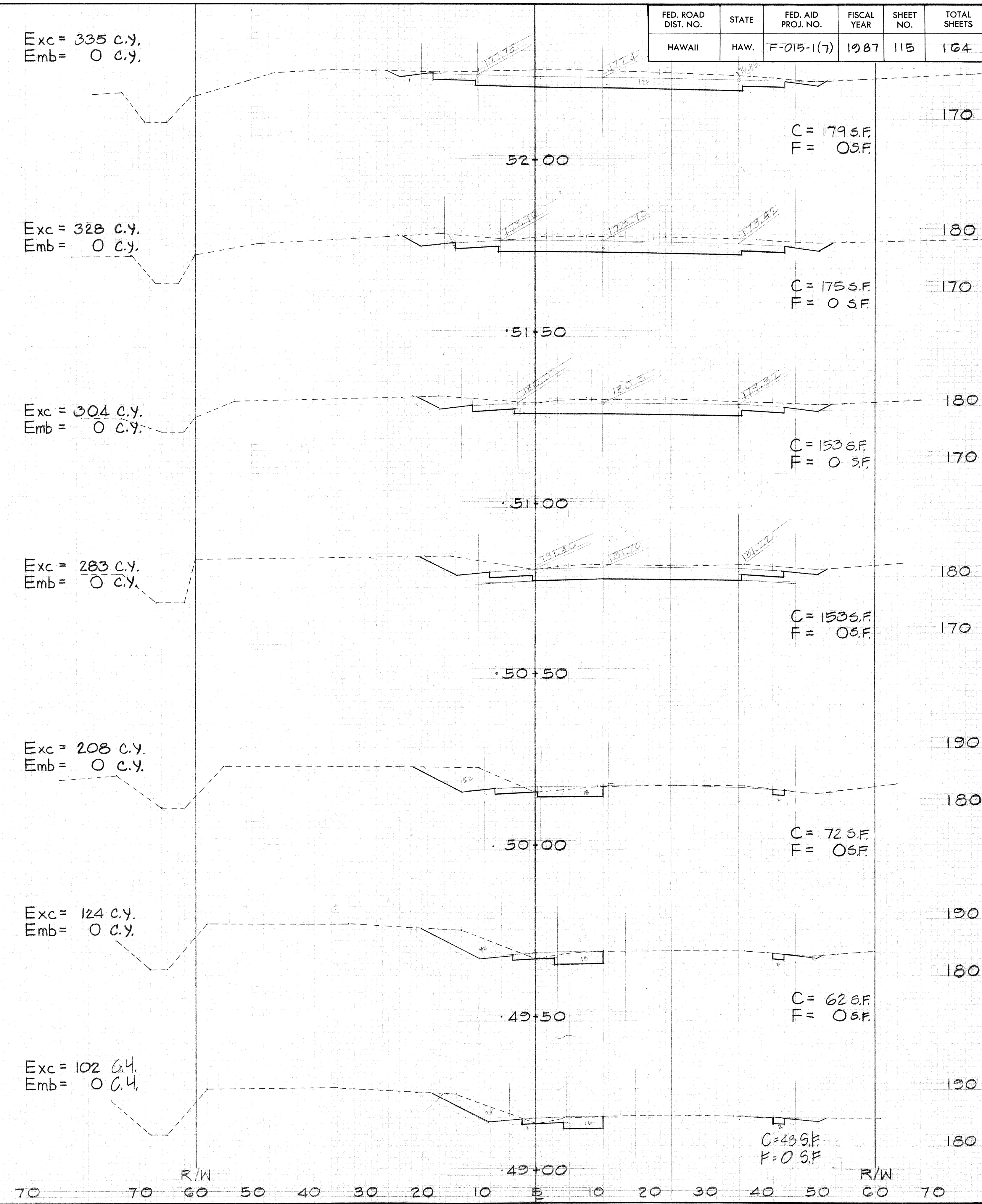
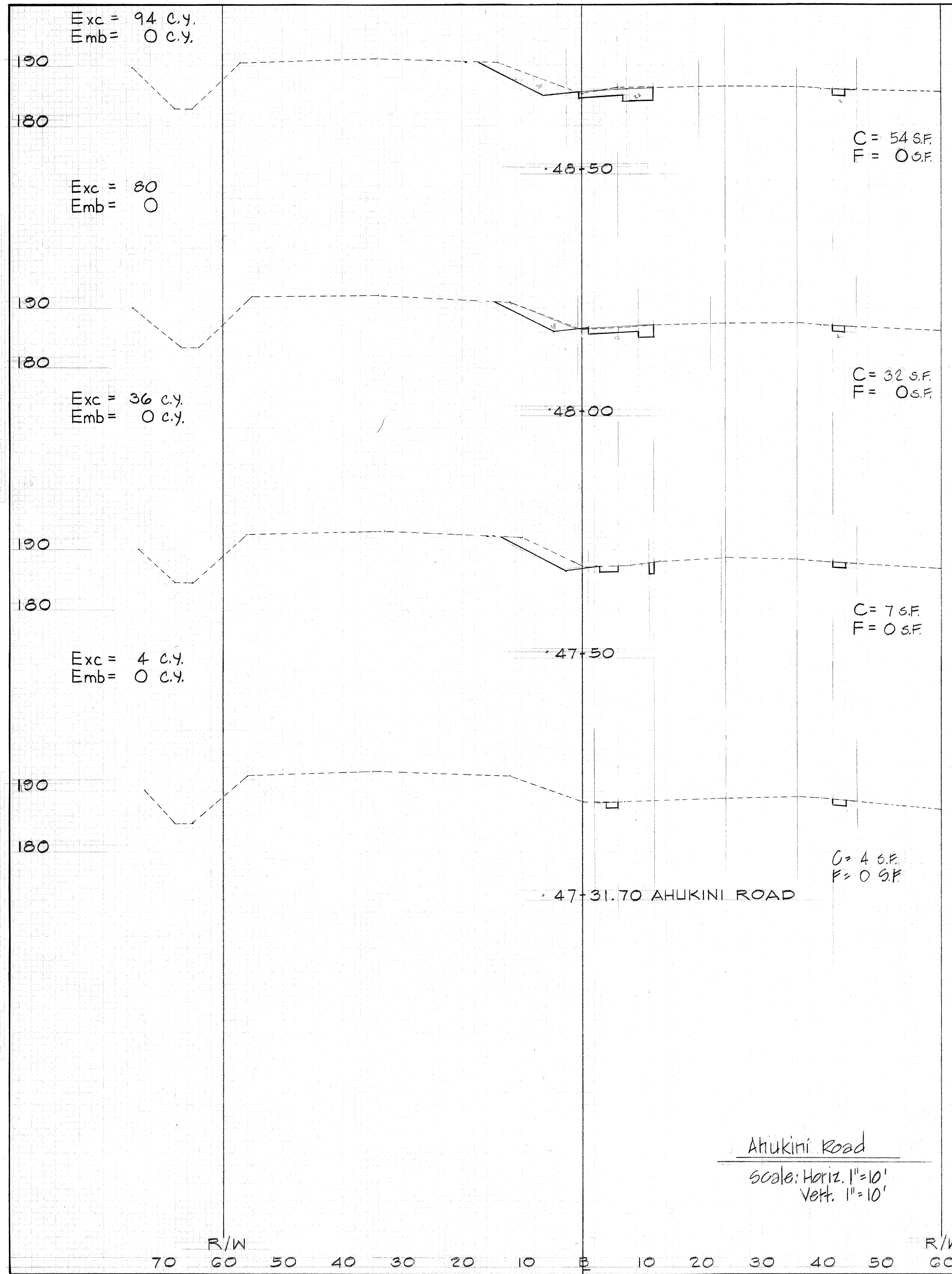


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-015-1(7)	1987	115	164



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-051-1(7)	1987	116	164

Exc = 840
Emb = 79

180

170

Exc = 776 C.Y.
Emb = 52 C.Y.

180

170

Sta. 57+50 Hanamaulu-
Ahukini Cut-Off Rd.

C = 511
F = 51

Sta. 55+50
Kapule Hwy.

C = 327 S.F.
F = 5 S.F.

Exc = 559 C.Y.
Emb = 5 C.Y.

180

170

Exc = 471 C.Y.
Emb = 0 C.Y.

180

170

C = 277 S.F.
F = 0 S.F.

Exc = 402 C.Y.
Emb = 0 C.Y.

180

170

C = 232 S.F.
F = 0 S.F.

Exc = 356 C.Y.
Emb = 0 C.Y.

180

170

C = 202 S.F.
F = 0 S.F.

C = 183 S.F.
F = 0 S.F.

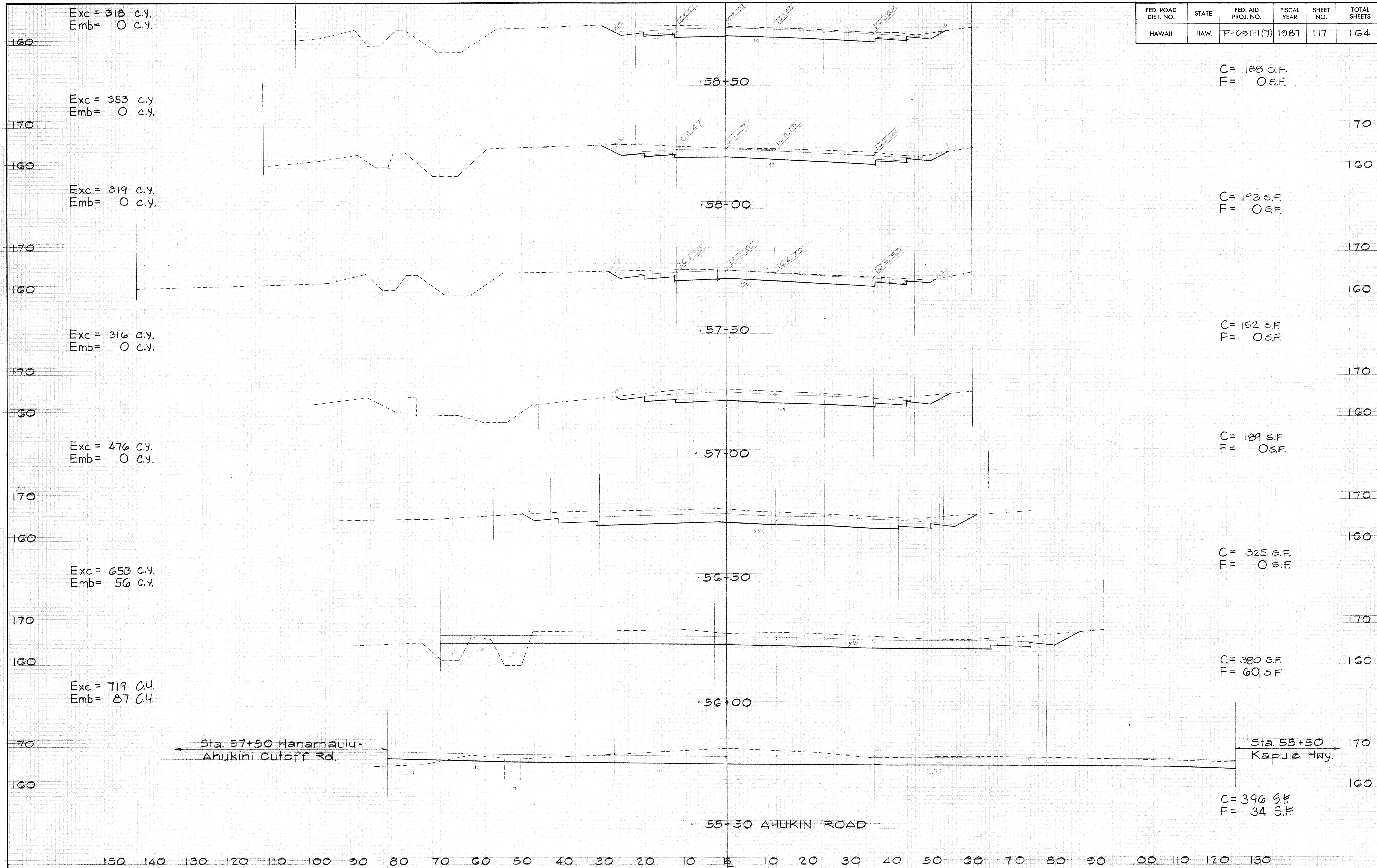
52+50 AHUKINI ROAD

130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-051-1(7)	1987	117	164

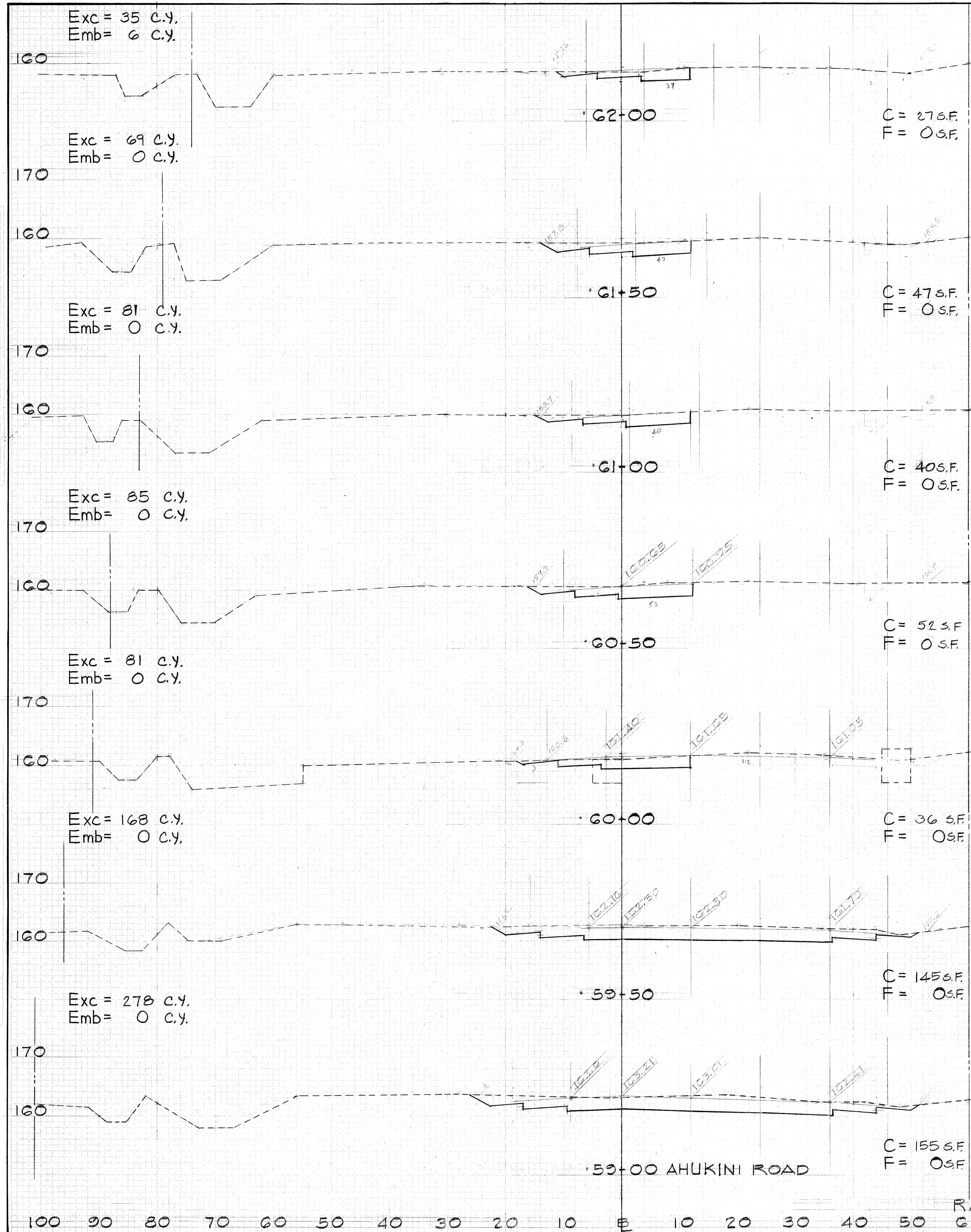
FINAL	SURVEY	DATE
SHEET	PLANNED	
POST	BOOK	
NO.	AREA	CHECKED

FINAL	SURVEY	DATE
SHEET	PLANNED	
POST	BOOK	
NO.	AREA	CHECKED



FINAL
SURVEY
PLATES
NOTE BOOK
NO.

FINAL
SURVEY
PLATES
NOTE BOOK
NO.



Earthwork Summary

Total Excavation = 9423 c.y.

Total Embankment = 295 c.y.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-051-1(7)	1987	118	164

Exc = 6 c.y.
Emb = 0 c.y.

Exc = 30 c.y.
Emb = 1 c.y.

Exc = 31 c.y.
Emb = 2 c.y.

Exc = 31 c.y.
Emb = 1 c.y.

Exc = 39 c.y.
Emb = 0 c.y.

Exc = 33 c.y.
Emb = 6 c.y.

C = 0
F = 0

C = 168.5 F = 0.5 F

C = 168.5 F = 1.5 F

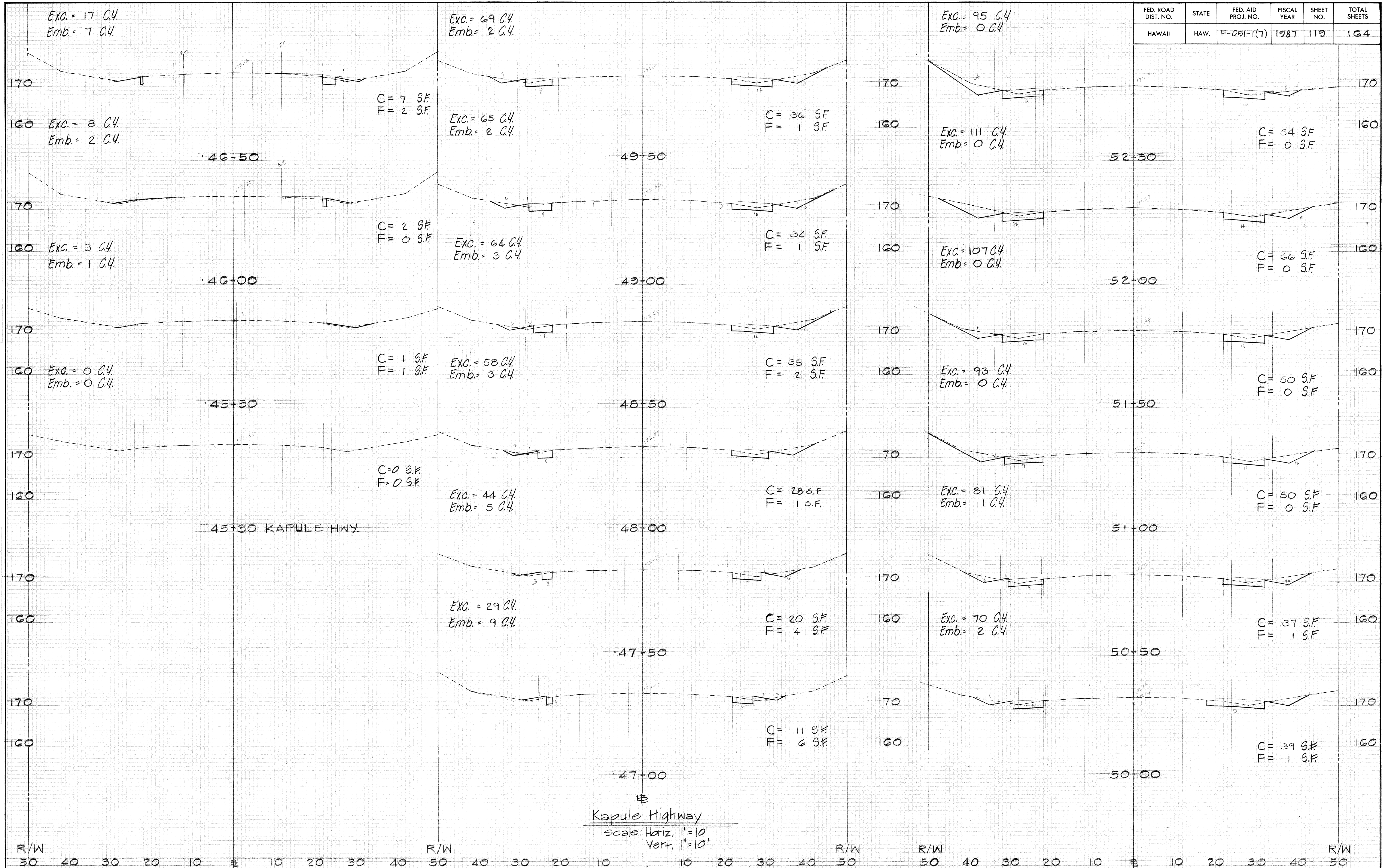
C = 178.5 F = 1.5 F

C = 178.5 F = 0.5 F

C = 258.5 F = 0.5 F

C = 118.5 F = 6.5 F

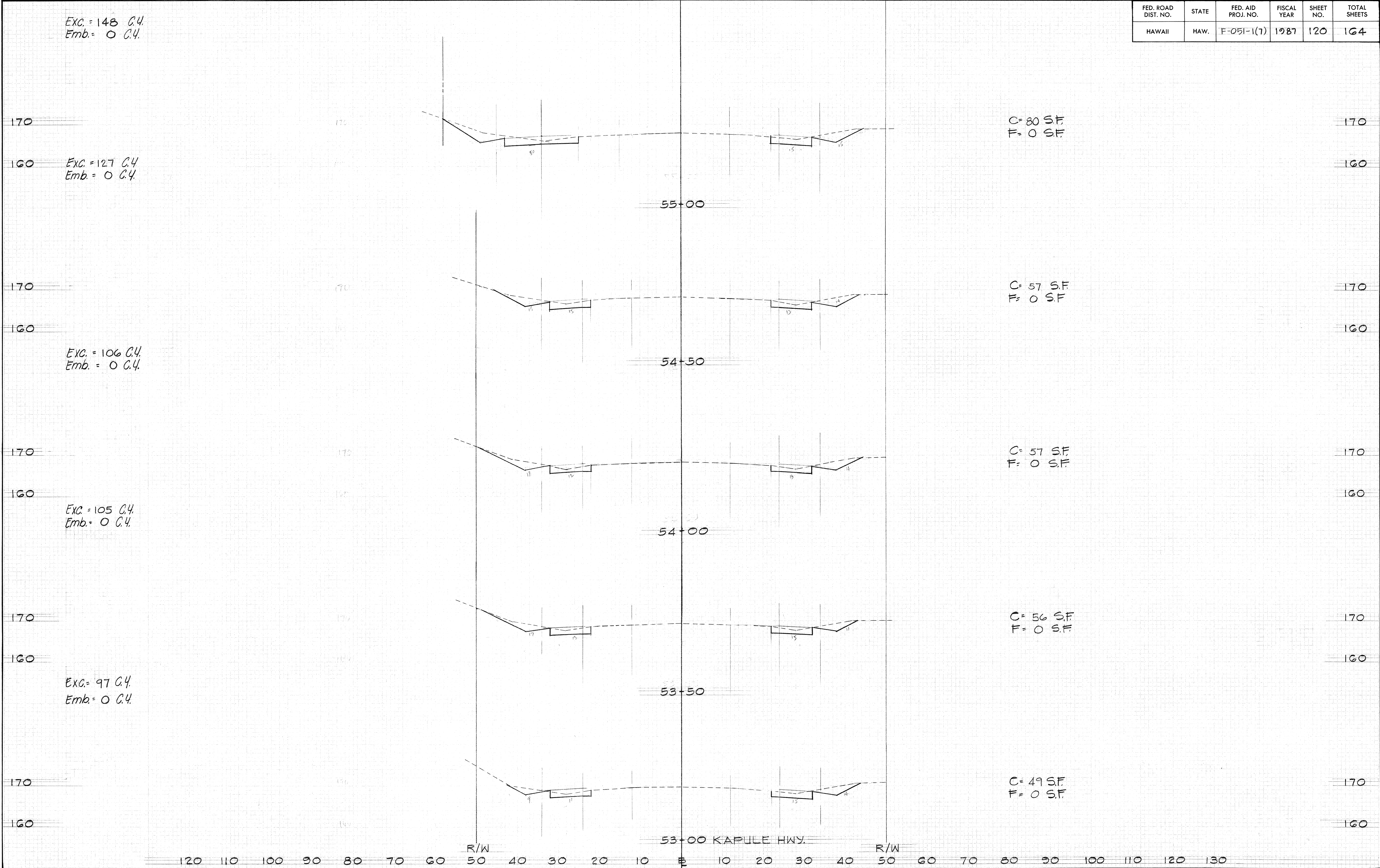
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-051-1(7)	1987	119	164



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-051-1(7)	1987	120	164

DESIGNED BY	DATE
CHECKED BY	DATE
APPROVED BY	DATE

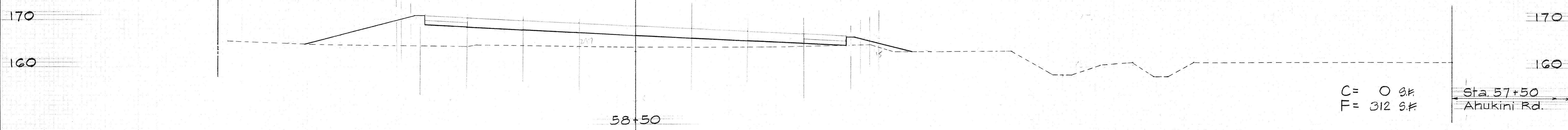
DESIGNED BY	DATE
CHECKED BY	DATE
APPROVED BY	DATE



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-051-1(7)	1987	121	164

Exc = 0 c.y.
Emb = 671 c.y.

