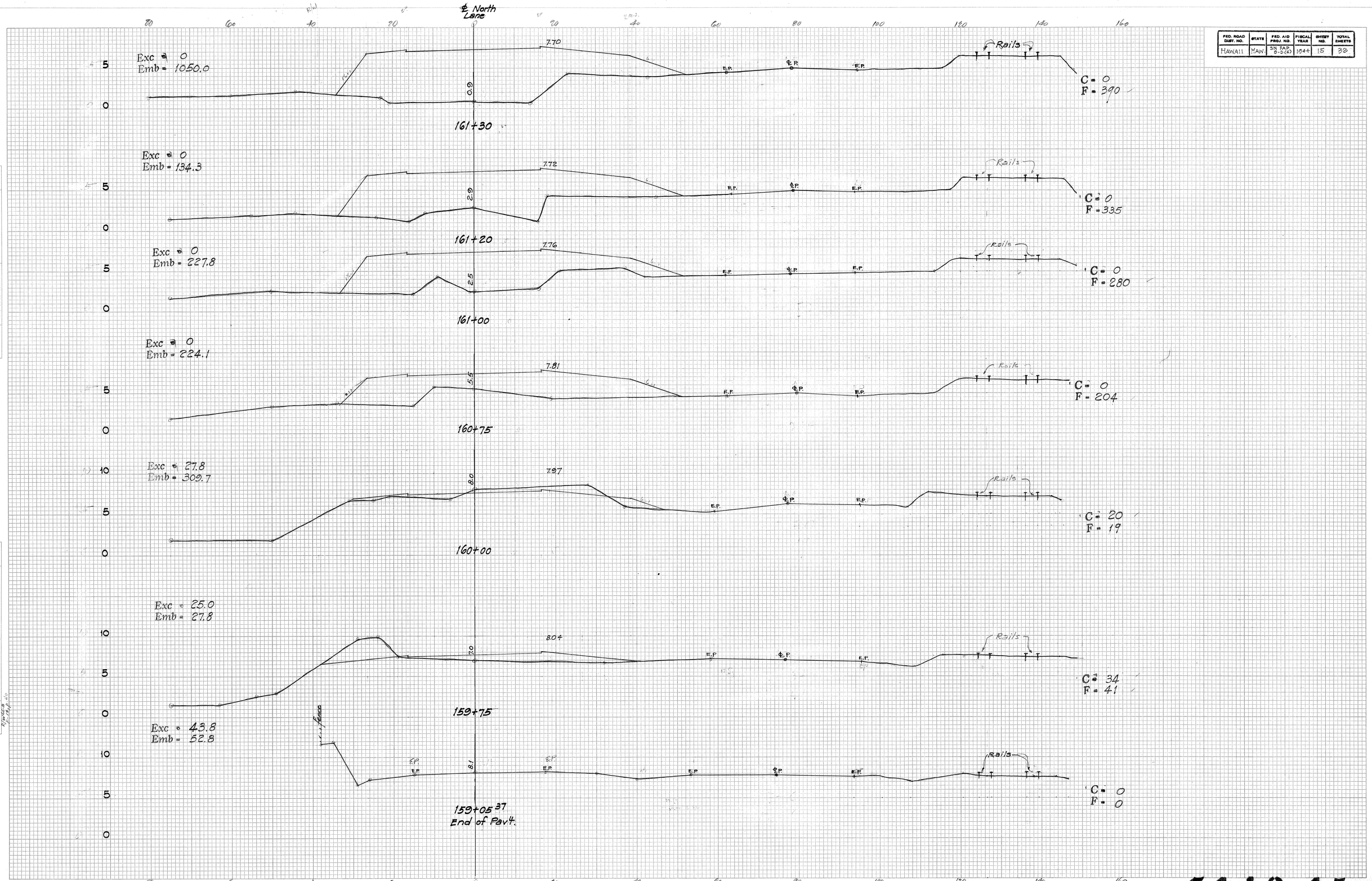
| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | SN FAP 0-0(4) | 1944 | 15 | 32 |




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

ORIGINAL SURVEY — SURVEYED, PLOTTED, TEMPLATE, AREAS, AREAS CHECKED — BY, DATE

PLATE 3 CROSS SECTION O. P. R. & R. E. STANDARD
KEUFFEL & ESSER CO., NEW YORK.
K & E CO. No. 345-3 MADE IN U. S. A. 34191-3

5142.15

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | SN FAP 9-D (4) | HAR | 16 | 33 |

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

ORIGINAL SURVEY — BY C.H.F.E.N. DATE 2/Dec/45 — SURVEYED, PLOTTED, NOTE BOOK, TEMPLATE, AREAS, AREAS CHECKED, NO. B-W-E-S-S-A-S-E-S-S-E-D-A-R-E-A-S

℄ North Lane

80 60 40 20 0 20 40 60 80 100 120 140 160

10 5 0 -5

Exc = 0
Emb = 815.7

7.26

Water

-1.0

Top Water

3:1

E.P. E.P. E.P. E.P.

Rails

C = 0
F = 447

163+50

Exc = 0
Emb = 830.6

7.36

-1.3

Top Water

3:1

E.P. E.P. E.P. E.P.

Rails

C = 0
F = 450

163+00

Exc = 0
Emb = 325.9

7.40

1.0

Top Water

3:1

E.P. E.P. E.P. E.P.

Rails

C = 0
F = 430

162+80

Exc = 0
Emb = 497.2

7.46

-1.3

Top Water

3:1

E.P. E.P. E.P. E.P.

Rails

C = 0
F = 465

162+50

Exc = 0
Emb = 810.4

7.56

-1.3

Top Water

3:1

E.P. E.P. E.P. E.P.

Rails

C = 0
F = 420

162+00

℄ North Lane

80 60 40 20 0 20 40 60 80 100 120 140 160

PLATE 1 CROSS SECTION O. P. R. & R. E. STANDARD
KEUFFEL & ESSER CO., NEW YORK.

K & E CO. No. 345-3 MADE IN U. S. A. 34191-3

5142.16

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW | SN F&P 8-D (4) | 1966 | 17 | 33 |

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

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

℄ North Lane

80 60 40 20 0 20 40 60 80 100 120 140 160

10 5 0

Exc = 0
Emb = 603.7

7.02

1.8

S.W. @ Bridge

E.P. ℄P

Rails

C = 0
F = 370

165+00

Exc = 0
Emb = 436.9

7.05

1.8

S.W. @ Bridge

R.R. Bridges

Water
Mud

C = 0
F = 345

164+67

Exc = 0
Emb = 85.8

7.05

1.9

E.P. ℄P S.W.

