FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
Hawaii	Haw.	NRH-12-B	1939	46	75

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

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

℄

618.48
C. 32 C.Y.
F. 0 C.Y.
618.5
6+00
C. 8.2 C.Y.
F. 0 C.Y.

617.70
C. 4
F. 0
616.5
5+00
C. 15 C.Y.
F. 20 C.Y.

616.41
C. 2
F. 22
Exist. Culvert
611.8
24" Conc. Pipe Sta. 4+67
612.2
615.5
4+50
C. 111 C.Y.
F. 20 C.Y.

615.72
C. 118
F. 0
613.5
4+00
C. 430 C.Y.
F. 0 C.Y.

616.34
C. 114
F. 0
613.5
3+00
C. 333 C.Y.
F. 0 C.Y.

612.96
C. 66
F. 0
613.7
2+00
C. 256 C.Y.
F. 0 C.Y.

611.53
C. 172
F. 2
612.5
1+00
C. 181 C.Y.
F. 4 C.Y.

610.2
C. 26
F. 2
610.2
0+00

℄

624.48
C. 0
F. 592
609.2
10+35
C. 0 C.Y.
A. 87 C.Y.

624.41
C. 0
F. 388
615.6
10+30
C. 0 C.Y.
F. 338 C.Y.

624.00
C. 0
F. 452
616.7
10+00
C. 0 C.Y.
F. 361 C.Y.

623.31
C. 0
F. 198
619.8
9+50
C. 2 C.Y.
F. 143 C.Y.

622.62
C. 8
F. 16
621.9
9+00
C. 2 C.Y.
F. 70 C.Y.

621.93
C. 0
F. 60
619.9
8+50
C. 0 C.Y.
F. 282 C.Y.

621.24
C. 0
F. 242
30" Con. Pipe Sta. 7+80
Exist. Culvert
612.8
614.6
613.4
8+00
C. 18 C.Y.
F. 459 C.Y.

619.86
C. 10
F. 4
619.2
7+00
C. 78 C.Y.
F. 7 C.Y.

℄

628.59
C. 2
F. 14
627.6
13+00
C. 11 C.Y.
F. 43 C.Y.

626.88
C. 4
F. 12
625.1
12+00
C. 53 C.Y.
F. 16 C.Y.

626.02
C. 44
F. 2
624.2
11+40
C. 8 C.Y.
F. 19 C.Y.

625.87
C. 0
F. 106
11+30.5

619.4
11+20

BRIDGE

623.1
11+10

625.50
C. 0
F. 24
11+07.7

625.38
C. 6
F. 66
Waste Ditch
623.2
11+00
C. 1 C.Y.
F. 49 C.Y.
Top of Bank of Ditch

625.34
C. 0
F. 200
Waste Ditch
620.2
10+90
C. 0 C.Y.
F. 796 C.Y.

℄

PLATE 3—CROSS SECTIONS P. R. & R. S. STANDARD
KEUFFEL & ESSER CO., NEW YORK.

4275.4

4298.46

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
Hawaii	Haw.	NRH-2-B	1933	47	75

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

639.34 — 638.6 — C 0 ℄ F 22 ℄ — 19 + 70

C, 70 C.Y.
F, 27 C.Y.

638.22 — 639.4 — C 54 F 0 — 19 + 00

C 207 C.Y.
F 0 C.Y.

636.62 — 637.8 — C 58 F 0 — 18 + 00

C 185 C.Y.
F 0 C.Y.

R=2500 ft.

635.01 — 636.2 — C 42 F 0 — 17 + 00

C 156 C.Y.
F 4 C.Y.

633.40 — 633.4 — C 42 F 2 — 16 + 00

C 178 C.Y.
F 4 C.Y.

631.80 — 633.2 — C 54 F 0 — 15 + 00

C 144 C.Y.
F 0 C.Y.

630.20 — 630.2 — C 24 F 0 — 14 + 00

℄

646.24 — 647.1 — C 64 ℄ F 0 ℄ — 24 + 00

C, 269 C.Y.
F, 0 C.Y.

644.64 — 645.2 — C, 76 F, 0 — 23 + 00

C, 272 C.Y.
F, 0 C.Y.

643.04 — 644.2 — C 72 F 0 — 22 + 00

C 141 C.Y.
F 67 C.Y.

641.43 — 642.3 — C 4 F 96 — 21 + 00

C. 20 C.Y.
F. 95 C.Y.

640.92 — 636.2 — C 0 F 126 — 20 + 68.25

C. = 0 C.Y.
F. = 98 C.Y.

640.66 — 631.5 — C 0 ℄ F 206 ℄ } Ahead — 20 + 32.25

BRIDGE

640.41 — 632.4 — Bridge between Sta. 20+36.42 and 20+32.25 — C = 0 C.Y. F = 111 C.Y. — 640.04 — 638.1 — C 0 F 380

C = 0 ℄ F = 174 ℄ — 20 + 36.42 — C. 0 C.Y. F. 174 C.Y. — 20 + 13.58

639.82 — 631.2 — C. 0 F. 310. — 20 + 00

C. 0 C.Y.
F. 184 C.Y.

℄

657.82 — 657.5 — C 14 ℄ F 2 ℄ — 29 + 00

C 70 C.Y.
F 4 C.Y.

655.20 — 654.8 — C 24 F 0 — 28 + 00

C. 28 C.Y.
F. 3 C.Y.

654.41 — 654.8 — C 26 F 6 — 27 + 70

C. 11 C.Y.
F. 4 C.Y.

653.89 — 653.4 — C 4 F 4 — 27 + 50

C. 39 C.Y.
F. 4 C.Y.

652.56 — 652.8 — C. 38 F 0 — 27 + 00

C. 111 C.Y.
F. 4 C.Y.

650.09 — 650.8 — C 22 F 2 — 26 + 00

C. 130 C.Y.
F. 4 C.Y.

647.90 — 648.3 — C 48 F 0 — 25 + 00

C. 207 C.Y.
F. 0 C.Y.

℄

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

4208.47

2.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
Hawaii	Haw.	NHI 2-B	1933	48	75

ORIGINAL SURVEY — SURVEYED, PLOTTED, TEMPLATE, CROSS SECTIONS, AREAS CHECKED — NOTE BOOK — NO. — BY — DATE

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

C 578 C.Y.
F 0 C.Y.

679.6
676.18
C 164 ft²
F 0 ft²
36 + 00

C 426 C.Y.
F 0 C.Y.

676.4
673.54
C 148
F 0
35 + 00

C 189 C.Y.
F 0 C.Y.

672.4
670.92
C 82
F 0
34 + 00

C 82 C.Y.
F 0 C.Y.

667.8
668.30
C 20
F 0
33 + 00

C 82 C.Y.
F 0 C.Y.

665.4
665.68
C 24
F 0
32 + 00

C 63 C.Y.
F 4 C.Y.

662.4
663.06
C 10
F 2
31 + 00

C 74 C.Y.
F 4 C.Y.

660.4
660.44
C 30
F 0
30 + 00

C 733 C.Y.
F 0 C.Y.

695.4
691.80
C 148 ft²
F 0 ft²
42 + 00

C 674 C.Y.
F 0 C.Y.

695.6
689.26
C 248
F 0
41 + 00

C 356 C.Y.
F 0 C.Y.

689.0
686.64
C 116
F 0
40 + 00

C 307 C.Y.
F 0 C.Y.

685.8
684.01
C 76
F 0
39 + 00

C 109 C.Y.
F 30 C.Y.

683.6
681.40
C 90
F 0
38 + 00

C 26 C.Y.
F 106 C.Y.

679.4
680.09
C 28
F 32
37 + 50

C 0 C.Y.
F 95 C.Y.

678.78
675.2
C 0
F 82
37 + 00

C 228 C.Y.
F 172 C.Y.

678.12
30" Conc. Pipe
672.2
673.4
674.2
C 0
F 124
36 + 75

C 567 C.Y.
F 0 C.Y.

695.4
693.28
C 148 ft²
F 0 ft²
49 + 00

R=1500'
693.2
695.40
C 158
F 0
48 + 00

C 574 C.Y.
F 0 C.Y.

700.2
696.81
C 132
F 0
47 + 00

C 618 C.Y.
F 0 C.Y.

701.8
697.42
C 182
F 0
46 + 00

C 300 C.Y.
F 0 C.Y.

700.2
697.22
C 142
F 0
45 + 00

C 285 C.Y.
F 15 C.Y.

696.2
696.21
C 12
F 8
44 + 00

C 22 C.Y.
F 382 C.Y.

694.40
686.4
30" Conc. Pipe
682.0
687.0
C 0
F 306
43 + 00

C 274 C.Y.
F 567 C.Y.

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

4298.48

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
Hawaii		Haw. WOH2-B	1933	49	75

℄

684.40
573.2
C 0
F 420
53 + 00

C 0 C.Y.
F 457 C.Y.

685.51
683.2
52 + 50
C 0
F 74

C 0 C.Y.
F 149 C.Y.

686.67
684.2
52 + 00
C 0
F 80

688.09
673.0
674.5
676.0
36" Conc. Pipe
C 0 C.Y.
F 760 C.Y.
C 0
F 452
51 + 34

C 0 C.Y.
F 598 C.Y.

688.91
678.8
51 + 00
C 0
F 408

C 41 C.Y.
F 378 C.Y.

690.2
689.85
50 + 50
C 44
F 0

C 144 C.Y.
F 0 C.Y.

693.3
691.26
50 + 00
C 112
F 0

C 482 C.Y.
F 0 C.Y.

℄

℄

687.2
677.74
C 414
F 0
56 + 00

C 633 C.Y.
F 0 C.Y.

685.4
678.55
C 270
F 0
55 + 50

C 250 C.Y.
F 61 C.Y.

679.96
677.1
55 + 00
C 0
F 66

C 0 C.Y.
F 186 C.Y.

680.68
670.0
674.0
24" Conc. Pipe
673.2
C 0
F 268
54 + 70

C 0 C.Y.
F 306 C.Y.

681.68
678.2
54 + 22
C 0
F 76

C 0 C.Y.
F 62 C.Y.

684.18
679.2
54 + 00
C 0
F 76

C 0 C.Y.
F 781 C.Y.

683.76
671.4
Drain
53 + 29
C 0
F 518

C 0 C.Y.
F 504 C.Y.

℄

℄

666.63
645.2
653.83
Area Ahead C 0 F 1298
Area Back C 0 F 574
61 + 00.91
667.14
644.2
C. 0 C.Y.
F. 203 C.Y.
℄ of Drain
Area Ahead C 0 F 616
Area Back C 0 F 1346
60 + 78.58

C 0 C.Y.
F 2526 C.Y.

668.86
658.4
C 0
F 412
60 + 00

C 459 C.Y.
F 768 C.Y.

677.2
671.69
C 248
F 0
59 + 00

C 620 C.Y.
F 0 C.Y.

681.2
677.19
C 422
F 0
58 + 50

C 935 C.Y.
F 0 C.Y.

686.5
673.30
C 588
F 0
58 + 00

C 2104 C.Y.
F 0 C.Y.

687.9
675.52
C 548
F 0
57 + 00

C 1782 C.Y.
F 0 C.Y.

℄

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

FINAL SURVEY — SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED — BY — DATE

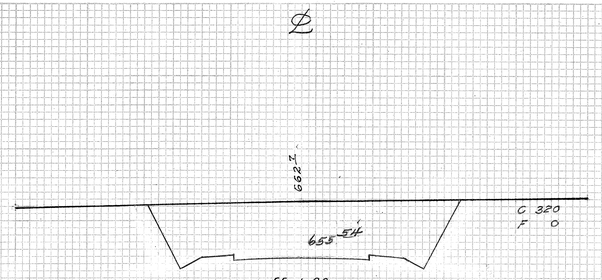
PLATE 3 — CROSS SECTION U. P. R. R. & H. E. STANDARD
KEUFFEL & ESSER CO., NEW YORK.

4298.49

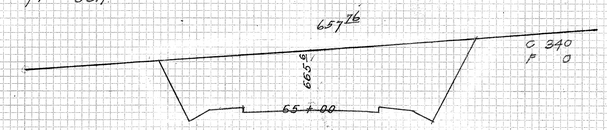
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
Hawaii	Haw.	NRH-2-B	1933	50	75

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

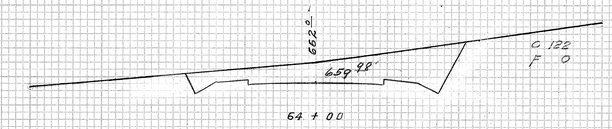
FINAL SURVEY — SURVEYED, PLOTTED, TRACED, NOTE BOOK, NO., AREAS, AREAS CHECKED, BY, DATE



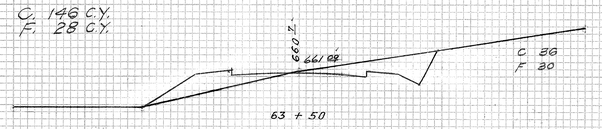
C. 1222 C.Y.
F. 0 C.Y.



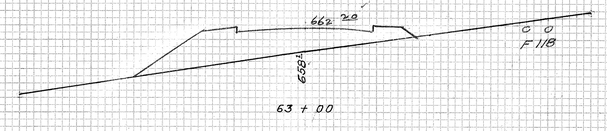
C. 856 C.Y.
F. 0 C.Y.



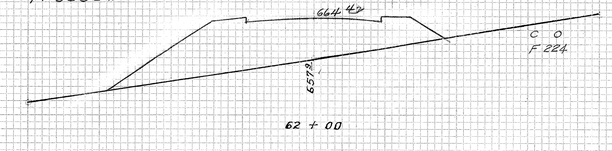
C. 146 C.Y.
F. 28 C.Y.



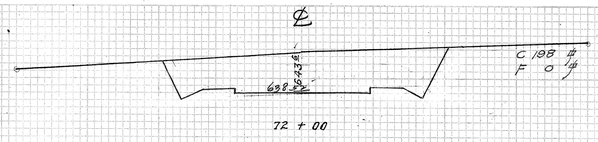
C. 33 C.Y.
F. 137 C.Y.



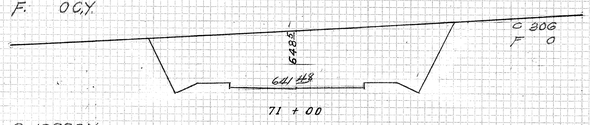
C. 0 C.Y.
F. 633 C.Y.



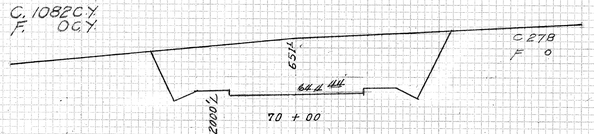
C. 0 C.Y.
F. 2807 C.Y.



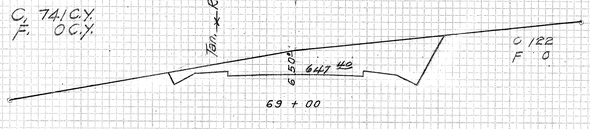
C. 933 C.Y.
F. 0 C.Y.



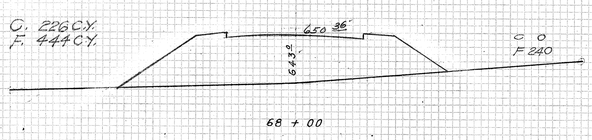
C. 1082 C.Y.
F. 0 C.Y.



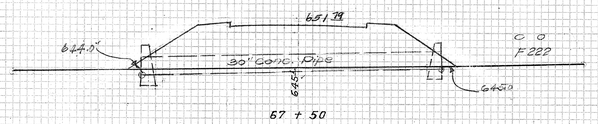
C. 741 C.Y.
F. 0 C.Y.



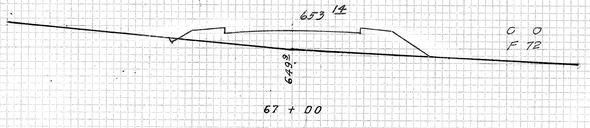
C. 226 C.Y.
F. 444 C.Y.



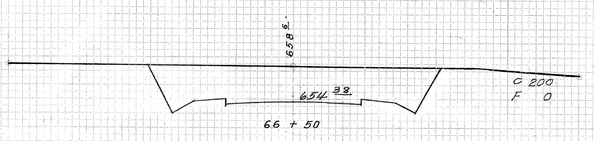
C. 0 C.Y.
F. 428 C.Y.