R/W

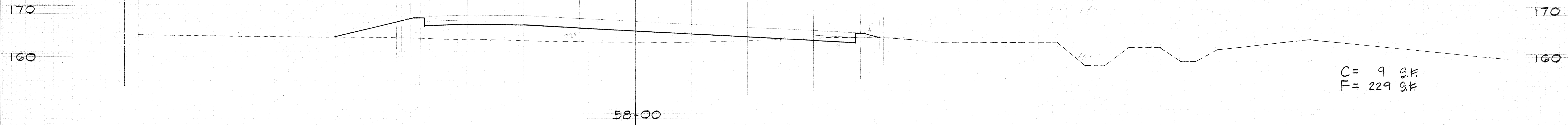


C = 0 sf
F = 312 sf

Sta 57+50
Ahukini Rd.

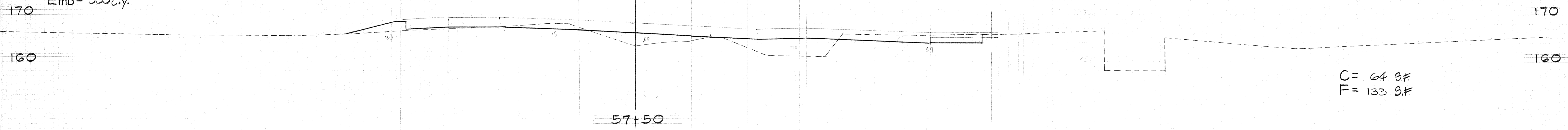
Exc = 8 c.y.
Emb = 501 c.y.

R/W



C = 9 sf
F = 229 sf

Exc = 68 c.y.
Emb = 335 c.y.



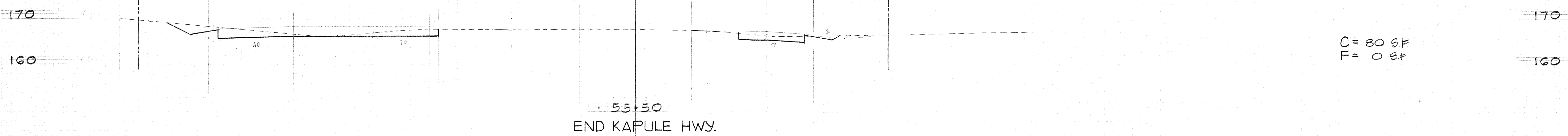
C = 64 sf
F = 133 sf

57+50
HANAMAULU - AHUKINI CUTOFF ROAD

Scale: Horiz. 1" = 10'
Vert. 1" = 10'

Earthwork Summary
Total Excavation = 1497 c.y.
Total Embankment = 37 c.y.

R/W



C = 80 sf
F = 0 sf

55+50
END KAPULE HWY.

130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-051-1(7)	1987	123	124

Exc. = 0 C.Y.
Emb. = 1759 C.Y.

Exc. = 0 C.Y.
Emb. = 1736 C.Y.

Exc. = 0 C.Y.
Emb. = 1628 C.Y.

Exc. = 0 C.Y.
Emb. = 1540 C.Y.

Exc. = 0 C.Y.
Emb. = 1588 C.Y.

Exc. = 0 C.Y.
Emb. = 1644 C.Y.

Exc. = 0 C.Y.
Emb. = 1584 C.Y.

Exc. = 0 C.Y.
Emb. = 1517 C.Y.

Construction
Easement

R/W

R/W

C = 0 S.F.
F = 965 S.F.

C = 0 S.F.
F = 910 S.F.

C = 0 S.F.
F = 848 S.F.

C = 0 S.F.
F = 815 S.F.

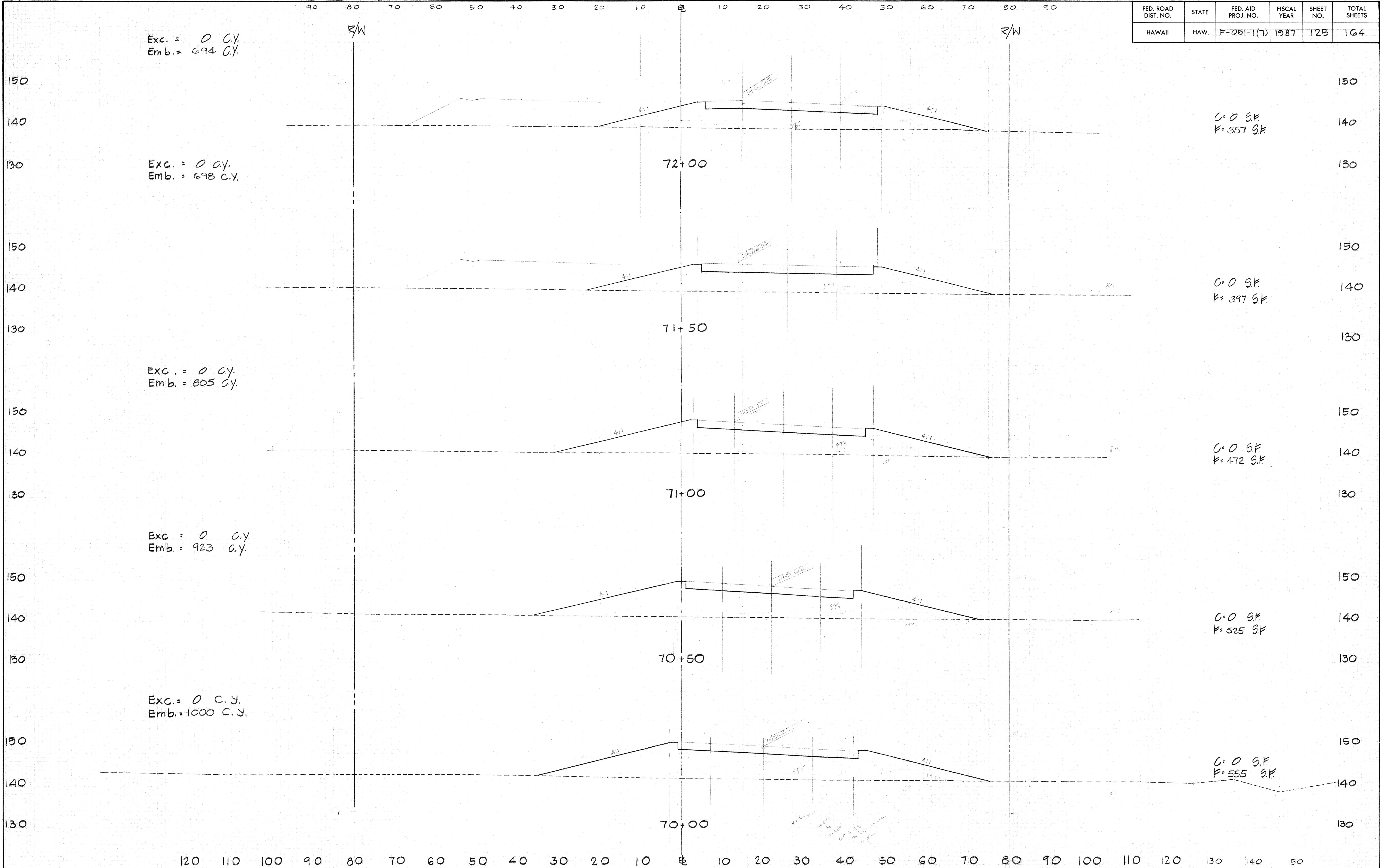
C = 0 S.F.
F = 900 S.F.

C = 0 S.F.
F = 875 S.F.

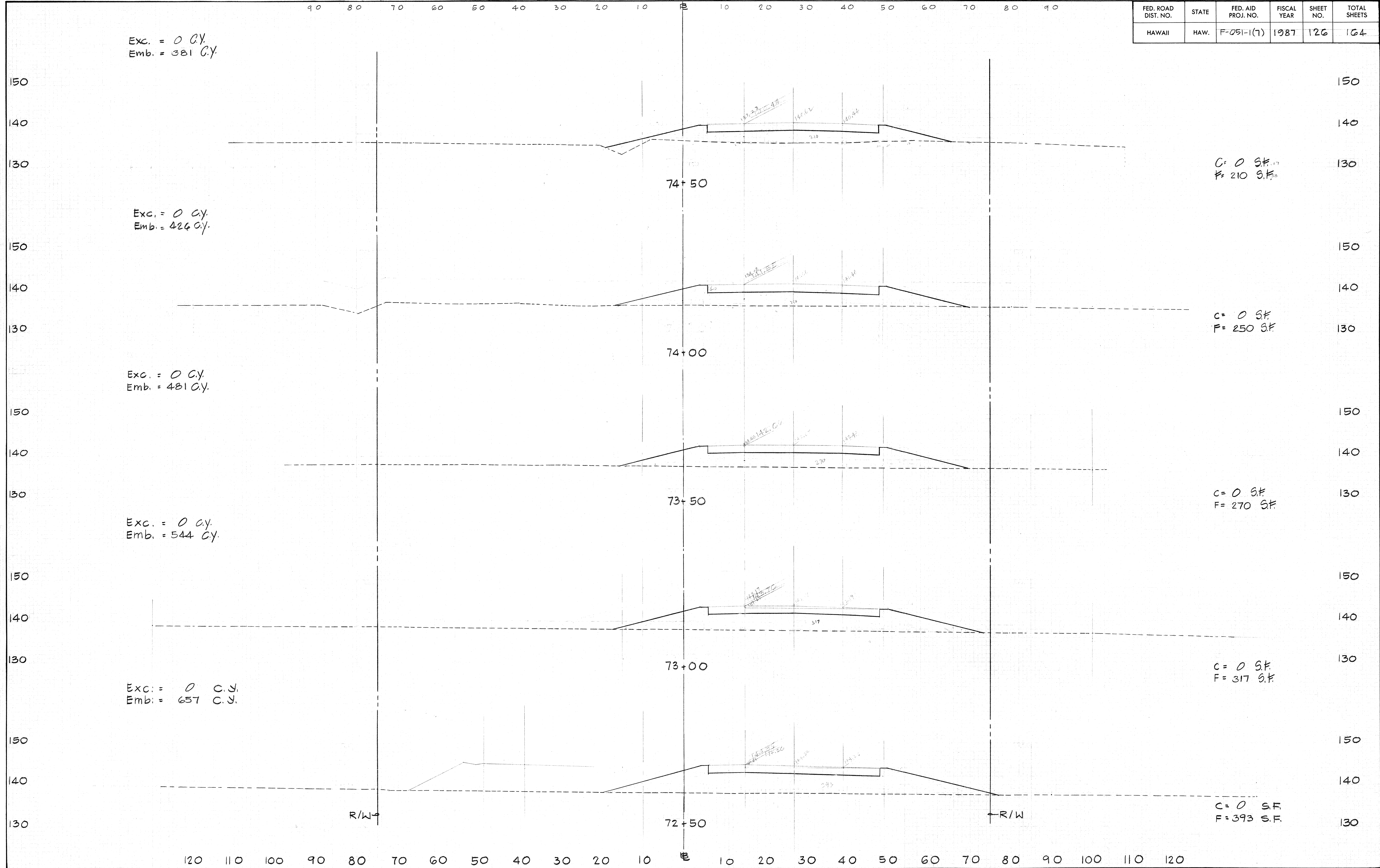
C = 0 S.F.
F = 836 S.F.

C = 0 S.F.
F = 802 S.F.

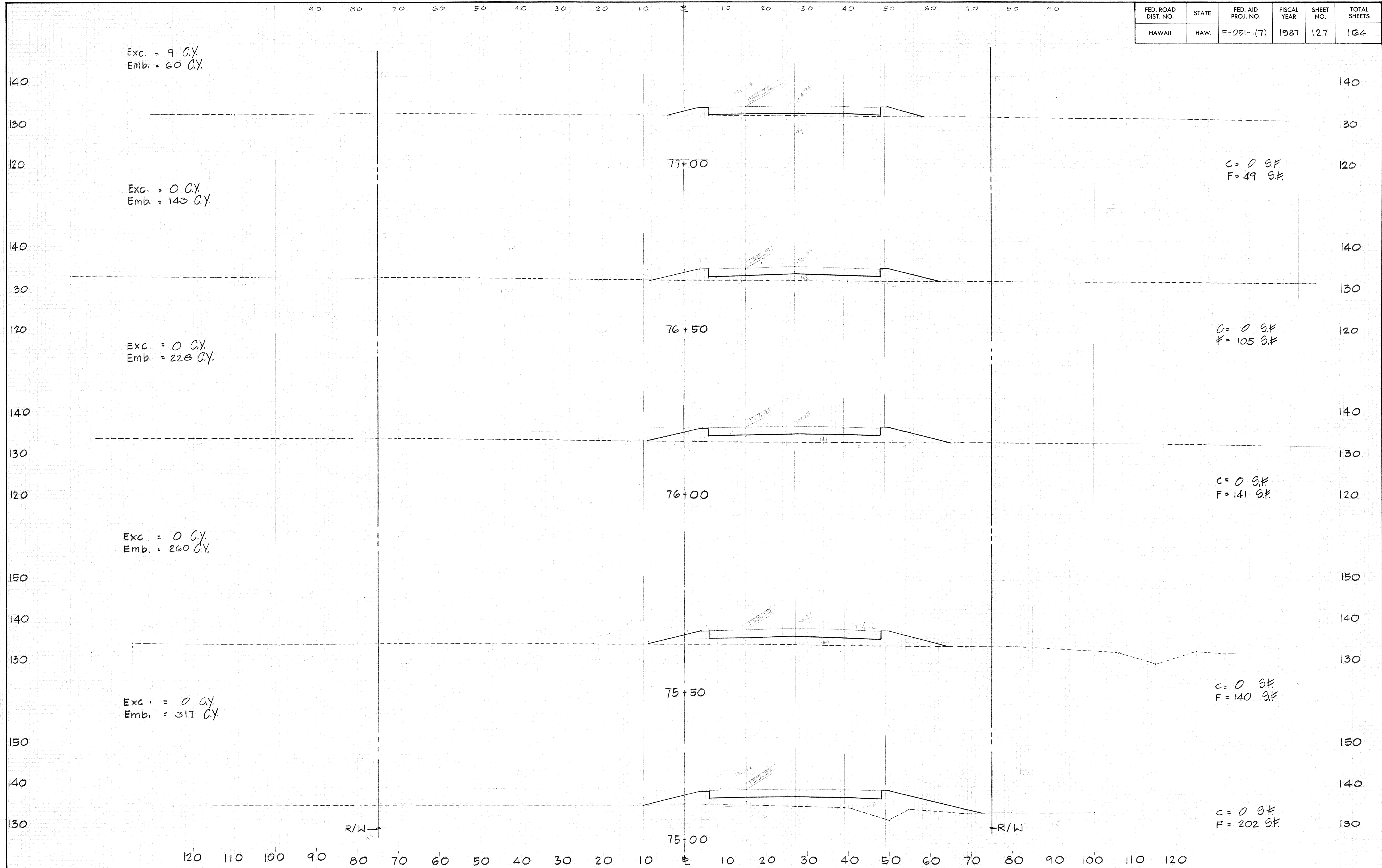
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-051-1(7)	1987	125	164



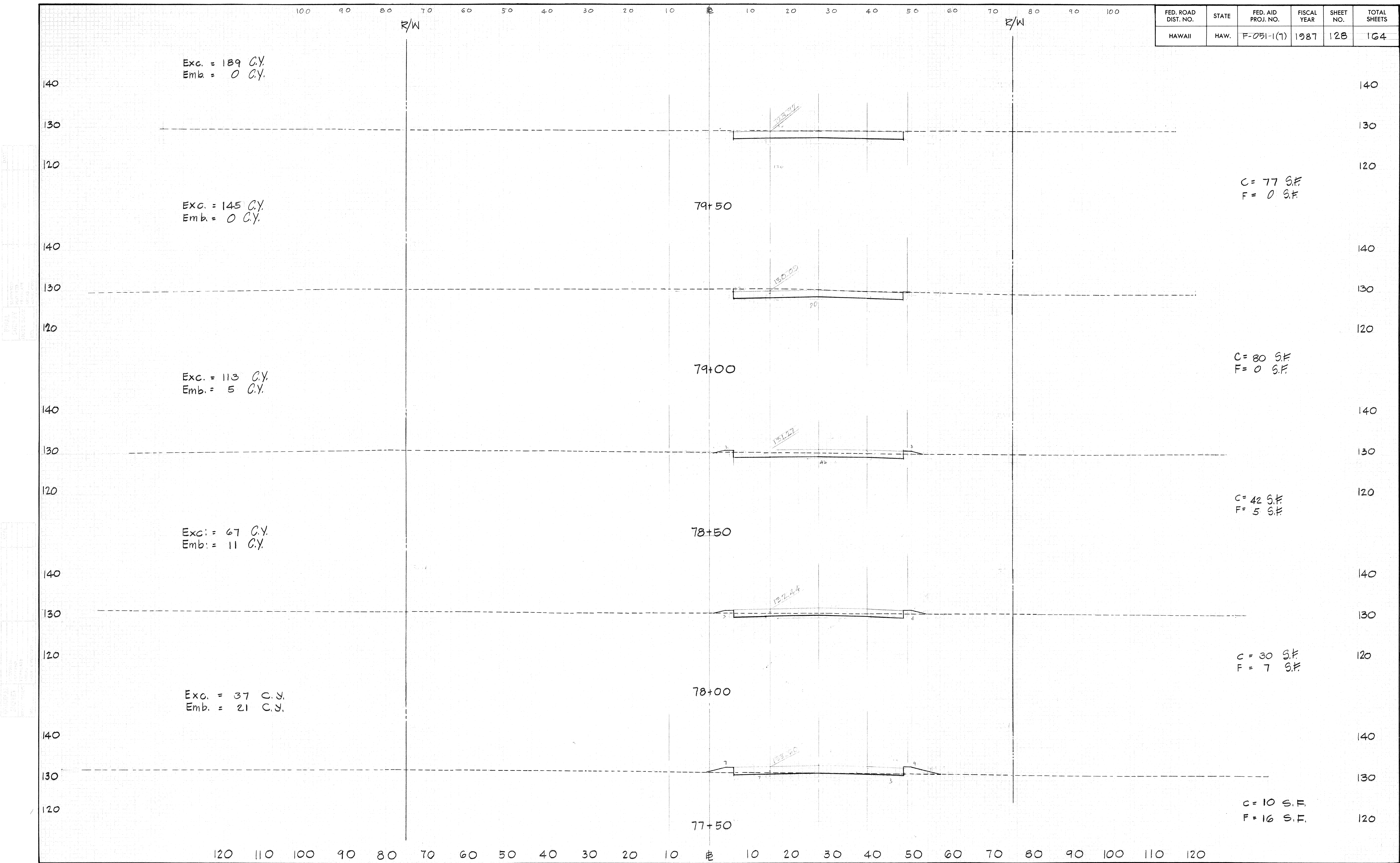
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-051-1(7)	1987	126	164



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-051-1(7)	1987	127	164



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-051-1(7)	1987	128	164



Exc. = 521 C.Y.
Emb. = 0 C.Y.

Exc. = 468 C.Y.
Emb. = 0 C.Y.

Exc. = 420 C.Y.
Emb. = 0 C.Y.

Exc. = 353 C.Y.
Emb. = 0 C.Y.

Exc. = 281 C.Y.
Emb. = 0 C.Y.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-051-1(7)	1987	129	164

C = 256 S.F.
F = 0 S.F.

C = 249 S.F.
F = 0 S.F.

