

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

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

Exc = 1273.4 cy
Emb = 21 cy

C = 1000 ft
F = 0

2+01

Exc = 312.5 cy
Emb = 22.4 cy

C = 463 ft
F = 13 ft

1+54

Exc = 176.9 cy
Emb = 24.6 cy

C = 323 ft
F = 44 ft

1+32.25

SPURTS MAIN CHANNEL

0+99.32 = 1+05.11

C = 12 ft
F = 4 ft

Exc = 1723.8 cy
Emb = 0

C = 1424 ft
F = 0

2+84.97

Exc = 973.8 cy
Emb = 0

C = 1264 ft
F = 0

2+50

Exc = 627.7 cy
Emb = 0

C = 614 ft
F = 0

2+22

DEPARTMENT OF PUBLIC WORKS CITY AND COUNTY OF HONOLULU			
BUREAU OF PLANS			
KALIHI TUNNEL			
STREAM DIVERSION			
MAIN CHANNEL CROSS SECTIONS			
ENGINEER	S.O.H. - J.S.Y.	DATE	JULY 16, 1933
DRAFTSMAN	J.S.	CHECKED BY	S.O.H. - R.W.
SCALE	Vert. 1" = 10' Hor. 1" = 10'	TRACER	J.S.
APPROVED	<i>[Signature]</i>	APPROVED	<i>[Signature]</i>
CHIEF ENGINEER		BUREAU ENGINEER	

APPROVED
[Signature]
ENGINEER, KALIHI TUNNEL

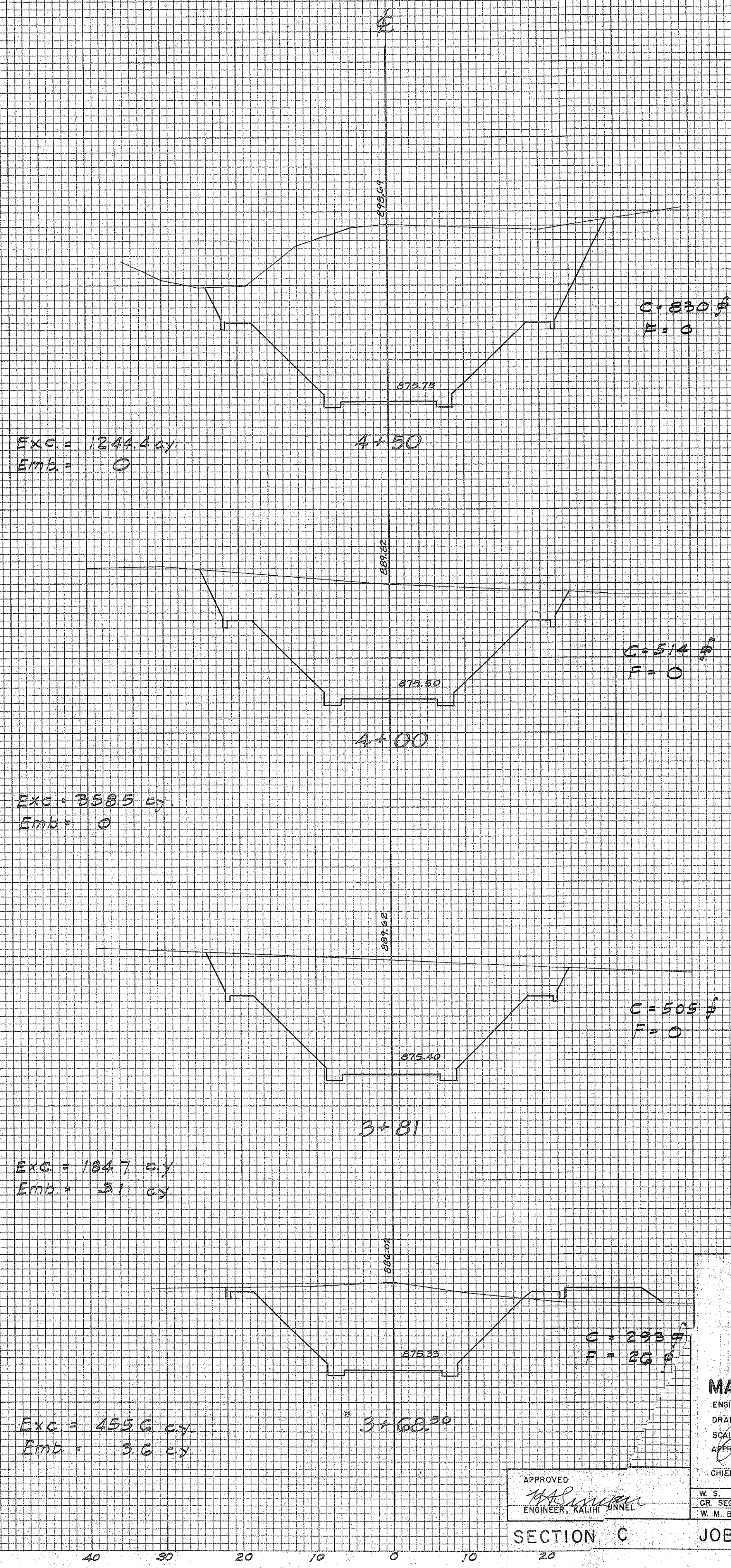
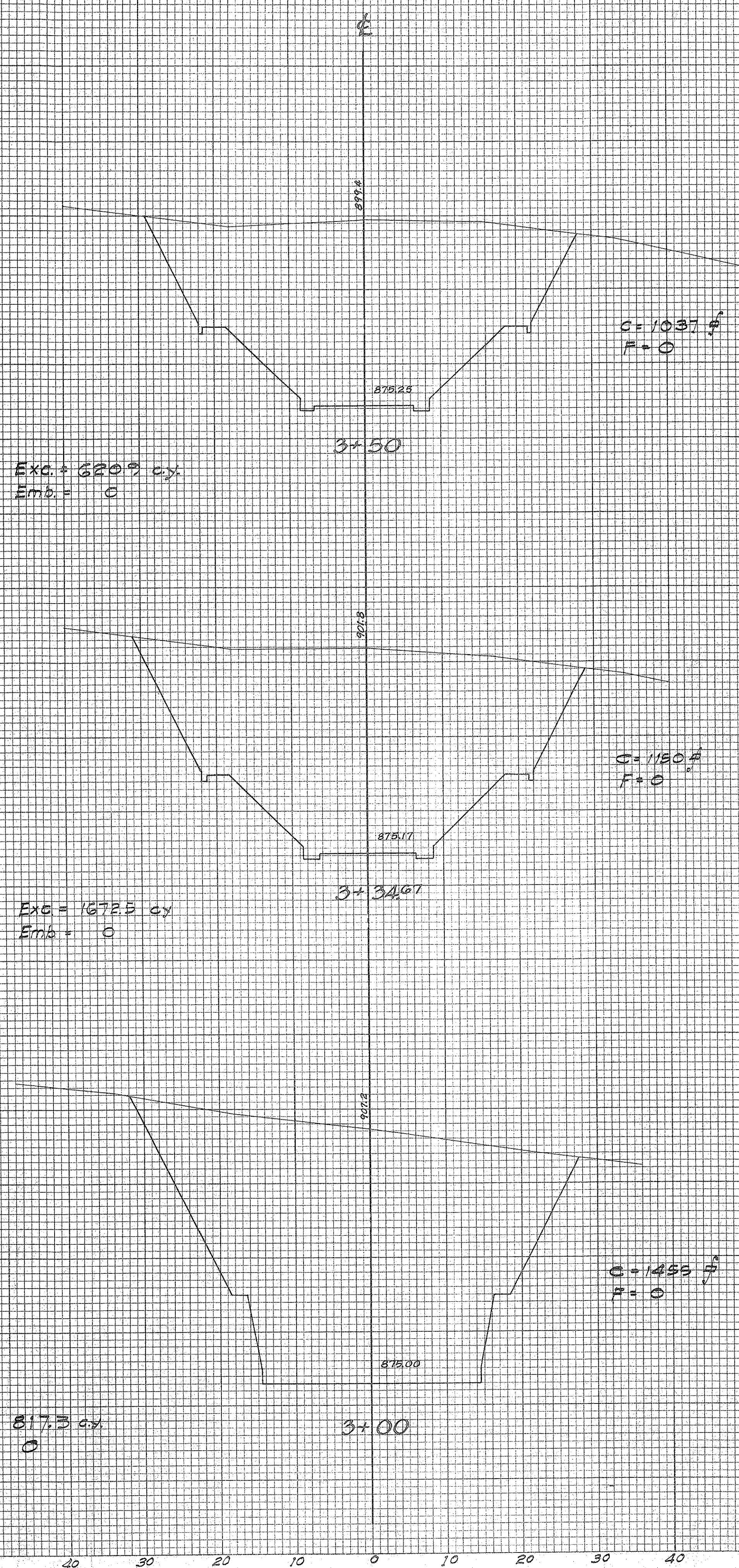
SECTION C JOB NO. 26 - 53 DWG. S-7

