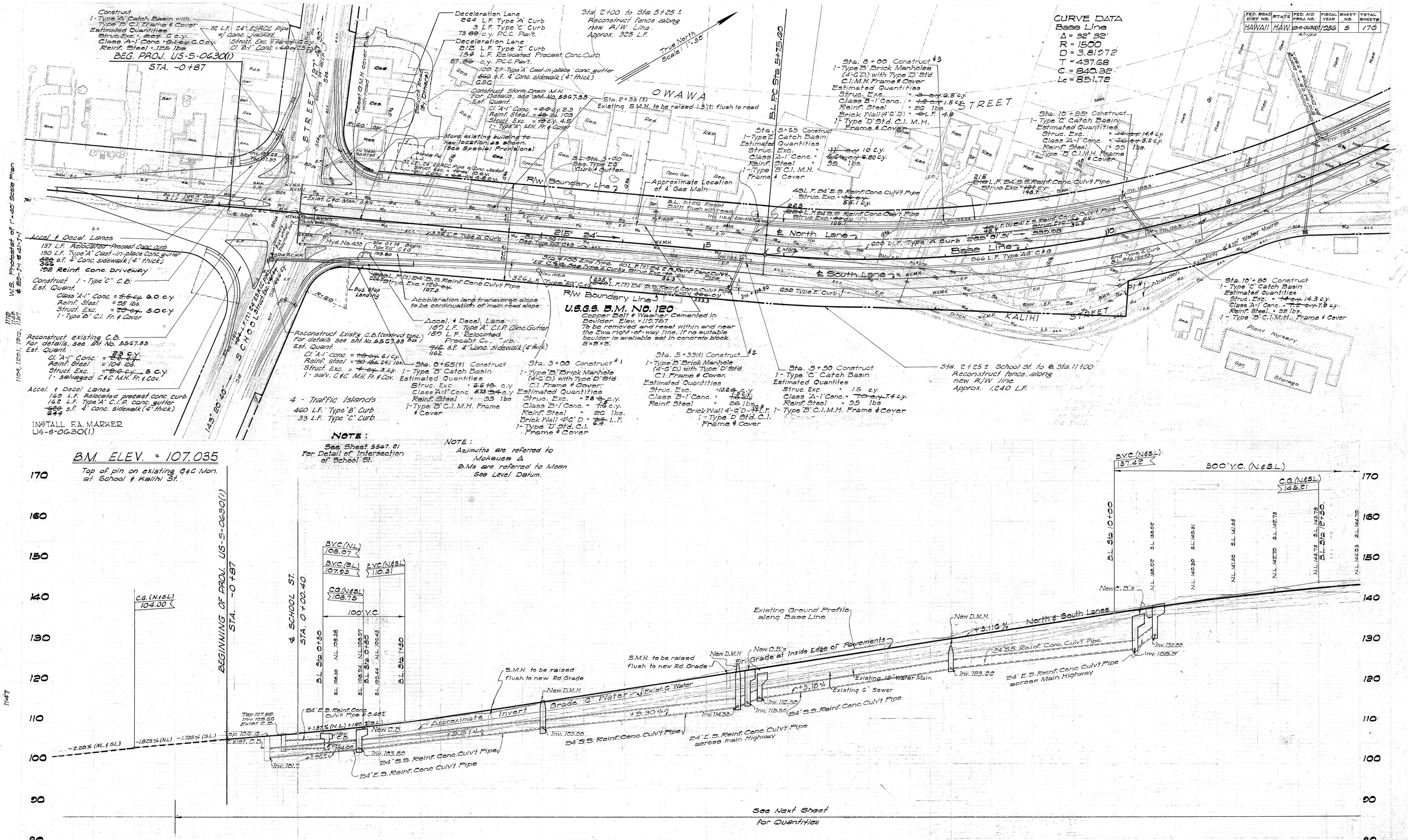
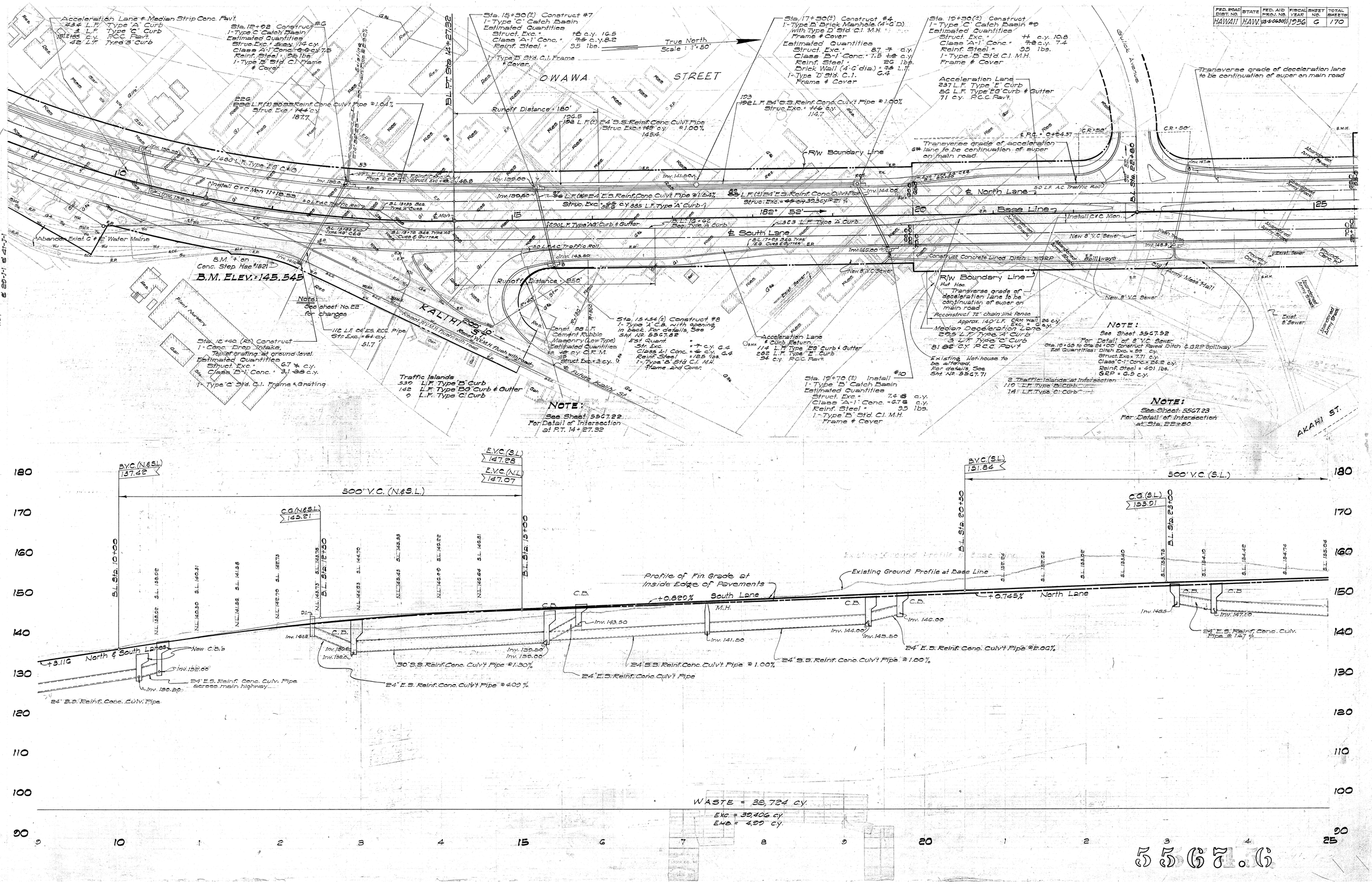
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-0-08(20)	1956	5	170