R.R. Bridges

Water
Mud

C = 0
F = 317

164+60

Exc = 0
Emb = 158.1

7.07

1.0

E.P. ℄P E.P. E.P. Rails

C = 0
F = 350

164+47 12

Exc = 0
Emb = 685.3

7.16

0.00

Top of Water

E.P. ℄P E.P. Rails

C = 0
F = 434

164+00

℄ North Lane

PLATE 3 CROSS SECTION U. P. R. & R. E. STANDARD
KEUFFEL & ESSER CO., NEW YORK.
K & E CO. No. 345-3 MADE IN U.S.A. 34191-3

5142.17

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | S-NFAS (29)(6) | 1944 | 18 | 93 |

£ North Lane

100 80 60 40 20 0 20 40 60 80 100 120 140 160

10 5 0 10 5 0 10 5 0 10 5 0 10

**169+00**

Exc = 1812.4
Emb = 5.6

7.78 — 6.8 — 5.8

E.P. E.P. E.P. T.B. Rails T.B. B.B.

C = 325
F = 2

**168+50**

Exc = 902.8
Emb = 283.3

7.55 — 5.8 — 5.8

E.P. E.P. E.P. T.B. T.B. B.B.

C = 0
F = 100

**167+00**

Exc = 0
Emb = 290.7

7.32 — 5.5 — 5.5

E.P. E.P. E.P. T.B. B.B.

C = 0
F = 215

**166+50**

Exc = 0
Emb = 393.5

7.20 — 4.0

E.P. E.P. E.P.

C = 0
F = 210

**166+00**

Exc = 0
Emb = 455.6

7.09 — 3.7

E.P. E.P. E.P. Rails T.B. B.B.

C = 0
F = 282

**165+50**

7.03 — 2.7

E.P. E.P. E.P. Rails

PLATE 3 - CROSS SECTION U.S. B. & R. E. STANDARD
KEUFFEL & ESSER CO., NEW YORK.
K & E CO. No. 345-3 MADE IN U.S.A. 34181-3

5142.18

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | SNFAP 9-D (2) | 1944 | 19 | 33 |

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

ORIGINAL SURVEY — SURVEYED, PLOTTED, TRACED, NOTE BOOK, NO., AREAS, AREAS CHECKED, BY, DATE — BY L.K. JR. TEM, DATE 7/5/44, 7/21/44

℄ North Lane — R/W

80 60 40 20 0 20 40 60 80 100 120 140

175+00 — Exc = Emb = — 9.18 — 2.0 — Rails — C = F =

174+00 — Exc = 1777.8 Emb = 159.3 — 8.05 — 2.25 — Rails — C = 230 F = 43

173+00 — Exc = Emb = — 8.71 — 3.0 — Rails — C = F =

172+00 — Exc = 1992.6 Emb = 229.6 — 8.48 — 4.2 — Rails — C = 308 F = 19

171+85 — Exc = Emb = — 8.45 — 5.4 — Rails — C = F =

171+00 — Exc = Emb = — 8.25 — 6.0 — Rails — C = F =

170+00 — Exc = 2363.0 Emb = 70.4 — 8.02 — 6.5 — Rails — C = 330 F = 0

E.P. T.F. B.F. T.B. B.B.

PLATE 3 - CROSS SECTIONS C. R. & R. E. STANDARD
KEUFFEL & ESSER CO., NEW YORK.
K & E CO. No. 345-3 MADE IN U. S. A. 36191-3

5142.19

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW | SNFAP 9-D(4) | 1944 | 20 | 33 |

℄ South Lanes

℄ North Traffic Lane

Exc = 143.7
Emb = 33.6

0.88

Rails

U.S.E.D. Gate

C = 107
F = 25

E.P.

178+00

Exc =
Emb =

0.85

T.F.

T.B.

C =
F =

177+00

Exc =
Emb =

0.58

Rails

C =
F =

176+71

Exc =
Emb =

0.53

Rails

C =
F =

176+50

Exc = 1322.2
Emb = 92.6

0.41

Rails

C = 250
F = 0

176+00

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

K & E CO. No. 345-3 MADE IN U.S.A. 34181-3

5142.20

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | SN FAS A-D(9) | 1944 | 21 | 33 |

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

ORIGINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — TEMPLATE — AREAS — CROSS CHECKED — BY T.F.N.E. — DATE 7/44

℄ North Traffic Lane

Exc
Emb

179+00

℄ Stream

EXCEPTION-BRIDGE 2

178+75 73 (on Bridge)

B.P. E.P. E.P. 5'8" (Tr. Rails) 5'8" (Tr. Rails) 5'8" (Tr. Rails) 5'8" (Tr. Rails) T.B. B.B.

C = 0
F = 0

Rails

C = 0
F = 0

Exc
Emb

10.05

178+75 73

Rails

C =
F =

Exc
Emb

178+63

Top Mud

Mud

Bott. Mud

Rails

C =
F =

60 40 20 0 20 40 60 80 100 120 140 160 180 200 220 240

PLATE 3 - CROSS SECTION U. S. P. R. & R. E. STANDARD

KEUFFEL & ESSER CO., NEW YORK.

K & E CO. No. 345-3 MADE IN U.S.A. 341911-3

5142.21

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW | SN PAP 9-D(6) | 19Ak | 22 | 33 |

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

ORIGINAL SURVEY — SURVEYED 7-8-58, PLOTTED 7-22-58, NOTE BOOK 1-58 pp 55-58, TEMPLATE, AREAS, CROSS SECTIONS CHECKED, NO., DATE 7-22-58, BY T.F.G. & J.J.F.

Note: For detail of Bridge see Bridge Plan

BRIDGE NO 2 EXCEPTION

℄ North Traffic Lane

℄ North Traffic Lane

Exc. =
Emb. =

180+92.3

Top Mud
Mud
Bott. Mud

Rails

C. =
F. =

℄ South Lane

Exc. = 0
Emb. = 524.0

180+92.2

55 Mud

160 ft

Exc. =
Emb. =

180+65

Stream

Deck of Bridge

Exc. =
Emb. =

180+56.1

Top Mud along Stream

Exc. =
Emb. =

180+00

℄ Mauka Abut. Line

180+00

Top Mud

PLATE 3. CROSS SECTION O. P. R. & R. E. STANDARD
KEUFFEL & ESSER CO., NEW YORK.
K & E CO. No. 348-3 MADE IN U.S.A. 39191-2

5142.22

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | SN FAP 9-D(4) | 1944 | 23 | 33 |

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

ORIGINAL SURVEY — SURVEYED, PLOTTED, TEMPLATE, NOTE BOOK 24-60 1944, AREAS, AREAS CHECKED, NO., DATE 7/24/44 7/26/44, BY T.K.W.F.