Sheet No. 67 of 252 Sheets

FILE	POCKET	FOLDER	NO.
7	5	2	27

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

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



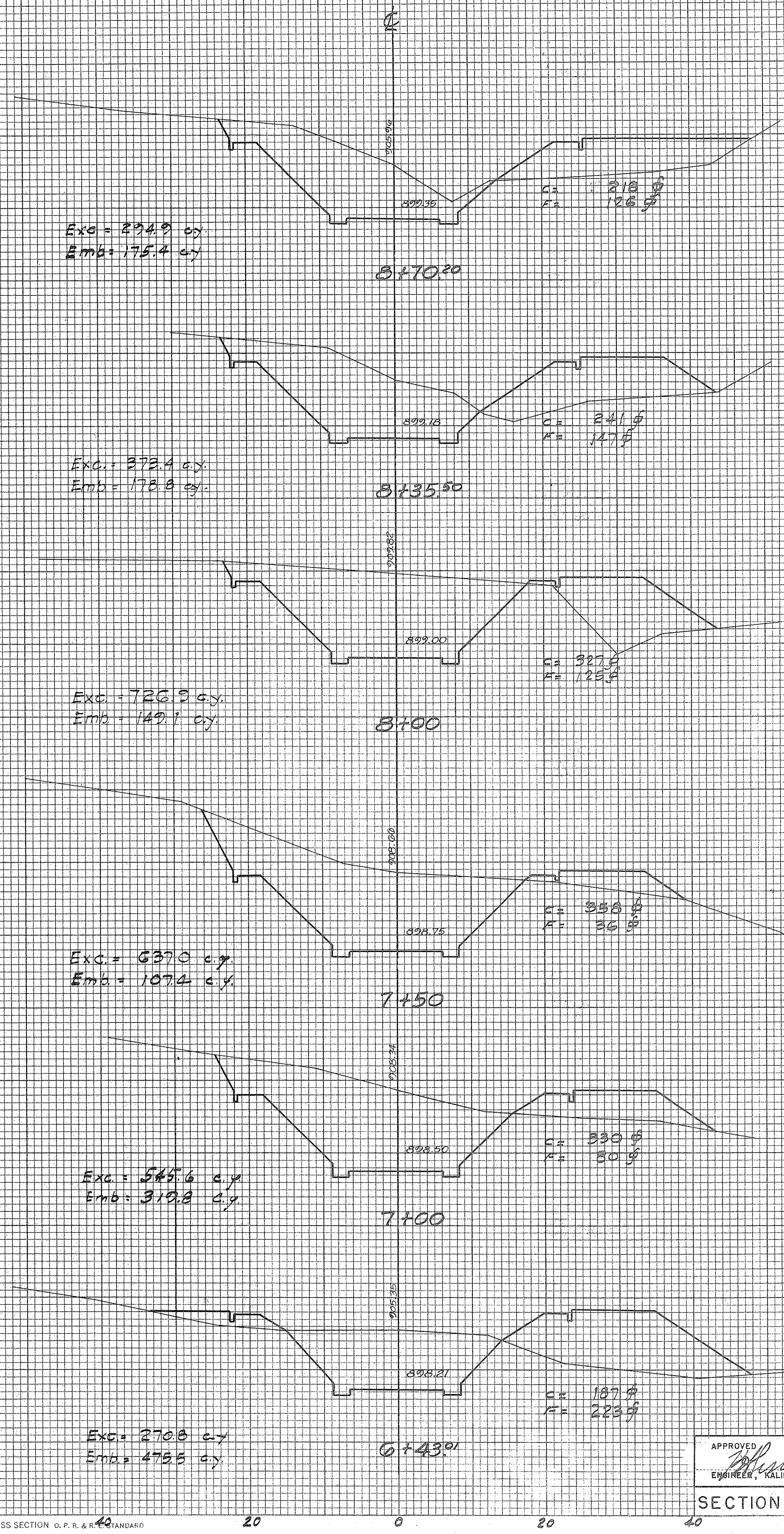
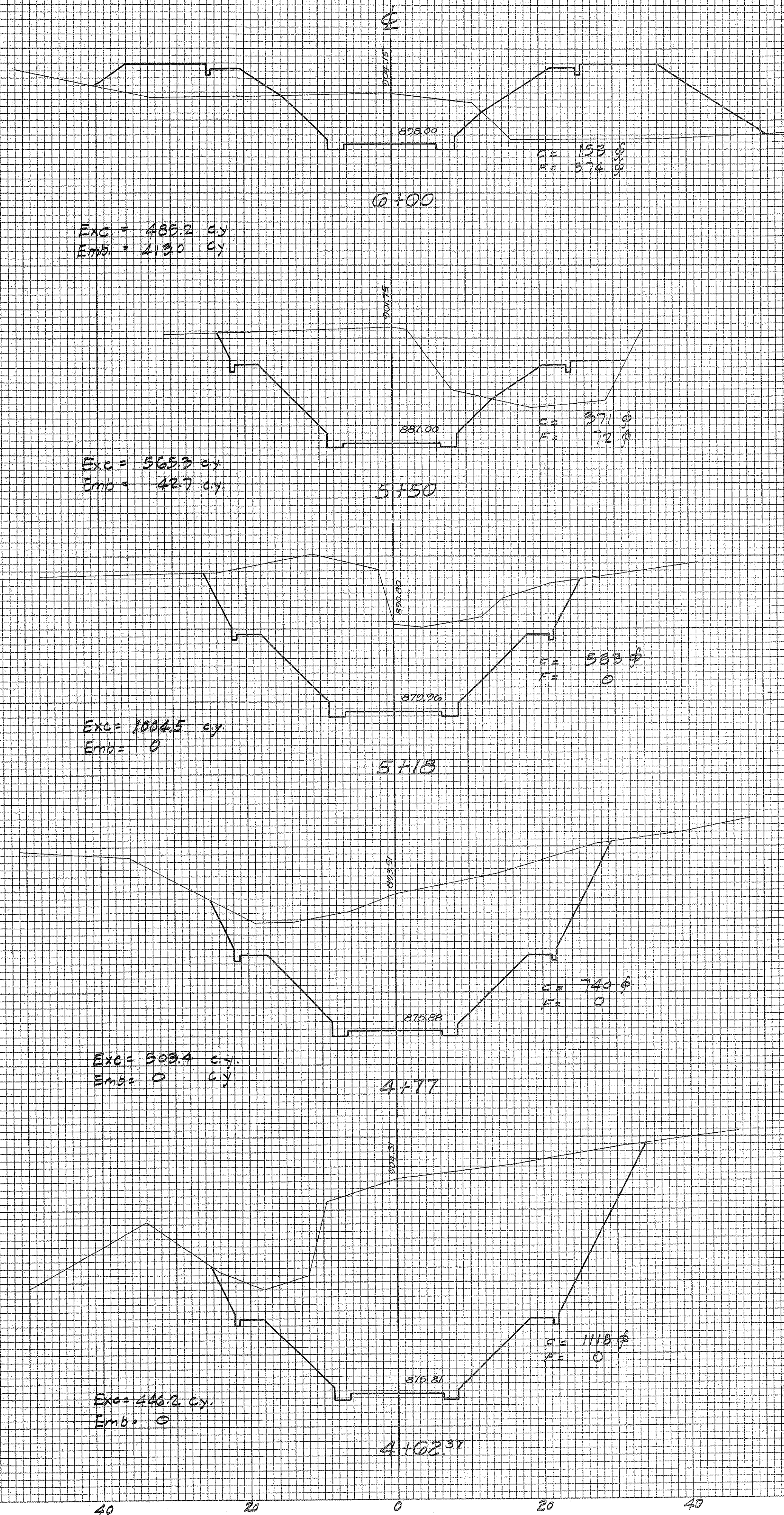
DEPARTMENT OF PUBLIC WORKS
CITY AND COUNTY OF HONOLULU
BUREAU OF PLANS
KALIHI TUNNEL
STREAM DIVERSION
MAIN CHANNEL CROSS SECTIONS
ENGINEER: J. S. J. DATE: JULY 18, 1952
DRAFTSMAN: J. S. CHECKED BY: J. S. J.
SCALE: 1" = 10' HORIZ. 1" = 10' VERT.
APPROVED: *J. S. J.* APPROVED: *J. S. J.*
CHIEF ENGINEER BUREAU ENGINEER

APPROVED
J. S. J.
ENGINEER, KALIHI TUNNEL

SECTION C JOB NO. 26 - 53 DWG. S-8

FINAL SURVEY	SURVEYED	DATE
	PLOTTED	BY
	NOTE BOOK	
	AREAS CHECKED	

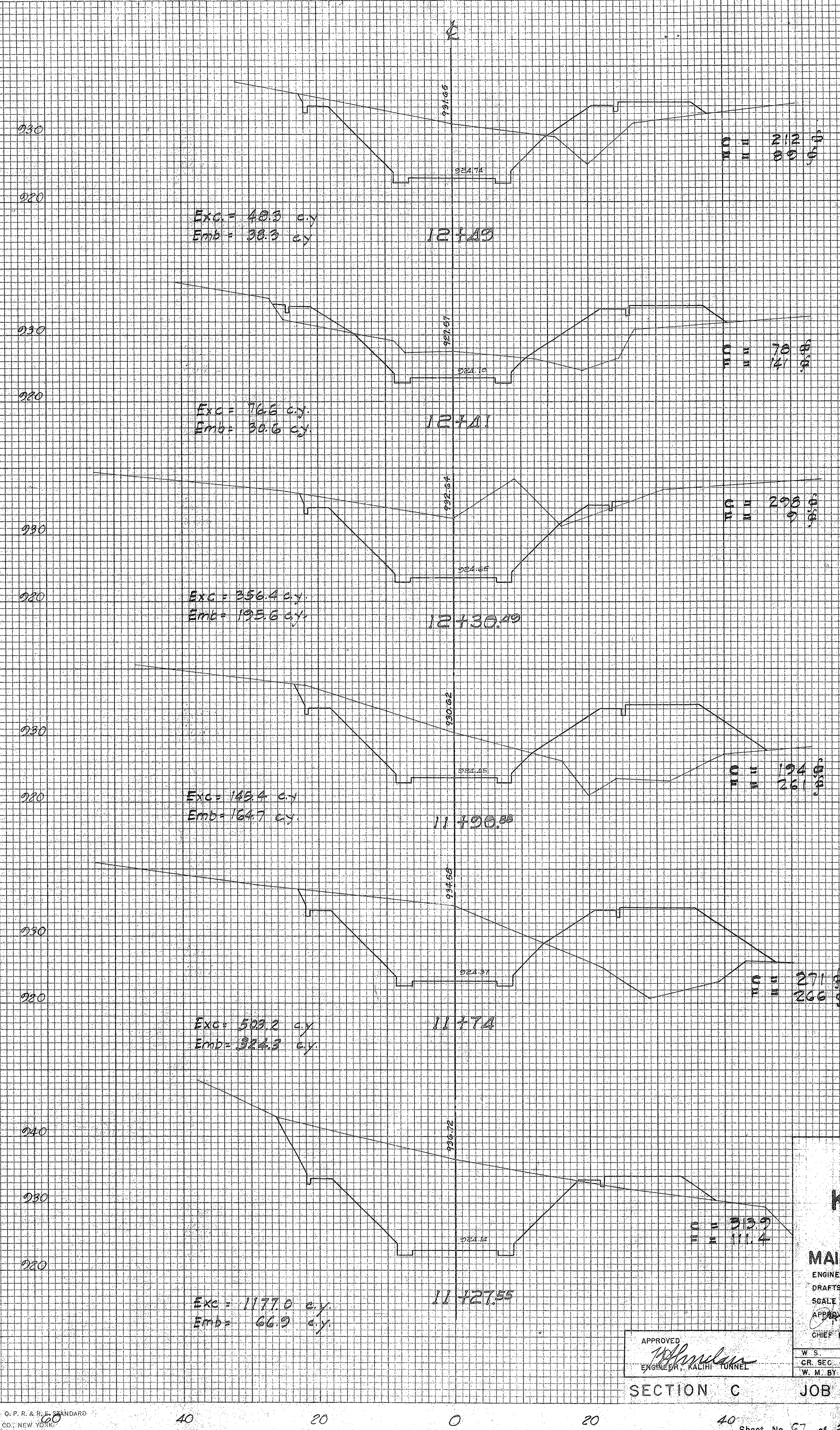
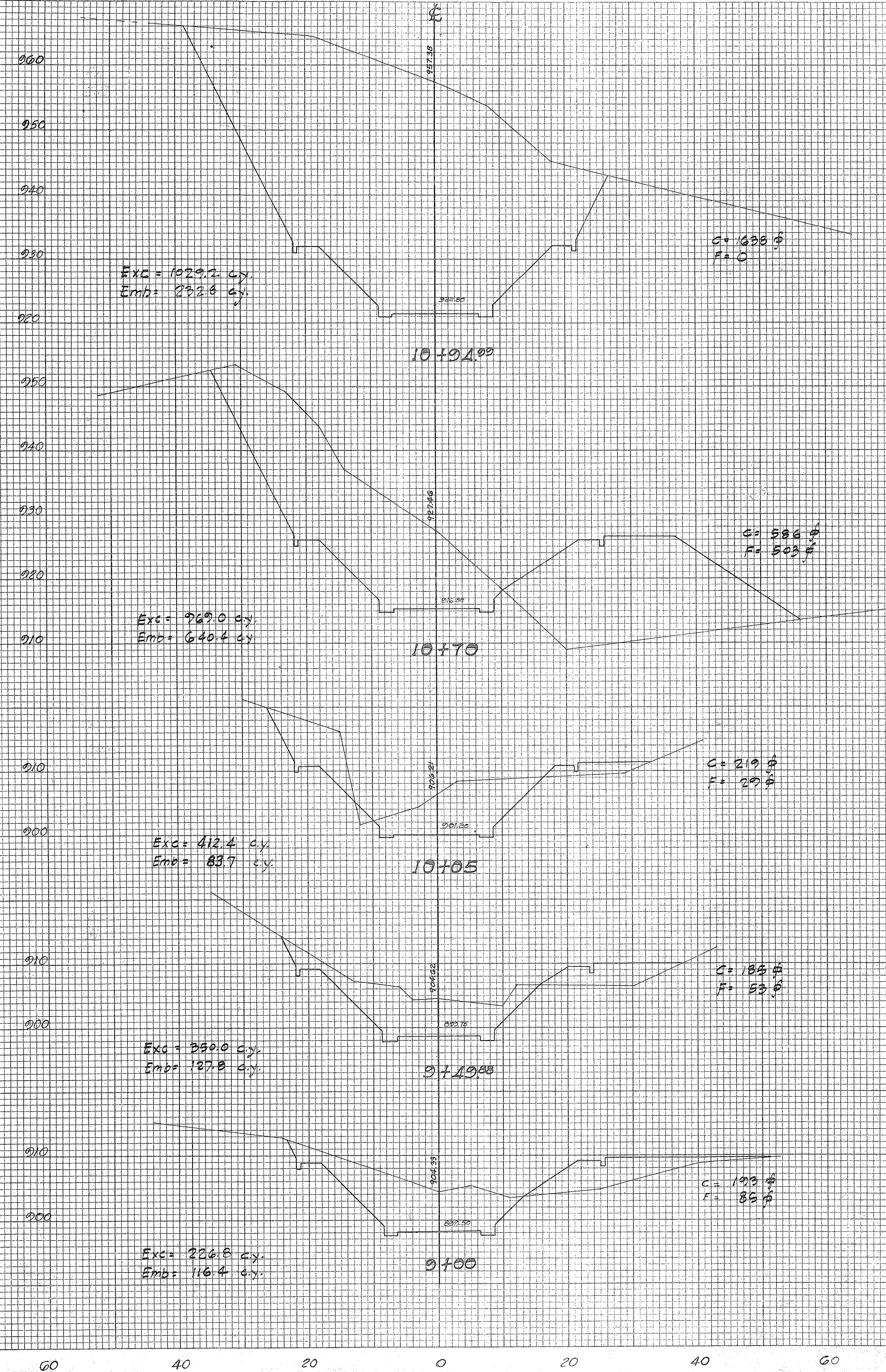
ORIGINAL SURVEY	SURVEYED	DATE
	PLOTTED	BY
	NOTE BOOK	
	AREAS CHECKED	