55 67.5

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	US-$-063(10)	1956	6	170



5567.6

FED. ROAD DIST NO.	STATE	FED AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	US-S-0620(1)	1956	7	170

W.S. Photostat of 1"=40' Scale Plan
℄ 29-J-1 & 41-J-1

Sta. 25+47 Construct
1- Brick M.H. (4'-6" D) with Type 'D' Std. C.I. Frame & Cover
Estimated Quantities
Struc. Exc. = 4.0 c.y.
Class 'B-1' Conc. = 2.0 c.y. 1.5 c.y.
Reinf. Steel = 26.0 lbs.
Brick Wall (4'-6" D) = 8 L.F. 0.5 L.F.

Sta. 26+23.11 to Sta. 28+96.89
KALIHI STREAM BRIDGE
For Details see Shts. 5567.84 to 110

True North
Scale: 1"=50'

STA. 30+00

Gulick Avenue

Sta. 23+47 Construct
1- Type 'C' Catch Basin
Estimated Quantities
Struc. Exc. = 11.0 c.y.
Class 'A-1' Conc. = 8.7 c.y. 6.8 c.y.
Reinf. Steel = 95 lbs.
1- Type 'B' Std. C.I. M.H. Frame & Cover

Decel. Lane & Curb Return to Bridge
384 L.F. Type 'E6' Curb & Gutter

77.7 L.F. 24" S.S. Reinf. Conc. Pipe
Struc. Exc. = 38 c.y. 64.3 c.y.

Paved Ditch
Estimated Quantities
Struc. Exc. = 13.2 c.y.
Class 'C-1' Conc. = 4.0 c.y. 2.8 c.y.
Reinf. Steel (Wire mesh) = 114 lbs.
(See Section)

Pedestrian's Walkway

180 L.F. Type 'A6' Curb & Gutter
17 L.F. Type 'E' Curb
8 c.y. R.C.C. Rev'd.

NOTE:
See next sheet for Detail beyond Sta. 30+00

KONO ST.

First Sewer

℄ B.C. = 0+94.37 CR = 50'

CR = 50'

Ped. Walkway

R/W Boundary Line

Abandoned Army Sewer

Abandoned Army Sewer

M.H.

For detail, see sht. No. 5567.82

Inv. 144.6

Inv. 147.0

Inv. 148.5

Inv. 148.0

B.L. Sta. 22+20

℄ North Lane

Bridge

30

50 L.F. A.C. Traffic Rail

Abandoned Army Pipe ø7.15%

℄ 96 L.F. 24" E.S. Reinf. Conc. Culv't. Pipe
Struc. Exc. = 38 c.y. 43.9 c.y.

25

Base Line

℄ South Lane

Mill Cut Rail in Wood Post = 118 L.F.

211 L.F. Type 'A6' Curb & Gutter

Conc. 1 L.F. Type 'A6' Curb & Gutter

182° 52' E.R.

20

Wash Basin

Abandoned Army Sewer

Abandoned Army Sewer

Abandoned Army Sewer

Boundary Conc.

Laundry Conc.

Inv. 148.5

Inv. 148.0

Inv. 148.0

Inv. 148.0

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAWAII	S-0630(1)	1956	8	170

Note:

See preceding sheet for Details before Station 30+00.

Note: For Intersection Details at Sta. 33+00 see sheets 5567.24 & 5567.25

For Intersection Detail See Sheet No. 5567.26

Accel. Lane & Return
228 L.F. Type "E" Curb
57 L.F. Type EG Curb & Gutter
33.5 c.y. P.C.C. Pavt.

Sta. 32+25(±)
1-Type "C" Catch Basin
Estimated Quantities
Struc. Exc. = ~~28~~ c.y. 8.2
Class "A-1" Conc. = ~~6.0~~ c.y. 7.0
Reinf. Steel = 25 lbs.

Sta. 30+52(±)
1-Brick Manhole (5'-0" dia) with Type "D" Std. C.I. M.H. Frame & Cover
Estimated Quantities
Struc. Exc. = ~~6~~ c.y. 17.5
Class "B-1" Conc. = ~~4.5~~ c.y. 1.6
Reinf. Steel = 250 lbs.
Brick Wall (5'-0" D.) = 12 L.F. 10.8

Traffic Island
Type "B" Curb = 81 L.F.
Type "C" Curb = 8 L.F.

B.L. Sta. 33+00
N.L. Sta. 32+80.07
S.L. Sta. 33+10.30

Const. paved ditch
Ditch Exc. = 3 c.y.
Cy. Conc. = 2.4 c.y.
Steel = 70 lbs.

Deceleration Lane & Return
Type "E" Curb = 45 L.F.
Type EG Curb & Gutter = 170 L.F.
Traffic Island
Type "B" Curb = 63 L.F.
Type "C" Curb = 8 L.F.

Sta. 33+55 to Sta. 41+40
Type AG Curb & Gutter = 815 L.F.