℄ M.S.

℄ North Lane — ℄ South Lane

## 185+00

Exc = ~~0~~
Emb = ~~0~~

11.4 — C=12.0 — 8.86 — 2.0 — April 25, 1945 — Berm — 3.36 — 5.0 — F=368 — E.P. — ℄ P. — E.P. — Rails

C = 120
F = 368

Exc = 375.9
Emb = 1368.5

## 185+00

Exc = ~~0~~
Emb = ~~0~~

11.3 — C=8.3 — 8.95 — 1.6 — April 25, 1945 — Berm — 3.58 — 4.0 — F=371 — ORE.L.RW — E.P. — ℄ P. — E.P. — Rails

C = 83
F = 371

Exc = 255.6
Emb = 1501.8

## 184+00

Exc = ~~0~~
Emb = ~~0~~

10.5 — 3.26 — C=5.5 — 2.1 — April 25, 1945 — Berm — 3.80 — F=440 — ORE.L.RW — E.P. — ℄ P. — E.P. — Rails

C = 55
F = 440

Exc = 84.2
Emb = 789.8

## 183+00

Exc = ~~0~~
Emb = ~~0~~

9.9 — 3.42 — C=3.6 — 2.9 — April 25, 1945 — 3.51 — F=413 — ORE.L.RW — E.P. — ℄ P. — E.P. — Rails

C = 36
F = 413

Exc = 36.1
Emb = 798.1

## 182+50

Exc = ~~0~~
Emb = ~~0~~

9.9 — 3.58 — C=2.3 — 2.2 — April 25, 1945 — 10.02 — F=449 — ORE.L.RW — E.P. — ℄ P. — E.P. — Rails

C = 3
F = 449

Exc = 21.3
Emb = 809.2

## 182+00

## 181+50

Exc = ~~10~~ ~~5~~
Emb = ~~5~~ ~~0~~

10.26 — C=2.0 — 3.75 — 1.85 — April 25, 1945 — 10.13 — F=425 — E.P. — ℄ P. — E.P. — Rails

Sta 181+50 C = 20 F = 425

## 181+00

**NOTE:** Sections from Sta 181+50 to Sta 193+00 as shown on Sheets № 5142.23 to № 5142.26 inclusive represent grading quantities to the Right of Centerline of North Lanes, Kamehameha Highway.
For quantities Left of Centerline of North Lanes, see Sheets № 5142.23A to № 5142.26A inclusive.

E/W 66 B
147-25
Pcs. 4

PLATE 3 CROSS SECTIONS, R. & R. E. STANDARD
KEUFFEL & ESSER CO., NEW YORK.
K & E CO. No. 345-3 MADE IN U.S.A. 241911-3

5142.23

220 200 180 160 140 120 100 80 60 40 20 0 20 40

℄ North Lane.

South Lane ℄

New R/W Line

184 + 00

C = 130
CB = 966

Exc. = 232.4
Exc. BP = 1739.9

CB = 966
C = 130
11.3
8.95
April 25, 1945

183 + 50

C = 121
CB = 913

Exc. = 195.4
Exc. BP = 1511.2

CB = 919
C = 121
11.0
9.03
April 25, 1945

183 + 00

C = 90
CB = 719

Exc. = 142.6
Exc. BP = 1163.9

CB = 719
C = 90
10.6
9.26
April 25, 1945

182 + 50

C = 64
CB = 538

Exc. = 105.6
Exc. BP = 725.0

CB = 538
C = 64
9.9
9.42
April 25, 1945

182 + 00

C = 50
CB = 245

Exc. = 60.2
Exc. BP = 264.8
Emb. = 27.8

CB = 245
C = 50
9.9
9.58
April 25, 1945

181 + 50

C = 15
CB = 41
F = 30

CA = 41
F = 28
C = 15
10.3
9.75
April 25, 1945

B.P. = Borrow Pit

**NOTE:** Sections from Sta. 181+50 to Sta. 193+00 as shown on Sheets No. 5142.23A to No. 5142.26A inclusive represent grading quantities to the Left of Centerline of North Lanes.
For quantities Right of Centerline of North Lanes including South Lanes of Kamehameha Highway See Sheets No. 5142.23 to No. 5142.26 inclusive.

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 PAPER - U. S. B. R. & R. E. STANDARD
KEUFFEL & ESSER CO., NEW YORK.
K & E CO. No. 345-3 MADE IN U. S. A. 34191-3

5142.23A

5142.23-A

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW | S.N.F.A.P. 9-D(8) | 1944 | 24 | 33 |

