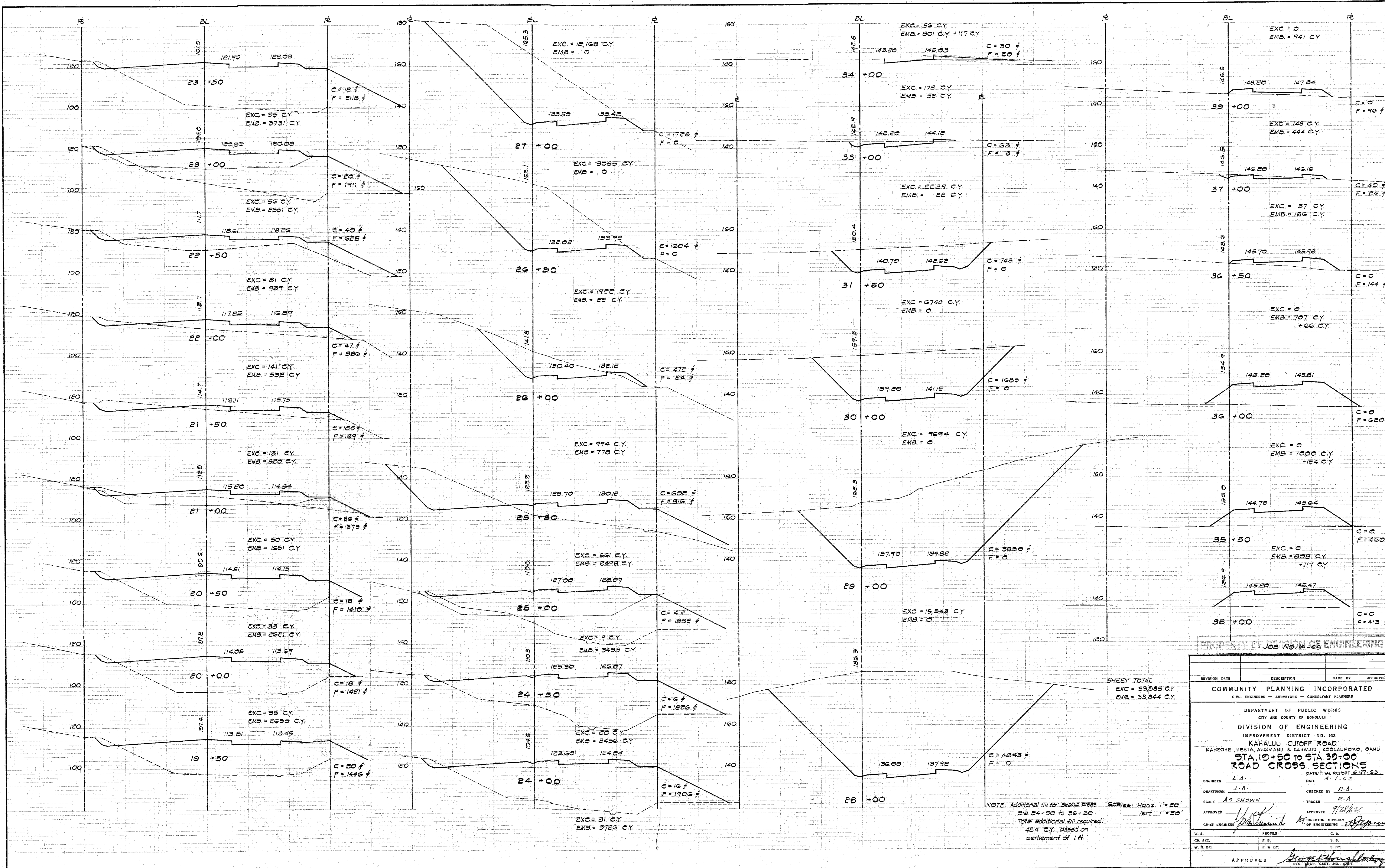




SHEET 27 OF 68 SHEETS

| FILE | POCKET | FOLDER | NO. |
|------|--------|--------|-----|
| 12   | 2      | 3      | 27  |





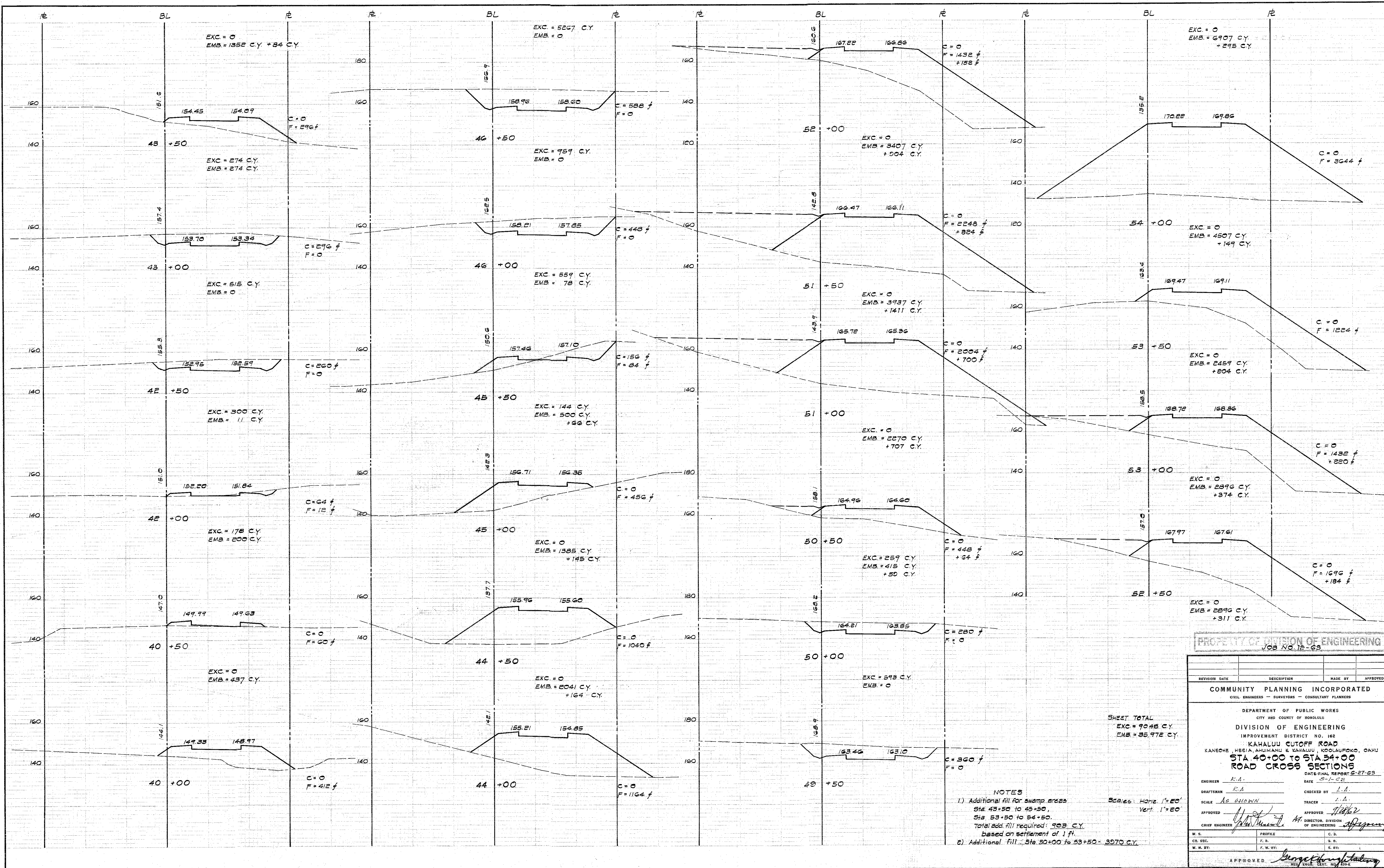
SHEET TOTAL  
EXC = 53,585 CY  
EMB = 33,944 CY

NOTE: Additional fill for swamp areas  
Sta 34+00 to 36+50  
Total additional fill required:  
424 CY, based on  
settlement of 1 ft.

Scales: Horiz. 1"=20'  
Vert. 1"=20'

| PROPERTY OF JOB NO. 15-63                                                            |                                   |            |          |
|--------------------------------------------------------------------------------------|-----------------------------------|------------|----------|
| REVISION DATE                                                                        | DESCRIPTION                       | MADE BY    | APPROVED |
| COMMUNITY PLANNING INCORPORATED<br>CIVIL ENGINEERS - SURVEYORS - CONSULTANT PLANNERS |                                   |            |          |
| DEPARTMENT OF PUBLIC WORKS<br>CITY AND COUNTY OF HONOLULU                            |                                   |            |          |
| DIVISION OF ENGINEERING<br>IMPROVEMENT DISTRICT NO. 162                              |                                   |            |          |
| KAHALU CUTOFF ROAD<br>KANEHOE, HEAIA, AHUIMANU & KAHALU, KOOLAPOKO, OAHU             |                                   |            |          |
| STA. 12+50 TO STA. 30+00<br>ROAD CROSS SECTIONS                                      |                                   |            |          |
| ENGINEER                                                                             | L.A.                              | DATE       | 8-1-62   |
| DRAFTSMAN                                                                            | L.A.                              | CHECKED BY | R.A.     |
| SCALE                                                                                | AS SHOWN                          | TRACER     | R.A.     |
| APPROVED                                                                             | APPROVED                          |            |          |
| CHIEF ENGINEER                                                                       | DIRECTOR, DIVISION OF ENGINEERING |            |          |
| W.S.                                                                                 | PROFILE                           | C.B.       |          |
| C.R. SEC.                                                                            | F.B.                              | S.B.       |          |
| W.N. BY:                                                                             | F.W. BY:                          | S.B.Y.     |          |
| APPROVED                                                                             |                                   |            |          |
| FILE                                                                                 | FOCKET                            | FOLDER     | NO.      |
| 12                                                                                   | 3                                 | 5          | 26       |





PROPERTY OF DIVISION OF ENGINEERING  
JOB NO. 12-63

| REVISION DATE | DESCRIPTION | MADE BY | APPROVED |
|---------------|-------------|---------|----------|
|               |             |         |          |

COMMUNITY PLANNING INCORPORATED  
CIVIL ENGINEERS - SURVEYORS - CONSULTANT PLANNERS

DEPARTMENT OF PUBLIC WORKS  
CITY AND COUNTY OF HONOLULU  
DIVISION OF ENGINEERING  
IMPROVEMENT DISTRICT NO. 162  
KAHALU CUTOFF ROAD  
KANE OHE, HEEA, AHUIMANU & KAHALU, KOOLAUPOKO, OAHU  
STA 40+00 TO STA 54+00  
ROAD CROSS SECTIONS  
DATE FINAL REPORT 6-27-63

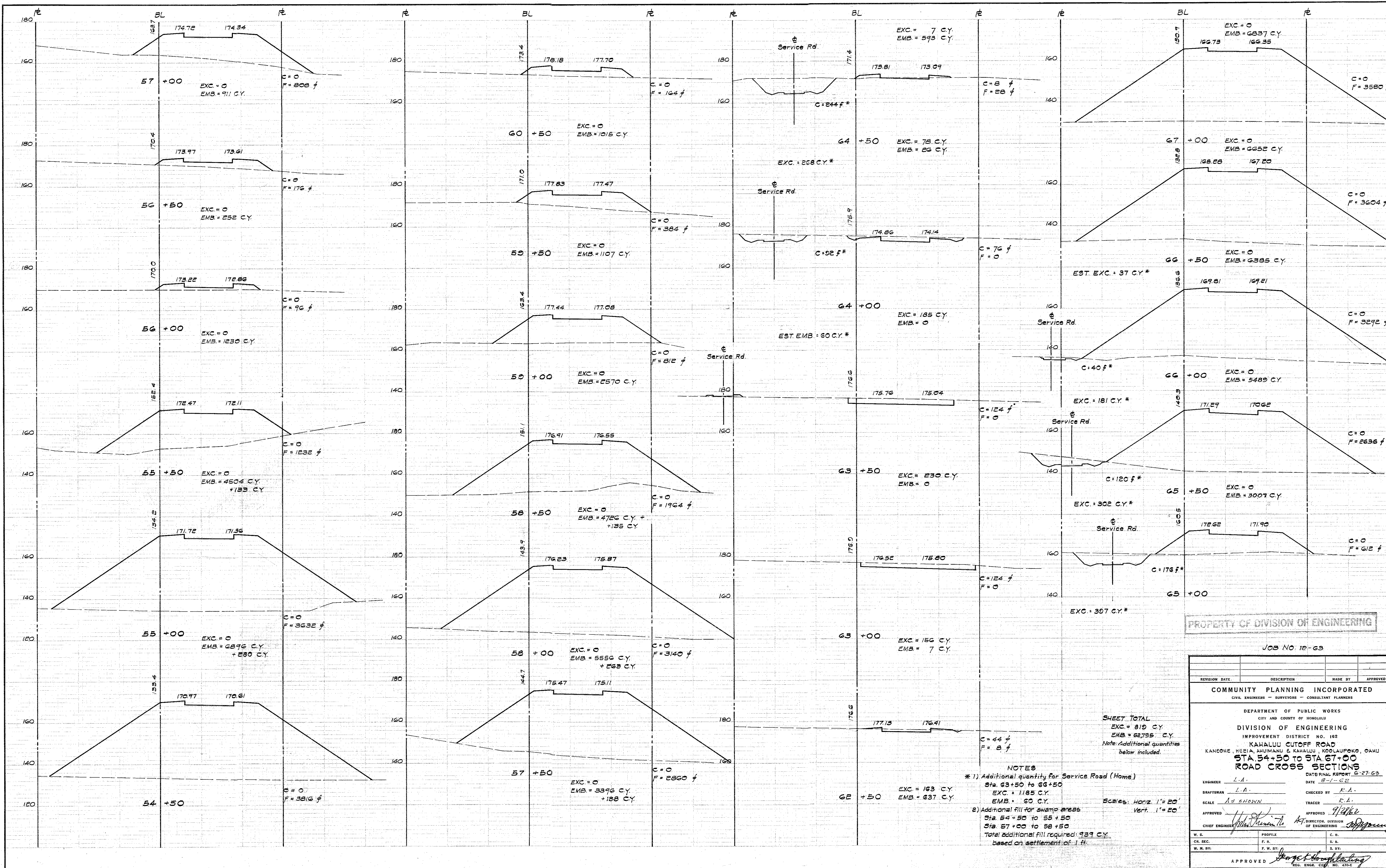
ENGINEER R.A. DATE 8-1-62  
DRAFTSMAN R.A. CHECKED BY L.A.  
SCALE AS SHOWN TRACER L.A.  
APPROVED [Signature] APPROVED [Signature]  
CHIEF ENGINEER [Signature] M. DIRECTOR, DIVISION OF ENGINEERING

| W. S. | PROF. DR. | C. S. |
|-------|-----------|-------|
|       |           |       |
|       |           |       |
|       |           |       |

APPROVED [Signature]  
W. S. BY: [Signature] F. W. BY: [Signature] S. BY: [Signature]

SHEET 29 OF 52 SHEETS





SHEET TOTAL  
EXC. = 819 C.Y.  
EMB. = 62,795 C.Y.  
Note: Additional quantities below included.