DEPARTMENT OF PUBLIC WORKS CITY AND COUNTY OF HONOLULU			
BUREAU OF PLANS			
KALIHI TUNNEL			
STREAM DIVERSION			
MAIN CHANNEL CROSS SECTIONS			
ENGINEER	DATE	C.B.	
DRAFTSMAN	CHECKED BY	S.B.	
SCALE	TRACER	S.B.	
APPROVED	APPROVED	S.B.	
CHIEF ENGINEER	BUREAU ENGINEER	S.B.	
W.S.	PROFILE	C.B.	
CR. SEC.	F.B.	S.B.	
W.M. BY	F.W. BY	S.B.	
SECTION C		JOB NO. 26-53 DWG. S-9	
FILE	POCKET	FOLDER	NO.
5	5	2	25

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

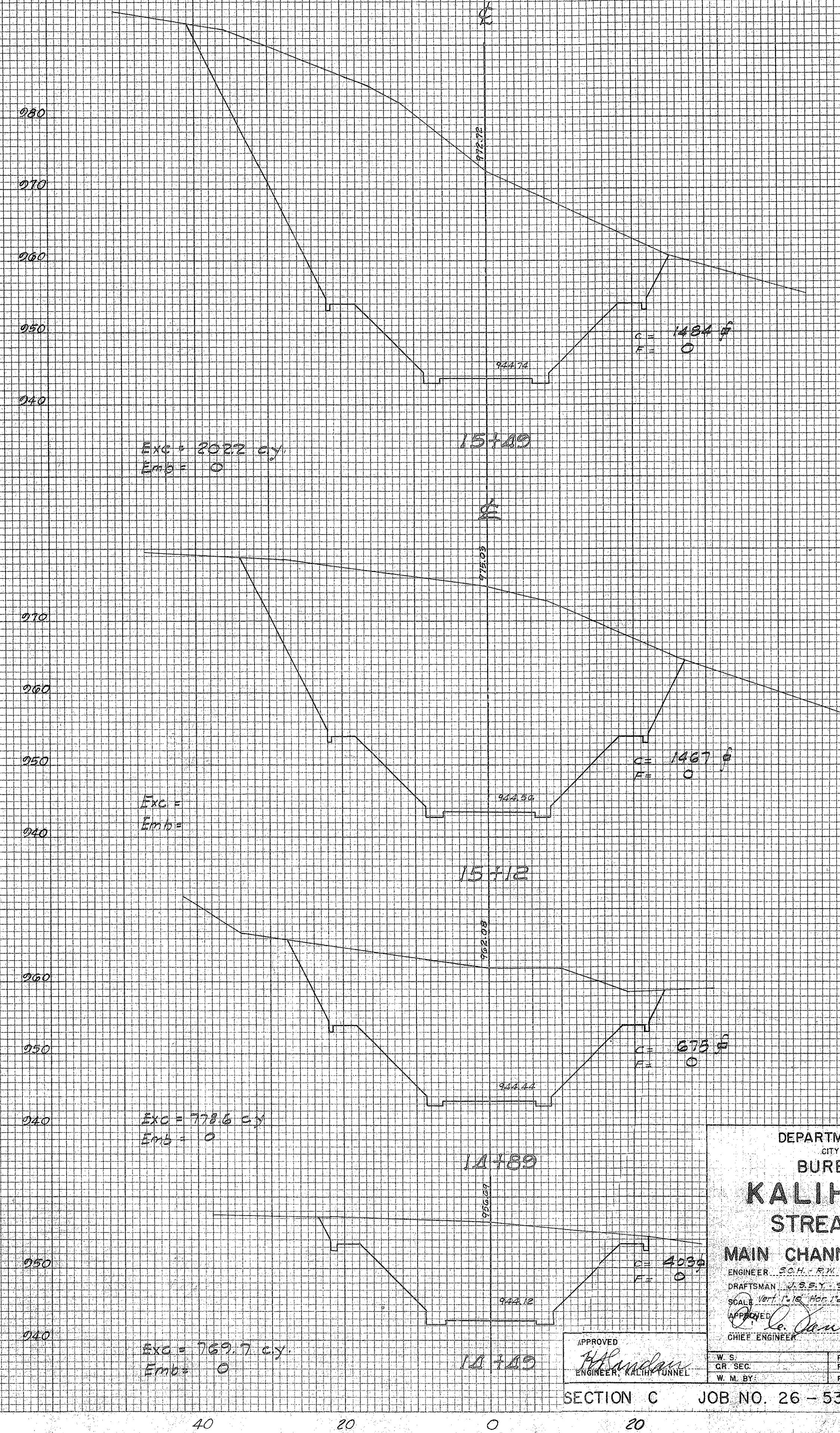
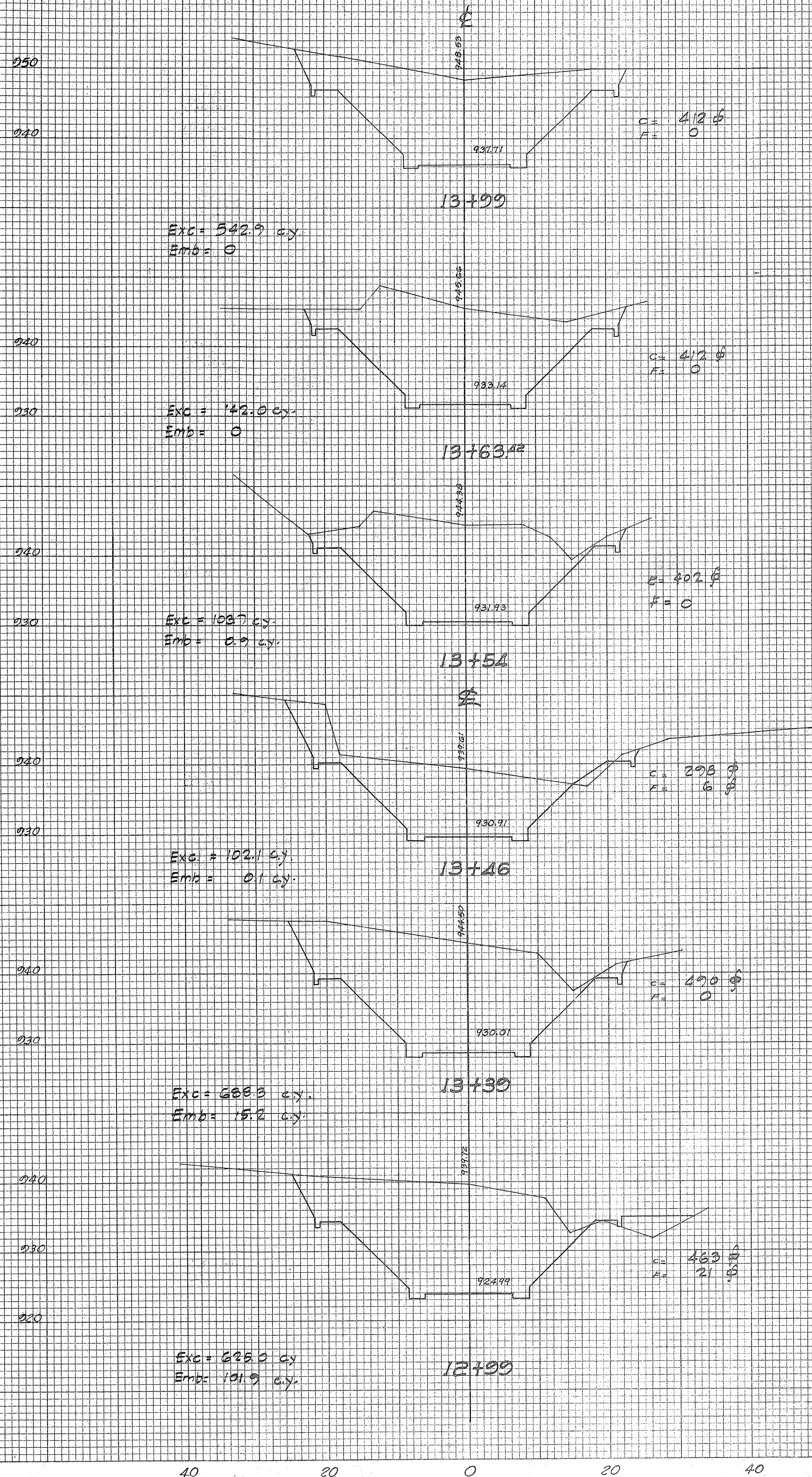
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NOTE BOOK	PLOTTED	BY
NO.	AREAS CHECKED	