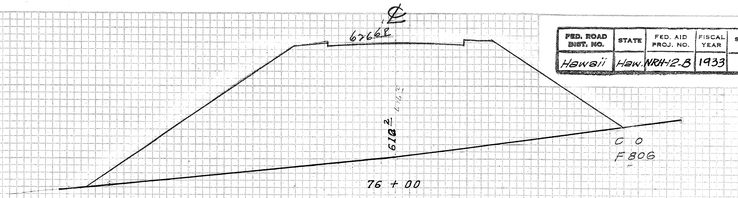
C. 0 C.Y.
F. 272 C.Y.



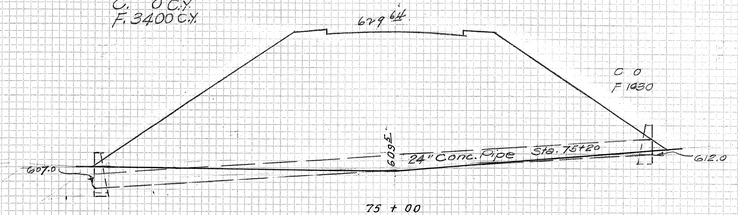
C. 185 C.Y.
F. 66 C.Y.



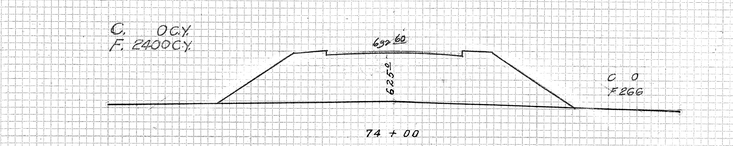
C. 482 C.Y.
F. 0 C.Y.



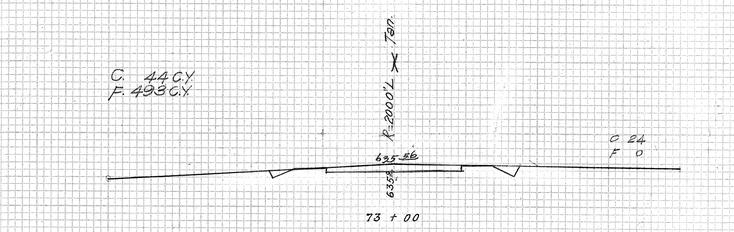
C. 0 C.Y.
F. 3400 C.Y.



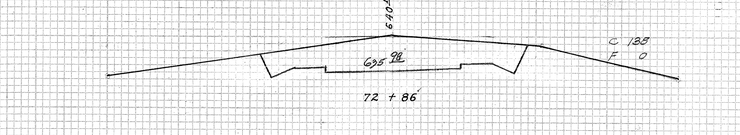
C. 0 C.Y.
F. 2400 C.Y.



C. 44 C.Y.
F. 498 C.Y.

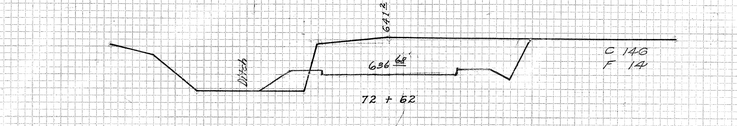


C. 42 C.Y.
F. 0 C.Y.



C. 29 C.Y.
F. 3 C.Y.

C. 57 C.Y.
F. 11 C.Y.



C. 394 C.Y.
F. 16 C.Y.

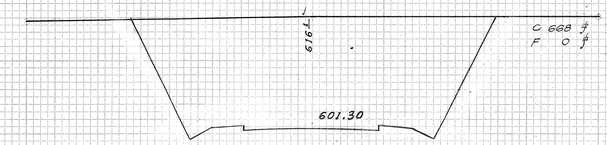
PLATE 3 — CROSS SECTION O. P. R. & R. E. STANDARD
KEUFFEL & ESSER CO., NEW YORK.

4298.50

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
Hawaii	HAW.	NRHP-B	1933	51	75

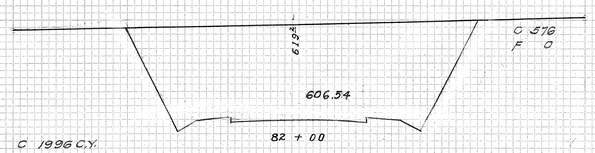
ORIGINAL SURVEY — SURVEYED, PLOTTED, TEMPLATE, AREAS, AREAS CHECKED, NOTE BOOK, NO., BY, DATE

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



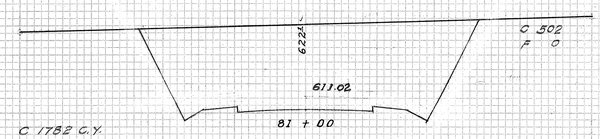
83 + 00

C 2304 C.Y.
F 0 C.Y.



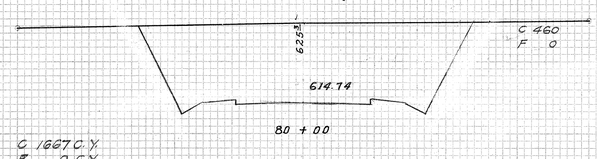
82 + 00

C 1996 C.Y.
F 0 C.Y.



81 + 00

C 1782 C.Y.
F 0 C.Y.

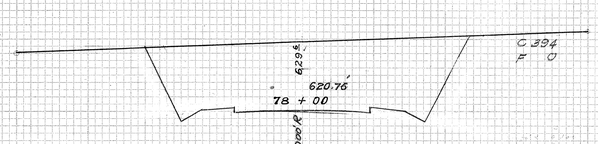


80 + 00

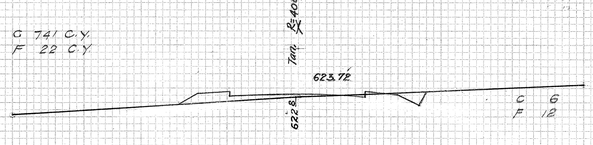
C 1667 C.Y.
F 0 C.Y.

79 + 00

C 1544 C.Y.
F 0 C.Y.



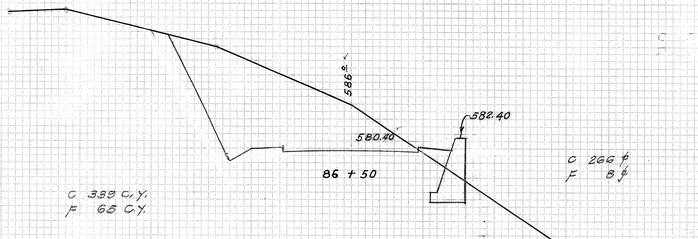
78 + 00



77 + 00

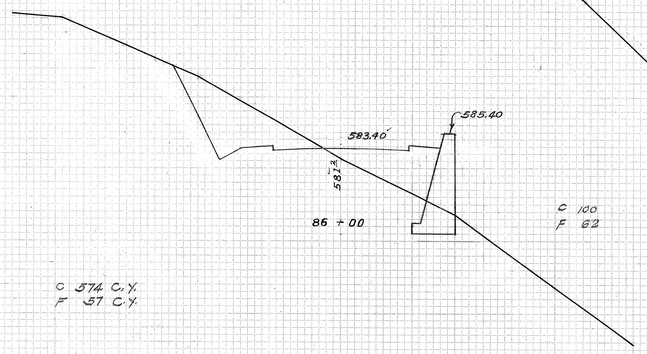
C 741 C.Y.
F 22 C.Y.

C 11 C.Y.
F 1515 C.Y.



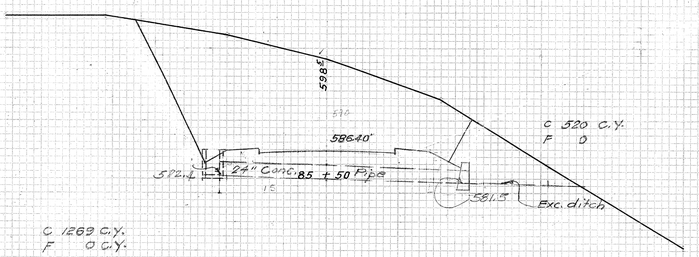
86 + 50

C 339 C.Y.
F 65 C.Y.

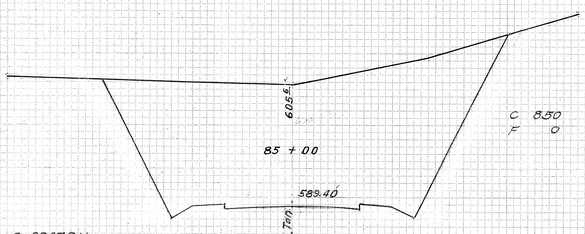


86 + 00

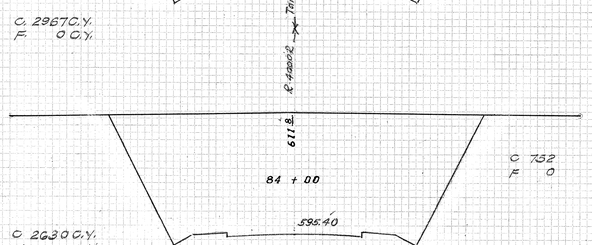
C 374 C.Y.
F 57 C.Y.



C 1269 C.Y.
F 0 C.Y.



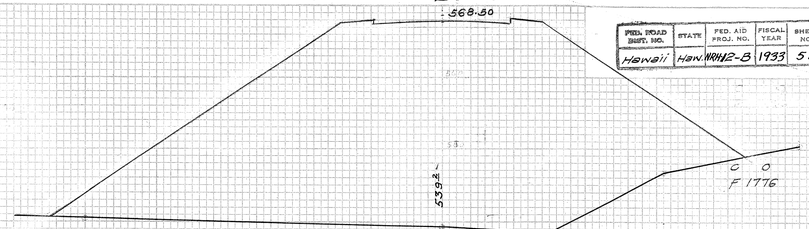
85 + 00



84 + 00

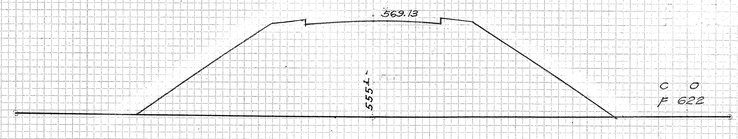
C 2967 C.Y.
F 0 C.Y.

C 2630 C.Y.
F 0 C.Y.



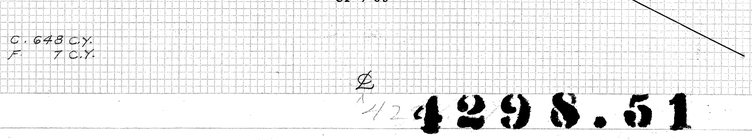
88 + 60

C 0 C.Y.
F 577 C.Y.



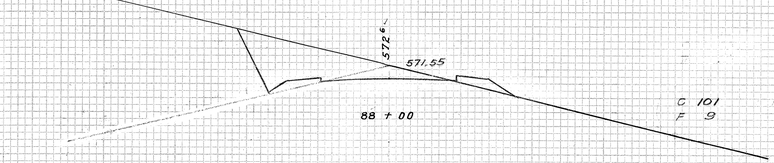
88 + 47

C 0 C.Y.
F 319 C.Y.



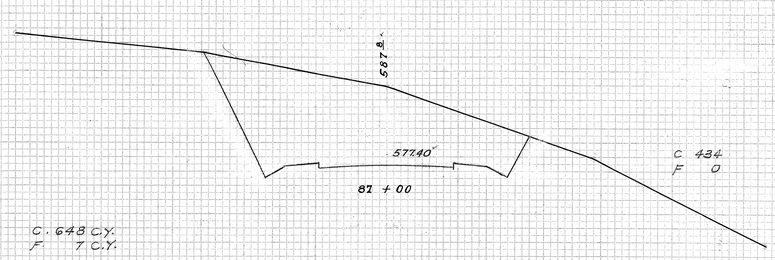
88 + 25

C 47 C.Y.
F 78 C.Y.



88 + 00

C 391 C.Y.
F 17 C.Y.



87 + 00

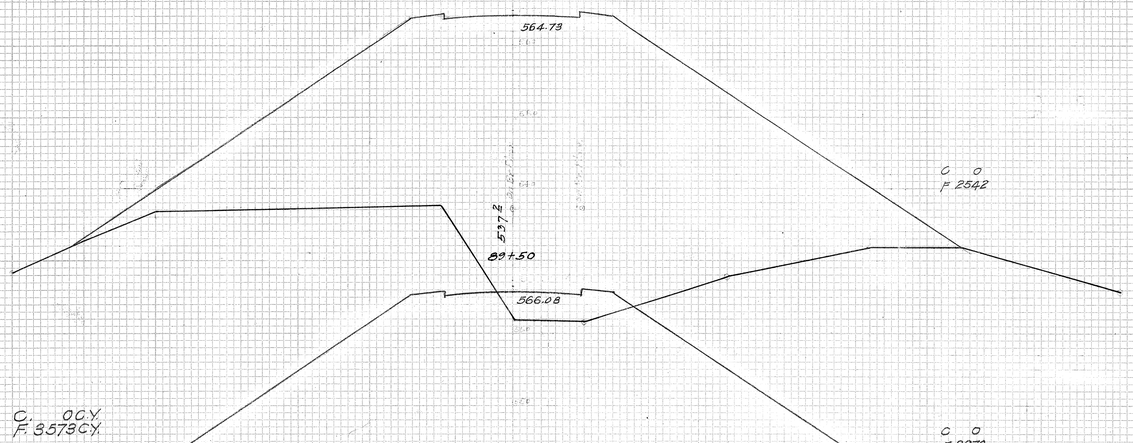
C 648 C.Y.
F 7 C.Y.

PLATE 2—CROSS SECTION C. P. R. & R. R. E. STANDARD
KEUFFEL & ESSER CO., NEW YORK.

1/2

4298.51

FEDERAL AID PROJ. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	Hawaii	HBW-NRH 2-B	1933	52	75

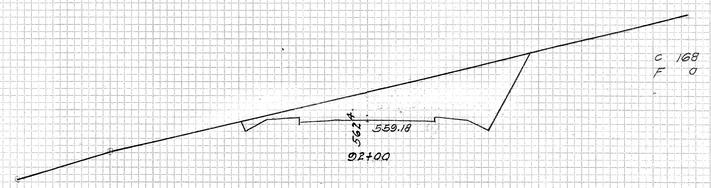


C. 0 C.Y.
F. 3573 C.Y.

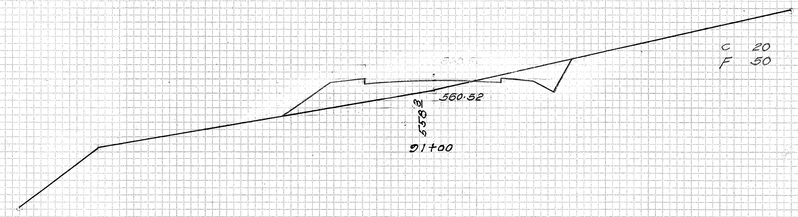
C. 0 C.Y.
F. 1624 C.Y.

C. 0 C.Y.
F. 2187 C.Y.

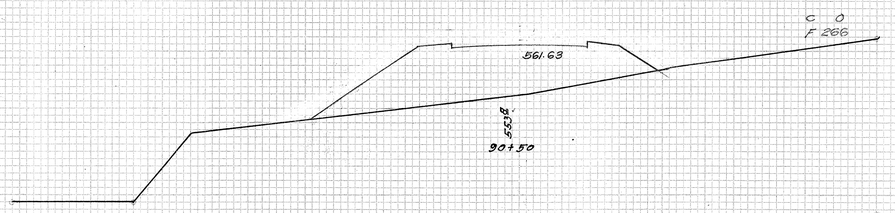
C. 0 C.Y.
F. 1098 C.Y.