NOTES  
\* 1) Additional quantity for Service Road (Home)  
Sta. 63+50 to 66+50  
EXC. = 1185 C.Y.  
EMB. = 60 C.Y.  
2) Additional fill for swamp areas  
Sta. 54+50 to 55+50  
Sta. 57+00 to 58+50  
Total additional fill required: 939 C.Y.  
based on settlement of 1 ft.

PROPERTY OF DIVISION OF ENGINEERING

JOB NO. 12-63

| REVISION DATE | DESCRIPTION | MADE BY | APPROVED |
|---------------|-------------|---------|----------|
|               |             |         |          |

COMMUNITY PLANNING INCORPORATED  
CIVIL ENGINEERS - SURVEYORS - CONSULTANT PLANNERS

DEPARTMENT OF PUBLIC WORKS  
CITY AND COUNTY OF HONOLULU  
DIVISION OF ENGINEERING  
IMPROVEMENT DISTRICT NO. 182  
KAHALU CUTOFF ROAD  
KANEHOE, HEEA, AHUIMANU & KAHALU, KOOLAUPOKO, OAHU  
STA. 54+50 TO STA. 67+00  
ROAD CROSS SECTIONS

ENGINEER: L.A.  
DRAFTSMAN: L.A.  
SCALE: AS SHOWN  
APPROVED: [Signature]  
CHIEF ENGINEER: [Signature]

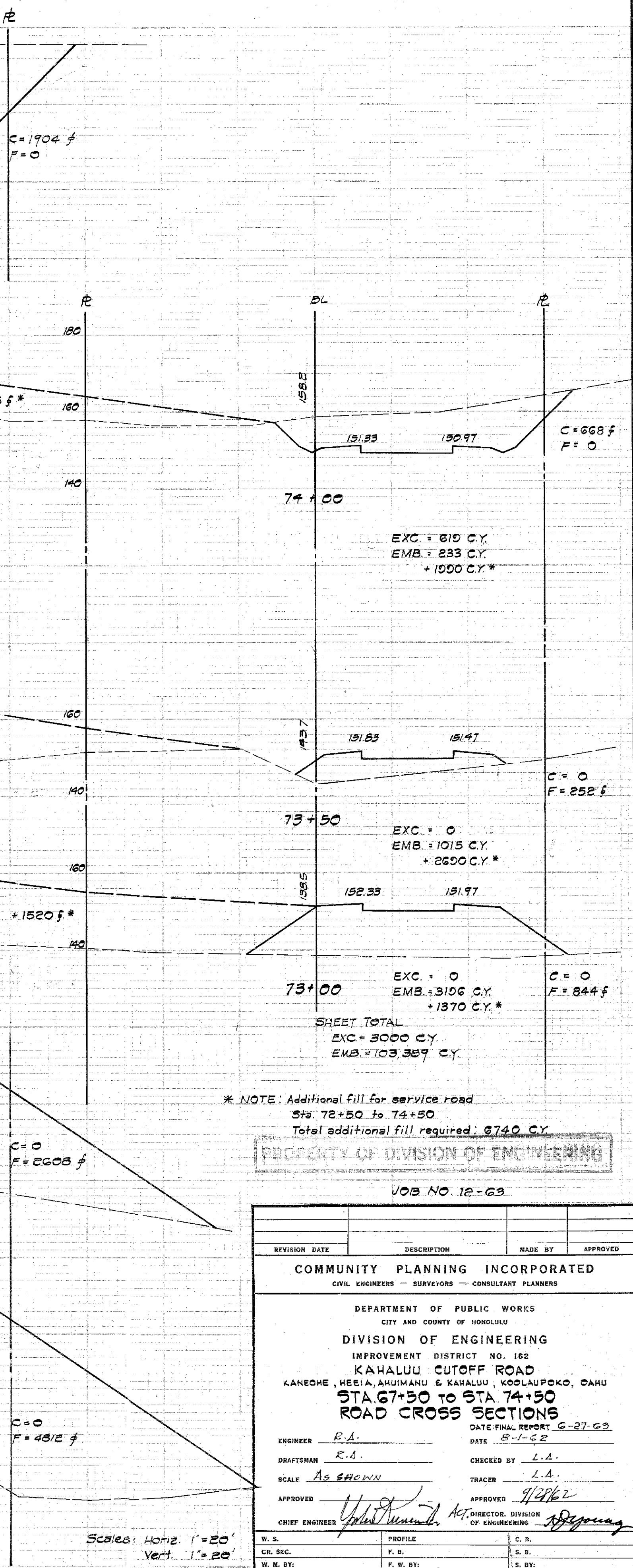
DATE: 8-1-62  
CHECKED BY: R.A.  
TRACER: R.A.  
APPROVED: [Signature]  
AT. DIRECTOR, DIVISION OF ENGINEERING: [Signature]

W. E. [Signature] PROFILE  
C. E. [Signature] F. E.  
W. H. [Signature] F. W. [Signature] S. BY: [Signature]

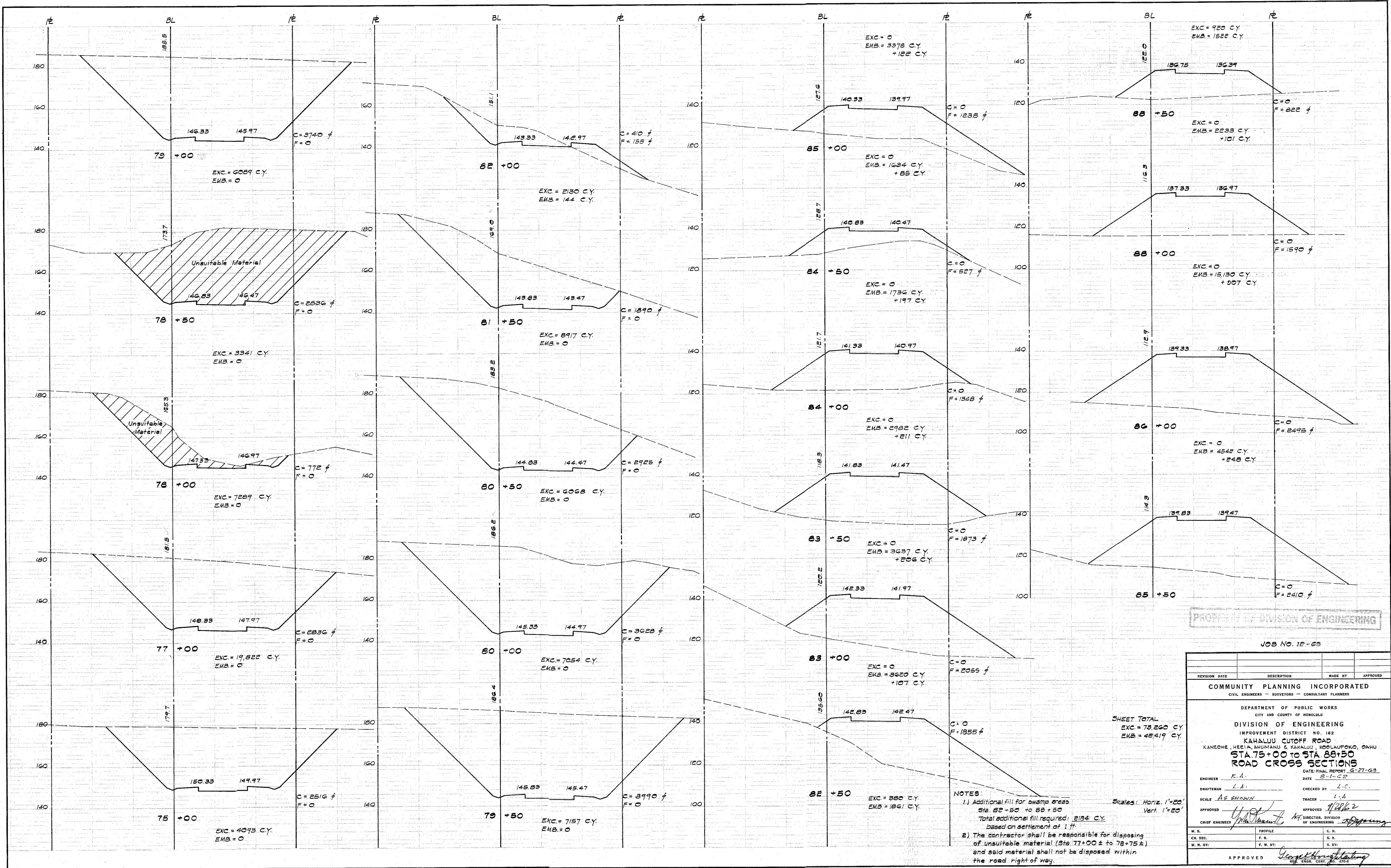
APPROVED: [Signature]  
REG. ENG. C. E. NO. 470-E