DEPARTMENT OF PUBLIC WORKS CITY AND COUNTY OF HONOLULU			
BUREAU OF PLANS			
KALIHI TUNNEL			
STREAM DIVERSION			
MAIN CHANNEL CROSS SECTIONS			
ENGINEER	DATE	CHECKED BY	TRACER
DRAFTSMAN	SCALE	APPROVED	APPROVED
CHIEF ENGINEER		BUREAU ENGINEER	
W. S.	CR. SEC.	W. M. BY	PROFILE
F. B.		F. W. BY	
S. B.		S. BY	
SECTION C JOB NO. 26 - 53 DWG. S-10			
FILE	POCKET	FOLDER	NO.
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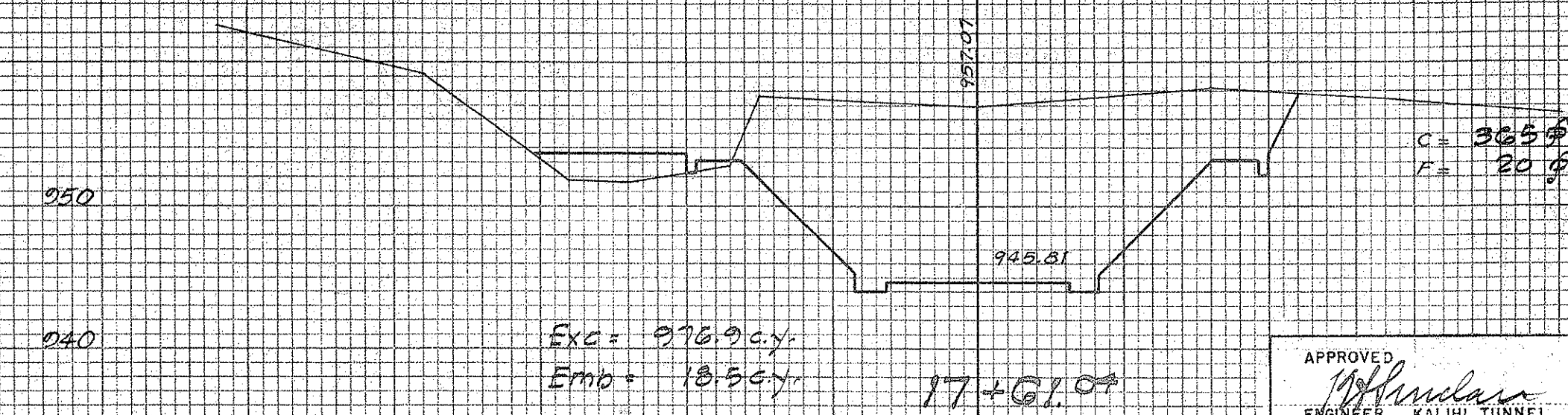
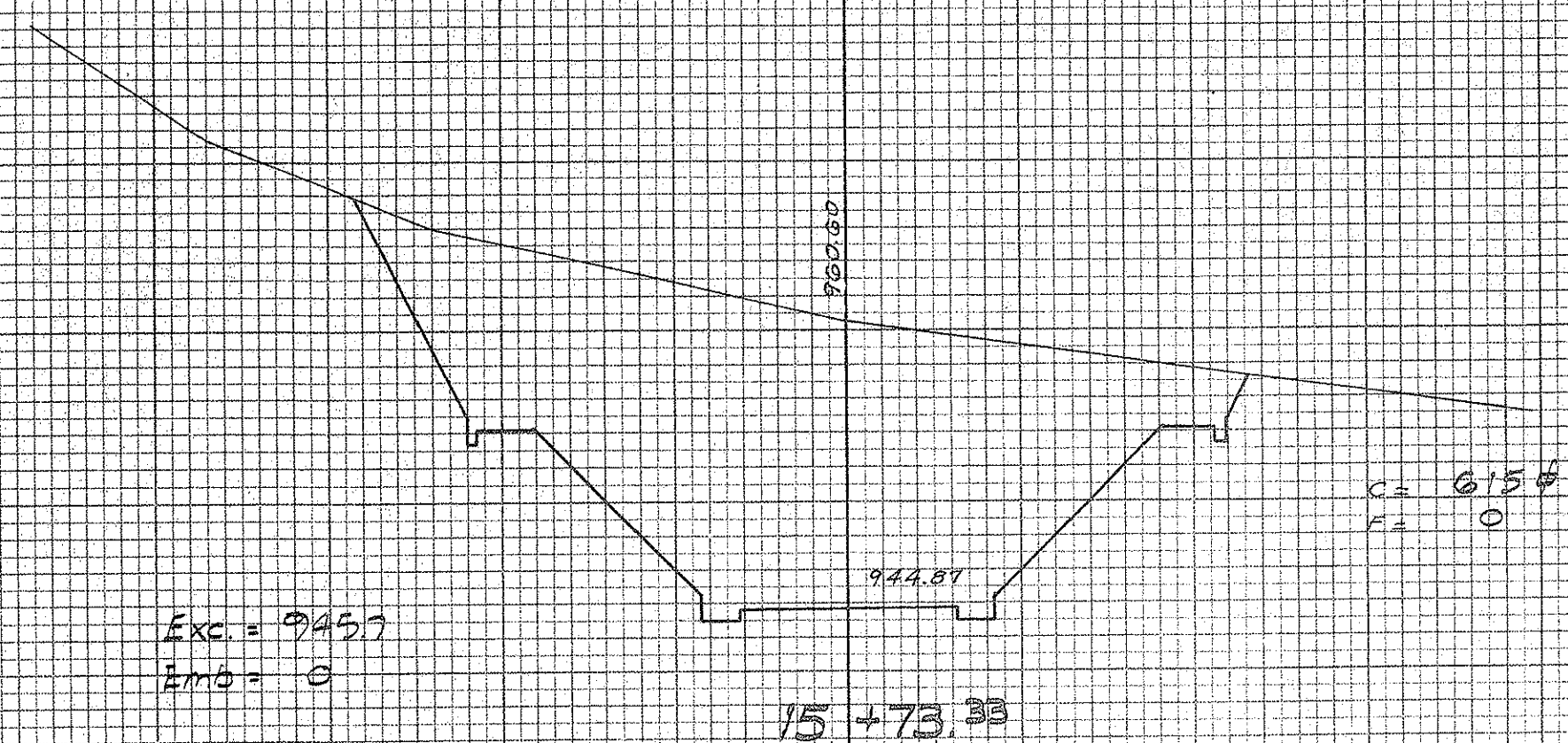
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	BY	
	SURVEYED	
	NOTED	
	NO.	

ORIGINAL SURVEY	DATE	
	BY	
	SURVEYED	
	NOTED	
	NO.	



DEPARTMENT OF PUBLIC WORKS CITY AND COUNTY OF HONOLULU BUREAU OF PLANS			
KALIHI TUNNEL			
STREAM DIVERSION			
MAIN CHANNEL CROSS SECTIONS			
ENGINEER	SCH. R.M.	DATE	JULY 18, 1939
DRAFTSMAN	J.B.B.Y. S.T.	CHECKED BY	SCH. R.M.
SCALE	VERT. 1" = 10' HORIZ. 1" = 10'	TRACED BY	S.T.
APPROVED	<i>[Signature]</i>	APPROVED	<i>[Signature]</i>
CHIEF ENGINEER		BUREAU ENGINEER	
W.S.	CR. SEC.	PROFILE	C.B.
W.M. BY:	F.B.	F.W. BY:	S.B.
SECTION C		JOB NO. 26-53	
DWG. S-11			
FILE	POCKET	FOLDER	NO.
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ORIGINAL SURVEY	BY	DATE
SURVEYED		
PLOTTED		
TEMPLATE		
NOTE BOOK		
AREAS CHECKED		

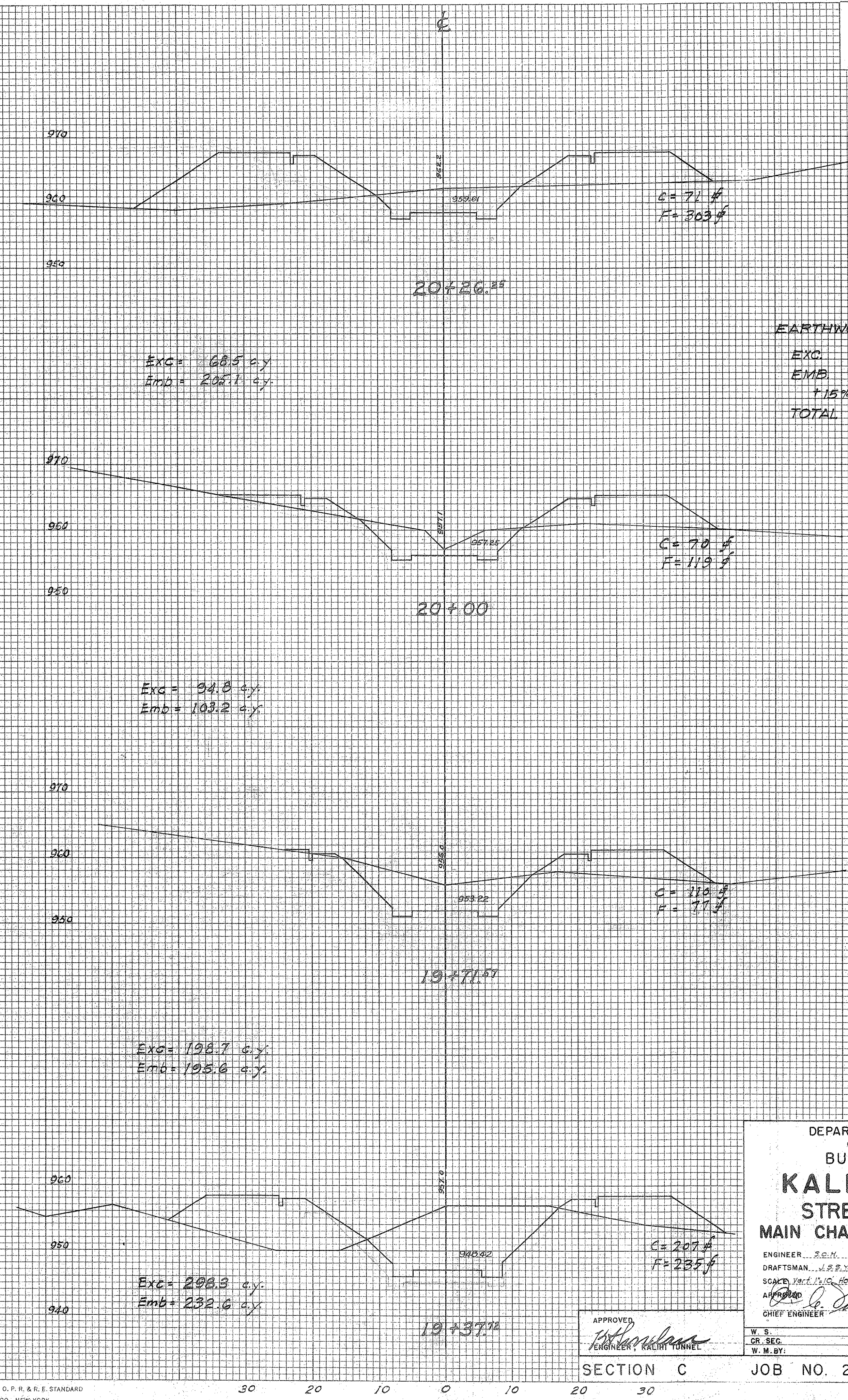
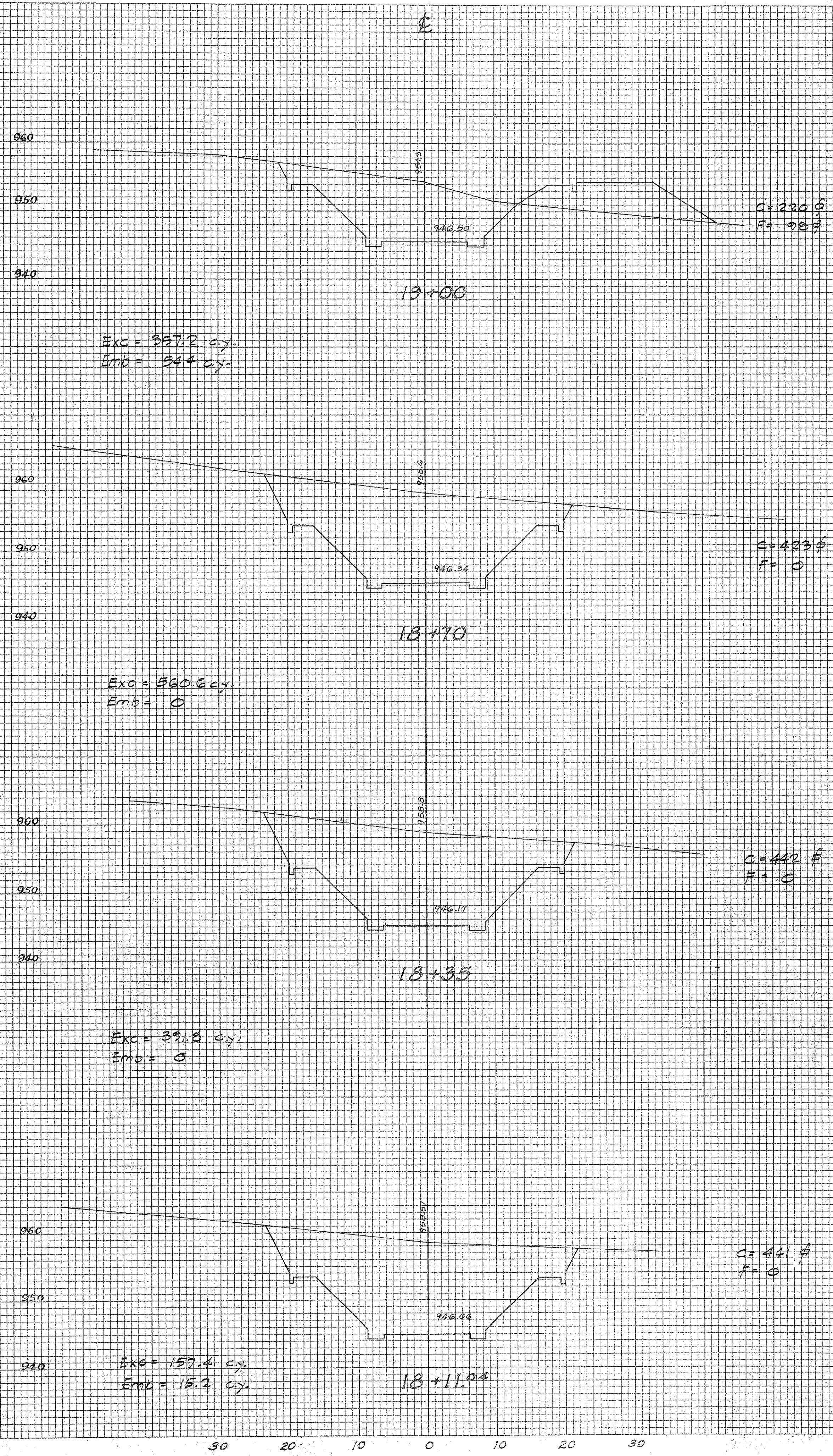