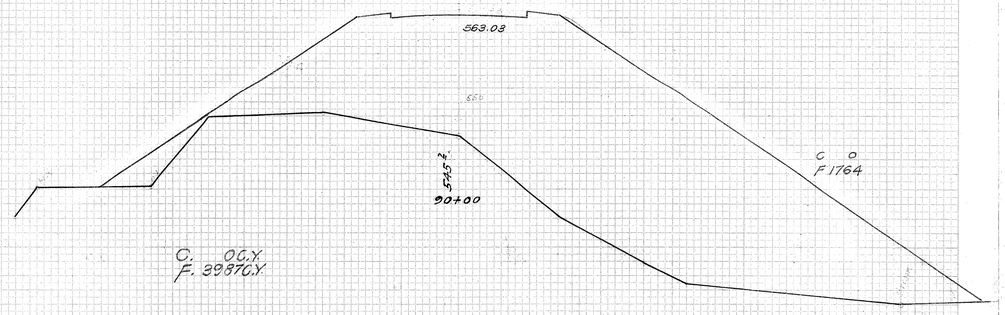
C. 348 C.Y.
F. 93 C.Y.



C. 18 C.Y.
F. 293 C.Y.



C. 0 C.Y.
F. 1880 C.Y.

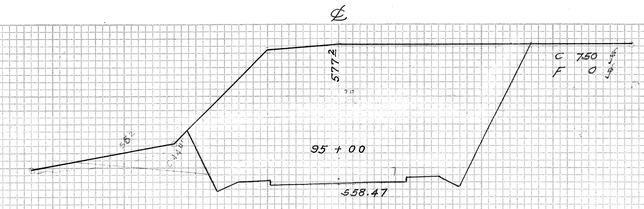


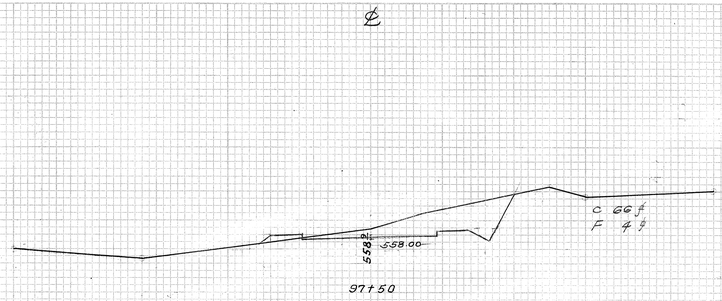
C. 0 C.Y.
F. 3987 C.Y.

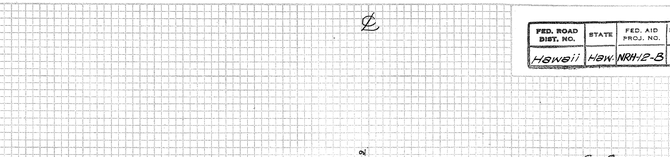
PLATE 3—CROSS SECTION O. P. R. & R. E. STANDARD
KEUFFEL & ESSER CO., NEW YORK.

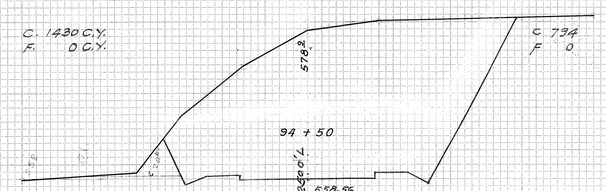
4298.52

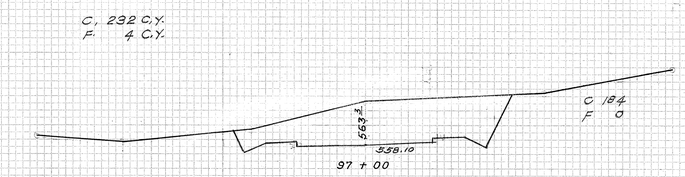
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
H&W811	H&W	NRH-2-B	1933	53	75

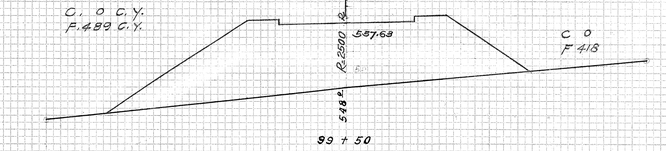


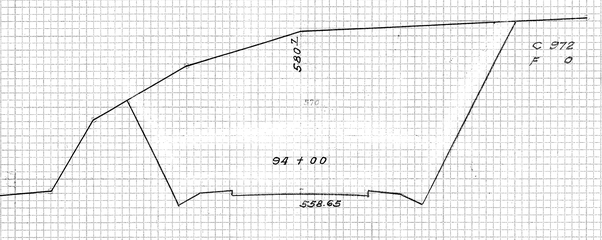


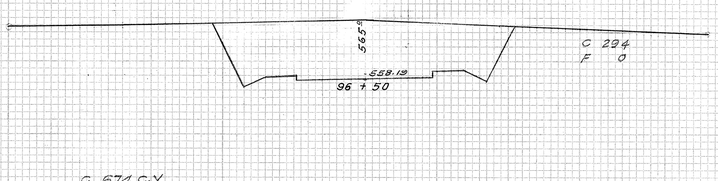


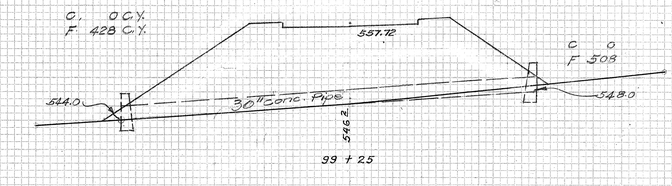


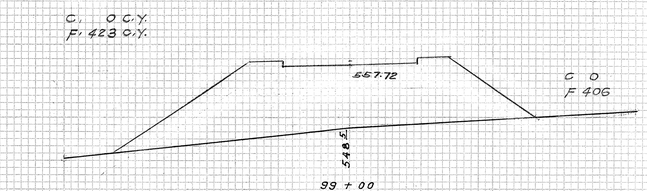


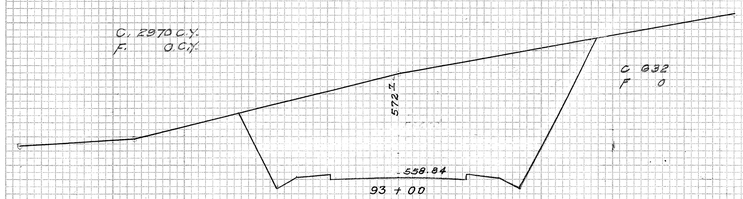


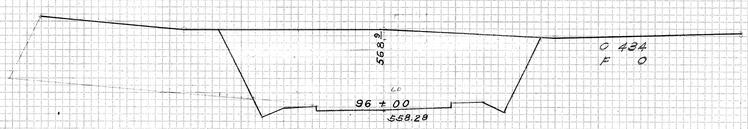


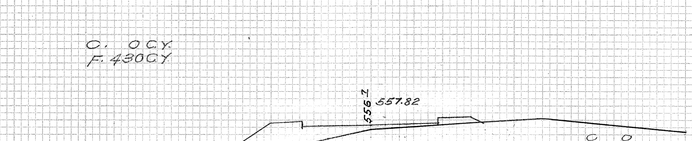


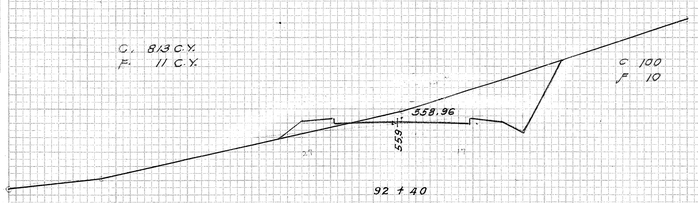


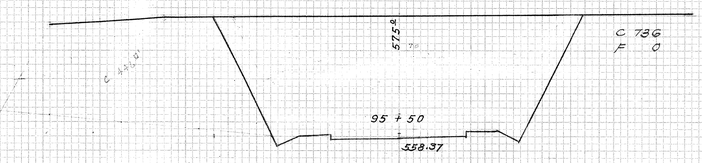












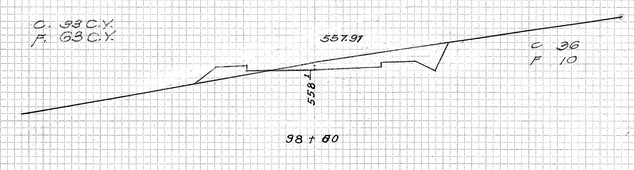


PLATE 3 — CROSS SECTION C. P. R. & R. E. STANDARD
KEUFFEL & ESSER CO., NEW YORK.

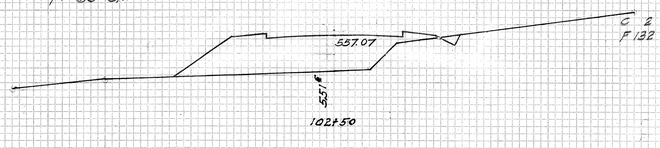
4298.53

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
Hawaii	Haw.	NRH-12-B	1933	54	75

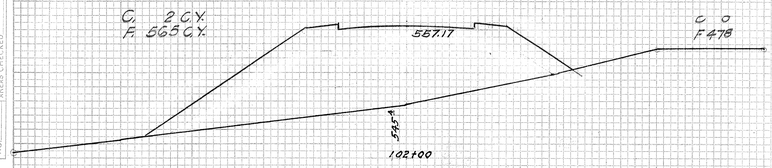
FINAL SURVEY — SURVEYED, PLOTTED, TEMPLATE, AREAS CHECKED, DATE, BY, NOTE BOOK, PAGES, NO.

ORIGINAL SURVEY — SURVEYED, PLOTTED, TEMPLATE, AREAS CHECKED, NOTE BOOK, NO.

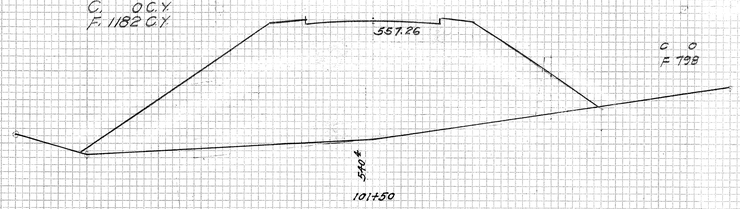
C. 16 C.Y.
F. 63 C.Y.



C. 2 C.Y.
F. 565 C.Y.

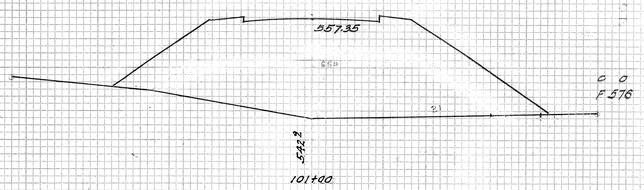


C. 0 C.Y.
F. 1182 C.Y.

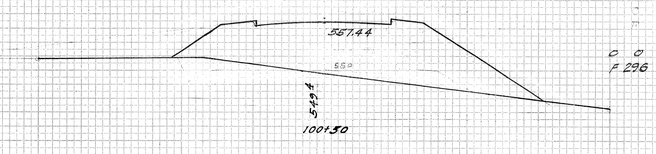


C. 0 C.Y.
F. 1272 C.Y.

30" Conc. Pipe Culvert at Sta. 101+28
2 C.H.W.

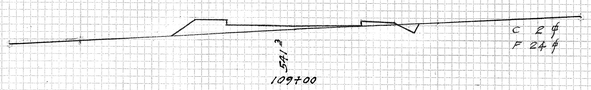


C. 0 C.Y.
F. 807 C.Y.



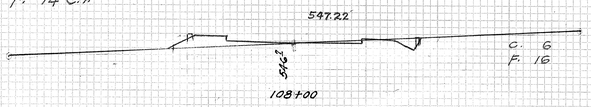
C. 0 C.Y.
F. 376 C.Y.

542.62'

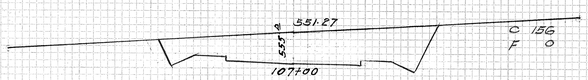


C. 15 C.Y.
F. 74 C.Y.

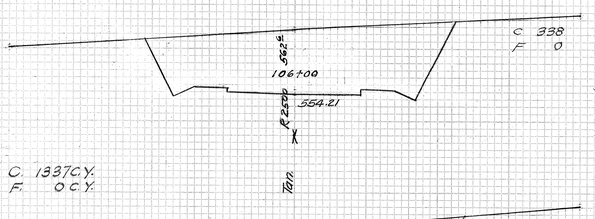
547.22



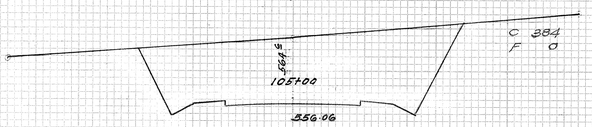
C. 300 C.Y.
F. 30 C.Y.



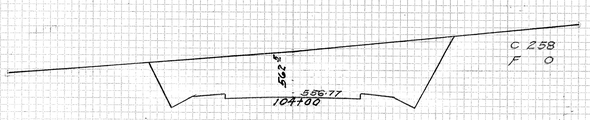
C. 915 C.Y.
F. 0 C.Y.



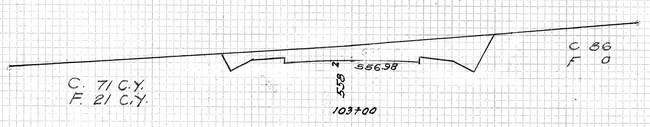
C. 1337 C.Y.
F. 0 C.Y.



C. 1189 C.Y.
F. 0 C.Y.

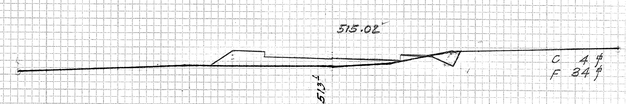


C. 637 C.Y.
F. 0 C.Y.



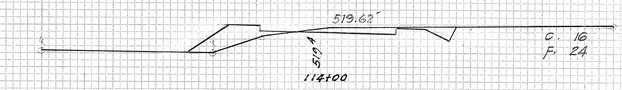
C. 71 C.Y.
F. 21 C.Y.

515.02'



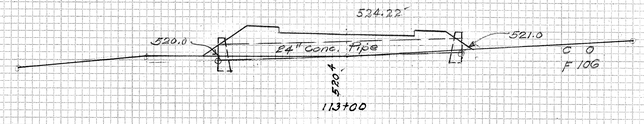
C. 37 C.Y.
F. 107 C.Y.

519.62'



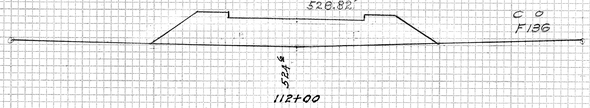
C. 30 C.Y.
F. 241 C.Y.

524.22'



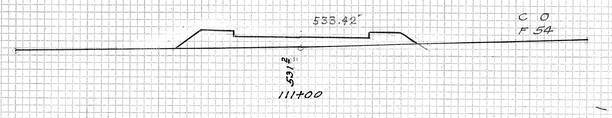
C. 0 C.Y.
F. 448 C.Y.

528.82'



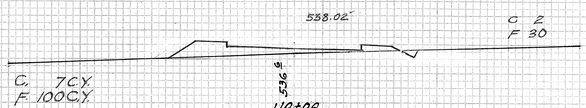
C. 0 C.Y.
F. 352 C.Y.

533.42'



C. 4 C.Y.
F. 156 C.Y.

558.02'



C. 7 C.Y.
F. 100 C.Y.

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

4298.54

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
Hawaii	HAW-NRH-2-B	1939	55	75	

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

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

℄

C 582
F 0
432.2
477.92
C. 1796 C.Y.
F. 0 C.Y.
122 + 00

C 988
F 0
432.2
493.92
121 + 00

C. 1167 C.Y.
F. 0 C.Y.

C 242
F 0
495.2
489.92
120 + 00

C. 652 C.Y.
F. 0 C.Y.

C 110
F 0
498.2
495.83
119 + 00

C. 311 C.Y.
F.

C 58
F 0
502.2
501.13
118 + 00

C. 122 C.Y.
F. 18 C.Y.

C 8
F 10
505.2
505.82
117 + 00

C. 18 C.Y.
F. 630 C.Y.

C 2
F 24
510.42
506.2
C. 11 C.Y.
F. 107 C.Y.
116 + 00

℄

C 0
F 580
452.68
439.2
C. 18 C.Y.
F. 1170 C.Y.
127 + 00

C 10
F 52
459.68
457.2
C. 693 C.Y.
F. 96 C.Y.
126 + 00

C 364
F 0
474.2
464.68
125 + 00

C. 1904 C.Y.
F. 0 C.Y.

C 664
F 0
488.2
124 + 00
Equation { 123 + 98.87 Ahead / 123 + 19 ±9 Back
Distance 123 to 124 = 20.68
470.68
R=2900'
471.92
488.2
C 710
F 0
℄ 110'
123 + 00
C. 526 C.Y.
F. 0 C.Y.
C. 2393 C.Y.
F. 0 C.Y.

