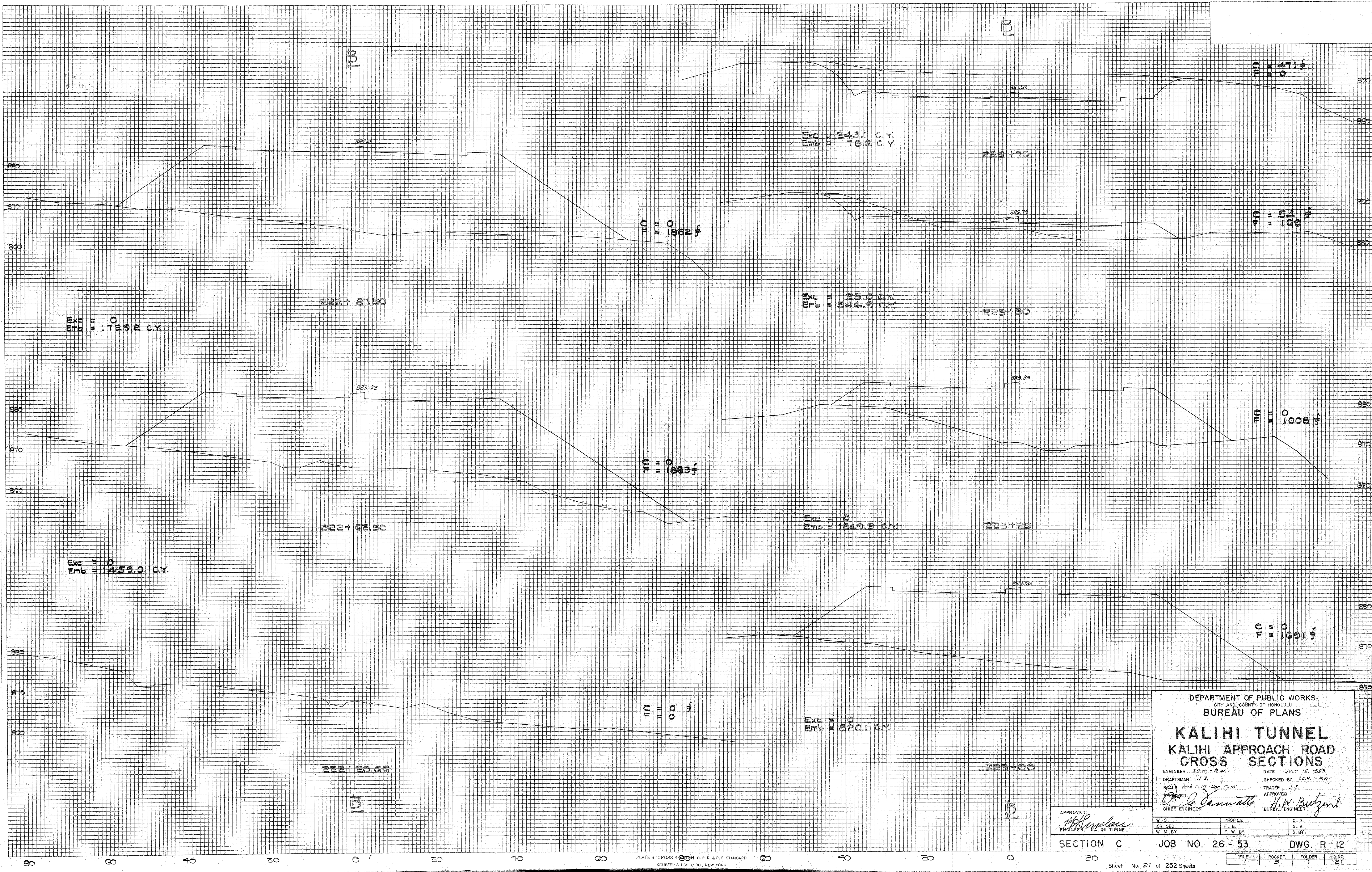


FINAL	SURVEYED	DATE
SURVEY	BY	
NOTE BOOK	NO.	
AREAS CHECKED		

ORIGINAL	SURVEYED	DATE
SURVEY	BY	
NOTE BOOK	NO.	
AREAS CHECKED		



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

KALIHI TUNNEL

KALIHI APPROACH ROAD

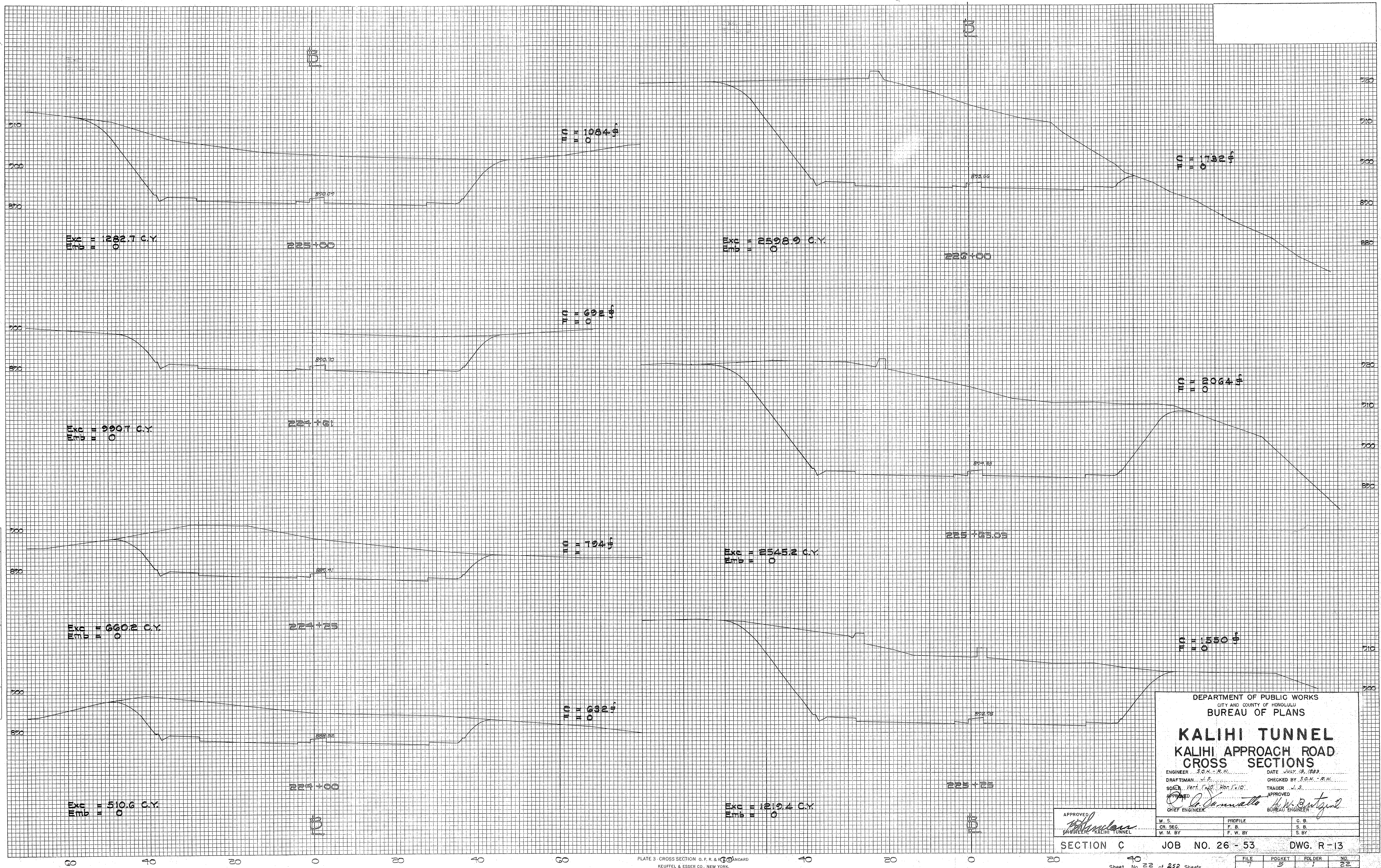
CROSS SECTIONS

ENGINEER... S.O.H. - R.K. DATE... JULY 15, 1953
DRAFTSMAN... J.S. CHECKED BY... S.O.H. - R.K.
SCALE... Vert. 1" = 10' Hor. 1" = 40' TRACER... J.S.
APPROVED... *[Signature]* APPROVED... *[Signature]*
CHIEF ENGINEER BUREAU ENGINEER