54 L.F. 24" E.S. R.C.C. Pipe
Str. Exc. = ~~45~~ c.y. 50.6

TRUE NORTH
6°26'E = 1°20'

P.I. #2

Sta. 40+50(±)
1-Conc. Drop Intake (1 side open)
Estimated Quantities
Struc. Exc. = ~~10~~ c.y. 9
Class "B-1" Conc. = ~~2.6~~ c.y. 3.6

Acceleration Lane & Return
45 L.F. Type "E" Curb
228 L.F. Type "EG" Curb & Gutter
Traffic Island
Type "B" Curb = 126 L.F.
Type "C" Curb = 8 L.F.

Base Line
Kalihi Stream
URBAN BOUNDARY
Kalihi Stream Bridge
R/W Boundary Line
℄ North Lane
℄ South Lane
R/W Boundary Line
KONO ST.
KAM. IV Road
PLACE
Waikahe Drive
Abandoned Army Shed
Storm drain easement (60' wide)

S.M.H. #17
Top = 148.45
Inv. = 134.85

S.M.H. #18
Top = 148.87
Inv. = 137.65

S.M.H. #19
Top = 145.15
Inv. = 141.65

S.M.H. #20
Top = 158.74
Inv. = 145.09

Demolish Exist. Sewer M.H. and Construct New Conc. M.H.

Adjust Sewer M.H. to New Grade

AC Traffic Roll (50 L.F.)

~~76~~ 48 L.F. 24" E.S. Reinf. Conc. Culvt. Pipe
Struc. Exc. = ~~68~~ c.y. 52

48 L.F. 24" E.S. Reinf. Conc. Culvt. Pipe
Str. Exc. = ~~44~~ c.y. 40.3

~~187.5~~ 128.6 ~~32" S.S. R.C.C. Pipe~~ 128.6 L.F. 32" E.S. R.C.C. Pipe
~~Str. Exc. = 184.8~~ 207.5 ~~309.1~~ L.F. 32" S.S. R.C.C. Pipe
Struc. Exc. = ~~245~~ c.y. 238.1

Sta. 33+40(±)
1-Type "D" Catch Basin
1-Type "B" Catch Basin
Estimated Quantities
Struc. Exc. = ~~30~~ c.y. 34.2
Class "A-1" Conc. = ~~14~~ c.y.
Reinf. Steel = 1160 lbs.
2-Type "B" C.I. C.B. Frame & Cover

Median Strip
Type A Curb = 135 L.F.
Type C Curb = 8 L.F.

Sta. 36+75(±)
1-Brick Manhole (5'-0" dia) with Type "A" Std. C.I. M.H. Frame & Cover
Estimated Quantities
Struc. Exc. = ~~11~~ c.y. 9
Class "B-1" Conc. = 1.2 c.y.
Reinf. Steel = ~~49~~ lbs. 29
Brick Wall (2'-0" D.) = ~~2.2~~ L.F. 2.5

Acceleration Lane & Return to ℄ Sta. 40+00
Type EG Curb & Gutter = 1218 L.F.
Traffic Island
Type "B" Curb = 95 L.F.
Type "C" Curb = 8 L.F.

Sta. 35+65(±)
1-Type "B" Catch Basin
Estimated Quantities
Struc. Exc. = ~~15~~ c.y. 12
Class "A-1" Conc. = ~~7.7~~ c.y. 7.0 at center of C.B.
Reinf. Steel = ~~134~~ lbs. 95
1-Type "B" C.I. C.B. Frame & Cover.

~~315.3~~ 315.3 L.F. 30" S.S. Reinf. Conc. Culvt. Pipe
Struc. Exc. = ~~42~~ c.y.

48 L.F. 30" E.S. and ~~70.5~~ 70.5 L.F. 30" S.S. Reinf. Conc. Culvt. Pipe
Struc. Exc. = ~~42~~ c.y.

~~Str. Exc. = 4~~ c.y. 35.4

~~Struc. Exc. = 30~~ c.y.