℄

443.67
Area Ahead { C 0 / F 452
Area Back { C 0 / F 1446
420.5
C. 0 C.Y.
F. 819 C.Y.
129 + 66.5

443.64
C 0
F 1234
423.1
129 + 50
C. 0 C.Y.
F 2031 C.Y.

444.03
C 0
F 896
429.2
128 + 98.5

C. 0 C.Y.
F. 3057 C.Y.

447.85
C 0
F 780
431.1
128 + 00
C. 0 C.Y.
F. 1497 C.Y.

449.68
C 0
F 830
431.2
127 + 50
C. 0 C.Y.
F. 1306 C.Y.

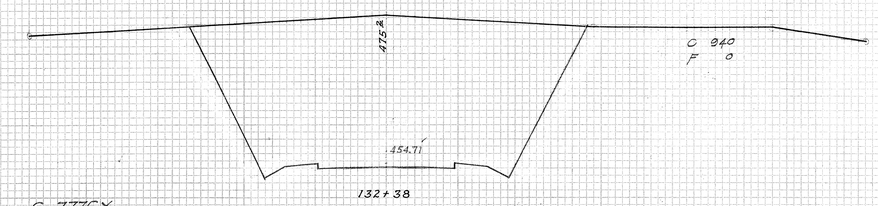
℄

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

1998.55

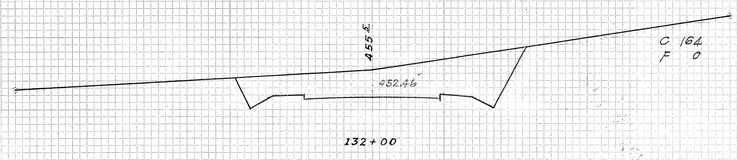
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
Hawaii	Haw	NRH-12-B	1933	56	75

℄



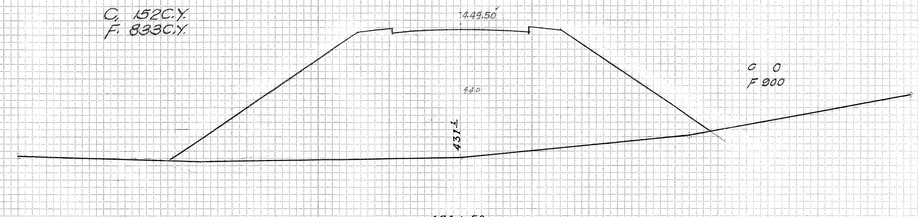
132 + 38

C. 777 C.Y.
F. 0 C.Y.



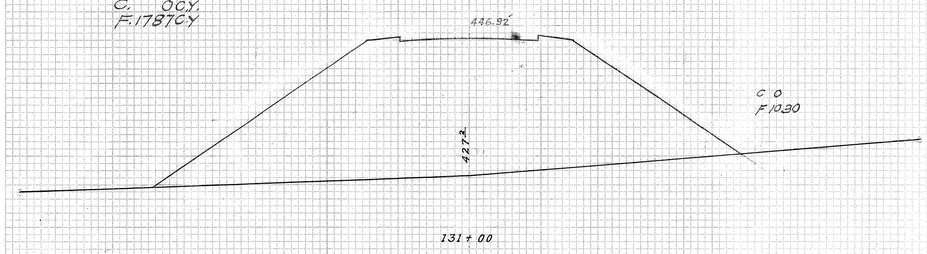
132 + 00

C. 152 C.Y.
F. 833 C.Y.



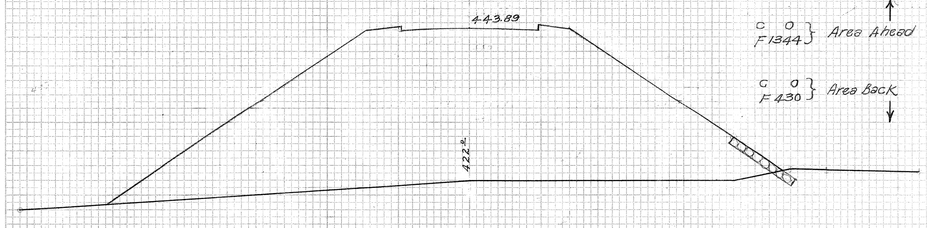
131 + 50

C. 0 C.Y.
F. 1787 C.Y.



131 + 00

C. 0 C.Y.
F. 4682 C.Y.

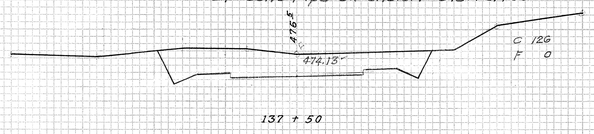


129 + 93.5

C. 0 C.Y.
F. 441 C.Y.

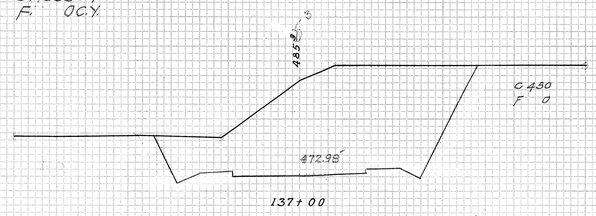
℄

24" Conc. Pipe extension Sta. 137+83



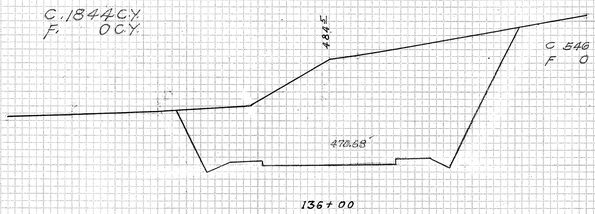
137 + 50

C. 533 C.Y.
F. 0 C.Y.



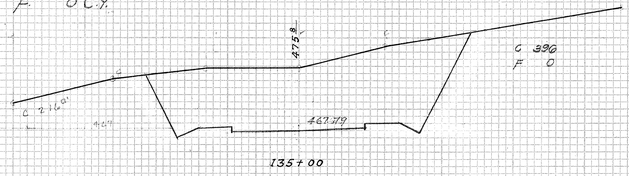
137 + 00

C. 1844 C.Y.
F. 0 C.Y.



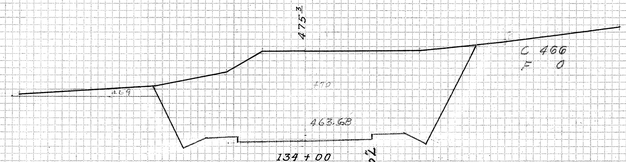
136 + 00

C. 1744 C.Y.
F. 0 C.Y.



135 + 00

C. 1596 C.Y.
F. 0 C.Y.



134 + 00

C. 2270 C.Y.
F. 0 C.Y.

133 + 00

℄

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

4298.56

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
Hawaii		HaW.NRH-12-B	1958	57	75

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

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

℄

C 88
F 32
139.45'
482.5'
142 + 00
Reverse Tan.
C 56
F 10
C. 267 C.Y.
F. 78 C.Y.
482.18'
480.2'
141 + 00

C. 71 C.Y.
F. 49 C.Y.
480.66'
479.5'
C 2
F 30
140 + 34.2

C. 40 C.Y.
F. 30 C.Y.
479.88'
479.9'
C 4
F 18
140 + 00

C. 596 C.Y.
F. 18 C.Y.
478.73'
479.8'
C 60
F 2
139 + 50

C. 82 C.Y.
F. 2 C.Y.
477.58'
477.5'
C 28
F 0
139 + 00

R=1500' ← Tan.

C. 122 C.Y.
F. 126 C.Y.
475.13'
474.4'
C 38
F 68
C. 152 C.Y.
F. 69 C.Y.
138 + 00

℄

C 112
F 28
498.28'
503.2'
148 + 00
C. 207 C.Y.
F. 370 C.Y.
495.98'
C 0
F 172
147 + 00
497.4'
C. 0 C.Y.
F. 368 C.Y.
496.83'
490.5
C 0
F 220
30" Conc. Pipe
488.5
488.2'
493.68'
146 + 50
C. 0 C.Y.
F. 815 C.Y.
C 0
F 680
146 + 00
493.13'
C. 0 C.Y.
F. 706 C.Y.
C 0
F 928
475.2'
145 + 76.2

C. 0 C.Y.
F. 1340 C.Y.
491.38'
C 2
F 24
489.2'
145 + 00
C. 213 C.Y.
F. 37 C.Y.
C 228
F 16
496.8'
490.23'
144 + 50
C. 483 C.Y.
F. 15 C.Y.
C 294
F 0
496.4'
489.25'
144 + 00
C. 759 C.Y.
F. 37 C.Y.
C 116
F 20
486.74'
487.9'
143 + 00
C. 378 C.Y.
F. 96 C.Y.

℄

C 0
F 148
507.48'
502.2'
152 + 00
C. 0 C.Y.
F. 885 C.Y.
506.33'
C 0
F 806
491.2'
151 + 50
505.18'
C. 0 C.Y.
F. 1594 C.Y.
C 0
F 916
474.5
487.2'
24" Conc. Pipe
477.5
151 + 00

C. 18 C.Y.
F. 2257 C.Y.
502.88'
C 10
F 356
495.2'
150 + 00
C. 169 C.Y.
F. 351 C.Y.
C 172
F 2
506.2'
501.78'
149 + 50
Ditch Bank
℄ Ditch
Tan. → R=1200' ← Tan.
C 274
F 0
C. 413 C.Y.
F. 2 C.Y.
506.2'
500.58'
149 + 00
C. 715 C.Y.
F. 52 C.Y.

℄

PLATE 8—CROSS SECTION U. P. R. & R. E. STANDARD
KEUFFEL & ESSER CO., NEW YORK.

4298.57

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NRH-12-3	1953	58	75

℄

522.8
514.38
C. 277 C.Y.
F. 0 C.Y.
155 + 00
C 366 ℄
F 0 ℄

531.2
514.08
C. 595 C.Y.
F. 0 C.Y.
154 + 87.0
Tan.
℄ 3000 R.
C 786
F 0

529.2
513.60
C. 487 C.Y.
F. 0 C.Y.
154 + 66
C 744
F 0

529.2
513.23
C. 1833 C.Y.
F. 0 C.Y.
154 + 50
C 900
F 0

528.2
512.08
C. 3648 C.Y.
F. 0 C.Y.
154 + 00
C 1080
F 0

521.2
509.78
C. 1365 C.Y.
F. 0 C.Y.
153 + 00
C 890
F 0

520.2
508.63
℄ 3000 R.
152 + 50
C 584
F 0

521.8
519.60
157 + 00
C 164 ℄
F 0 ℄

521.6
517.81
C. 305 C.Y.
F. 21 C.Y.
156 + 44.2
C 130
F 20

Sta. 55+00 = 516.68
Sta. 55+99.5 = 516.67
C. 106 C.Y.
F. 1463 C.Y.
Area Ahead { C 0, F 1776
Approx. Area Back { C 0, F 530

490.8
End Area 156 + 00 Same as Sta. 155+99.5
156 + 99.5
C. 0 C.Y.
F. 33 C.Y.

516.09
489.2
C. 0 C.Y.
F. 523 C.Y.
Approx. Area Ahead { C 0, F 550
Area Back { C 0, F 1742
155 + 74.2

C. 0 C.Y.
F. 1729 C.Y.

515.07
510.2
C. 203 C.Y.
F. 87 C.Y.
155 + 30
C 0
F 166

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

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

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

4298.58

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
Hawaii	Haw.	NRH-2-B	1939	59	75

FINAL SURVEY — SURVEYED, COMPUTED, TEMPLATE, AREAS, NOTE BOOK, NO., DATE, BY, AREAS CHECKED

ORIGINAL SURVEY — SURVEYED, COMPUTED, TEMPLATE, AREAS, NOTE BOOK, NO., DATE, BY, AREAS CHECKED

℄

539.03'
C 0
F 1448
517.9
160+65
536.63'
C 0
F 296
529.5
160+25
C. 0 C.Y.
F. 1292 C.Y.
C. 5 C.Y.
F. 146 C.Y.
535.13'
C 10
F 20
534.2
160+00
C. 9 C.Y.
F. 141 C.Y.
532.78'
526.0
528.4
24" Conc. Pipe
C 0
F 132
527.2
159+50
C. 43 C.Y.
F. 184 C.Y.
529.13'
C 46
F 2
529.2
159+00
C. 1133 C.Y.
F. 40 C.Y.
C 566
F 0
533.75
536.4
158+00
C. 970 C.Y.
F. 0 C.Y.
C 482
F 0
532.4
157+50
C. 598 C.Y.
F. 0 C.Y.
724.32

℄

559.13'
C 118
F 0
562.4
167+00
C. 489 C.Y.
F. 0 C.Y.
Tan. ∠ 22°00'
553.13'
C 146
F 0
556.4
163+00
C. 225 C.Y.
F. 6 C.Y.
548.45'
C 10
F 4
547.2
162+22
C. 1 C.Y.
F. 32 C.Y.
548.03'
C 0
F 240
541.9
162+15
C. 0 C.Y.
F. 123 C.Y.
547.13'
C 0
F 206
540.8
162+00
C. 0 C.Y.
F. 97 C.Y.
546.35'
540.2
C 0
F 198
C. 0 C.Y.
F. 1147 C.Y.
161+87
544.13'
C 0
F 1476
This end of Culvert to connect covered ditch.
30" Conc. Pipe
516.4
161+50
C. 0 C.Y.
F. 3006 C.Y.
541.13'
C 0
F 1770
517.4
161+00
C. 0 C.Y.
F. 2086 C.Y.

℄

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

4298.59

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
Hawaii		HSN-NRH-12-B	1933	60	75

℄

574.43
C 0
F 292
564.8
24" Conc. Pipe
566.4
567.4
171 + 50

C 0 C.Y.
F 478 C.Y.

576.38
C 0
F 224
569.8
171 + 00

C 939 C.Y.
F

583.2
579.97
C 180
F 0
170 + 00

C 1115 C.Y.
F 0 C.Y.

590.2
581.39
C 422
F 0
169 + 00

C 1448 C.Y.
F 0 C.Y.

F=2000 ft. rad.

588.2
580.34
C 360
F 0
168 + 00

C 1041 C.Y.
F 0 C.Y.

581.2
576.82
C 202
F 0
167 + 00

C 711 C.Y.
F 0 C.Y.

575.2
571.13
C 182
F 0
166 + 00

C 689 C.Y.
F 0 C.Y.

569.2
565.13
C 190
F 0
165 + 00

C 570 C.Y.
F 0 C.Y.

℄

℄

562.73
C 0
F 570
548.7
175 + 50

C 0 C.Y.
F 768 C.Y.

562.98
C 0
F 260
551.0
Double 36" Conc. Pipe Culverts
556.4
551.0
175 + 00

C 0 C.Y.
F 109 C.Y.

563.17
C 0
F 86
560.4
174 + 83

C 90 C.Y.
F 53 C.Y.

567.2
565.71
C 148
F 0
174 + 50

C 494 C.Y.
F

574.2
564.32
C 386
F 0
174 + 00

C 1089 C.Y.
F 0 C.Y.

573.2
568.58
C 202
F 0
173 + 00

C 374 C.Y.
F 1,159 C.Y.

572.43
C 0
F 86
569.2
172 + 00

C 0 C.Y.
F 380 C.Y.

℄

℄

571.53
C 0
F 1006
551.2
178 + 50

C 0 C.Y.
F 1832 C.Y.

568.84
C 0
F 972
554.2
178 + 00

C 0 C.Y.
F 1391 C.Y.

566.65
C 0
F 530
554.2
177 + 50

C 0 C.Y.
F 822 C.Y.

564.94
C 0
F 358
555.2
177 + 00

C 0 C.Y.
F 715 C.Y.