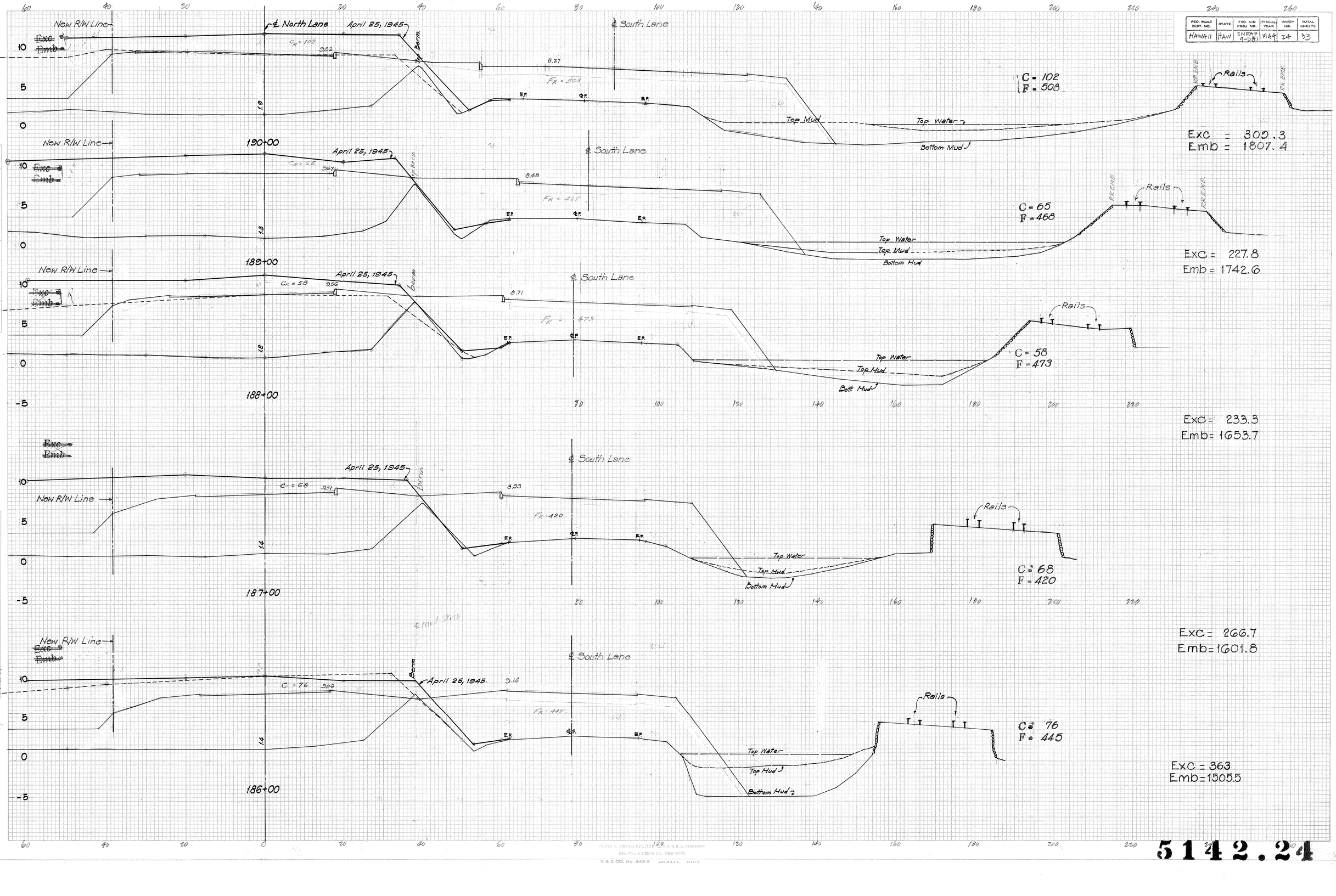



PLATE 5 CROSS SECTIONS U.S. P.R.& R.E. STANDARD
KEUFFEL & ESSER CO. NEW YORK.
K & E CO. No. 345-3 MADE IN U.S.A.

5142.24

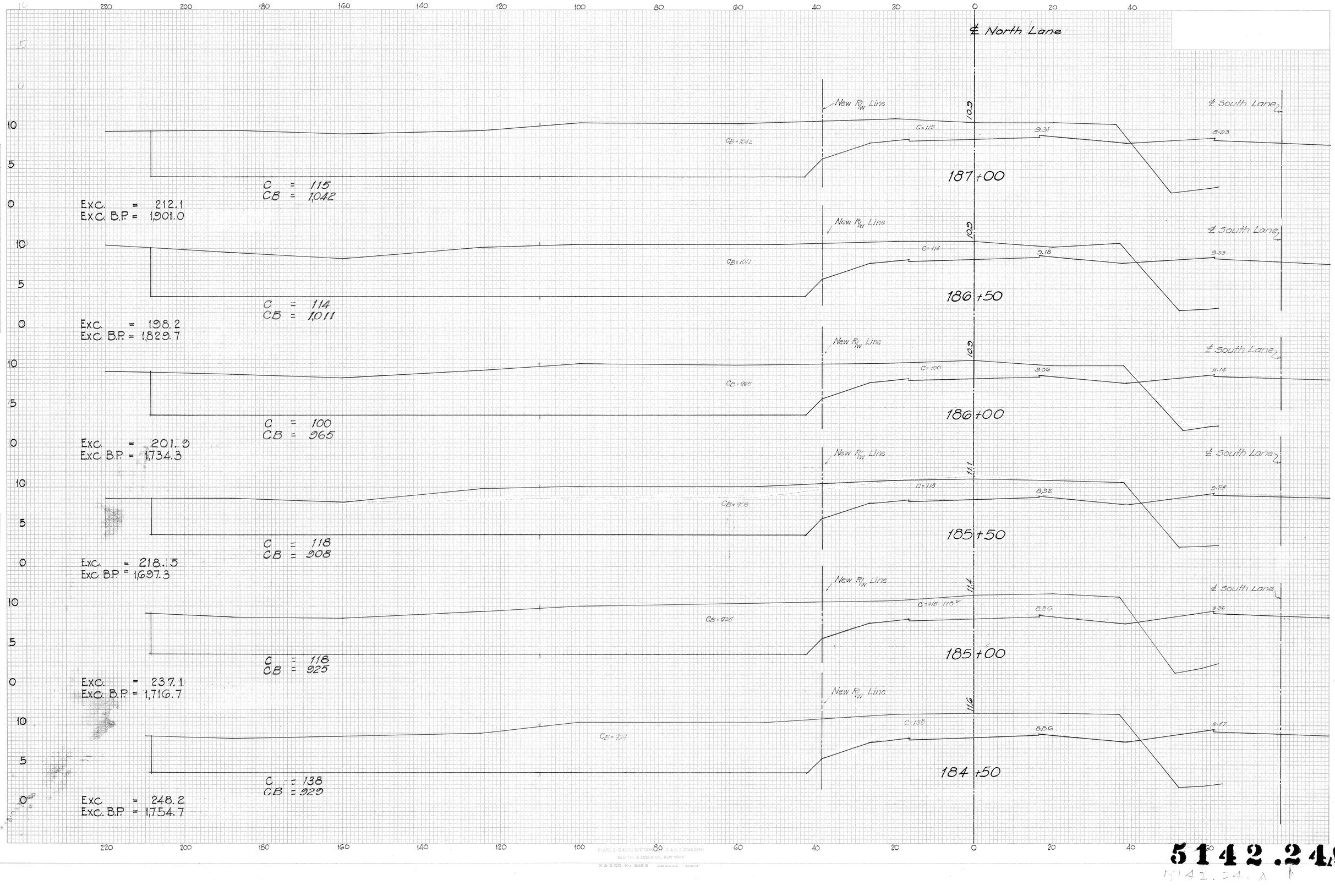



PLATE 3: CROSS SECTIONS U.S.R.R.A.R.E. STANDARD
KEUFFEL & ESSER CO., NEW YORK.
K & E CO. No. 345-S

5142.24A
5142.24-A

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW | S-N FAP 9-D (4) | 1944 | 25 | 33 |

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

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

Sta 192+50 to 192+75 →

Exc. = 22.0
Emb. = 0

Sta. 0+00 (Old ℄ South Lane - Middle St.)