APPROVED
[Signature]
ENGINEER, KALIHI TUNNEL

SECTION C JOB NO. 26 - 53 DWG. R-12

ORIGINAL SURVEY	SURVEYED BY _____	DATE _____
NOTE BOOK	PLOTTED _____	
	TEMPLATE _____	
	AREAS _____	



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

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

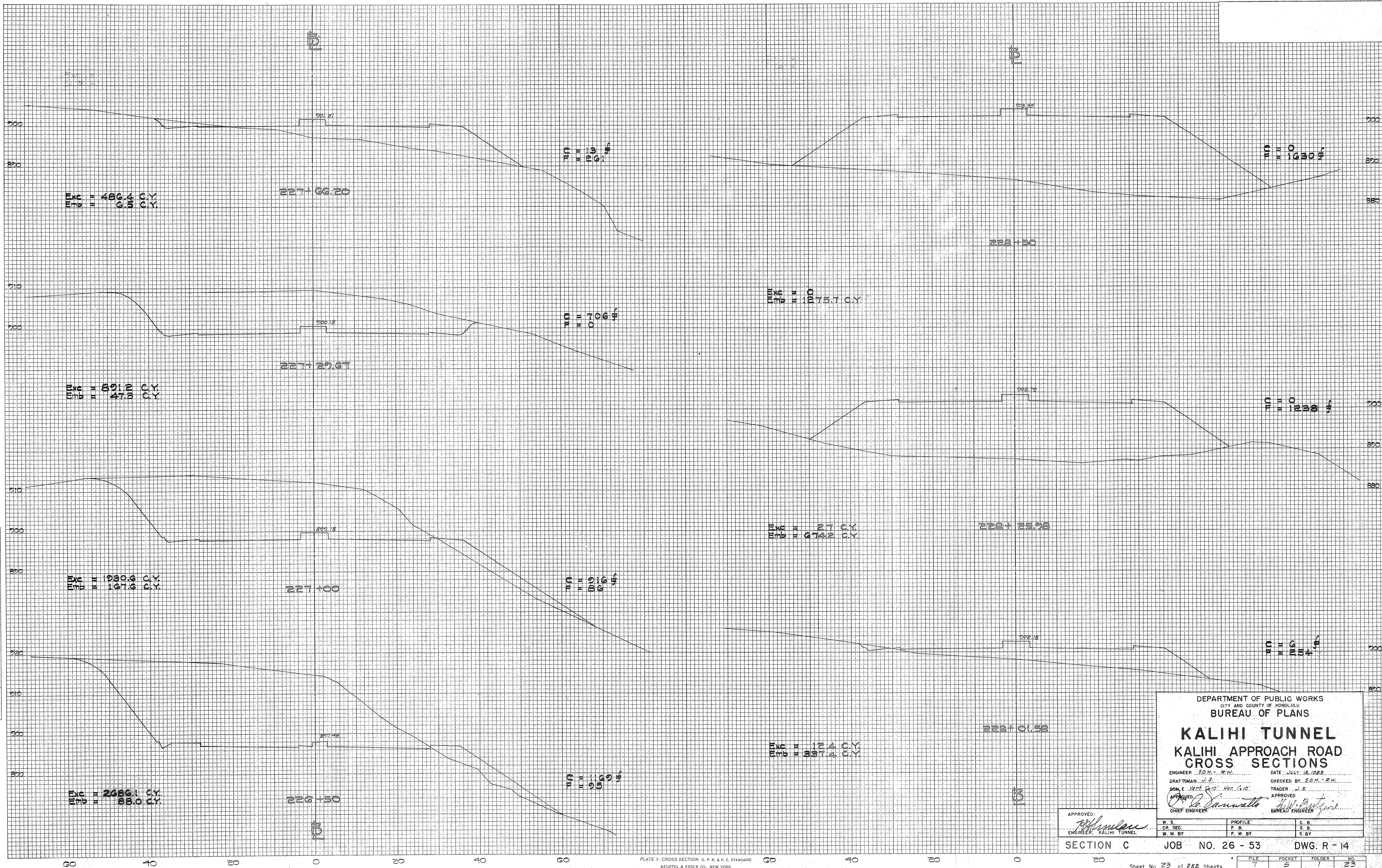


PLATE 3 - CROSS SECTION - G. P. R. & R. E. STANDARD
 KEUFFEL & ESSER CO., NEW YORK

APPROVED
 ENGINEER, KALIHI TUNNEL

DEPARTMENT OF PUBLIC WORKS CITY AND COUNTY OF HONOLULU BUREAU OF PLANS	
KALIHI TUNNEL	
KALIHI APPROACH ROAD	
CROSS SECTIONS	
ENGINEER: S. H. R. K.	DATE: JULY 16, 1953
DRAFTSMAN: J. S.	CHECKED BY: S. H. R. K.
SCALE: Vert. 1" = 10'	TRADER: J. S.
APPROVED: <i>[Signature]</i>	APPROVED: <i>[Signature]</i>
CHIEF ENGINEER	BUREAU ENGINEER

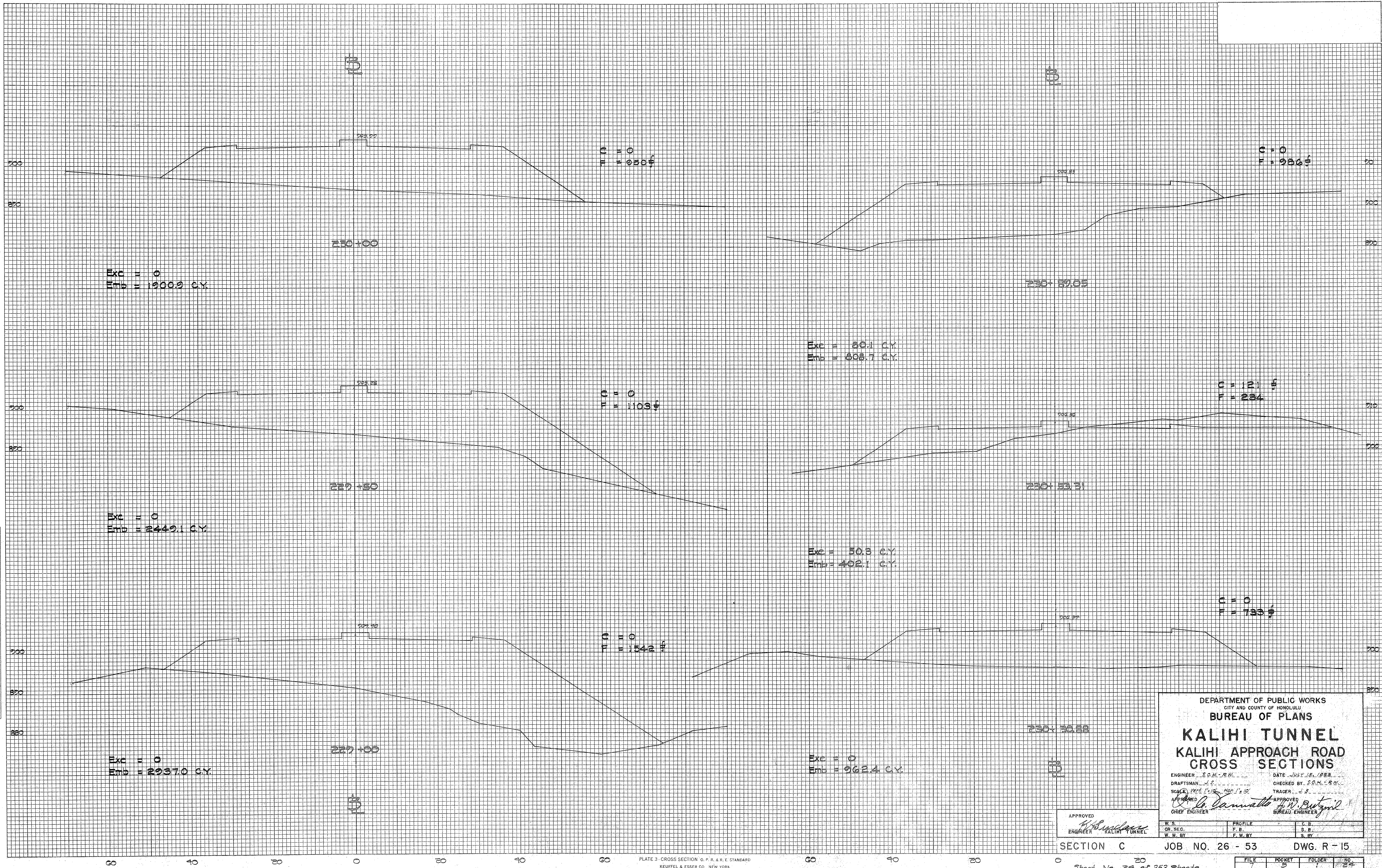
SECTION C JOB NO. 26 - 53 DWG. R - 14

Sheet No. 23 of 252 Sheets

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

ORIGINAL SURVEY	DATE
	BY
	AREAS CHECKED
NO.	