563.71
C 0
F 414
553.2
176 + 50

C 0 C.Y.
F 1270 C.Y.

562.82
C 0
F 566
548.2
175 + 80

C 0 C.Y.
F 631 C.Y.

℄

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

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

4298.60

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
Hawaii	HAW	NRH-12(3)	1973 ~~67~~	61	75

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

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

C. 1058
F. 0

611 ℄
181+50
589.02

C. 1915 C.Y.
F. 0 C.Y.

C. 1050 ℄
F. 0 ℄

616 ℄
184+50
594.16

C. 1891 C.Y.
F. 0 C.Y.

587.29
C. 0
F. 490
589 ℄
186+25
C. 7 C.Y.
F. 370 C.Y.

C. 1010
F. 0

607 ℄
181+00
586.18

C. 1709 C.Y.
F. 0 C.Y.

C 992
F 0

615 ℄
184+00
594.79

C. 1746 C.Y.
F. 0 C.Y.

588.72
C. 16
F. 310
581 ℄
186+00
C. 20 C.Y.
F. 152 C.Y.

C 836
F 0

602 ℄
180+50
583.28

C. 1217 C.Y.
F. 0 C.Y.

C 894
F 0

614 ℄
183+50
594.83

C. 1563 C.Y.
F. 0 C.Y.

C 38
F 100
589.73
585 ℄
185+80

C 478
F 0

591 ℄
180+00
580.32

443
C. ~~935~~ C.Y.
F. ~~563~~ C.Y.
332

179+50
C = 0
F = 0
R.M.B.
7/11/83

C 784
F 0

612 ℄
183+00
594.27

C. 1500 C.Y.
F. 0 C.Y.

C 366
F 0
593 ℄
185+50
591.12

C. 224 C.Y.
F. 56 C.Y.

C 826
F 0

611 ℄
182+50
593.12

C. 1748 C.Y.
F. 0 C.Y.

C. 0
F. 388
574.46
564 ℄
179+00

C. 0 C.Y.
F. 289 C.Y.

573.46
C. 0
F. 360
560 ℄
554.9
24" Conc. Pipe Sta 178+60
554.0
178+83

C. 0 C.Y.
F. 957 C.Y.

C 1062
F 0

612 ℄
182+00
591.37

C. 1963 C.Y.
F. 0 C.Y.

C. 1115 C.Y.
F. 0 C.Y.

C 838
F 0
610 ℄
185+00
592.94

C. 1748 C.Y.
F. 0 C.Y.

PLATE 3—CROSS SECTION — U. S. C. & G. S. STANDARD
KEUFFEL & ESSER CO., NEW YORK.

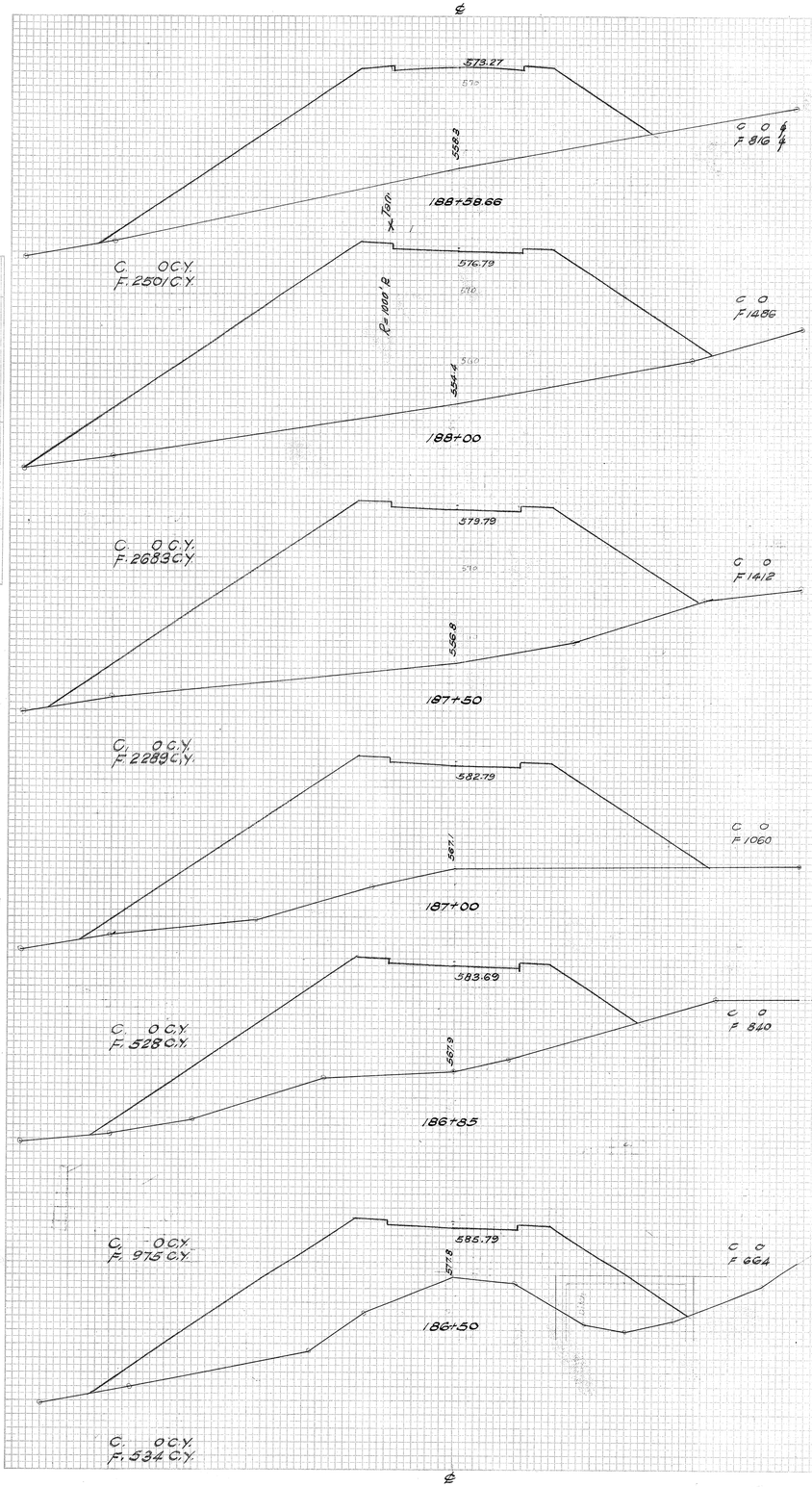
4298.61

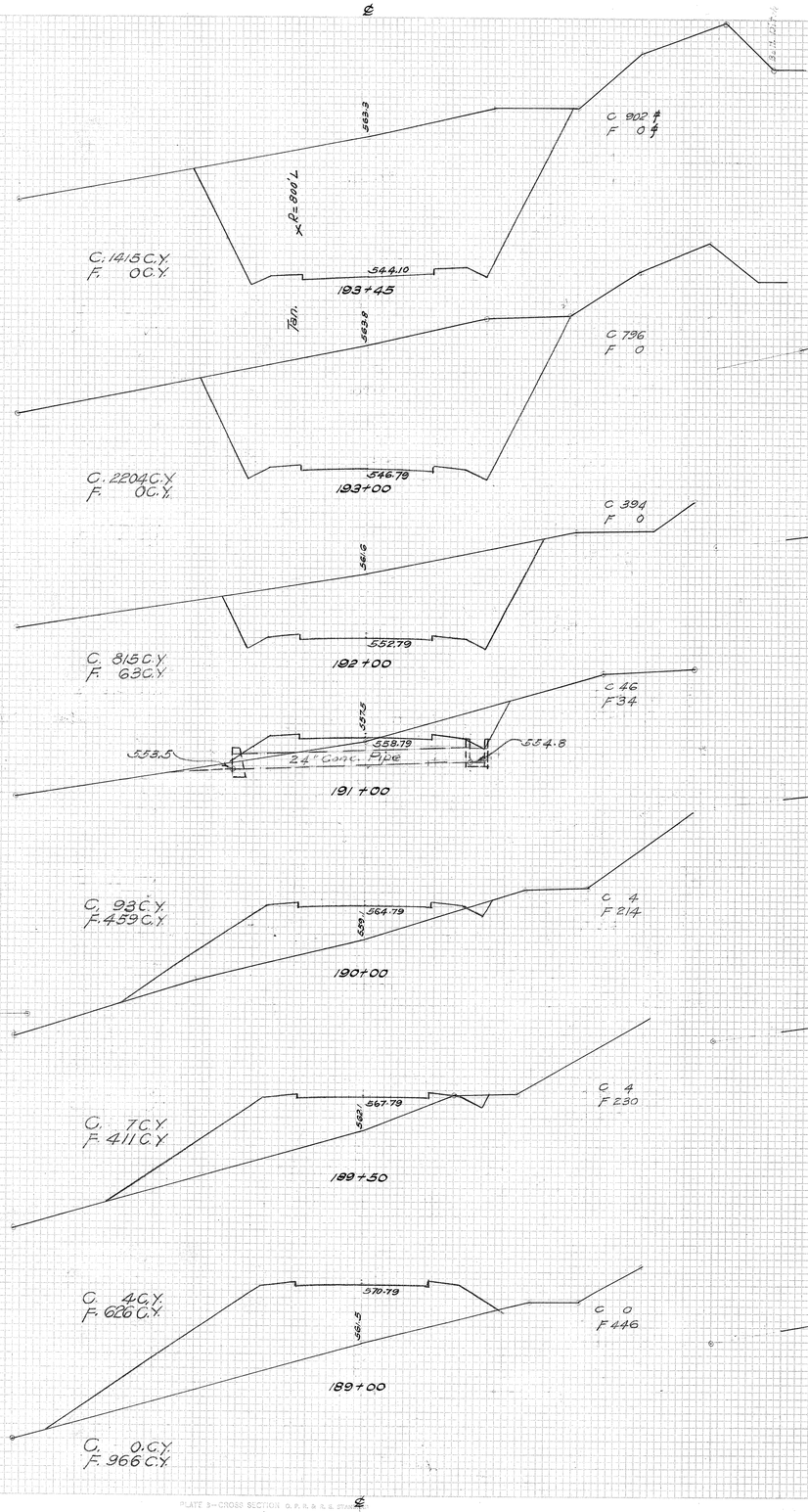
4298.61

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
Hawaii	HAW.	NRH 12-B	1933	62	75

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

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





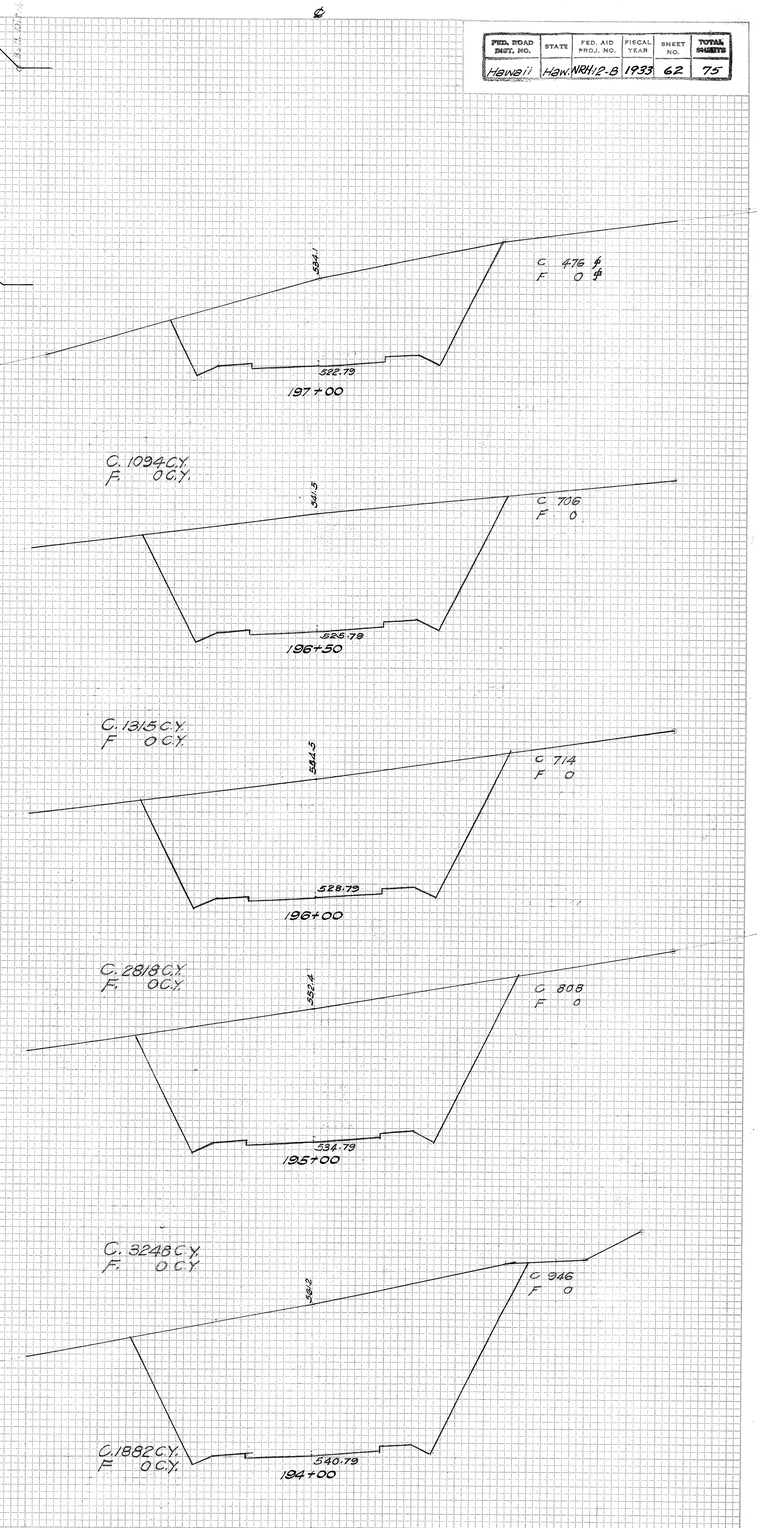
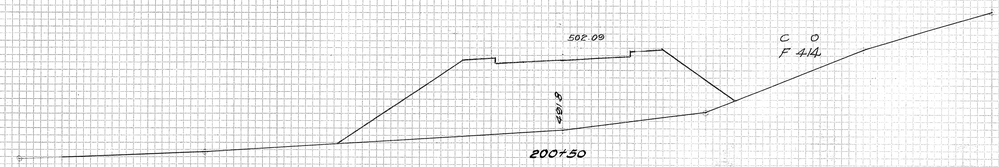


PLATE 9—CROSS SECTION C. P. R. & R. R. STATION
STUFFEL & ESSER CO., NEW YORK.

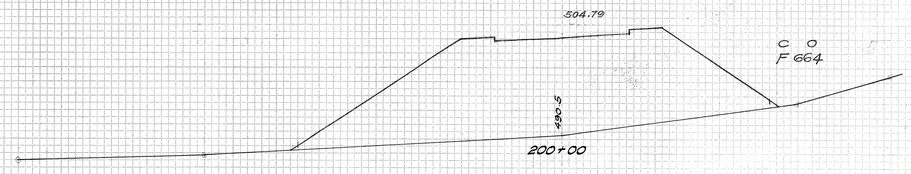
42.78 1298.62

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
Hawaii	HSWNRH12-B	1933	63	75

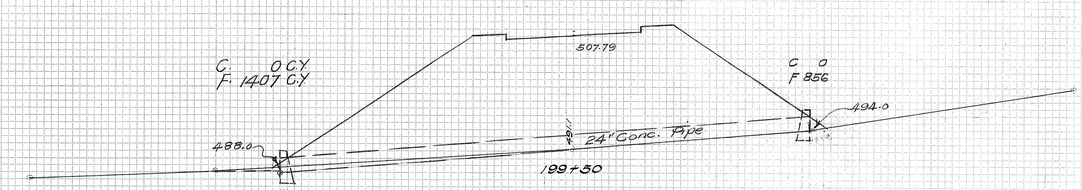
℄



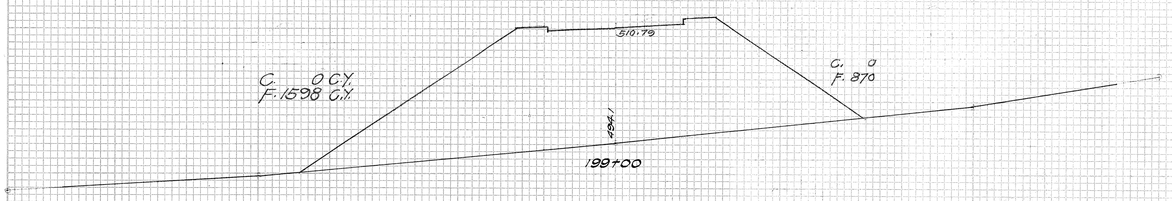
C, 0 C.Y.
F. 998 C.Y.