New R/W Line

April 25, 1945

℄ North Lane

C=47

8.77

Top Berm

(Profile Line)

3.0

2.0

192+50

E.P.

℄ P.

E.P.

Section taken to Track NOT PLOTTED

C = 47
F = 0

Exc = 165.7
Emb = 13.9

Exc = 0
Emb = 0

New R/W Line

April 25, 1945

8.02

C=132

Top Berm

F=15

Sta. -0+50 (Old ℄ South Lane - Middle St.)

℄ North Lane

2.9

192+00

E.P.

℄ P.

E.P.

Top Water

Section taken to Track NOT PLOTTED

C = 132
F = 15

Exc = 237.0
Emb = 430.5

Exc = 0
Emb = 0

April 25, 1945

9.07

C=125

Top Berm

7.94

℄ South Lane

2.4

F=450

E.P.

℄ P.

E.P.

Top Water

Section taken to Track NOT PLOTTED

C = 125
F = 450

Exc = 231.5
Emb = 833.3

Exc = 0
Emb = 0

New R/W Line

191+50

April 25, 1945

9.22

C=125

Top Berm

8.05

℄ North Lane

2.3

℄ South Lane

F=450

E.P.

℄ P.

E.P.

See Middle St. Sections

Top Water

R.R. Track

To R.R. Emb.

C = 125
F = 450

Exc = 222.2
Emb = 847.2

Exc = 0
Emb = 0

New R/W Line

191+00

April 25, 1945

9.37

C=115

Top Berm

8.16

℄ South Lane

1.8

F=465

E.P.

℄ P.

E.P.

Top Water

Top Rails

C = 115
F = 465

Exc = 200.9
Emb = 900.9

Exc = 0
Emb = 0

190+50

P.C. 190+38.78

C =
F =

PLATE 3 CROSS SECTION U. P. R. & R. E. STANDARD
KEUFFEL & ESSER CO., NEW YORK.
K & E CO. No. 345-3 MADE IN U.S.A.

5142.25

220 200 180 160 140 120 100 80 60 40 20 0 20 40

℄ North Lane.

10 5 0

New $R_{/W}$ Line

℄ South Lane

11.1

3.52

3.93

190 +00

$C_B$ = 1,170

C = 84
CB = 1,170

Exc. = 160.2
Exc. B.P. = 2176.0

10 5 0

New $R_{/W}$ Line

℄ South Lane

11.8

C = 89

3.41

3.98

189 +50

$C_B$ = 1,170

C = 89
CB = 1,180

Exc. = 171.3
Exc. B.P. = 2157.4

10 5 0

New $R_{/W}$ Line

11.9

C = 96

3.67

℄ South Lane

3.45

189 +00

$C_B$ = 1,150

C = 96
CB = 1,150

Exc. = 177.8
Exc. B.P. = 2134.3

10 5 0

New $R_{/W}$ Line

11.7

C = 96

3.65

℄ South Lane

3.60

188 +50

$C_B$ = 1,155

C = 96
CB = 1,155

Exc. = 174.1
Exc. B.P. = 2097.2

10 5 0

New $R_{/W}$ Line

11.6

C = 92

3.56

℄ South Lane

3.71

188 +00

$C_B$ = 1,110

C = 92
CB = 1110

Exc. = 196.3
Exc. B.P. = 2064.8

10 5 0

New $R_{/W}$ Line

11.3

120

3.44

℄ South Lane

3.56

187 +50

$C_B$ = 1,120

C. = 120
C.B. = 1,120

Exc. = 217.6
Exc. B.P. = 2001.9

220 200 180 160 140 120 100 80 60 40 20 0 20 40

PLATE 3 - CROSS SECTIONS - K. & E. STANDARD
KEUFFEL & ESSER CO., NEW YORK.
K & E CO. No. 345-3 MADE IN U.S.A. 34181-0

5142.25A

5142.25-A

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

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

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 42W31 | NEW | STP-B(2) | 1942 | 20 | 22 |

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

ORIGINAL SURVEY — DATE 11/16/42 — BY E.J.H. — SURVEYED E.J.H. — COMPUTED — TEMPLATE — NOTE BOOK Misc. Bk. 4 P. 35-39 — AREAS — AREAS CHECKED — NO. 1

P/M 56-C P.H.

Exc = 0
Emb = -

Sta. 1+50 Middle St.

℄ North Lane

8.17

℄ South Lane

Conc. Slab

F=438

E.P.

℄ P.

E.P.

5.6

194+50

C = 0
F = 438

Exc = 0
Emb = 928.7

Sta. 1+00 ℄ South Lane - Middle St.

℄ North Lane

8.32

℄ South Lane

7.32

F=565

5.0

194+00

C = 0
F = 565

Exc = -
Emb = -

℄ North Lane

8.47

6.2

F.P.

4.4

193+50

C =
F =

Exc = -
Emb = -

℄ North Lane

3.9

193+05.27

C =
F =

Exc = -
Emb = -

New R/W Line

Sta. 0+50 (Old ℄ South Lane - Middle St.)

℄ North Lane

8.62

℄ South Lane

2.0

193+00

C = 0
F = 0

PLATE 3 - CROSS SECTION O. P. R. & R. E. STANDARD
KEUFFEL & ESSER CO., NEW YORK.
K & E CO. No. 345-3 MADE IN U.S.A. 24181-2

5142.26

220 200 180 160 140 120 100 80 60 40 20 0 20 40

10 5 0

New $R_{/W}$ Line

℄ North Lane

Sta. 0+50 (Old ℄ South Lane - Middle St.)

(Middle St. Cross Section)

193+00

C = 156
CB = 618

Exc. = 311.1
Exc. B.P. = 1389.0

New $R_{/W}$ Line

℄ North Lane

Sta. 0+00 (Old ℄ South Lane Middle St.)

192+50

C = 180
CB = 883

Exc. = 277.8
Exc. B.P. = 1765.8

New $R_{/W}$ Line

℄ North Lane

192+00

C = 120
CB = 1,024

Exc. = 192.6
Exc. B.P. = 1913.0

New $R_{/W}$ Line

℄ North Lane

191+50

C = 88
CB = 1,042

Exc. = 163.0
Exc. B.P. = 2025.0

New $R_{/W}$ Line

℄ North Lane.