ENGINEER SOH - RM DATE JULY 15, 1953
DRAFTSMAN J. N. S. CHECKED BY SOH - RM
SCALE VERT. 1" = 10' HOR. 1" = 10' TRACER J. N. S.
APPROVED D. L. Cannatta APPROVED H. W. Burtzick
CHIEF ENGINEER BUREAU ENGINEER

FILE	POCKET	FOLDER	NO.
7	5	2	32

DATE	BY	FINAL SURVEY	SURVEYED	PLOTTED	AREA	CHECKED

DATE	BY	ORIGINAL SURVEY	SURVEYED	PLOTTED	AREA	CHECKED



EARTHWORK SUMMARY

EXC.	36158.6 CY
EMB.	4,827.4 CY
+15%	724.1 CY
TOTAL EMB.	5,551.5 CY

DEPARTMENT OF PUBLIC WORKS
 CITY AND COUNTY OF HONOLULU
 BUREAU OF PLANS

**KALIHI TUNNEL
 STREAM DIVERSION
 MAIN CHANNEL CROSS SECTIONS**

ENGINEER: S.C.H. DATE: July 15, 1953
 DRAFTSMAN: J.S.S. CHECKED BY: S.O.H. - P.H.
 SCALE: Vert. 1" = 10' Hori. 1" = 10'
 TRACER: S.J. - H.S.
 APPROVED: *S. C. Hamada* CHIEF ENGINEER
 APPROVED: *W. Butz* BUREAU ENGINEER

W.S. CR. SEC. W.M. BY: PROFILE F.B. F.W. BY: C.B. S.B. S. BY:

SECTION C JOB NO. 26-53 DWG. S-13

FILE 7 FOLDER 5 NO. 33

DATE	BY
SURVEYED	
PLOTTED	
TEMPLATE	
NOTE BOOK	
AREAS CHECKED	
NO.	

DATE	BY
SURVEYED	
PLOTTED	
TEMPLATE	
NOTE BOOK	
AREAS CHECKED	
NO.	

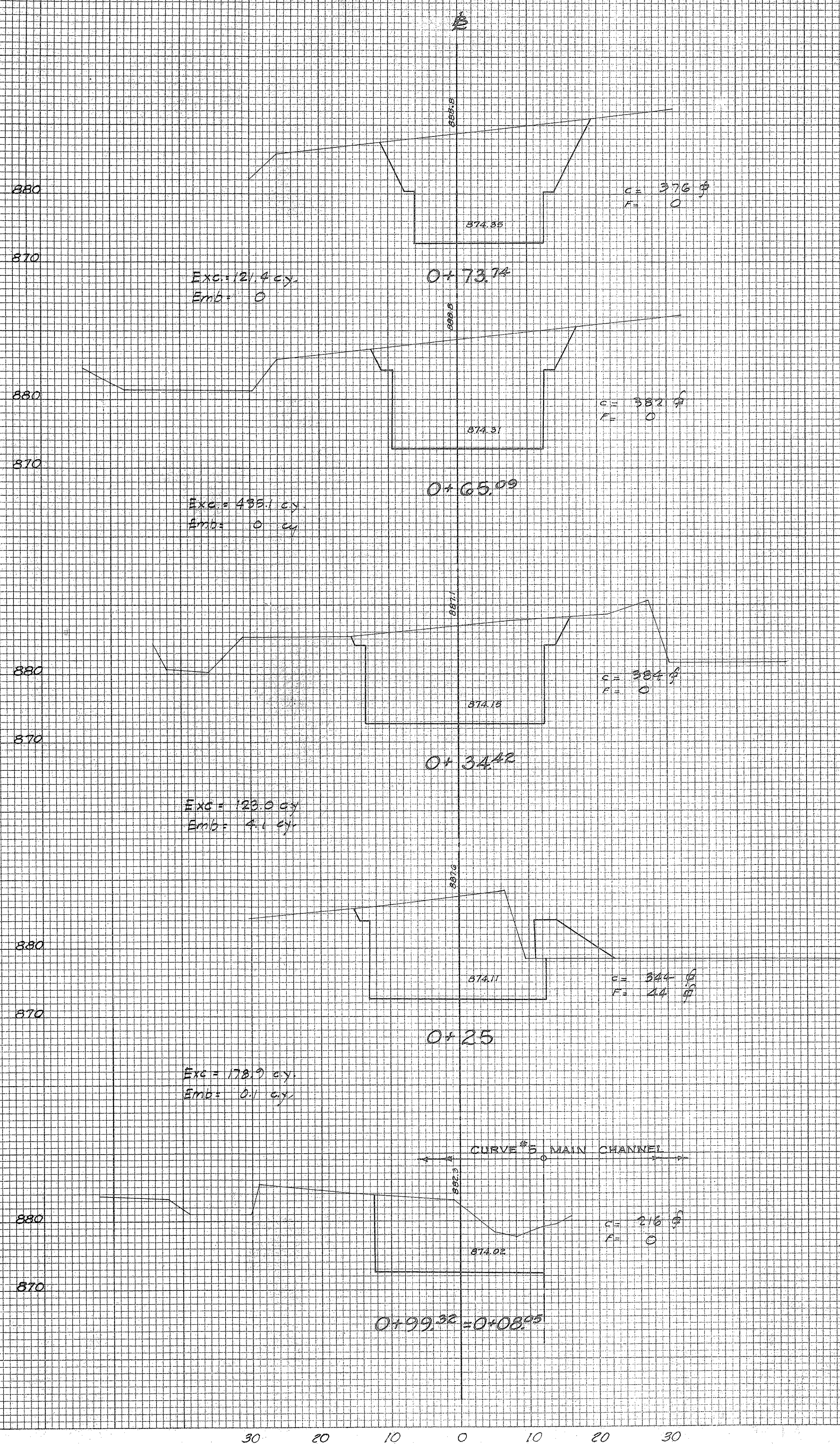
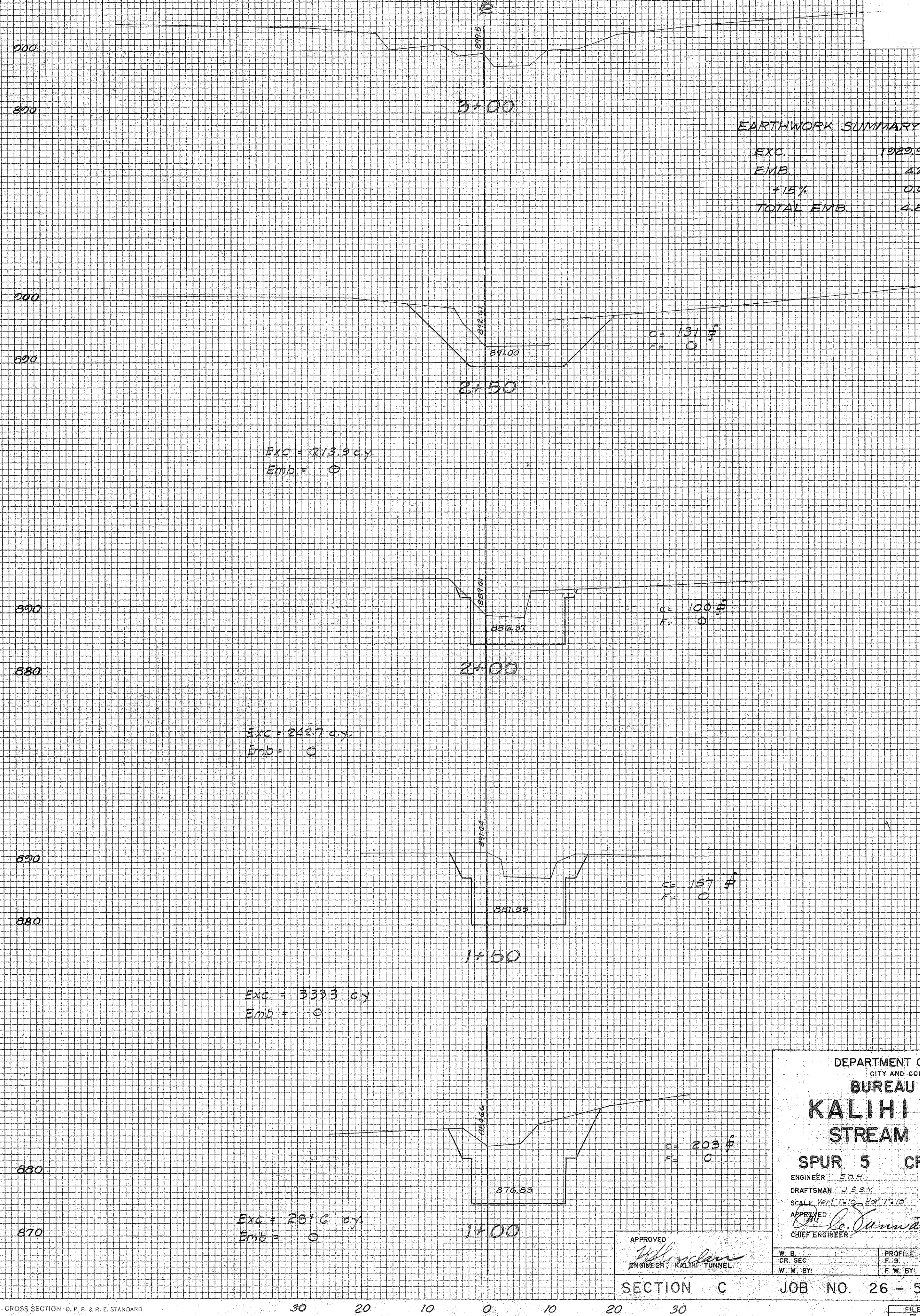


