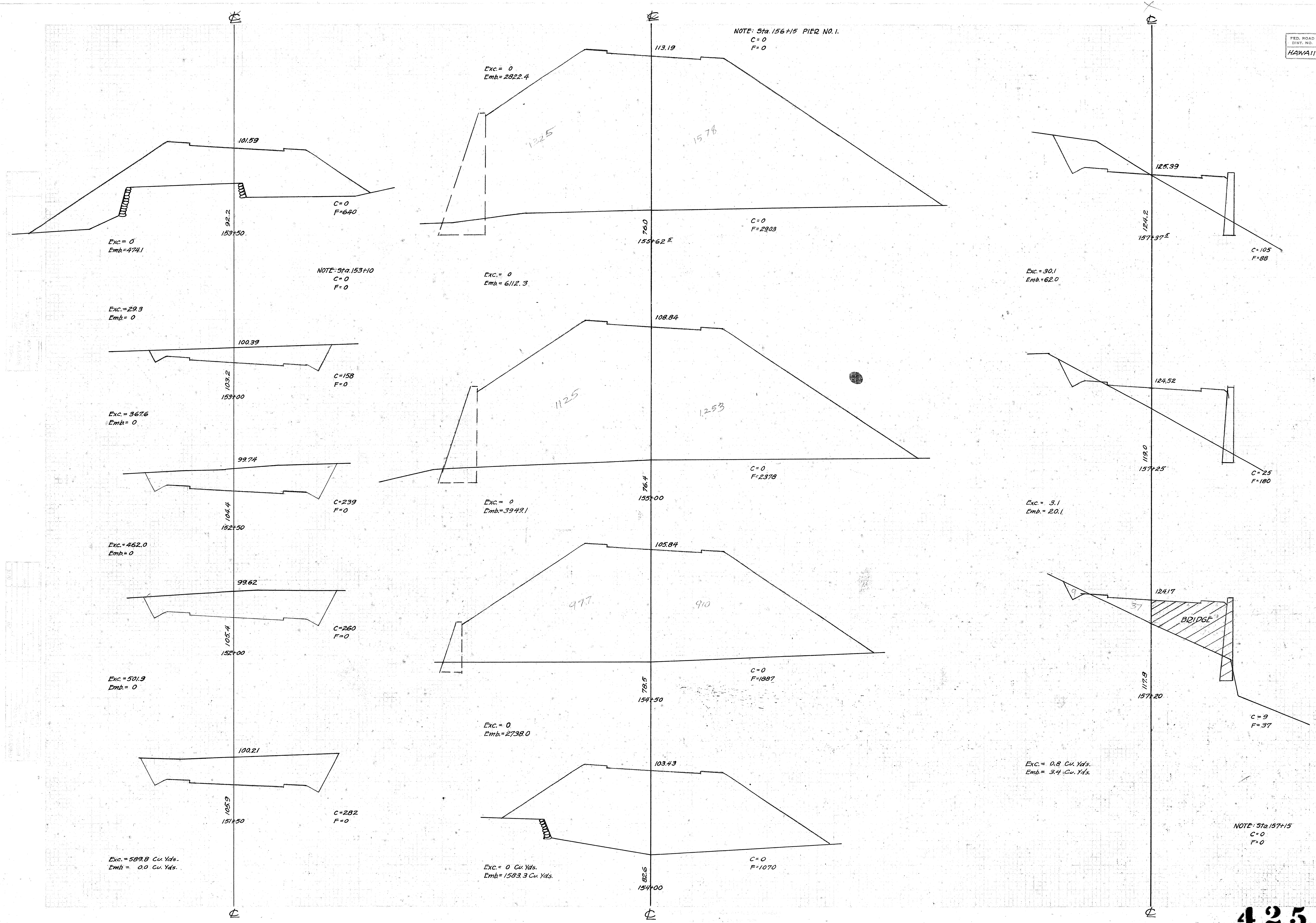
4258.39

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET	TOTAL SHEETS
HAWAII	HAW	E-12-A	1932	40	56


℄
157.94
C=1
F=91
156.7
142+50
Exc.=0.9
Emb.=124.1
161.53
C=0
F=43
159.9
142+00
Exc.=2.8
Emb.=123.2
165.12
C=3
F=90
6.5
164.1
141+50
Exc=4.6
Emb.=131.5
168.71
C=0
F=52
3.5
167.7
141+00
Exc.=114.8
Emb.=50.0
172.30
C=122
F=2
172.0
140+50
Exc.=161.1
Emb.=14.8
175.89
C=152
F=14
175.2
140+00
Exc=646.3 Cu.Yds.
Emb.=25.9 Cu.Yds.
℄
℄
126.07
123.8
147+00
C=0
F=82
Exc.=7.4
Emb.=185.2
133.25
C=4
F=18
132.3
146+00
Exc.=16.7
Emb.=74.1
140.43
C=5
F=22
139.2
145+00
Exc.=83.3
Emb.=51.9
147.61
C=40
F=6
146.5
144+00
Exc.=125.2
Emb.=22.0
EQUATION {143+89.0 Ahead= / 143+82.9 Back
150.76
C=114
F=21
149.9
143+50
Exc.=107.4
Emb.=59.3
154.35
C=2
F=43
153.2
143+00
Exc.=2.8 Cu.Yds.
Emb.=124.1 Cu.Yds.
℄
℄
101.33
C=355
F=0
107.4
151+00
Exc.=613.0
Emb.=0
103.04
C=307
F=0
109.4
150+50
Exc.=529.6
Emb.=0
105.36
C=265
F=0
110.9
150+00
Exc.=690.7
Emb.=0
111.71
C=108
F=0
114.5
149+00
Exc.=205.6
Emb.=24.1
118.89
C=3
F=13
118.7
148+00
Exc.=5.6 Cu.Yds.
Emb.=175.9 Cu.Yds.
℄

4258.40

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	E-12-A	1932	41	56



101.59
C=0
F=640
92.2
153+50
Exc.= 0
Emb.=474.1
NOTE: Sta.153+10
C=0
F=0
Exc.=29.3
Emb.= 0
100.39
C=158
F=0
103.2
153+00
Exc.=367.6
Emb.= 0
99.74
C=239
F=0
104.4
152+50
Exc.=462.0
Emb.=0
99.62
C=260
F=0
105.4
152+00
Exc.=501.9
Emb.= 0
100.21
C=282
F=0
105.9
151+50
Exc.=589.8 Cu. Yds.
Emb.= 0.0 Cu. Yds.
NOTE: Sta.156+15 PIER NO.1.
C=0
F=0
Exc.= 0
Emb.=2822.4
113.19
1325
1578
76.0
155+62½
C=0
F=2903
Exc.= 0
Emb.= 6112.3
108.84
1125
1253
C=0
F=2378
76.4
155+00
Exc.= 0
Emb.=3949.1
105.84
477
910
C=0
F=1887
78.5
154+50
Exc.= 0
Emb.=2738.0
103.43
C=0
F=1070
82.6
154+00
Exc.= 0 Cu. Yds.
Emb.= 1583.3 Cu. Yds.
125.39
124.2
157+37½
C=105
F=88
Exc.=30.1
Emb.=62.0
124.52
119.0
157+25
C=25
F=180
Exc.= 3.1
Emb.= 20.1
124.17
9
37
BRIDGE
117.8
157+20
C=9
F=37
Exc.= 0.8 Cu. Yds.
Emb.= 3.4 Cu. Yds.
NOTE: Sta.157+15
C=0
F=0

4258.41

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	E-12-A	1932	42	56

℄
℄
℄
136.75
C=719
F=0
148.9
159+00
Exc.= 1146.3
Emb.= 17.6
133.25
C=519
F=19
146.4
158+50
Exc.= 829.6
Emb.= 17.6
129.76
C=377
F=0
139.5
158+00
Exc.= 465.7
Emb.= 115.7
126.27
C=126
F=125
121.4
157+50
Exc.= 53.5 Cu. Yds.
Emb.= 49.3 Cu. Yds.
157.70
151.5
162+00
C=50
F=249
249
Exc.= 63.9
Emb.= 263.9
154.21
C=19
F=36
154.7
161+50
Exc.= 376.9
Emb.= 33.3
150.71
C=398
F=0
161.2
161+00
Exc.= 853.7
Emb=0
147.22
C=524
F=0
158.6
160+50
Exc.=1033.3
Emb= 0
143.73
C=592
F=0
155.1
160+00
Exc.=1286.1
Emb=0
140.24
C=797
F=0
151.7
159+50
Exc.=1403.7 Cu. Yds.
Emb= 0 Cu. Yds.
185.63
C=172
F=0
188.3
166+00
Exc.= 325.0
Emb.= 5.6
182.14
C=179
F=6
186.4
165+50
Exc.= 313.0
Emb.= 19.5
178.65
C=175
F=15
182.0
165+00
Exc.= 305.6
Emb.= 23.2
175.16
C=155
F=10
178.0
164+50
Exc.= 271.3
Emb.= 19.56
171.67
C=138
F=11
174.3
164+00
Exc.= 230.6
Emb.= 21.3
168.17
C=111
F=12
169.3
163+50
Exc.= 124.1
Emb.= 169.4
164.68
C=23
F=171
16
160.4
163+00
Exc.= 37.0
Emb.= 475.0
161.19
C=17
F=342
342
152.0
162+50
Exc.= 62.0 Cu. Yds.
Emb.= 547.2 Cu. Yds.

4258.42

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	E-12-A	1932	43	56

℄
208.75
C=280
F=0
Exc.=537.0
Emb.=0
214.3
170+00
207.17
C=300
F=0
Exc.=514.8
Emb.=0
212.7
169+50
205.10
C=256
F=0
Exc.=477.8
Emb.=0
209.9
169+00
202.56
C=250
F=0
Exc.=458.3
Emb.=0
206.9
168+50
199.54
C=245
F=0
Exc.=580.4
Emb.=0
203.9
168+00
196.11
C=382
F=0
Exc.=744.4
Emb.=0
200.7
167+50
192.62
C=422
F=0
Exc.=642.6
Emb.=0
197.6
167+00
189.13
C=272
F=0
195.6
166+50
Exc.=411.1 Cu.Yds.
Emb=0 Cu.Yds.
℄
208.03
205.3
C=0
F=80
175+50
Exc.=18.5
Emb.=74.1
208.36
208.4
C=20
F=0
Exc.=83.3
Emb=0
175+00
208.69
C=70
F=0
209.4
Exc.=181.5
Emb 0
174+50
209.02
C=126
F=0
Exc.=607.4
Emb=0
211.0
174+00
209.68
C=202
F=0
Exc.=398.2
Emb=0
213.7
173+00
210.01
C=228
F=0
Exc.=437.0
Emb=0
214.6
172+50
210.34
C=244
F=0
Exc.=453.7
Emb=0
215.2
172+00
210.61
C=246
F=0
Exc.=452.8
Emb 0
215.6
171+50
210.47
C=243
F=0
Exc.=456.5
Emb 0
215.2
171+00
209.84
C=250
F=0
Exc.=490.7 Cu.Yds.
Emb=0 Cu.Yds.
214.9
170+50
℄
204.73
207.2
C=144
F=0
180+50
Exc.=272.2
Emb.=0
205.06
C=150
F=0
Exc.=240.7
Emb=0
207.6
180+00
205.39
C=110
F=0
Exc.=30.6
Emb=0
207.1
179+50
NOTE: Sta.179+35
C=0
F=0
Exc.=0
Emb=133.5
205.72
C=0
F=206
199.7
197.2
179+00
Exc.=0
Emb=474.1
206.05
C=0
F=306
188.0
178+50
Exc.=0
Emb=827.8
206.38
C=0
F=588
194.0
178+00
Exc.=0
Emb=1125.0
206.71
C=0
F=627
193.4
177+50
Exc.=0
Emb=1112.0
207.04
C=0
F=574
194.1
177+00
Exc.=0
Emb=988.9
207.37
C=0
F=494
196.1
176+50
Exc.=0
Emb=724.1
207.70
C=0
F=288
201.1
176+00
Exc.=0 Cu.Yds.
Emb=340.7 Cu.Yds.
℄
EQUATION: {188+21.1 Ahead= 183+45.0 Back
202.37
C=6
F=25
201.3
183+00
Exc.=10.2
Emb.=40.7
203.06
C=5
F=19
202.0
182+50
Exc.=11.1
Emb.=24.1
203.62
C=7
F=7
203.0
182+00
Exc.=38.0
Emb.=13.0
204.06
C=34
F=0
204.0
181+50
Exc.=118.5
Emb=0
204.00
C=94
F=0
208.6
181+00
Exc.=220.4 Cu.Yds.
Emb=0 Cu.Yds.
℄
℄
℄

4258.43

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	E-12-A	1932	44	56

℄
R.R.
F
P
190.84
P
F
190.6
193+00
C=28
F=0
Exc.= 103.7
Emb= 0
R.R.
F
P
193.72
P
Hedge
193.6
192+00
C=28
F=0
Exc.= 77.8
Emb= 7.4
TAN
R.R.
F
P
196.36
P
Hedge
196.1
191+00
C=14
F=4
Exc.= 59.3
Emb= 14.8
R.R.
F
P
198.47
P
F
198.2
190+00
C=18
F=4
Exc= 66.7
Emb= 14.8
R.R.
F
P
200.09
P
H
200.2
189+00
C=18
F=4
Exc.= 55.0 Cu. Yds.
Emb= 66.5 Cu. Yds.
℄
R.R
173.81
P
F
174.8
200+00
C=71
F=0
To Hanamaulu Mill
Exc.= 213.0
Emb.= 0
R.R.
F
P
175.97
P
H
176.1
199+00
C=44
F=0
Exc.= 114.8
Emb.= 0
R= 2000' L
R.R.
F
P
178.13
P
H
177.8
198+00
C=18
F=0
Exc.= 70.4
Emb.= 7.4
R.R.
F
P
180.29
P
H
179.8
197+00
C=20
F=4
Exc.= 63.0
Emb.= 11.1
R.R.
F
P
182.62
P
182.2
196+00
C=14
F=2
Exc.= 70.4
Emb.= 7.4
R.R.
P
185.28
P
H
184.9
195+00
C=24
F=2
Exc.= 85.2
Emb.= 11.1
TAN
R.R.
F
P
188.11
P
F
187.4
194+00
C=22
F=4
Exc.= 92.6 Cu. Yds.
Emb= 7.4 Cu. Yds.
℄
P
153.11
P
R.R.
152.8
207+00
C=4
F=20
Exc.= 14.8
Emb.= 63.0
F
P
156.30
P
F
R.R.
155.8
206+00
C=4
F=14
Exc.= 14.8
Emb.= 51.9
TAN
F
P
159.52
P
R.R.
159.0
205+00
C=4
F=14
Exc.= 14.8
Emb.= 48.2
F
P
162.74
P
F
R.R.
162.1
204+00
C=4
F=12
Exc.= 25.9
Emb.= 22.2
Curb
P
165.96
R.R.
165.7
203+00
C=10
F=0
Gov. Road To Hanamaulu Shool
Exc.= 29.6
Emb.= 0
Curb P
169.17
R.R.
P
H
168.9
202+00
C=6
F=0
R. 2000'
P
R.R.
171.66
171.9
201+00
C=37
F=0
Exc.= 200.0 Cu. Yds.
Emb.= 0 Cu. Yds.
℄
R. 2600' L
F
P
132.08
P
F
R.R.
131.6
214+00
C=6
F=4
Exc.= 44.4
Emb.= 11.1
F
P
135.08
F
R.R.
134.7
213+00
C=18
F=2
Exc.= 48.2
Emb.= 11.1
F
P
138.08
P
F
R.R.
137.6
212+00
C=8
F=4
Exc.= 29.6
Emb.= 11.1
F
P
141.08
P
F
R.R.
140.8
211+00
C=8
F=2
Exc.= 29.6
Emb.= 7.4
TAN
F
P
144.08
P
F
R.R.
143.9
210+00
C=8
F=2
Exc.= 33.3
Emb.= 22.2
P
147.08
P
F
R.R.
146.9
209+00
C=10
F=10
Exc.= 25.9
Emb.= 59.3
F
P
150.08
P
F
R.R.
149.9
208+00
C=4
F=22
Exc.= 14.8 Cu. Yds.
Emb.= 77.8 Cu. Yds.

