PLAN
NOTE BOOK
NO.
SURVEYED
PLOTTED
ALIGNMENT CHECKED
RT. OF WAY CHECKED
BY
DATE

PROFILE
NOTE BOOK
NO.
SURVEYED
PLOTTED
GRADES CHECKED
B. M̲S̲. NOTED
STRUCTURE NOTAT'NS CH'KD
BY
DATE

NOTE!
Resurface existing Road where damaged by the installation of Culverts ect., with Asphalt Conc. Curbs and Sidewalks damaged shall be replaced with Class "A-1" Conc.

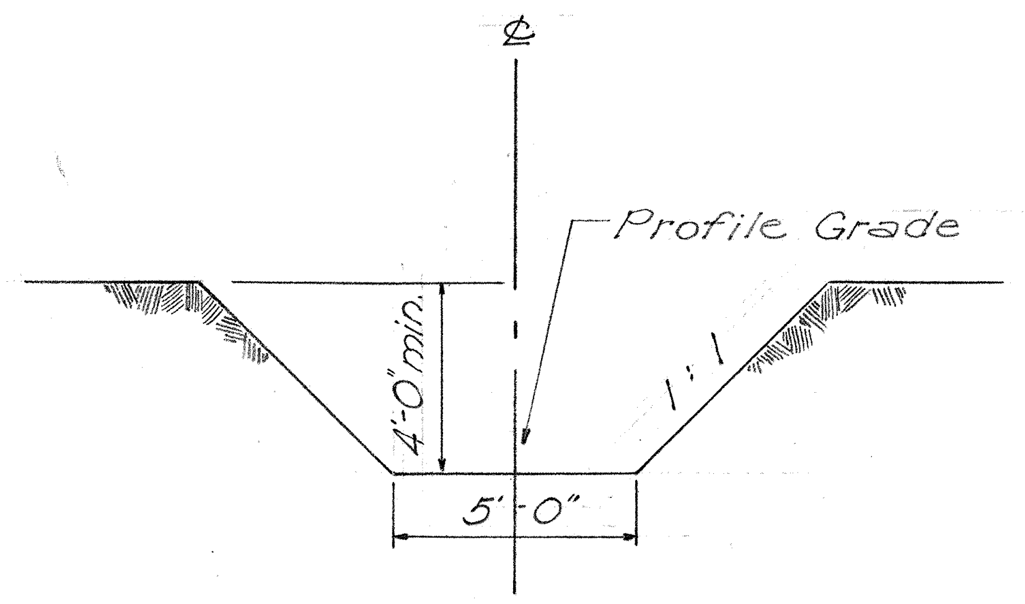
Sta. 26+05.62
BERM
FISHPOND
25
147°-00'
Low ground under water during rains.
℄ CURVE DATA
Δ = 40°-00'
R = 137.37'
T = 50.00'
Lc = 95.90'
True North
Scale: 1" = 100'
Approximate edge of pond during heavy rains.
END OF DITCH
Sta. 21+59.72
EQUATION -35.96
END OF ROAD
Sta. 20+09.72
25'
20'
Exist. Fence
Install 4-36" Cir. Conc. Culverts 56' long - 2 CHW
20
187°-00'
Sta. 16+92.78
Sta. 16+52.82
WOODLAND
MARKET
EL RANCHO
Const. lined ditch 146' long ± - See Details.
Existing 36" Conc. Culv't. Conc. HW
Exist. 2x4 Box Culvt.
Inv. = 4.02'
Inv. 3.17
Exist. Open Ditch
Inv. 6.52'
LUNALILO HOME ROAD
CARNATION GARDEN
CURVE DATA ℄ DITCH
Δ = 38°-30'
R = 1964.86
T = 686.16
Lc = 1320.29
Remove portion of existing CRM Paving as necessary for Const. of new Ditch.
Existing 24" Conc. Pipe Culvert
Construct CRM Paved Inlet
Existing 12" Conc. Culv't.
Existing 24" Conc. Culv't.
115
Existing 4x8' Conc. Box Culv't.
To Hanauma Bay
℄ Existing Ditch
Inv. = ±49.9
PC Sta. 1+40
Sta. 0+00
Sta. 0+00 is offset 55' to the left of Sta. 116+93.97
Install 2-48" Cir. Conc. Pipe Culv'ts. 24' long.
110
5
Coral Road
Existing CRM Paving.
Construct CRM Paved Inlets
℄ Existing Ditch
Existing R/W
NOTE!
Provide CRM Paved Inlets as directed by the Resident Engr.
10
105
℄ New Ditch
New R/W
15
PT Sta. 14+60.29
Sta. 13+50
CONSTRUCT PAVED DITCH
Remove Existing 18" Cir. Conc. Culvert and Install 24" Cir. Conc. Pipe Culvert - 72' long.
Sta. 17+17.12
Inv. = 2.0'
Sta. 17+93.12
R=25'
100
Sta. 17+93 ± to Sta. 20+10 ± Construct Dirt Road with easy riding connection to Existing Pavt.
Sta. 19+50
CONSTRUCT PAVED DITCH
-131°-45'
45'
35'
95
90
To Honolulu
EP
FH
MH
WV