PLATE 3 - CROSS SECTION G.P.R. & R.E. STANDARD
KEUFFEL & ESSER CO., NEW YORK.



EARTHWORK SUMMARY

EXC.	1729.9
EMB.	4.2
+15%	0.6
TOTAL EMB.	4.8

DEPARTMENT OF PUBLIC WORKS
CITY AND COUNTY OF HONOLULU
BUREAU OF PLANS
KALIHI TUNNEL
STREAM DIVERSION

SPUR 5 CROSS SECTIONS

ENGINEER: S.O.H. DATE: JUNE 15, 1953
DRAFTSMAN: W.S.P. CHECKED BY: S.C.H. R.N.
SCALE: 1/4" = 1'-0" TRACER: S.D. H.S.
APPROVED: C. L. Jannotta APPROVED: H. W. Outgill
CHIEF ENGINEER BUREAU ENGINEER

APPROVED
H. W. Outgill
ENGINEER, KALIHI TUNNEL

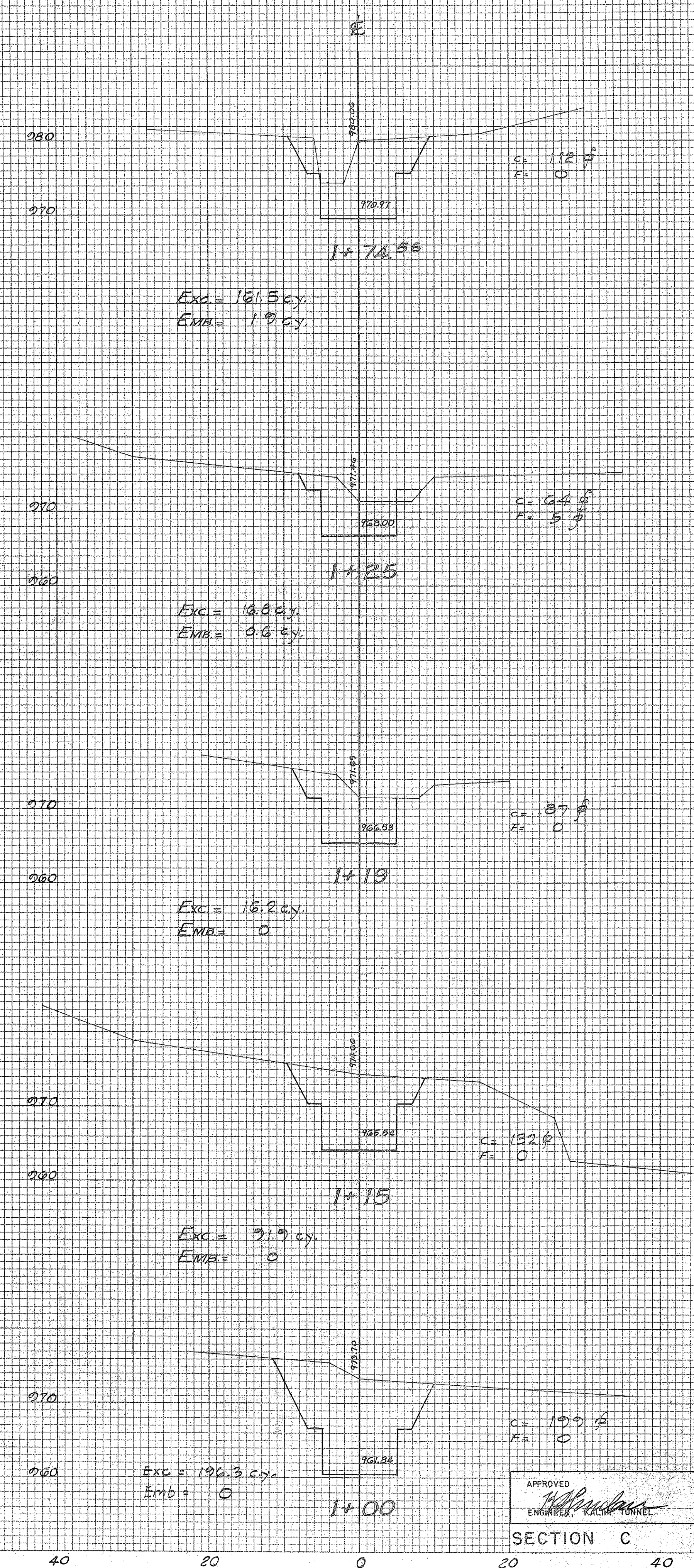
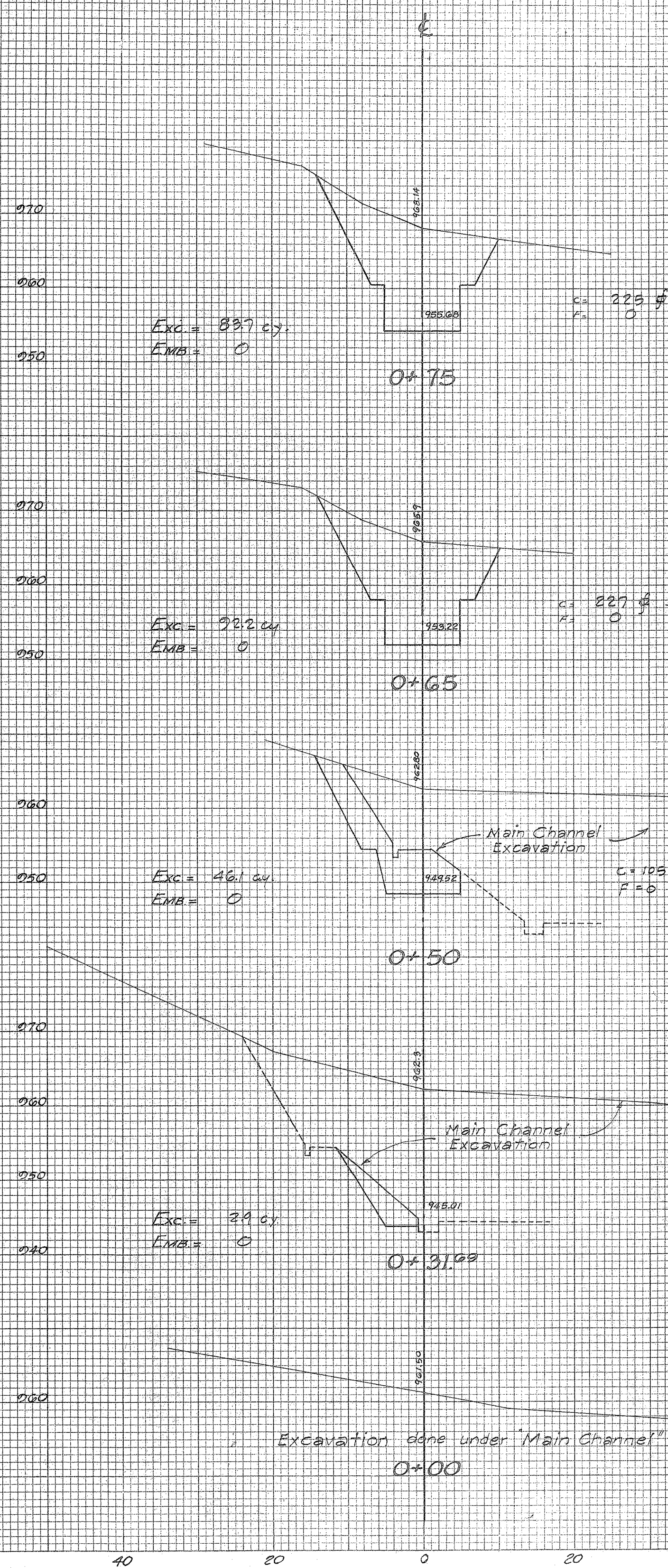
W.B. CR. SEC. PROFILE F.B. S.B. S.B.
W.M. BY: F.W. BY: S.B.

SECTION C JOB NO. 26-53 DWG. S-14

FILE 7 FOLDER 5 FOLDER 2 NO. 34
Sheet No. 71 of 252 Sheets

FINAL SURVEY	DATE
SURVEYED	BY
NOTED	BY
NO.	NO.

ORIGINAL SURVEY	DATE
SURVEYED	BY
NOTED	BY
NO.	NO.