DEPARTMENT OF PUBLIC WORKS CITY AND COUNTY OF HONOLULU	
BUREAU OF PLANS	
KALIHI TUNNEL	
KALIHI APPROACH ROAD	
CROSS SECTIONS	
ENGINEER S.C.H.-R.W.	DATE JULY 15, 1953
DRAFTSMAN J.S.	CHECKED BY S.C.H.-R.W.
SCALE: Vert 1" = 10' Hor 1" = 10'	TRACER J.S.
APPROVED CHIEF ENGINEER	APPROVED BUREAU ENGINEER

APPROVED ENGINEER	KALIHI TUNNEL
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W.S. CH. SEC. W. W. BY	PROFILE F. B. F. W. BY	C. B. S. B. S. BY
------------------------------	------------------------------	-------------------------

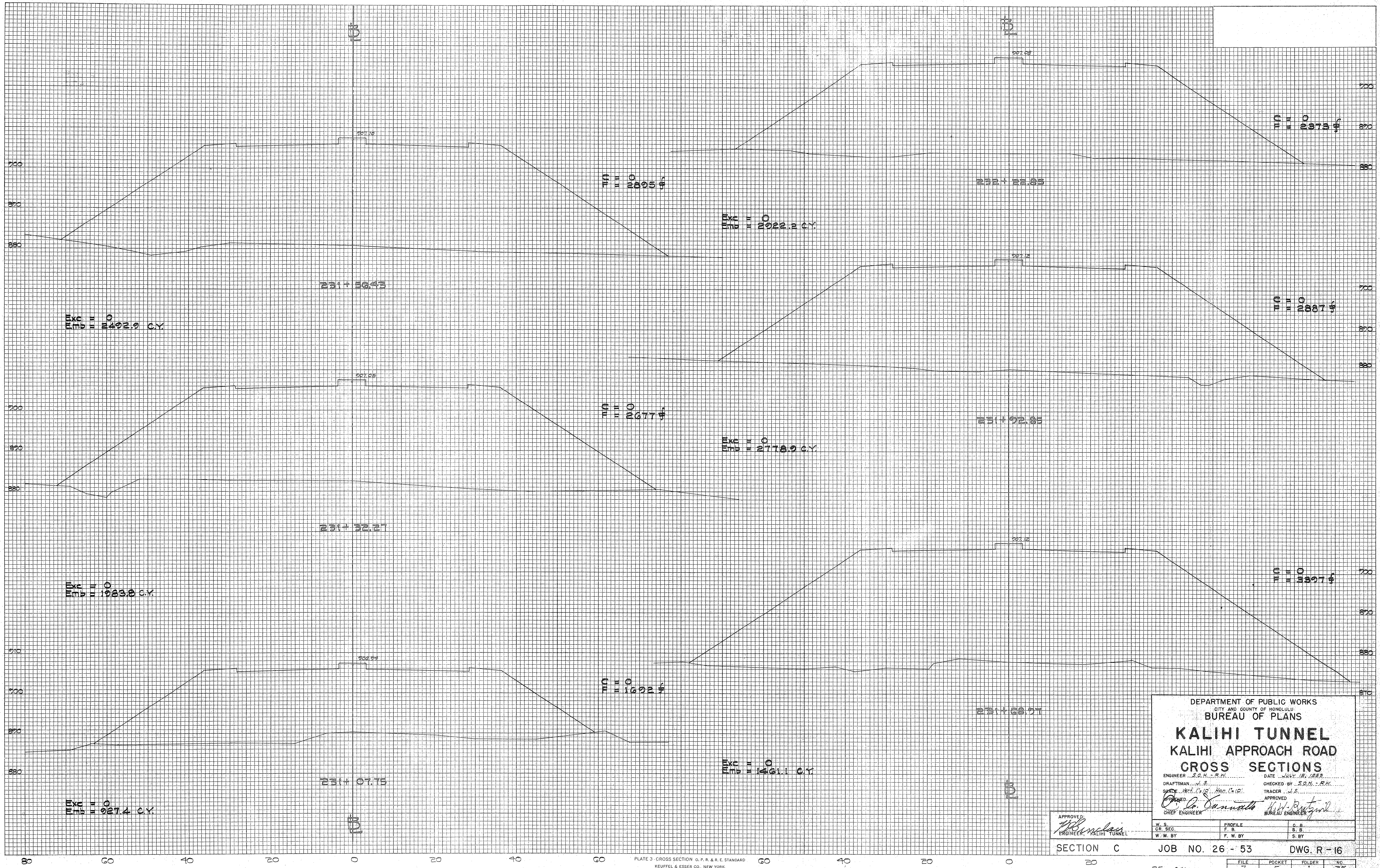
SECTION C	JOB NO. 26 - 53	DWG. R - 15
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Sheet No. 24 of 252 Sheets

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

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



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

KALIHI TUNNEL
KALIHI APPROACH ROAD
CROSS SECTIONS

ENGINEER E. H. - R. M. DATE JULY 15, 1952
DRAFTSMAN A. S. CHECKED BY E. H. - R. M.
SCALE VERT. 1" = 10' HOR. 1" = 10' TRACER J. S.
APPROVED [Signature] [Signature]
CHIEF ENGINEER BUREAU ENGINEER

APPROVED:
[Signature]
ENGINEER, KALIHI TUNNEL

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. R - 16
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Sheet No. 25 of 252 Sheets