See:
Sheets 5451.8, .9, .10 for cross sections
Sheet 5451.7 for typical sections & pipe culv't details

PLATE 1—PLAN—PROFILE O. P. R. & R. E. STANDARD
KEUFFEL & ESSER CO. NEW YORK

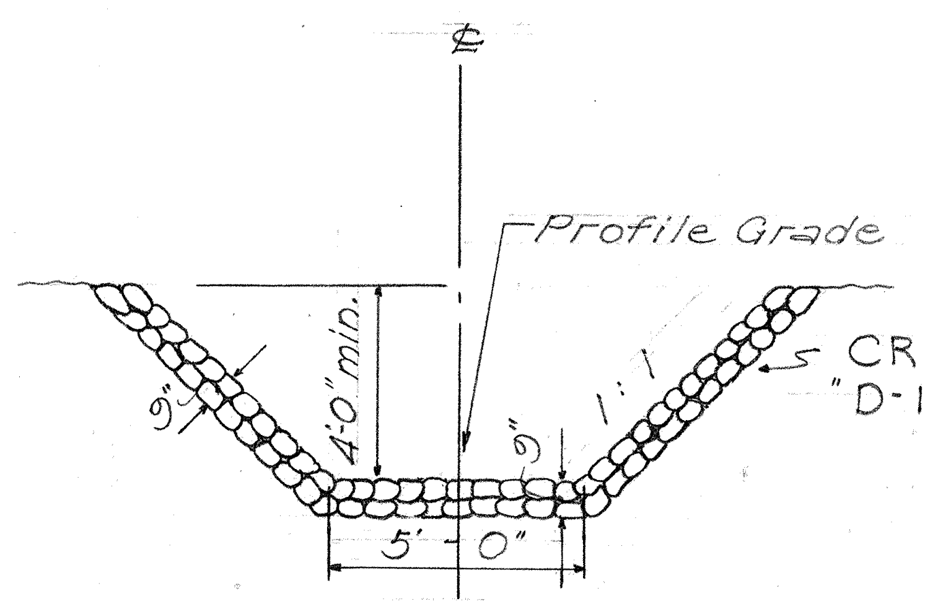
K & E CO. No. 345-1 MADE IN U. S. A. 37006