"DIEPO" DIETRICH-POST CO.
CROSS SECTION

4258.44

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	E-12-A	1932	45	56

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

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

℄
106.8
107.48
R.R.
C=8
F=4
221+00
Exc.=51.9
Emb.=11.1
110.4
111.08
R.R.
220+00
C=20
F=2
Exc.=103.7
Emb.=3.7
114.1
114.68
R.R.
219+00
C=36
F=0
Exc.=111.1
Emb.=0
117.7
118.28
R.R.
218+00
C=24
F=0
Exc.=74.1
Emb.=0
121.7
121.88
R.R.
217+00
C=16
F=0
Exc.=40.7
Emb.=7.4
124.9
125.48
R.R.
216+00
C=6
F=4
Exc.=22.2
Emb.=22.2
128.4
128.83
R.R.
215+00
C=6
F=8
Exc.=22.2 Cu.Yds.
Emb.=22.2 Cu.Yds.
℄
87.8
88.12
S.W.
C=18
F=4
Exc.=63.0
Emb.=11.1
228+00
90.0
90.26
S.W.
227+00
C=16
F=2
Exc.=44.4
Emb.=7.4
92.0
92.40
S.W.
226+00
C=8
F=2
Exc.=29.6
Emb.=11.1
94.3
94.72
S.W.
225+00
C=8
F=4
Exc.=29.6
Emb.=11.1
97.3
97.41
R.R.
224+00
C=8
F=2
Exc.=77.8
Emb.=3.7
100.5
100.46
R.R.
223+00
C=34
F=0
Exc.=92.6
Emb.=0
103.6
103.88
R.R.
221+00
C=16
F=0
Exc.=44.4 Cu.Yds.
Emb.=7.4 Cu.Yds.
℄
65.8
66.65
C=60
F=5
Exc.=275.9
Emb.=9.3
235+00
72.4
71.80
C=89
F=0
Exc.=329.6
Emb.=0
234+00
77.0
76.02
C=89
F=0
233+00
Exc.=227.8
Emb.=0
79.2
79.80
C=34
F=0
232+00
Exc.=81.5
Emb.=5.6
81.1
81.70
C=10
F=3
231+00
Exc.=44.4
Emb.=11.1
83.3
83.84
C=14
F=3
230+00
Exc.=100.0
Emb.=5.6
85.6
85.98
C=40
F=0
229+00
Exc.=107.4 Cu.Yds.
Emb.=7.4 Cu.Yds.
℄
37.5
38.11
C=40
F=0
241+00
Exc.=196.3
Emb.=0
41.6
41.86
C=66
F=0
240+00
Exc.=337.0
Emb.=7.4
239+83± Road to Hanamaulu Dairy →
45.7
45.96
C=102
F=4
239+00
Exc.=374.1
Emb.=25.9
49.4
50.17
C=100
F=10
238+00
Exc.=318.5
Emb.=68.5
53.3
54.89
55.13
C=72
F=27
237+00
Exc.=235.2
Emb.=127.8
58.9
60.85
C=55
F=42
236+00
Exc.=213.0 Cu.Yds.
Emb.=87.0 Cu.Yds.

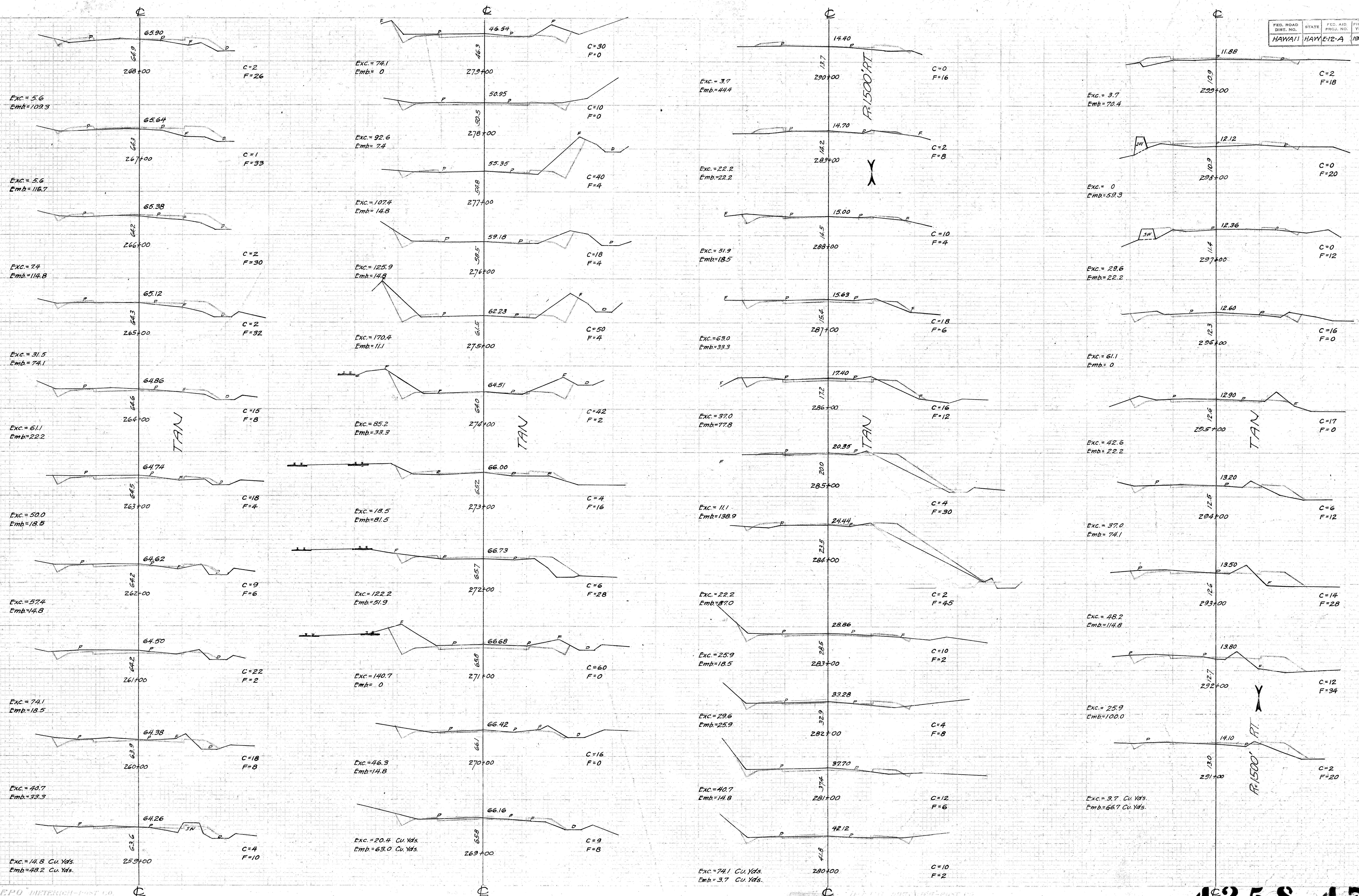
4258.45

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	E-12-A	1932	46	56

44.60
41.6
244+50
C=0
F=82
Exc.= 3.7
Emb.=230.6
42.41
37.5
244+00
C=4
F=167
Exc.= 3.7
Emb.=410.2
40.23
34.2
243+50
C=0
F=276
Exc.= 0
Emb.=421.3
38.39
34.9
243+00
C=0
F=179
Exc.= 0
Emb.=217.1
37.53
37.28
242+65
C=0
F=156
Exc.= 0
Emb.=69.4
37.26
37.01
242+50
C=0
F=94
Exc.= 0
Emb.=67.8
37.06
36.81
242+35
C=0
F=150
Exc.= 0
Emb.=126.1
36.84
34.8
242+00
C=0
F=48
Exc.= 74.1 Cu.Yds.
Emb.=88.9 Cu.Yds.
57.98
61.8
248+00
C=190
F=0
Exc.=361.1
Emb.= 0
56.64
60.4
247+50
C=200
F= 0
Exc.=368.5
Emb.= 0
55.06
58.7
247+00
C=198
F= 0
Exc.=379.6
Emb.= 0
53.23
57.8
246+50
C=212
F=0
Exc.= 290.7
Emb.= 0
51.16
52.9
246+00
C=102
F=0
Exc.=128.7
Emb.= 0
48.93
48.9
245+50
C=37
F=0
Exc.= 37.0
Emb.= 28.7
46.79
45.6
245+00
C= 3
F=31
Exc.=2.8 Cu.Yds.
Emb.=104.6 Cu.Yds.
61.92
61.4
252+00
C= 20
F= 2
Exc.= 77.8
Emb.= 14.8
61.42
61.0
251+00
C=22
F=6
Exc.= 62.0
Emb.= 5.6
61.17
61.0
250+50
C=45
F=0
Exc.= 75.9
Emb.= 0
60.92
60.6
250+00
C= 37
F= 0
Exc.= 113.0
Emb.= 2.8
60.55
61.1
249+50
C=85
F=3
Exc.= 180.6
Emb.= 2.8
59.94
61.8
249+00
C=110
F=0
Exc.= 272.2
Emb.= 0
59.08
61.6
248+50
C=144
F=0
Exc.=309.3 Cu.Yds.
Emb.= 0 Cu.Yds.
64.14
63.6
258+00
C= 4
F= 16
Exc.= 18.5
Emb.=48.2
64.02
63.7
257+00
C= 6
F= 10
Exc.= 30.5
Emb.= 15.2
Equation 256+82.4 = 257+00
63.87
63.9
256+00
C= 14
F= 0
Exc.= 37.0
Emb.= 3.7
63.42
63.1
255+00
C=6
F=2
Exc.= 37.0
Emb.= 7.4
62.92
62.4
254+00
C= 14
F= 2
Exc.= 40.7
Emb.= 11.1
62.42
61.7
253+00
C= 8
F= 4
Exc.= 51.9 Cu.Yds.
Emb.= 11.1 Cu.Yds.

4258.46

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	E-12-A	1932	47	56



℄
65.90
64.9
268+00
C=2
F=26
Exc.=5.6
Emb.=109.3
65.64
64.3
267+00
C=1
F=33
Exc.=5.6
Emb.=116.7
65.38
64.2
266+00
C=2
F=30
Exc.=7.4
Emb.=114.8
65.12
64.3
265+00
C=2
F=32
Exc.=31.5
Emb.=74.1
64.86
64.6
264+00
C=15
F=8
Exc.=61.1
Emb.=22.2
TAN
64.74
64.5
263+00
C=18
F=4
Exc.=50.0
Emb.=18.5
64.62
64.2
262+00
C=9
F=6
Exc.=57.4
Emb.=14.8
64.50
64.2
261+00
C=22
F=2
Exc.=74.1
Emb.=18.5
64.38
63.9
260+00
C=18
F=8
Exc.=40.7
Emb.=33.3
64.26
SW
63.6
259+00
C=4
F=10
Exc.=14.8 Cu. Yds.
Emb.=48.2 Cu. Yds.
℄
46.54
46.3
279+00
C=30
F=0
Exc.=74.1
Emb.= 0
50.95
50.5
278+00
C=10
F=0
Exc.=92.6
Emb.=7.4
55.35
54.8
277+00
C=40
F=4
Exc.=107.4
Emb.=14.8
59.18
58.5
276+00
C=18
F=4
Exc.=125.9
Emb.=14.8
62.23
61.5
275+00
C=50
F=4
Exc.=170.4
Emb.=11.1
64.51
64.0
274+00
C=42
F=2
Exc.=85.2
Emb.=33.3
TAN
66.00
65.2
273+00
C=4
F=16
Exc.=18.5
Emb.=81.5
66.73
65.7
272+00
C=6
F=28
Exc.=122.2
Emb.=51.9
66.68
65.8
271+00
C=60
F=0
Exc.=140.7
Emb.= 0
66.42
66.1
270+00
C=16
F=0
Exc.=46.3
Emb.=14.8
66.16
65.8
269+00
C=9
F=8
Exc.=20.4 Cu. Yds.
Emb.=63.0 Cu. Yds.
℄
14.40
13.7
290+00
R=1500' RT.
C=0
F=16
Exc.=3.7
Emb.=44.4
14.70
14.2
289+00
C=2
F=8
Exc.=22.2
Emb.=22.2
15.00
14.5
288+00
C=10
F=4
Exc.=51.9
Emb.=18.5
15.63
15.4
287+00
C=18
F=6
Exc.=63.0
Emb.=33.3
17.40
17.2
286+00
C=16
F=12
Exc.=37.0
Emb.=77.8
TAN
20.35
20.0
285+00
C=4
F=30
Exc.=11.1
Emb.=138.9
24.44
23.5
284+00
C=2
F=45
Exc.=22.2
Emb.=87.0
28.86
28.5
283+00
C=10
F=2
Exc.=25.9
Emb.=18.5
33.28
32.9
282+00
C=4
F=8
Exc.=29.6
Emb.=25.9
37.70
37.4
281+00
C=12
F=6
Exc.=40.7
Emb.=14.8
42.12
41.8
280+00
C=10
F=2
Exc.=74.1 Cu. Yds.
Emb.=3.7 Cu. Yds.
℄
℄
11.88
10.9
299+00
C=2
F=18
Exc.=3.7
Emb.=70.4
SW
12.12
10.9
298+00
C=0
F=20
Exc.= 0
Emb.=59.3
SW
12.36
11.4
297+00
C=0
F=12
Exc.=29.6
Emb.=22.2
12.60
12.3
296+00
C=16
F=0
Exc.=61.1
Emb.=0
12.90
12.6
295+00
C=17
F=0
TAN
Exc.=42.6
Emb.=22.2
13.20
12.5
294+00
C=6
F=12
Exc.=37.0
Emb.=74.1
13.50
12.6
293+00
C=14
F=28
Exc.=48.2
Emb.=114.8
13.80
12.7
292+00
C=12
F=34
Exc.=25.9
Emb.=100.0
14.10
13.0
291+00
R=1500' RT.
C=2
F=20
Exc.=3.7 Cu. Yds.
Emb.=66.7 Cu. Yds.
℄
P
F
D

"DIEPO" DIETERICH-POST CO.
CROSS SECTION

4258.47

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	E-12-A	1932	48	56

℄
10.26
8.4
308+00
C=0
F=44
Exc.=0
Emb.=248.2
10.23
canal
7.6
307+00
C=0
F=90
Exc.=0
Emb.=236.7
Note: Sta. 306+10
C=0
F=52
10.27
306+00
ARCH CULVERT
Yardage Exception, 305+95 to 306+10
Note: Sta. 305+95
C=0
F=52
Exc.=0
Emb.=165.4
R=1800'L
10.44
8.8
305+00
C=0
F=42
Exc.=0
Emb.=163.0
10.68
8.7
304+00
C=0
F=46
Exc.=0
Emb.=163.0
10.92
9.0
303+00
C=0
F=42
Exc.=0
Emb.=177.8
11.16
9.1
302+00
C=0
F=54
TAN
Exc.=0
Emb.=170.4
11.40
9.8
301+00
C=0
F=38
Exc.=0
Emb.=118.5
11.64
10.4
300+00
C=0
F=26
Exc.=3.7 Cu.Yds.
Emb.=81.5 Cu.Yds.
10.53
10.2
317+00
C=21
F=0
TAN
Exc.=77.8
Emb.=0
10.50
10.1
316+00
C=21
F=0
Exc.=101.9
Emb.=3.7
10.47
10.2
315+00
C=34
F=2
Exc.=111.1
Emb.=5.6
10.44
10.2
314+00
R.R.
C=26
F=1
Exc.=101.9
Emb.=1.9
10.41
10.3
313+00
RR
C=29
F=0
R=1800'L
Exc.=88.9
Emb.=0
10.38
9.8
312+00
R.R.
C=19
F=0
Exc.=40.7
Emb.=63.0
10.35
8.9
311+00
R.R.
C=3
F=34
Exc.=9.9
Emb.=122.2
10.32
8.9
310+00
R.R.
C=2
F=32
Exc.=3.7
Emb.=148.2
10.29
8.4
309+00
RR
C=0
F=48
Exc.=0 Cu.Yds.
Emb.=170.4 Cu.Yds.
12.90
12.1
326+00
C=8
F=10
Exc.=37.0
Emb.=51.9
12.45
11.4
325+00
C=12
F=18
Exc.=46.3
Emb.=59.3
12.00
10.8
324+00
C=13
F=14
Exc.=48.2
Emb.=37.0
11.55
10.8
323+00
C=13
F=6
TAN
Exc.=57.4
Emb.=14.8
11.10
10.7
322+00
C=18
F=2
Exc.=77.8
Emb.=3.7
10.70
10.4
321+00
C=24
F=0
Exc.=63.0
Emb.=14.8
10.62
10.1
320+00
C=10
F=8
Exc.=33.3
Emb.=29.6
10.59
9.8
319+00
C=8
F=8
Exc.=35.2
Emb.=25.9
10.56
9.9
318+00
C=11
F=6
Exc.=59.3 Cu.Yds.
Emb.=11.1 Cu.Yds.
13.15
12.8
335+00
C=8
F=4
Exc.=31.5
Emb.=14.8
13.46
13.1
334+00
C=9
F=4
Exc.=38.9
Emb.=14.8
13.77
13.4
333+00
TAN
C=12
F=4
Exc.=44.4
Emb.=14.8
14.08
13.8
332+00
C=12
F=4
Exc.=35.2
Emb.=18.5
14.39
14.0
331+00
C=7
F=6
Exc.=16.7
Emb.=22.2
14.51
14.2
330+00
C=2
F=6
Exc.=51.9
Emb.=22.2
14.25
13.5
329+00
R=1000'RT
C=26
F=6
Exc.=111.1
Emb.=11.1
13.80
14.0
328+00
C=34
F=0
Exc.=75.9
Emb.=22.2
13.35
13.0
327+00
TAN
C=7
F=0
Note: Sand excavation with 1:1 slopes, Sta. 307+00 to 335+00
Exc.=27.8 Cu.Yds.
Emb.=40.7 Cu.Yds.