C = 205 S.F.
F = 0 S.F.

C = 176 S.F.
F = 0 S.F.

C = 127 S.F.
F = 0 S.F.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-051-1(7)	1987	130	164

Exc. = 894 C.Y.
Emb. = 0 C.Y.

Exc. = 840 C.Y.
Emb. = 0 C.Y.

Exc. = 778 C.Y.
Emb. = 0 C.Y.

Exc. = 685 C.Y.
Emb. = 0 C.Y.

Exc. = 615 C.Y.
Emb. = 0 C.Y.

C = 450 S.F.
F = 0 S.F.

C = 457 S.F.
F = 0 S.F.

C = 383 S.F.
F = 0 S.F.

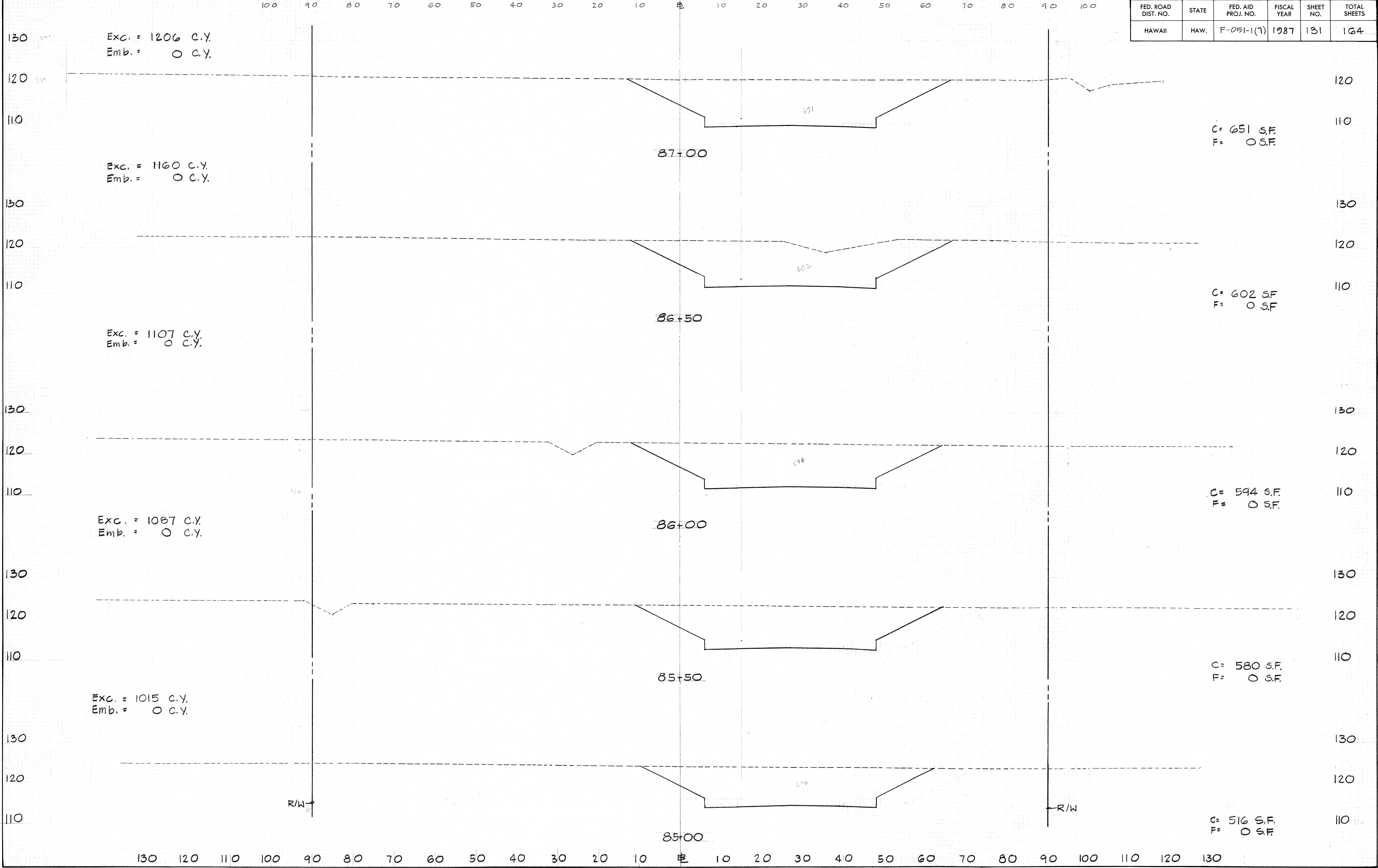
C = 357 S.F.
F = 0 S.F.

C = 307 S.F.
F = 0 S.F.

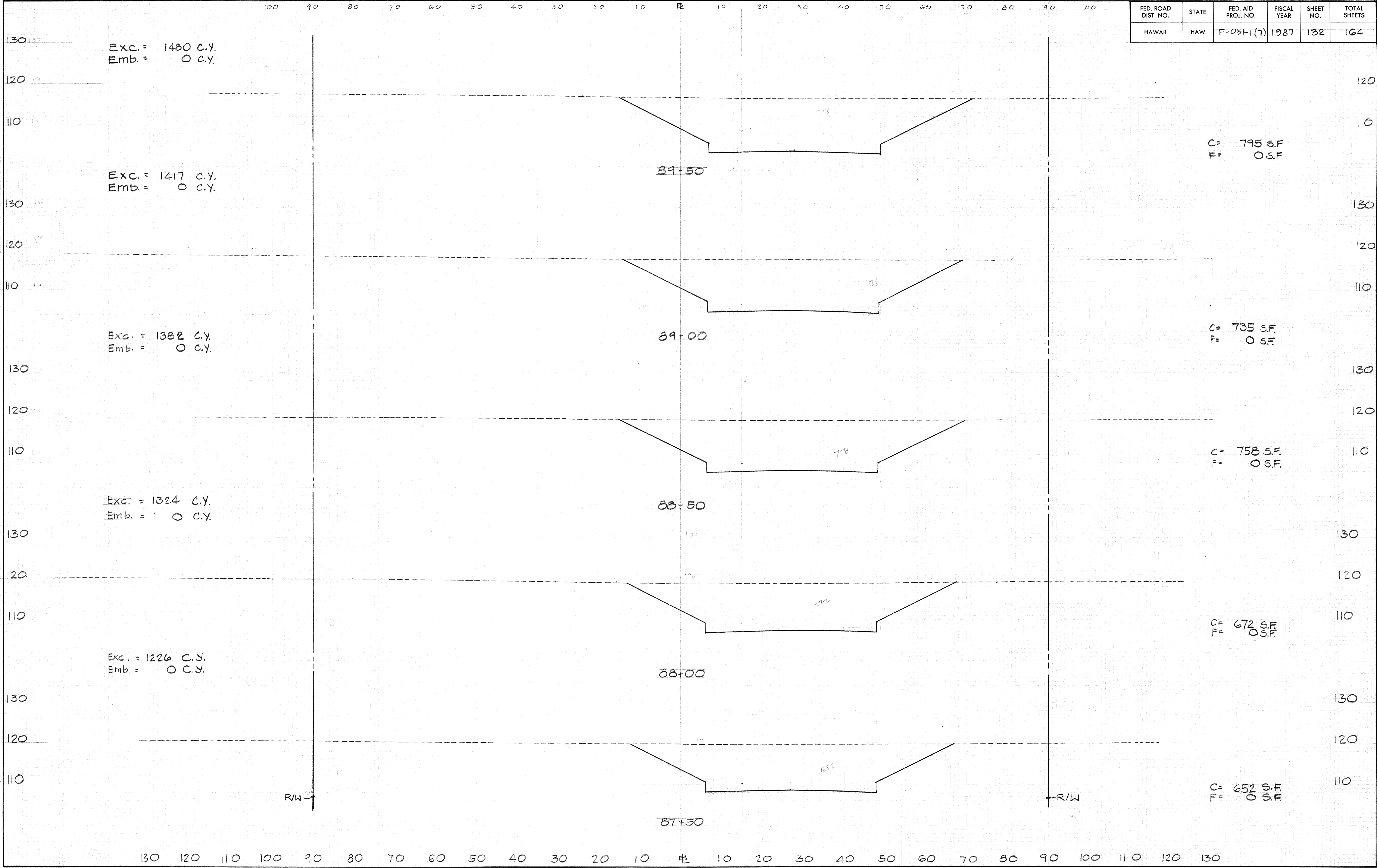
FINAL
DESIGN
DATE: 10/1/87
BY: J. L. HARRIS
CHECKED: J. L. HARRIS
DATE: 10/1/87

FINAL
DESIGN
DATE: 10/1/87
BY: J. L. HARRIS
CHECKED: J. L. HARRIS
DATE: 10/1/87

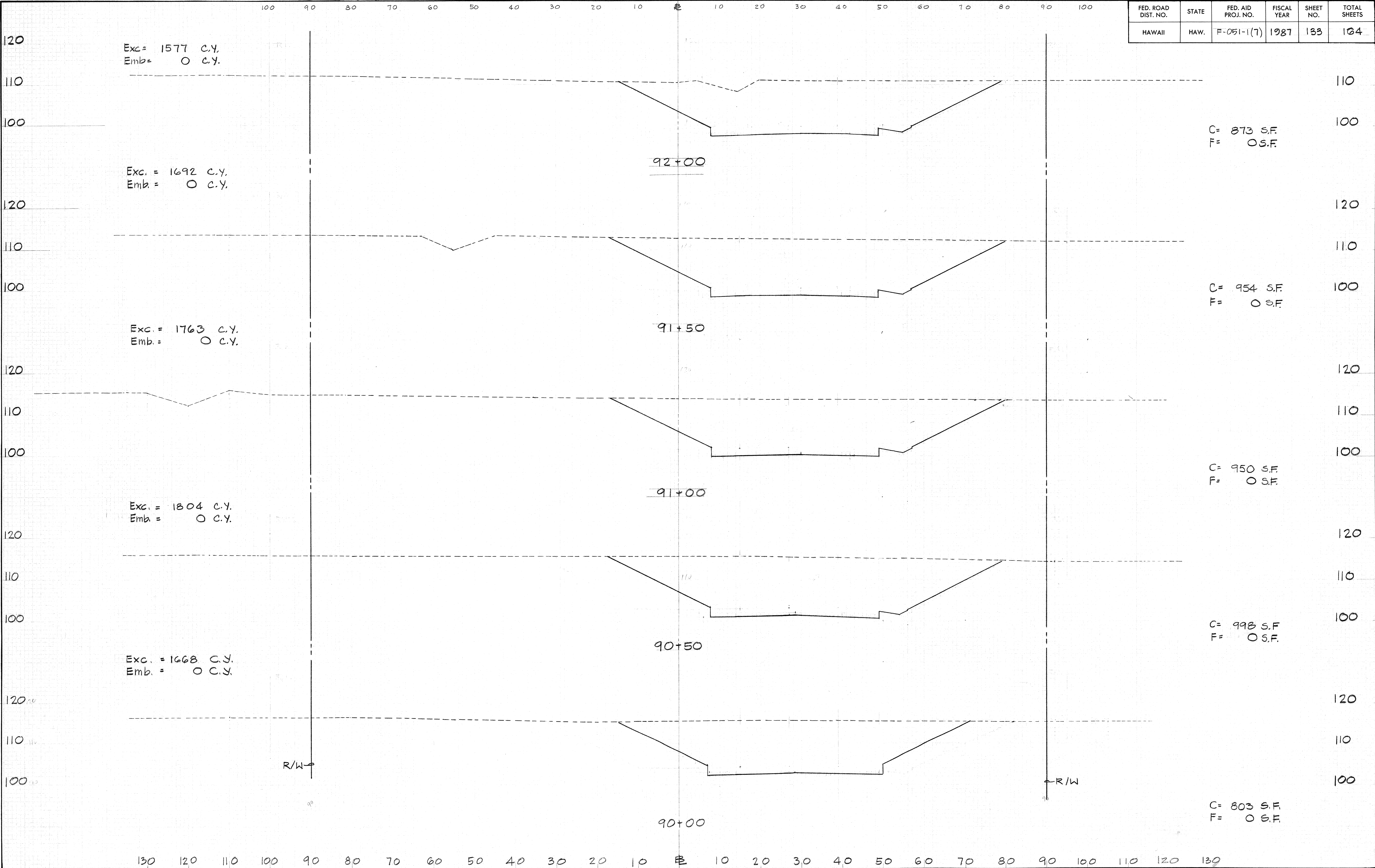
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-051-1(7)	1987	131	164



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-051-1 (7)	1987	132	164



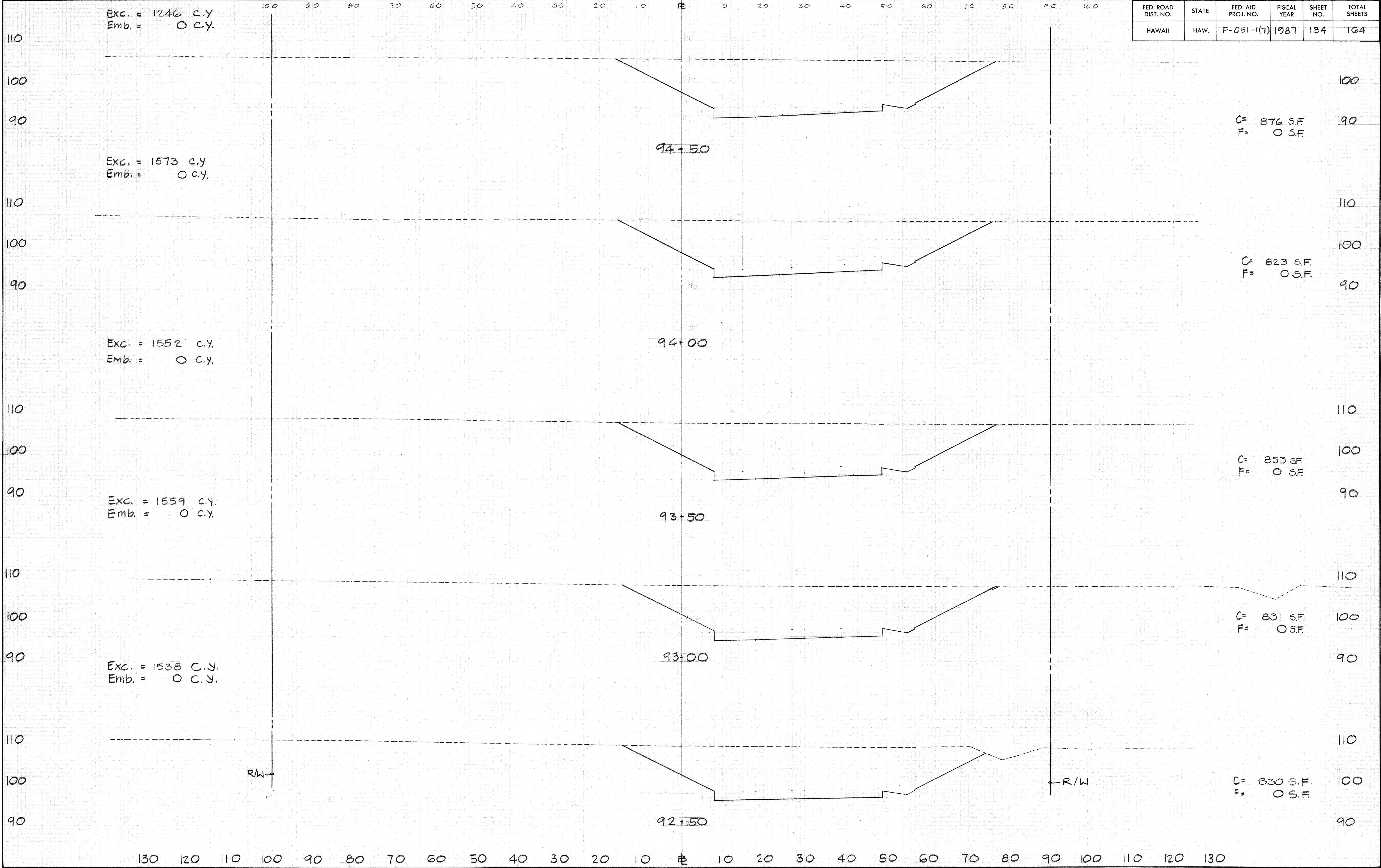
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-051-1(7)	1987	133	134



DATE: 10/1/87
BY: J. L. HARRIS
CHECKED: J. L. HARRIS
DESIGNED: J. L. HARRIS
DRAWN: J. L. HARRIS
SCALE: 1" = 10'

DATE: 10/1/87
BY: J. L. HARRIS
CHECKED: J. L. HARRIS
DESIGNED: J. L. HARRIS
DRAWN: J. L. HARRIS
SCALE: 1" = 10'

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-051-1(7)	1987	134	164



Exc. = 1864 C.Y.
Emb. = 0 C.Y.

Exc. = 1747 C.Y.
Emb. = 0 C.Y.

Exc. = 1409 C.Y.
Emb. = 0 C.Y.

Exc. = 1076 C.Y.
Emb. = 0 C.Y.

Exc. = 877 C.Y.
Emb. = 0 C.Y.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-051-1(7)	1987	135	164

90

C = 1050 S.F.
F = 0 S.F.

100

C = 837 S.F.
F = 0 S.F.

80

110

100

C = 685 S.F.
F = 0 S.F.

90

110

100

C = 477 S.F.
F = 0 S.F.

90

110

100

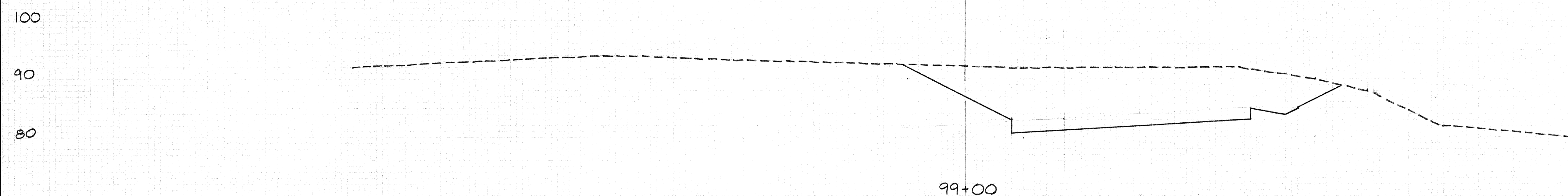
C = 470 S.F.
F = 0 S.F.

90

80

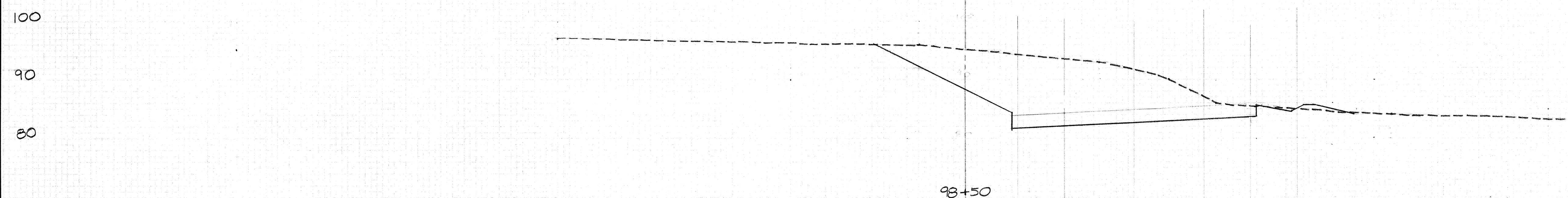
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-051-1(7)	1987	136	164

Exc. = 777 C.Y.
Emb. = 0 C.Y.



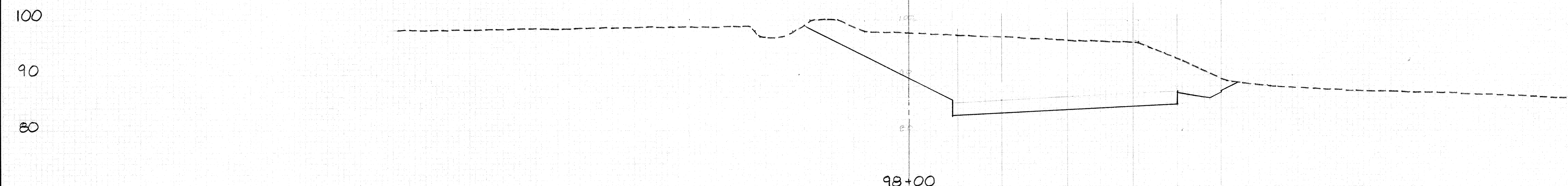
C = 585 S.F.
F = 0 S.F.

Exc. = 977 C.Y.
Emb. = 0 C.Y.



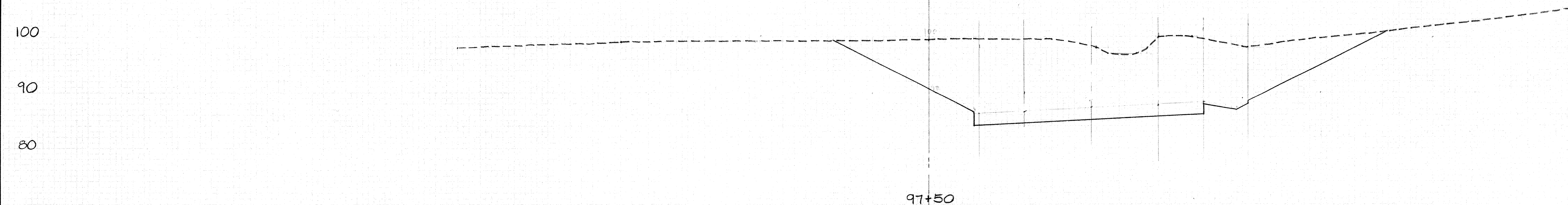
C = 470 S.F.
F = 5 S.F.

Exc. = 1104 C.Y.
Emb. = 0 C.Y.