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS



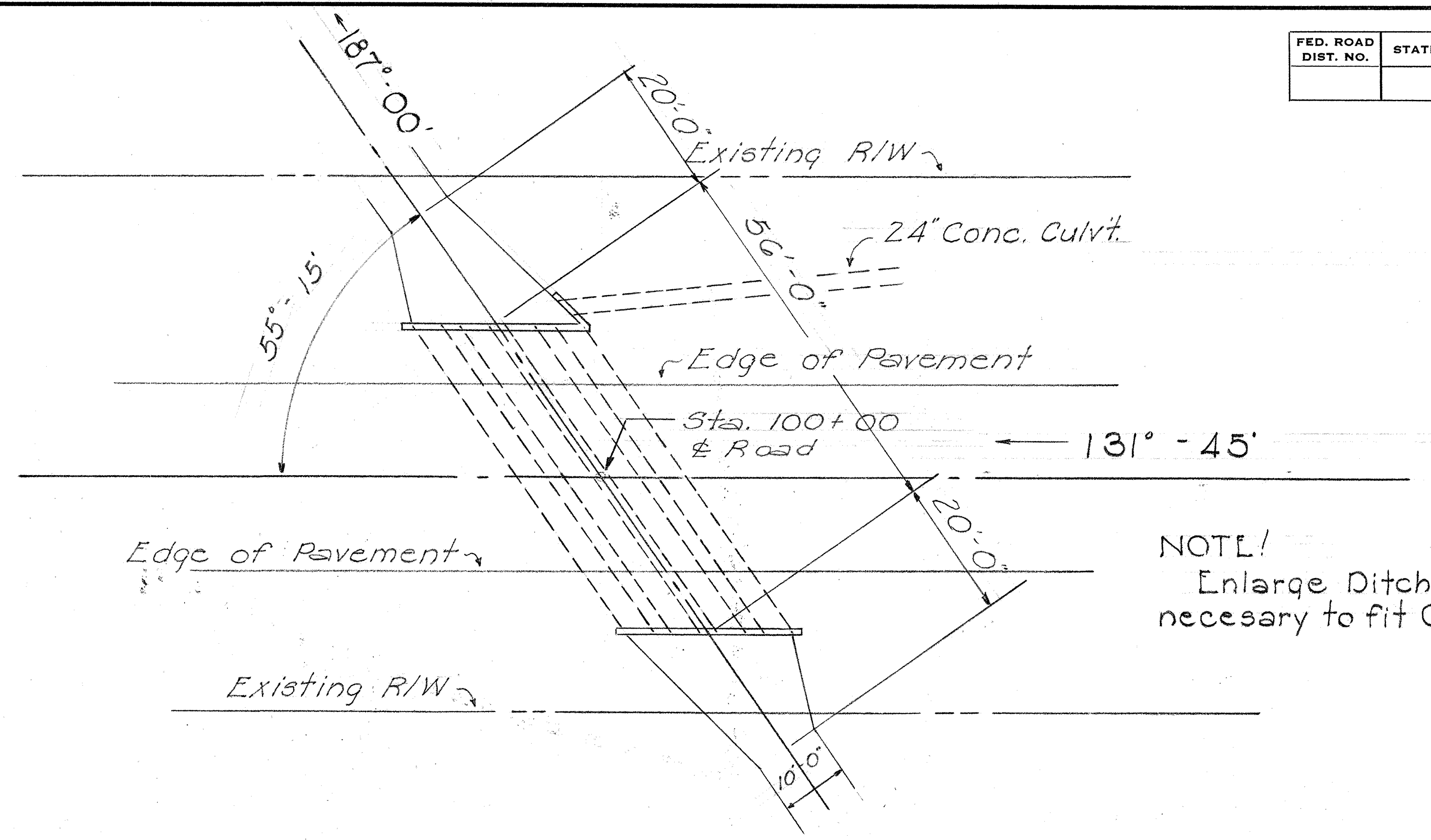
TYPICAL SECTION

Sta. 0+00 to Sta. $11+93^{.27}$ ±
Scale: 1/4" = 1'-0"



DETAIL OF PAVED DITCH

Scale: 1/4" = 1'-0"



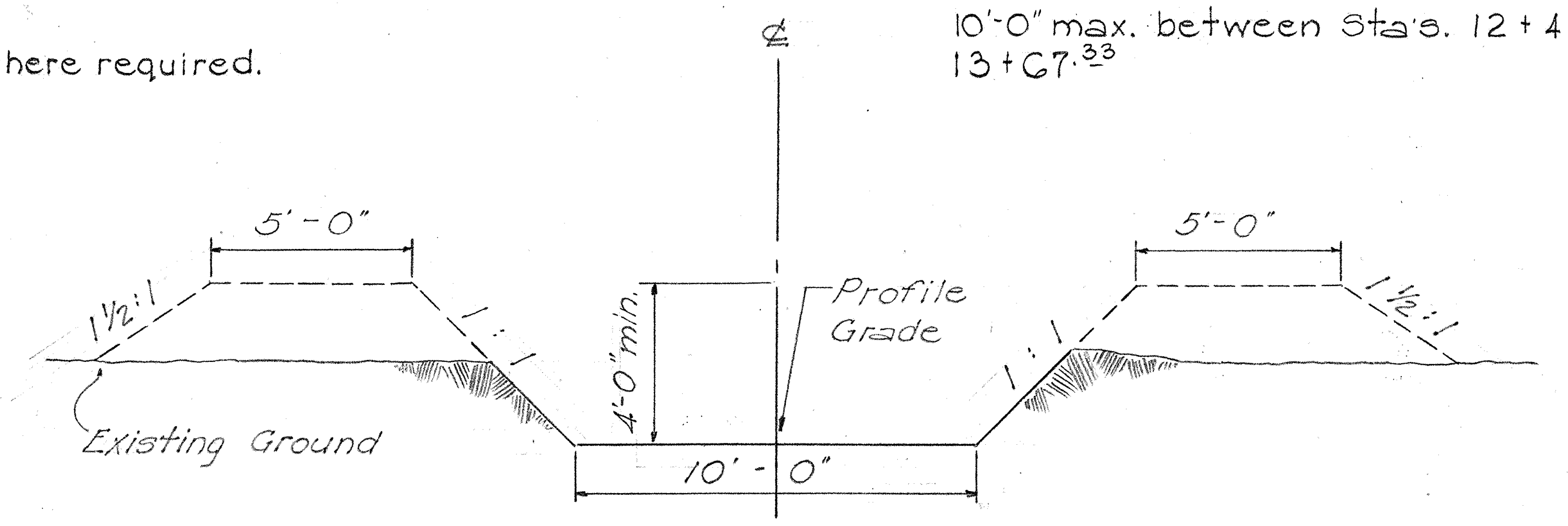
NOTE!
Enlarge Ditch to width necesary to fit Culverts.