4258.48

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	E-12-A	1932	49	56

℄
11.75
C=13
C=0
F=148
7.2
343+00
Exc.=0
Emb.=485.2
Ditch Exc.=68.5
11.75
C=24
C=0
F=114
8.4
342+00
Exc.=7.4
Emb.=429.6
Ditch Exc.=240.7
11.75
C=106
C=4
F=118
4.9
341+00
Exc.=25.9
Emb.=305.6
Ditch Exc.=363.0
11.78
C=90
C=10
F=47
10.7
340+00
Exc.=29.6
Emb.=101.9
Ditch Exc.=166.7 Cu.Yds.
11.93
C=6
F=8
11.2
339+00
Exc.=31.5
Emb.=22.2
12.22
C=11
F=4
11.8
338+00
Exc.=27.8
Emb.=33.3
12.84
C=4
F=14
11.7
337+00
Exc.=18.5
Emb.=40.7
13.15
C=6
F=8
12.3
336+00
Exc.=25.9 Cu.Yds.
Emb.=33.3 Cu.Yds.
℄
11.75
C=26
C=0
F=108
7.9
352+00
Exc.=0
Emb.=444.4
Ditch Exc.=57.4
11.75
C=5
C=0
F=132
7.7
351+00
Exc.=0
Emb.=563.0
Ditch Exc.=25.9
11.75
C=9
C=0
F=172
6.6
350+00
Exc.=0
Emb.=637.0
Ditch Exc.=33.3
11.75
C=9
C=0
F=172
6.6
349+00
Exc.=0
Emb.=633.3
Ditch Exc.=22.2
11.75
C=3
C=0
F=170
6.7
348+00
Exc.=0
Emb.=635.2
Ditch Exc.=16.7
11.75
C=6
C=0
F=173
6.2
347+00
Exc.=0
Emb.=690.7
Ditch Exc.=27.8
11.75
C=9
C=0
F=200
5.5
346+00
Exc.=0
Emb.=763.0
Ditch Exc.=16.7
11.75
C=0
C=0
F=212
5.8
345+00
Exc.=0
Emb.=705.6
Ditch Exc.=20.4
11.75
C=11
C=0
F=169
6.1
344+00
Exc.=0 Cu.Yds.
Emb.=587.0 Cu.Yds.
Ditch Exc.=44.4 Cu.Yds.
℄
28.08
C=106
F=2
28.0
360+00
Exc.=488.9
Emb.=3.7
24.44
C=158
F=0
27.5
359+00
Exc.=563.0
Emb.=0
20.80
C=146
F=0
23.3
358+00
Exc.=592.6
Emb.=0
17.27
C=174
F=0
20.5
357+00
Exc.=718.5
Emb.=0
14.56
C=214
F=0
18.6
356+00
Exc.=744.4
Emb.=0
C=266
12.75
C=188
F=0
16.2
355+00
Exc.=520.4
Emb.=11.1
Ditch Exc.=401.3
End of ditch = 354+~~00~~50
C=200
11.86
C=93
F=6
12.3
354+00
Exc.=172.2
Emb.=301.9
Ditch Exc.=416.7
11.75
C=25
C=0
F=157
6.8
353+00
Exc.=0 Cu.Yds.
Emb.=490.7 Cu.Yds.
Ditch Exc.=94.4 Cu.Yds.
℄
48.68
C=29
F=2
48.8
368+00
Exc.=109.3
Emb.=3.7
47.77
C=35
F=0
47.7
367+00
Exc.=105.6
Emb.=0
46.34
C=27
F=0
46.1
366+00
Exc.=69.2
Emb.=0
Equation 365+19 = 365+47±
44.90
C=25
F=0
44.8
365+00
Exc.=166.7
Emb.=0
42.30
C=65
F=0
42.2
364+00
Exc.=305.6
Emb.=0
39.00
C=100
F=0
39.0
363+00
Exc.=366.7
Emb.=0
35.35
C=98
F=0
35.2
362+00
Exc.=288.9
Emb.=0
31.72
C=58
F=0
31.2
361+00
Exc.=303.7 Cu.Yds.
Emb.=3.7 Cu.Yds.

4258.49

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	E-12-A	1932	50	56

℄
55.8
55.58
S.W.
S.W.
C=98
F=0
Exc.=222.2
Emb.=87.0
377+00
52.8
55.64
S.W.
C=22
F=47
Exc.=40.7
Emb.=392.6
376+00
49.8
54.88
S.W.
C=0
F=165
Exc.=0
Emb.=701.9
375+00
47.8
54.00
S.W.
C=0
F=214
Exc.=0
Emb.=740.7
374+00
47.3
53.11
S.W.
C=0
F=186
Exc.=0
Emb.=555.6
373+00
48.3
52.22
S.W.
C=0
F=114
Exc.=24.1
Emb.=214.8
372+00
50.6
51.34
S.W.
S.W.
C=13
F=2
Exc.=125.9
Emb.=3.7
371+00
50.7
50.46
S.W.
S.W.
C=55
F=0
Exc.=161.1
Emb.=0
370+00
49.7
49.56
S.W.
S.W.
C=32
F=0
Exc.=113.0 Cu.Yds.
Emb.=3.7 Cu.Yds.
369+00
45.1
51.97
S.W.
C=0
F=358
Exc.=0
Emb.=608.3
386+50
44.3
51.65
S.W.
C=0
F=299
Exc.=0
Emb.=813.0
386+00
47.4
51.00
S.W.
C=0
F=140
Exc.=0
Emb.=366.7
385+00
48.4
50.35
S.W.
C=0
F=58
Exc.=44.4
Emb.=107.4
384+00
50.0
50.11
S.W.
C=24
F=0
Exc.=211.1
Emb.=0
383+00
52.0
50.70
S.W.
C=90
F=0
Exc.=385.2
Emb.=0
382+00
53.9
51.70
C=118
F=0
Exc.=474.1
Emb.=0
381+00
55.4
52.70
S.W.
S.W.
C=138
F=0
Exc.=625.9
Emb.=0
380+00
57.3
53.70
S.W.
S.W.
C=200
F=0
Exc.=687.0
Emb.=0
379+00
57.4
54.70
S.W.
C=171
F=0
Exc.=498.2
Emb.=0
378+00
30.7
33.57
C=0
F=80
Exc.=13.0
Emb.=168.5
394+00
38.3
39.57
C=7
F=11
Exc.=477.8
Emb.=20.4
393+00
50.7
45.36
C=251
F=0
Exc.=1183.3
Emb.=0
392+00
57.8
49.70
C=388
F=0
Exc.=1135.2
Emb.=0
391+00
56.9
52.38
C=225
F=0
Exc.=418.5
Emb.=63.0
390+00
51.5
53.39
C=1
F=34
Exc.=1.9
Emb.=609.3
389+00
44.7
52.95
S.W.
C=0
F=295
Exc.=0
Emb.=1277.8
388+00
40.0
52.30
S.W.
C=0
F=395
Exc.=0 Cu.Yds.
Emb.=697.2 Cu.Yds.
387+00
12.6
12.81
C=6
F=8
Exc.=29.5
Emb.=40.7
406+00
13.4
13.52
C=10
F=14
Exc.=38.9
Emb.=59.3
405+00
14.5
14.47
C=11
F=18
Exc.=24.1
Emb.=63.0
404+00
14.8
15.40
R.R.
C=2
F=16
Road to Rice Mill
Exc.=3.9
Emb.=31.0
403+00
EXCEPTION No. 2
WAIALUA BRIDGE
Sta. 398+35 - 401+95±
16.0
15.81
C=0
F=0
Exc.=88.9
Emb.=3.7
398+00
18.7
17.82
S.W.
C=48
F=2
Exc.=124.1
Emb.=7.4
397+00
21.3
21.82
C=19
F=2
Exc.=37.0
Emb.=94.4
396+00
25.4
27.57
S.W.
C=1
F=49
Exc.=1.9 Cu.Yds.
Emb.=238.9 Cu.Yds.
395+00
FINAL SURVEY
ORIGINAL SURVEY

4258.50

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	E-12-A	1932	51	56

℄
12.53
12.3
416+00
C=12
F=4
Exc.=31.5
Emb.=11.1
12.93
12.4
415+00
C=5
F=2
Exc.=16.7
Emb.=18.5
13.21
12.7
414+00
C=4
F=8
Exc.=18.5
Emb.=22.2
13.26
12.7
413+00
C=6
F=4
Exc.=14.8
Emb.=18.5
13.07
12.0
412+00
C=2
F=6
Exc.=11.1
Emb.=29.6
12.65
11.6
411+00
C=4
F=10
Exc.=14.8
Emb.=37.0
12.22
11.2
410+00
C=4
F=10
Exc.=11.1
Emb.=55.6
12.03
10.5
409+00
C=2
F=20
Exc.=7.4
Emb.=90.7
12.06
9.8
408+00
C=2
F=29
Exc.=3.7
Emb.=157.4
12.32
10.9
407+00
C=2
F=56
Exc.=11.1 Cu. Yds.
Emb.=118.5 Cu. Yds.
℄
19.53
19.2
425+00
C=38
F=0
Exc.=85.2
Emb.=11.1
16.61
16.5
424+00
C=13
F=6
Exc.=22.2
Emb.=25.9
13.73
13.0
423+00
C=4
F=17
Exc.=29.6
Emb.=22.2
11.55
10.0
422+00
C=12
F=4
Exc.=22.2
Emb.=111.1
10.89
9.0
421+00
C=0
F=56
Exc.=0
Emb.=177.8
10.93
9.4
420+00
C=0
F=40
Exc.=7.4
Emb.=133.3
11.33
9.7
419+00
C=4
F=32
Exc.=13.0
Emb.=79.6
11.73
10.6
418+00
C=3
F=11
Exc.=20.4
Emb.=20.4
12.13
11.6
417+00
C=8
F=0
Exc.=37.0 Cu. Yds.
Emb.=7.4 Cu. Yds.
℄
15.71
15.6
435+00
C=84
F=2
Exc.=311.1
Emb.=3.7
17.09
17.4
434+00
C=84
F=0
Exc.=218.5
Emb.=0
18.03
17.8
433+00
C=34
F=0
Exc.=70.4
Emb.=3.7
18.75
18.1
432+00
C=4
F=2
Exc.=25.9
Emb.=3.7
19.47
18.8
431+00
C=10
F=0
Exc.=50.0
Emb.=3.7
20.19
19.4
430+00
C=17
F=0
Exc.=53.7
Emb.=7.4
20.91
20.1
429+00
C=12
F=2
Exc.=25.9
Emb.=18.5
21.63
20.6
428+00
C=2
F=8
Exc.=7.4
Emb.=40.7
22.03
20.8
427+00
C=2
F=14
Exc.=30.3
Emb.=34.1
EQUATION (426+36± Ahead = 426+38± Back
21.83
20.4
426+00
C=14
F=4
Exc.=96.3 Cu. Yds.
Emb.=7.4 Cu. Yds.
See Sheet 51A
℄
8.87
8.6
443+00
C=10
F=0
Exc.=101.9
Emb.=0
8.98
9.2
442+00
C=37
F=0
Exc.=166.7
Emb.=0
9.09
9.0
441+00
C=53
F=0
Exc.=107.4
Emb.=27.8
9.20
8.7
440+00
C=5
F=15
Exc.=27.8
Emb.=64.8
9.68
8.6
439+00
C=10
F=20
Exc.=18.5
Emb.=155.6
10.91
9.0
438+00
C=0
F=64
Exc.=0
Emb.=348.2
12.51
8.5
437+00
C=0
F=124
Exc.=155.6
Emb.=250.0
14.11
13.7
436+00
C=84
F=11
Exc.=311.1 Cu. Yds.
Emb.=241 Cu. Yds.

4258.51

(15)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	E-12A	1932	51A	56

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

℄
℄
℄
℄
20.8
21.88
E.P.
E.P.
427+00
C: 1.0 #
F: 22.0 #
Exc. 25.9 C.Y.
Emb. 57.4 "
20.3
21.11
E.P.
E.P.
426+00
C = 13.0 #
F = 9.0 #
Exc. 163.0 C.Y.
Emb. 16.7 "
19.0
19.36
E.P.
425+00
C = 75.0 #
F: 0.0
Exc. 159.3 C.Y.
Emb. 16.7 "
16.5
16.61
E.P.
E.P.
424+00
C = 11.0 #
F: 9.0 #
Exc. 22.2 C.Y.
Emb. 79.6 "
13.2
13.82
E.P.
E.P.
423+00
C: 1.0
F: 34.0
Exc. 3.7 C.Y.
Emb. 129.6 "
10.1
11.95
E.P.
E.P.
422+00
C: 1.0 #
F: 36.0 #
Exc. 1.9 C.Y.
Emb. 166.7 "
℄ R.R.
9.1
10.98
E.P.
E.P.
421+00
C = 0.0
F: 54.0
Exc. 1.9 C.Y.
Emb. 177.8 "
℄ R.R.
9.4
10.93
E.P.
E.P.
420+00
C: 1.0 #
F: 42.0 #
17.4
17.18
E.P.
E.P.
434+00
C = 76.0 #
F = 0.0
Exc. 211.1 C.Y.
Emb. 1.9 "
17.4
18.05
E.P.
433+00
C = 38.0 #
F = 1.0 #
Exc. 103.7 C.Y.
Emb. 14.8 "
17.6
18.77
E.P.
E.P.
432+00
C = 18.0 #
F = 7.0 #
Exc. 94.4 C.Y.
Emb. 14.8 "
18.3
19.49
E.P.
E.P.
431+00
C: 33.0 #
F: 1.0 #
Exc. 122.2 C.Y.
Emb. 5.6 "
19.2
20.21
E.P.
E.P.
430+00
C = 33.0 #
F = 7.0 #
Exc. 125.9 C.Y.
Emb. 5.6 "
20.0
20.93
E.P.
E.P.
429+00
C = 35.0 #
F = 1.0 #
Exc. 66.7 C.Y.
Emb. 40.7 "
20.3
21.65
E.P.
E.P.
428+00
C = 1.0 #
F = 21.0 #
Exc. 3.7 C.Y.
Emb. 79.6 "
9.4
9.89
441+00
C = 6.0 #
F = 1.0 #
Exc. 44.4 C.Y.
Emb. 9.3 "
9.6
10.04
440+00
C = 8.0 #
F = 4.0 #
Exc. 14.8 C.Y.
Emb. 81.5 "
9.1
10.73
E.P.
439+00
C = 0.0 #
F = 40.0 #
Exc. 0.0 C.Y.
Emb. 266.7 "
9.0
11.99
438+00
C = 0.0 #
F = 104.0 #
Exc. 1.9 C.Y.
Emb. 381.5 "
9.8
13.33
Flume
E.P.
E.P.
437+00
C = 1.0 #
F = 102.0 #
Exc. 103.7 C.Y.
Emb. 235.2 "
12.8
14.66
E.P.
E.P.
436+00
C = 55.0 #
F = 25.0 #
Exc. 288.9 C.Y.
Emb. 46.3 "
15.7
15.99
E.P.
E.P.
435+00
C = 101.0 #
F = 0.0 #
Exc. 327.8 C.Y.
Emb. 0.0 "
8.4
9.75
443+00
C = 2.0 #
F = 22.0 #
Exc. 5.6 C.Y.
Emb. 100.0 "
8.5
9.82
442+00
C = 1.0 #
F = 32.0 #
Exc. 31.5 C.Y.
Emb. 61.1 "

VOID

See Sheet #4258.51B & C

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

4258.51A

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
Haw	Haw.	E12A	1932	51B	56

Revised Apr. 12, 1933

FINAL SURVEY
NOTE BOOK NO.
SURVEYED F.S. | PLOTTED R.M.S. | TEMPLATE R.M.S. | AREAS R.M.S.
AREAS CHECKED
BY | DATE 3/33

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

10.11
C= 20
F= 20
Exc.= 26.9
Emb.= 23.1
8.5
422+00
10.31
C= 9
F= 5
Exc.= 8.3
Emb.= 16.7
10.1
421+50
10.51
C= 0
F= 13
Exc.= 0
Emb= 40.7
9.5
421+00
10.71
C= 0
F= 31
Exc.= 0
Emb.= 53.7
9.3
420+50
10.91
C= 0
F= 27
9.5
420+00
Exc.= 7.9 C.Y.
Emb.= 115.2 C.Y.
419+53.1 A=
417+59.2 B.
11.33
C= 4
F= 32
9.7
419+00
14.08
C= 256
F= 0
Exc.= 550.0
Emb.= 0
19.9
425+00
12.99
C= 338
F= 0
Exc.= 373.1
Emb= 0
21.1
424+50
11.89
C= 65
F= 1
Exc.= 60.0
Emb.= 125.9
12.7
424+00
10.96
C= 0
F= 135
Exc.= 0
Emb.= 260.0
7.2
423+50
10.36
C= 0.0
F= 146
Exc.= 0
Emb.= 241.7
5.7
423+00
10.07
Exc.= 18.5
Emb= 125.0
C= 0
F= 115
6.0
422+50
17.79
Lavatory
C= 54
F= 0
Exc.= 51.9
Emb.= 14.8
18.8
428+50
School House
18.91
C= 2
F= 16
Exc.= 2.8
Emb.= 33.3
17.2
428+00
18.12
C= 1
F= 20
Exc.= 4.6
Emb.= 29.6
17.0
427+50
17.81
C= 4.0
F= 12.0
Exc.= 43.5
Emb.= 11.1
17.3
427+00
17.19
C= 43.0
F= 0.0
Exc.= 129.6
Emb.= 0
18.0
426+50
16.26
C= 98.0
F= 0
Exc.= 238.9
Emb.= 0
18.3
426+00
15.17
Exc.= 385.2 C.Y.
Emb.= 0 C.Y.
16.7
C= 160
F= 0
425+50
12.38
14.53
432+00
C= 95
F= 0
Exc.= 197.2
Emb.= 0
13.18
15.6
C= 108
F= 0
431+50
Exc.= 193.5
Emb.= 0
14.97
16.0
C= 101
F= 0
431+00
Exc.= 181.5
Emb.= 0
14.77
C= 95
F= 0
16.7
430+50
Exc.= 150.9
Emb.= 0
15.56
C= 68
F= 0
16.8
Exc.= 124.1
Emb.= 0
430+00
16.36
C= 66
F= 0
17.6
429+50
Exc.= 74.1
Emb.= 5.6
17.0
17.15
C= 14
F= 6
Exc.= 63.0
Emb.= 5.6
429+00

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

4258.51B

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
Hawii	Haw	E12A	1932	51C	56

Revised Apr. 12, 1933

FINAL SURVEY		BY	DATE
NOTE BOOK	SURVEYED	F.S.	3/33
NO.	PLOTTED	RMB	
	TEMPLATE	RMB	
	AREAS	RMB	
	AREAS CHECKED	F.S.	