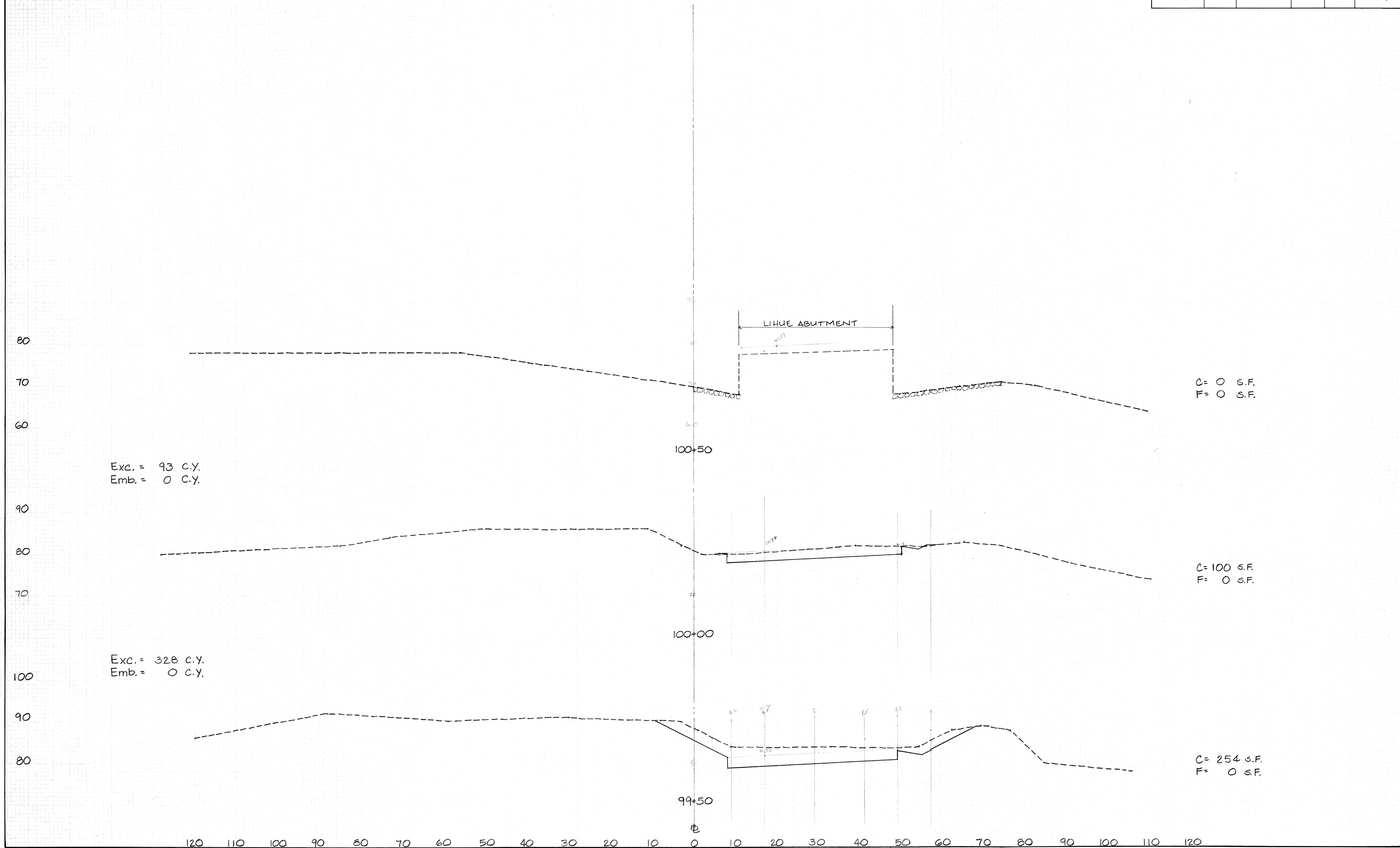
C = 722 S.F.
F = 0 S.F.

Exc. = 1560 C.Y.
Emb. = 0 C.Y.



C = 963 S.F.
F = 0 S.F.

130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F.051-1(1)	1987	138	164

C = 672 S.F.
F = 0 S.F.

C = 597 S.F.
F = 0 S.F.

C = 180 S.F.
F = 0 S.F.

C = 117 S.F.
F = 0 S.F.

C = 0 S.F.
F = 0 S.F.

Exc. = 1231 C.Y.
Emb. = 0 C.Y.

Exc. = 1175 C.Y.
Emb. = 0 C.Y.

Exc. = 719 C.Y.
Emb. = 0 C.Y.

Exc. = 275 C.Y.
Emb. = 0 C.Y.

Exc. = 108 C.Y.
Emb. = 0 C.Y.

114+00

113+50

113+00

112+50

112+00

KAPAA ABUTMENT

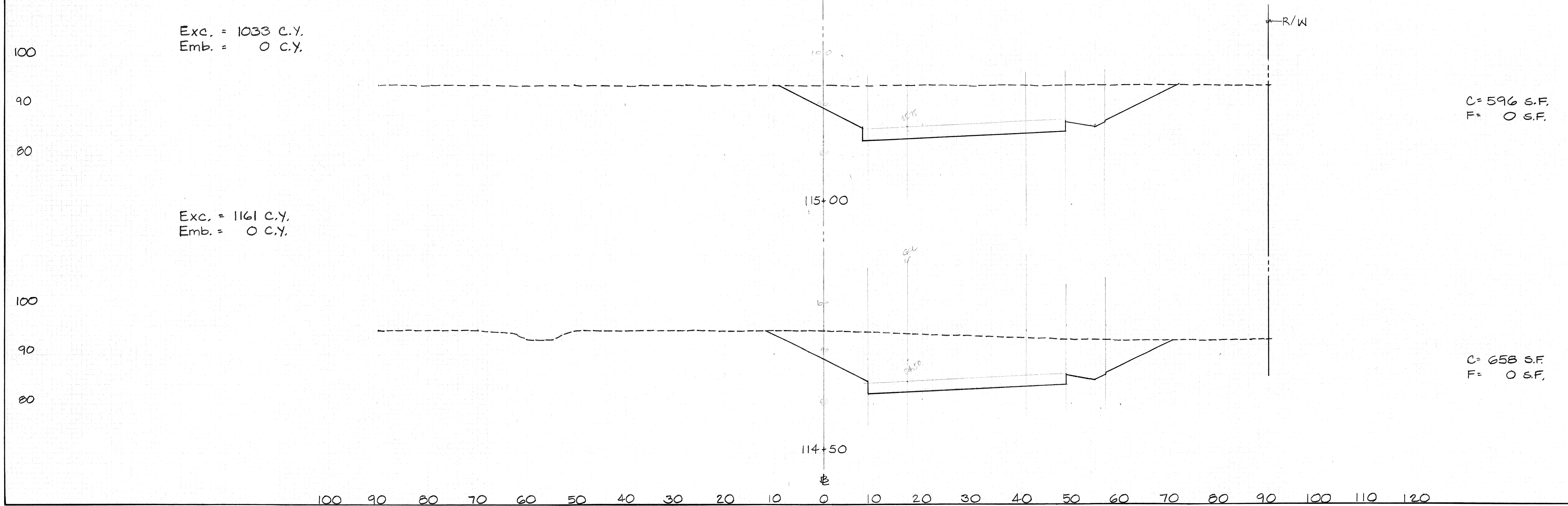
R/W

R/W

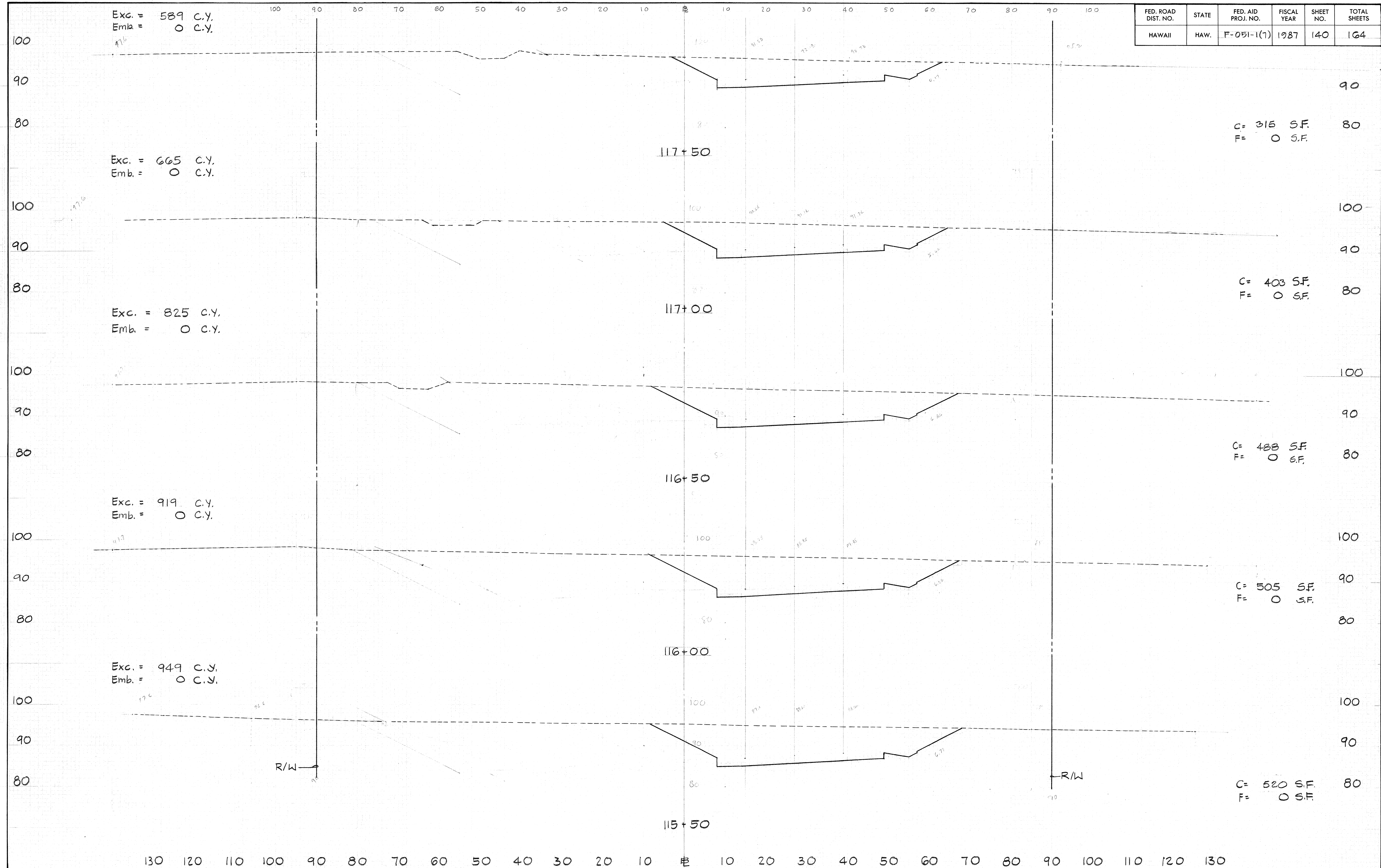
R/W

120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120

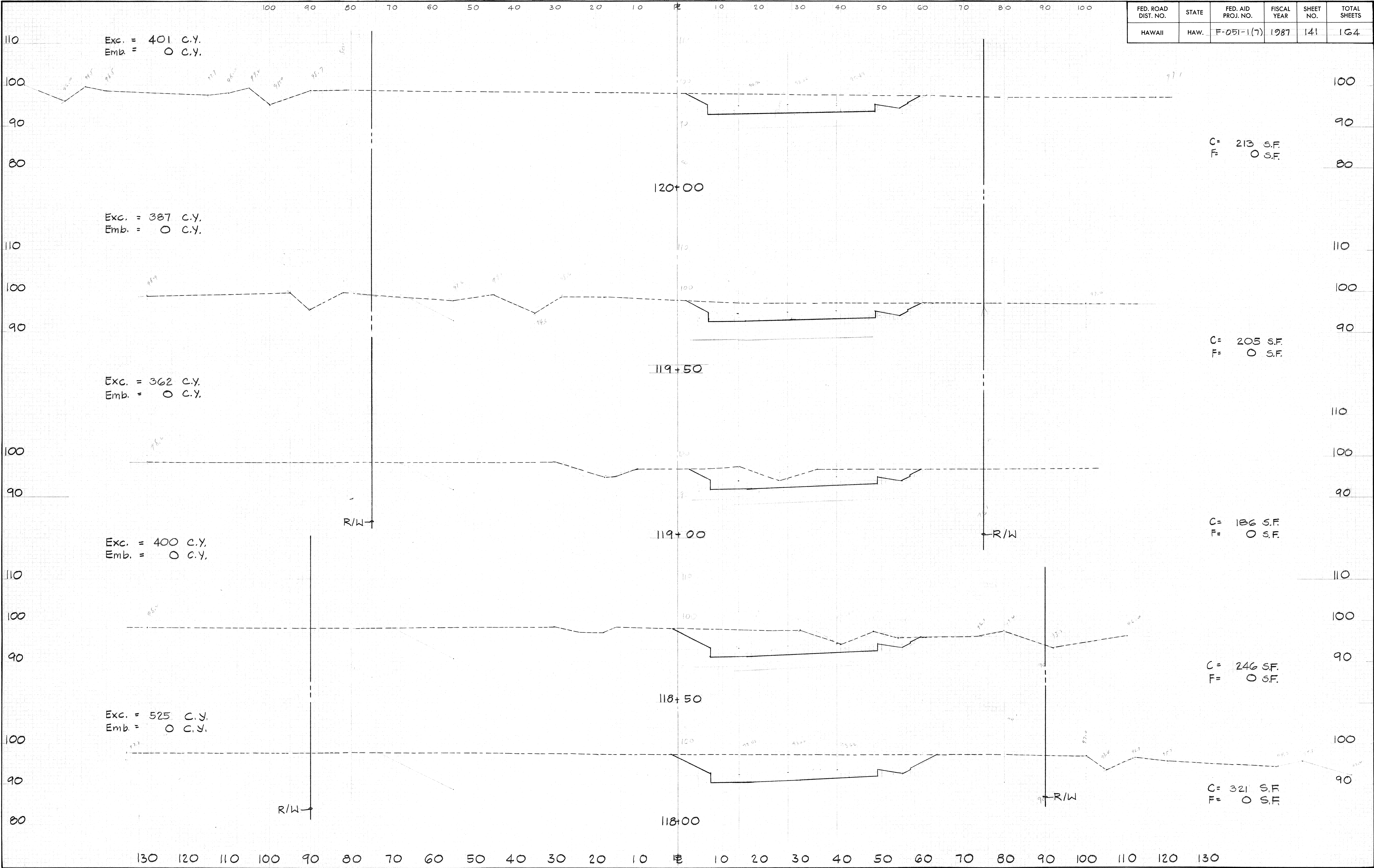
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-051-1(7)	1987	139	164



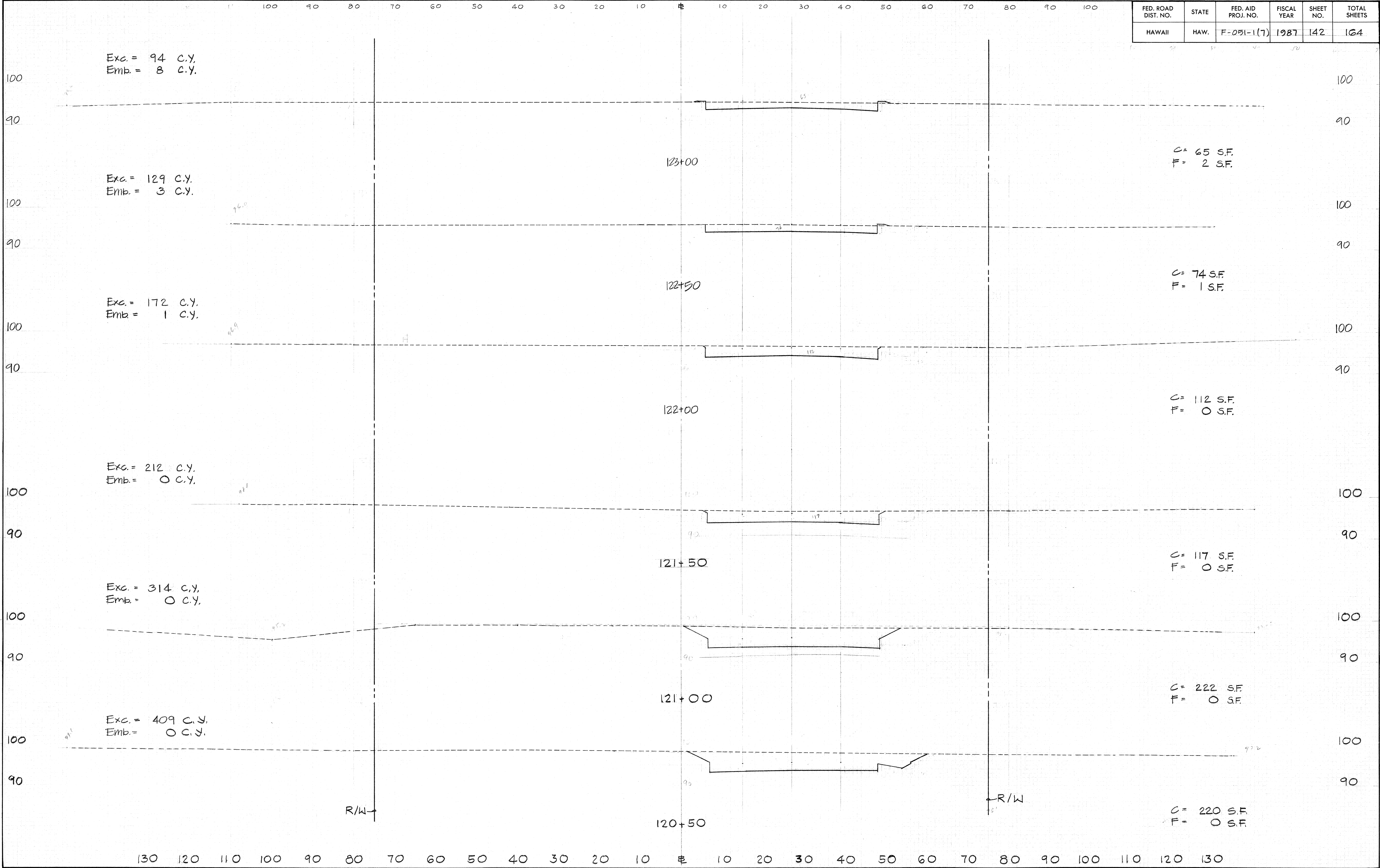
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-051-1(1)	1987	140	164



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-051-1(7)	1987	141	164



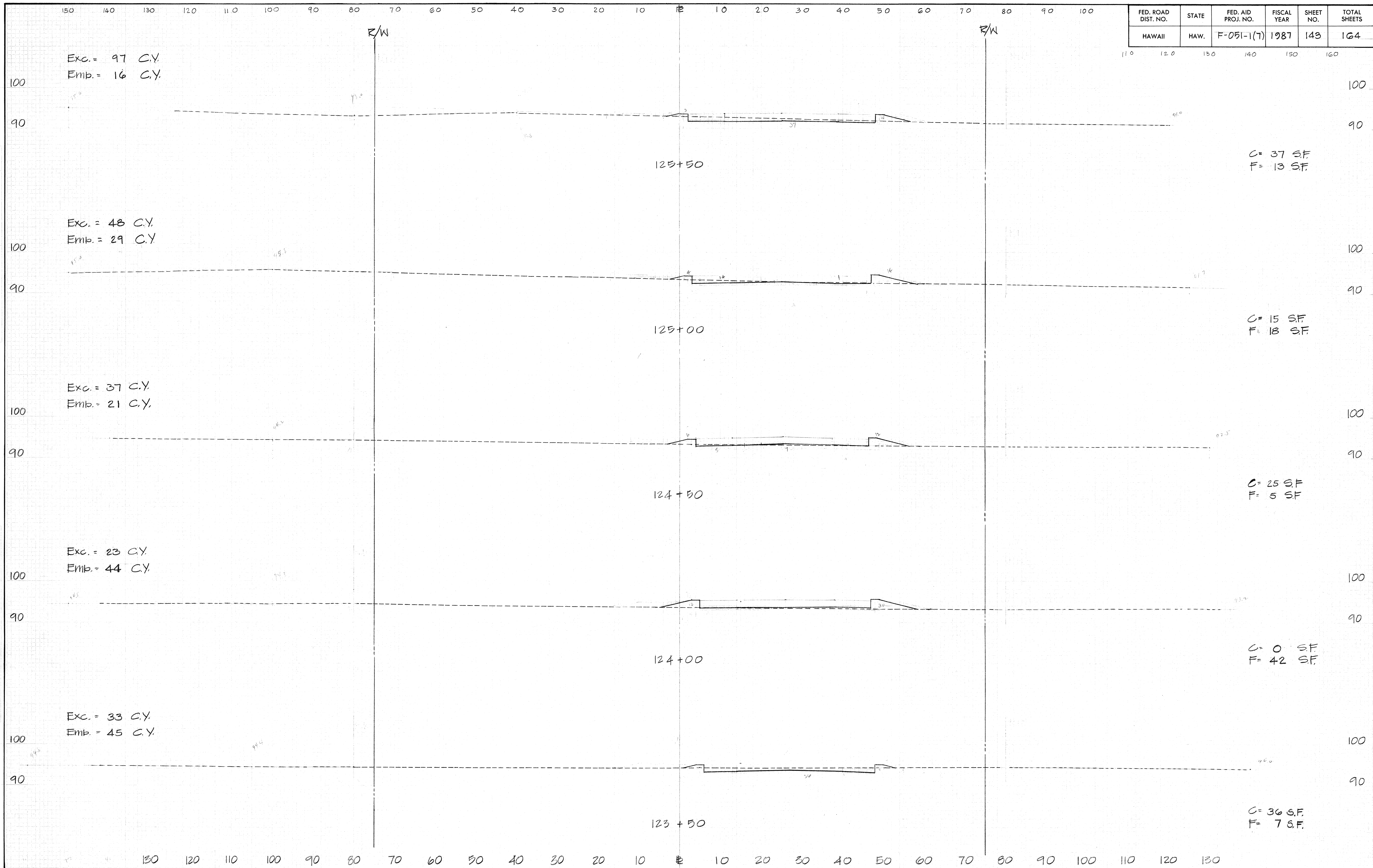
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-051-1(7)	1987	142	164