LAYOUT PLAN

36" Concrete Pipe Culverts
Scale: 1" = 20'-0"

NOTE! Berm where required.

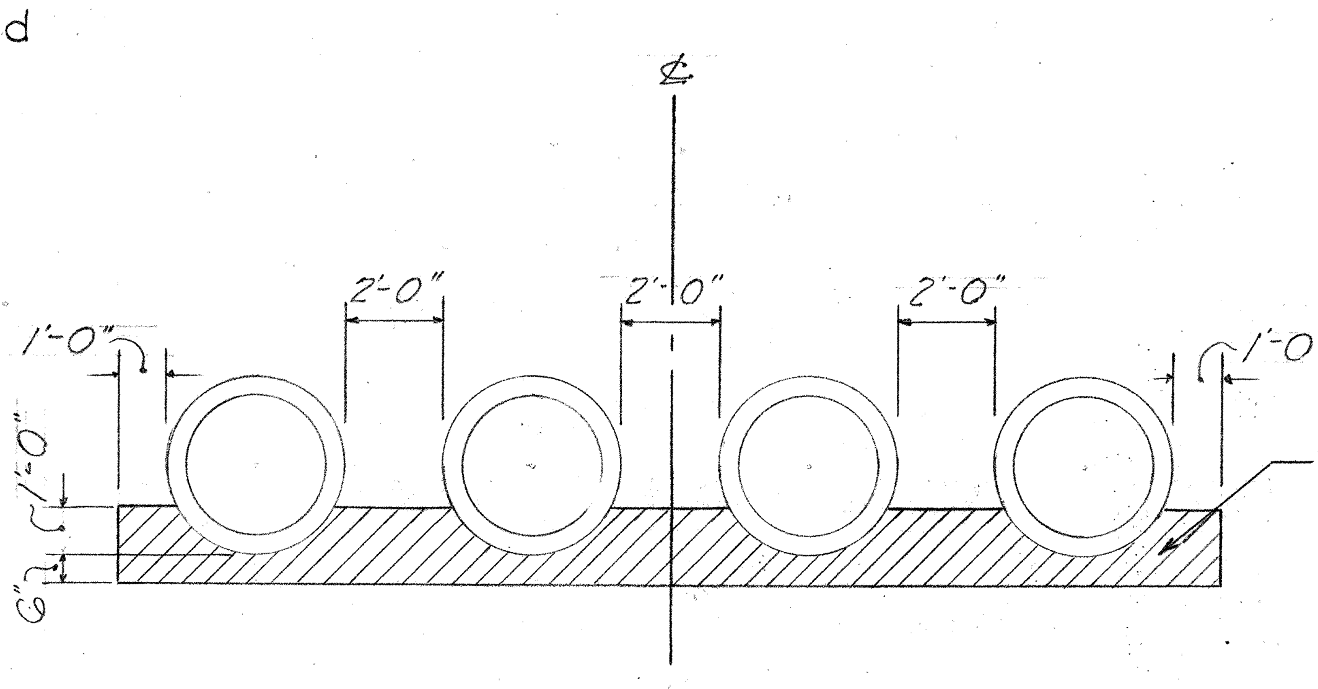
NOTE!
Bottom of Ditch varies from 5'-0" min. to 10'-0" max. between Sta's. $12+43^{.27}$ ± and $13+67^{.33}$



NOTE!
CRM Paving required for this section shall be as shown in Detail of CRM Paving except for the bottom width which will be as shown in the Typical Section.