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

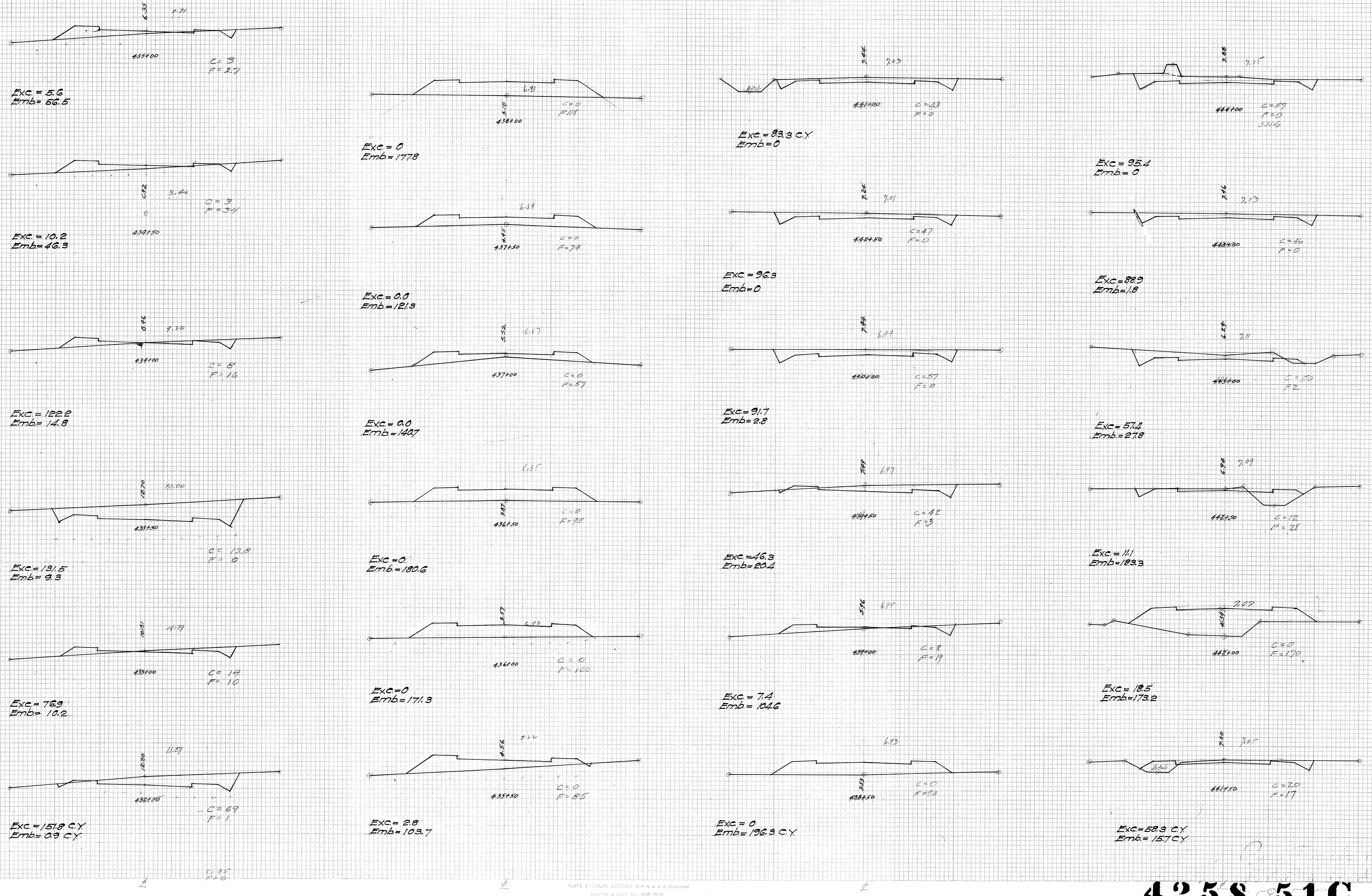

6.35
7.71
435+00
C= 3
F= 27
Exc. = 5.6
Emb= 56.5
6.92
8.40
C= 3
F= 34
434+50
Exc. = 10.2
Emb= 46.3
8.96
9.20
434+00
C= 8
F= 16
Exc. = 122.2
Emb= 14.8
12.70
10.00
433+50
C= 12.8
F= 0
Exc. = 131.5
Emb= 9.3
10.31
10.79
433+00
C= 14
F= 10
Exc. = 76.9
Emb= 10.2
12.70
11.59
432+50
C= 69
F= 1
Exc. = 151.8 C.Y.
Emb= 0.9 C.Y.
C= 95
F= 0
6.91
3.10
438+00
C=0
F 118
Exc. = 0
Emb. = 177.8
6.89
4.45
437+50
C=0
F= 74
Exc. = 0.0
Emb. = 121.3
5.52
6.87
437+00
C=0
F=57
Exc. = 0.0
Emb = 140.7
6.35
3.87
436+50
C=0
F=95
Exc. =0
Emb. = 180.6
3.57
6.93
436+00
C = 0
F= 100
Exc.=0
Emb. = 171.3
7.22
4.56
435+50
C=0
F=85
Exc. = 2.8
Emb. = 103.7
7.44
7.03
Ditch
441+00
C = 43
F = 0
Exc. = 83.3 C.Y.
Emb.=0
7.24
7.01
440+50
C = 47
F = 0
Exc. = 96.3
Emb.=0
7.24
6.99
440+00
C = 57
F = 0
Exc. = 91.7
Emb. = 2.8
7.49
6.97
439+50
C = 42
F = 3
Exc. = 46.3
Emb. = 20.4
5.96
6.95
439+00
C = 8
F = 19
Exc. = 7.4
Emb. = 104.6
6.93
3.53
438+50
C = 0
F = 74
Exc. = 0
Emb. = 196.3 C.Y.
7.88
7.15
444+00
C = 57
F = 0
S.W. = 6
Exc = 95.4
Emb. = 0
7.46
7.13
443+50
C = 46
F = 0
Exc. = 88.9
Emb. = 1.8
6.29
7.11
443+00
C = 50
F 2
Exc. = 57.4
Emb. = 27.8
6.94
7.09
442+50
C = 12
F = 28
Exc. = 11.1
Emb. = 183.3
7.07
4.39
442+00
C = 0
F = 170
Exc. = 18.5
Emb. = 173.2
7.00
7.05
Ditch
441+50
C = 20
F = 17
Exc. = 58.3 C.Y.
Emb. = 15.7 C.Y.
℄
℄
℄

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

4258.51C

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	E-12-A	1932	52	56

℄
7.77
7.5
453+00
C= 8
F=8
Exc.= 31.5
Emb.= 27.8
7.88
7.9
452+00
C=9
F=7
Exc.= 44.4
Emb.=24.1
7.99
8.1
451+00
C=15
F=6
Exc.= 66.7
Emb.= 18.5
8.10
8.4
450+00
C=21
F=4
Exc.= 94.4
Emb.= 7.4
8.21
8.8
449+00
C= 30
F= 0
Exc.= 107.4
Emb.= 0
8.32
8.9
448+00
C=28
F=0
Exc.= 75.9
Emb.= 7.4
8.43
8.4
447+00
C=13
F=4
Exc.= 37.0
Emb.= 13.0
8.54
8.1
446+00
C=7
F=3
Exc.= 14.8
Emb.=88.9
8.65
6.9
445+00
C=1
F=45
Exc.= 1.9
Emb.=157.4
8.76
7.1
444+00
C=0
F=40
Exc.= 33.3 Cu. Yds.
Emb.=74.1 Cu. Yds.
℄
6.91
6.3
463+00
C=14
F= 2
Exc.= 92.6
Emb.= 13.0
6.96
7.6
462+00
C=36
F=5
Exc.= 85.2
Emb.= 20.4
7.01
6.6
461+00
C=10
F=6
Exc.= 38.9
Emb.= 14.8
7.06
6.7
460+00
C=11
F=2
Exc.= 48.2
Emb.= 5.6
7.11
6.9
459+00
C=15
F=1
Exc.= 35.2
Emb.= 3.7
7.22
6.4
458+00
C=4
F=1
Exc.= 11.1
Emb.= 46.3
7.33
6.0
457+00
C= 2
F=24
Exc.= 9.3
Emb.= 75.9
7.44
6.9
456+00
C=3
F=17
Exc.= 13.0
Emb.= 74.1
7.55
7.2
455+00
C=4
F=23
Exc.= 20.4
Emb.= 61.1
7.66
7.4
454+00
C=7
F=10
Exc.= 27.8 Cu. Yds.
Emb.= 33.3 Cu. Yds.
℄
6.71
6.5
473+00
C=14
F=0
Exc.= 27.8
Emb.= 13.0
6.71
6.2
472+00
C=1
F=7
Exc.= 3.7
Emb.=29.6
6.71
6.2
471+00
C=1
F=9
Exc.= 1.9
Emb.=35.2
6.71
6.1
470+00
C=0
F=10
Exc.= 3.7
Emb.=33.3
6.71
6.2
469+00
C= 2
F=8
Exc.= 7.4
Emb.=29.6
6.71
6.3
468+00
C=2
F=8
Exc.= 14.8
Emb.= 25.9
6.71
6.4
467+00
C=6
F=6
Exc.= 14.8
Emb.=33.3
6.76
6.2
466+00
C=2
F=12
Exc.= 11.1
Emb.= 29.6
6.81
6.4
465+00
C=4
F=4
Exc.= 18.5
Emb.=18.5
6.86
6.5
464+00
C=6
F=6
Exc.= 37.0 Cu. Yds.
Emb.= 14.8 Cu. Yds.
℄
7.51
6.9
481+00
C=5
F=17
Exc.= 48.2
Emb.=40.7
7.31
7.6
480+00
C=22
F=13
Exc.= 87.0
Emb.= 24.1
7.11
7.2
479+00
C=25
F=0
Exc.= 103.7
Emb.= 1.9
6.91
7.3
478+00
C=31
F=1
Exc.= 168.5
Emb.= 33.3
477+72 side road →
6.74
7.4
477+00
C=60
F=17
Exc.= 207.4
Emb.= 63.0
6.71
7.2
476+00
C=52
F=17
Exc.= 150.0
Emb.= 31.5
6.71
7.2
475+00
C=29
F=0
Exc.= 92.6
Emb.= 5.6
6.71
6.9
474+00
C=21
F=3
Exc.= 64.8 Cu. Yds.
Emb.= 5.6 Cu. Yds.

Void See Sheet 52A

4258.52

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	E-12A	1932	52A	56

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

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

℄
STA. 440+00 TO 467+00
VOID
7.3 9.01
453+00
C: 0.0 #
F: 37.0 #
Exc. 0.0 C.Y.
Emb. 185.2 "
6.8 9.08
452+00
C: 0.0 #
F: 68.0 #
Exc. 0.0 C.Y.
Emb. 335.2 "
5.2 9.16
451+00
C: 0.0 #
F: 113.0 #
Exc. 0.0 C.Y.
Emb. 313.0 "
7.0 9.23
450+00
C: 0.0 #
F: 56.0 #
Exc. 25.9 C.Y.
Emb. 105.6 "
8.8 9.31
449+00
C: 14.0 #
F: 1.0 #
Exc. 27.8 C.Y.
Emb. 83.3 "
7.5 9.38
448+00
C: 1.0 #
F: 44.0 #
Exc. 3.7 C.Y.
Emb. 174.1 "
7.6 9.45
447+00
C: 1.0 #
F: 50.0 #
Exc. 3.7 C.Y.
Emb. 170.4 "
7.2 9.53
446+00
C: 1.0 #
F: 42.0 #
Exc. 3.7 C.Y.
Emb. 144.4 "
8.2 9.60
445+00
C: 1.0 #
F: 36.0 #
Exc. 3.7 C.Y.
Emb. 138.9 "
7.9 9.67
444+00
C: 1.0 #
F: 37.0 #
Exc. 5.6 C.Y.
Emb. 113.0 "
℄
STA. 440+00 TO 467+00
VOID
6.7 8.28
E.P.
E.P.
463+00
C: 0.0 #
F: 40.0 #
Exc. 3.7 C.Y.
Emb. [illegible].4 "
7.7 8.35
462+00
C: 2.0 #
F: 11.0 #
Exc. [illegible].4 C.Y.
Emb. 68.5 "
7.2 8.43
461+00
C: 2.0 #
F: 26.0 #
Exc. [illegible].7 C.Y.
Emb. [illegible].0 "
8.1 8.50
460+00
C: 30.0 #
F: 1.0 #
Exc. [illegible].7 C.Y.
Emb. [illegible].0 "
8.1 8.57
459+00
C: 16.0 #
F: 6.0 #
Exc. 81.5 C.Y.
Emb. 18.5 "
8.8 8.64
458+00
C: 28.0 #
F: 4.0 #
Exc. 59.[illegible] C.Y.
Emb. 38.9 "
7.5 8.72
457+00
C: 4.0 #
F: 17.0 #
Exc. 14.8 C.Y.
Emb. 75.9 "
7.5 8.79
456+00
C: 4.0 #
F: 24.0 #
Exc. 7.4 C.Y.
Emb 92.6 "
7.6 8.86
455+00
C: 0.0 #
F: 36.0 #
Exc. 0.0 C.Y.
Emb. 125.9 "
7.4 8.94
454+00
C: 0.0 #
F: 42.0 #
Exc. 0.0 C.Y.
Emb. 137.0 "
℄
6.9 7.55
E.P.
E.P.
473+00
C: 2.0 #
F: 14.0 #
Exc. 5.6 C.Y.
Emb. 74.1 "
6.6 7.62
E.P.
E.P.
472+00
C: 1.0 #
F: 26.0 #
Exc. 1.9 C.Y.
Emb. 116.7 "
6.3 7.69
E.P.
E.P.
471+00
C: 0.0 #
F: 37.0 #
Exc. 0.0 C.Y.
Emb. 166.7 "
6.2 7.77
E.P.
E.P.
470+00
C: 0.0 #
F: 53.0 #
Exc. 0.0 C.Y.
Emb. 188.9 "
6.2 7.84
E.P.
E.P.
469+00
C: 0.0 #
F: 47.0 #
Exc. 0.0 C.Y.
Emb. 172.2 "
6.4 7.91
E.P.
E.P.
468+00
C: 0.0 #
F: 44.0 #
Exc. 0.0 C.Y.
Emb. 172.2 "
6.3 7.99
E.P.
E.P.
467+00
C: 0.0 #
F: 49.0 #
Exc. 0.0 C.Y.
Emb. 194.4 "
8.06
E.P.
E.P.
466+00
C: 0.0 #
F: 56.0 #
Exc. 0.0 C.Y.
Emb. 201.9 "
6.3 8.13
E.P.
E.P.
465+00
C: 0.0 #
F: 53.0 #
Exc. 0.0 C.Y.
Emb. 192.6 "
6.5 8.21
E.P.
464+00
C: 0.0 #
F: 51.0 #
Exc. 0.0 C.Y.
Emb. 168.5 "
VOID STA. 440+00 to 467+00
See Sheet # 4258.52B & C
℄
6.2 7.14
E.P.
E.P.
481+00
C: 1.0 #
F: 32.0 #
Exc. 46.3 C.Y.
Emb. 61.1 "
7.2 7.03
E.P.
E.P.
480+00
C: 24.0 #
F: 1.0 #
Exc. 100.0 C.Y.
Emb. 64.8 "
7.5 7.11
E.P.
E.P.
479+00
C: 30.0 #
F: 34.0 #
Exc. 77.8 C.Y.
Emb. 77.8 "
7.1 7.18
E.P.
E.P.
478+00
C: 12.0 #
F: 8.0 #
Exc. 61.1 C.Y.
Emb. 22.2 "
7.3 7.25
E.P.
E.P.
477+00
C: 21.0 #
F: 4.0 #
Exc. 114.8 C.Y.
Emb. 24.1 "
7.4 7.33
E.P.
E.P.
476+00
C: 41.0 #
F: 9.0 #
Exc. 113.0 C.Y.
Emb. 40.7 "
7.3 7.40
E.P.
475+00
C: 20.0 #
F: 13.0 #
Exc. 48.2 C.Y.
Emb. 40.7 "
7.2 7.47
E.P.
E.P.
474+00
C: 6.0 #
F: 9.0 #
Exc. 14.8 C.Y.
Emb. 42.6 "

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

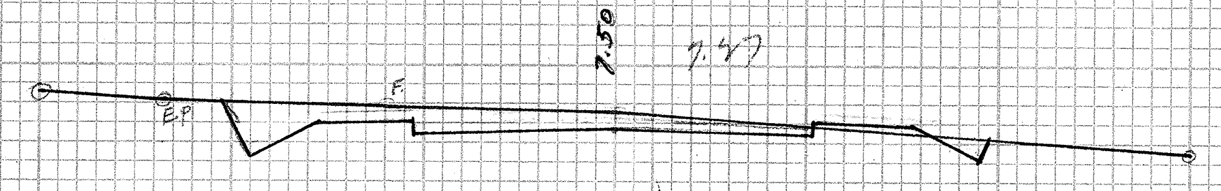
4258.52A

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET	TOTAL SHEETS
Hawaii	Haw	E12A	1932	52B	56

Revised Apr. 12, 1933

FINAL SURVEY
NOTE BOOK
NO.