FILE	POCKET	FOLDER	NO.
7	5	1	25

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

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

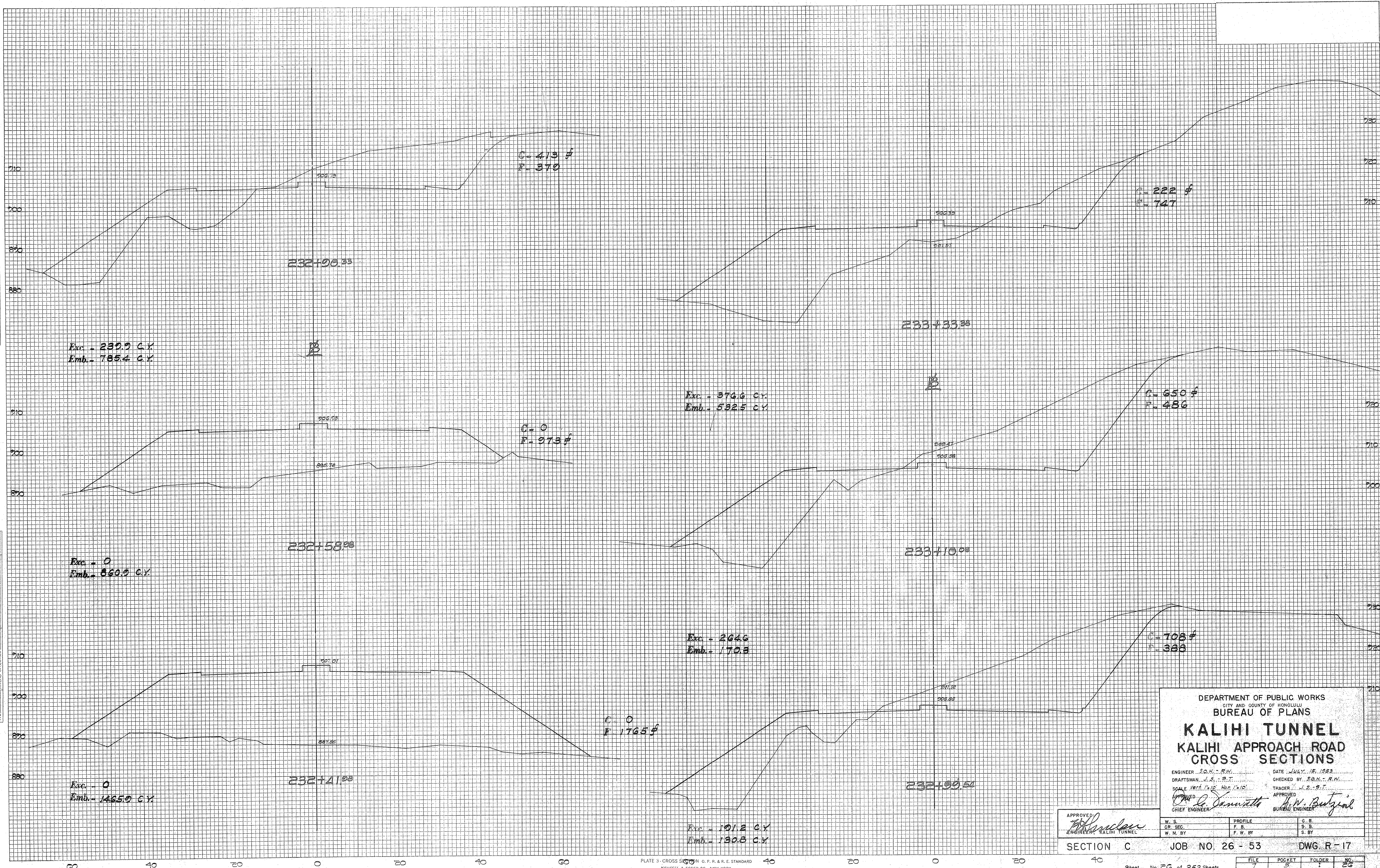


PLATE 3 - CROSS SECTION ON O.P.R. & R.E. STANDARD
KEUFFEL & ESSER CO., NEW YORK.

APPROVED
[Signature]
ENGINEER, KALIHU TUNNEL

DEPARTMENT OF PUBLIC WORKS CITY AND COUNTY OF HONOLULU BUREAU OF PLANS		
KALIHU TUNNEL		
KALIHU APPROACH ROAD		
CROSS SECTIONS		
ENGINEER S.O.H. - R.W.	DATE JULY 15, 1953	
DRAFTSMAN J.S. - S.T.	CHECKED BY S.O.H. - R.W.	
SCALE Vert. 1" = 10' Hor. 1" = 10'	TRACER J.S. - S.T.	
APPROVED <i>[Signature]</i> CHIEF ENGINEER	APPROVED <i>[Signature]</i> BUREAU ENGINEER	
W. S. CR. SEC. W. M. BY	PROFILE F. B. BY F. W. BY	C. B. S. B. S. BY

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

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

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

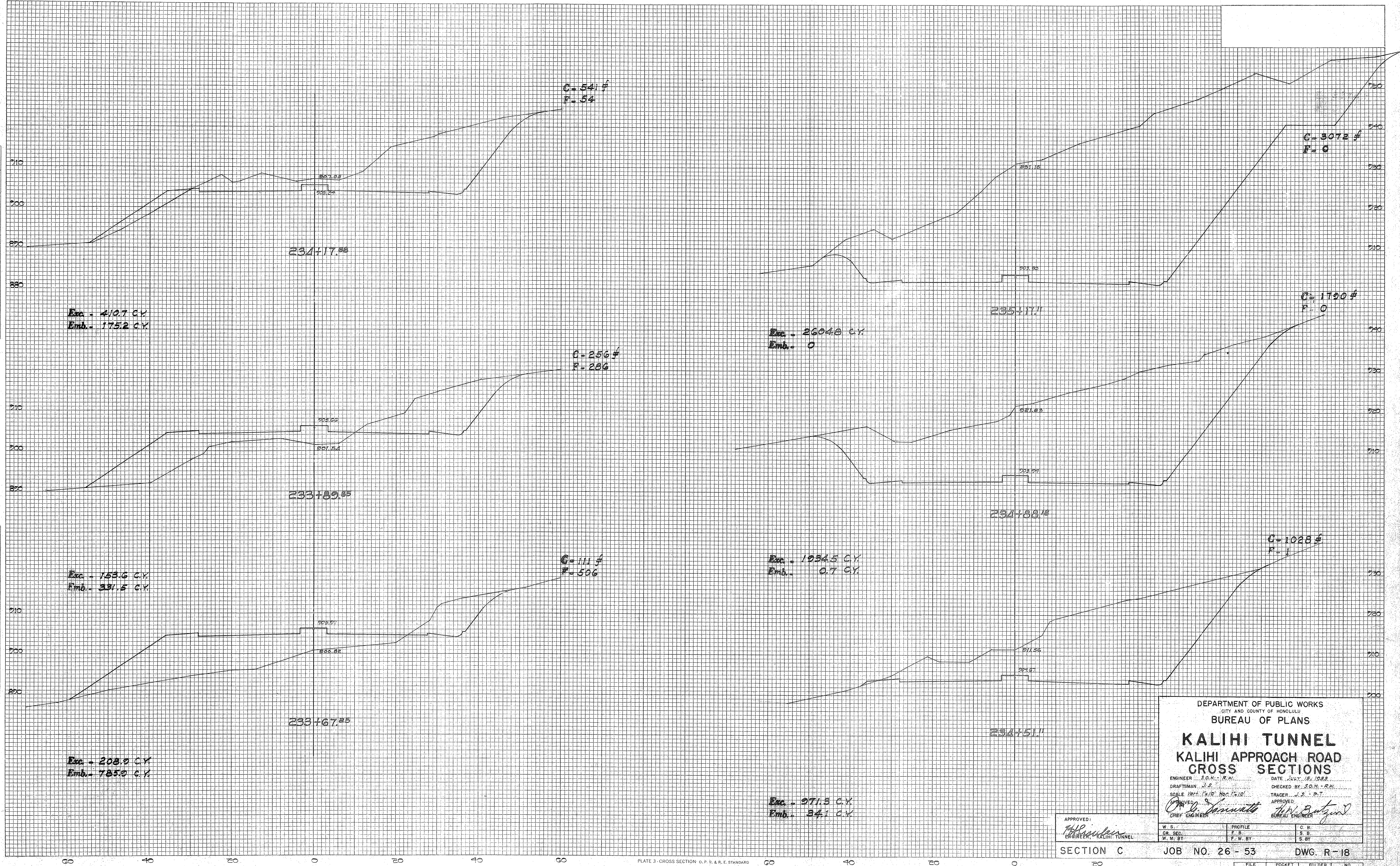


PLATE 3 - CROSS SECTION O.P.R. & R.E. STANDARD
KEUFFEL & ESSER CO., NEW YORK.

APPROVED:
[Signature]
ENGINEER, KALIHI TUNNEL

DEPARTMENT OF PUBLIC WORKS CITY AND COUNTY OF HONOLULU BUREAU OF PLANS		
KALIHI TUNNEL KALIHI APPROACH ROAD CROSS SECTIONS		
ENGINEER S.O.H. - R.W.	DATE JULY 15, 1952	C.B.
DRAFTSMAN J.S.	CHECKED BY S.O.H. - R.W.	S.B.
SCALE Vert. 1" = 10' Hor. 1" = 10'	TRACER J.S. - S.T.	S.G.
APPROVED <i>[Signature]</i> CHIEF ENGINEER	APPROVED <i>[Signature]</i> BUREAU ENGINEER	
W.S.	PROFILE	C.B.
OR SEC.	F.S.	S.B.
W.W. BY	F.W. BY	S.G.
SECTION C		
JOB NO. 26 - 53		
DWG. R-18		
FILE	POCKET	FOLDER
7	5	1