Sta. 39+00(±)
1-Type "B" Catch Basin
Estimated Quantities
Struc. Exc. = ~~15~~ c.y. 12
Class "A-1" Conc. = ~~6.7~~ c.y. 7.2
Reinf. Steel = ~~100~~ lbs. 95
1-Type "B" C.I. C.B. Frame & Cover

Sta. 42+40(±)
1-Brick Manhole (4'-6" dia) with Type "A" Std. C.I. M.H. Frame & Cover
Estimated Quantities
Struc. Exc. = ~~8~~ c.y. 10.3
Class "B-1" Conc. = ~~1.7~~ c.y. 1.5
Reinf. Steel = ~~45~~ lbs. 26
Brick Wall (4'-6" D.) = ~~5.4~~ L.F. 6.9

Sta. 32+00(±)
1-Type "B" Catch Basin
Estimated Quantities
Struc. Exc. = ~~15~~ c.y. 18.8
Class "A-1" Conc. = ~~9.0~~ c.y. 8.0
Reinf. Steel = ~~124~~ lbs. 95
1-Type "B" C.I. C.B. Frame & Cover

Deceleration & Acceleration Lanes
318 L.F. Type "A" Curb
222 L.F. Type "AG" C&G
Type "C" Curb = 3 L.F.
78 c.y. P.C.C. Pavt.

Deceleration Lane & Return
263 L.F. Type "E" Curb
76 L.F. Type "EG" Curb & Gutter
733 c.y. P.C.C. Pavt.
Traffic Island
Type "B" Curb = 68 L.F.
Type "C" Curb = 8 L.F.

~~56.3~~ 52.7 L.F. 24" E.S. Reinf. Conc. Culvt. Pipe
Struc. Exc. = ~~25~~ c.y. 22.63

Note:— The finished grade of the concrete and asphalt concrete pavement across the median strip at access road intersections, including portions of the concrete pavement at the ends of deceleration lanes, shall be laid out in the field to give a smooth riding surface for all turning movements of vehicles.

CURVE DATA

Base Line
Δ = 52°31'00"
R = 1250.0
D = 4.5838GG°
T = 610.66
C = 1106.05
Lc = 1145.74

℄ N.L. Spiral
θ_s = 6°45'42"
p = 2.95
k = 149.03
X_c = 299.58
Y_c = 11.79
L_s = 300'

℄ North Lane
Δ_c = 38°59'36"
R_c = 1271.05
D_c = 4.5018°
L_c = 865.03
S_E = 0.10'/ft

℄ South Lane
Δ_c = 38°27'40"
R_c = 1222.03
D_c = 4.6851°
L_c = 820.03
S_E = 0.10'/ft

℄ S.L. Spiral
θ_s = 07°01'40"
p = 3.07
k = 149.03
X_c = 299.55
Y_c = 12.25
L_s = 300'

B.M. ELEV. = 146.78
□ cut on large boulder 100'± right of sta. 30+00

B.M. ELEV. = 132.08
+ cut on S.M. Hole Frame Left of Sta. 36+50±

B.L. Sta. 6 Lane C.G. Sta. = 41+35.81
Equation C.G. = 41+32.00
N.L. Sta. 6 Lane C.G. Sta. = 41+28.61
B.L. Sta. N. Lane C.G. = 41+31.62

B.L. PT. 42+80.14

Sta. 33+30(±)
1-Type "A" Catch Basin
1-Brick Manhole (5'-0" dia.)
Estimated Quantities
Struc. Exc. = ~~19~~ c.y. 14.0
Class "A-1" Conc. = ~~7.6~~ c.y. 7.9
Class "B-1" Conc. = ~~1.3~~ c.y. 1.8
Reinf. Steel = ~~154~~ lbs. 149
1-Type "B" C.I. Fr. & Cov.
1-Type "D" C.I. Fr. & Cov.
Brick Wall (5'-0" dia) = ~~10~~ L.F. 7.1

Profile of Existing Ground at ℄ North Lane

Profile of Existing Ground at ℄ South Lane

B.V.C. 157.00
B.V.C. 157.45
E.V.C. 168.00
E.V.C. 167.06

450' V.C. (N.L.)
400' V.C. (S.L.)

B.L. Sta. 28+68.63
N.L. Sta. 28+55
B.L. Sta. 29+00
N.L. Sta. 27+86.37
S.L. Sta. 28+13.63
El. 156.58
El. 156.59

B.L. Sta. 29+40.87
S.L. Sta. 29+63.50

B.L. Sta. 30+00
S.T.A.