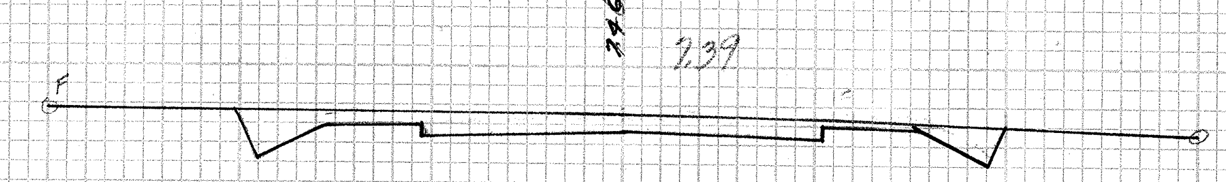
	BY	DATE
SURVEYED	F.S.	3/33
PLOTTED	R.M.B.	
TEMPLATE	R.M.B.	
AREAS	F.S.	
AREAS CHECKED		



Exc. = 63
Emb. = 0.9

447+00

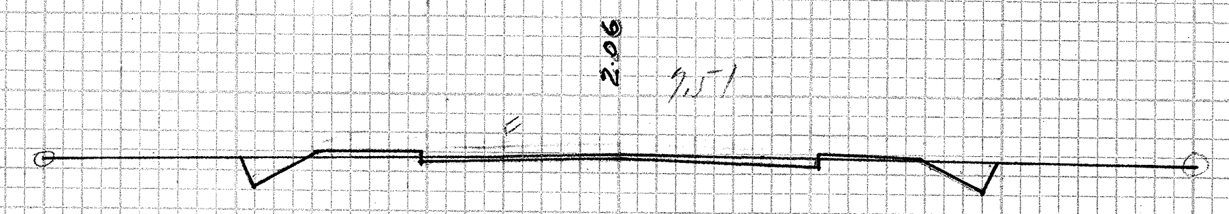
C = 29
F = 1



Exc. = 74.1
Emb. = 0

450+00

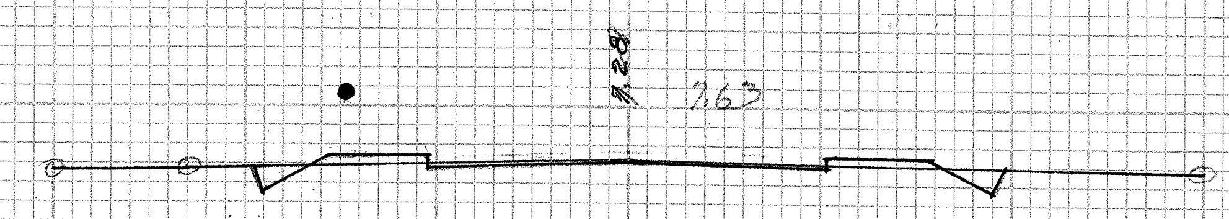
C = 38
F = 0



453+00

C = 6
F = 2

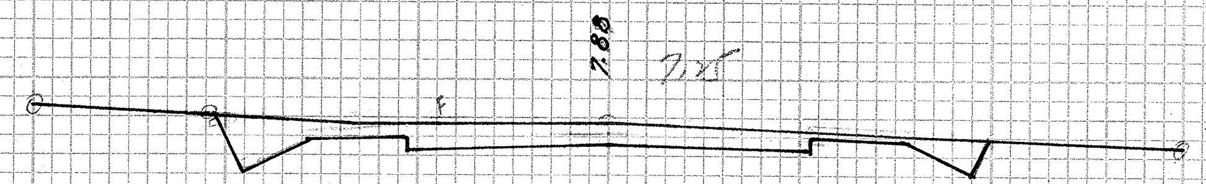
Exc. = 11.1 C.Y.
Emb. = 3.7



Exc. = 6.5
Emb. = 4.6

456+00

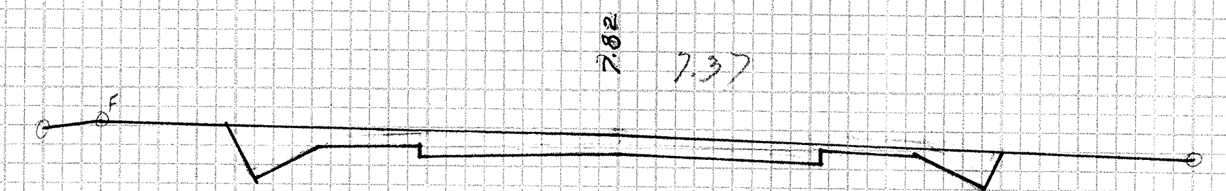
C = 3
F = 3



Exc. = 93.5 C.Y.
Emb. = 0 C.Y.