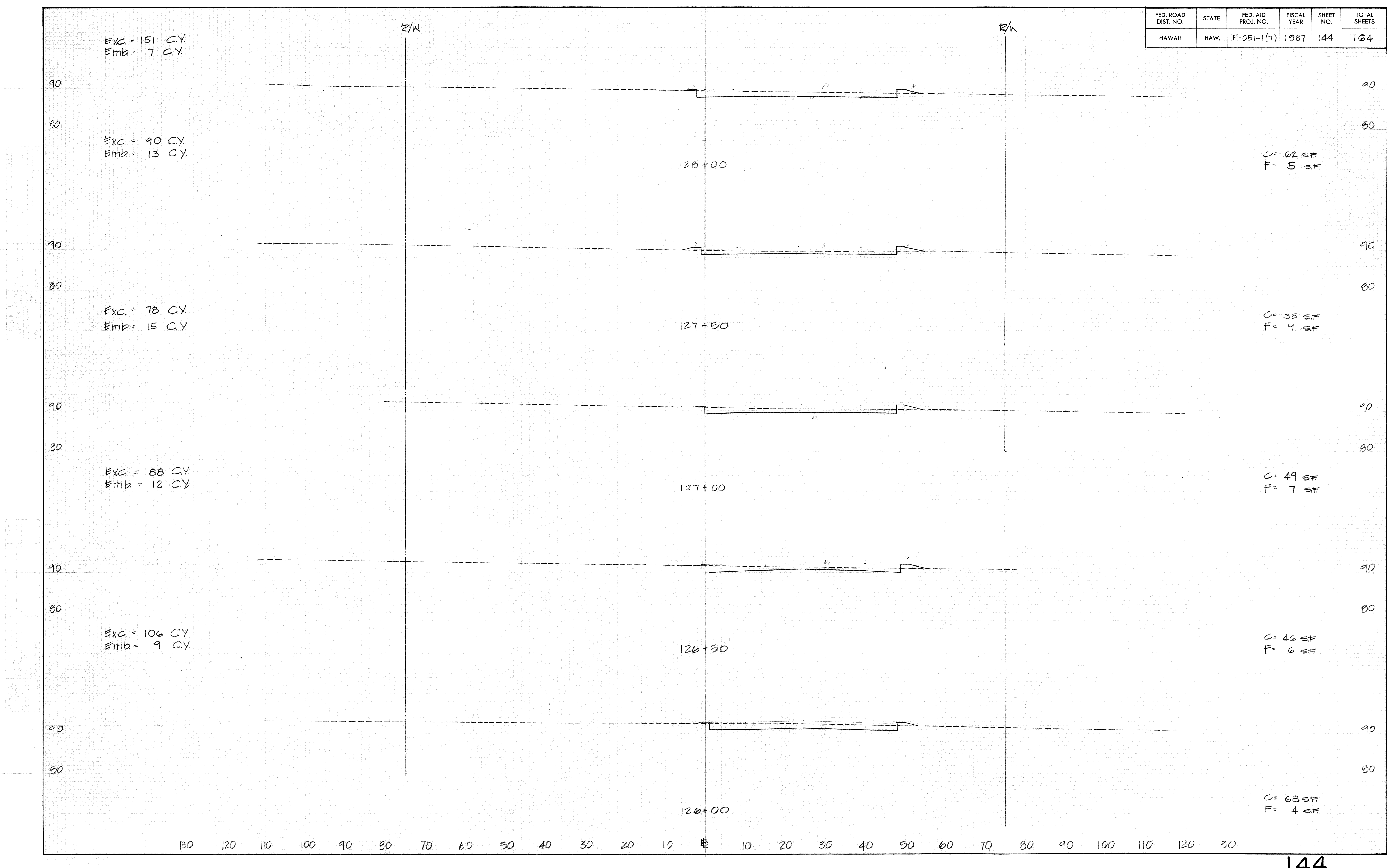
DATE	10/1/87
BY	W. J. BROWN
CHECKED	W. J. BROWN
APPROVED	W. J. BROWN
NO.	100

DATE	10/1/87
BY	W. J. BROWN
CHECKED	W. J. BROWN
APPROVED	W. J. BROWN
NO.	100

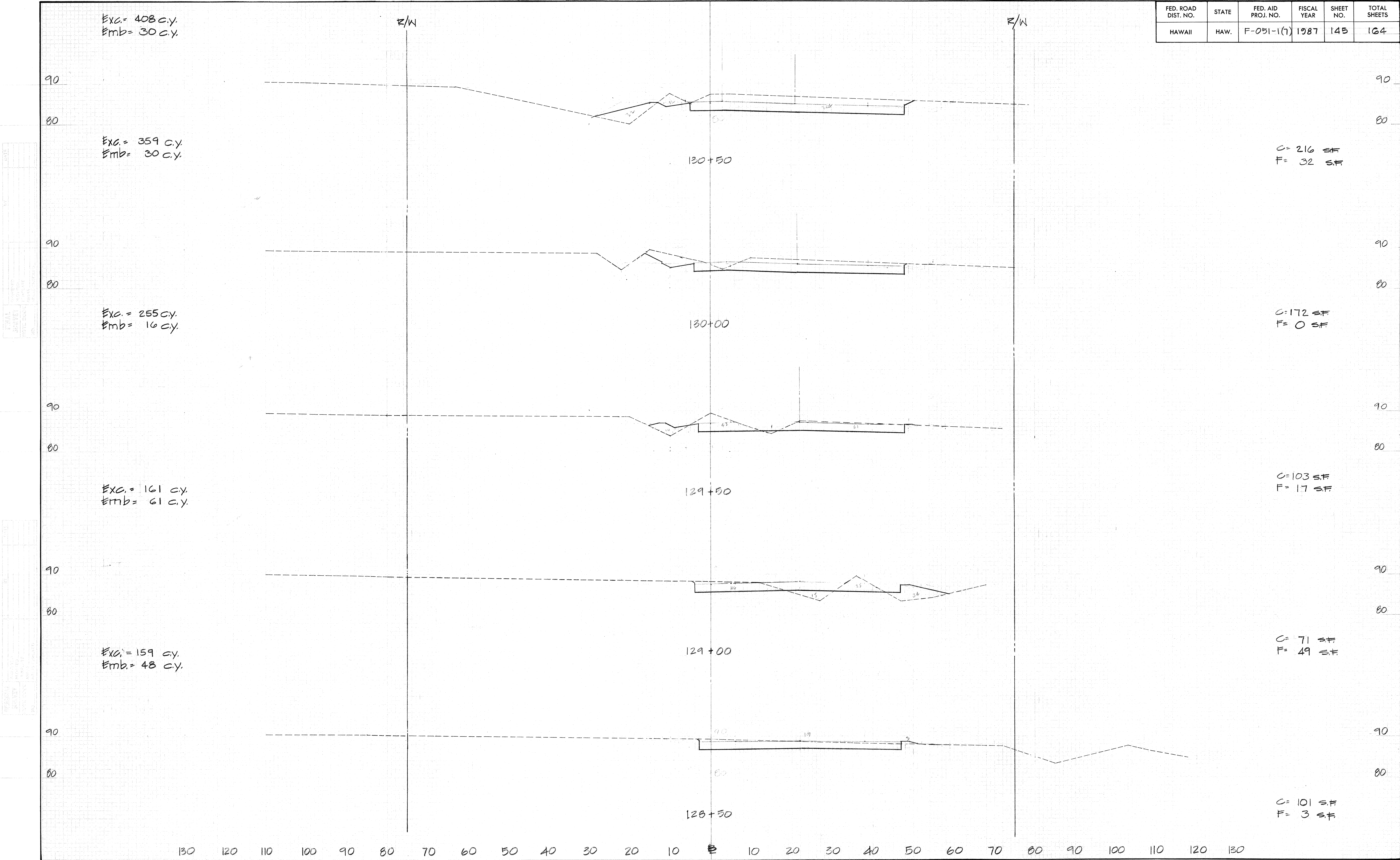
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-051-1(7)	1987	143	164



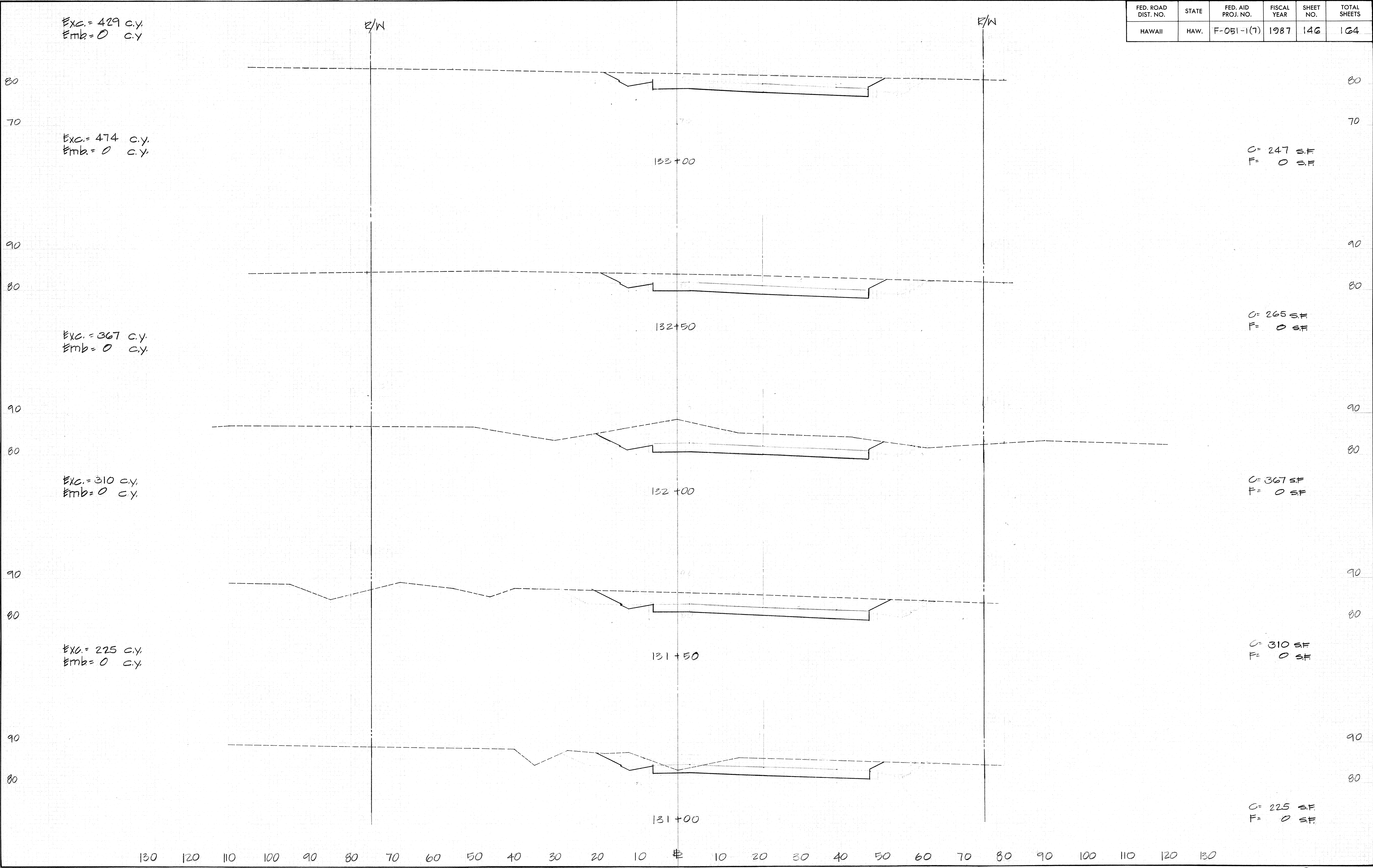
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-051-1(7)	1987	144	164



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-051-1(7)	1987	145	164



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-051-1(7)	1987	146	164



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-051-1(7)	1987	147	164

Exc.= 1356 C.Y.
Emb.= 0 C.Y.

Exc.= 1245 C.Y.
Emb.= 0 C.Y.

Exc.= 734 C.Y.
Emb.= 0 C.Y.

Exc.= 549 C.Y.
Emb.= 0 C.Y.

Exc.= 430 C.Y.
Emb.= 0 C.Y.