191+00

C = 88
CB = 1,145

Exc. = 146.3
Exc. B.P. = 2382.4

New $R_{/W}$ Line

℄ North Lane

190+50

C = 70
CB = 1,428

Exc. = 142.6
Exc. B.P. = 2405.6

220 200 180 160 140 120 100 80 60 40 20 0 20 40

PLATE 3 CROSS SECTION P. R. & R. E. STANDARD
KEUFFEL & ESSER CO., NEW YORK
K & E CO. No. 345-3 MADE IN U.S.A.

5142.26A

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

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 8 | HAWAII | BRM-B-[illegible] | 1964 | 27 | 33 |

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

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

197+44.27

Exc = 0
Emb = 0

Deck Conc. Bridge
7.55
4.0
S.W.
Top Water
Bott. Stream
℄ North Lane
℄ P.
E.P.
℄ S.L.
C = 0
F = 0

197+00

Exc = 0
Emb = 0

Top Water
Bottom Stream
Edge Kalihi Stream (West Bank)
C = 0
F = 0

196+50

Exc = 0
Emb = 0

℄ North Lane
3.0
C = 0
F = 0

196+00

Exc = 0
Emb = 0

4.7
7.7
Edge Kalihi Stream (West Bank)
C = 0
F = 0

195+50

Exc = 0
Emb = 0

6.7
7.87
4.8
3.8
C = 0
F = 0

Elevations to Mean Sea Level Datum

195+00

Exc = 0
Emb = 0

Existing Ground (Kalihi Stream)
Conc. Floor
℄ North Lane
5.0
8.02
F = 2.10
℄ South Lane
C = 0
F = 2.10

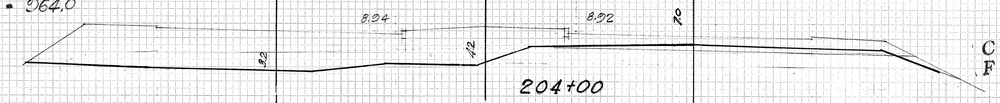
Exc = 0
Emb = 600.0

PLATE 3. CROSS SECTION (U.P.R. & R.E. STANDARD)
KEUFFEL & ESSER CO., NEW YORK.
K & E CO. No. 345-3 MADE IN U.S.A. 34191-2

5142.27

| F.A.I. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWAII | HAW. | BNFAP0008 | 1944 | 28 | 35 |