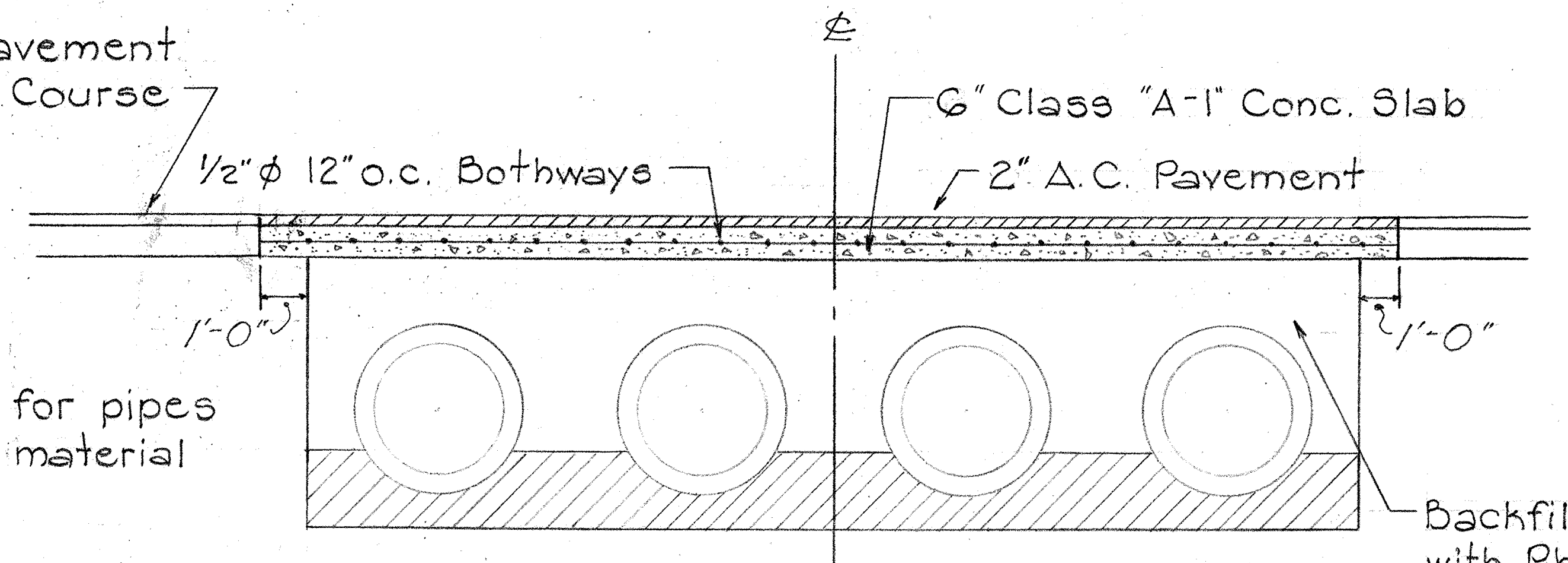
TYPICAL SECTION

Sta. $12+43^{.27}$ ± to Sta. $17+25^{.64}$ ±
Sta. $17+81^{.64}$ ± to Sta. $20+09^{.72}$ ±
Scale: 1/4" = 1'-0"


℄
2'-0"
2'-0"
2'-0"
1'-0"
1'-0"
1'-0"
6"
Construct Cradle for pipes with select rocky material or sand.