C= 897 SF
F= 0 SF

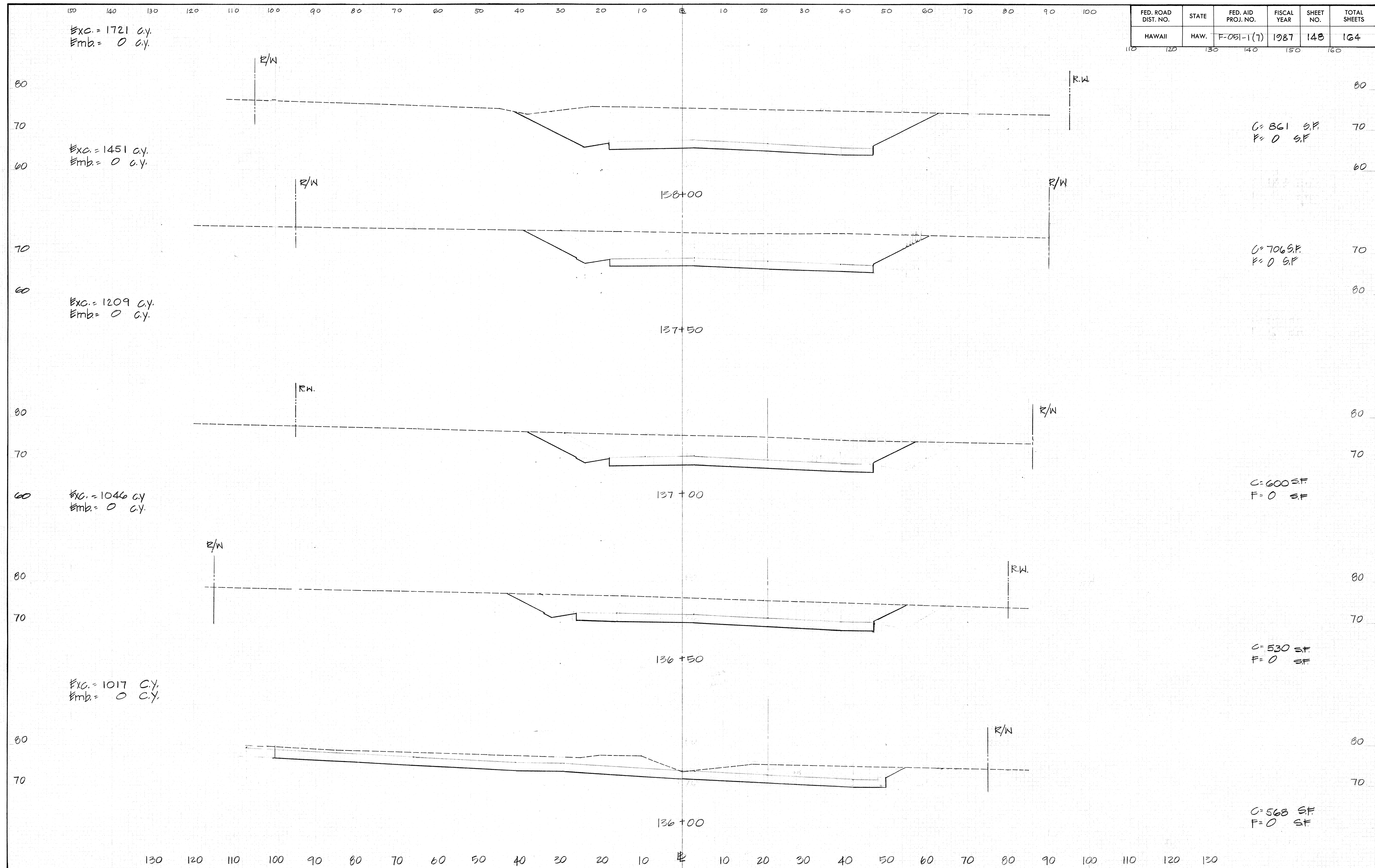
C= 448 SF
F= 0 SF

C= 345 SF
F= 0 SF

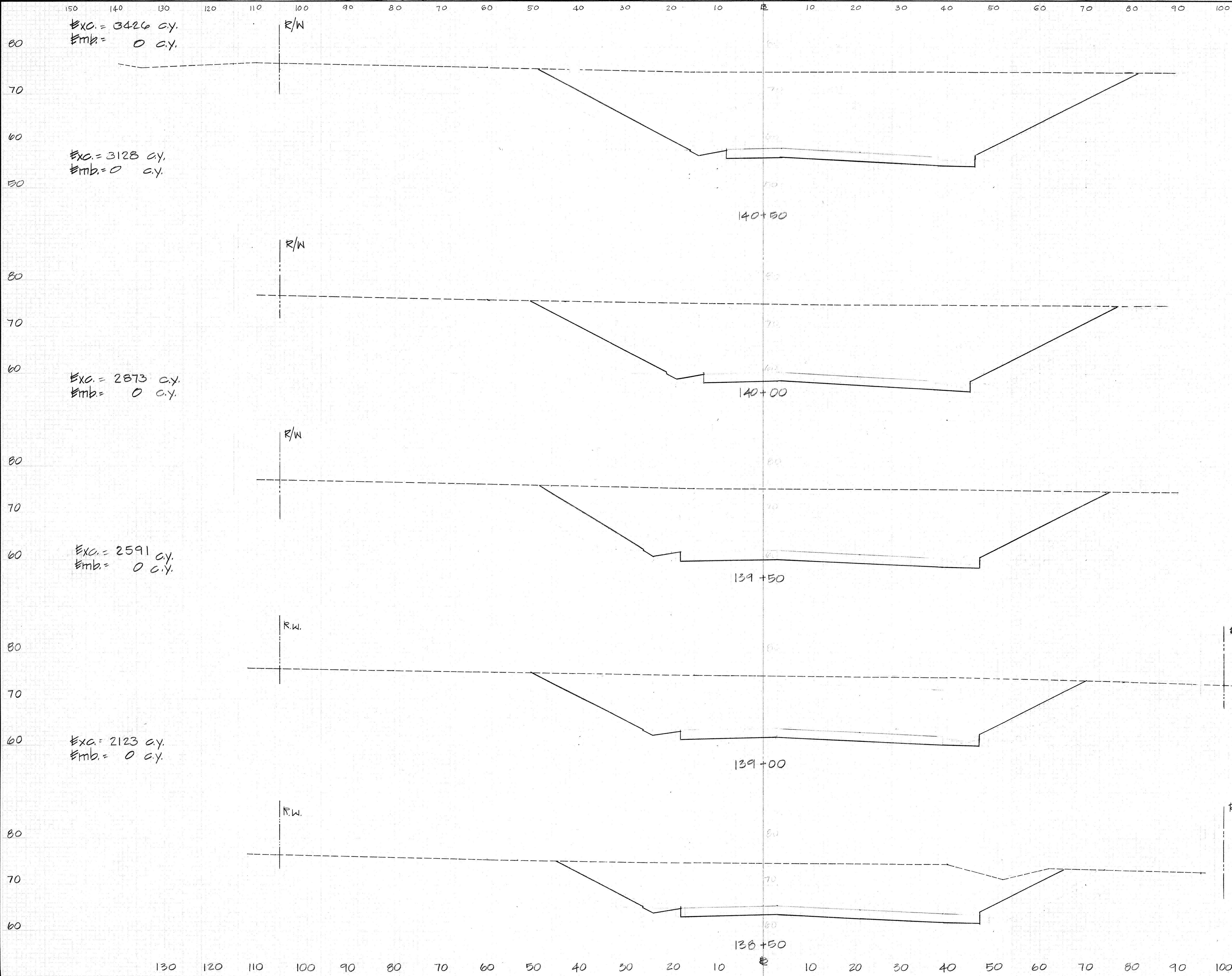
C= 248 SF
F= 0 SF

C= 216 SF
F= 0 SF

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-051-1(7)	1987	148	164

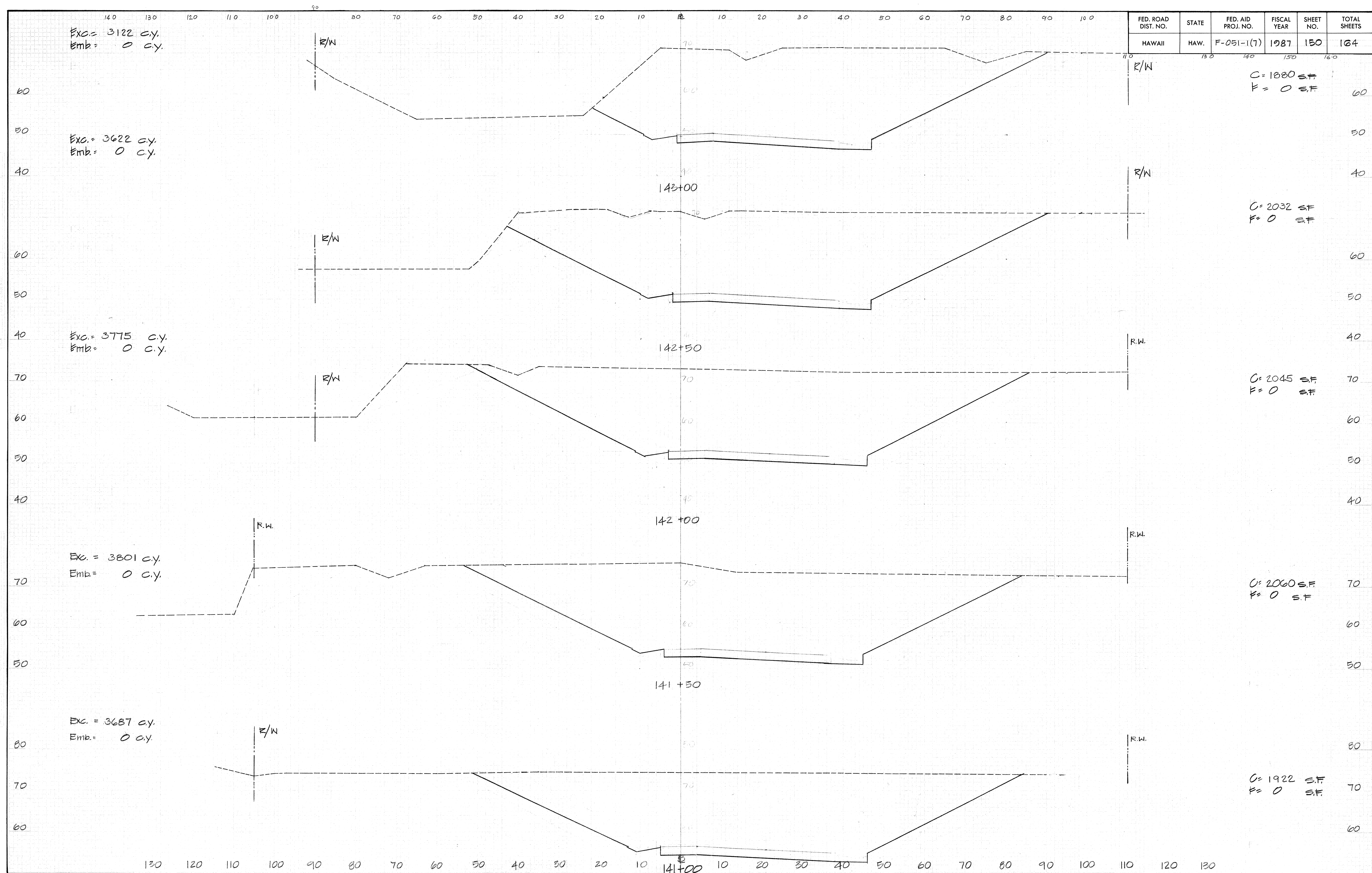


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-051-1(7)	1987	149	164

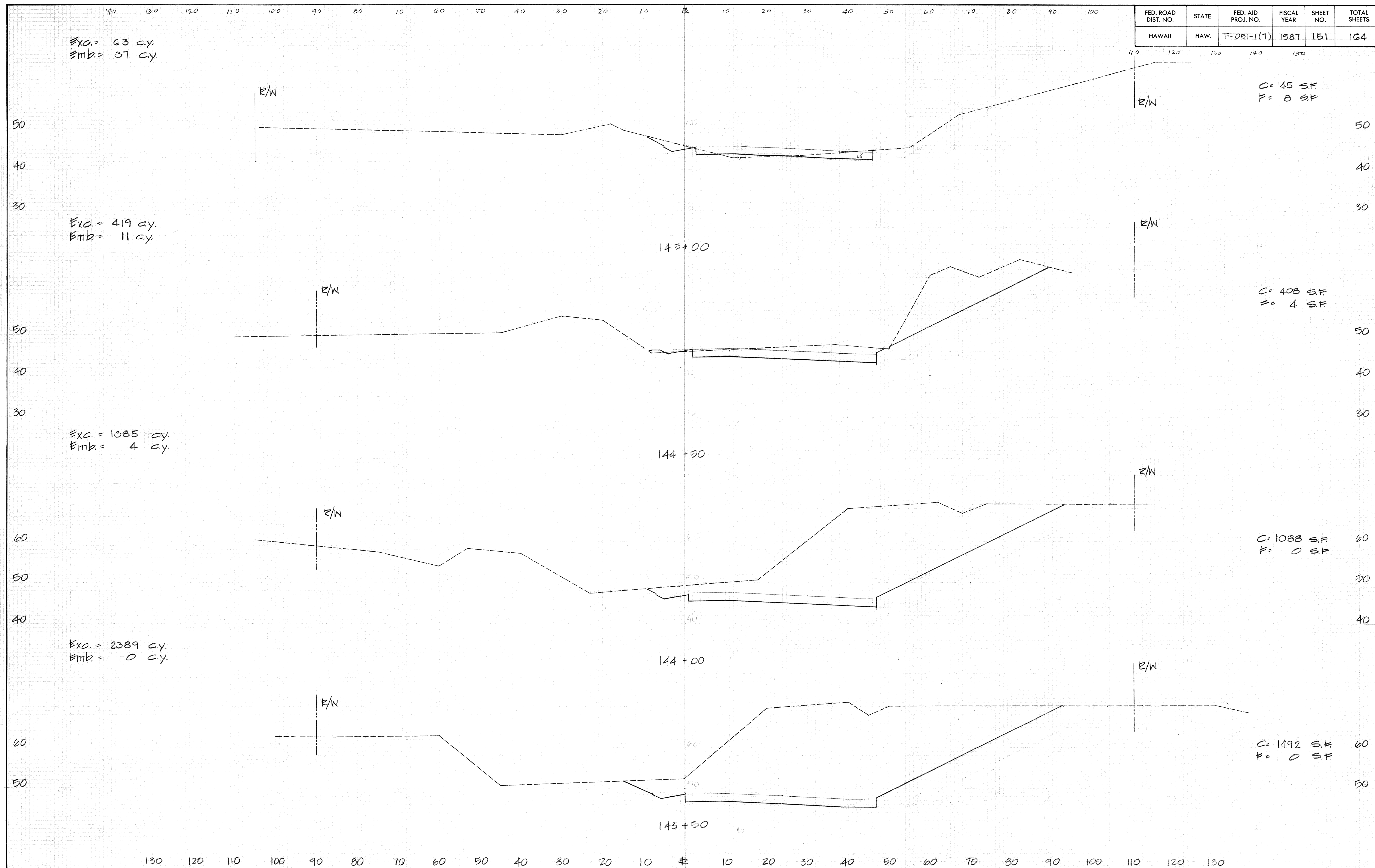


R.W.	70
C = 1778 SF F = 0 SF	60
	50
R.W.	80
	70
C = 1600 SF F = 0 SF	60
	50
R.W.	80
	70
C = 1503 SF F = 0 SF	60
	50
R.W.	80
	70
C = 1295 SF F = 0 SF	60
	50
R.W.	80
	70
C = 998 SF F = 0 SF	60

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-051-1(7)	1987	150	164



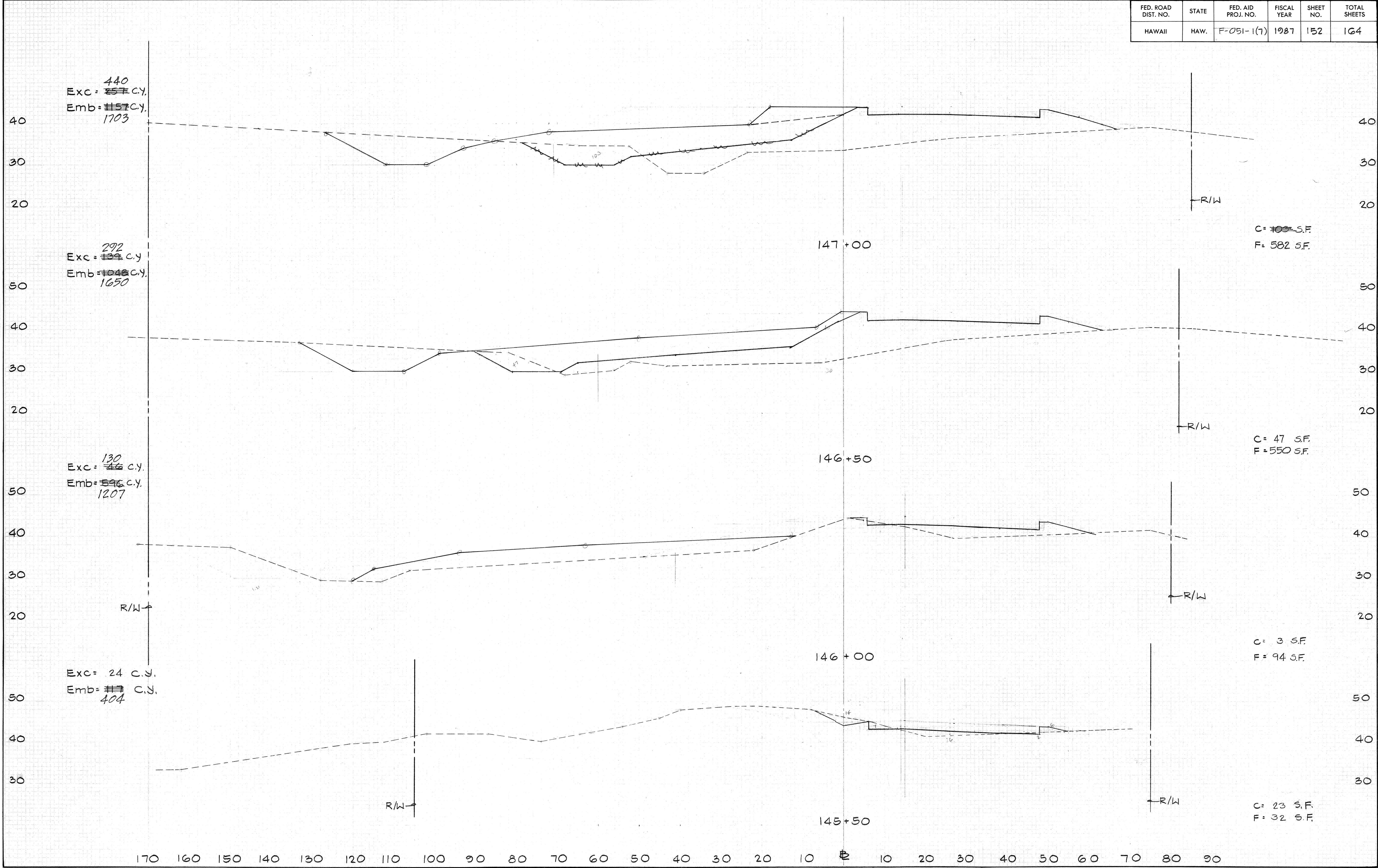
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-051-1(7)	1987	151	164



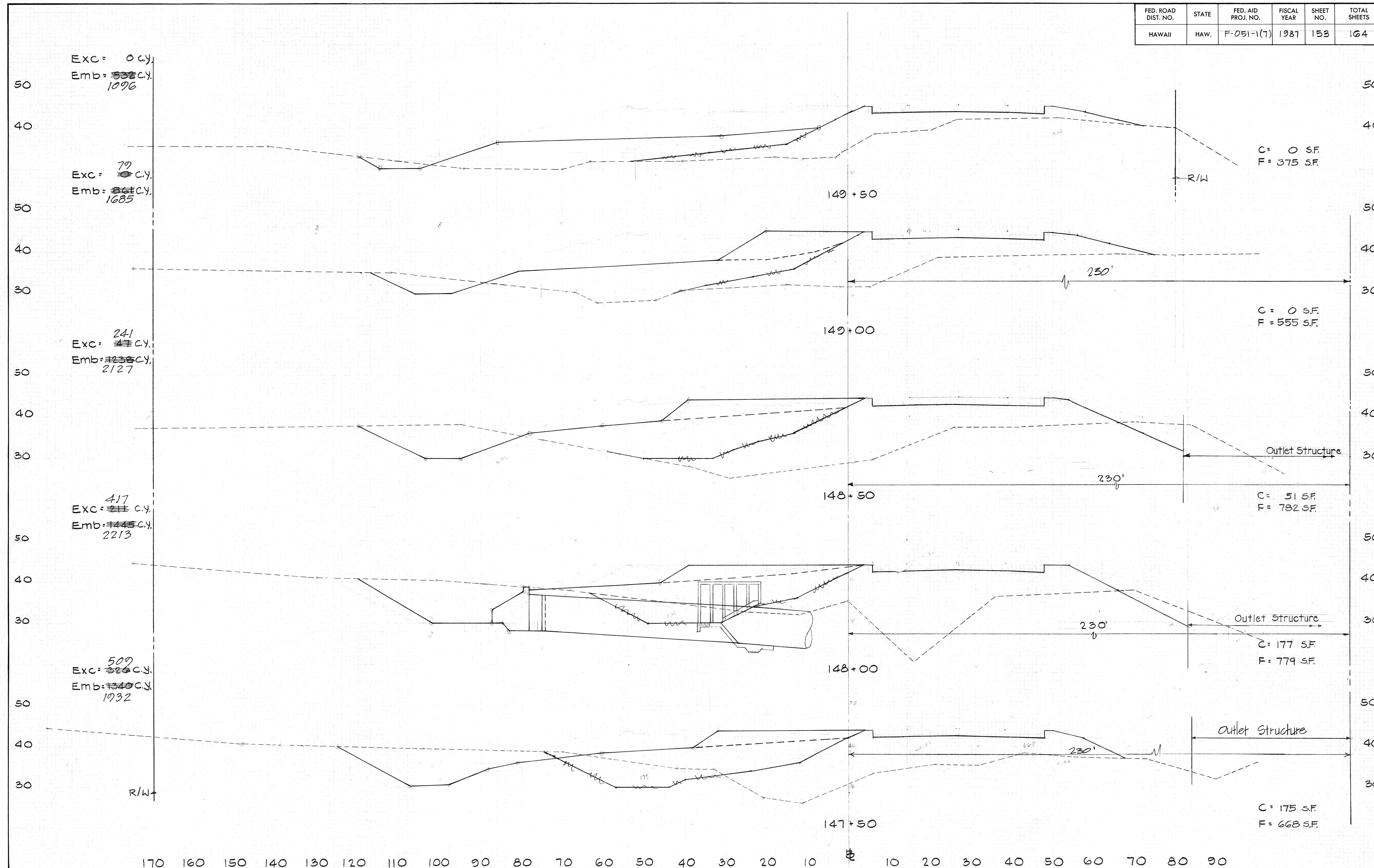
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-051-1(7)	1987	152	164

DATE	BY	CHKD	APPD
DESIGNED	DRAWN	CHECKED	APPROVED
SCALE	DATE	BY	CHKD

DATE	BY	CHKD	APPD
DESIGNED	DRAWN	CHECKED	APPROVED
SCALE	DATE	BY	CHKD



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-051-1(7)	1987	153	164



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-051-1(7)	1987	154	164

Exc. = 230 C.Y.
Emb. = 30 C.Y.

Exc. = 157 C.Y.
Emb. = 72 C.Y.

Exc. = 103 C.Y.
Emb. = 84 C.Y.

Exc. = 56 C.Y.
Emb. = 126 C.Y.

Exc. = 18 C.Y.
Emb. = 273 C.Y.

C = 100 S.F.
F = 28 S.F.

C = 70 S.F.
F = 50 S.F.

C = 41 S.F.
F = 41 S.F.

C = 19 S.F.
F = 95 S.F.

C = 0 S.F.
F = 200 S.F.

Exc. = 140¹³⁰ 278 C.Y.
Emb. = 0 C.Y.

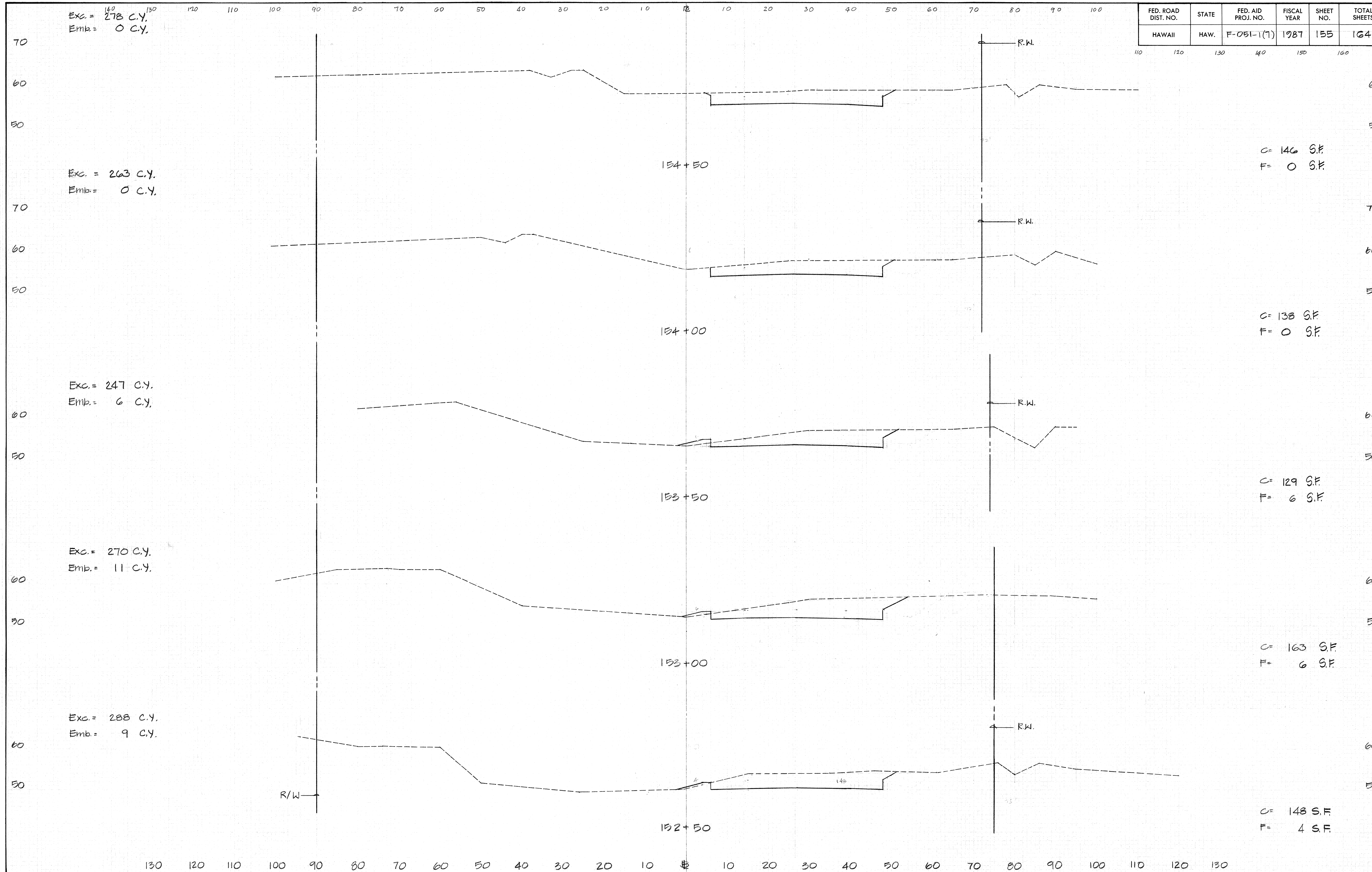
Exc. = 263 C.Y.
Emb. = 0 C.Y.

Exc. = 247 C.Y.
Emb. = 6 C.Y.

Exc. = 270 C.Y.
Emb. = 11 C.Y.

Exc. = 288 C.Y.
Emb. = 9 C.Y.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-051-1(7)	1987	155	164



Exc = 104 C.Y.
Emb = 5 C.Y.

Exc = 152 C.Y.
Emb = 2 C.Y.

Exc = 194 C.Y.
Emb = 0 C.Y.

Exc = 248 C.Y.
Emb = 0 C.Y.

Exc = 284 C.Y.
Emb = 0 C.Y.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-051-1(7)	1987	156	164

C = 69 S.F.
F = 2 S.F.

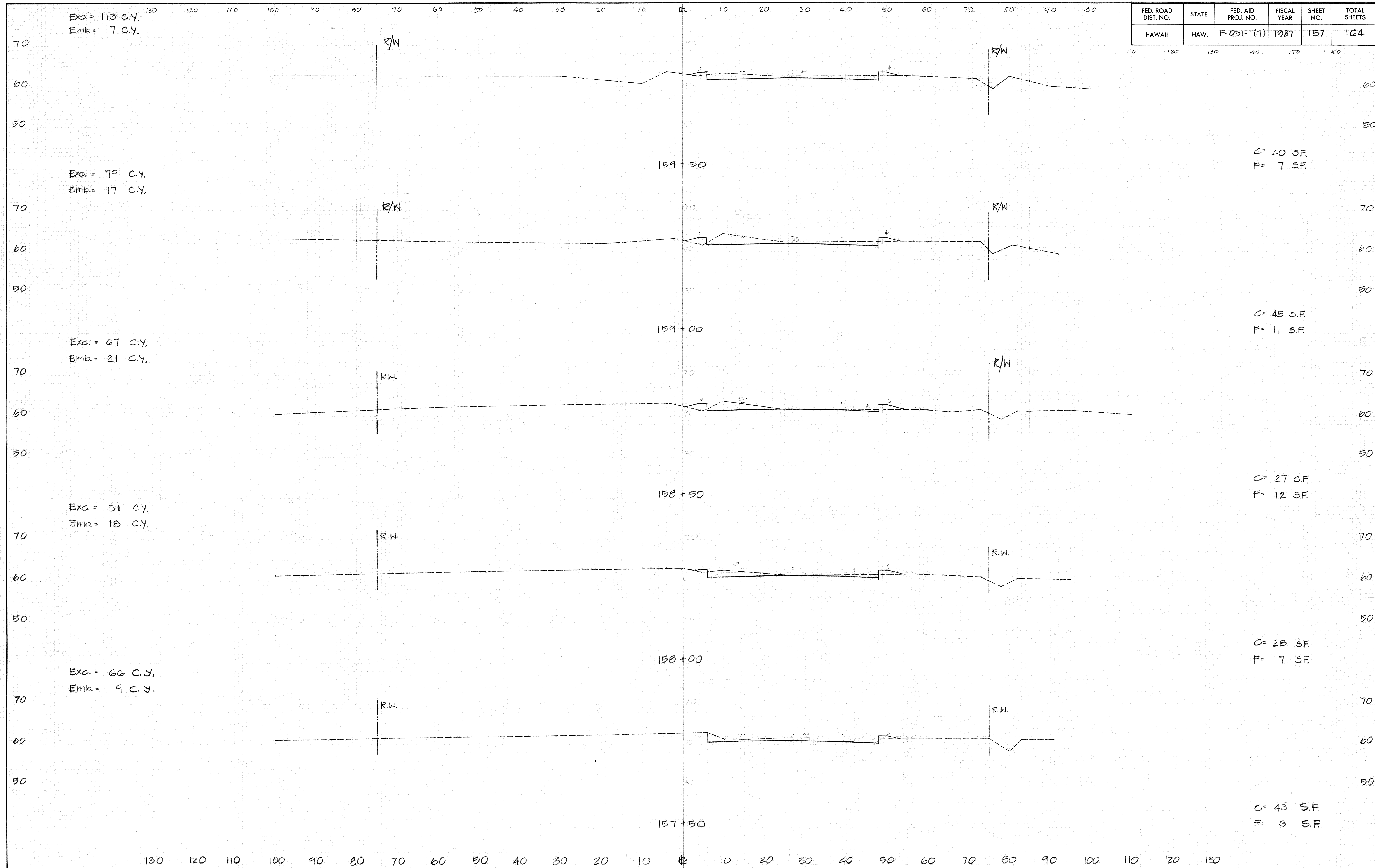
C = 95 S.F.
F = 0 S.F.

C = 115 S.F.
F = 0 S.F.

C = 153 S.F.
F = 0 S.F.

C = 154 S.F.
F = 0 S.F.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-051-1(7)	1987	157	164
110	120	130	140	150	160



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-051-1(7)	1987	158	164

Exc. = 91 C.Y.
Emb. = 19 C.Y.

Exc. = 145 C.Y.
Emb. = 19 C.Y.

Exc. = 144 C.Y.
Emb. = 12 C.Y.

Exc. = 149 C.Y.
Emb. = 5 C.Y.