N.L. Sta. 30+80
S.L. Sta. 31+63.50

N.L. Sta. 32+80.07 (Elev. = 167.36)
B.L. Sta. 33+00
S.L. Sta. 33+10.30 (Elev. = 164.93)

N.L. Sta. 33+63.50
S.L. Sta. 33+63.50

N.L. Sta. 41+38.47 El. 203.00
S.L. Sta. 41+46.78 El. 200.22

+0.572% South Lane
+0.745% North Lane
+4.101% North Lane
+4.236% South Lane
Fin. Grade at ℄
+4.32%
+4.40%
+5.45%
+7.22%

Demolish exist. SMH & Construct new Conc. M.H.
Demolish Exist. S.M.H. and Construct New Conc. M.H.
End of 42" Conc. Pipe
Exist. 18" Sewer Main
Ex. S.M.H.
Inv. 158.0
Inv. 147.5
Inv. 147.0
Inv. 152.5
Inv. 152.0
42" S.S. Reinf. Conc. Culvt. Pipe
36" S.S. R.C.C. Pipe
36" E.S. R.C.C. Pipe
Inv. 157.8 at center of Brick Manhole
Inv. 172.5 at Center of M.H.
Inv. 185.0
Inv. 184.6 at center of C.B.
Inv. 188.5 at center of C.B.
Inv. 197.0
Inv. 200.5
30" E.S. & S.S. Reinf. Conc. Culvt. Pipe across North Lane
30" E.S. Reinf. Conc. Culvt. Pipe across South Lane
30" S.S. Reinf. Conc. Culvt. Pipe
30" S.S. Reinf. Conc. Culvt. Pipe
D.I.
C.B.
M.H.

Approx. Location of Bridge Abutment

F.H.
Exc. = 7,628 c.y.
Emb. = 6,106 c.y.

WASTE (F.H.)
Exc. = 5,572 c.y.
Emb. = 0

SEE O.H. SUMM.
Exc. = 10,760 c.y.
Emb. = 1,505 c.y.

S. Hirota
H. Miyake
E. Nishihara
W.S. 23-J-1, Photostat of 1"=40' Scale Plans & Profile
1147

5567.8

FED. ROAD DIST. NO.	STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	U55-2(30)	1956	9	170

KALIHI VALLEY HOMES (HHA)

FOR INTERSECTION DETAIL SEE SHEET NO. 5567.27

B.M. ELEV. = 215.26

℄ Kam. IV Sta. 34+98 (±)
1-Type "C" Catch Basin
Estimated Quantities
Struc. Exc. = ~~18~~ c.y. 6.8
Class A-1 Conc. = ~~4.2~~ c.y. 7.2
Reinf. Steel = ~~108 lbs.~~ 25 lbs.
1-Type "B" C.I.C.B. Frame & Cover

Sta. 45+62 (±)
1-Type "C" Catch Basin
Estimated Quantities
Struc. Exc. = ~~16 c.y.~~ 8.5 c.y.
Class A-1 Conc. = ~~8.6 c.y.~~ 6.2 c.y.
Reinf. Steel = ~~110 lbs.~~ 25 lbs.
1-Type "B" C.I.C.B. Frame & Cover

Kam II Sta. 34+97.21 to Kam II 39+67.49
98 L.F. Type "E" Curb
412 L.F. Type EG C.&G.
Traffic Island
145 L.F. Type "B" Curb
14 L.F. Type "C" Curb
108 L.F. Type "E" Curb

Sta. 49+08 (±) Install
24" S.S. R.C.C. Pipe, ~~86 L.F.~~ 81.2 L.F.
1-Type "C" C.B.
Est. Quant.
Struc. Exc. = ~~6.5~~ c.y. 3.0 c.y.
Class A-1 Conc. = ~~6.3 c.y.~~ 6.3 c.y.
Reinf. Steel = 25 lbs.
1-Type "B" C.I. Frame & Cover

Sta. 49+65 (±) Install
24" S.S. R.C.C. Pipe, 68 L.F.
1-C.D.I., 1 side open
Estimated Quantities
Struc. Exc. = ~~6.6 c.y.~~ 2.7 c.y.
Class B-1 Conc. = ~~3.1 c.y.~~ 2.2 c.y.