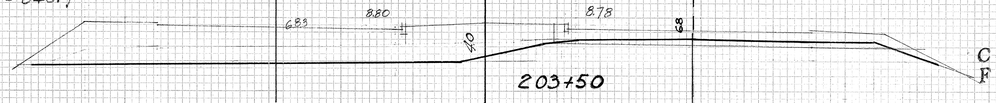
Exc = 54.0
Emb = 964.0




204+00

C = 30
F = 454

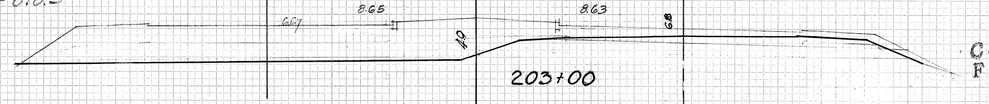
Exc = 52.3
Emb = 840.7




203+50

C = 34
F = 454

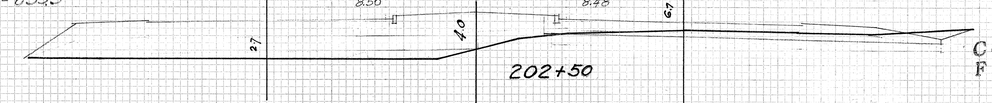
Exc = 72.2
Emb = 818.5




203+00

C = 44
F = 430

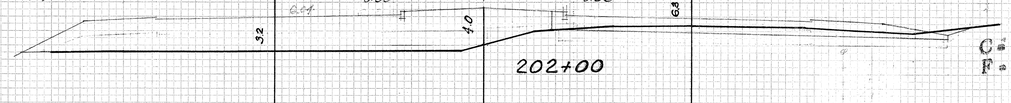
Exc = 81.5
Emb = 833.3




202+50

C = 44
F = 470

Exc = 81.5
Emb = 870.4




202+00

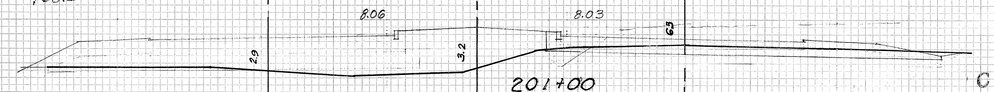
C = 44
F = 470

Exc = 87.0
Emb = 805.6

201+50

C = 50
F = 400

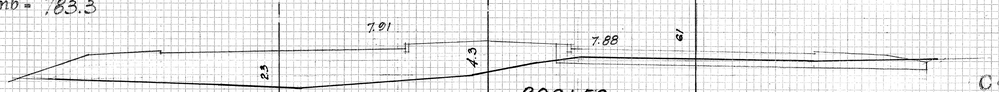
Exc = 101.9
Emb = 768.5




201+00

C = 60
F = 430

Exc = 105.5
Emb = 783.3




200+50

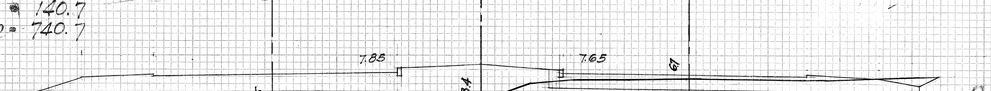
C = 54
F = 416

Exc = 111.1
Emb = 746.3

200+00

C = 66
F = 390

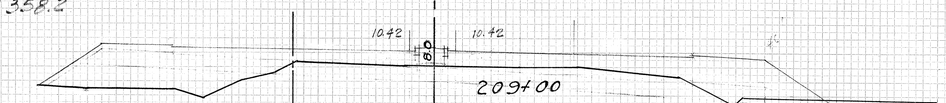
Exc = 140.7
Emb = 740.7




199+50

C = 86
F = 410

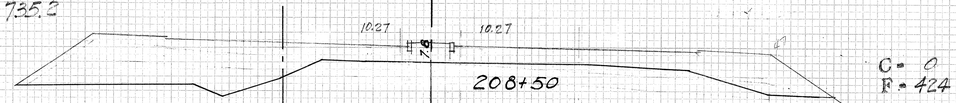
Exc = 0
Emb = 358.2




209+00

C = 0
F = 370

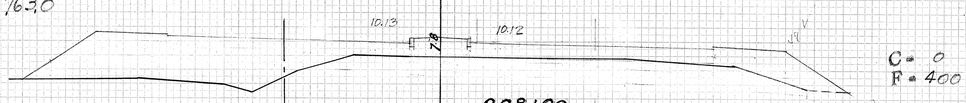
Exc = 0
Emb = 735.2




208+50

C = 0
F = 424

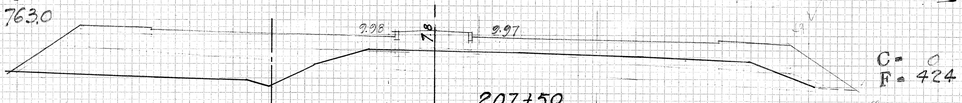
Exc = 0
Emb = 763.0




208+00

C = 0
F = 400

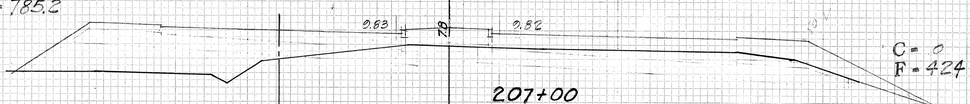
Exc = 0
Emb = 763.0




207+50

C = 0
F = 424

Exc = 0
Emb = 785.2




207+00

C = 0
F = 424

Exc = 0
Emb = 831.5




206+50

C = 0
F = 474

Exc = 0
Emb = 892.6

206+00

C = 0
F = 430

Exc = 64.8
Emb = 858.1

205+50

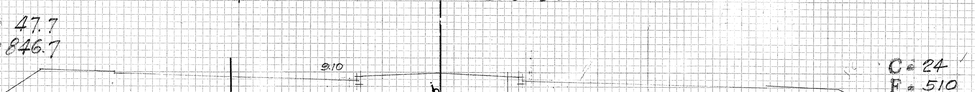
C = 70
F = 480

Exc = 94.4
Emb = 892.6

205+00

C = 32
F = 484

Exc = 47.7
Emb = 846.7




M.S. 204+54 to 204+54

C = 24
F = 510

5142.28

PLATE 3 - CROSS SECTION C. P. R. & R. F. STANDARD
KEUFFEL & ESSER CO., NEW YORK
K & E CO. No. 345-3 MADE IN U.S.A.

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

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | NO. SHEETS |
|---|---|---|---|---|---|
| 13W21 | 432 | N-FAP 5(23) | 1944 | 20 | 33 |

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

ORIGINAL SURVEY — SURVEYED, PLOTTED, TEMPLATE, AREAS — BY E. K. — DATE 7-7-44 — NOTE BOOK 13W21A P. 15 — NO.

Scale: Hor. 1"=20'. Ver. 1"=5'.

## ℄ South Lanes

Exc = 0
Emb = 915.8

F = 402

C = 0
F = 402

New ℄ South Lane

-(1+50)

Exc = 0
Emb = 391.7

O R & L R/W Line

C = 0
F = 21

-(2+00)

Exc = 0
Emb = 557.9

-(2+24½)

6.1" (T. Rail)
5.8" (T. Rail)
5.8" (T. Rail)
5.8" (T. Rail)

C = 0
F = 0

In Fill

-(2+39)

Exc =
Emb =

6.2" (T. Rail)
5.8" (T. Rail)
5.8" (T. Rail)
5.8" (T. Rail)

C = 0
F = 0

-(2+50)

Exc =
Emb =

6.2" (T. Rail)
5.8" (T. Rail)
5.7" (T. Rail)
5.6" (T. Rail)

C = 0
F = 0

-(2+74)



5142.30

Sh. 17

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| Hawaii | Hawaii | S-FA | 1949 | 31 | 32 |