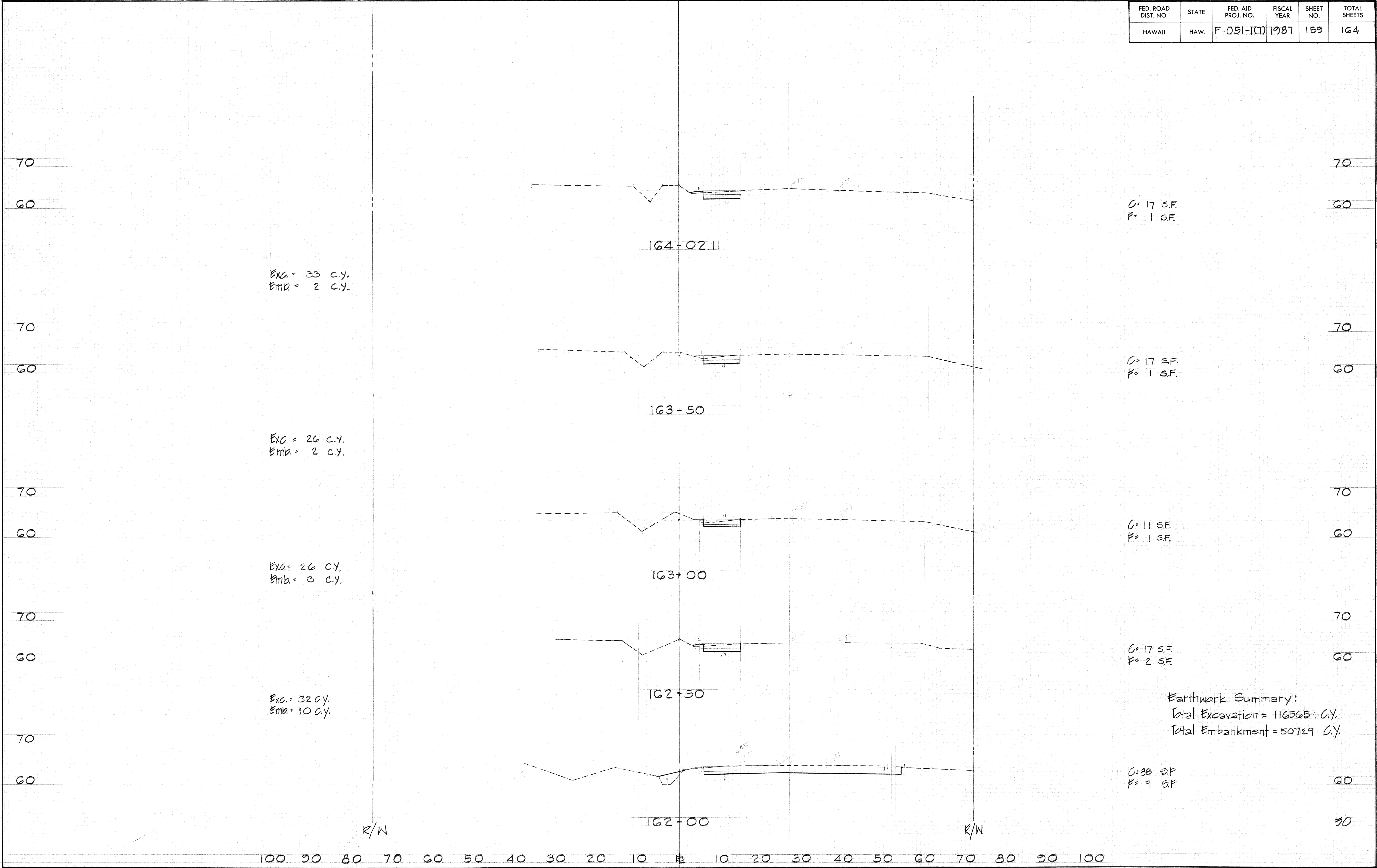
C = 80 S.F.
F = 11 S.F.

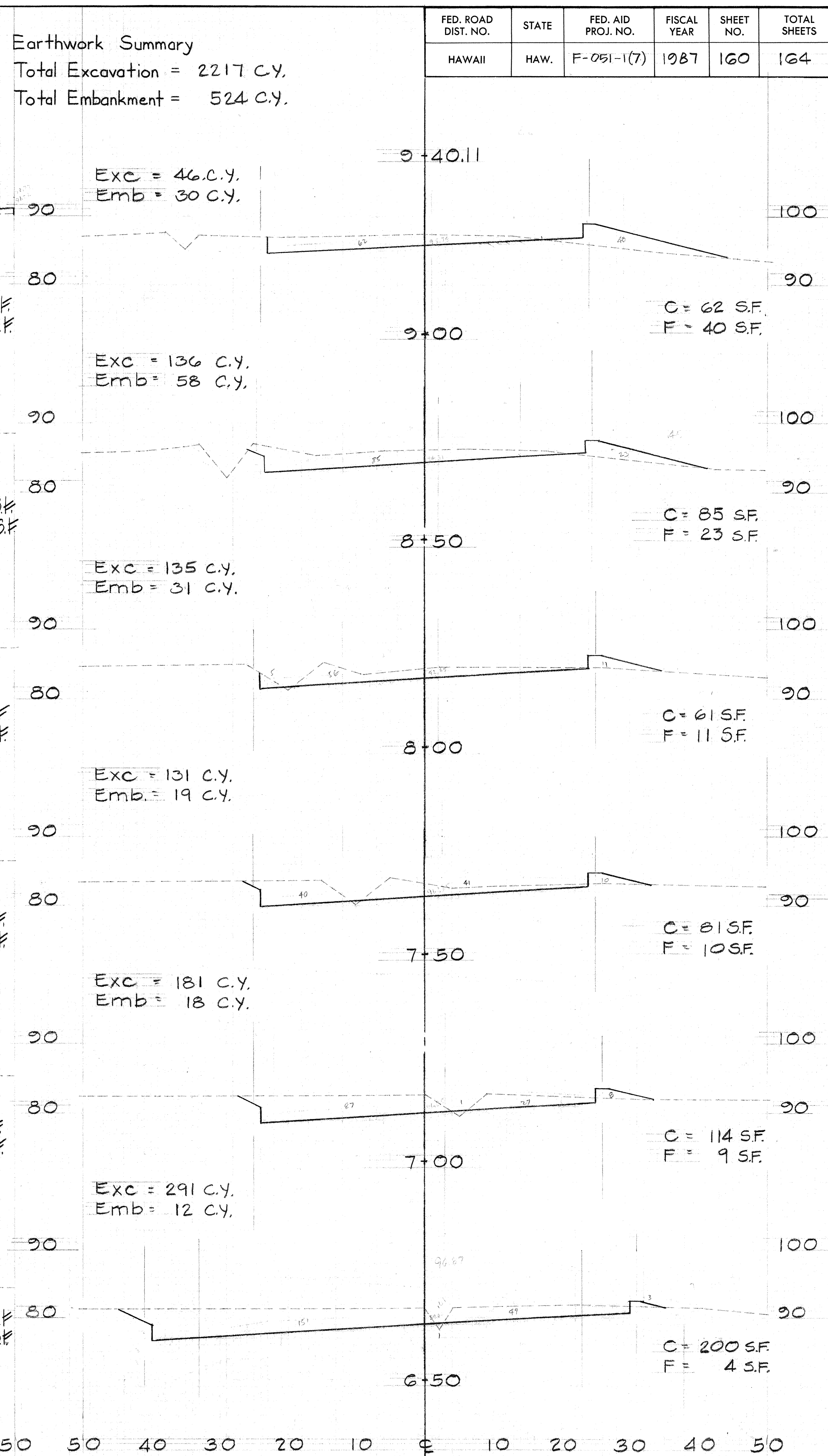
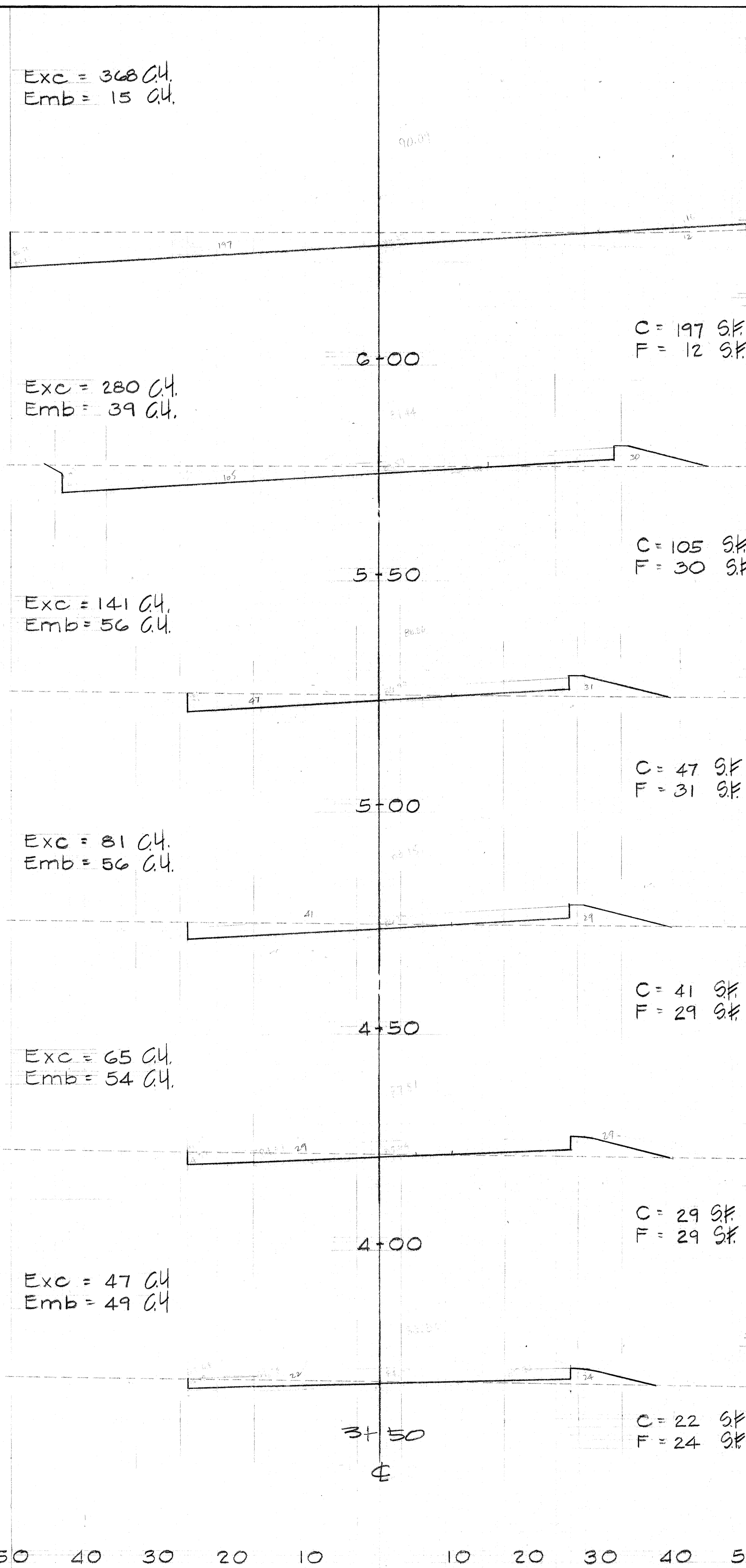
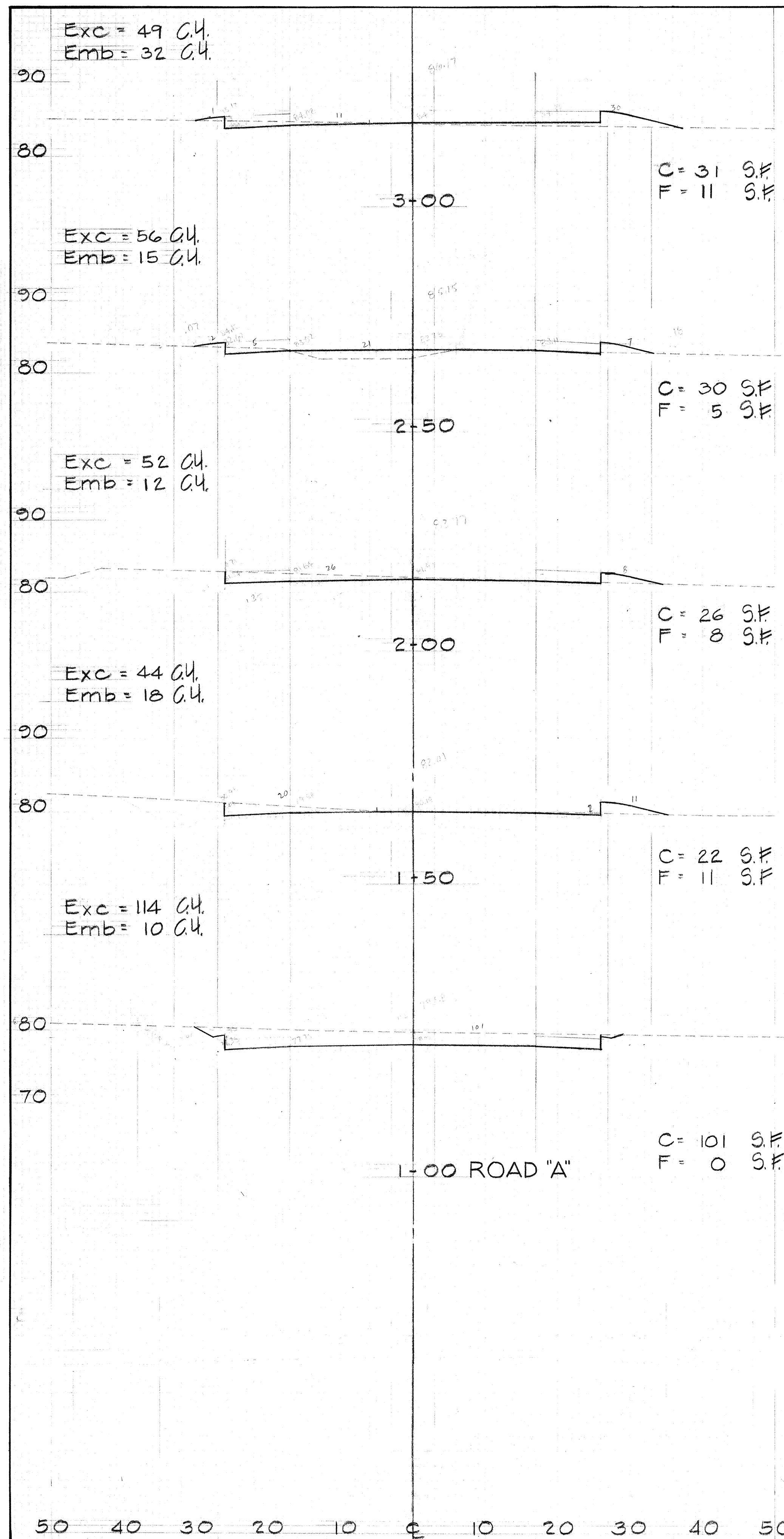
C = 77 S.F.
F = 9 S.F.

C = 79 S.F.
F = 4 S.F.

C = 82 S.F.
F = 1 S.F.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-051-1(7)	1987	159	164

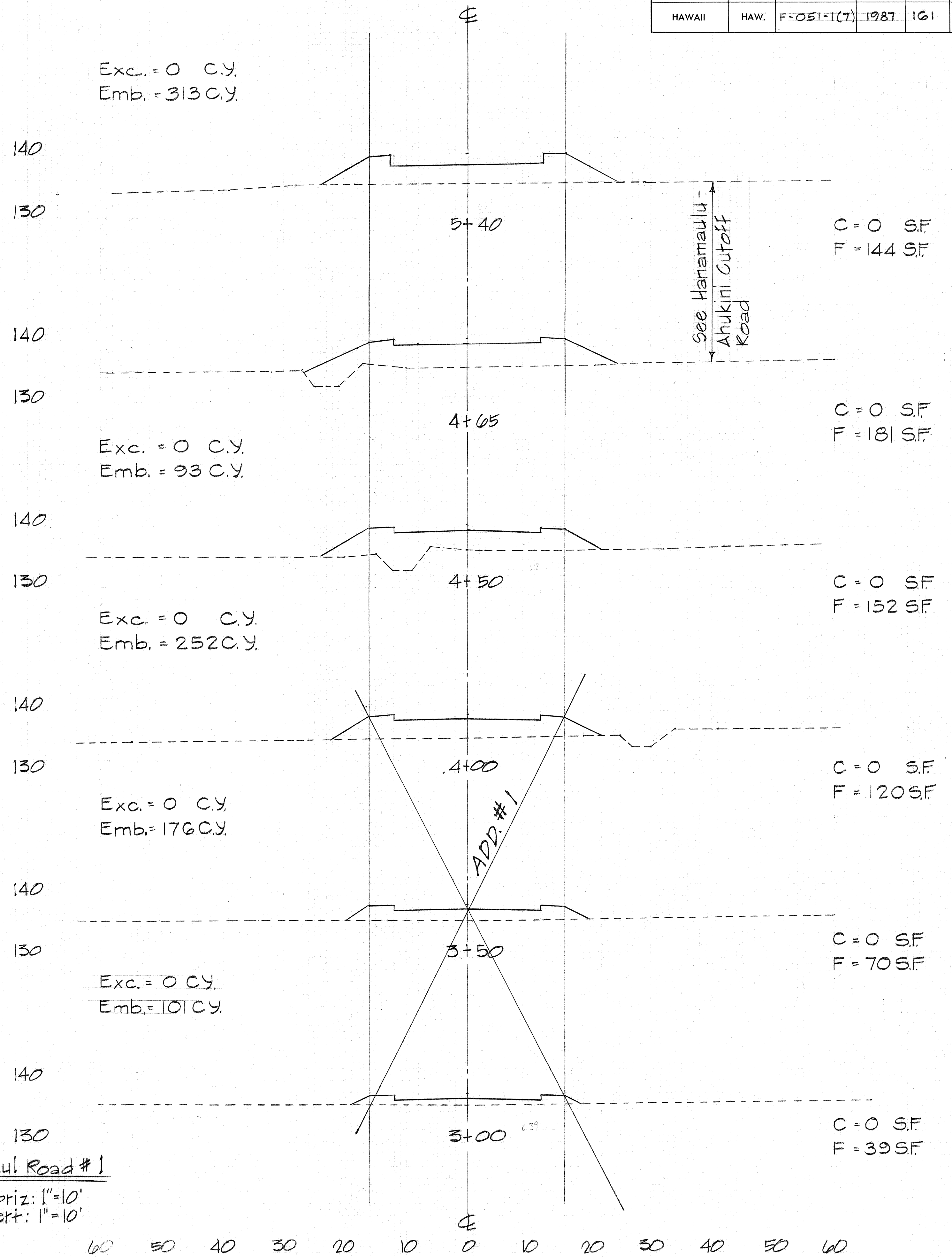
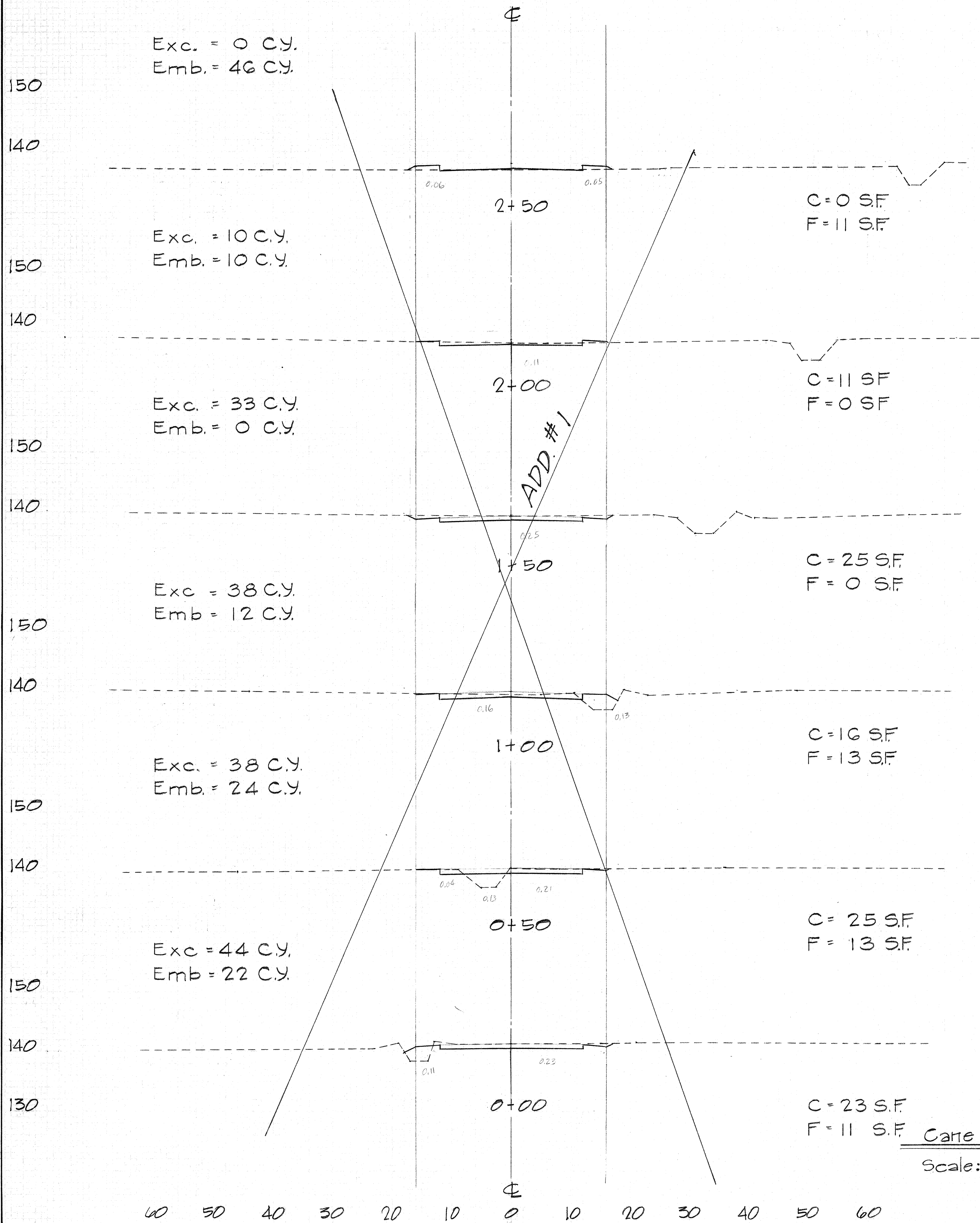