Sta. 52+35 ±
2-Brick Manhole (5'-0" dia.) with 1-Type "D" &
1-Type "A" Std C.I. M.H. Frame & Cover
Struc. Exc. = ~~8.1 c.y.~~ 4.0 c.y.
Class B-1 Conc. = ~~8.4 c.y.~~ 3.0 c.y.
Reinf. Steel = ~~180 lbs.~~ 180 lbs. (Brick Wall (5'D) = 5.4 L.F. = 87.72 lbs.)

Sta. 52+61 ± Install
1-Type "C" Catch Basin.
Estimated Quantities
Struc. Exc. = ~~12 c.y.~~ 5 c.y.
Class A-1 Conc. = ~~6.3 c.y.~~ 6.0 c.y.
Reinf. Steel = 25 lbs.
1-Type "B" C.I.C.B. Frame & Cover

Median Strip
Type "A" Curb = 162 L.F.
Type "C" Curb = 81 L.F.

Deceleration Lane & Return to B.L. Sta. 58+84
Type "EG" C.&G. = 271 L.F.
Traffic Island
Type "E" Curb = 57 L.F.
Type "C" Curb = 8 L.F.

℄ 54+05

N.L. P.C. Sta. 52+87.72
B.L. P.C. Sta. 54+81.92
S.L. P.C. Sta. 54+70.88

Kam IV Rd.

Kam II Sta. 39+67.49 = Kam IV Sta. 32+45.74 = B.L. Sta. 45+57.28 = N.L. Sta. 45+63.05

CURVE DATA
R/W & Curb
Δ = 179°11'00"
R = 500
D = 11.459°
T = 75.54
C = 129.39
Lc = 149.05

Median Strip
Type "A" Curb = 49 L.F.
Type "A" C.&G. = 245 L.F.

Deceleration Lane
Type "E" Curb = 250 L.F.
P.C.C. Pav't = 106 c.y.
℄ Sta. 48+01.28 to 49+00
Type EG C.&G. = 231 L.F.

Acceleration Lane & Return
Type "E" Curb = 320 L.F.
P.C.C. Pav't = 140 c.y.
Traffic Island
Type "B" Curb = 90 L.F.
Type "C" Curb = 8 L.F.

~~8 L.F. 24" S.S. Reinf. Conc. Culv't Pipe~~
~~Str. Exc. = 10 c.y.~~
Transverse grade of acceleration lane to be continuation of slope of main road

~~20 L.F. 24" S.S. Reinf. Conc. Culv't Pipe~~
~~Str. Exc. = 24 c.y.~~

℄ North Lane
~~24 L.F. 30" S.S. Reinf. Conc. Culv't Pipe~~
Struc. Exc. = ~~8.2 c.y.~~ 7.5 c.y.

℄ Mon.

℄ South Lane
~~288 L.F. 30" S.S. Reinf. Conc. Culv't Pipe~~
Struc. Exc. = ~~234 c.y.~~ 246.4 c.y.

~~24 L.F. 30" S.S. Reinf. Conc. Culv't Pipe~~
Struc. Exc. = ~~29.5 c.y.~~ 34.9 c.y.

R/W Boundary Line

KAM IV ROAD

Base Line

235° 23'

R.C. Traffic Rail: 50 L.F.
Struc. Exc. = 5.0 c.y.

B.L. Sta. 53+20
Begin Type "A" Curb & Gutter

Sta. 45+30 (±)
1-Brick Manhole (5'-0" dia.) with
Type "A" Std C.I. M.H. Frame & Cover
Estimated Quantities
Struc. Exc. = ~~7.0 c.y.~~ 10.0 c.y.
Class B-1 Conc. = ~~1.1 c.y.~~ 1.8 c.y.
Reinf. Steel = ~~98 lbs.~~ 20 lbs.
Brick Wall (5'D) = ~~6.4 L.F.~~ 7.4 L.F.

Sta. 48+80 (±)
1-Type "B" Catch Basin
Estimated Quantities
Struc. Exc. = ~~7.5 c.y.~~ 14.4 c.y.
Class A-1 Conc. = ~~7.5 c.y.~~ 7.7 c.y.
Reinf. Steel = ~~140 lbs.~~ 25 lbs.
1-Type "B" C.I.C.B. Frame & Cover

Transverse grade of deceleration lane to be continuation of slope of main road

Transverse grade of deceleration lane to be continuation of slope of main road.