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

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

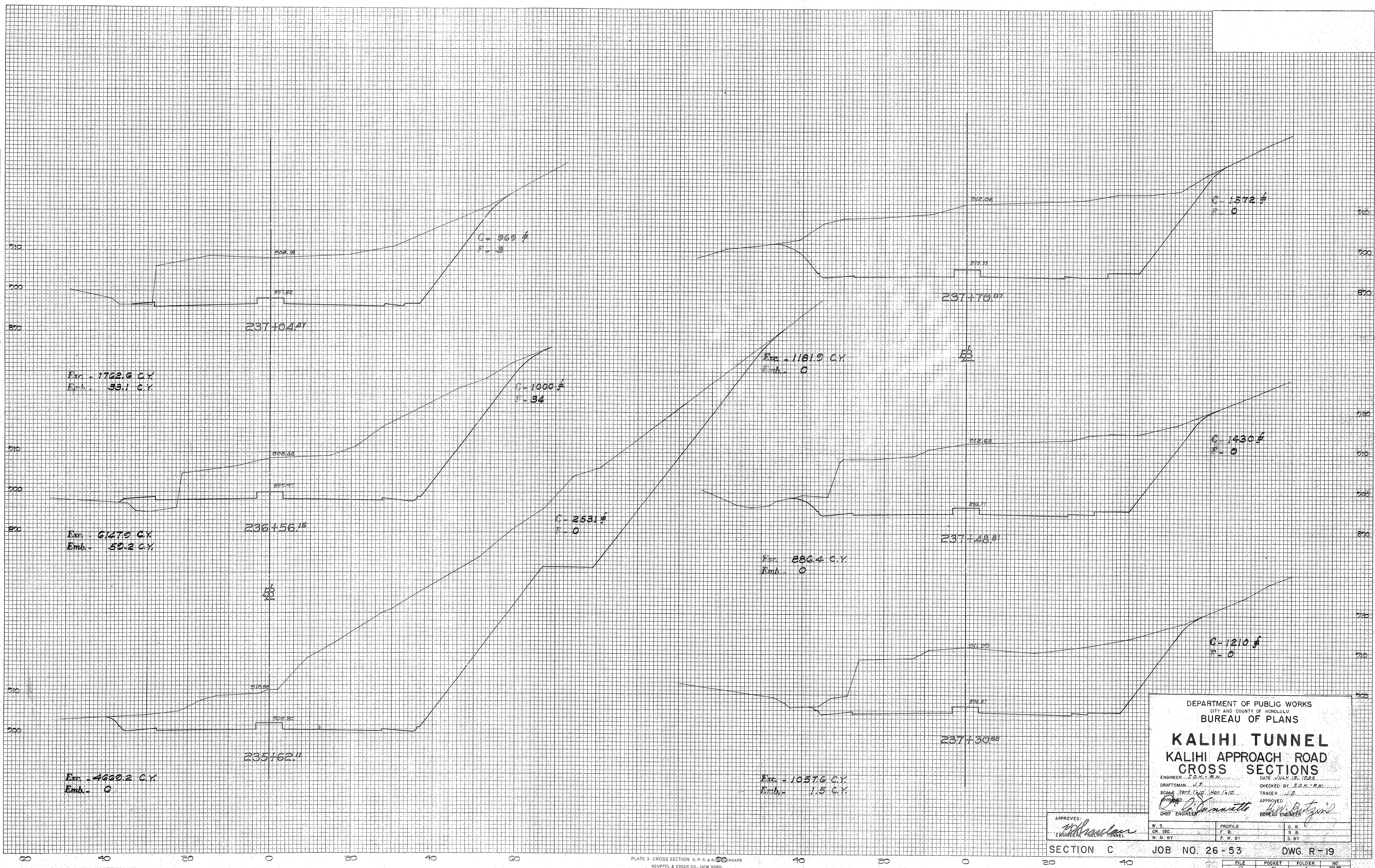


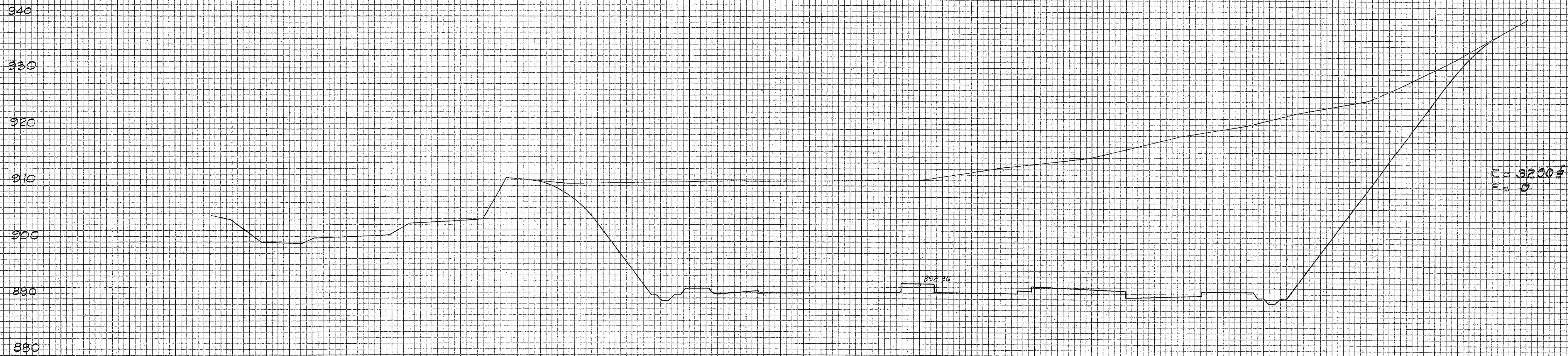
PLATE 3 - CROSS SECTION O.P.R. & R. STANDARD
KEUFFEL & ESSER CO., NEW YORK.

APPROVED:
[Signature]
ENGINEER

DEPARTMENT OF PUBLIC WORKS CITY AND COUNTY OF HONOLULU BUREAU OF PLANS		
KALIHI TUNNEL		
KALIHI APPROACH ROAD		
CROSS SECTIONS		
ENGINEER - S.O.M. - R.M.	DATE - JULY 18, 1923	CHECKED BY - S.O.M. - R.M.
DRAFTSMAN - J.S.		TRACER - J.S.
SCALE - Vert. 1" = 10', Hor. 1" = 10'		APPROVED - <i>[Signature]</i>
CHIEF ENGINEER - <i>[Signature]</i>	BUREAU ENGINEER - <i>[Signature]</i>	
W. S.	PROFILE	C. B.
CR. SEC.	F. B.	S. B.
W. N. BY	F. W. BY	S. BY
SECTION C JOB NO. 26-53 DWG. R-19		
FILE	POCKET	FOLDER

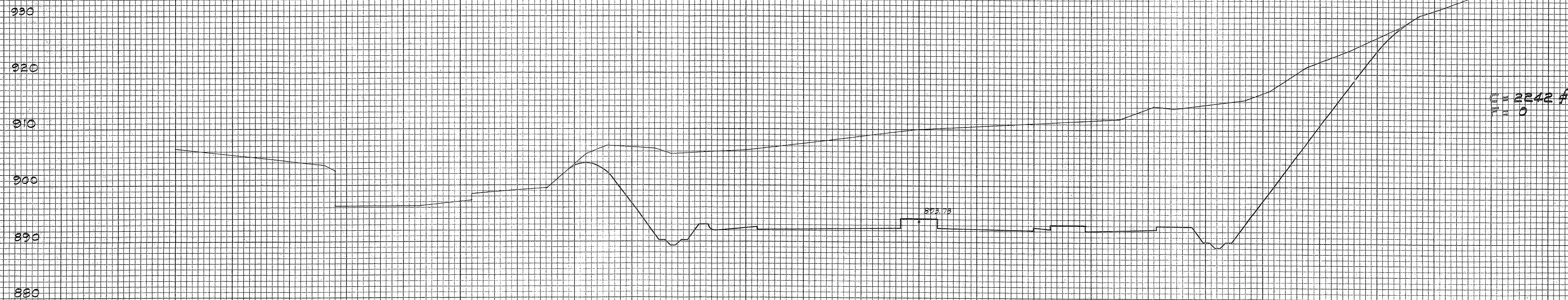
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	PLOTTED		
	NOTE BOOK		
	AREAS CHECKED		
NO.			