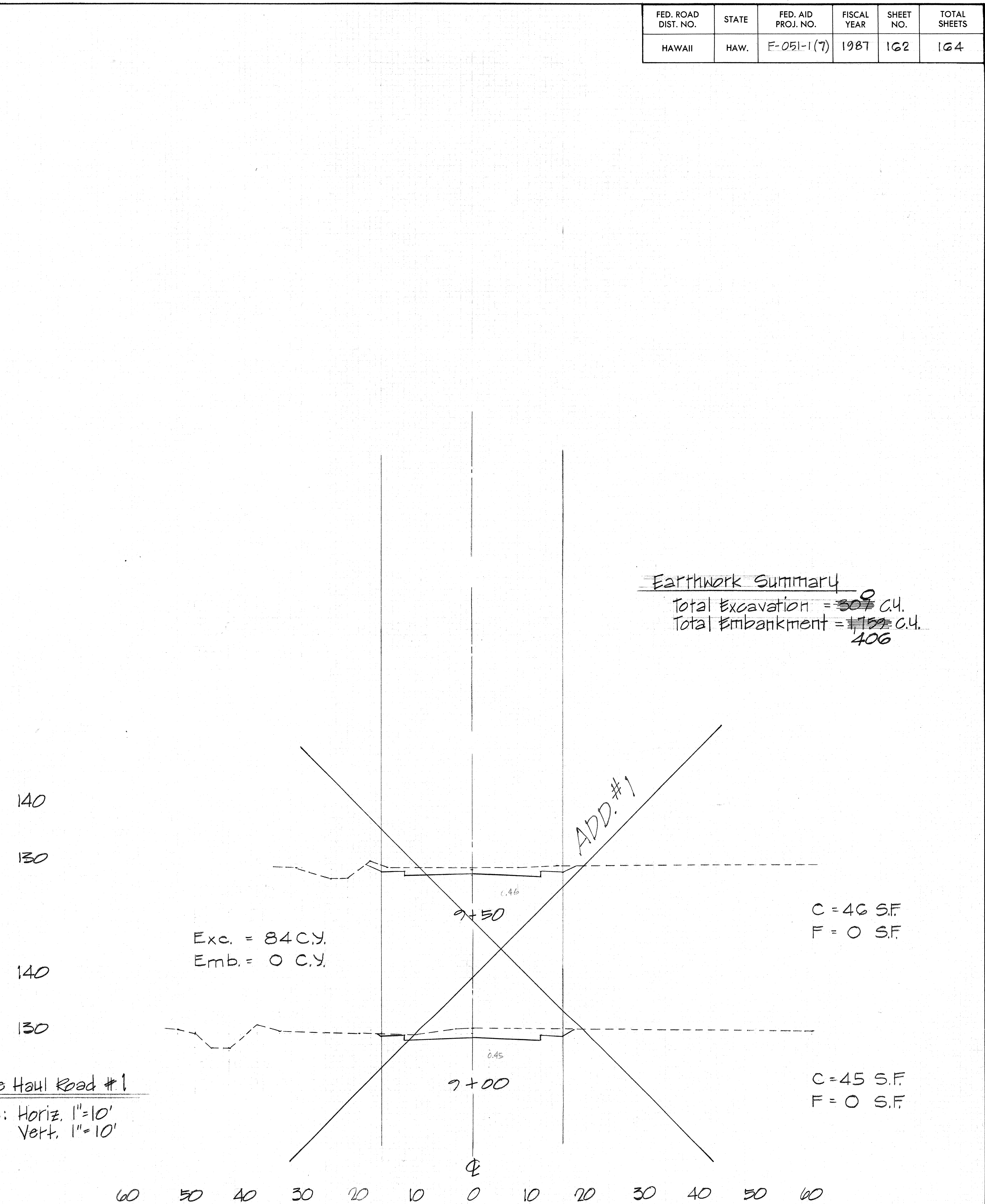
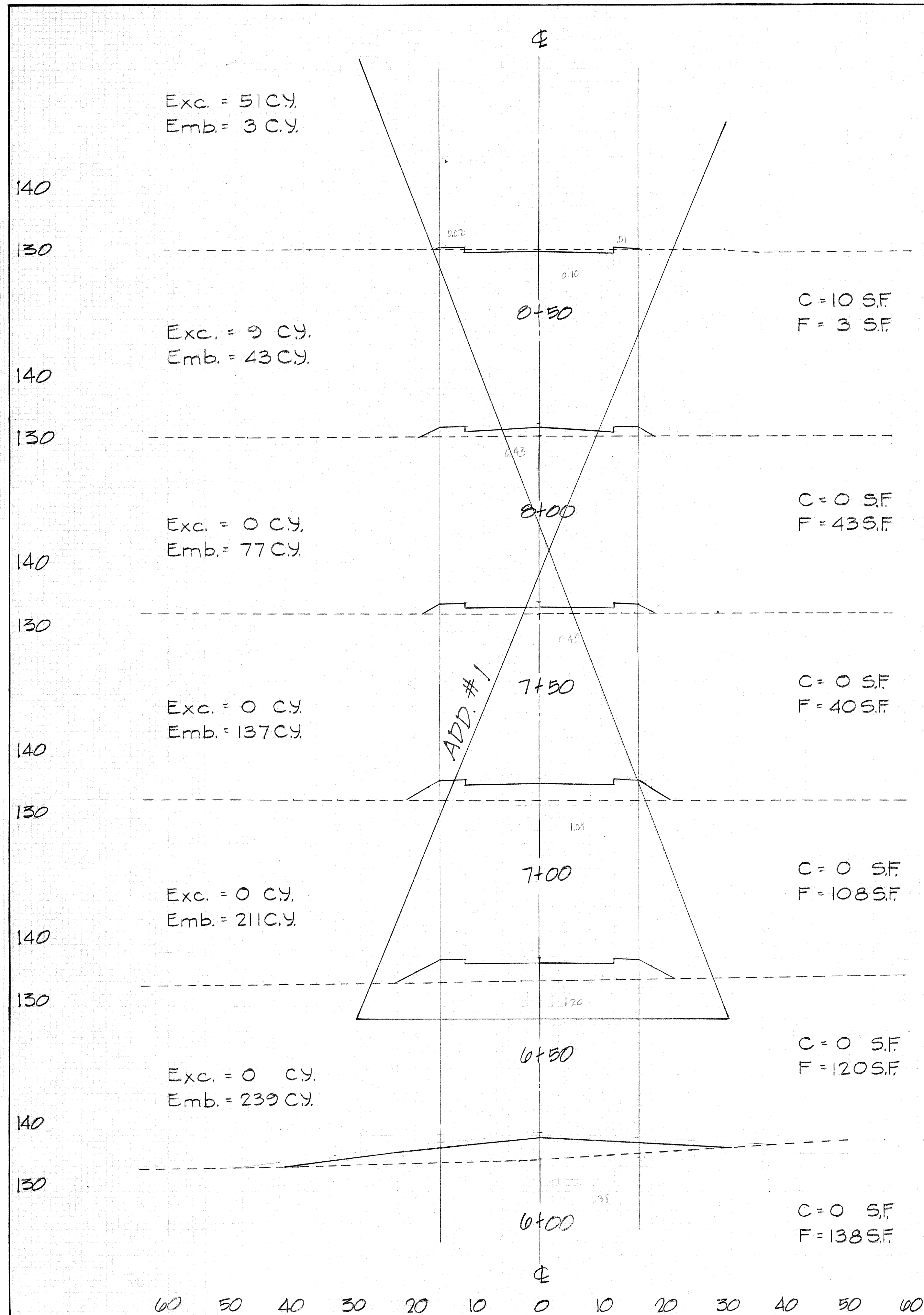
Earthwork Summary
Total Excavation = 2217 C.Y.
Total Embankment = 524 C.Y.

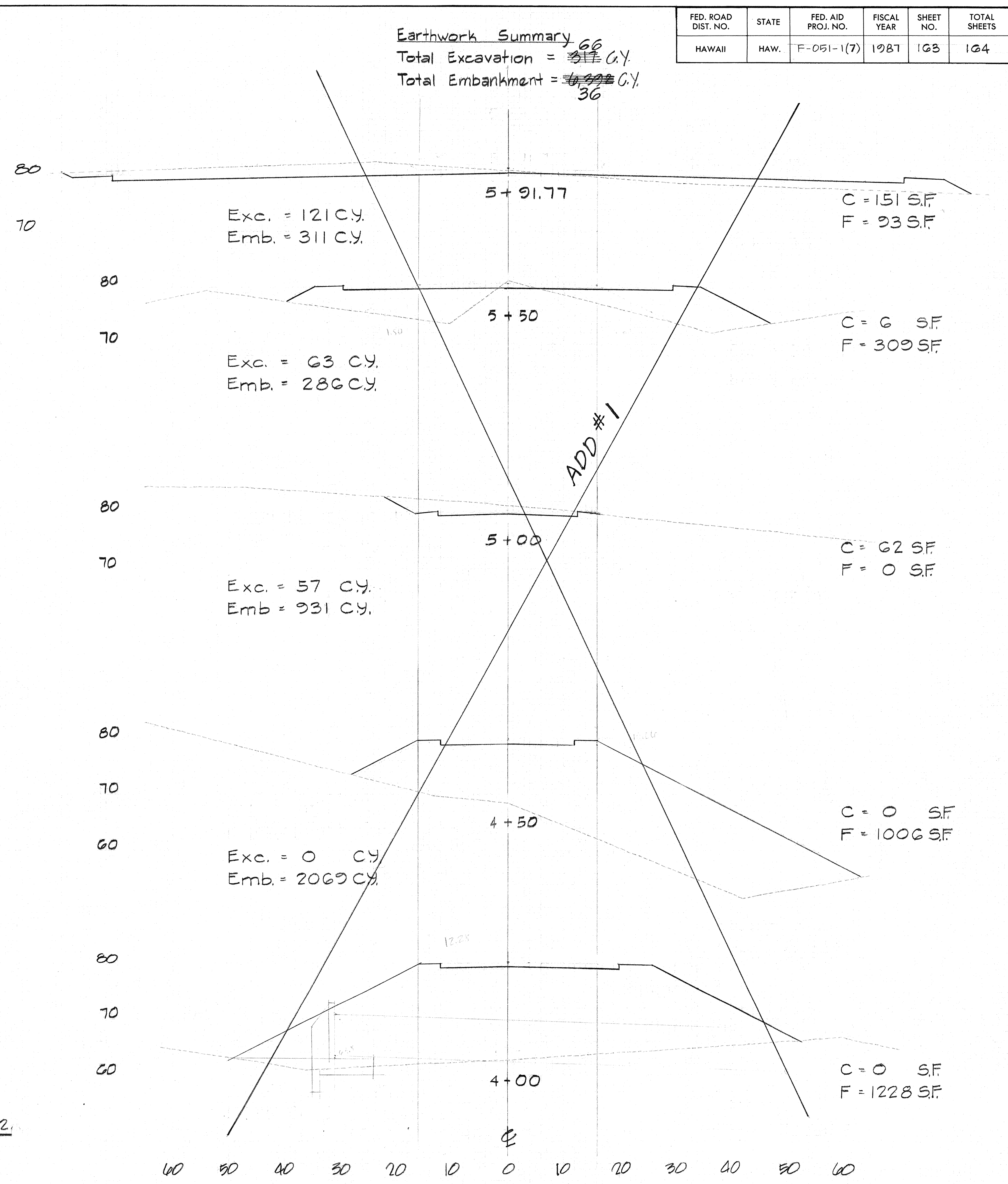
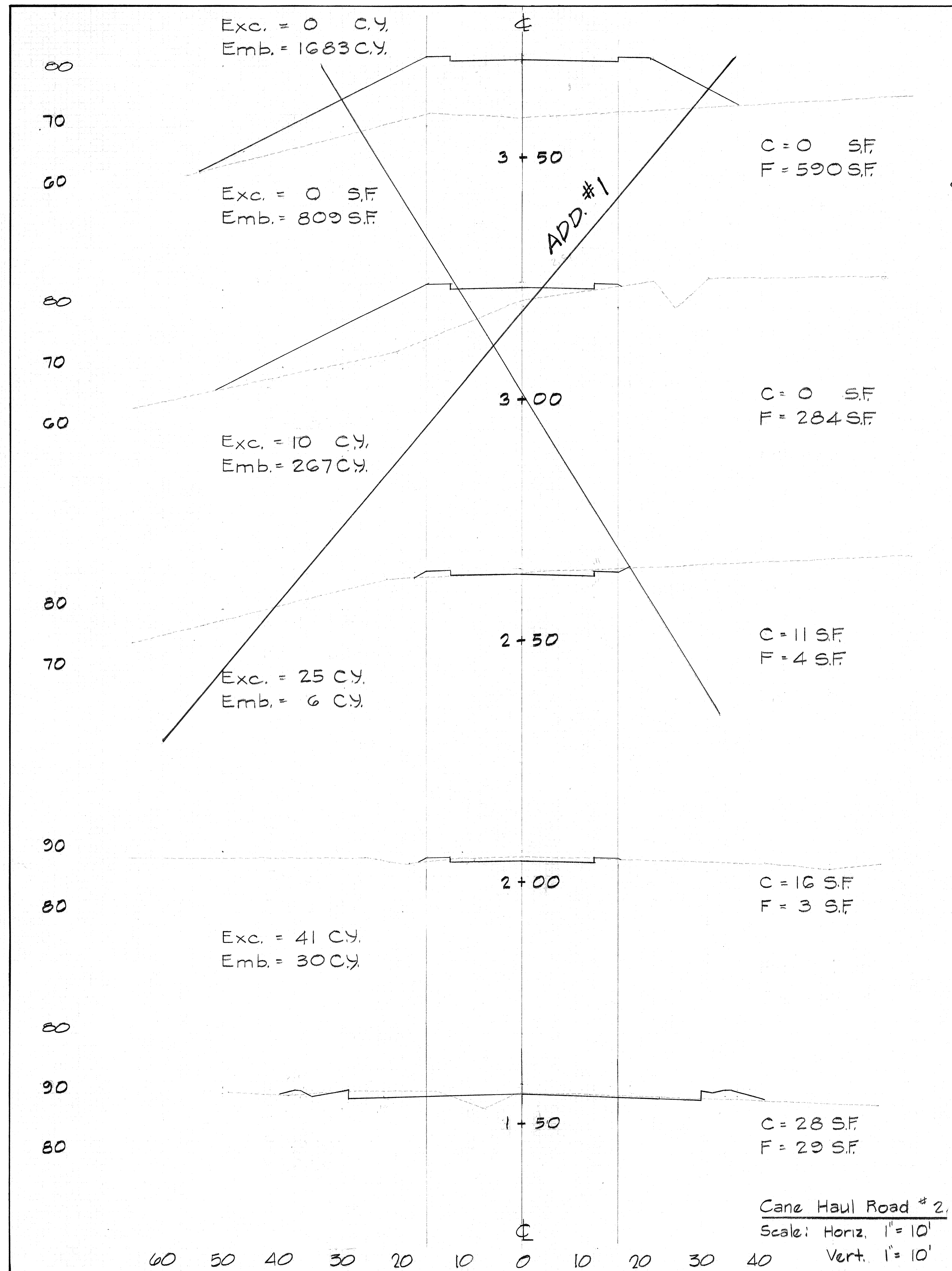
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-051-1(7)	1987	160	164

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-051-1(7)	1987	161	164



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-051-1(7)	1987	162	164

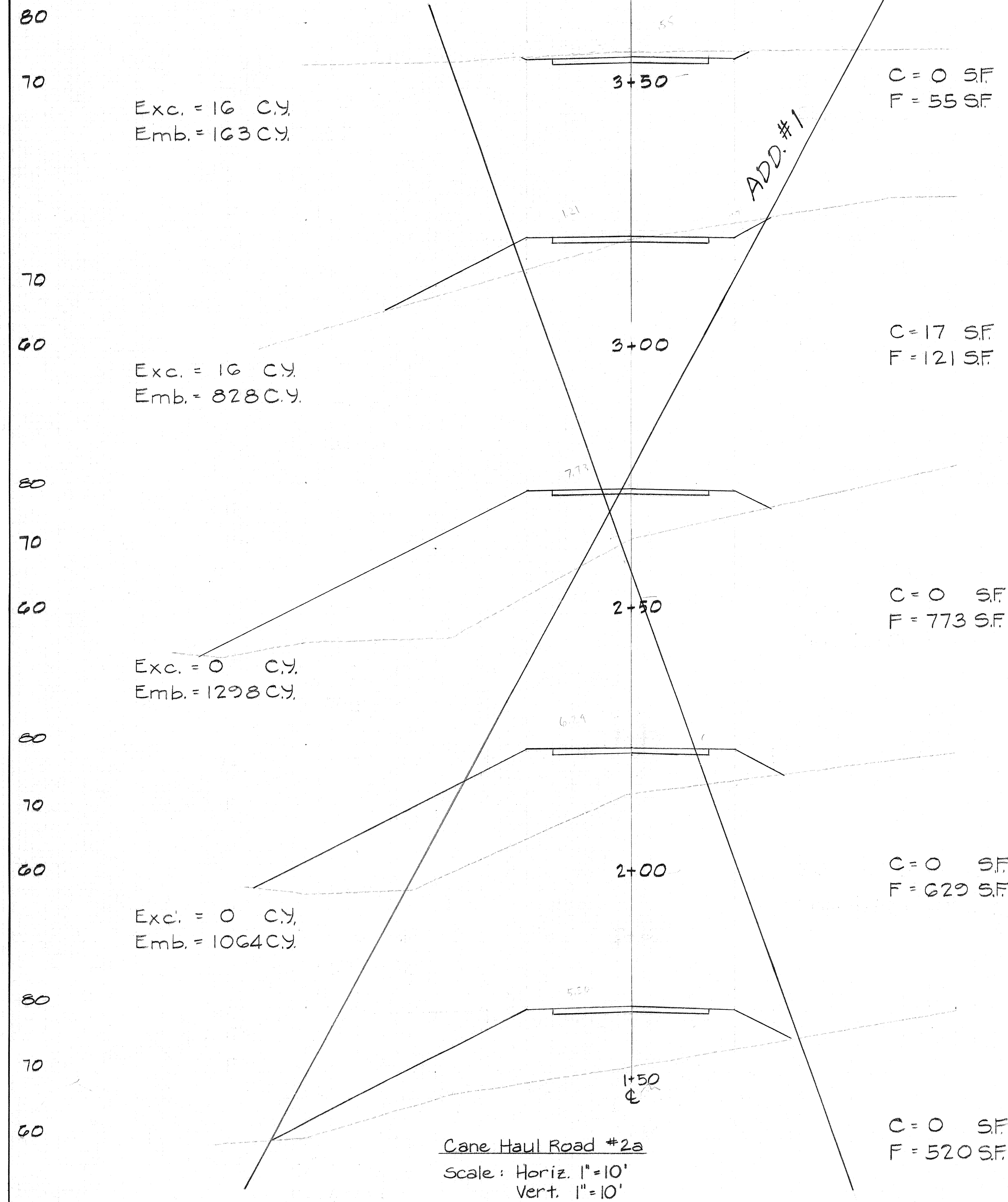




FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-051-1(7)	1987	163	164

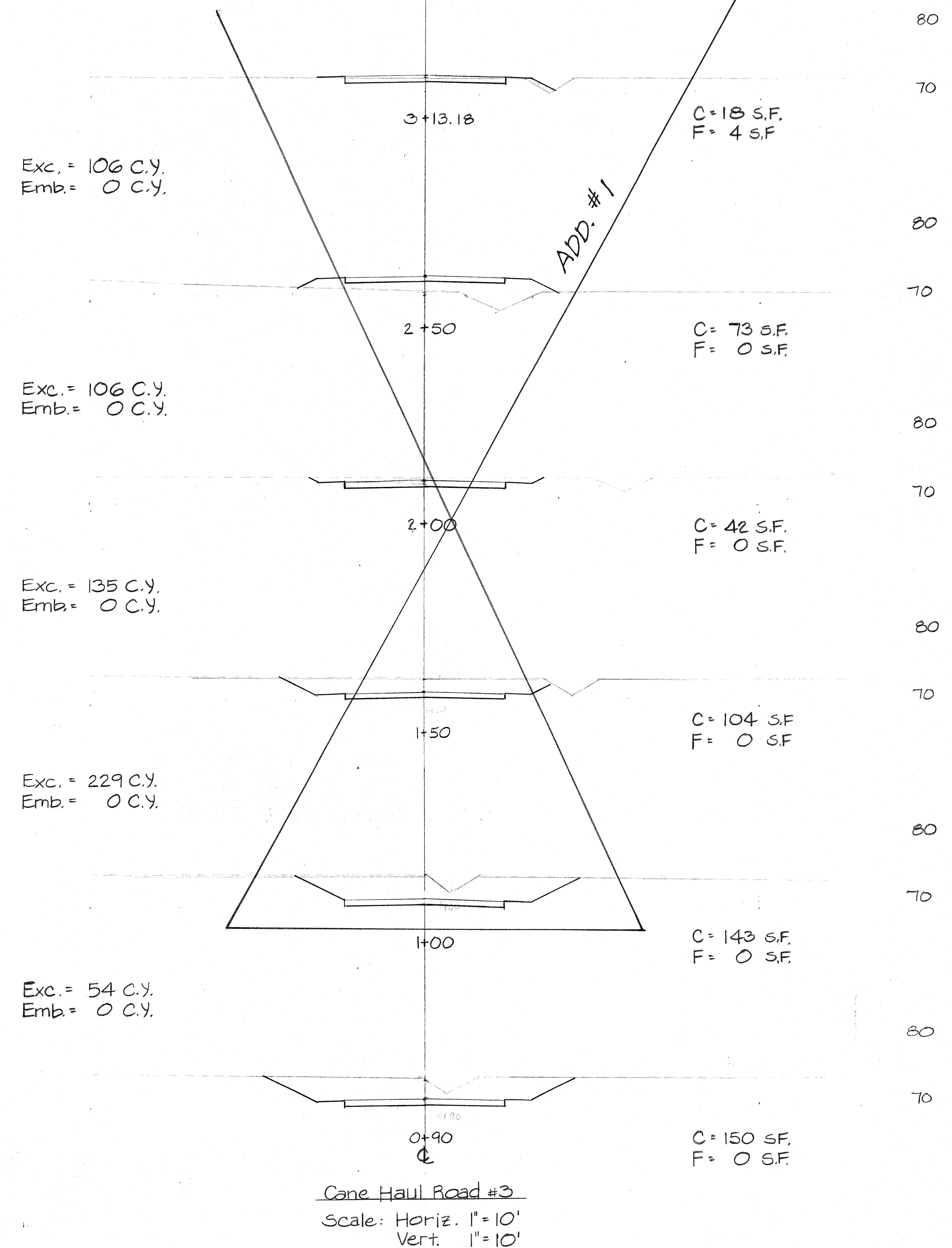
Earthwork Summary:

Total Excavation = 32 C.Y.
Total Embankment = 3353 C.Y.



Earthwork Summary:

Total Excavation = ~~630~~ 54 C.Y.
Total Embankment = ~~5~~ 0 C.Y.



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-051-1(7)	1987	164	164