FILE 12  
FOCKET 3  
FOLDER 3  
NO. 30







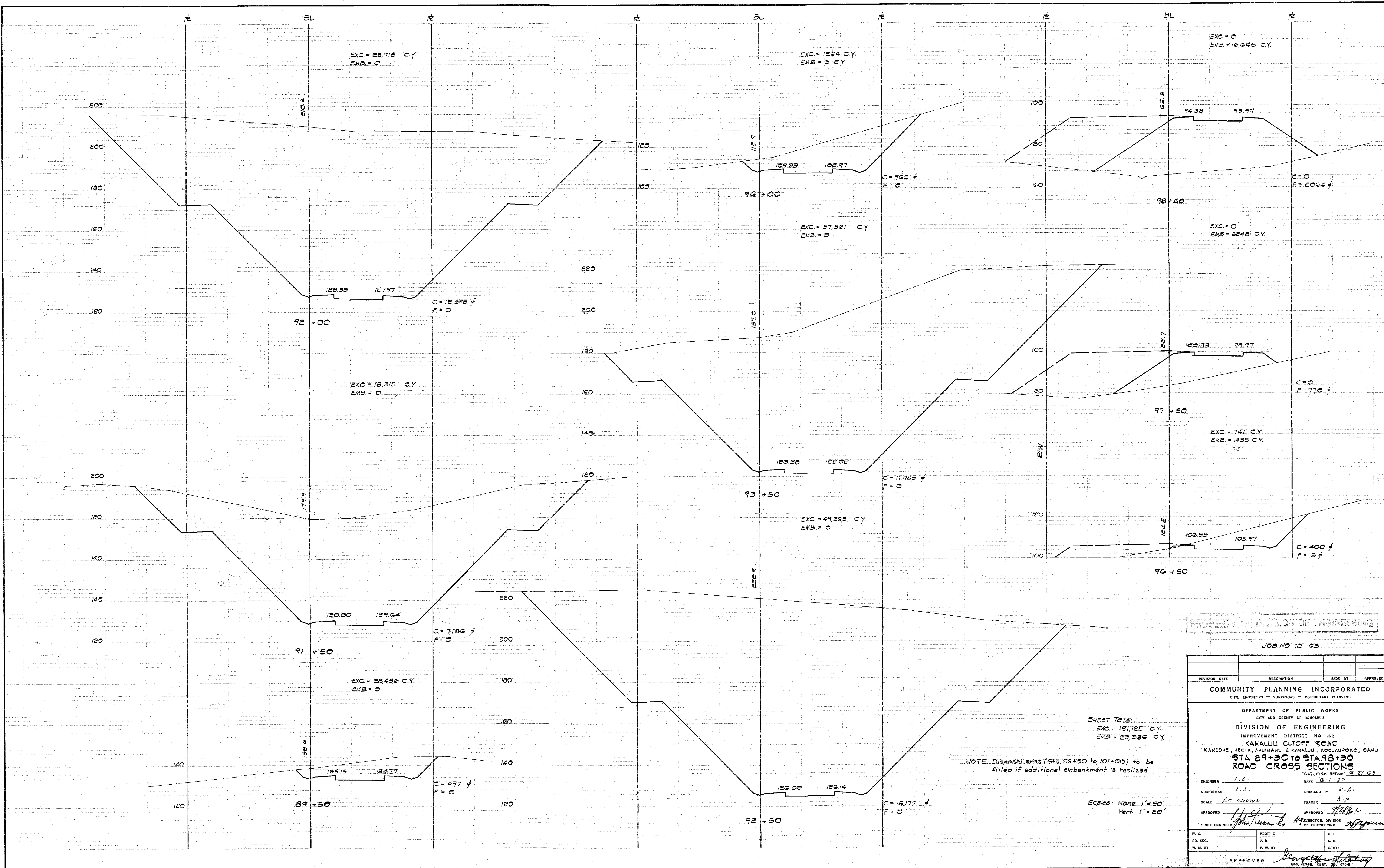


PROPERTY OF DIVISION OF ENGINEERING

JOB NO. 12-63

| REVISION                                                                             | DATE               | DESCRIPTION        | MADE BY | APPROVED |
|--------------------------------------------------------------------------------------|--------------------|--------------------|---------|----------|
| COMMUNITY PLANNING INCORPORATED<br>CIVIL ENGINEERS - SURVEYORS - CONSULTANT PLANNERS |                    |                    |         |          |
| DEPARTMENT OF PUBLIC WORKS<br>CITY AND COUNTY OF HONOLULU                            |                    |                    |         |          |
| DIVISION OF ENGINEERING<br>IMPROVEMENT DISTRICT NO. 162                              |                    |                    |         |          |
| KAHALU CUTOFF ROAD<br>KANEHOE, HEEI, AHIOMANU & KAHALU, KOOLAUPOKO, OAHU             |                    |                    |         |          |
| STA. 75+00 TO STA. 88+50<br>ROAD CROSS SECTIONS                                      |                    |                    |         |          |
| ENGINEER                                                                             | R. A.              | DATE: FINAL REPORT | 6-27-63 |          |
| DRAFTSMAN                                                                            | L. A.              | DATE               | 8-1-62  |          |
| SCALE                                                                                | AS SHOWN           | CHECKED BY         | L. C.   |          |
| APPROVED                                                                             | <i>[Signature]</i> | TRACER             | L. A.   |          |
| CHIEF ENGINEER                                                                       | <i>[Signature]</i> | APPROVED           | 9/28/62 |          |
| W. S.                                                                                | PROFILE            | C. B.              |         |          |
| C. S.                                                                                | F. B.              | S. B.              |         |          |
| W. N. BY:                                                                            | F. W. BY:          | S. BY:             |         |          |
| APPROVED <i>[Signature]</i>                                                          |                    |                    |         |          |
| FILE                                                                                 | 12                 | FOCKET             | 3       | FOLDER   |
|                                                                                      |                    |                    |         | NO.      |





SHEET TOTAL  
EXC = 181,122 C.Y.  
EMB = 23,336 C.Y.

NOTE: Disposal area (Sta. 96+50 to 101+00) to be filled if additional embankment is realized.

Scales: Horiz. 1" = 20'  
Vert. 1" = 20'

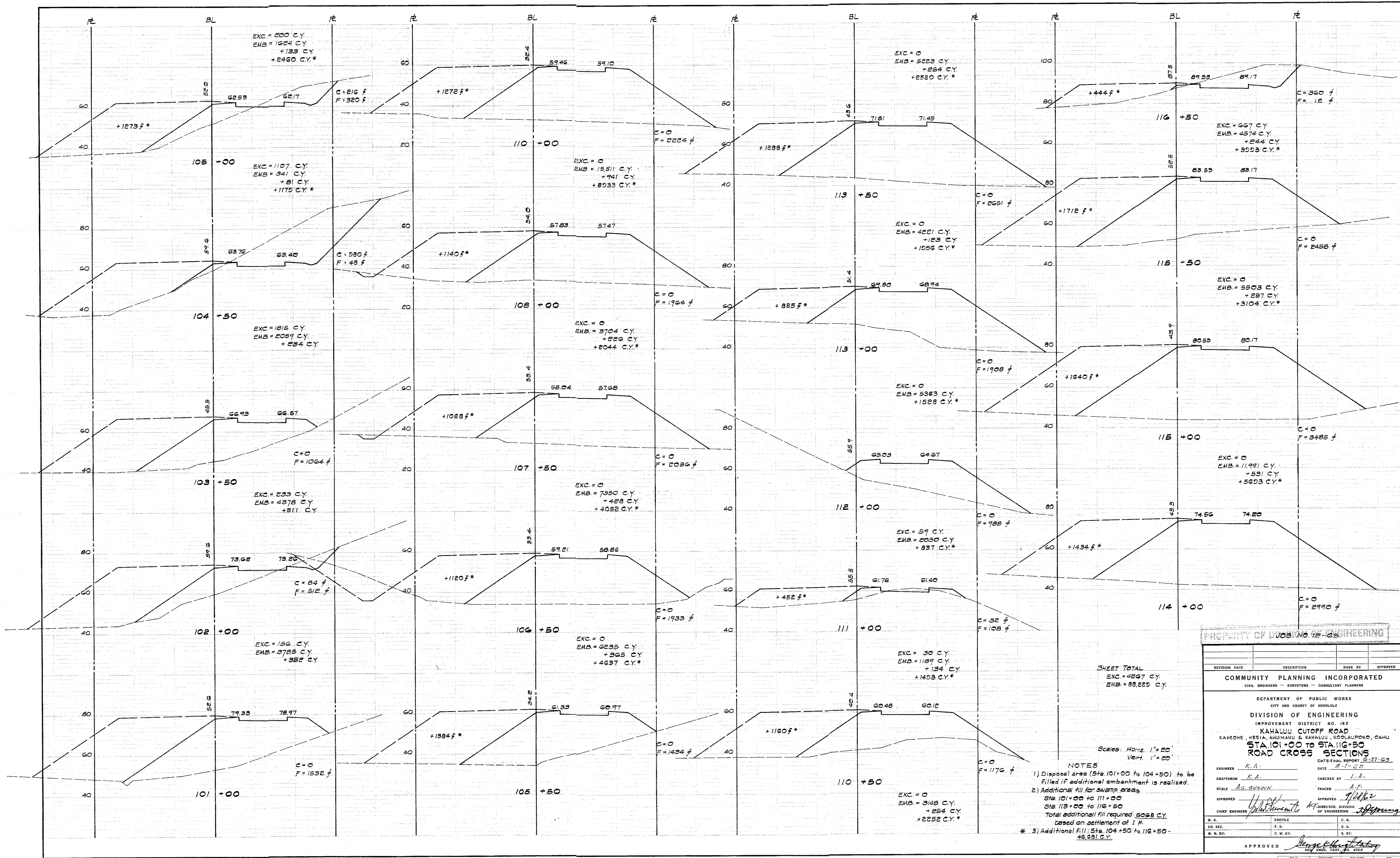
PROPERTY OF DIVISION OF ENGINEERING

JOB NO. 12-63

| REVISION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | DATE | DESCRIPTION | MADE BY | APPROVED |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-------------|---------|----------|
| COMMUNITY PLANNING INCORPORATED<br>CIVIL ENGINEERS - SURVEYORS - CONSULTANT PLANNERS                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |      |             |         |          |
| DEPARTMENT OF PUBLIC WORKS<br>CITY AND COUNTY OF HONOLULU<br>DIVISION OF ENGINEERING<br>IMPROVEMENT DISTRICT NO. 162<br>KAHALU CUTOFF ROAD<br>KANEHE, HEEIA, AHUIMANU & KAHALU, KOOLAPOKO, OAHU<br>STA. 89+50 TO STA. 98+50<br>ROAD CROSS SECTIONS<br>DATE FINAL REPORT 6-27-62<br>DATE 8-1-62<br>ENGINEER L.A.<br>DRAFTSMAN L.A.<br>SCALE AS SHOWN<br>APPROVED [Signature]<br>CHIEF ENGINEER [Signature]<br>W. S. [ ] PROFILE C. B. [ ]<br>CR. SEC. F. B. [ ] S. B. [ ]<br>W. M. BY: F. W. BY: S. BY: [ ]<br>APPROVED [Signature]<br>REG. ENG. CERT. NO. 4702 |      |             |         |          |

FILE 12 FOLDER 3 SHEET 33 OF 62 SHEETS





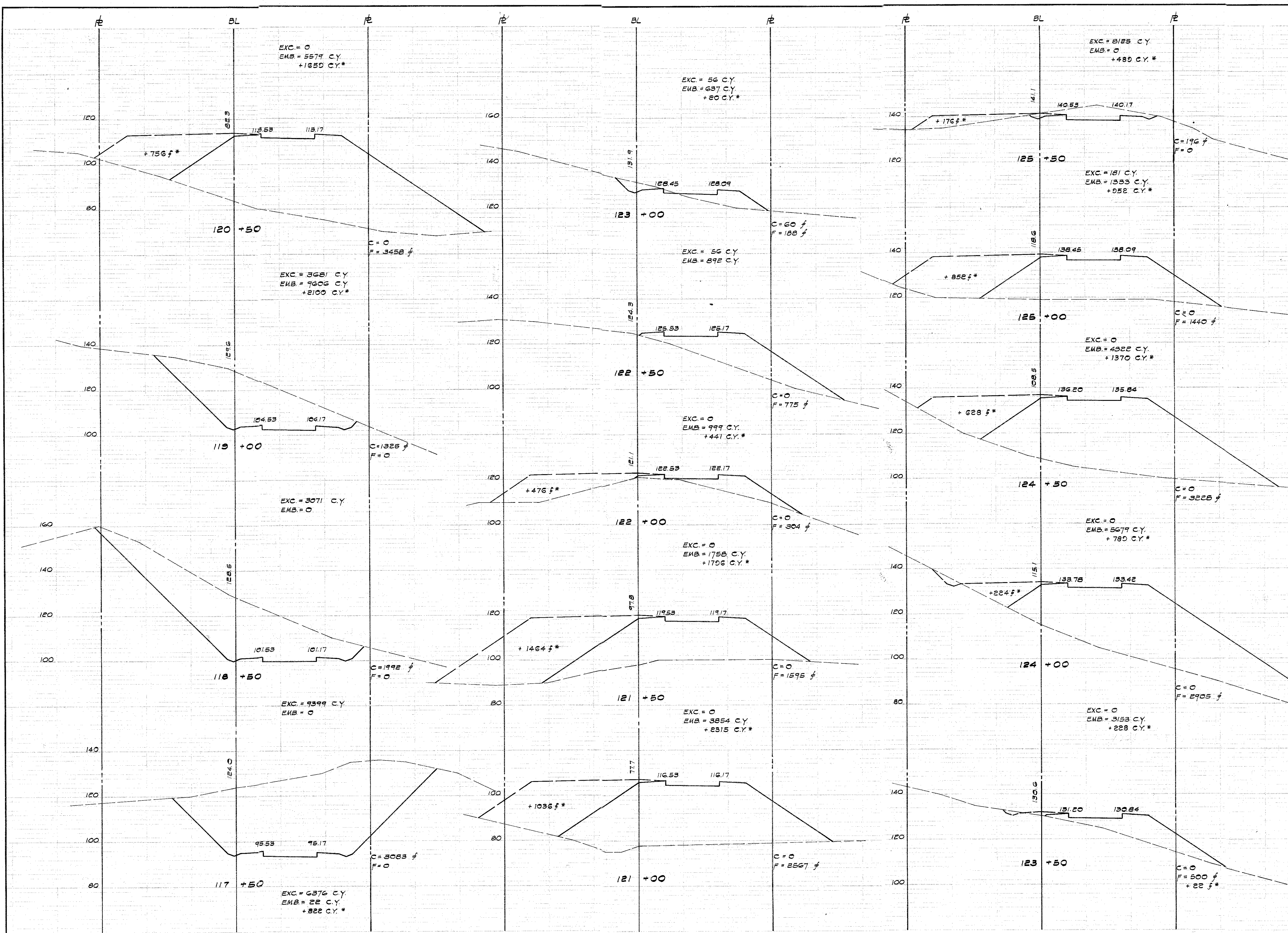
SHEET TOTAL  
EXC = 4267 C.Y.  
EMB = 88,225 C.Y.