446+50

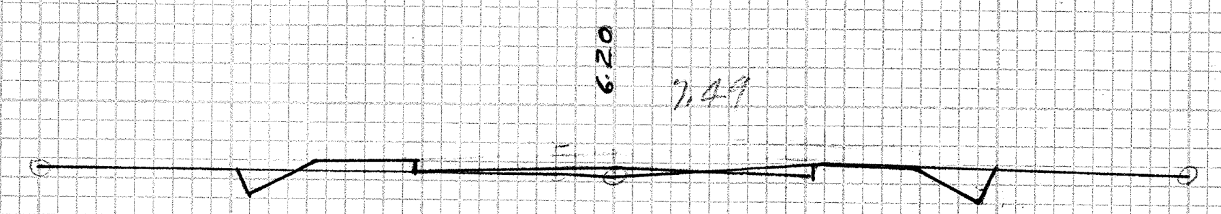
C = 39
F = 0



Exc. = 92.6
Emb. = 0

449+50

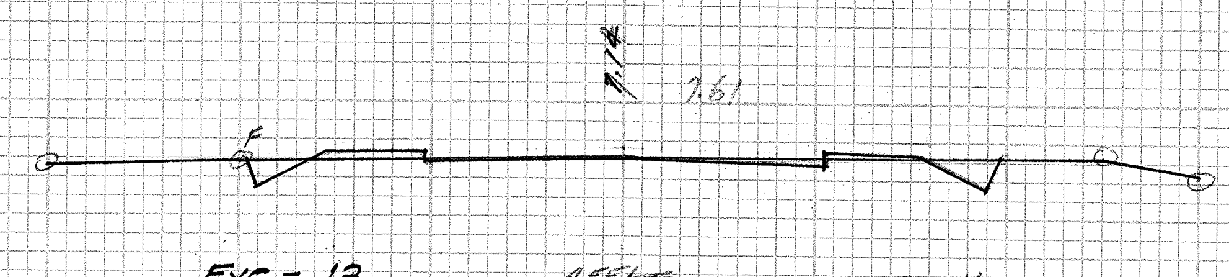
C = 52
F = 0



Exc. = 10.2
Emb. = 4.6

452+50

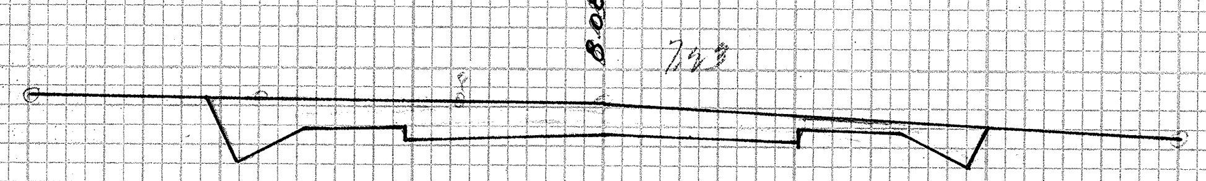
C = 6
F = 2



Exc. = 13
Emb. = 2.8

455+50

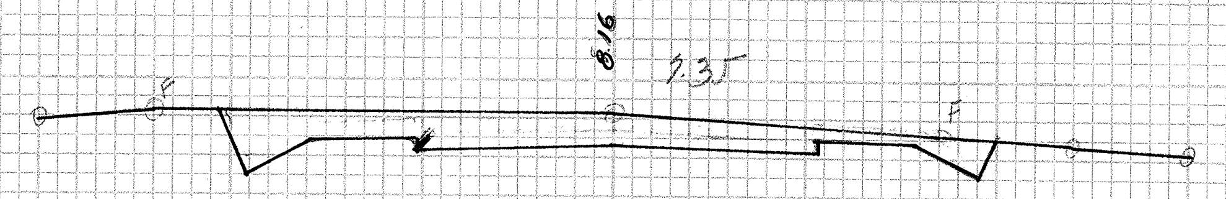
C = 4
F = 2



Exc. = 90.7 C.Y.
Emb. = 0

446+00

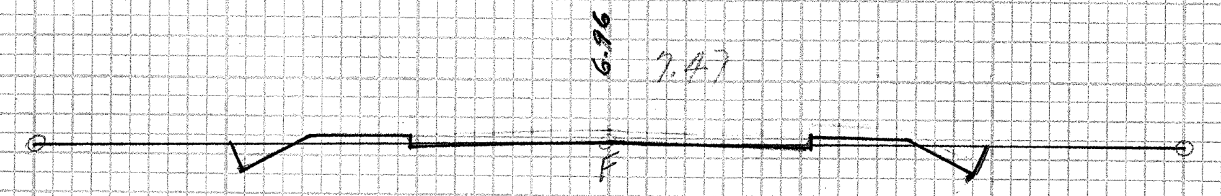
C = 62
F = 0



Exc. = 107.4
Emb. = 0

449+00

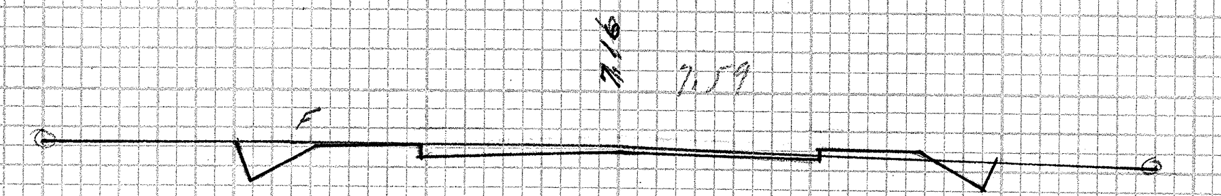
C = 58
F = 0



Exc. = 12.9
Emb. = 4.6

452+00

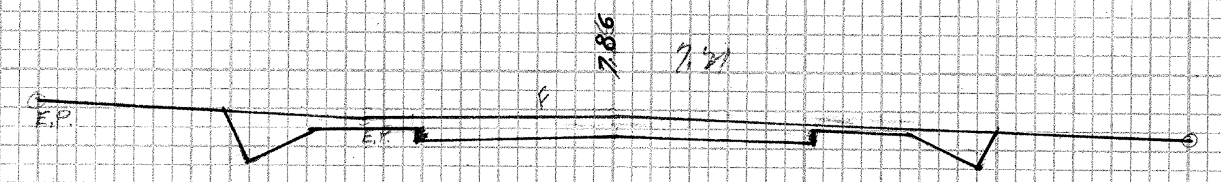
C = 5
F = 3



Exc. = 17.6
Emb. = 1.9

455+00

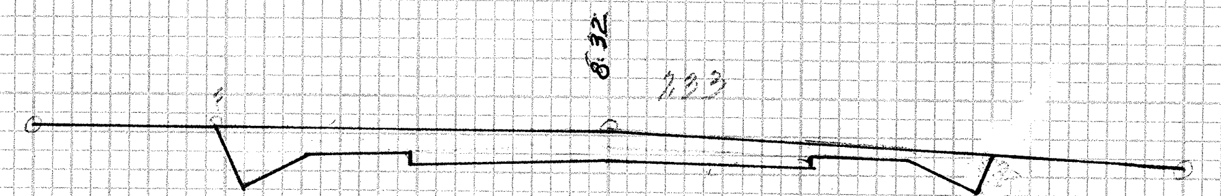
C = 10
F = 1


7.86
7.21
E.P.
E.P.
F

Exc. = 70.4 C.Y.
Emb. = 0

445+50

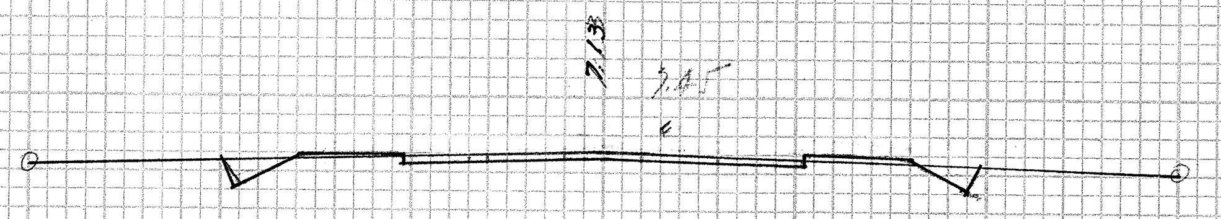
C = 36
F = 0



Exc. = 100.9
Emb. = 0

448+50

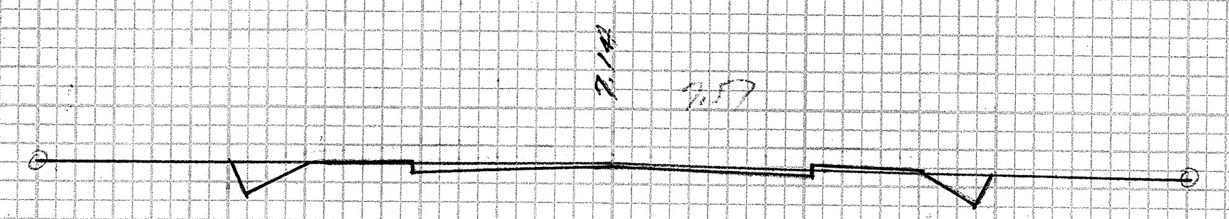
C = 58
F = 0



Exc. = 15.7
Emb. = 2.8

451+50

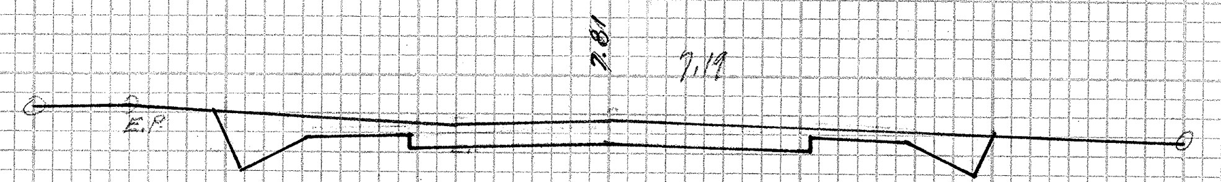
C = 9
F = 2



Exc. = 17.6
Emb. = 1.9

454+50

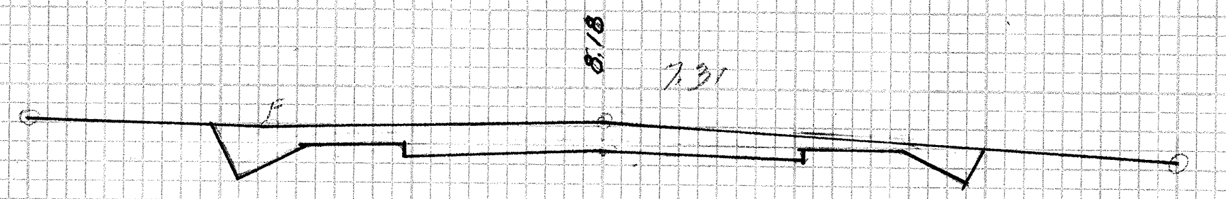
C = 9
F = 1



Exc. = 74.1 C.Y.
Emb. = 0

445+00

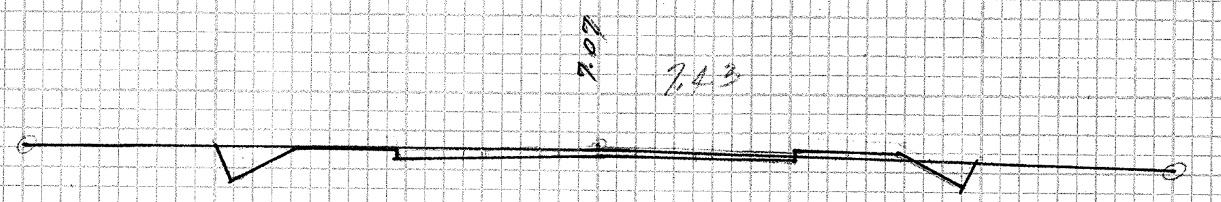
C = 40
F = 0



Exc. = 102.8
Emb. = 0

448+00

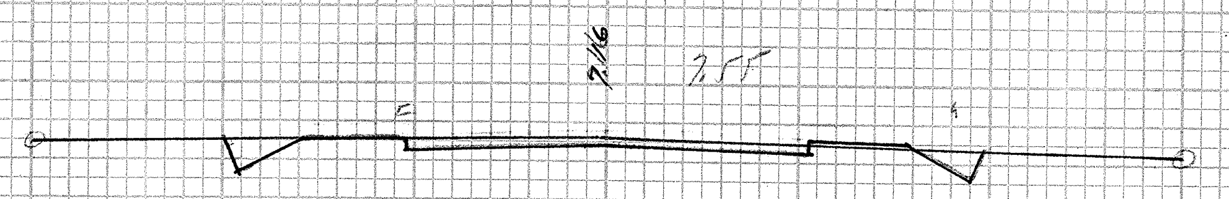
C = 61
F = 0



Exc. = 29.6
Emb. = 0.9

451+00

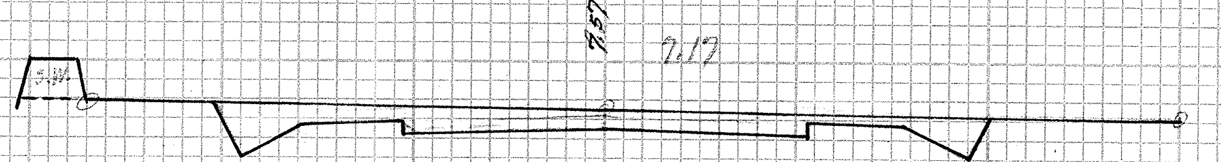
C = 10
F = 1



Exc. = 17.6
Emb. = 1.9

454+00

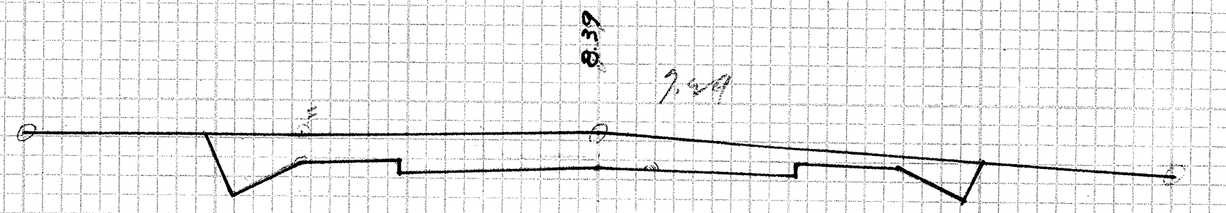
C = 10
F = 1



444+50

C = 40
F = 0

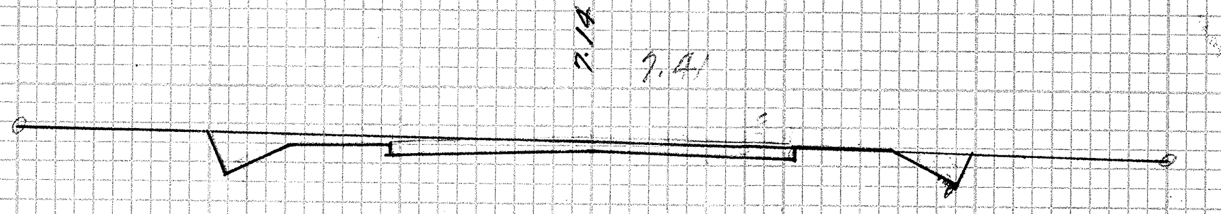
Exc. = 89.8
Emb. = 0



Exc. = 82.4 C.Y.
Emb. = 0.9 C.Y.

447+50

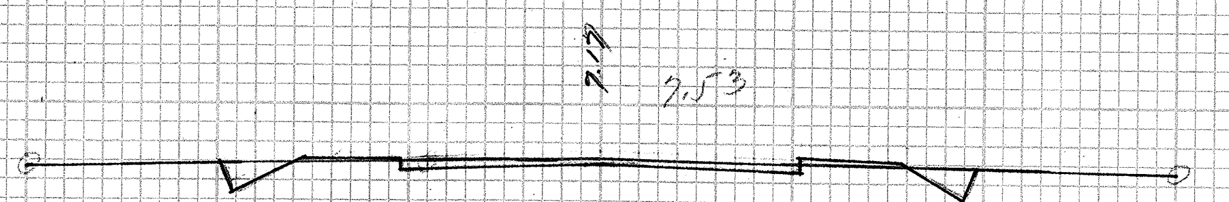
C = 60
F = 0



Exc. = 55.6
Emb. = 0

450+50

C = 22
F = 0



Exc. = 13.9 C.Y.
Emb. = 2.8 C.Y.

453+50

C = 9
F = 1

ORIGINAL SURVEY
NOTE BOOK
NO.

	BY	DATE
SURVEYED		
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		

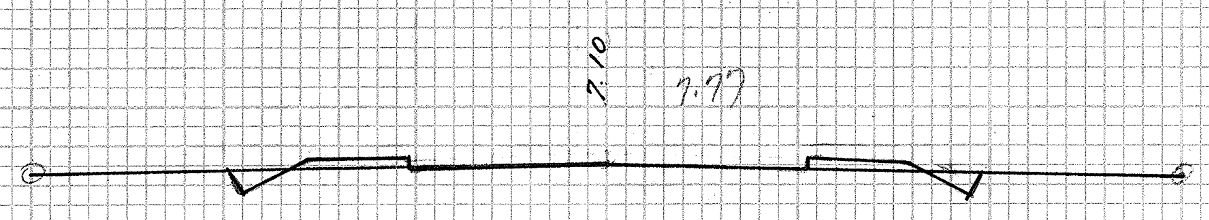
PLATE 3—CROSS SECTION O. P. R. & R. E. STANDARD
KEUFFEL & ESSER CO., NEW YORK.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
Hawaii	Haw	E-12-A	1932	52C	56

Revised Apr. 12, 1933

FINAL SURVEY		BY	DATE
NOTE BOOK	SURVEYED	ES	3/33
NO.	PLOTTED	RMB	
	TEMPLATE	RMB	
	AREAS	FS	
	AREAS CHECKED		

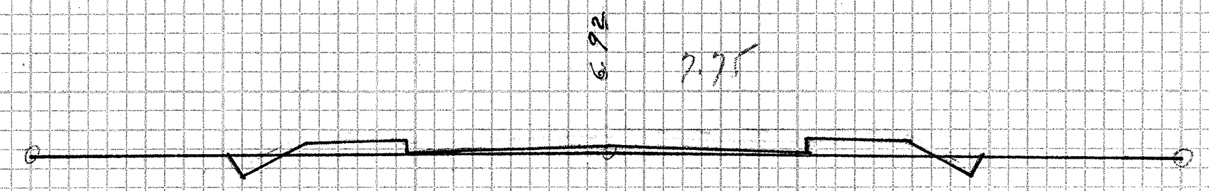
ORIGINAL SURVEY		BY	DATE
NOTE BOOK	SURVEYED		
NO.	PLOTTED		
	TEMPLATE		
	AREAS		
	AREAS CHECKED		



439+50

C= 3
F= 4

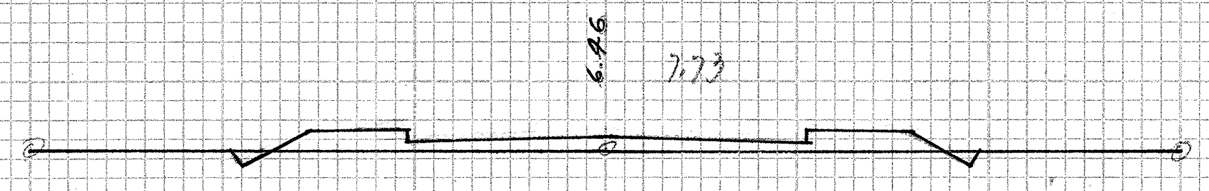
Exc.= 4.6
Emb= 13.0



439+00

C= 2
F= 10

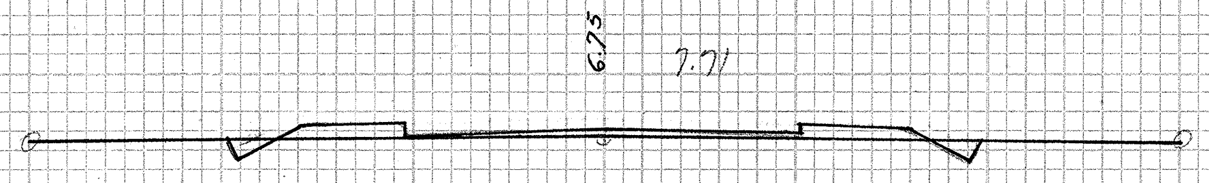
Exc.= 2.8
Emb= 31.5



438+50

C= 1
F= 24

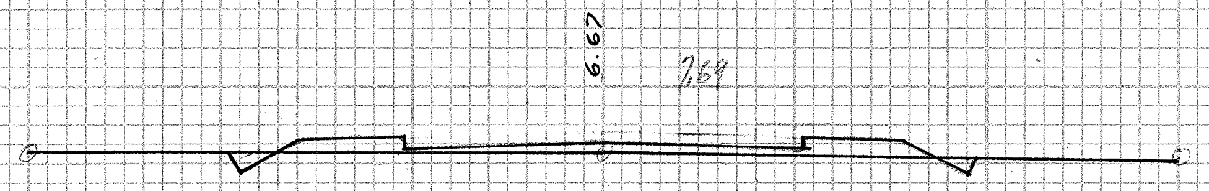
Exc.= 2.8
Emb= 31.5



438+00

C= 2
F= 10

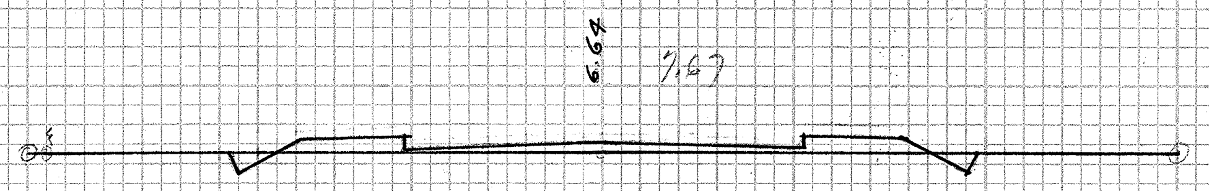
Exc.= 2.8
Emb= 24.1



457+50

C= 1
F= 16

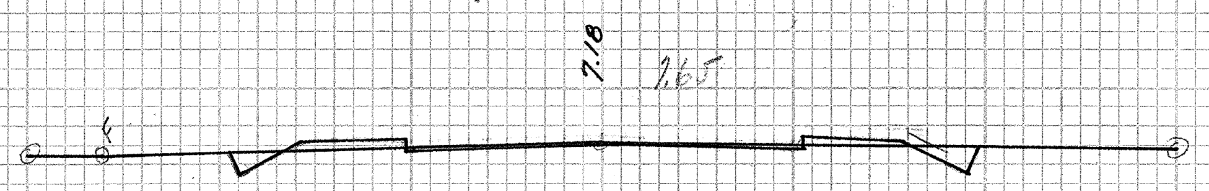
Exc.= 2.8
Emb= 26.8



457+00

C= 2
F= 12

Exc.= 4.6
Emb= 13.9

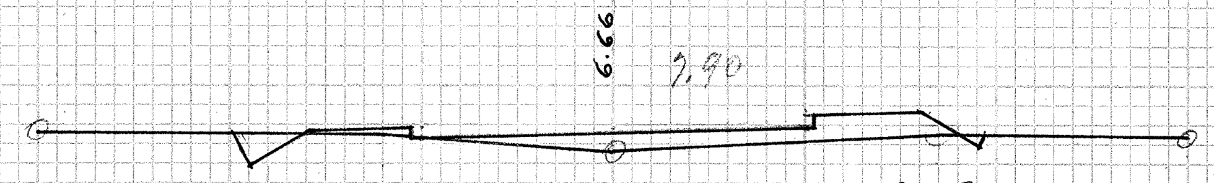


456+50

C= 3
F= 3

Exc.= 5.6 C.Y.
Emb.= 5.6 C.Y.

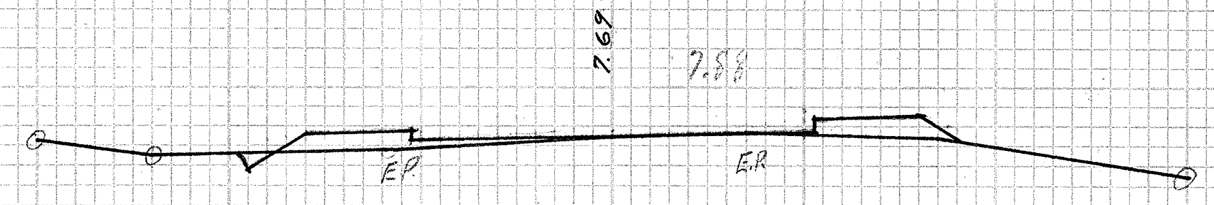
C= 3
F= 3



462+00

C= 3
F= 22

Exc.= 2.8 C.Y.
Emb= 33.3 C.Y.

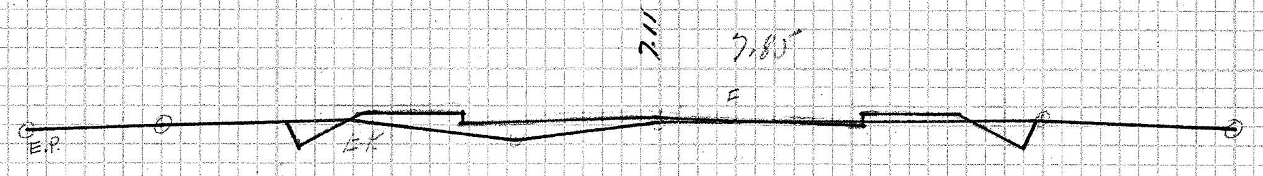

7.69
7.88
E.P.
E.P.

461+50

C= 0
F= 14

Exc.= 3.6
Emb.= 32.4

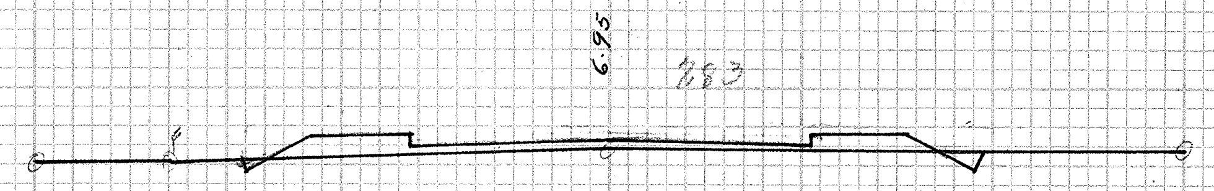
461+15.2 Ahead
461+00 Back
Equation


7.11
7.85
E.P.
E.P.