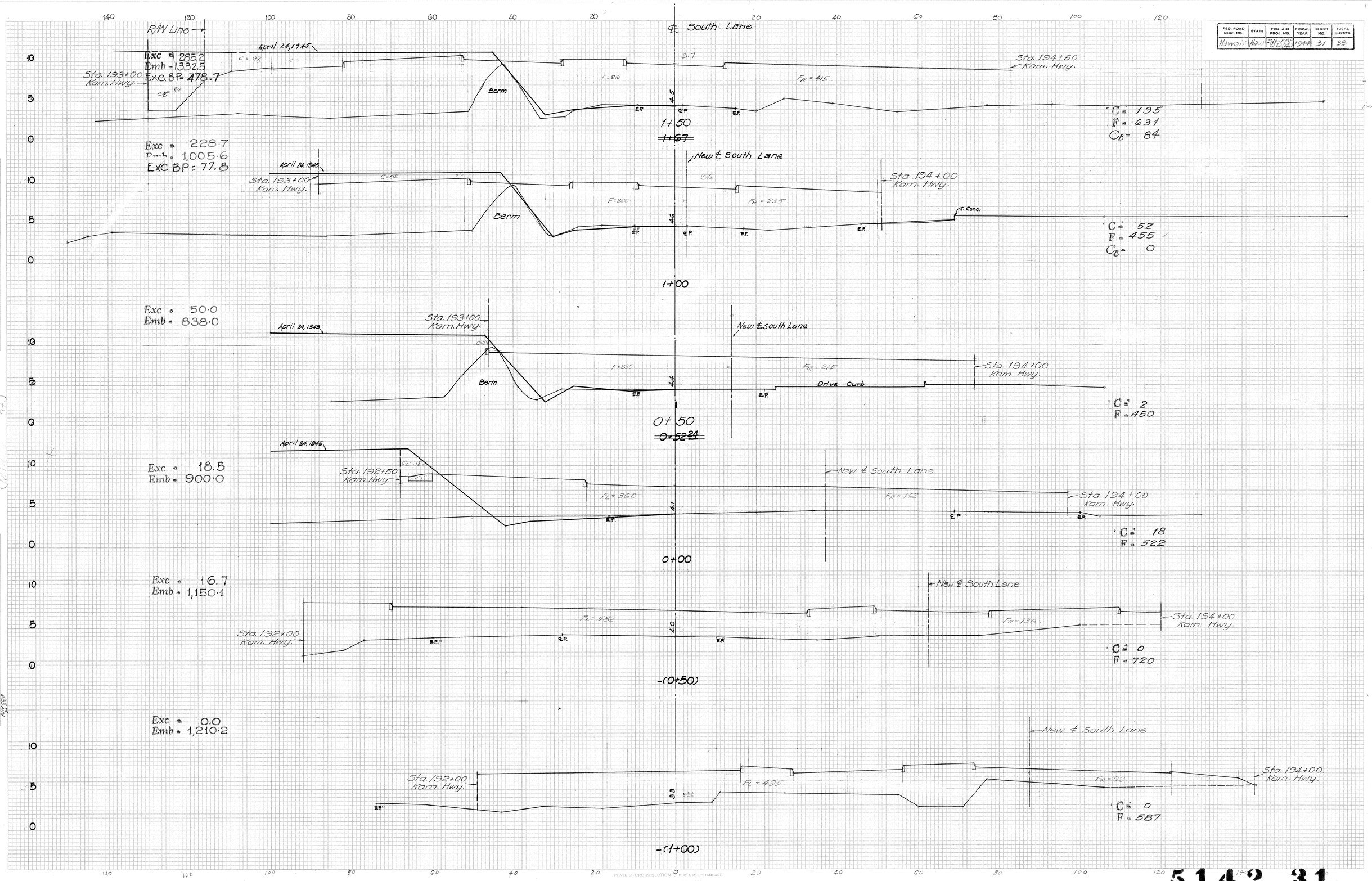



PLATE 3: CROSS SECTION U. S. P. R. & R. E. STANDARD
KEUFFEL & ESSER CO., NEW YORK.
K & E CO. No. 345-3 MADE IN U.S.A. 34181-3

5142.31

Sh. 2

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| HAWSII | HAW | SN-F-H-3(64) | 1944 | 32 | 33 |

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

ORIGINAL SURVEY — SURVEYED / PLOTTED / TEMPLATE / NOTE BOOK RM 652 P. 23 / AREAS CHECKED / NO. — DATE 7/44 / BY

℄ 3 Lanes

Exc = 0
Emb = 594.5

R/W Line

Coral Fill

April 24, 1945

Berm

E.Pond

E.P.

℄ P.H.

E.P.

F=230

8.82

F = 102

C.R.M. Bus Well

Fence

4.9

4.21

10 / 5 / 0

4+00

C = 0
F = 341

Exc = 2.8
Emb = 616.7

R/W Line

April 24, 1945

F=36

8.3

8.33

F=170

F = 119

R/W

E.P.

E.P.

4.9

3+50

C = 3
F = 324
$C_B$ = 0

Exc = 63.0
Emb = 689.8
Exc. B.P. = 37.2

New R/W Line

April 24, 1945

C=69

CB=165

9.16

F = 221

F = 200

R/W

Coral Fill

Berm

E.P.

E.P.

E.P.

4.7

Ditch

Ditch

Water

T.F.

B.F.

3+00

C = 65
F = 421
$C_B$ = 105

Exc = 176.5
Emb = 872.2
Exc. B.P. = 580.6

New R/W Line

April 24, 1945

C=131

CB=522

9.34

F=246

F 275

E.P.

E.P.

4.5

~ M u d ~

Bottom Mud

2+50

C = 131
F = 521
$C_B$ = 522

Exc = 226.0
Emb = 1230.6
Exc. B.P. = 884.3

New R/W Line

April 24, 1945

C=113

CB=433

3.51

F=196

F 612

Sta. 193+00 (Kam Hwy)

Berm

E.P.

E.P.

E.P.

4.4

T.F.

B.F.

Sta. 195+00 (Kam Hwy)

2+00

C = 113
F = 808
$C_B$ = 433

NOTE: Exc. B.P. = Borrow Pit.

140 120 100 80 60 40 20 0 20 40 60 80 100 120

PLATE 3 - CROSS SECTION - U.S.R.A. & E. STANDARD
KEUFFEL & ESSER CO. NEW YORK
K & E CO. No. 345-3 MADE IN U.S.A.

5142.32

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | SHEETS |
|---|---|---|---|---|---|
| 4 | Wash | F-81 (4) | 1944 | 33 | 53 |

Vol

℄ South Lanes.

℄ South Lanes

Exc = 31.5
Emb = 768.5

7+78

$C_L$=4 F = $F_L$=195 $F_R$=82

10 / 5 / 0

E=4

April 24, 1945

T.R. B.F. E.P. ℄P.R.R. E.P. Fence

5.4

C = 5
F = 294

7+00

Exc = 93
Emb = 1094.4

8+12

C=0. F=247 $F_R$=50

10 / 5 / 0

April 24, 1945

T.R. B.F. E.P. ℄P.R.R. E.P. Fence

5.6 5.51

C = 0
F = 297

6+00

Exc = 0
Emb = 1070.4

8+47

C=0 F=202 $F_R$=70

10 / 5 / 0

April 24, 1945

Berm E.P. ℄P.R.R. E.P. Fence

5.5 5.48

C = 0
F = 281

5+00

Exc = 0
Emb = 538.9

8+47

C=0. F=216 $F_R$=55

10 / 5 / 0

April 24, 1945

Berm T.O. E.P. ℄P.R.R. E.P. Fence

5.5 5.28

C = 0
F = 301

4+50
~~4+70~~

11+00

Exc. =
Emb. =

C=0. F=44 $F_R$=16

10 / 5

April 24, 1945

7.76

C = 0
F = 60

9+00

Exc = 22.2
Emb = 335.2

7+43

$C_L$=0 $F_L$=91 $C_R$=14 $F_R$=30

10 / 5 / 0

April 24, 1945

Swamp Ditch 5.55 (T. Rail) 5.39 (T. Rail) 5.41 E.P. T.R. Fence

C = 12
F = 121

8+00

Exc =
Emb =

7+42

10 / 5 / 0

Swamp Ditch 5.54 (T. Rail) 5.41 5.44 (T. Rail) E.P. E.P. Fence

C =
F =

7+92.39

100 80 60 40 20 0 20 40 50 40 20 0 20 40

PLATE 3 CROSS SECTION, C. P. R. & P. C. STANDARD
KEUFFEL & ESSER CO., NEW YORK.
K & E CO. No. 345-3 MADE IN U.S.A. 241911-0

DATE 7/44 1/44 | BY J. F. E. M. | ORIGINAL SURVEY: SURVEYED, PLOTTED, TEMPLATE, AREAS, NOTE BOOK, AREAS CHECKED, NO. Ellensburg A-3

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

5142.33

Sheet