DETAIL OF CRADLE FOR CULVERTS

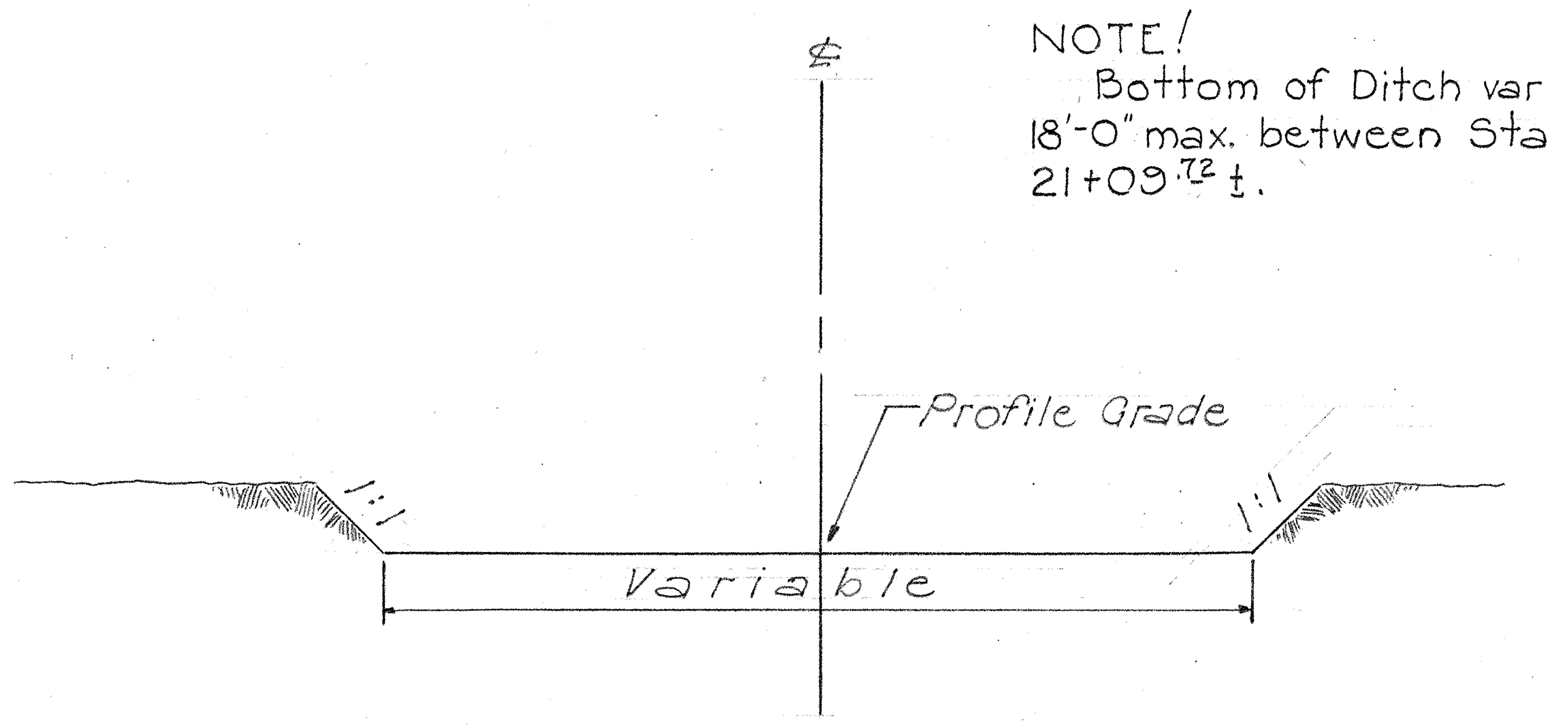
Scale: 1/4" = 1'-0"


Original Pavement and Base Course
℄
6" Class "A-1" Conc. Slab
1/2"ϕ 12" o.c. Bothways
2" A.C. Pavement
1'-0"
1'-0"
Backfill in accordance with Phamphlet E-1 of the Specifications.

DETAIL OF TRENCH BACKFILL AND PAVEMENT REPAIR

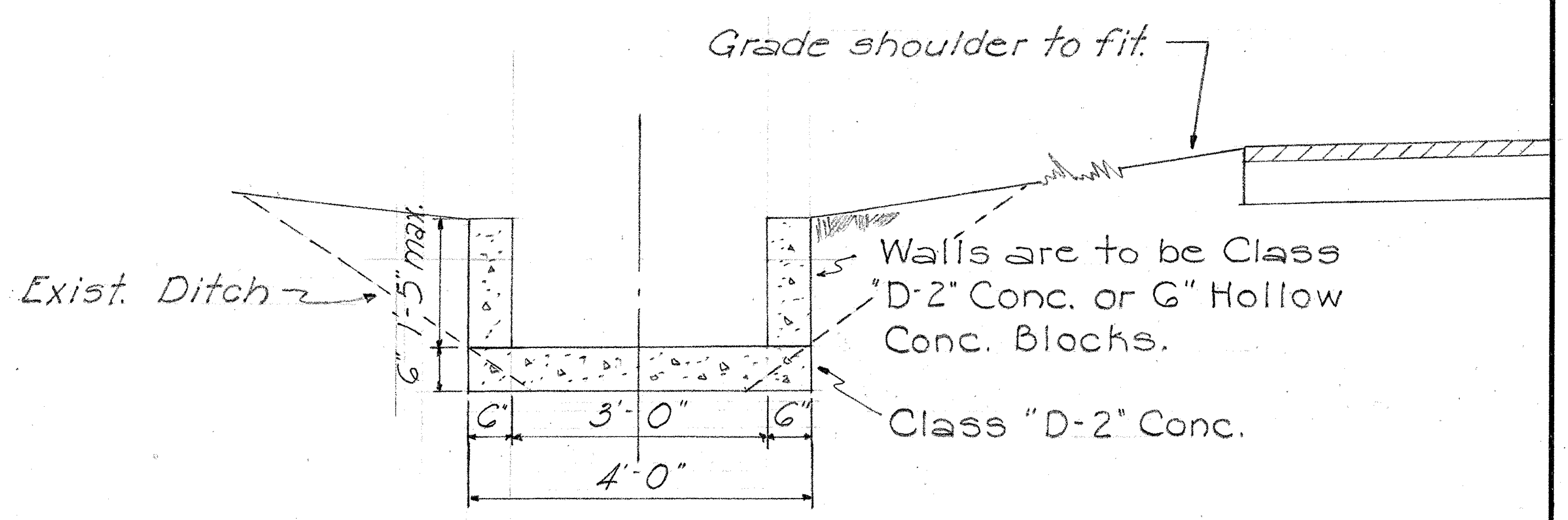
Scale: 1/4" = 1'-0"