461+50

C= 3
F= 13

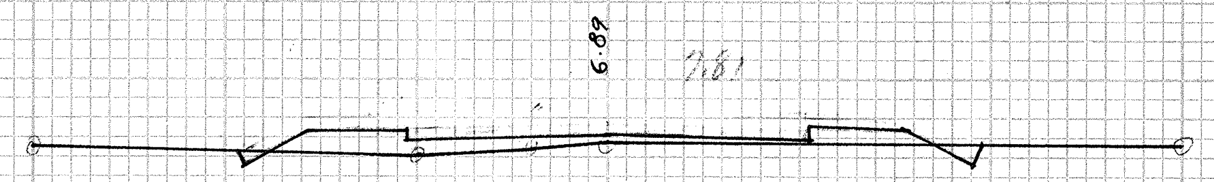
Exc.= 3.7
Emb.= 29.6



461+00

C= 1
F= 19

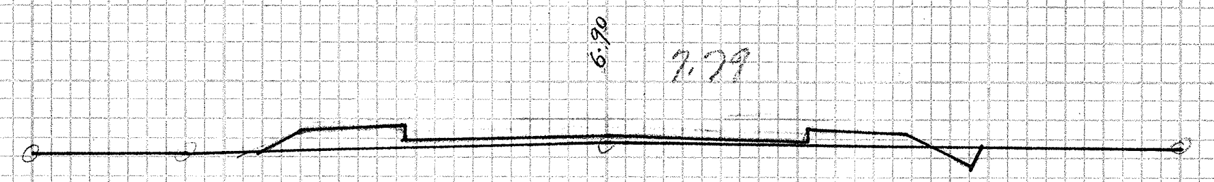
Exc.= 1.9
Emb.= 38.0



460+50

C= 1
F= 22

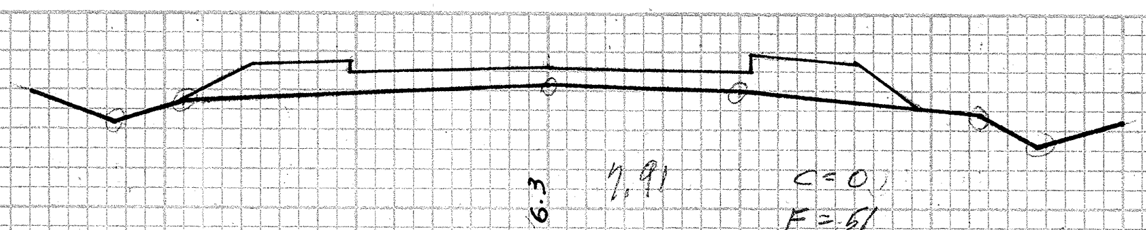
Exc.= 1.9
Emb.= 34.3



460+00

C= 1
F= 15

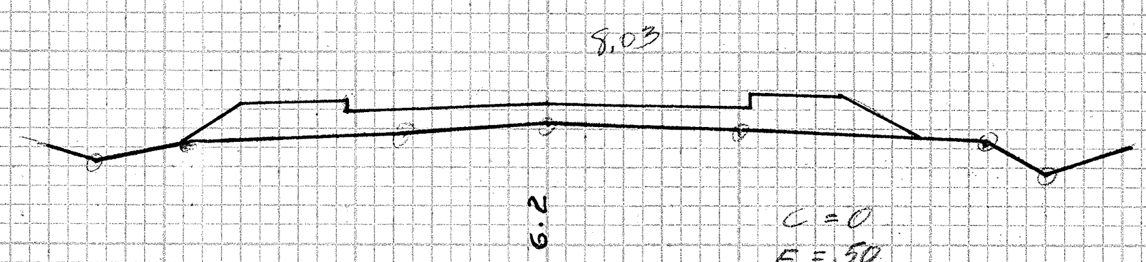
Exc.= 3.7 C.Y.
Emb.= 17.6 C.Y.



C= 0
F= 51

467+00

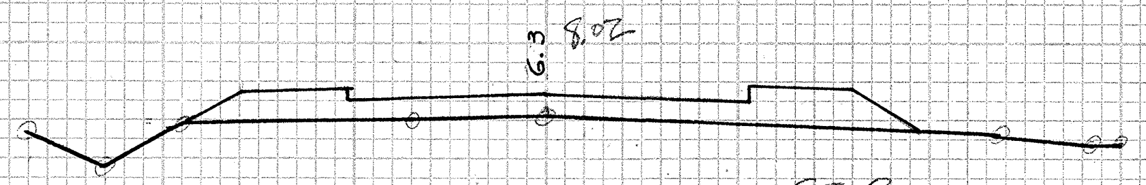
Exc.= 0
Emb.= 187 C.Y.



C= 0
F= 50

466+00

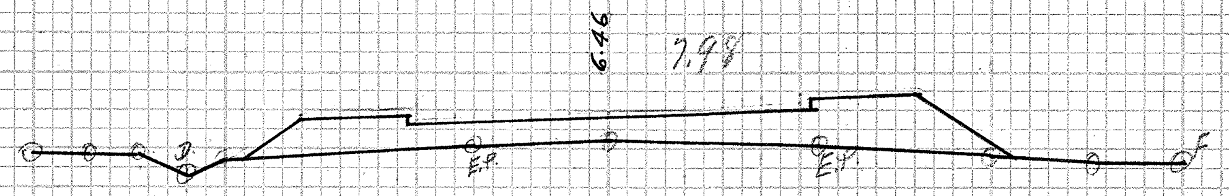
Exc.= 0
Emb.= 177.8



C= 0
F= 46

465+00

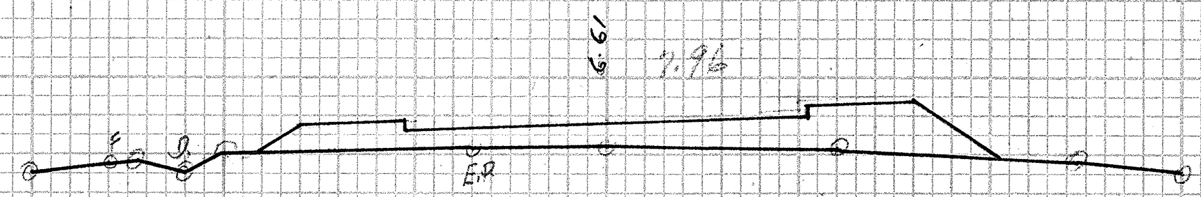
Exc= 0
Emb.= 201.9


6.46
7.98
E.P.
E.P.

464+00

C= 0
F= 63

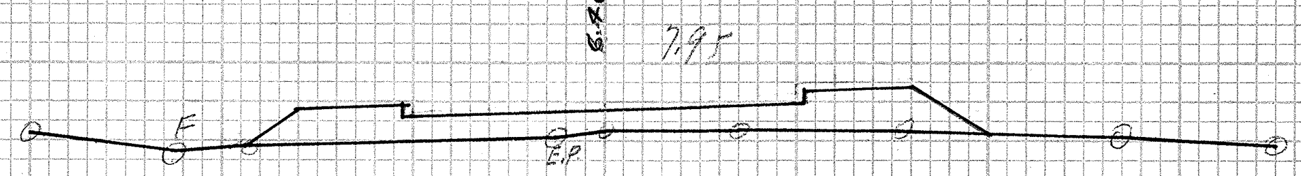
Exc.= 0
Emb.= 110.2



463+50

C= 0
F= 56

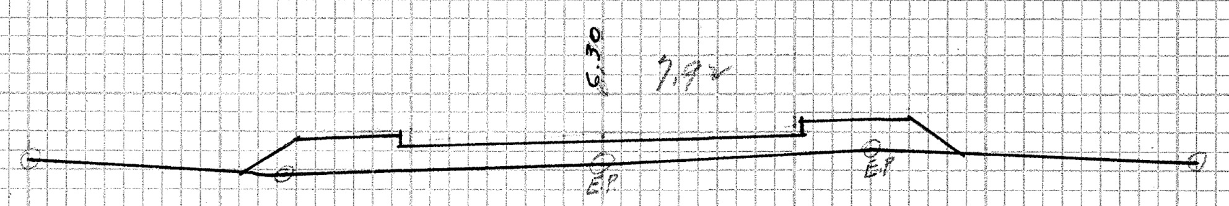
Exc.= 0
Emb.= 103.7



463+00

C= 0
F= 56

Exc.= 0
Emb.= 96.3


6.30
7.94
E.P.
E.P.

462+50

C= 0
F= 48

Exc.= 2.8
Emb.= 64.8

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

4258.52C

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	E-12-A	1932	53	56

℄
10.04
C=12
F=7
9.9
Exc.= 44.4
Emb.= 18.5
490+00
9.60
C=12
F=3
9.7
Exc.= 46.3
Emb.= 7.4
489+00
9.15
C=13
F=1
9.3
Exc.= 40.7
Emb.= 24.1
488+00
8.77
C=9
F=12
8.8
Exc.= 16.7
Emb.= 44.4
487+00
8.51
C=0
F=12
7.8
Exc.= 1.9
Emb.= 103.7
486+00
8.31
C=1
F=44
7.4
Exc.= 20.4
Emb.= 137.0
485+00
8.11
C=10
F=30
8.1
Exc.= 18.5
Emb.= 116.7
484+00
7.91
C=0
F=33
6.5
Exc.= 0.0
Emb.= 142.6
483+00
7.71
C=0
F=44
6.1
Exc.= 7.4 cu. yd.
Emb.= 98.2 cu. yd.
482+00
℄
℄
9.88
C=2
F=10
9.5
Exc.= 14.8
Emb.= 42.6
500+00
10.13
C=6
F=18
9.2
Exc.= 11.1
Emb.= 40.7
499+00
10.53
C=0
F=9
9.8
Exc.= 3.7
Emb.= 31.5
498+00
11.06
C=2
F=8
10.7
Exc.= 14.8
Emb.= 25.9
497+00
11.53
C=6
F=6
11.3
Exc.= 38.9
Emb.= 11.1
496+00
11.74
C=15
F=0
11.5
Exc.= 53.7
Emb.= 3.7
495+00
11.69
C=14
F=2
11.6
Exc.= 61.1
Emb.= 3.7
494+00
11.37
C=19
F=0
11.3
Exc.= 51.9
Emb.= 9.3
493+00
10.93
C=9
F=5
10.7
Exc.= 29.6
Emb.= 18.5
492+00
10.49
C=7
F=5
10.2
Exc.= 35.2 cu. yd.
Emb.= 22.2 cu. yd.
491+00
℄
℄
8.79
C=8
F=2
8.2
Exc.= 29.6
Emb.= 3.7
510+00
9.10
C=8
F=0
8.6
Exc.= 29.6
Emb.= 0.0
509+00
9.35
C=8
F=0
8.9
Exc.= 25.9
Emb.= 7.4
508+00
9.46
C=6
F=4
9.2
Exc.= 31.5
Emb.= 11.1
507+00
9.51
C=11
F=2
9.2
Exc.= 24.1
Emb.= 22.2
506+00
9.56
C=2
F=10
9.1
Exc.= 7.4
Emb.= 33.3
505+00
9.61
C=2
F=8
9.1
Exc.= 7.4
Emb.= 33.3
504+00
9.66
C=2
F=10
9.1
Exc.= 7.4
Emb.= 29.6
503+00
9.71
C=2
F=6
9.3
Exc.= 18.5
Emb.= 14.8
502+00
9.76
C=8
F=2
9.5
Exc.= 18.5 cu. yd.
Emb.= 22.2 cu. yd.
501+00
℄
℄
7.85
C=9
F=6
6.6
Exc.= 31.5
Emb.= 20.4
519+00
7.55
C=8
F=5
6.7
Exc.= 70.4
Emb.= 9.3
518+00
7.24
C=30
F=0
6.9
Exc.= 111.1
Emb.= 0.0
517+00
7.08
C=30
F=0
6.8
Exc.= 66.7
Emb.= 7.4
516+00
7.24
C=6
F=4
6.6
Exc.= 14.8
Emb.= 29.6
515+00
7.55
C=2
F=12
6.6
Exc.= 11.1
Emb.= 59.3
514+00
7.86
C=4
F=20
6.9
Exc.= 22.2
Emb.= 42.6
513+00
8.17
C=8
F=3
7.6
Exc.= 37.0
Emb.= 9.3
512+00
8.48
C=12
F=2
8.0
Exc.= 37.0 cu. yd.
Emb.= 7.4 cu. yd.
511+00

VOID
See Sheet 53A

4258.53

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	E-12 A	1932	53A	56

℄
9.7
9.99
E.P.
E.P.
491+00
C = 38.0 #
F = 1.0 #
Exc. 124.1 C.Y.
Emb. 14.8 "
9.0
9.71
E.P.
E.P.
490+00
C = 24.0 #
F = 7.0 #
Exc. 111.1 C.Y.
Emb. 16.7 "
9.0
9.43
E.P.
E.P.
489+00
C = 31.0 #
F = 2.0 #
Exc. 118.5 C.Y.
Emb. 5.6 "
9.0
9.14
E.P.
E.P.
488+00
C = 33.0 #
F = 1.0 #
Exc. 77.8 C.Y.
Emb. 38.9 "
8.0
8.85
E.P.
E.P.
487+00
C = 9.0 #
F = 30.0 #
Exc. 57.4 C.Y.
Emb. 46.3 "
8.4
8.57
E.P.
486+00
C = 33.0 #
F = 5.0 #
Exc. 61.1 C.Y.
Emb. 20.4 "
7.9
8.28
E.P.
E.P.
485+00
C = 11.0 #
F 6.0 #
Exc. 50.0 C.Y.
Emb. 70.4 "
7.6
7.99
E.P.
E.P.
484+00
C = 16.0 #
F = 32.0 #
Exc. 75.9 C.Y.
Emb. 114.8 "
8.0
7.71
E.P.
E.P.
483+00
C = 25.0 #
F = 30.0 #
Exc. 46.3 C.Y.
Emb. 118.5 "
6.2
7.43
E.P.
E.P.
482+00
C = 0.0 #
F = 34.0 #
Exc. 1.9 C.Y.
Emb. 122.2 "
℄
9.2
9.97
E.P.
E.P.
500+00
C = 1.0 #
F = 20.0 #
Exc. 9.3 C.Y.
Emb. 74.1 "
9.4
10.16
E.P.
E.P.
499+00
C = 4.0 #
F = 20.0 #
Exc. 11.1 C.Y.
Emb. 79.6 "
9.3
10.35
E.P.
498+00
C = 2.0 #
F = 23.0 #
Exc. 5.6 C.Y.
Emb. 61.1 "
9.9
10.53
E.P.
E.P.
497+00
C = 1.0 #
F = 10.0 #
Exc. 44.4 C.Y.
Emb. 22.2 "
10.9
10.72
E.P.
E.P.
496+00
C = 23.0 #
F = 2.0 #
Exc. 50.0 C.Y.
Emb. 38.9 "
11.3
10.91
E.P.
E.P.
495+00
C = 4.0 #
F = 14.0 #
Exc. 66.7 C.Y.
Emb. 38.9 "
11.1
10.85
E.P.
494+00
C = 32.0 #
F = 2.0 #
Exc. 161.1 C.Y.
Emb. 3.7 "
11.0
10.57
E.P.
493+00
C = 55.0 #
F = 0.0 #
Exc. 187.0 C.Y.
Emb. 0.0 "
10.5
10.28
E.P.
492+00
C = 46.0 #
F = 0.0 #
Exc. 155.6 C.Y.
Emb. 1.9 "
℄
7.2
8.12
E.P.
E.P.
510+00
C = 1.5 #
F = 22.0 #
Exc. 62.0 C.Y.
Emb. 40.7 "
8.4
8.30
E.P.
E.P.
509+00
C = 32.0 #
F = 0.0 #
Exc. 111.1 C.Y.
Emb. 0.0 "
8.7
8.49
E.P.
E.P.
508+00
C = 23.0 #
F = 0.0 #
Exc. 116.7 C.Y.
Emb. 0.0 "
9.0
8.67
E.P.
E.P.
507+00
C = 35.0 #
F = 0.0 #
Exc. 114.8 C.Y.
Emb. 0.0 "
9.2
8.86
E.P.
E.P.
506+00
C = 27.0 #
F = 0.0 #
Exc. 83.3 C.Y.
Emb. 1.9 "
9.1
9.05
E.P.
E.P.
505+00
C = 18.0 #
F = 1.0 #
Exc. 61.1 C.Y.
Emb. 7.4 "
9.1
9.23
E.P.
E.P.
504+00
C = 15.0 #
F = 3.0 #
Exc. 55.6 C.Y.
Emb. 13.0 "
9.1
9.42
E.P.
E.P.
503+00
C = 15.0 #
F = 4.0 #
Exc. 38.9 C.Y.
Emb. 18.5 "
9.0
9.60
E.P.
E.P.
502+00
C = 6.0 #
F = 6.0 #
Exc. 22.2 C.Y.
Emb. 22.2 "
9.2
9.79
E.P.
E.P.
501+00
C = 6.0 #
F = 6.0 #
Exc. 13.0 C.Y.
Emb. 48.2 "
℄
8.6
8.48
521+00
C = 24.0 #
F = 28.0 #
Exc. 50.0 C.Y.
Emb. 225.9 "
6.7
8.18
520+00
C = 3.0 #
F = 94.0 #
Exc. 7.4 C.Y.
Emb. 316.7 "
6.0
7.89
E.P.
E.P.
519+00
C = 1.0 #
F = 77.0 #
Exc. 14.8 C.Y.
Emb. 146.3 "
6.8
7.59
E.P.
518+00
C = 7.0 #
F = 2.0 #
Exc. 42.6 C.Y.
Emb. 7.4 "
7.1
7.30
E.P.
E.P.
517+00
C = 16.0 #
F = 2.0 #
Exc. 87.0 C.Y.
Emb. 3.7 "
7.1
7.00
E.P.
E.P.
516+00
C = 31.0 #
F = 0.0 #
Exc. 88.9 C.Y.
Emb. 3.7 "
6.9
7.18
515+00
C = 17.0 #
F = 2.0 #
Exc. 50.0 C.Y.
Emb. 5.6 "
6.7
7.37
E.P.
E.P.
514+00
C = 10.0 #
F = 1.0 #
Exc. 25.9 C.Y.
Emb. 20.4 "
6.7
7.56
E.P.
E.P.
513+00
C = 4.0 #
F = 10.0 #
Exc. 14.8 C.Y.
Emb. 33.3 "
7.1
7.74
E.P.
E.P.
512+00
C = 4.0 #
F = 8.0 #
Exc. 33.3 C.Y.
Emb. 20.4 "
7.8
7.93
E.P.
E.P.
511+00
C = 14.0 #
F = 3.0 #
Exc. 28.7 C.Y.
Emb. 46.3 "

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. & R. E. STANDARD
KEUFFEL & ESSER CO., NEW YORK.