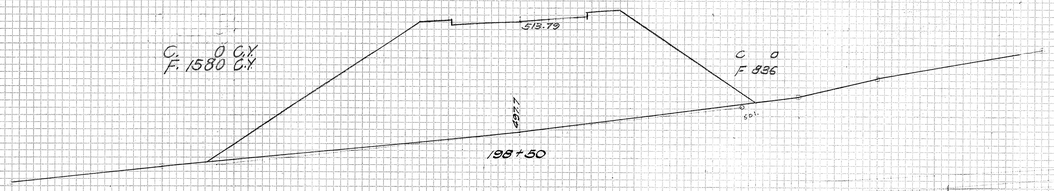
C, 0 C.Y.
F. 1407 C.Y.



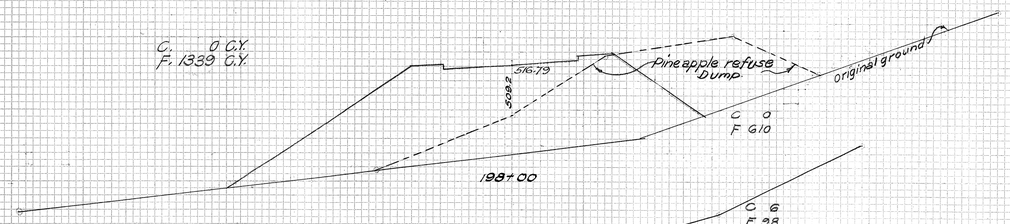
C, 0 C.Y.
F. 1598 C.Y.



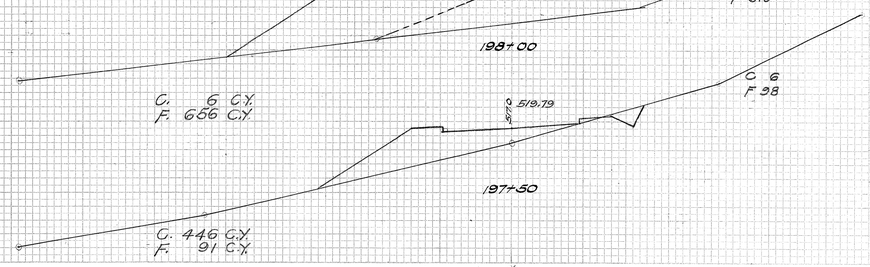
C, 0 C.Y.
F. 1580 C.Y.



C, 0 C.Y.
F. 1339 C.Y.

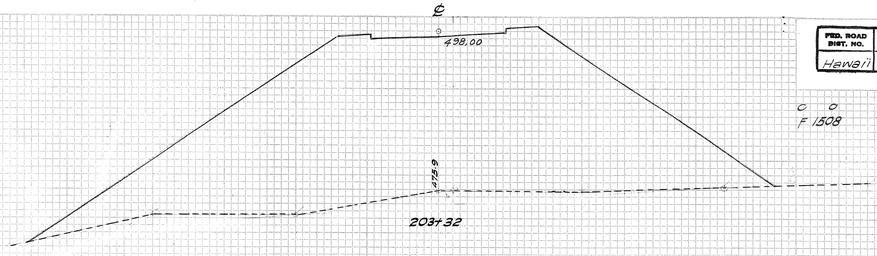


C, 6 C.Y.
F. 656 C.Y.

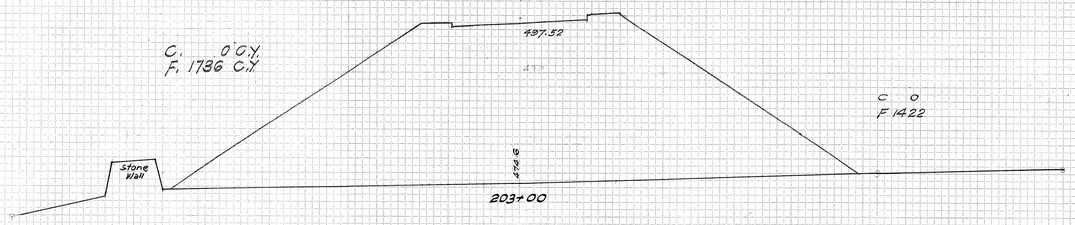


C, 446 C.Y.
F, 91 C.Y.

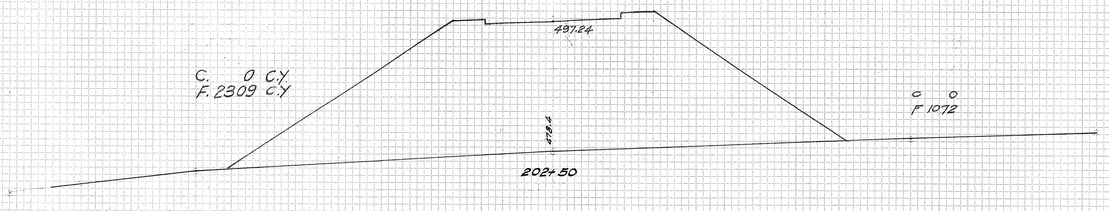
℄



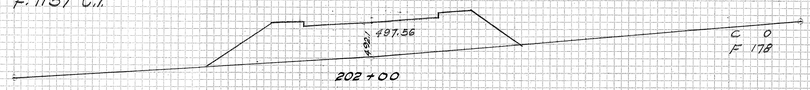
C, 0 C.Y.
F. 1736 C.Y.



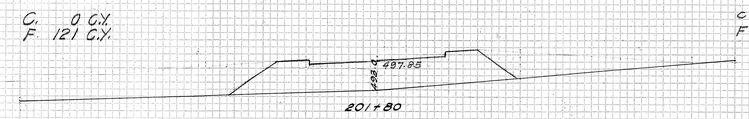
C, 0 C.Y.
F. 2309 C.Y.



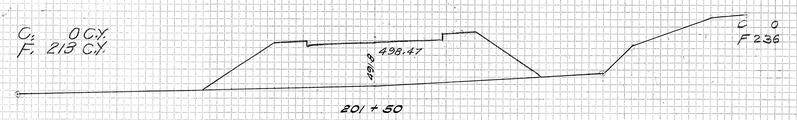
C, 0 C.Y.
F. 11157 C.Y.



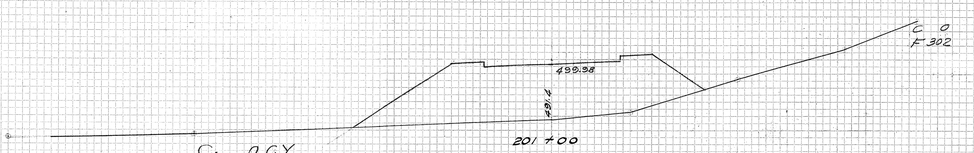
C, 0 C.Y.
F. 121 C.Y.



C, 0 C.Y.
F. 213 C.Y.



C, 0 C.Y.
F. 498 C.Y.



C, 0 C.Y.
F. 663 C.Y.

℄

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

42 4998.63

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	NRH 2-B	1933	64	75

℄

C. 513 C.Y.
F. 0 C.Y.

517.0

507.56

205+50

C 406 ft
F 0 ft

527.9

504.60

205+00

C 148
F 0

C. 137 C.Y.
F. 98 C.Y.

502.6

501.93

204+50

C 0
F 106

C. 0 C.Y.
F. 307 C.Y.

500.82

498.6

204+10

C 0
F 308

C. 0 C.Y.
F. 2050 C.Y.

498.86

498.7

204+00

C 0
F 798

499.42

C. 0 C.Y.
F. 495 C.Y.

479.4

203+87

C 0
F 1260

499.27

C. 0 C.Y.
F. 814 C.Y.

478.1

203+82

C 0
F 2184

BRIDGE

℄

℄

C. 272 ft
F 0 ft

531.9

525.88

EQUATION { 211+69.91 Ahead
208+59.46 Back

C. 101 C.Y.
F 0 C.Y.

532.3

525.32

208+50

C 302
F 0

C. 702 C.Y.
F. 0 C.Y.

532.3

522.36

208+00

C 456
F 0

C. 1122 C.Y.
F. 0 C.Y.

534.1

519.40

207+50

C 756
F 0

C. 1524 C.Y.
F. 0 C.Y.

534.4

516.44

207+00

C 890
F 0

C. 1604 C.Y.
F. 0 C.Y.

534.7

513.48

206+50

C 842
F 0

C. 1309 C.Y.
F. 0 C.Y.

532.2

510.52

206+00

C 572
F 0

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

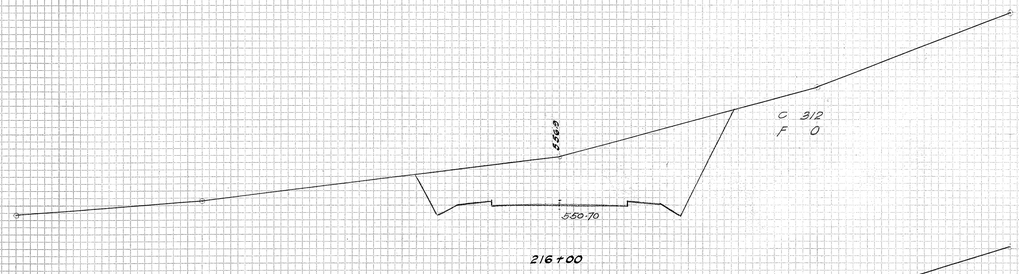
4998.64

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
Hawaii	HAW	NR412-5	1933	65	75

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

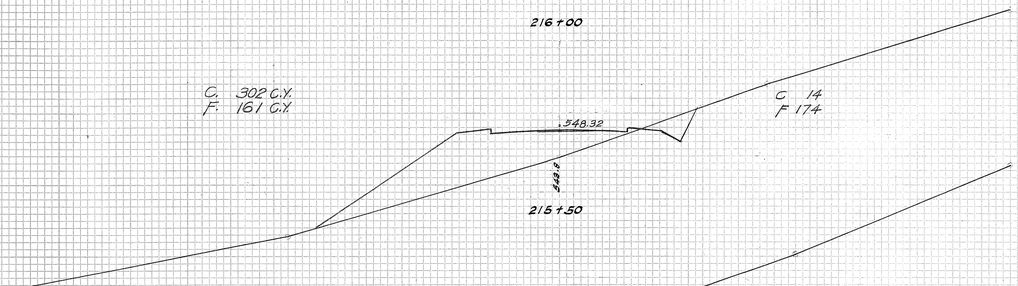
ORIGINAL SURVEY — SURVEYED — PLOTTED — TRACED — AREAS — NOTE BOOK — NO. — AREAS CHECKED — BY — DATE

℄



216+00

C. 302 C.Y.
F. 161 C.Y.



215+50

C. 15 C.Y.
F. 441 C.Y.

215+00

C. 40 C.Y.
F. 959 C.Y.

214+00

24" Conc. Pipe Culvert at Sta. 213+50

C. 15 C.Y.
F. 589 C.Y.

213+00

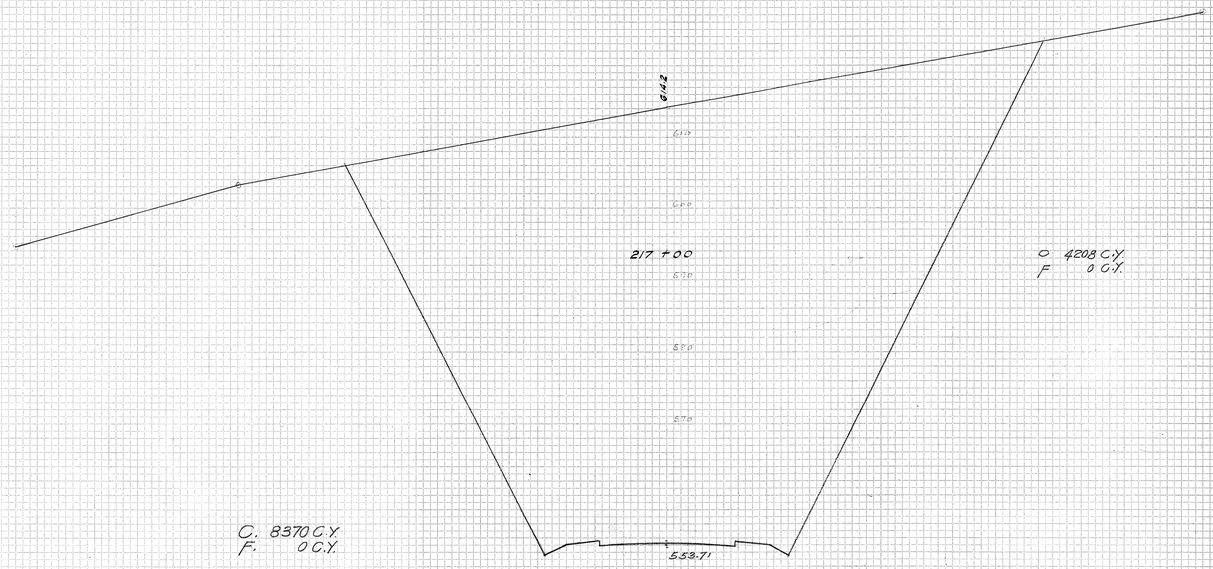
C. 378 C.Y.
F. 189 C.Y.

212+00

C. 260 C.Y.
F. 0 C.Y.

℄

C. 8370 C.Y.
F. 0 C.Y.



217+00

C. 4208 C.Y.
F. 0 C.Y.

℄

PLATE 5 — CROSS SECTION U. P. R. & R. E. STANDARD
KNIFFEL & ESSER CO., NEW YORK

4298.65

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW. NRH-12-B		1933	66	75

℄

599 ft.

218 + 00

C. 6229 C.Y.
F. 0 C.Y.

C 2848
F 0

354.38

612 ft.

217 + 50

C. 5674 C.Y.
F. 0 C.Y.

C 3880
F 0

Gen. ℄ R 300' R

554.34

619 ft.

217 + 11

C. 1667 C.Y.
F. 0 C.Y.

C 3976
F 0

553.89

℄

℄

583 ft.

220 + 00

C. 1548 C.Y.
F. 0 C.Y.

C 660
F 0

548.76

571 ft.

219 + 50

C 1012
F 0

551.04

C. 2304 C.Y.
F 0 C.Y.

580 ft.

219 + 00

C 1476
F 0

552.73

C. 3263 C.Y.
F. 0 C.Y.

589 ft.

218 + 50

C 2048
F 0

553.83

C. 4533 C.Y.
F. 0 C.Y.

℄

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

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

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

4298.66

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
Hawaii		HAW. NRH 12-B	1933	67	75

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

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

℄

C 0
F 1800

537.39

515.3

222 + 00

C 22 C.Y.
F 1852 C.Y.

540.25

533.7

221 + 50

C 24
F 200

C 192
F 12

C 220 C.Y.
F 196 C.Y.

547.0

548.11

221 + 00

C 420
F 0

555.8

545.97

220 + 50

C 0 C.Y.
F 11085 C.Y.

C 0 C.Y.
F 9852 C.Y.

C 0 C.Y.
F 5867 C.Y.

℄

℄

529.81

C 0
F 5868

471.4

223 + 50

581.67

C 0
F 6104

475.8

223 + 00

534.59

C 4536
F 0

453.6

491.4

222 + 50

℄

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

4298.67

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
Hawaii	Haw	NHH 12-B	1933	68	75

℄

C. 1904 C.Y.
F. 0 C.Y.

544.9

225 + 50

517.37

C 1592 ℔
F 0 ℔

22,300 ℔ × 720

531.4

C. 430 C.Y.
F. 1230 C.Y.

225 + 00

520.23

C 464
F 0

523.09

508.2

C 0
F 1328

224 + 50

525.95

C. 0 C.Y.
F. 5057 C.Y.

C 0
F 4134

480.8

C. 0 C.Y.
F. 9261 C.Y.

224 + 00

30" Conc. Pipe Culvert at Sta. 224+00 on the skew.