EARTHWORK SUMMARY

Exc.	TOT. G. CY
EMB.	2.5 CY
+15%	0.4 CY
TOTAL EMB.	2.9 CY

DEPARTMENT OF PUBLIC WORKS BUREAU OF PLANS KALIH TUNNEL STREAM DIVERSION SPUR 6 CROSS SECTIONS

ENGINEER: J. J. J. DATE: JULY 18, 1952
DRAFTSMAN: J. J. J. CHECKED BY: J. J. J.
SCALE: 1" = 10' HORIZ. 1" = 5' VERT.
TRACER: J. J. J.
APPROVED: J. J. J. CHIEF ENGINEER
APPROVED: J. J. J. BUREAU ENGINEER

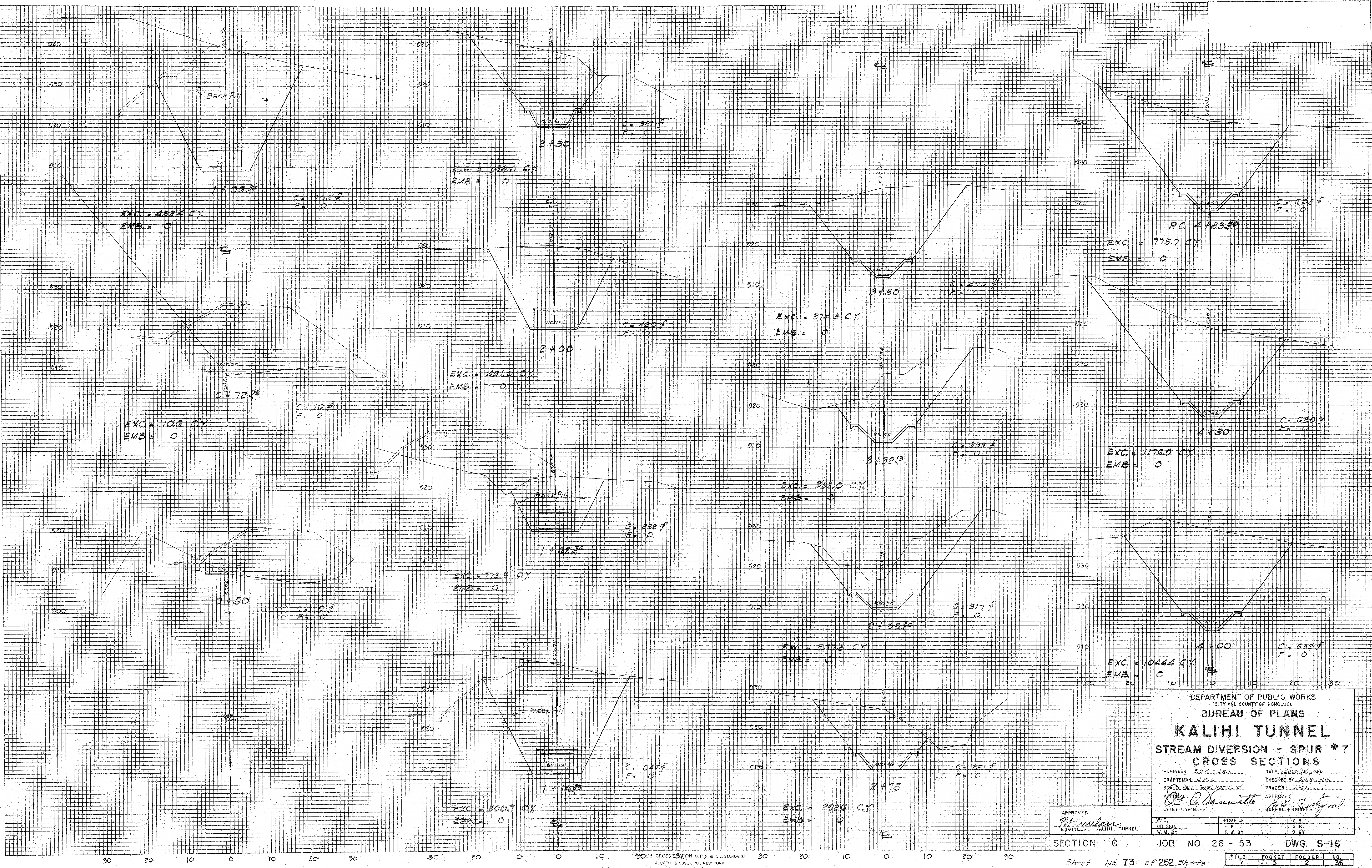
APPROVED
ENGINEER: J. J. J.