Scales: Horiz. 1" = 20'  
Vert. 1" = 20'

- NOTES
- 1) Disposal area (Sta. 101+00 to 104+50) to be filled if additional embankment is realized.
  - 2) Additional fill for swamp areas:  
Sta. 101+00 to 111+00  
Sta. 113+00 to 116+50  
Total additional fill required: 5068 C.Y.  
based on settlement of 1 ft.
  - \* 3) Additional fill: Sta. 104+50 to 116+50 - 46,681 C.Y.

| PROPERTY OF DVOB NO. 12-23                                                                                                          |             |                                   |             |
|-------------------------------------------------------------------------------------------------------------------------------------|-------------|-----------------------------------|-------------|
| REVISION DATE                                                                                                                       | DESCRIPTION | MADE BY                           | APPROVED    |
| COMMUNITY PLANNING INCORPORATED<br>CIVIL ENGINEERS - SURVEYORS - CONSULTANT PLANNERS                                                |             |                                   |             |
| DEPARTMENT OF PUBLIC WORKS<br>CITY AND COUNTY OF HONOLULU                                                                           |             |                                   |             |
| DIVISION OF ENGINEERING<br>IMPROVEMENT DISTRICT NO. 162<br>KAHALU CUTOFF ROAD<br>KAHEOHE, KEEIA, AHUIMANU & KAHALU, KOOLAPOKO, OAHU |             |                                   |             |
| STA. 101+00 TO STA. 116+50<br>ROAD CROSS SECTIONS                                                                                   |             |                                   |             |
| ENGINEER                                                                                                                            | R.A.        | CHECKED BY                        | L.A.        |
| DRAFTSMAN                                                                                                                           | R.A.        | TRACER                            | A.F.        |
| SCALE                                                                                                                               | AS SHOWN    | APPROVED                          | 1/2/62      |
| CHIEF ENGINEER                                                                                                                      | [Signature] | DIRECTOR, DIVISION OF ENGINEERING | [Signature] |
| W.S.                                                                                                                                | PROFILE     | C.B.                              |             |
| CR. SEC.                                                                                                                            | F.D.        | S.B.                              |             |
| W.M. BY:                                                                                                                            | F.W. BY:    | S. BY:                            |             |
| APPROVED [Signature]                                                                                                                |             |                                   |             |
| FILE                                                                                                                                | POCKET      | FOLDER                            | NO.         |
| 12                                                                                                                                  | 3           | 3                                 | 34          |





PROPERTY OF DIVISION OF ENGINEERING

SHEET TOTAL  
EXC. = 30,945 C.Y.  
EMB. = 37,834 C.Y.

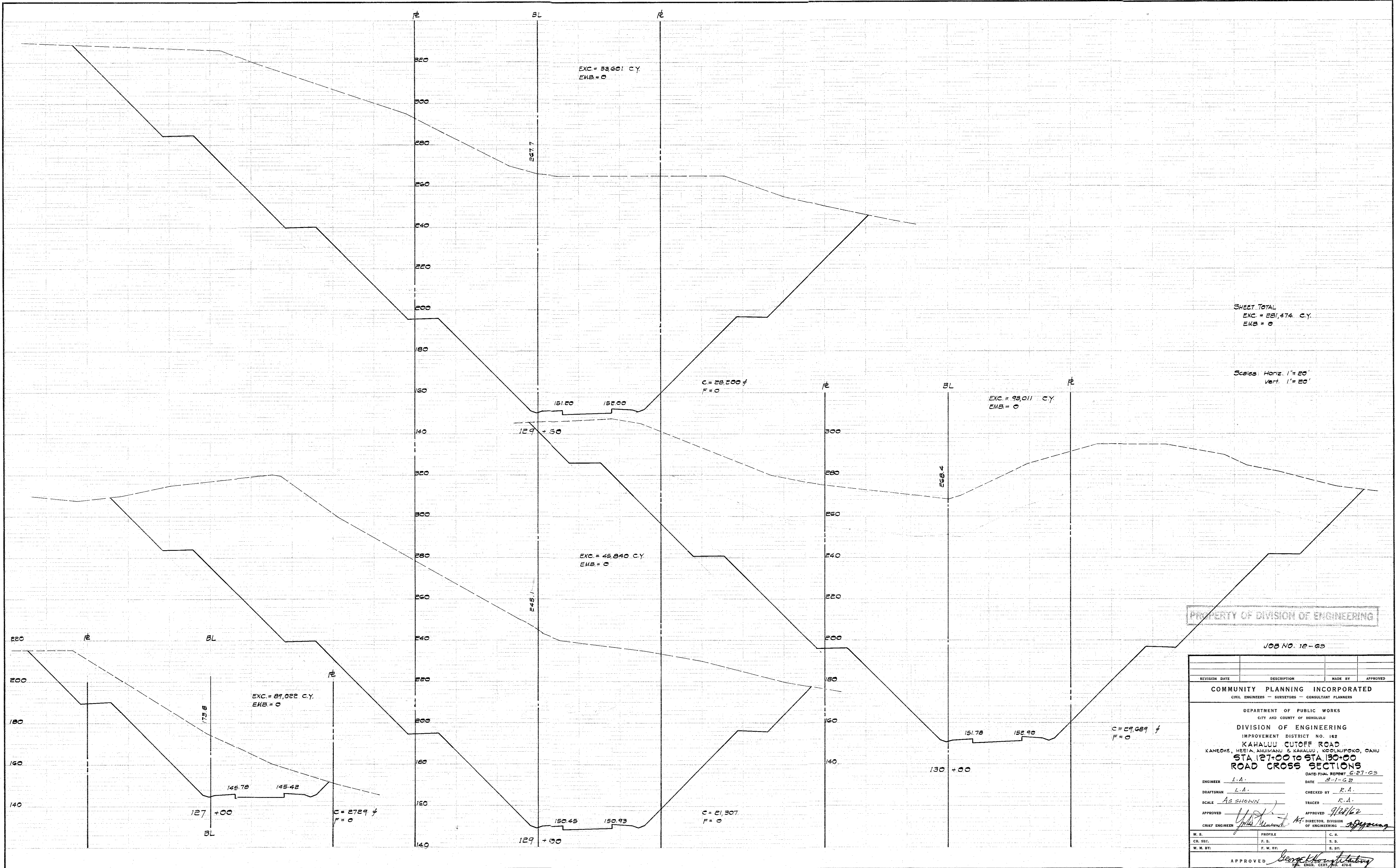
Scales: Horiz. 1" = 20'  
Vert. 1" = 20'  
\* NOTE: Additional Fill  
Sta. 116+50 to 117+00  
Sta. 119+00 to 122+50  
Sta. 123+00 to 127+00  
Total additional fill required: 12,031 C.Y.

JOB NO. 12-63

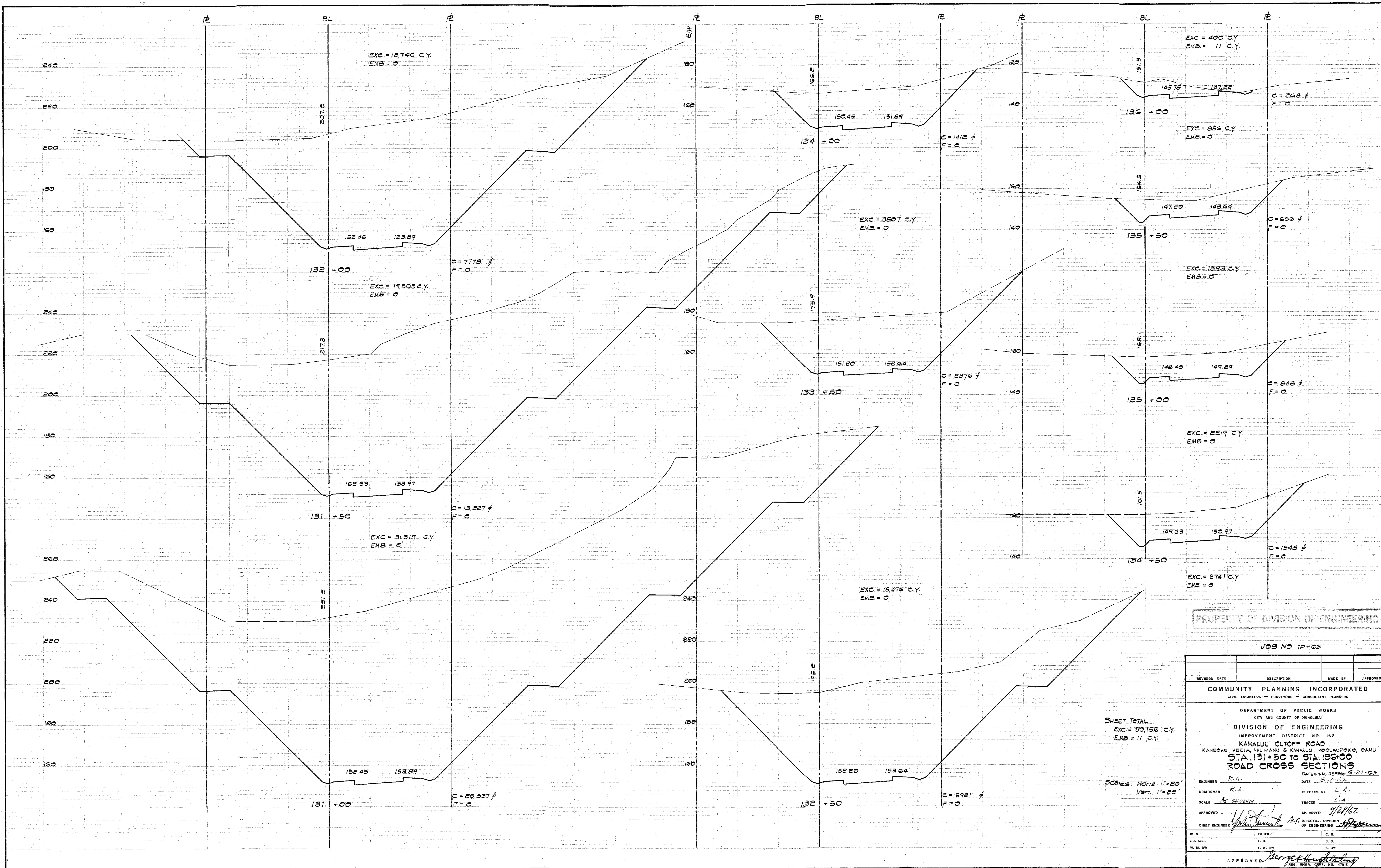
| REVISION                                                                                                                            | DATE                                                | DESCRIPTION | MADE BY | APPROVED |
|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|-------------|---------|----------|
| COMMUNITY PLANNING INCORPORATED<br>CIVIL ENGINEERS - SURVEYORS - CONSULTANT PLANNERS                                                |                                                     |             |         |          |
| DEPARTMENT OF PUBLIC WORKS<br>CITY AND COUNTY OF HONOLULU                                                                           |                                                     |             |         |          |
| DIVISION OF ENGINEERING<br>IMPROVEMENT DISTRICT NO. 162<br>KAHALU CUTOFF ROAD<br>KANEHOE, HEAIA, AHUIMANU & KAHALU, KOOLAPOKO, OAHU |                                                     |             |         |          |
| STA. 117+50 TO STA. 125+50<br>ROAD CROSS SECTIONS                                                                                   |                                                     |             |         |          |
| ENGINEER                                                                                                                            | L.A.                                                | DATE        | 8-1-62  |          |
| DRAFTSMAN                                                                                                                           | R.A.                                                | CHECKED BY  | L.C.    |          |
| SCALE                                                                                                                               | AS SHOWN                                            | TRACER      | A.F.    |          |
| APPROVED                                                                                                                            | [Signature] ASST. DIRECTOR, DIVISION OF ENGINEERING |             |         |          |
| W.S.                                                                                                                                | PROFILE                                             | C.B.        |         |          |
| CR. SEC.                                                                                                                            | F.S.                                                | S.B.        |         |          |
| W.M. BY:                                                                                                                            | F.W. BY:                                            | S. BY:      |         |          |
| APPROVED [Signature] [Signature]                                                                                                    |                                                     |             |         |          |

| FILE | POCKET | FOLDER | NO. |
|------|--------|--------|-----|
| 12   | 9      | 5      | 35  |









EXC. = 400 C.Y.  
EMB. = 11 C.Y.