NOTE!
Bottom of Ditch varies from 10'-0" min. to 18'-0" max. between Sta's. $20+09^{.72}$ ± and $21+09^{.72}$ ±.



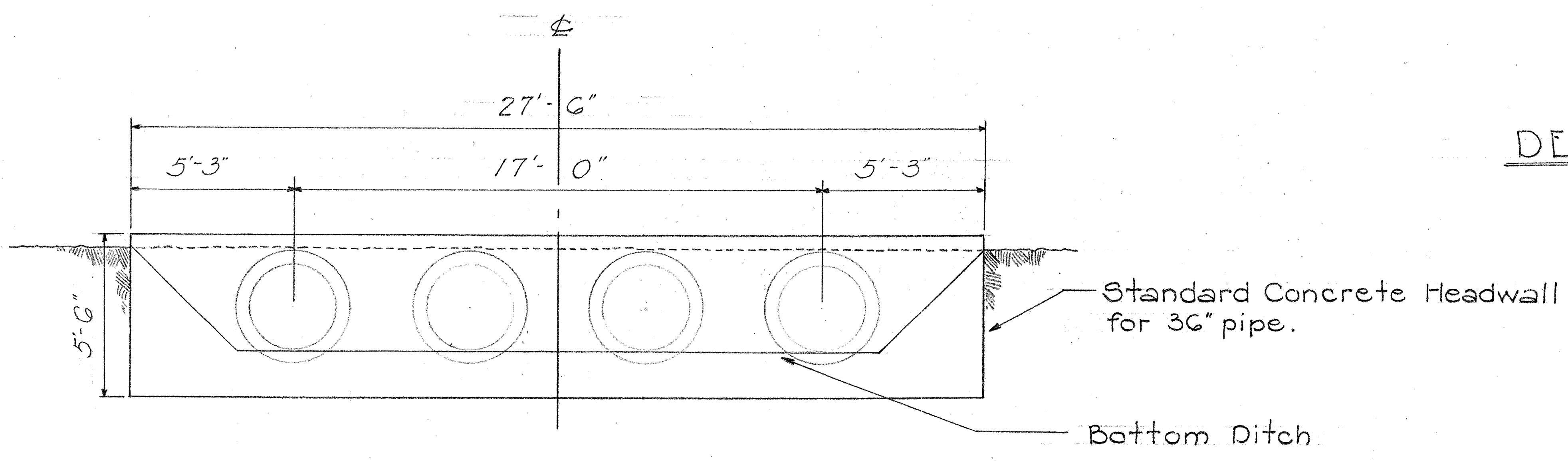
TYPICAL SECTION

Scale: 1/4" = 1'-0"



DETAIL OF LINED DITCH

Scale 1/2" = 1'-0"



TYPICAL SECTION

36" Concrete Pipe Culverts
Scale: 1/4" = 1'-0"

TERRITORIAL HIGHWAY DEPARTMENT
TERRITORY OF HAWAII
TYPICAL SECTIONS
&
PIPE CULVERT DETAILS
KALANIANAOLE HIGHWAY
Scale: As shown.
Oct. 20, 1949

SHEET No. OF SHEETS

5451.7

ORIGINAL PLAN	SURVEY PLOTTED BY........DATE........
	DESIGNED BY........ " ....
	DRAWN BY........ " ....
	TRACED BY........ " ....
NOTE BOOK No.	QUANTITIES BY........ " ....
	QUANTITIES CHECKED BY........ " ....
	CHECKED BY........ " ....

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

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

Note: Stations shown on Cross Sections are reffered to ℄ Road.