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



Exc = 3168.5 C.Y.
Emb = 0

C = 3200.4
F = 0



Exc = 2724.2 C.Y.
Emb = 0

C = 2242.4
F = 0

DEPARTMENT OF PUBLIC WORKS CITY AND COUNTY OF HONOLULU BUREAU OF PLANS			
KALIHI TUNNEL			
KALIHI APPROACH ROAD CROSS SECTIONS			
ENGINEER - S.O.H. - R.W.	DATE - JULY 18, 1959		
DRAFTSMAN - R.M.	CHECKED BY - S.O.H. - R.W.		
SCALE - 1" = 10' (HORIZ.) 1" = 10' (VERT.)	TRACER - J.S.		
APPROVED <i>[Signature]</i> CHIEF ENGINEER	APPROVED <i>[Signature]</i> BUREAU ENGINEER		

W.S.	PROFELLE	G.B.
CR. SEC.	F.B.	S.B.
W.M. BY	F.W. BY	S. BY

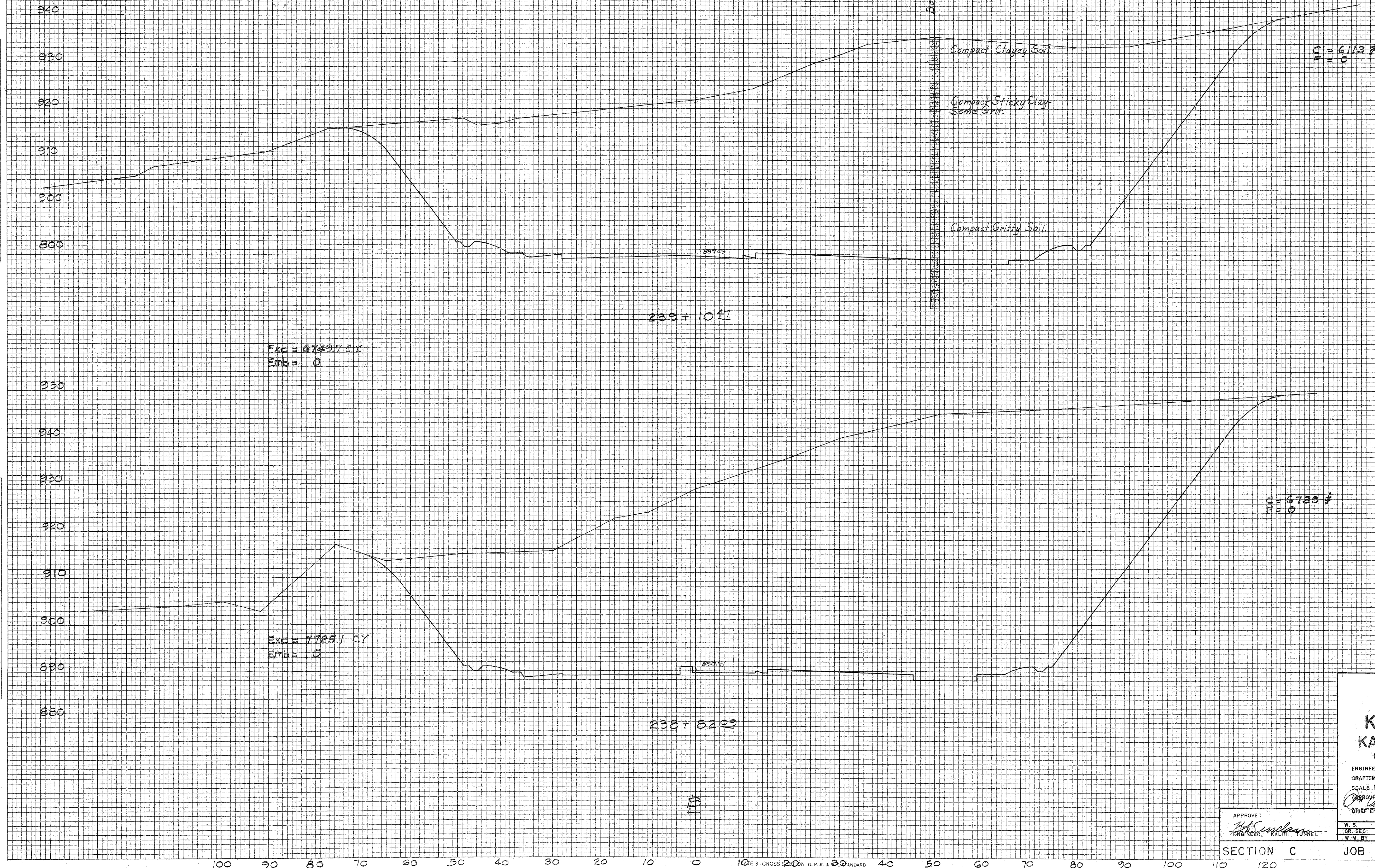
SECTION C JOB NO. 26 - 53 DWG. R - 20

Sheet No. 29 of 252 Sheets

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7	5	1	29

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	SURVEYED	PLOTTED
	NOTE BOOK	TEMPERATURE
	NO.	AREAS CHECKED

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



DEPARTMENT OF PUBLIC WORKS CITY AND COUNTY OF HONOLULU BUREAU OF PLANS			
KALIHI TUNNEL KALIHI APPROACH ROAD CROSS SECTIONS			
ENGINEER: S.M. - R.M.	DATE: JULY 15, 1952	CHECKED BY: S.M. - R.M.	
DRAFTSMAN: R.M.	SCALE: Vert. 1" = 10' Hor. 1" = 10'	TRACER: M.S.	
APPROVED: [Signature]	APPROVED: [Signature]	APPROVED: [Signature]	
CHIEF ENGINEER	BUREAU ENGINEER	BUREAU ENGINEER	

APPROVED	W.S.	PROFILE	C.B.
ENGINEER, KALIHI TUNNEL	OR. SEC.	F.B.	S.B.
	W.M. BY	F.W. BY	S. BY

SECTION C	JOB NO. 26 - 53	DWG. R - 21
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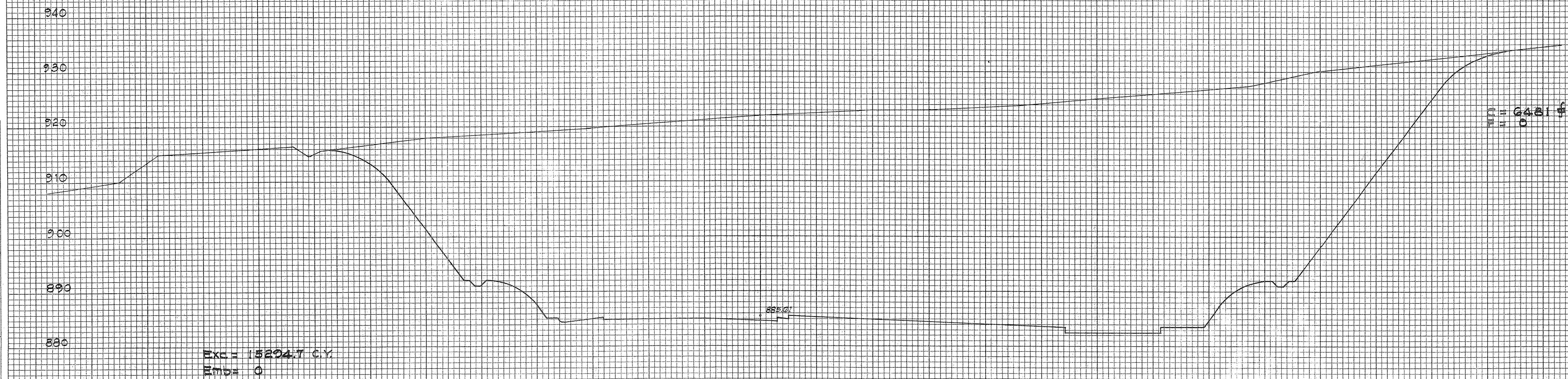
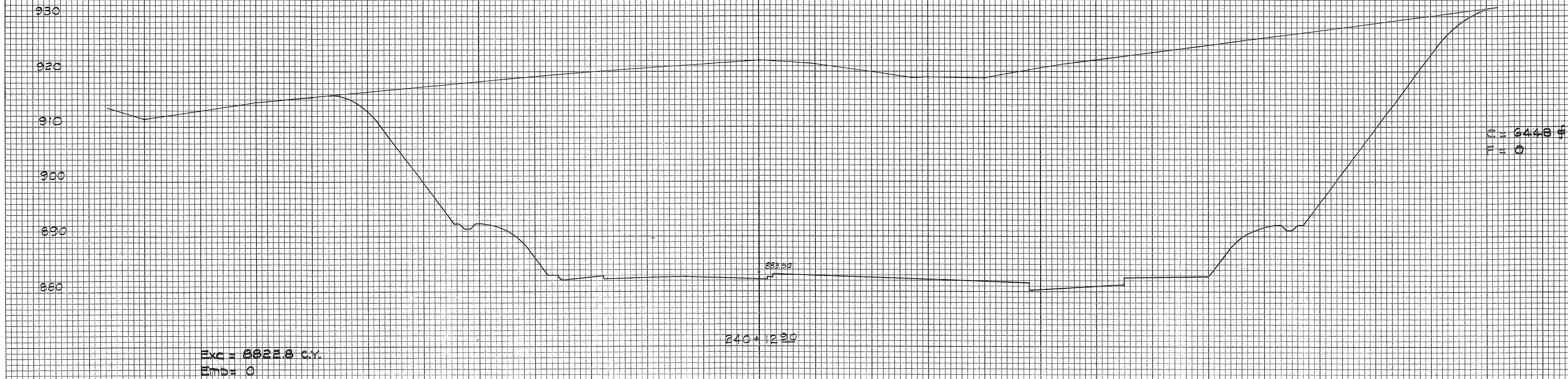
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7	5	1	30