℄

℄

563.6

226 + 50

C 3266 ℔
F 0 ℔

C. 6127 C.Y.
F. 0 C.Y.

511.65

569.2

226 + 00

C 3352
F 0

514.31

C. 4578 C.Y.
F. 0 C.Y.

℄

PLATE 2—CROSS SECTION O. P. R. & R. E. STANDARD
KEUFFEL & ESSER CO., NEW YORK.

4298.68

4298.68

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

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

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
Hawaii	HAW. NH-2-B	1933	69	76	

℄

497.35

486.2

C 0 @ F 476

229 + 00

R=2500'-0"

C. 0 C.Y.
F. 663 C.Y.

500.21

C 0
F 240

F.L. 491.4

493.5

228 + 50

C. 244 C.Y.
F. 222 C.Y.

508.6

C 264
F 0

509.07

228 + 00

C. 1168 C.Y.
F. 0 C.Y.

527.3

C 998
F 0

227 + 50

505.93

C. 3050 C.Y.
F. 0 C.Y.

547.2

C 2296
F 0

227 + 00

508.79

C. 5150 C.Y.
F. 0 C.Y.

℄

℄

514.2

231 + 00

C 1308
F 0

C. 1211 C.Y.
F. 194 C.Y.

485.91

488.77

C. 0 C.Y.
F. 480 C.Y.

483.8

C 0
F 210

230 + 50

490.20

C 0
F 826

471.8

CULVERT

230 + 25

491.63

C 0
F 668

477.6

230 + 00

C. 0 C.Y.
F. 1063 C.Y.

494.49

C 0
F 480

485.3

229 + 50

C. 0 C.Y.
F. 885 C.Y.

℄

℄

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

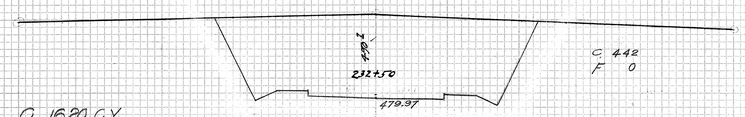
4298.69

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

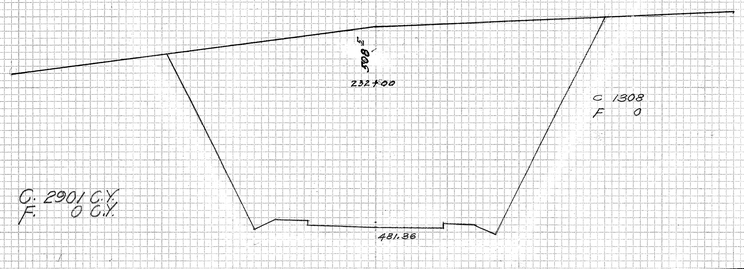
ORIGINAL SURVEY — SURVEYED, PLOTTED, NOTE BOOK, NO., BY, DATE

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
Hawaii	Haw.	NBH-12-B	1933	70	75

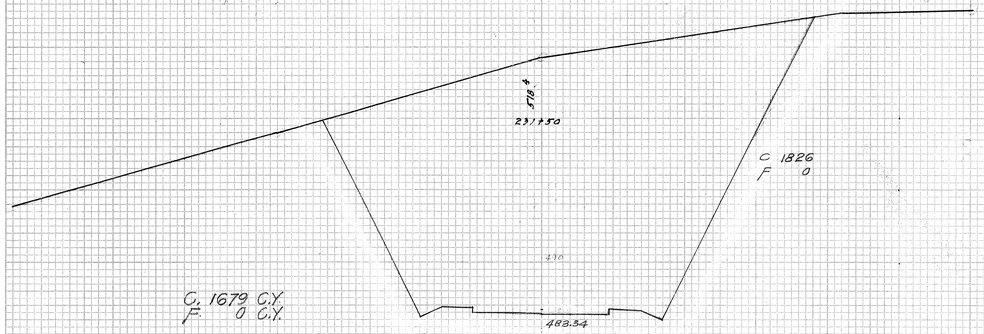
℄



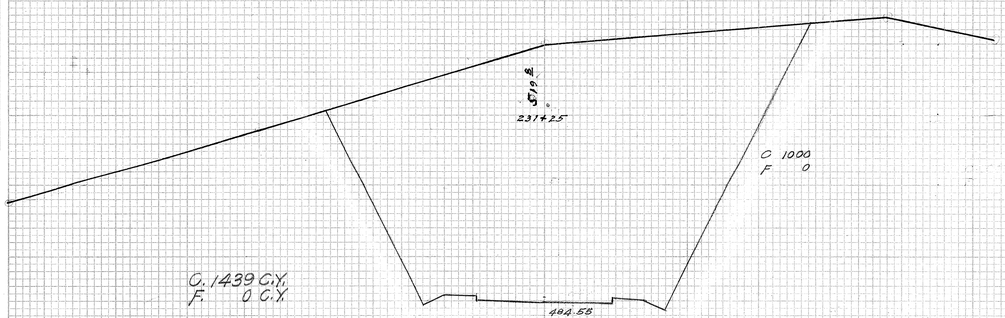
C. 1620 C.Y.
F. 0 C.Y.



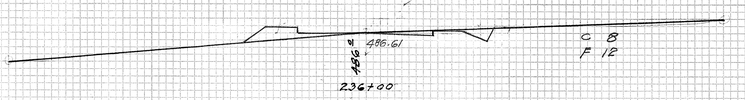
C. 2901 C.Y.
F. 0 C.Y.



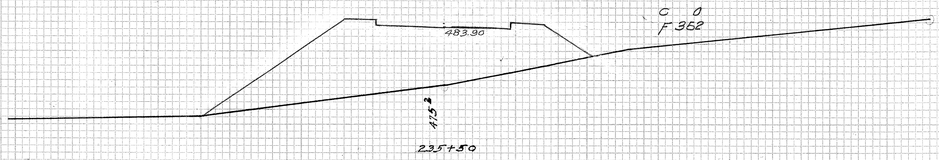
C. 1679 C.Y.
F. 0 C.Y.



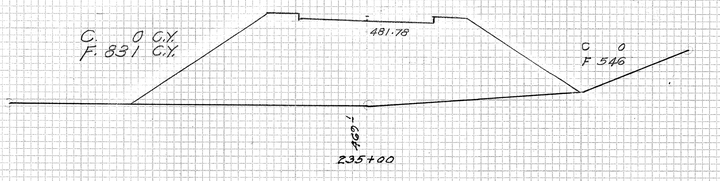
C. 1439 C.Y.
F. 0 C.Y.



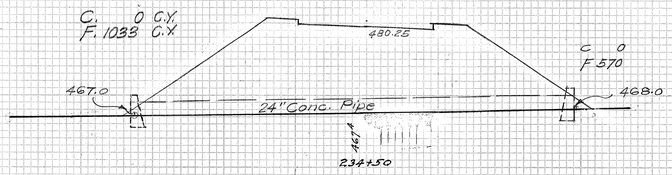
C. 7 C.Y.
F. 337 C.Y.



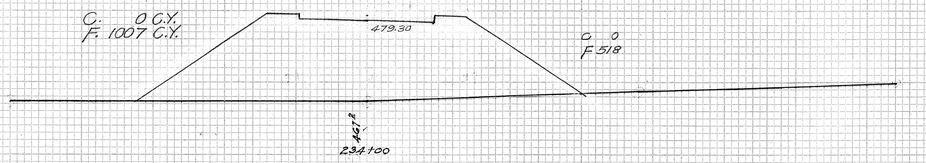
C. 0 C.Y.
F. 831 C.Y.



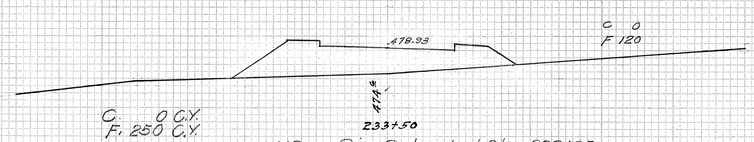
C. 0 C.Y.
F. 1033 C.Y.



C. 0 C.Y.
F. 1007 C.Y.

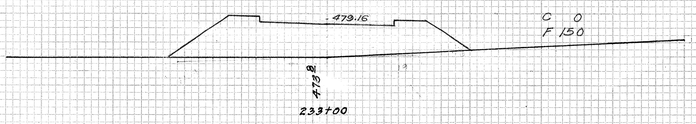


C. 0 C.Y.
F. 391 C.Y.



C. 0 C.Y.
F. 250 C.Y.

24" Conc. Pipe Culvert at Sta. 233+25



C. 405 C.Y.
F. 139 C.Y.

℄

PLATE 2—CROSS SECTION O. P. R. & R. E. STANDARD
KEUFFEL & ESSER CO., NEW YORK.

4298.70

FINAL SURVEY — SURVEYED, REVISED, TEMPLATE, AREAS, AREAS CHECKED, NOTE BOOK, NO., BY, DATE

ORIGINAL SURVEY — SURVEYED, REVISED, TEMPLATE, AREAS, AREAS CHECKED, NOTE BOOK, NO., BY, DATE

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
Hawaii	Haw.	NRH-2-B	1933	71	75

FINAL SURVEY — SURVEYED, PLOTTED, TEMPLATE, AREAS, CROSS SECTIONED, NOTE BOOK, NO., BY, DATE

ORIGINAL SURVEY — SURVEYED, PLOTTED, TEMPLATE, AREAS, CROSS SECTIONED, NOTE BOOK, NO., BY, DATE

℄

C 738
F 0

518.2

504.61

239 + 00

C. 1007 C.Y.
F. 0 C.Y.

C 350
F 0

503.2

696.6 — 24" Conc. Pipe — 497.6

501.61

238 + 50

C 266
F 0

504.1

C. 570 C.Y.
F. 0 C.Y.

498.61

238 + 00

C 342
F 0

502.8

C. 563 C.Y.
F. 0 C.Y.

495.61

237 + 50

C 298
F 0

499.2

C. 593 C.Y.
F. 0 C.Y.

492.61

237 + 00

C 154
F 0

493.1

C. 418 C.Y.
F. 0 C.Y.

489.61

236 + 50

C. 150 C.Y.
F. 11 C.Y.

℄

℄

C 142
F 162

520.2

518.61

241 + 50

C. 676 C.Y.
F. 150 C.Y.

C 588
F 0

528.3

516.61

241 + 00

C 1218
F 0

535.3

C. 1672 C.Y.
F. 0 C.Y.

240 + 50

513.61

C 1656
F 0

539.5

C. 2661 C.Y.
F. 0 C.Y.

240 + 00

510.61

C 1266
F 0

R=1500'E ∡ Tan.

538.6

C. 2706 C.Y.
F. 0 C.Y.

239 + 50

507.61

C. 1856 C.Y.
F. 0 C.Y.

℄

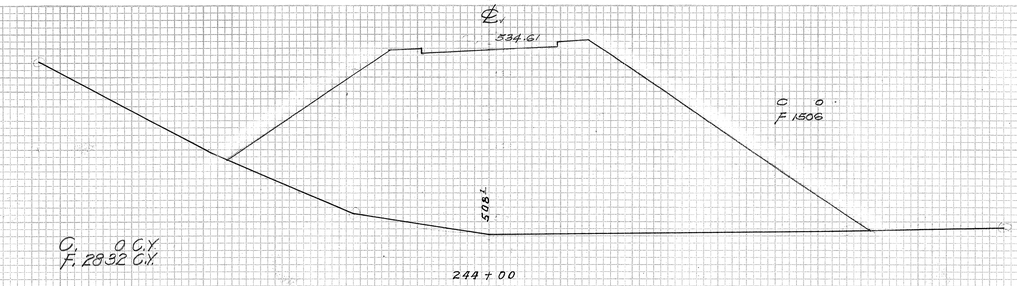
℄

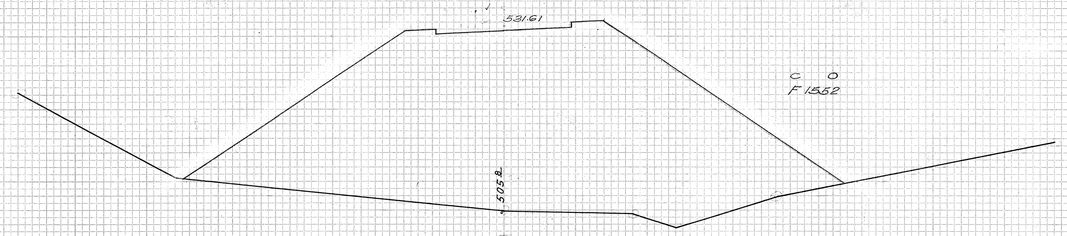
PLATE 3—CROSS SECTION O. P. R. & R. E. STANDARD
KEUFFEL & ESSER CO., NEW YORK.

4298.71

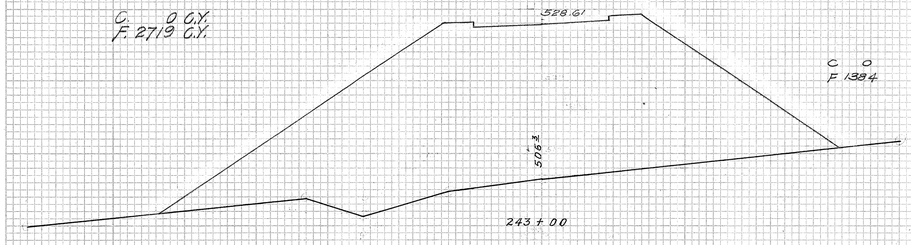
4298.71

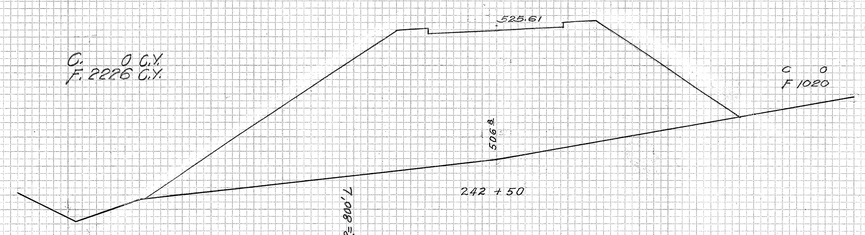
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	NRH-12-B	1933	72	75

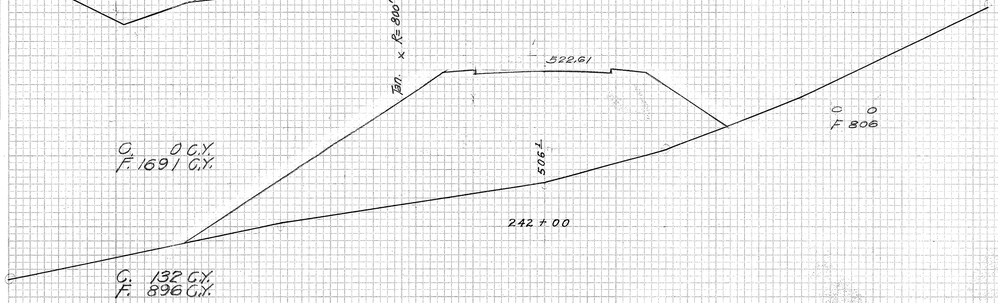




30" Conc. Pipe Culvert at Sta. 243+26 on Skew.