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

K & E CO. No. 345-3 MADE IN U. S. A. 44769 3

5451.8

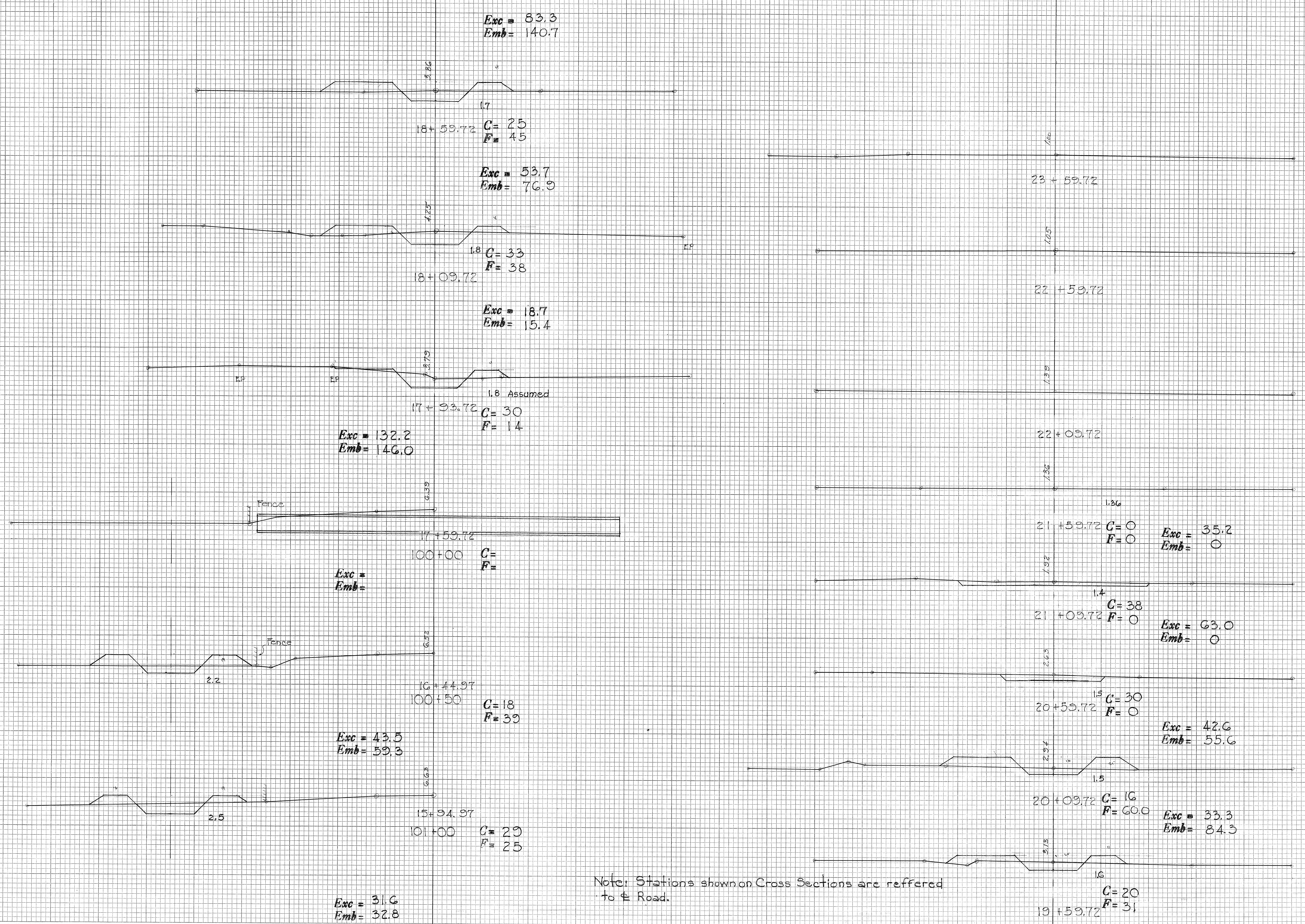
FINAL SURVEY		BY	DATE
NOTE BOOK	SURVEYED		
	PLOTTED		
	TEMPLATE		
NO.	AREAS		
	AREAS CHECKED		

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

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

K & E CO. No. 345-3 MADE IN U.S.A. 44766 3

5451.9



Note: Stations shown on Cross Sections are reffered to ℄ Road.

Total Exc. = 3,152.8 c.y.
Total Emb. = 946.4 c.y.

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

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

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

K & E CO. No. 345-3 MADE IN U.S.A. 44766 3

5451.10