Sheet No. 30 of 252 Sheets

KEUFFEL & ESSER CO., NEW YORK.

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

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



DEPARTMENT OF PUBLIC WORKS CITY AND COUNTY OF HONOLULU BUREAU OF PLANS			
KALIHI TUNNEL KALIHI APPROACH ROAD CROSS SECTIONS			
ENGINEER	DATE	CHECKED BY	TRACER
DRAFTSMAN			
SCALE			
APPROVED	APPROVED	APPROVED	APPROVED
CHIEF ENGINEER	BUREAU ENGINEER	BUREAU ENGINEER	BUREAU ENGINEER

W.S.	PROFILE	C.B.
OR SEC.	F.B.	S.B.
W.M. BY	F.W. BY	S. BY

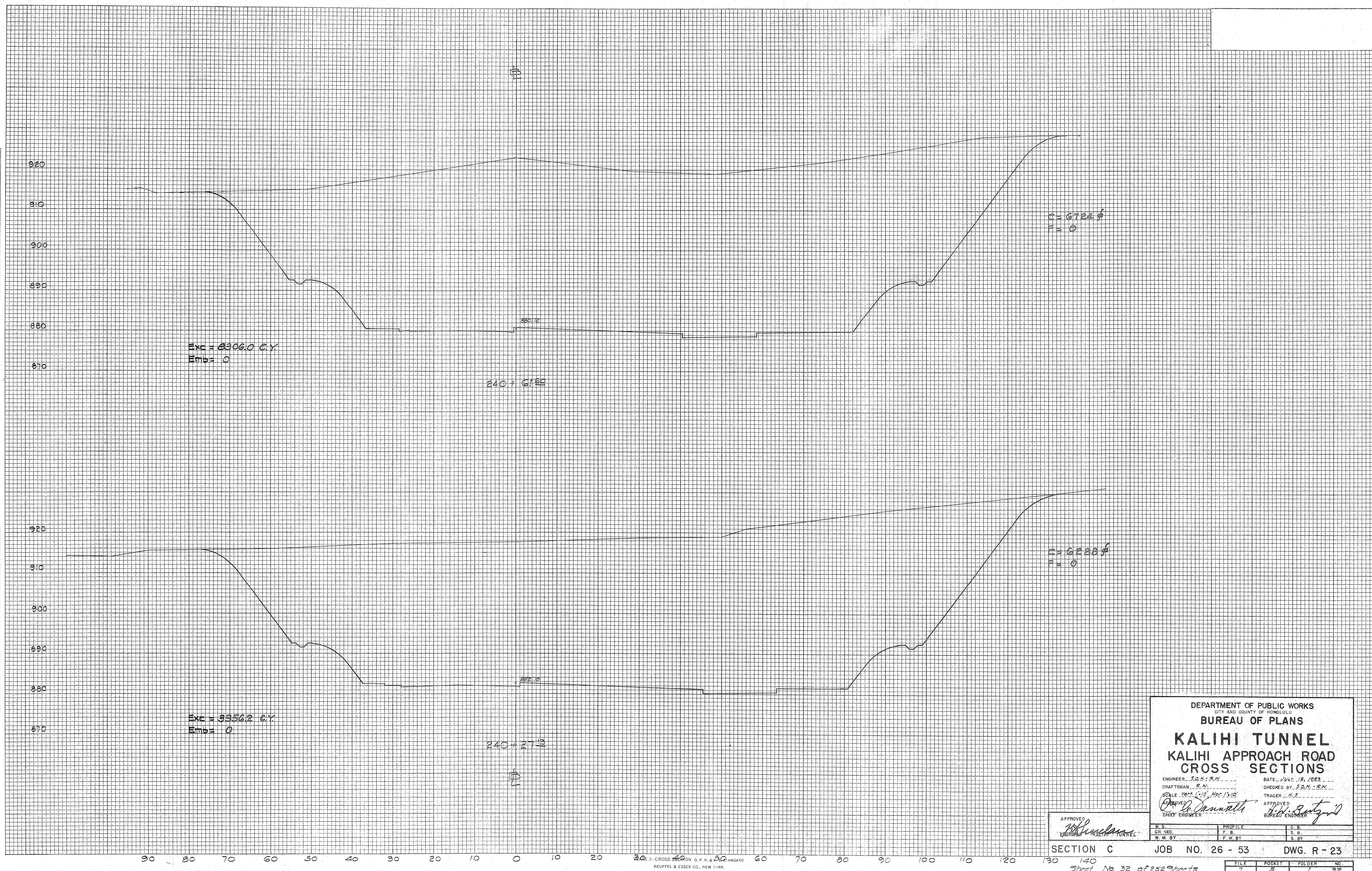
SECTION C JOB NO. 26-53 DWG. R-22

Sheet No. 31 of 252 Sheets

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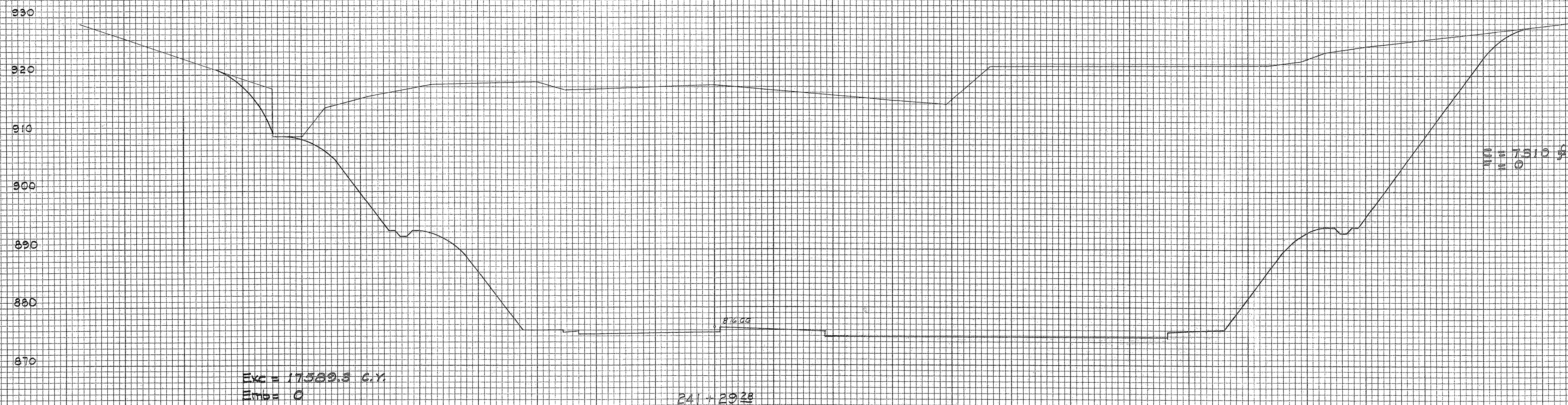
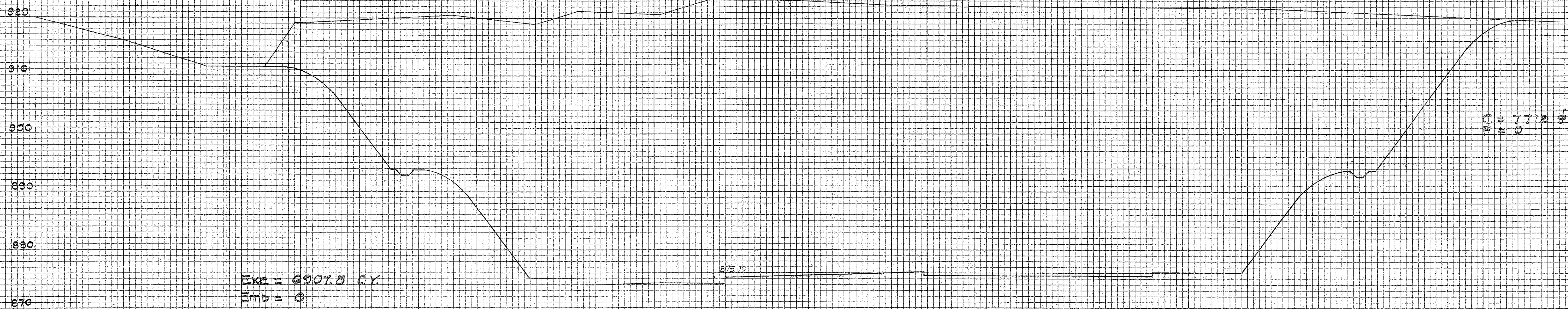
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NOTE BOOK	PLOTTED		
NO.	AREAS CHECKED		