SECTION C JOB NO. 26-53 DWG. S-15

FILE	POCKET	FOLDER	NO.
7	5	2	35

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

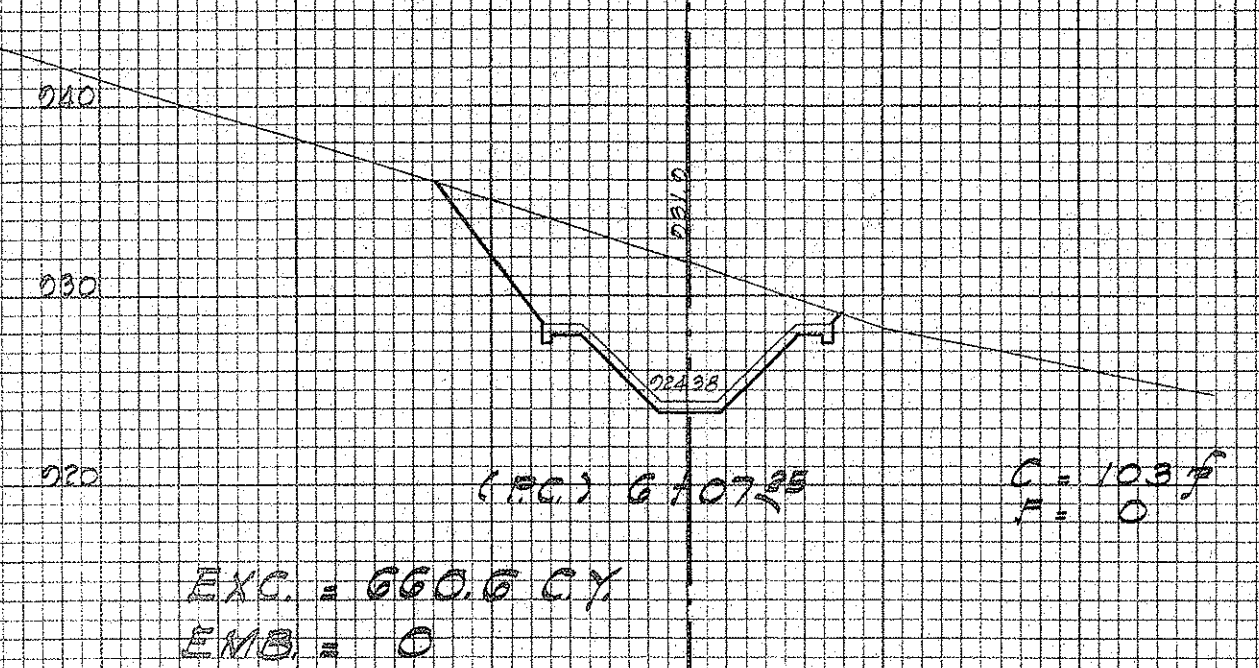
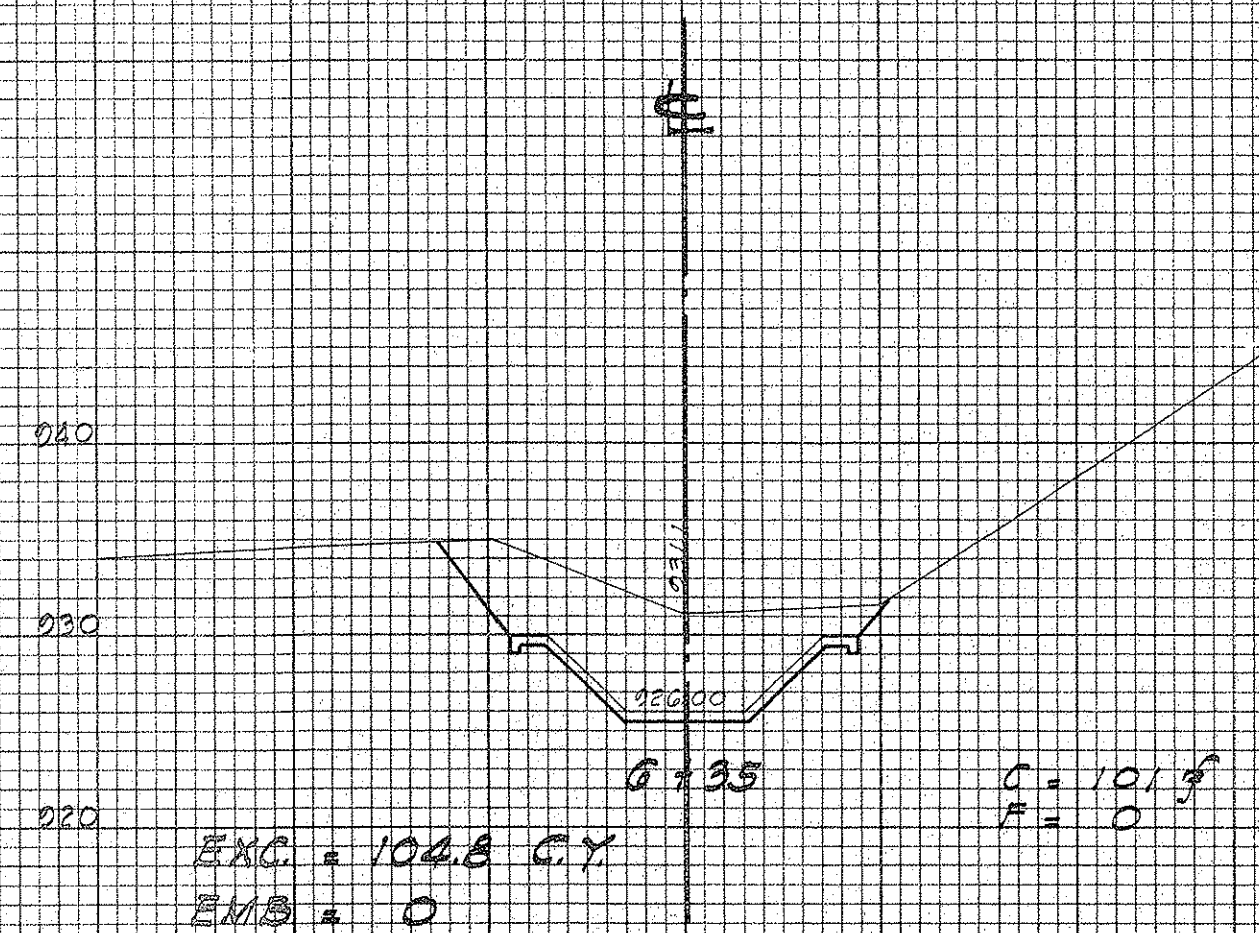
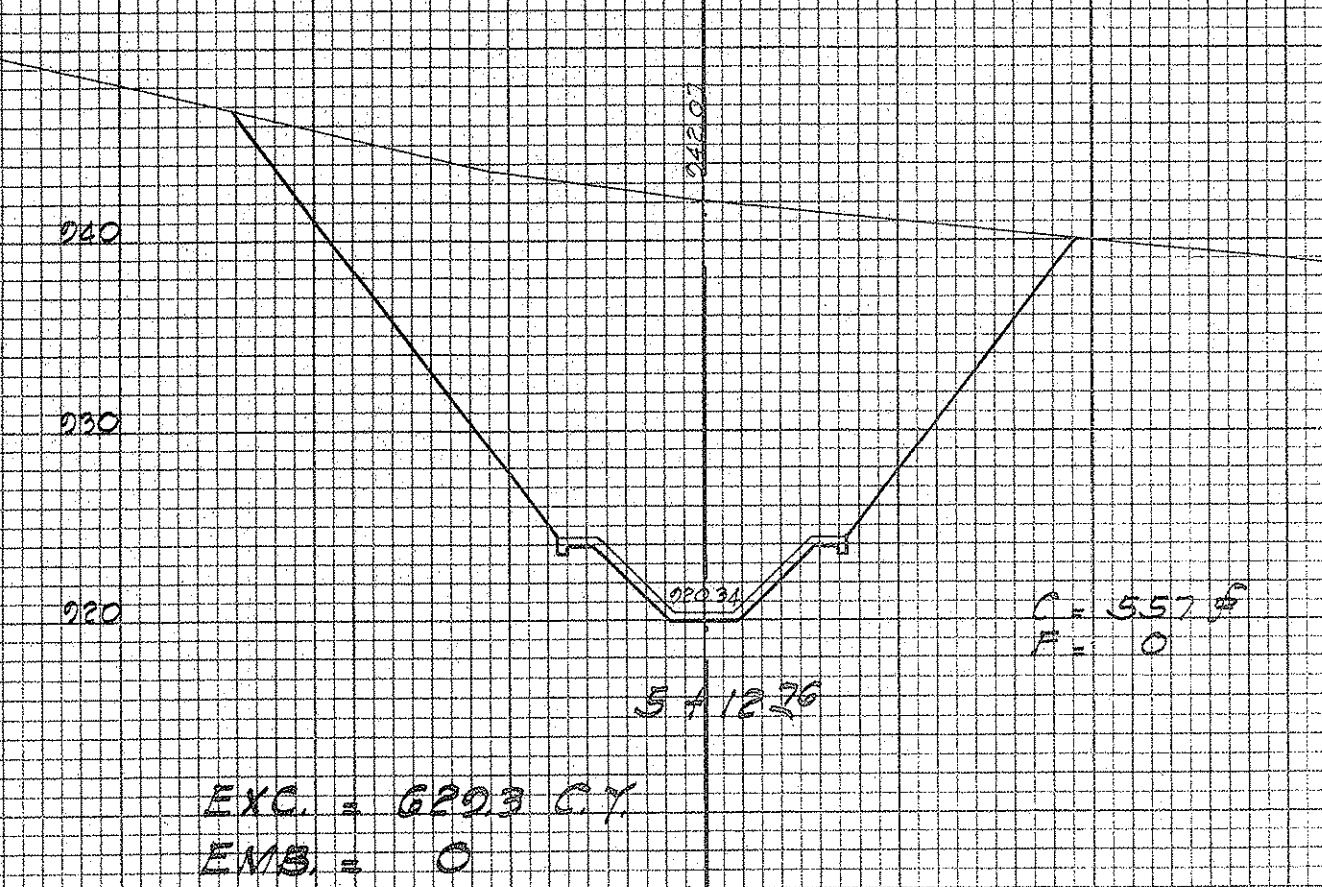
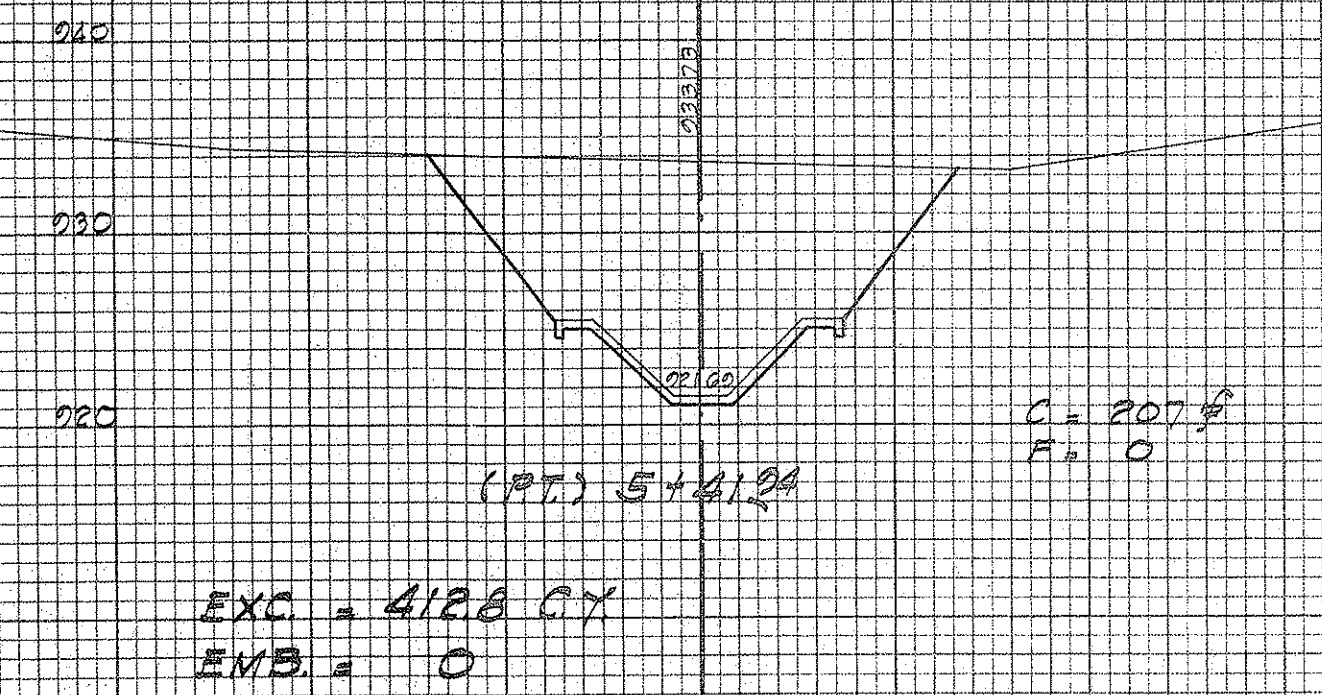
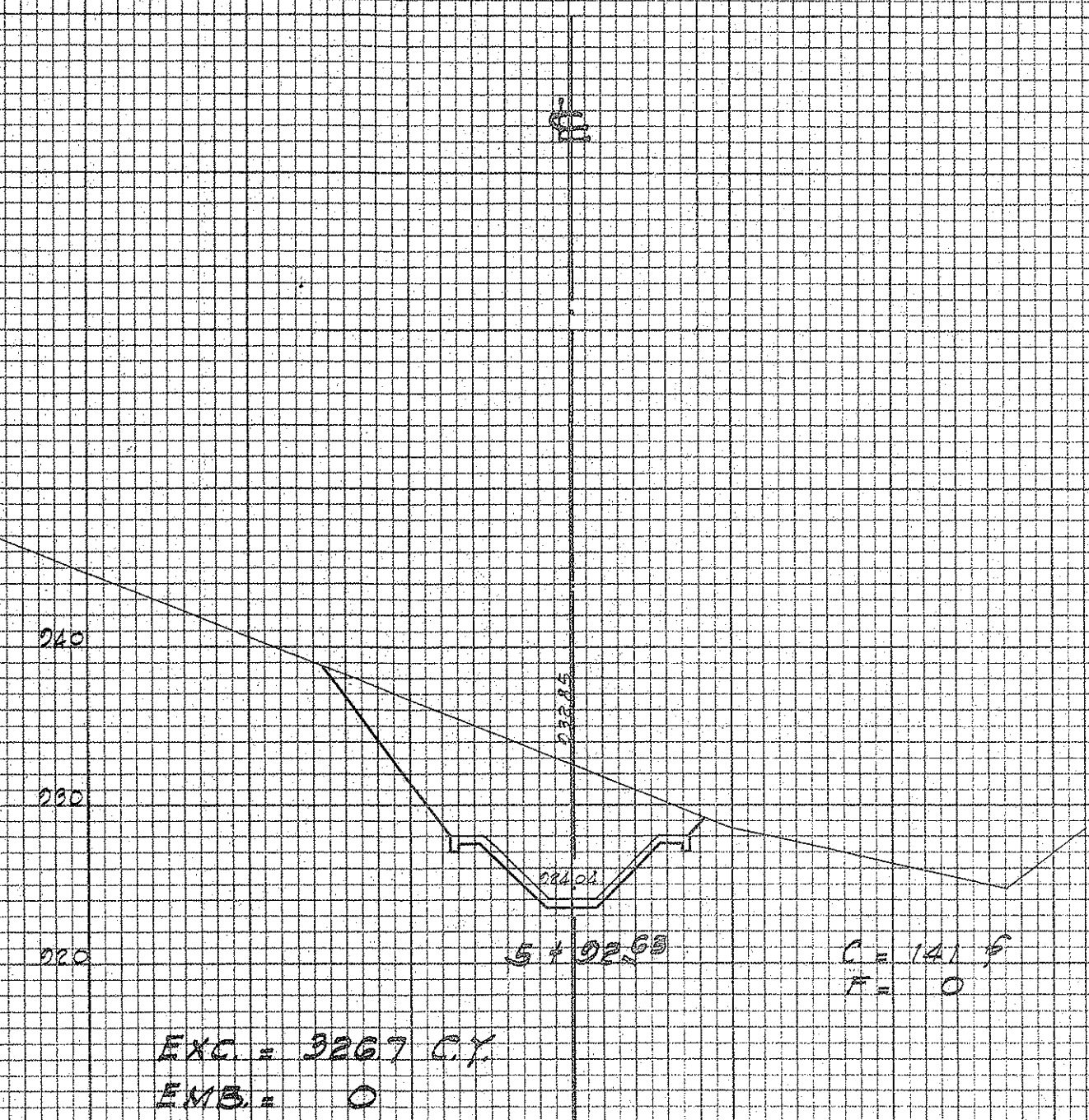
ORIGINAL	DATE
SURVEY	BY
NOTE BOOK	NO.
SURVEYED	AREAS CHECKED
PLOTTED	AREAS CHECKED
TEMPLATE	AREAS CHECKED



DEPARTMENT OF PUBLIC WORKS CITY AND COUNTY OF HONOLULU			
BUREAU OF PLANS			
KALIHI TUNNEL			
STREAM DIVERSION - SPUR #7			
CROSS SECTIONS			
ENGINEER	S. H. L.	DATE	JULY 18, 1928
DRAFTSMAN	J. K. L.	CHECKED BY	S. H. L.
SCALE	VERT. 1" = 10' HORIZ. 1" = 10'	TRACER	J. K. L.
APPROVED	<i>[Signature]</i>	APPROVED	<i>[Signature]</i>
CHIEF ENGINEER		BUREAU ENGINEER	
W. S.	PROFILE	C. B.	
GR. SEC.	F. B.	S. B.	
W. M. BY	F. W. BY	S. BY	
SECTION C		JOB NO. 26 - 53	
		DWG. S-16	
FILE	POCKET	FOLDER	NO.
1	5	2	36

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

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



EARTHWORK SUMMARY
 EXC. 8,996.0 C.Y.
 EMB. 0.0 C.Y.

DEPARTMENT OF PUBLIC WORKS CITY AND COUNTY OF HONOLULU			
BUREAU OF PLANS			
KALIHI TUNNEL			
STREAM DIVERSION - SPUR #7			
CROSS SECTIONS			
ENGINEER	S.O.H.	DATE	JULY 15, 1953
DRAFTSMAN	J.K.L.	CHECKED BY	S.O.H.-R.K.
SCALE	VERT. 1"=10' HOR. 1"=10'	TRACER	J.K.L.
APPROVED	<i>[Signature]</i>	APPROVED	<i>[Signature]</i>
CHIEF ENGINEER		BUREAU ENGINEER	

APPROVED
[Signature]
 ENGINEER, KALIHI TUNNEL

SECTION C JOB NO. 26 - 53 DWG. S-17

Sheet No. 74 of 252 Sheets

FILE	POCKET	FOLDER	NO.
7	5	2	37

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