EXC. = 856 C.Y.  
EMB. = 0

EXC. = 1393 C.Y.  
EMB. = 0

EXC. = 2219 C.Y.  
EMB. = 0

EXC. = 2741 C.Y.  
EMB. = 0

EXC. = 15476 C.Y.  
EMB. = 0

EXC. = 3507 C.Y.  
EMB. = 0

EXC. = 19,505 C.Y.  
EMB. = 0

EXC. = 31,319 C.Y.  
EMB. = 0

EXC. = 12,740 C.Y.  
EMB. = 0

PROPERTY OF DIVISION OF ENGINEERING

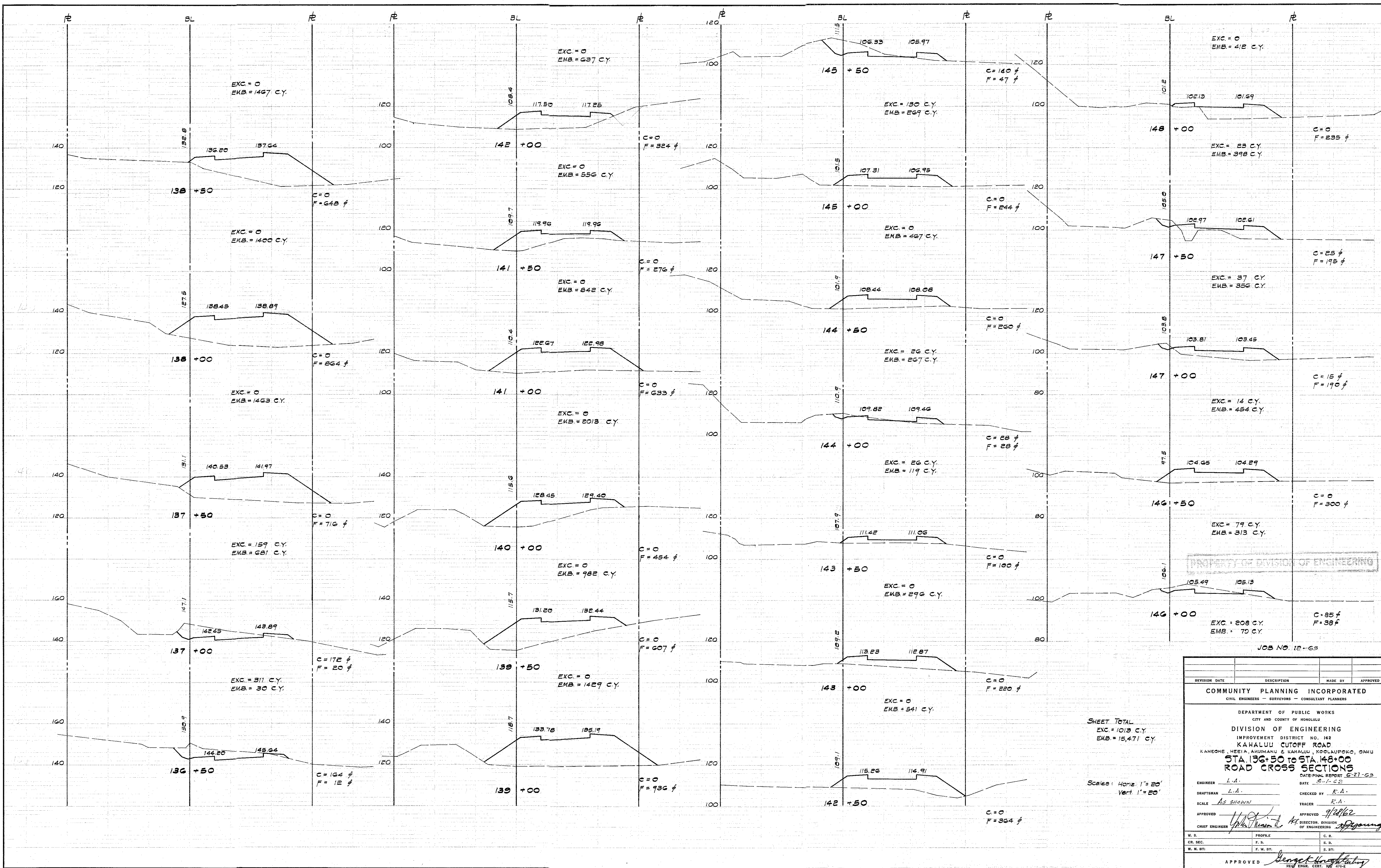
JOB NO. 12-63

| REVISION DATE                                       | DESCRIPTION        | MADE BY                                | APPROVED           |
|-----------------------------------------------------|--------------------|----------------------------------------|--------------------|
| COMMUNITY PLANNING INCORPORATED                     |                    |                                        |                    |
| CIVIL ENGINEERS - SURVEYORS - CONSULTANT PLANNERS   |                    |                                        |                    |
| DEPARTMENT OF PUBLIC WORKS                          |                    |                                        |                    |
| CITY AND COUNTY OF HONOLULU                         |                    |                                        |                    |
| DIVISION OF ENGINEERING                             |                    |                                        |                    |
| IMPROVEMENT DISTRICT NO. 162                        |                    |                                        |                    |
| KAHALUU CUTOFF ROAD                                 |                    |                                        |                    |
| KANEHE, HEEIA, AHUIMANU & KAHALUU, KOOLAUPOKO, OAHU |                    |                                        |                    |
| STA. 131+50 TO STA. 136+00                          |                    |                                        |                    |
| ROAD CROSS SECTIONS                                 |                    |                                        |                    |
| ENGINEER                                            | R.A.               | DATE FINAL REPORT                      | 6-27-62            |
| DRAFTSMAN                                           | R.A.               | CHECKED BY                             | L.A.               |
| SCALE                                               | AS SHOWN           | TRACER                                 | L.A.               |
| APPROVED                                            | <i>[Signature]</i> | APPROVED                               | 9/22/62            |
| CHIEF ENGINEER                                      | <i>[Signature]</i> | ACT. DIRECTOR, DIVISION OF ENGINEERING | <i>[Signature]</i> |
| APPROVED <i>[Signature]</i>                         |                    |                                        |                    |
| W. S.                                               | PROFILE            | C. B.                                  |                    |
| CR. SEC.                                            | F. B.              | S. B.                                  |                    |
| W. M. BY:                                           | F. W. BY:          | S. BY:                                 |                    |
| SHEET 37 OF 62 SHEETS                               |                    |                                        |                    |
| FILE                                                | 12                 | FOLDER                                 | 37                 |

SHEET TOTAL  
EXC. = 90,156 C.Y.  
EMB. = 11 C.Y.

Scales: Horiz. 1"=20'  
Vert. 1"=20'





PROPERTY OF DIVISION OF ENGINEERING

JOB NO. 12-63

| REVISION | DATE | DESCRIPTION | MADE BY | APPROVED |
|----------|------|-------------|---------|----------|
|          |      |             |         |          |

COMMUNITY PLANNING INCORPORATED  
CIVIL ENGINEERS - SURVEYORS - CONSULTANT PLANNERS

DEPARTMENT OF PUBLIC WORKS  
CITY AND COUNTY OF HONOLULU  
DIVISION OF ENGINEERING  
IMPROVEMENT DISTRICT NO. 162  
KAHALU CUTOFF ROAD  
KANEHOE, HEEIA, AHUIMANU & KAHALU, KOOLAUPOKO, OAHU  
STA. 136+50 TO STA. 148+00  
ROAD CROSS SECTIONS

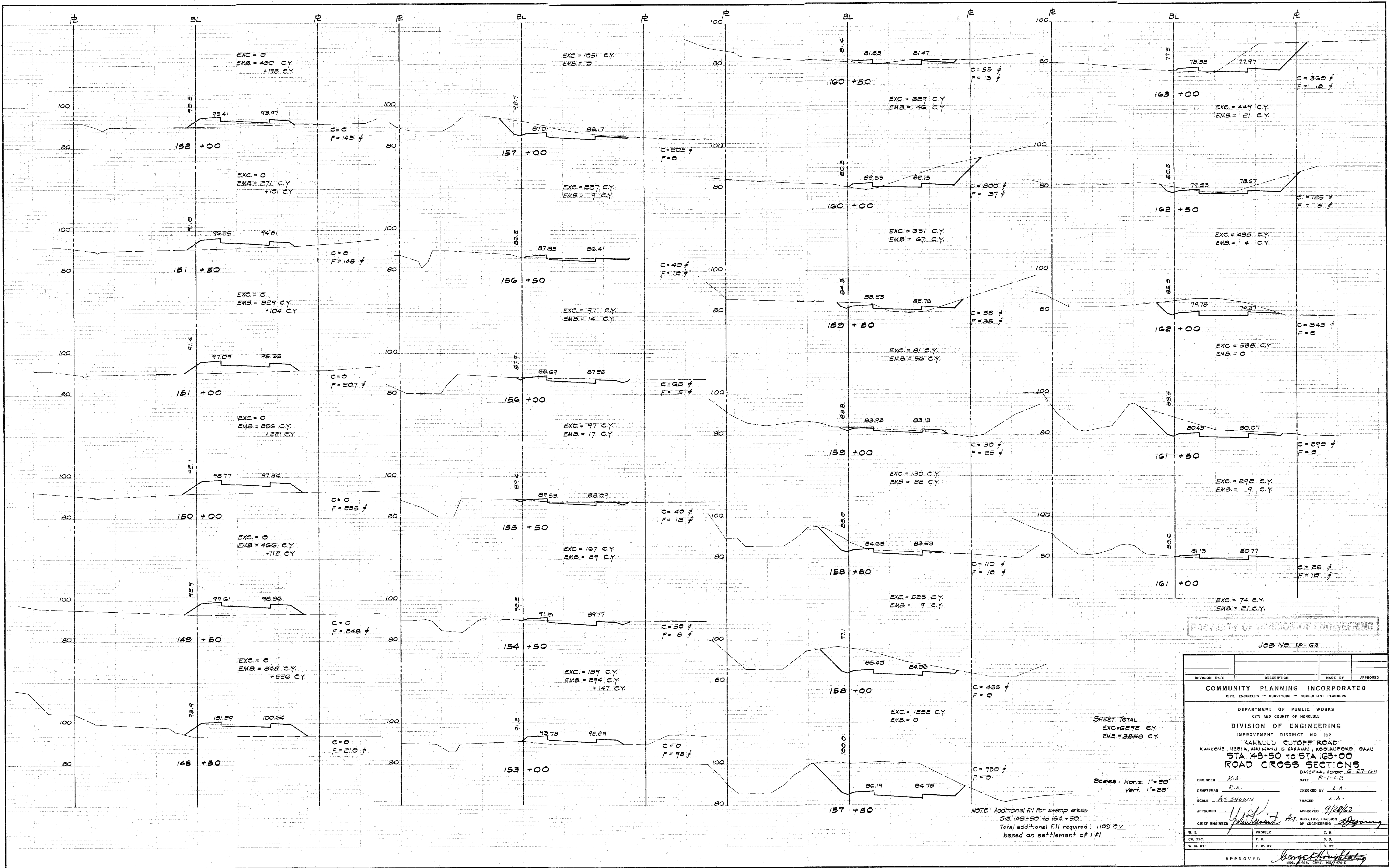
ENGINEER: L.A. DATE: 8-1-62  
DRAFTSMAN: L.A. CHECKED BY: R.A.  
SCALE: AS SHOWN TRACER: R.A.  
APPROVED: [Signature] 9/28/62  
CHIEF ENGINEER: [Signature] AT DIRECTOR, DIVISION OF ENGINEERING

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

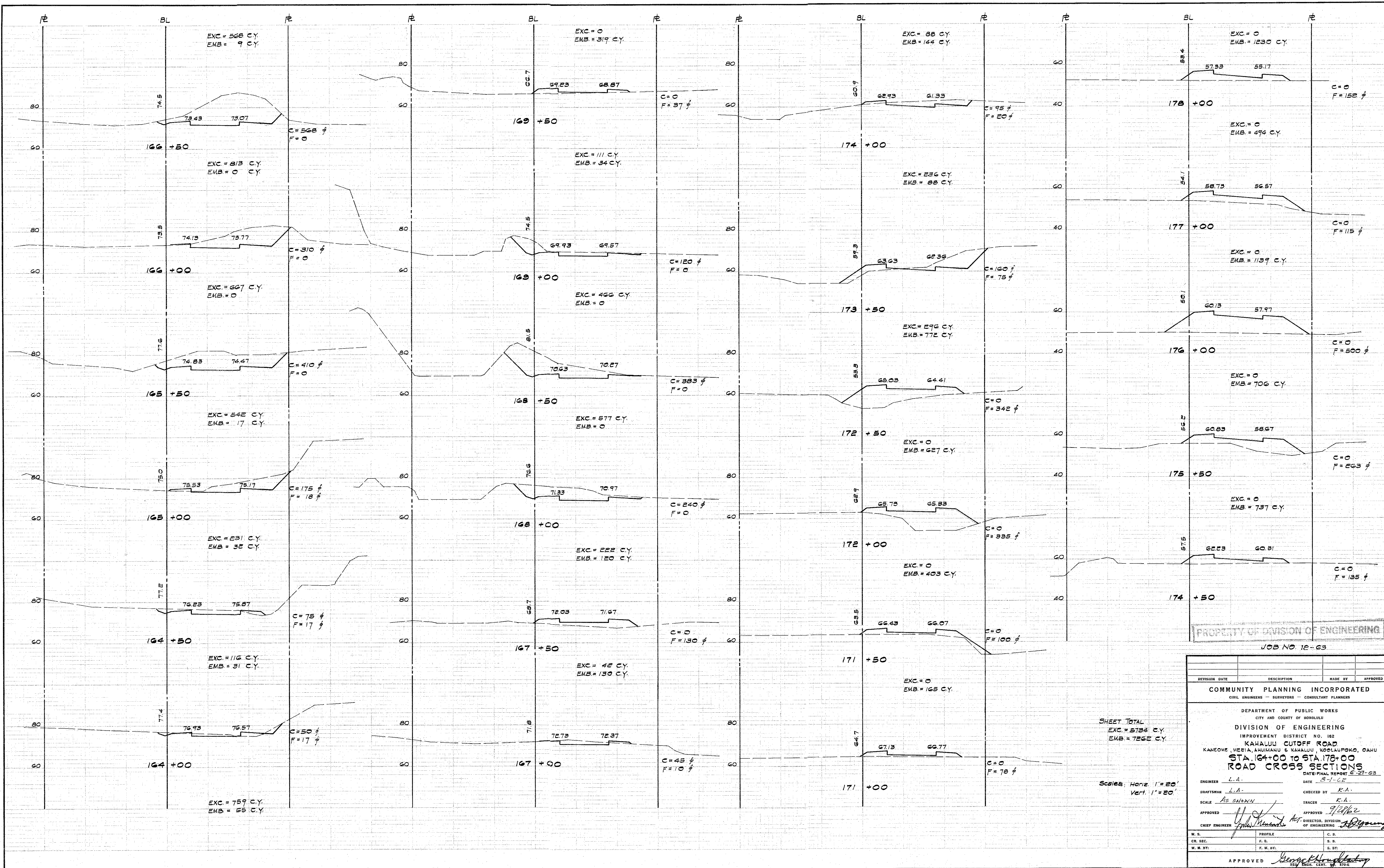
APPROVED: [Signature] REG. ENGR. CERT. NO. 470-E