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



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

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



DEPARTMENT OF PUBLIC WORKS CITY AND COUNTY OF HONOLULU BUREAU OF PLANS			
KALIHI TUNNEL KALIHI APPROACH ROAD CROSS SECTIONS			
ENGINEER S.C.H. R.N.	DATE JULY 15, 1953	CHECKED BY S.C.H. R.N.	
DRAFTSMAN R.W.		TRACER H.S.	
SCALES Vert. 1"=10' Hor. 1"=10'		APPROVED	
CHIEF ENGINEER		BUREAU ENGINEER	
W.S.	PROFILE	C.B.	
OR SEC.	F.S.	S.B.	
W.M. BY	F.W. BY	S.B.Y.	
SECTION C		JOB NO. 26 - 53	DWG. R - 24
FILE	POCKET	FOLDER	NO.
7	5	1	35

APPROVED
ENGINEER, KALIHI TUNNEL

SECTION C

JOB NO. 26 - 53

DWG. R - 24

Sheet No. 33 of 252 Sheets

KEUFFEL & ESSER CO., NEW YORK.

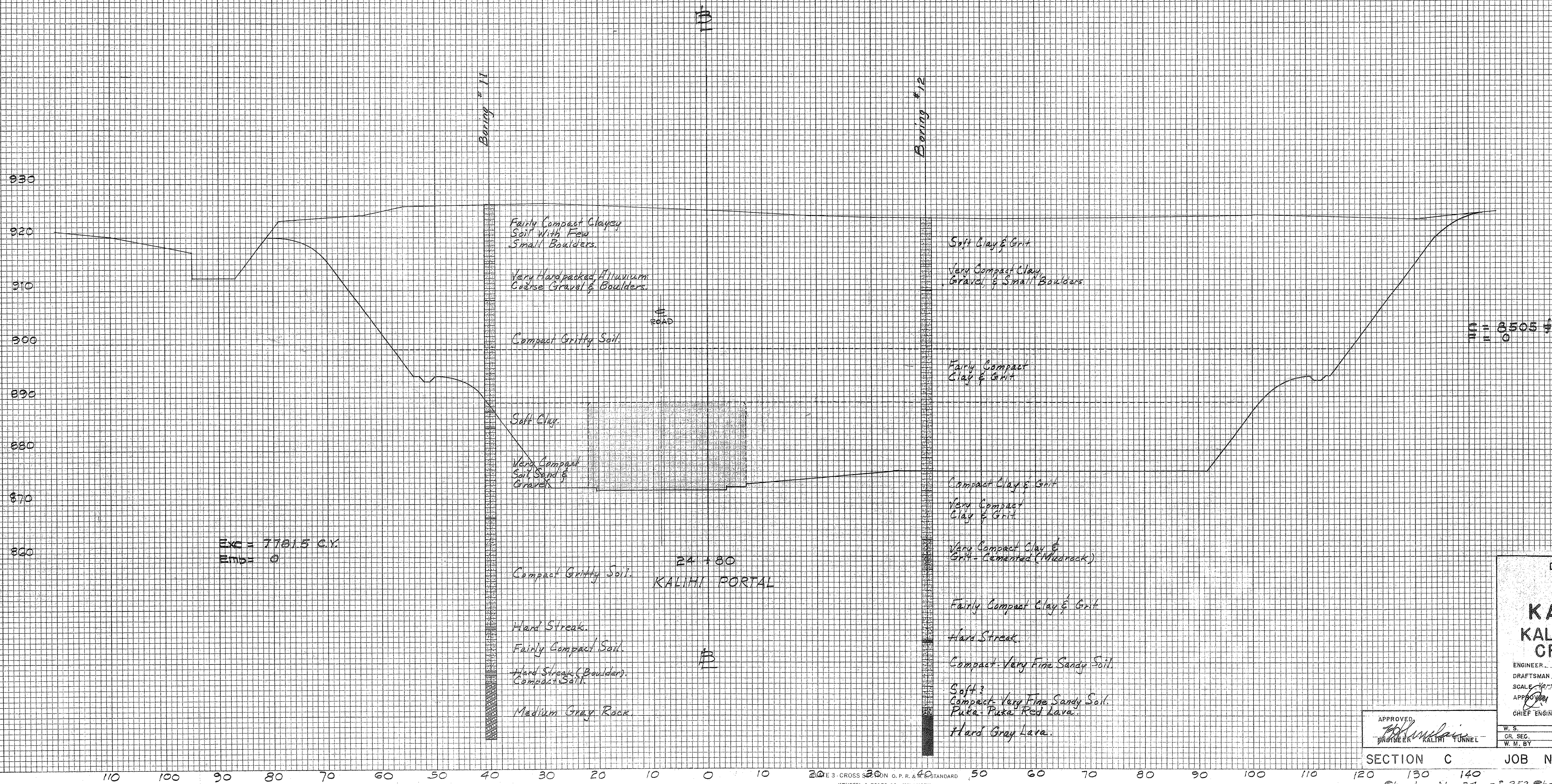
FINAL SURVEY	DATE	
	BY	
	SURVEYED	
	NOTE BOOK	
	AREAS CHECKED	

ORIGINAL SURVEY	DATE	
	BY	
	SURVEYED	
	NOTE BOOK	
	AREAS CHECKED	

7,300 C.Y. to be excavated behind Portal
Yardage to be part of Road Excavation.

EARTHWORK SUMMARY

EXC.	127,705.1
EMB.	36,040.5
+15%	5,406.1
TOTAL EMB.	41,446.6



DEPARTMENT OF PUBLIC WORKS CITY AND COUNTY OF HONOLULU			
BUREAU OF PLANS			
KALIHI TUNNEL			
KALIHI APPROACH ROAD			
CROSS SECTIONS			
ENGINEER S.O.H. - R.M.	DATE JULY 19, 1932	CHECKED BY S.O.H. - R.M.	TRAGER H.S.
DRAFTSMAN R.M.	SCALE 1" = 10' (1" = 10')	APPROVED	APPROVED
CHIEF ENGINEER		CHIEF ENGINEER	BUREAU ENGINEER

APPROVED	W. S.	PROFILE	C.B.
DRAWN	CR. SEC.	F. B.	S. B.
	W. M. BY	F. W. BY	S. BY

SECTION C JOB NO. 26 - 53 DWG. R - 25

Sheet No. 34 of 252 Sheets

FILE	POCKET	FOLDER	NO.
7	5	1	34