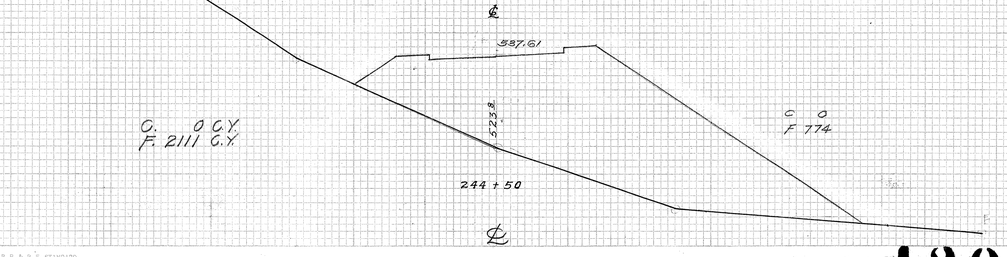


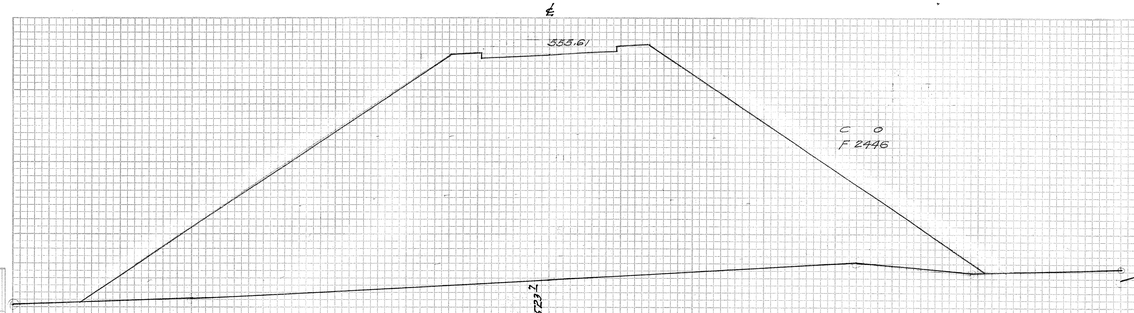
PLATE 3—CROSS SECTION, O. P. R. & R. R. STANDARD
KEUFFEL & ESSER CO., NEW YORK.

4298.72

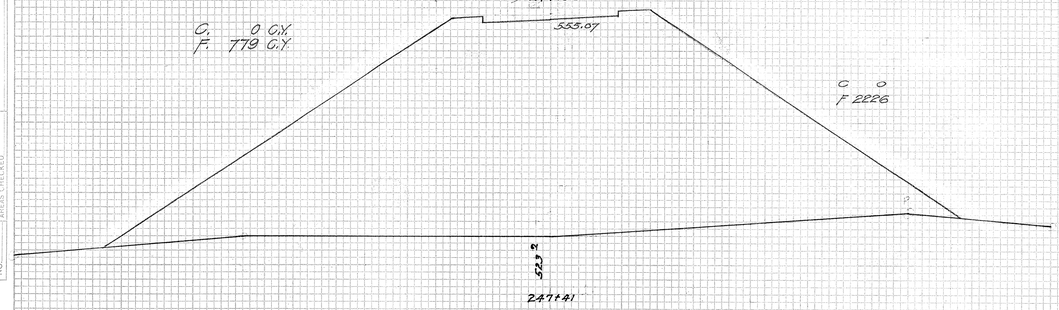
ORIGINAL SURVEY — SURVEYED, PLOTTED, TEMPLATE, AREAS CHECKED, NOTE BOOK, NO., BY, DATE

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

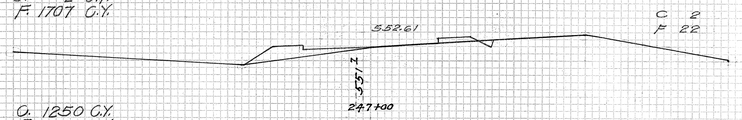
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
Hawaii	Haw.	NRH 12-B	1933	73	75



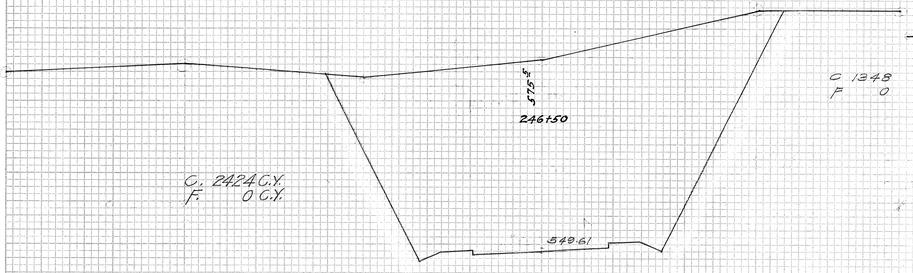
C. 0 C.Y.
F. 779 C.Y.



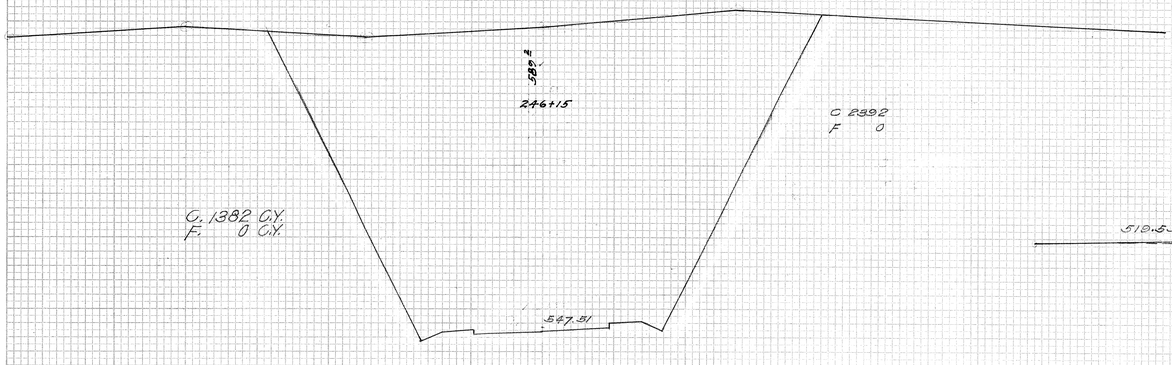
C. 2 C.Y.
F. 1707 C.Y.



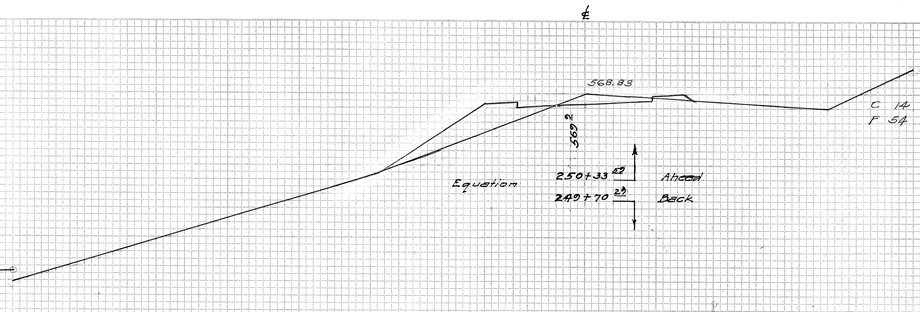
C. 1250 C.Y.
F. 20 C.Y.



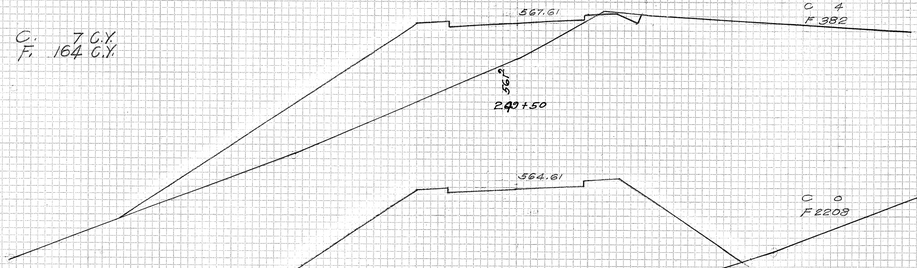
C. 2424 C.Y.
F. 0 C.Y.



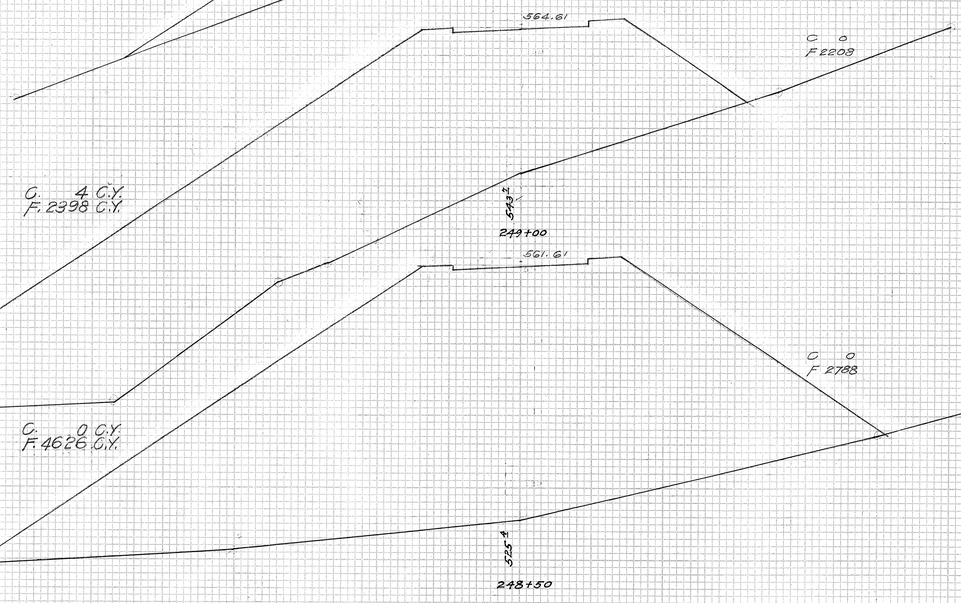
C. 1382 C.Y.
F. 0 C.Y.



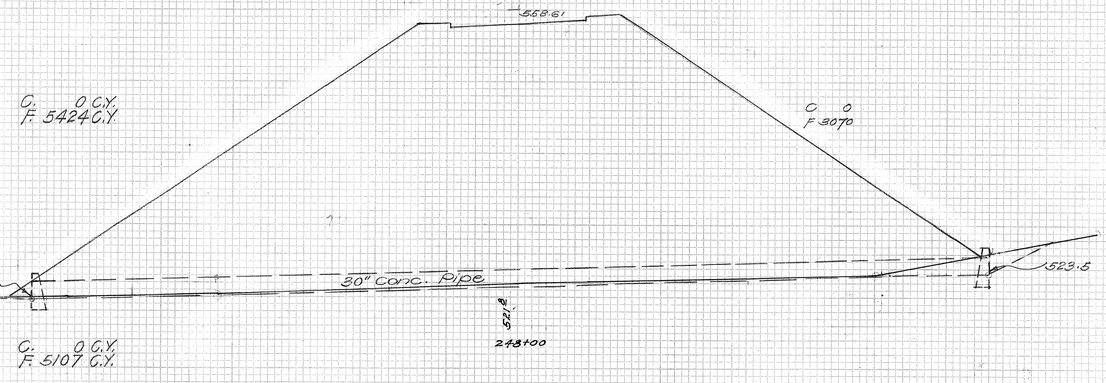
C. 7 C.Y.
F. 164 C.Y.



C. 4 C.Y.
F. 2398 C.Y.



C. 0 C.Y.
F. 4626 C.Y.



C. 0 C.Y.
F. 5424 C.Y.

C. 0 C.Y.
F. 5107 C.Y.

℄ ℄

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

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

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

4298.73

4298.73

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NR412-B	1933	74	75

ORIGINAL SURVEY — SURVEYED / COMPUTED / TRACED / TEMPLATE / NOTE BOOK / AREAS / NO. / AREAS CHECKED / BY / DATE

FINAL SURVEY — SURVEYED / COMPUTED / TRACED / TEMPLATE / NOTE BOOK / AREAS / NO. / AREAS CHECKED / BY / DATE

℄

C. 1144 C.Y.
F. 0 C.Y.

C 446
F 0

607.81
606
256+00

C. 303 C.Y.
F. 90 C.Y.

C 172
F 0

596.81
595.2
255+00

C. 163 C.Y.
F. 73 C.Y.

C 110
F 84

593.33
592.2
254+42

R=2000.0'

Ex. Existing Ret. Wall

C 100
F 10

590.81
589.2
254+00

C. 344 C.Y.
F. 18 C.Y.

C 86
F 0

584.81
583.2
253+00

C. 393 C.Y.
F. 0 C.Y.

C 126
F 0

578.81
577.2
252+00

C. 441 C.Y.
F. 0 C.Y.

C 112
F 0

572.81
571.2
251+00

C. 155 C.Y.
F. 66 C.Y.

℄

C. 430 C.Y.
F. 0 C.Y.

C 128
F 0

638.81
637.2
262+00

C 104
F 0

632.81
631.2
261+00

C. 615 C.Y.
F. 0 C.Y.

C 228
F 0

626.81
625.2
260+00

C. 889 C.Y.
F. 0 C.Y.

C 252
F 0

620.81
619.2
259+00

C. 841 C.Y.
F. 0 C.Y.

C 202
F 0

614.81
613.2
258+00

C. 320 C.Y.
F. 0 C.Y.

C 144
F 0

611.81
610.2
257+50

C. 276 C.Y.
F. 0 C.Y.

C 154
F 0

608.81
607.2
257+00

24" Conc. Pipe

603.8

604.8

C. 389 C.Y.
F. 0 C.Y.

C 354
F 0

606.65
605.2
256+64

C. 948 C.Y.
F. 0 C.Y.

℄

C. 54 C.Y.
F. 150 C.Y.

C 30
F 62

662.81
661.2
24" Conc. Pipe
656.0
659.8
266+00

C 28
F 100

669.81
668.2
265+50

C. 74 C.Y.
F. 193 C.Y.

C 156
F 22

656.81
655.2
265+00

C. 246 C.Y.
F. 41 C.Y.

C 214
F 0

659.81
658.2
264+50

C. 435 C.Y.
F. 0 C.Y.

C 256
F 0

650.81
649.2
264+00

C. 359 C.Y.
F. 0 C.Y.

C 132
F 0

647.81
646.2
263+50

24" Conc. Pipe Culvert at Sta. 263+12
on Skew.

C. 341 C.Y.
F. 0 C.Y.

C 236
F 0

644.81
643.2
263+00

C. 405 C.Y.
F. 0 C.Y.

R=2000'R — Tan.

C 272
F 0

642.32
641.2
262+57

C. 422 C.Y.
F. 0 C.Y.

℄

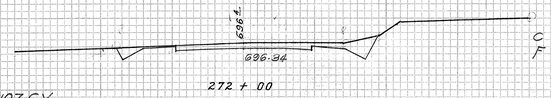
PLATE 3—CROSS SECTION ℄ R. R. & R. E. STANDARD
KEUFFEL & ESSER CO., NEW YORK.

4295.74

4298.74

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII		HAW. NRH 2-B	1933	75	75

℄



C 34
F 0

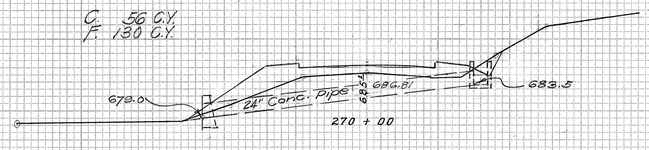
272 + 00

C. 107 C.Y.
F. 22 C.Y.

C 29
F 12

271 + 00

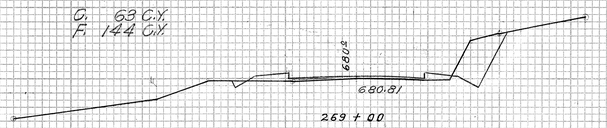
C. 56 C.Y.
F. 190 C.Y.



C 6
F 58

270 + 00

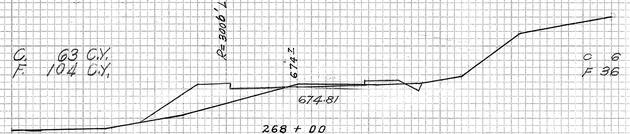
C. 63 C.Y.
F. 144 C.Y.



C 28
F 20

269 + 00

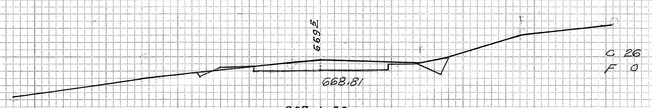
C. 63 C.Y.
F. 104 C.Y.



C 6
F 36

268 + 00

C. 59 C.Y.
F. 67 C.Y.



C 26
F 0

267 + 00

C. 104 C.Y.
F. 115 C.Y.

℄

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

42 15.75

4298.75