FILE: 12 FOLDER: 3 NO. 38





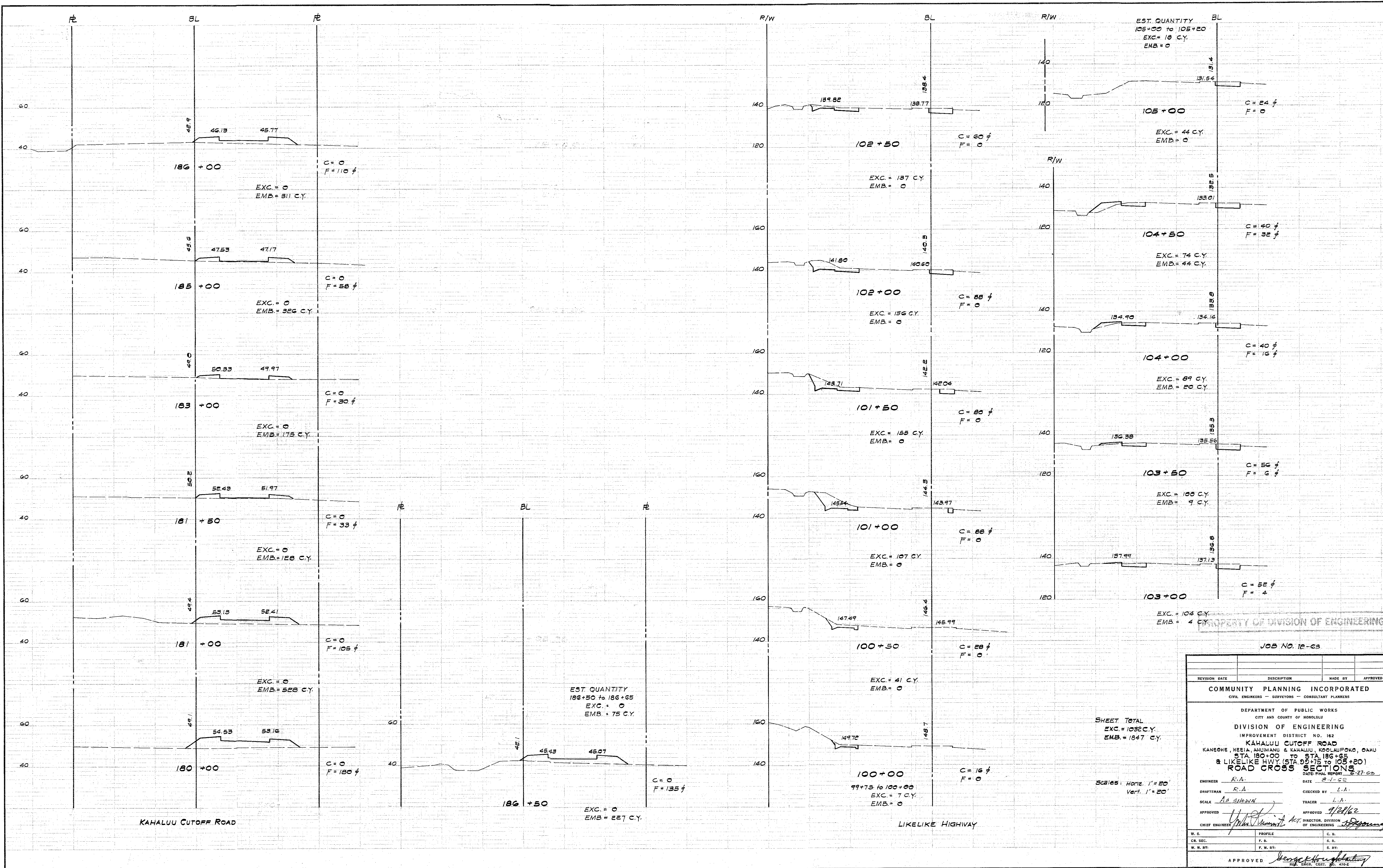




PROPERTY OF DIVISION OF ENGINEERING  
JOB NO 12-63

| REVISION DATE                                                                                                                                                                                                                                                                      | DESCRIPTION                                         | MADE BY                                                 | APPROVED            |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|---------------------------------------------------------|---------------------|
| COMMUNITY PLANNING INCORPORATED<br>CIVIL ENGINEERS - SURVEYORS - CONSULTANT PLANNERS                                                                                                                                                                                               |                                                     |                                                         |                     |
| DEPARTMENT OF PUBLIC WORKS<br>CITY AND COUNTY OF HONOLULU<br>DIVISION OF ENGINEERING<br>IMPROVEMENT DISTRICT NO. 162<br>KAHALU CUTOFF ROAD<br>KANEONE, HEEIA, AHUIMANU & KAHALU, KOOLAPOKO, OAHU<br>STA. 164+00 TO STA. 178+00<br>ROAD CROSS SECTIONS<br>DATE/FINAL REPORT 6-21-63 |                                                     |                                                         |                     |
| ENGINEER<br>L.A.                                                                                                                                                                                                                                                                   | CHECKED BY<br>R.A.                                  | DATE<br>8-1-62                                          | APPROVED<br>9/28/62 |
| DRAFTSMAN<br>L.A.                                                                                                                                                                                                                                                                  | TRACER<br>R.A.                                      | APPROVED<br>George H. Houghton<br>RES. ENG. CERT. 470-E |                     |
| SCALE<br>AS SHOWN                                                                                                                                                                                                                                                                  | SHEET TOTAL<br>EXC. = 5734 C.Y.<br>EMB. = 7862 C.Y. |                                                         |                     |
| Scales: Horiz. 1" = 20'<br>Vert. 1" = 20'                                                                                                                                                                                                                                          |                                                     |                                                         |                     |
| W. S.                                                                                                                                                                                                                                                                              | PROFILE                                             | C. S.                                                   |                     |
| CR. SEC.                                                                                                                                                                                                                                                                           | F. S.                                               | S. S.                                                   |                     |
| W. M. BY:                                                                                                                                                                                                                                                                          | F. W. BY:                                           | S. BY:                                                  |                     |





PROPERTY OF DIVISION OF ENGINEERING

JOB NO. 12-63

| REVISION | DATE | DESCRIPTION | MADE BY | APPROVED |
|----------|------|-------------|---------|----------|
|          |      |             |         |          |

COMMUNITY PLANNING INCORPORATED  
CIVIL ENGINEERS - SURVEYORS - CONSULTANT PLANNERS

DEPARTMENT OF PUBLIC WORKS  
CITY AND COUNTY OF HONOLULU

DIVISION OF ENGINEERING  
IMPROVEMENT DISTRICT NO. 162

KAHALUU CUTOFF ROAD  
STA. 180+00 TO STA. 186+65  
& LIKELIKE HWY. (STA. 99+75 TO 105+20)  
ROAD CROSS SECTIONS

ENGINEER: R.A. DATE: 8-1-62  
DRAFTSMAN: R.A. CHECKED BY: L.A.  
SCALE: AS SHOWN TRACER: L.A.  
APPROVED: [Signature] 9/28/62  
CHIEF ENGINEER: [Signature] ACT. DIRECTOR, DIVISION OF ENGINEERING

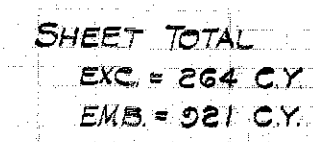
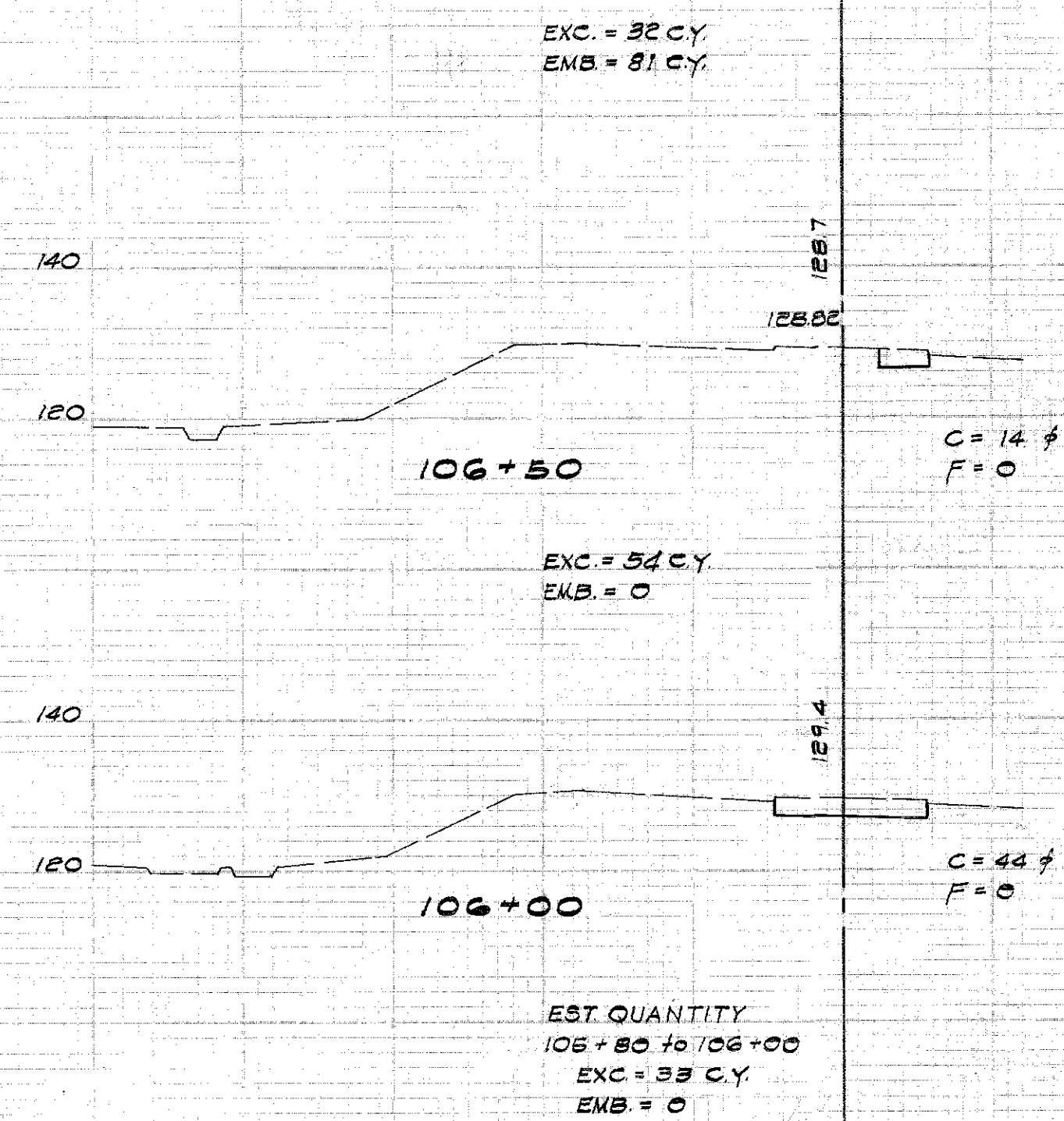
| W. S.     | PROFILE   | C. S.  |
|-----------|-----------|--------|
| CR. SEC.  | F. R.     | S. R.  |
| W. W. BY: | F. W. BY: | S. BY: |

APPROVED: [Signature]  
REG. ENGR. CERT. NO. 4702

| FILE | POCKET | FOLDER | NO. |
|------|--------|--------|-----|
| 12   | 3      | 3      | 41  |

SHEET 41 OF 62 SHEETS





## EARTHWORK SUMMARY

# ROADWAY

| SHEET                       | EXCAVATION   | EMBANKMENT   |
|-----------------------------|--------------|--------------|
| 27                          | 7421 C.Y.    | 26,317 C.Y.  |
| 28                          | 53,285       | 34,268       |
| 29                          | 5048         | 40,845       |
| 30                          | 2004         | 62,795       |
| 31                          | 3000         | 110,129      |
| 32                          | 73,260       | 44,603       |
| 33                          | 181,122      | 23,336       |
| 34                          | 4267         | 139,078      |
| 35                          | 30,945       | 50,815       |
| 36                          | 281,474      | 0            |
| 37                          | 50,156       | 11           |
| 38                          | 1013         | 15,471       |
| 39                          | 6292         | 4067         |
| 40                          | 5734         | 7262         |
| 41                          | 1032         | 1847         |
| 42                          | 264          | 921          |
| TOTAL ROADWAY<br>QUANTITIES | 751,017 C.Y. | 563,565 C.Y. |