4258.53A

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	E-12-A	1932	54	56

FINAL SURVEY

ORIGINAL SURVEY

16.6
19.33
C=0 F=83
Exc.= 3.7 Emb.= 311.1
573+00
14.2
17.53
C=2 F=85
572+00
Exc.= 3.7 Emb.= 275.9
13.6
15.74
C=0 F=64
571+00
Exc.= 75.9 Emb.= 159.3
12.4
13.94
C=41 F=22
570+00
Exc.= 90.7 Emb.= 53.7
11.3
12.15
C=8 F=7
569+00
Exc.= 70.4 Emb.= 13.0
10.4
10.35
C=30 F=0
568+00
Exception No 4
Kapaa Town
Sta. 522+00 to 568+00
8.8
8.78
C=0 F=0
522+00
Exc.= 0.0 Emb.= 53.7
7.2
8.47
C=0 F=29
521+00
Exc.= 0.0 Emb.= 192.6
5.9
8.16
C=0 F=75
520+00
Exc.= 16.7 cu. yd. Emb.= 150.0 cu. yd.
27.9
29.36
C=350 F=23
580+00
Exc.= 750.0 Emb.= 72.2
27.6
28.98
C=55 F=16
579+00
Exc.= 105.6 Emb.= 72.2
26.6
28.03
C=2 F=23
578+00
Exc.= 94.4 Emb.= 42.6
25.9
26.51
C=49 F=0
577+00
Exc.= 409.3 Emb.= 0.0
24.9
24.72
C=172 F=0
576+00
Exc.= 685.2 Emb.= 0.0
22.9
22.92
C=198 F=0
575+00
Exc.= 433.3 Emb.= 16.7
19.9
21.13
C=36 F=9
574+00
Exc.= 66.7 cu. yd. Emb.= 188.9 cu. yd.
29.6
27.02
590+00
C=1 F=65
Exc.= 1.9 Emb.= 224.1
23.5
25.93
589+00
C=0 F=56
Exc.= 0.0 Emb.= 211.1
24.0
25.88
588+00
C=0 F=58
Exc.= 3.7 Emb.= 124.1
25.5
26.35
587+00
C=2 F=9
Exc.= 140.7 Emb.= 16.7
27.3
26.82
586+00
C=74 F=0
Exc.= 340.7 Emb.= 0.0
27.7
27.29
585+00
C=110 F=0
Exc.= 353.7 Emb.= 72.2
25.9
27.76
584+00
C=81 F=39
Exc.= 150.0 Emb.= 275.9
24.6
28.23
583+00
C=0 F=110
Exc.= 3.7 Emb.= 431.5
28.2
28.70
582+00
C=2 F=123
Exc.= 385.2 Emb.= 344.4
31.8
29.17
581+00
C=206 F=63
Exc.= 1029.6 cu. yd. Emb.= 159.3 cu. yd.
59.4
48.76
596+50
C=338 F=0
Exc.= 426.9 Emb.= 0.0
48.8
47.10
596+00
C=123 F=0
Exc.= 113.9 Emb.= 81.5
41.9
45.26
C=0 F=88
Exc.= 0.0 Emb.= 415.7
595+50
43.41
33.8
C=0 F=361
595+00
Exc.= 11.1 Emb.= 885.2
39.0
39.72
594+00
C=6 F=117
Exc.= 27.8 Emb.= 248.5
35.2
36.02
593+00
C=9 F=28
Exc.= 53.7 Emb.= 79.6
31.9
32.33
592+00
C=20 F=15
Exc.= 37.0 Emb.= 192.6
27.0
29.15
591+00
C=0 F=89
Exc.= 1.9 cu. yd. Emb.= 285.2 cu. yd.

4258.54

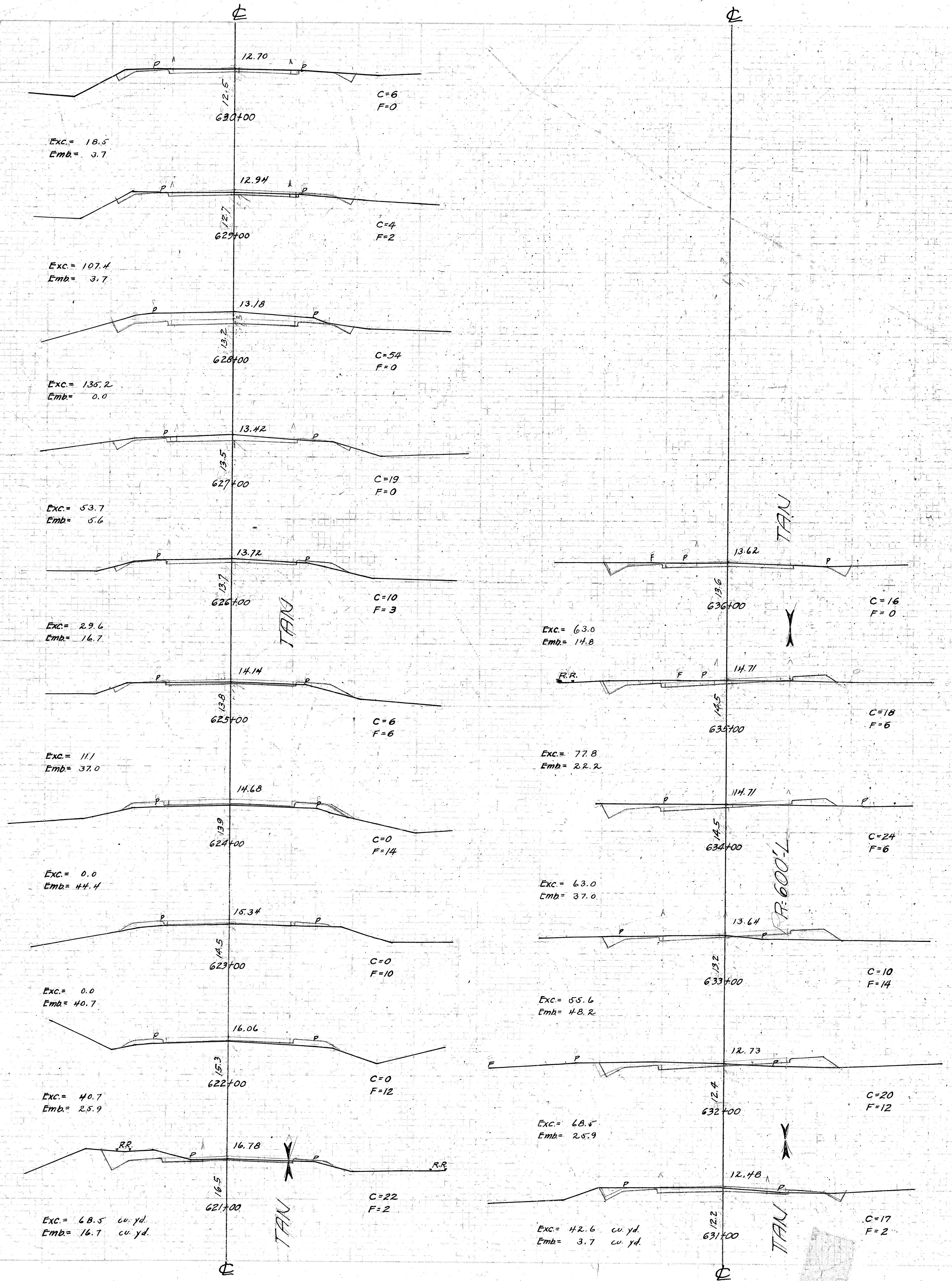
(18)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	E-12-A	1932	55	56

℄
47.5
49.81
C=3
F=73
600+00
Exc.= 2.8
Emb.= 225.0
45.8
50.79
C=0
F=170
599+50
Exc.= 0.0
Emb.= 309.3
46.3
51.40
C=0
F= 164
599+00
Exc.= 7.4
Emb.= 233.3
48.3
51.62
C=8
F=88
598+50
Exc.= 265.7
Emb.= 114.8
60.7
51.47
C= 279
F= 36
Exc.= 531.5
Emb.= 102.8
598+00
50.1
50.95
C= 295
F= 75
597+50
Exc.= 346.3
Emb.= 102.8
47.9
50.05
C= 79
F= 36
597+00
Exc.= 386.1 cu. yd.
Emb.= 33.3 cu. yd.
℄
℄
35.9
40.45
604+00
Exc.= 37.0
Emb.= 609.3
C=0
F=259
39.9
42.79
C=20
F= 70
603+00
Exc.= 137.0
Emb.= 231.5
42.7
43.96
C=128
F=55
602+50
Exc.= 519.4
Emb.= 51.0
54.4
45.13
C= 433
F=0
602+00
Exc.= 801.9
Emb.= 0.0
55.9
46.30
601+50
C=433
F=0
Exc.= 634.3
Emb.= 0.0
53.8
47.47
C=252
F=0
Exc.= 290.7
Emb.= 13.9
601+00
48.5
48.64
C=62
F=18
600+50
Exc.= 60.2 cu. yd.
Emb.= 81.5 cu. yd.
℄
℄
20.6
20.66
C=8
F=6
612+50
Exc.= 68.5
Emb.= 5.6
22.7
21.73
C=66
F=0
612+00
Exc.= 537.0
Emb.= 0.0
28.2
24.07
C=224
F=0
611+00
Exc.= 1144.4
Emb.= 0.0
32.8
26.41
C=394
F=0
610+00
Exc.= 1174.1
Emb.= 0.0
34.0
28.75
609+00
C=240
F=0
Exc.= 637.0
Emb.= 0.0
33.1
31.09
C=104
F=0
608+00
Exc.= 192.6
Emb.= 37.0
32.4
33.43
C=0
F=20
607+00
Exc.= 0.0
Emb.= 377.8
35.77
32.1
606+00
C=0
F=184
Exc.= 0.0
Emb.= 822.2
38.11
33.0
605+00
Exc.= 0.0 cu. yd.
Emb.= 961.1 cu. yd.
C=0
F=260
℄
℄
17.4
17.50
C=15
F=7
620+00
Exc.= 27.8
Emb.= 37.0
17.4
18.04
C=0
F=13
619+00
Exc.= 3.7
Emb.= 46.3
17.4
18.22
C=2
F=12
618+00
Exc.= 2.7
Emb.= 16.4
Exception No 4
$615+75^{1} - 617+26^{0}$
Kapaa River Bridge
Exc.= 5.2
Emb.= 11.7
Equation $615+27^{9} = 615+33^{6}$
17.7
18.22
C=4
F=9
615+00
Exc.= 5.6
Emb.= 13.9
17.8
18.32
C=2
F=6
614+50
Exc.= 2.8
Emb.= 17.6
17.9
18.61
C=1
F=13
614+00
Exc.= 2.8
Emb.= 15.7
18.4
19.10
C=2
F=4
613+50
Exc.= 4.6
Emb.= 11.1
19.0
19.78
C=3
F=8
613+00
Exc.= 10.2 cu. yd.
Emb.= 13.0 cu. yd.
℄

4258.55

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	E-12-A	1932	56	56



℄
12.70
P
P
12.5
630+00
C=6
F=0
Exc.= 18.5
Emb.= 3.7
12.94
P
P
12.7
629+00
C=4
F=2
Exc.= 107.4
Emb.= 3.7
13.18
P
P
13.2
628+00
C=54
F=0
Exc.= 135.2
Emb.= 0.0
13.42
P
P
13.5
627+00
C=19
F=0
Exc.= 53.7
Emb.= 5.6
13.72
P
P
13.7
626+00
C=10
F=3
TAN
Exc.= 29.6
Emb.= 16.7
14.14
P
P
13.8
625+00
C=6
F=6
Exc.= 11.1
Emb.= 37.0
14.68
P
P
13.9
624+00
C=0
F=14
Exc.= 0.0
Emb.= 44.4
15.34
P
P
14.5
623+00
C=0
F=10
Exc.= 0.0
Emb.= 40.7
16.06
P
P
15.3
622+00
C=0
F=12
Exc.= 40.7
Emb.= 25.9
R.R.
P
16.78
P
R.R.
16.5
621+00
C=22
F=2
TAN
Exc.= 68.5 cu. yd.
Emb.= 16.7 cu. yd.
℄
℄
TAN
13.62
F
P
P
13.6
636+00
C=16
F=0
Exc.= 63.0
Emb.= 14.8
R.R.
F
P
14.71
14.5
635+00
C=18
F=6
Exc.= 77.8
Emb.= 22.2
14.71
P
P
14.5
634+00
C=24
F=6
R: 600' L
Exc.= 63.0
Emb.= 37.0
13.64
P
P
13.2
633+00
C=10
F=14
Exc.= 55.6
Emb.= 48.2
12.73
F
P
P
12.4
632+00
C=20
F=12
Exc.= 68.5
Emb.= 25.9
12.48
P
P
12.2
631+00
C=17
F=2
TAN
Exc.= 42.6 cu. yd.
Emb.= 3.7 cu. yd.
℄

4258.56

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	E-12A	1932	56A	56

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

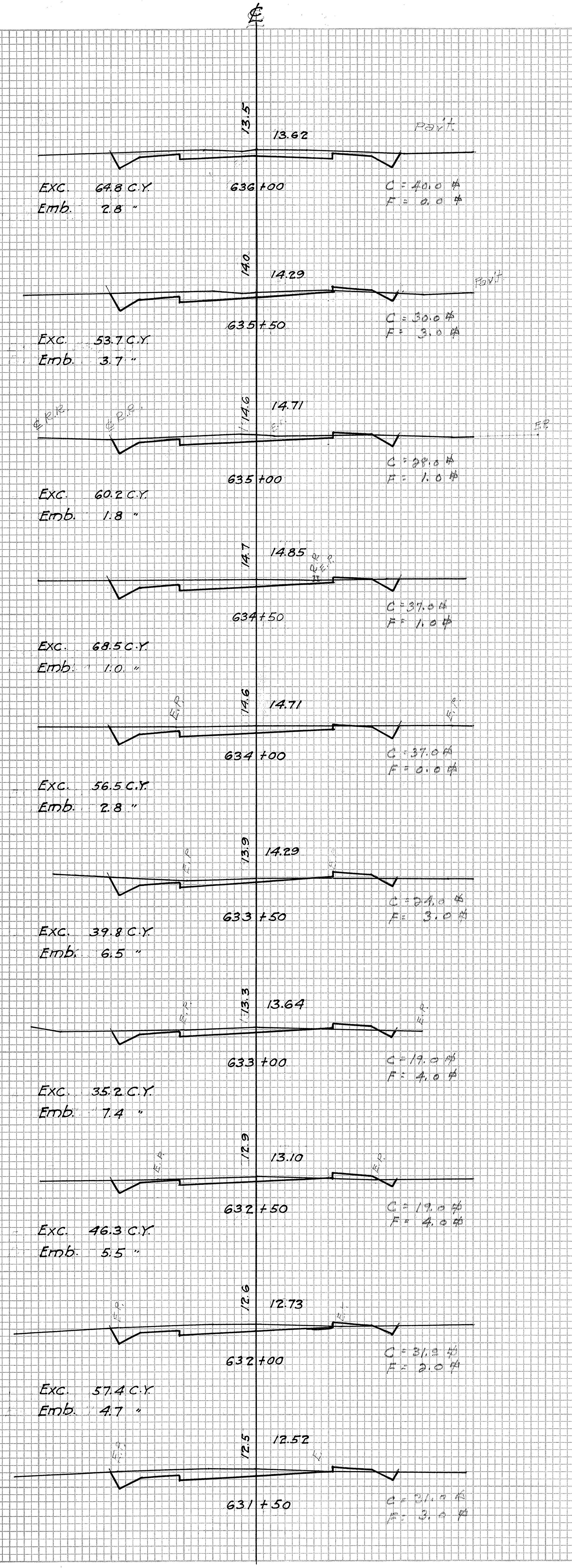

℄
13.5
13.62
Pav't.
636+00
Exc. 64.8 C.Y.
Emb. 2.8 "
C = 40.0 #
F = 0.0 #
14.0
14.29
Pav't
635+50
Exc. 53.7 C.Y.
Emb. 3.7 "
C = 30.0 #
F = 3.0 #
14.6
14.71
℄ R.R.
℄ R.R.
E.P.
E.P.
635+00
Exc. 60.2 C.Y.
Emb. 1.8 "
C = 28.0 #
F = 1.0 #
14.7
14.85
℄ E.P.
634+50
Exc. 68.5 C.Y.
Emb. 1.0 "
C = 37.0 #
F = 1.0 #
14.6
14.71
E.P.
E.P.
634+00
Exc. 56.5 C.Y.
Emb. 2.8 "
C = 37.0 #
F = 0.0 #
13.9
14.29
E.P.
633+50
Exc. 39.8 C.Y.
Emb. 6.5 "
C = 24.0 #
F = 3.0 #
13.3
13.64
E.P.
E.P.
633+00
Exc. 35.2 C.Y.
Emb. 7.4 "
C = 19.0 #
F = 4.0 #
12.9
13.10
E.P.
E.P.
632+50
Exc. 46.3 C.Y.
Emb. 5.5 "
C = 19.0 #
F = 4.0 #
12.6
12.73
E.P.
E.P.
632+00
Exc. 57.4 C.Y.
Emb. 4.7 "
C = 31.9 #
F = 2.0 #
12.5
12.52
E.P.
E.P.
631+50
C = 31.0 #
F = 3.0 #

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

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