## DRAINAGE CHANNEL

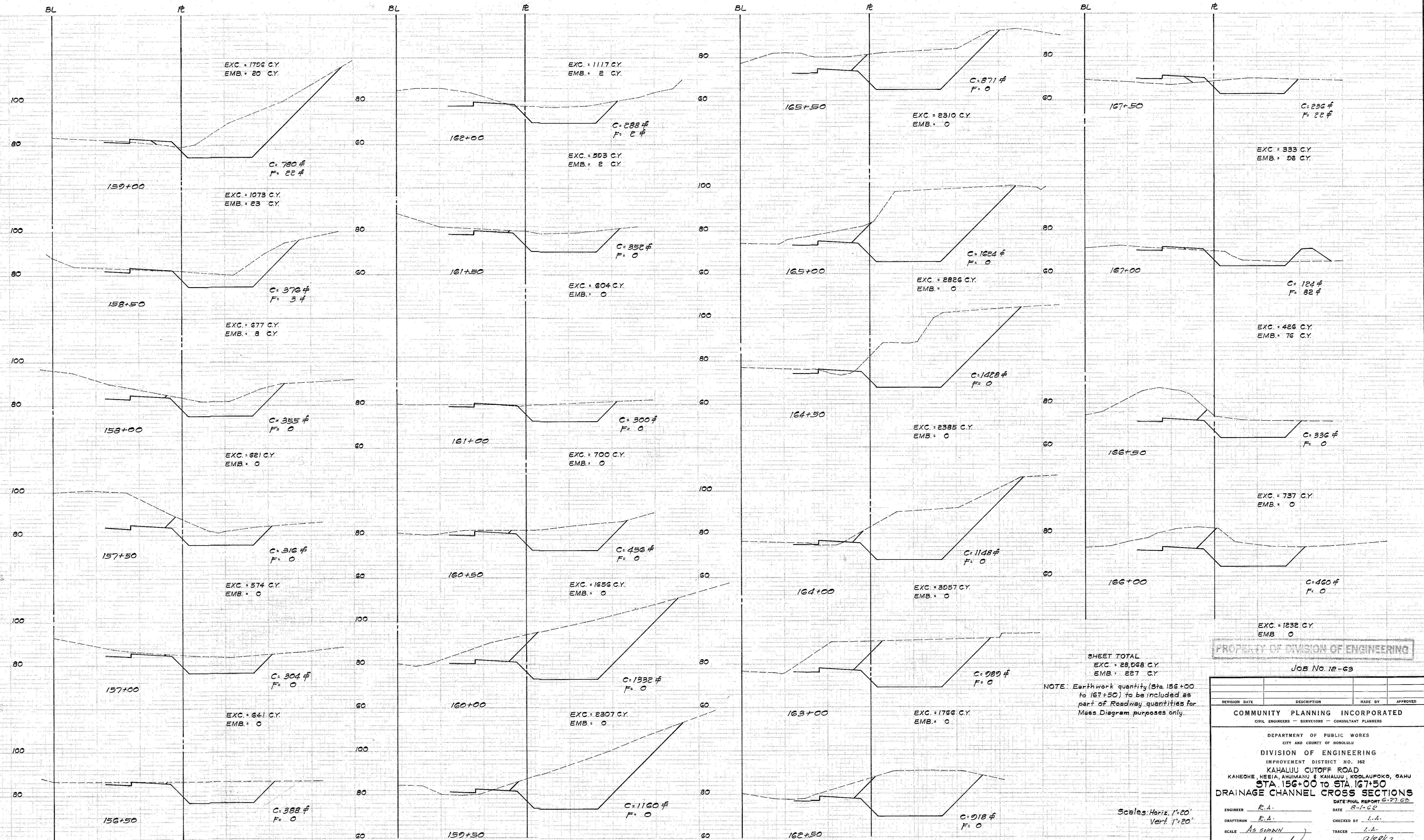
|                                                       | SHEET        | EXCAVATION   | EMBANKMENT  |
|-------------------------------------------------------|--------------|--------------|-------------|
|                                                       | 43           | 28, 968 C.Y. | 227 C.Y.    |
|                                                       | 44           | 10, 223      | 781         |
| Additional/ exc. for 3'-0" thick crushed rock blanket |              | 4, 582       |             |
| TOTAL CHANNEL QUANTITIES -                            | 43, 773 C.Y. |              | 1, 008 C.Y. |

PROPERTY OF DIVISION OF ENGINEERING

JOB NO. 12-63

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |             |         |          |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|---------|----------|
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |             |         |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |             |         |          |
| REVISION DATE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | DESCRIPTION | MADE BY | APPROVED |
| <p align="center"><b>COMMUNITY PLANNING INCORPORATED</b></p> <p align="center">CIVIL ENGINEERS — SURVEYORS — CONSULTANT PLANNERS</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |             |         |          |
| <p align="center"><b>DEPARTMENT OF PUBLIC WORKS</b></p> <p align="center">CITY AND COUNTY OF HONOLULU</p> <p align="center"><b>DIVISION OF ENGINEERING</b></p> <p align="center">IMPROVEMENT DISTRICT NO. 162</p> <p align="center"><b>KAHALU CUTOFF ROAD</b></p> <p align="center">KANEONE, HESIA, AMUIMANU &amp; KAHALU, KOOLAUPOKO, OAHU</p> <p align="center"><b>LIKELIKE HWY. (STA. 105+80 TO 109+65)</b></p> <p align="center"><b>ROAD CROSS SECTIONS</b></p> <p align="right">DATE: FINAL REPORT <u>6-27-62</u></p> <p align="right">DATE: <u>8-1-62</u></p> <p>ENGINEER <u>L.A.</u></p> <p>DRAFTSMAN <u>L.A.</u></p> <p>SCALE <u>AS SHOWN</u></p> <p>APPROVED <u>[Signature]</u></p> <p>CHIEF ENGINEER <u>[Signature]</u></p> <p>DIRECTOR, DIVISION OF ENGINEERING <u>[Signature]</u></p> <p>W. S. _____ P. O. _____ C. B. _____</p> <p>CR. SEC. _____ F. B. _____ S. B. _____</p> <p>W. M. BY: _____ F. W. BY: _____ S. BY: _____</p> <p align="center">APPROVED <u>[Signature]</u></p> <p align="center">DEC. ENGR. CERT. (NO. 4704)</p> |             |         |          |





EST. QUANTITY  
Sta. 156+00 to 156+50  
EXC. = 637 C.Y.  
EMB. = 0

SHEET TOTAL  
EXC. = 28,048 C.Y.  
EMB. = 227 C.Y.

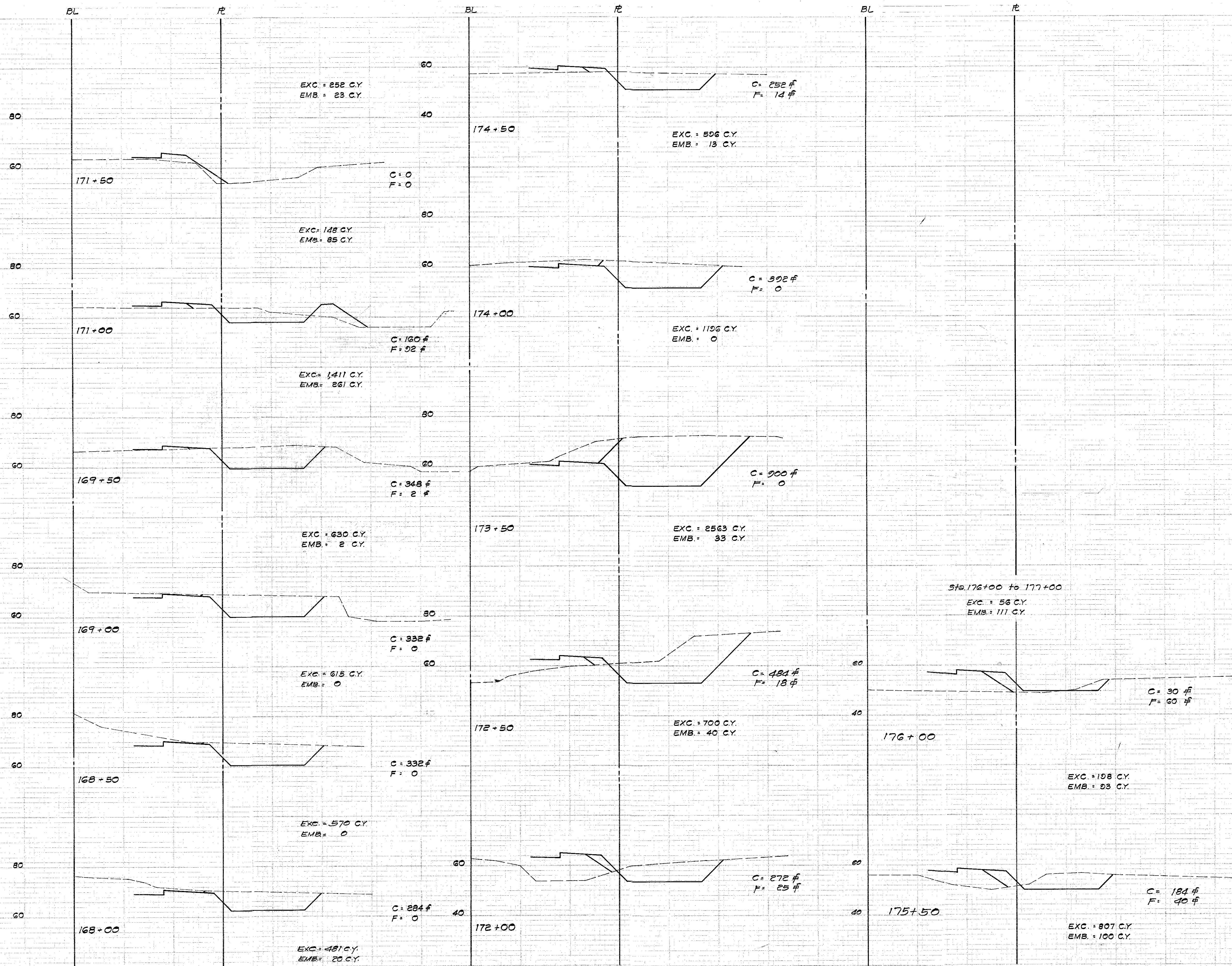
NOTE: Earthwork quantity (Sta. 156+00 to 167+50) to be included as part of Roadway quantities for Mass Diagram purposes only.

Scales: Horiz. 1"=20'  
Vert. 1"=20'

PROPERTY OF DIVISION OF ENGINEERING  
JOB NO. 12-63

|                                                                                                                                                                                                        |                    |                |                    |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|----------------|--------------------|
| REVISION DATE                                                                                                                                                                                          | DESCRIPTION        | MADE BY        | APPROVED           |
| COMMUNITY PLANNING INCORPORATED<br>CIVIL ENGINEERS - SURVEYORS - CONSULTANT PLANNERS                                                                                                                   |                    |                |                    |
| DEPARTMENT OF PUBLIC WORKS<br>CITY AND COUNTY OF HONOLULU                                                                                                                                              |                    |                |                    |
| DIVISION OF ENGINEERING<br>IMPROVEMENT DISTRICT NO. 162<br>KAHALUU CUTOFF ROAD<br>KANEHOLE, KEEA, AHUIMANU & KAHALUU, KOOLAPOKO, OAHU<br>STA. 156+00 TO STA. 167+50<br>DRAINAGE CHANNEL CROSS SECTIONS |                    |                |                    |
| ENGINEER                                                                                                                                                                                               | R.A.               | DATE           | 8-1-62             |
| DRAFTSMAN                                                                                                                                                                                              | R.A.               | CHECKED BY     | L.A.               |
| SCALE                                                                                                                                                                                                  | AS SHOWN           | TRACER         | L.A.               |
| APPROVED                                                                                                                                                                                               | <i>[Signature]</i> | APPROVED       | <i>[Signature]</i> |
| CHIEF ENGINEER                                                                                                                                                                                         | <i>[Signature]</i> | CHIEF ENGINEER | <i>[Signature]</i> |
| W. S.                                                                                                                                                                                                  | PROFILE            | C. B.          |                    |
| CR. SEC.                                                                                                                                                                                               | F. B.              | S. B.          |                    |
| W. M. BY:                                                                                                                                                                                              | F. W. BY:          | S. BY:         |                    |
| APPROVED <i>[Signature]</i>                                                                                                                                                                            |                    |                |                    |





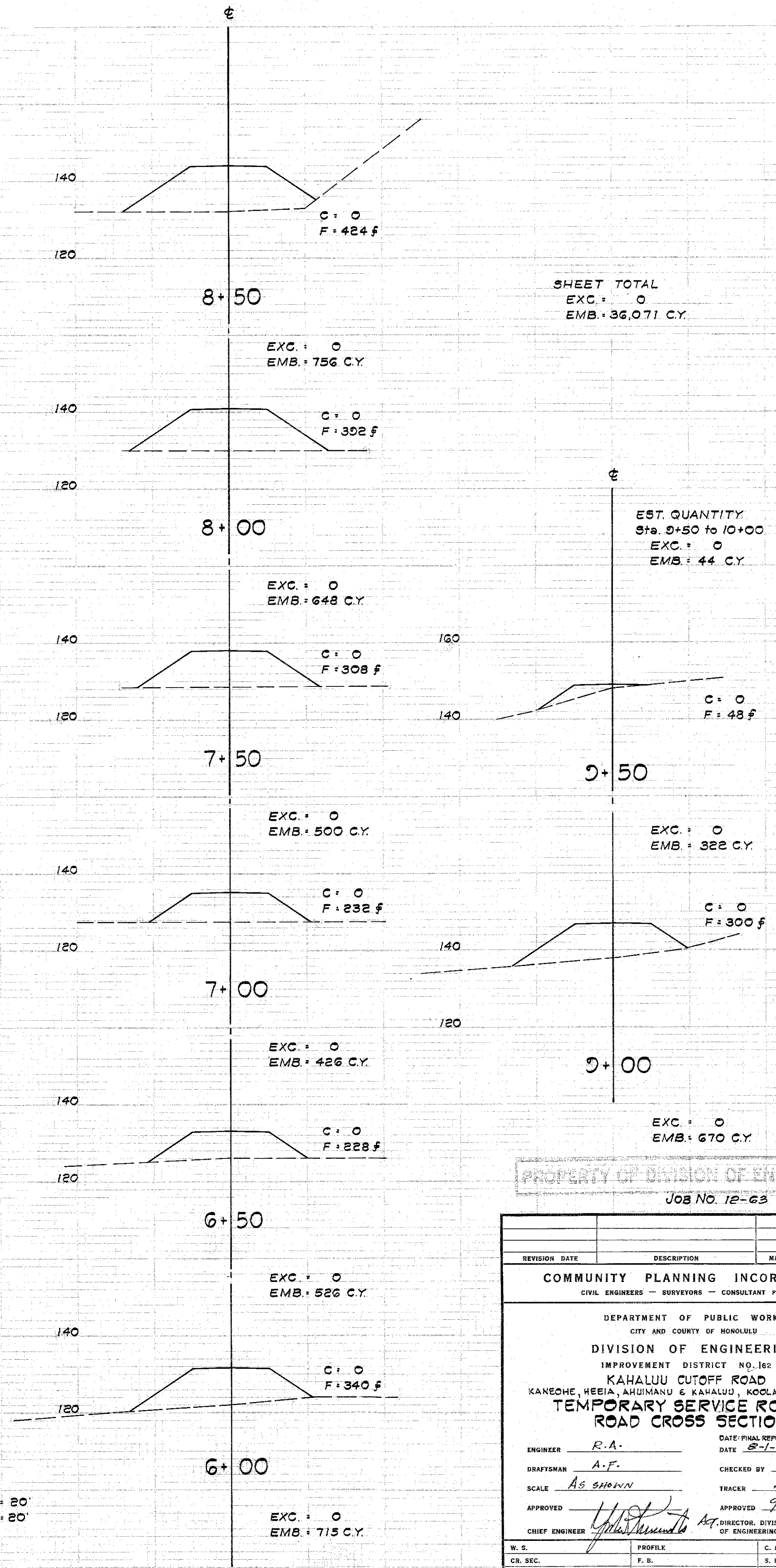
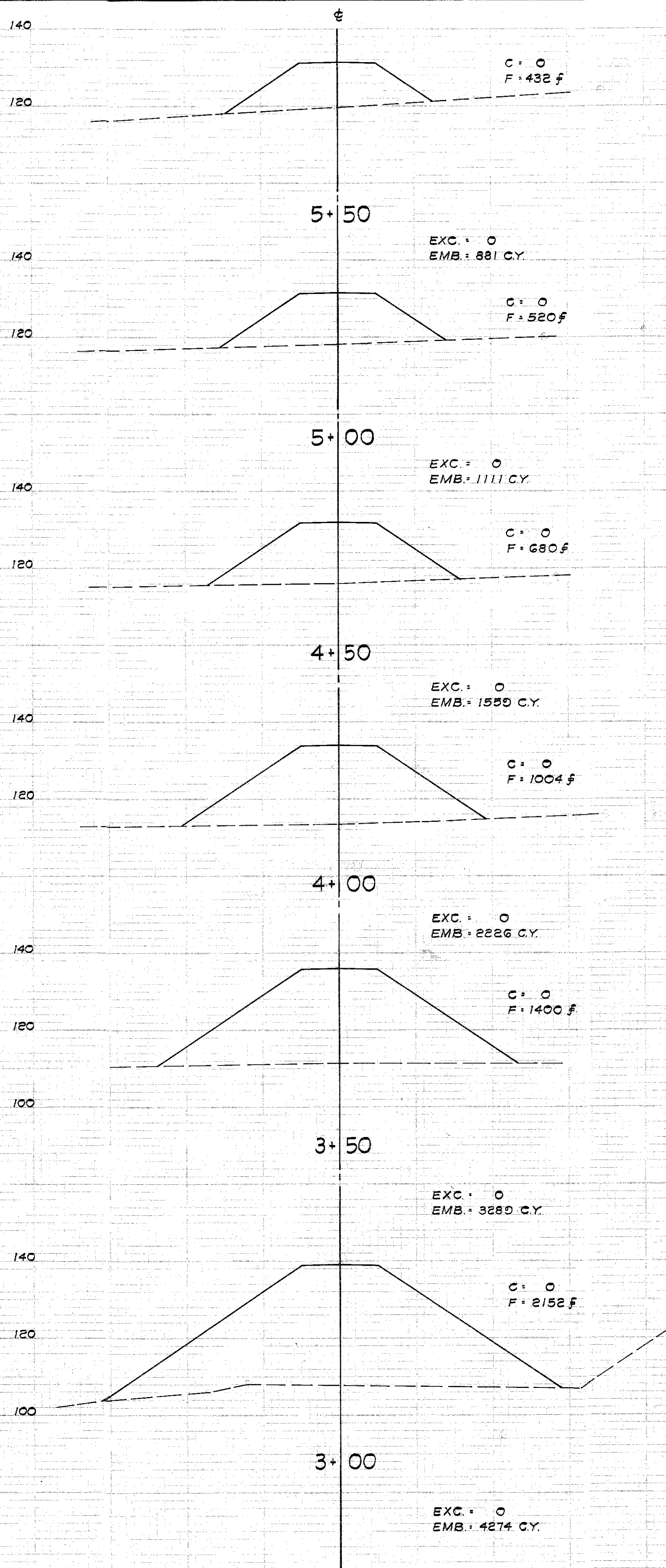
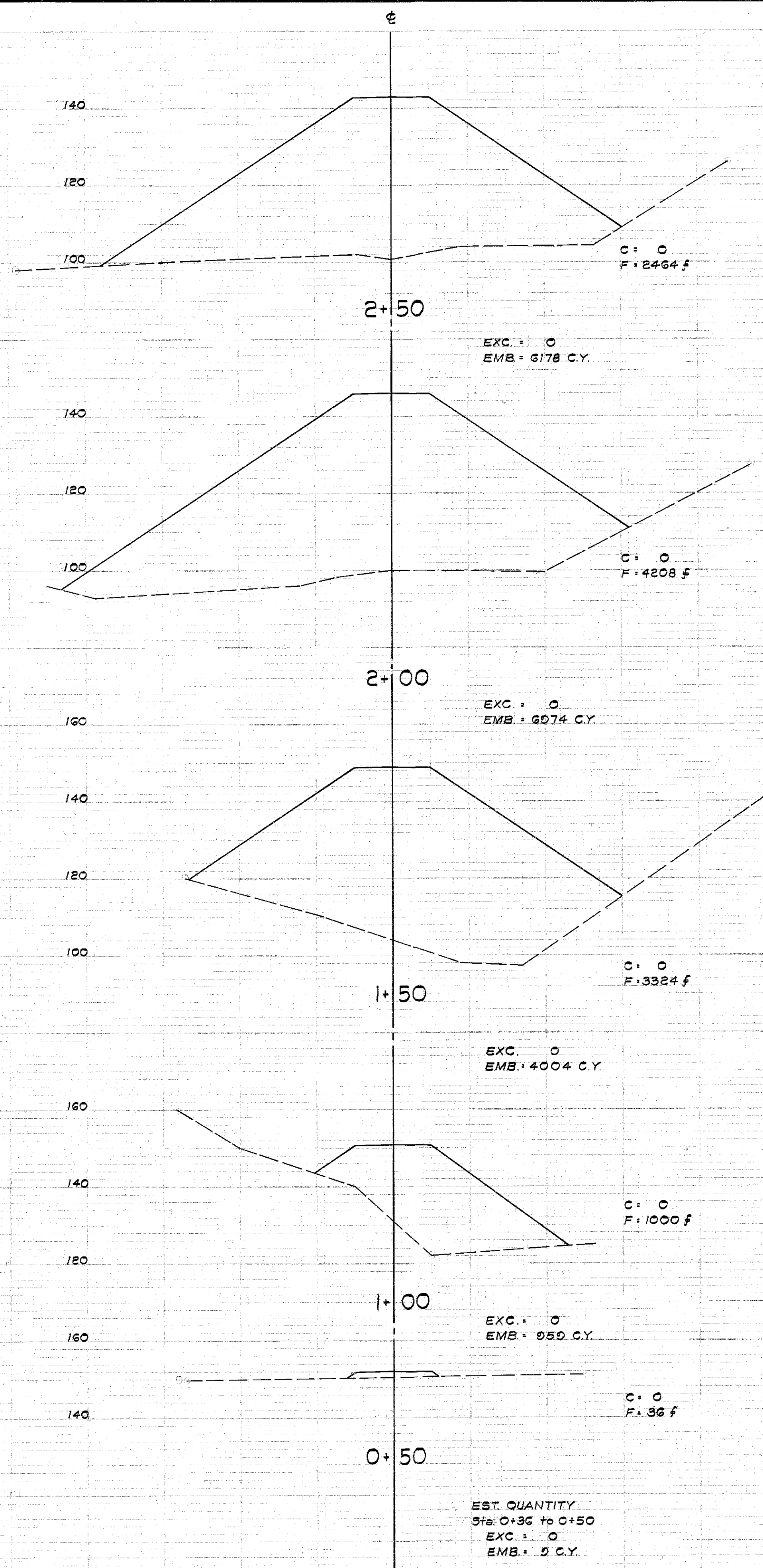
SHEET TOTAL  
EXC = 10,223 C.Y.  
EMB = 781 C.Y.

NOTE: Earthwork quantity (Sta. 167+50 to 177+00)  
to be included as part of Roadway quantities  
for Mass Diagram purposes only.

Scales: Horiz. 1"=20'  
Vert. 1"=20'

|                                                                                                                                                                                                                                                                                                    |                            |                            |                            |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|----------------------------|----------------------------|
| PROPERTY OF DIVISION OF ENGINEERING                                                                                                                                                                                                                                                                |                            |                            |                            |
| JOB NO. 12-63                                                                                                                                                                                                                                                                                      |                            |                            |                            |
| REVISION DATE                                                                                                                                                                                                                                                                                      | DESCRIPTION                | MADE BY                    | APPROVED                   |
| COMMUNITY PLANNING INCORPORATED<br>CIVIL ENGINEERS - SURVEYORS - CONSULTANT PLANNERS                                                                                                                                                                                                               |                            |                            |                            |
| DEPARTMENT OF PUBLIC WORKS<br>CITY AND COUNTY OF HONOLULU<br>DIVISION OF ENGINEERING<br>IMPROVEMENT DISTRICT NO. 162<br>KAHALUU CUTOFF ROAD<br>KANEIHE, KEEIA, AHUIMANU & KAHALUU, KOOLAUPOKO, OAHU<br>STA. 168+00 TO STA. 177+00<br>DRAINAGE CHANNEL CROSS SECTIONS<br>DATE: FINAL REPORT 5-27-63 |                            |                            |                            |
| ENGINEER L.A.                                                                                                                                                                                                                                                                                      | DATE 8-1-62                | CHECKED BY R.A.            | TRACER R.A.                |
| DRAFTSMAN L.A.                                                                                                                                                                                                                                                                                     | SCALE AS SHOWN             | APPROVED 9/28/62           | APPROVED 9/28/62           |
| CHIEF ENGINEER [Signature]                                                                                                                                                                                                                                                                         | CHIEF ENGINEER [Signature] | CHIEF ENGINEER [Signature] | CHIEF ENGINEER [Signature] |
| W.S.                                                                                                                                                                                                                                                                                               | PROFILE                    | C.B.                       |                            |
| CR. SEC.                                                                                                                                                                                                                                                                                           | F.B.                       | S.B.                       |                            |
| W.M. BY:                                                                                                                                                                                                                                                                                           | F.W. BY:                   | S. BY:                     |                            |
| APPROVED [Signature]<br>[Signature]<br>[Signature]                                                                                                                                                                                                                                                 |                            |                            |                            |
| SHEET 44 OF 62 SHEETS                                                                                                                                                                                                                                                                              |                            |                            |                            |





SHEET TOTAL  
EXC.: 0  
EMB.: 36,071 C.Y.

EST. QUANTITY  
Sta. 0+50 to 10+00  
EXC.: 0  
EMB.: 44 C.Y.

Scales: Horiz. 1" = 20'  
Vert. 1" = 20'

PROPERTY OF DIVISION OF ENGINEERING  
JOB NO. 12-63

|                                                                                                                                     |             |                   |          |
|-------------------------------------------------------------------------------------------------------------------------------------|-------------|-------------------|----------|
| REVISION DATE                                                                                                                       | DESCRIPTION | MADE BY           | APPROVED |
| COMMUNITY PLANNING INCORPORATED<br>CIVIL ENGINEERS - SURVEYORS - CONSULTANT PLANNERS                                                |             |                   |          |
| DEPARTMENT OF PUBLIC WORKS<br>CITY AND COUNTY OF HONOLULU                                                                           |             |                   |          |
| DIVISION OF ENGINEERING<br>IMPROVEMENT DISTRICT NO. 162<br>KAHALU CUTOFF ROAD<br>KANEHE, HEEIA, AHUIMANU & KAHALU, KOOLAUPOKO, OAHU |             |                   |          |
| TEMPORARY SERVICE ROAD<br>ROAD CROSS SECTIONS                                                                                       |             |                   |          |
| ENGINEER                                                                                                                            | R.A.        | DATE/FINAL REPORT | 6-27-63  |
| DRAFTSMAN                                                                                                                           | A.F.        | DATE              | 8-1-63   |
| SCALE                                                                                                                               | AS SHOWN    | CHECKED BY        | L.A.     |
| APPROVED                                                                                                                            | [Signature] | TRACER            | A.F.     |
| CHIEF ENGINEER                                                                                                                      | [Signature] | APPROVED          | 9/22/62  |
| W.S.                                                                                                                                | PROF.       | C.B.              |          |
| CR. SEC.                                                                                                                            | F.B.        | S.B.              |          |
| W.M. BY:                                                                                                                            | F.W. BY:    | S. BY:            |          |
| APPROVED [Signature]                                                                                                                |             |                   |          |
| FILE                                                                                                                                | POCKET      | FOLDER            | NO.      |
| 12                                                                                                                                  | 0           | 3                 | 45       |