Construct CBW Wall
Approx. 50 L.F. 14
Est. Quant. CBW = ~~18~~ c.y.
Exc. = 4 c.y.

Deceleration Lane
Type "A" Curb = 389 L.F.
Type "C" Curb = 3 L.F.
P.C.C. Pav't = ~~84 c.y.~~ 77.7 c.y.

B.L. Sta. 50+50 to end of return (6 Lane) ~ Construct wood guard rail w/ Conc. post. Approx. 170 L.F.

Sta. 52+95 (±)
1-Type "B" Catch Basin
Estimated Quantities
Struc. Exc. = ~~8.8 c.y.~~ 12.5 c.y.
Class A-1 Conc. = ~~6.6 c.y.~~ 7.2 c.y.
Reinf. Steel = 25 lbs.
1-Type "B" C.I.C.B. Frame and Cover.

Acceleration Lane & Return
45 L.F. Type "E" Curb
104 L.F. Type "EG" Curb & Gutter
Traffic Island
Type "B" Curb = 58 L.F.
Type "C" Curb = 8 L.F.

End of return to B.L. Sta. 53+50 (5 Lane) ~ Construct wood guard rail w/ Conc. post. Approx. 140 L.F.

~~58 L.F. 24" S.S. Reinf. Conc. Culv't Pipe~~
Struc. Exc. = ~~9.6 c.y.~~ 5.8 c.y.

~~116 L.F. 30" S.S. Reinf. Conc. Culv't Pipe, 5.2%~~
Struc. Exc. = ~~150 c.y.~~ 142 c.y.

Sta. 53+50 – Install 24" S.S. R.C.C. Pipe, ~~56~~ 55.6 Lin. Ft.
1-Type "C" Catch Basin
Est. Quant.
Struc. Exc. = ~~21 c.y.~~ 33.5 c.y.
Class A-1 Conc. = ~~6.0 c.y.~~ 6.2 c.y.
Reinf. Steel = 25 lbs.
1-Type "B" C.I.C.B. Frame and Cover

ALU STREET

B.L. Sta. 52+20
N.L. Sta. 53+25.50
S.L. Sta. 53+68.55
Exist. 30" Culvert

B.L. Sta. 55+20
N.L. Sta. 56+25.50
S.L. Sta. 56+68.55

Exist. 18" Culvert

Acceleration Lane
46 L.F. Type A Curb
31 L.F. Type C Curb
~~115 L.F.~~ 110 L.F. P.C.C. Pav't
103.67 c.y.

Transverse grade of deceleration lane to be 0.04' per ft.

℄ N.L. Spiral
θ_s = 06°25'42"
p = 2.95
k = 149.93
X_c = 299.58
Y_c = 11.79
L_s = 300'

℄ North Lane
Δc = 38°59'36"
R_c = 1271.05
D_c = 4.5078°
L_c = 865.03
S_E = 0.10'/ft.

℄ South Lane
Δc = 38°27'40"
R_c = 1222.03
D_c = 4.6851°
L_c = 820.03
S_E = 0.10'/ft.

℄ S.L. Spiral
θ_s = 07°01'40"
p = 3.07
k = 149.03
X_c = 299.55
Y_c = 12.25
L_s = 300

N.L. C.S. Sta. = 41+41.82
N.L. C.S. Sta. = 41+24.87
S.L. C.S. Sta. = 41+28.05
S.L. C.S. Sta. = 41+28.05
B.L. P.T. Sta. 42+80.94

B.L. Sta. 44+80.07
N.L. S.T. Sta. 44+44.87
S.L. S.T. Sta. 44+28.05

B.L. Sta. = 45+41.88

URBAN REDEVELOPMENT PROJECT

Note:
For relocation of existing 12" water main, and installation of new mains, fire hydrants, cross connections, etc., See Sheets 5567.43 to 5567.49

Deceleration Lane & Return
270 L.F. Type "E" Curb
49 L.F. Type EG Curb & Gutter
76 c.y. P.C.C. Pav't
Traffic Island
58 L.F. Type "B" Curb
8 L.F. Type "C" Curb

B.M. ELEV. = 231.70
Spike in Electric Pole #77 opposite House #2200 Kam IV. Rd. 42' left of sta. 50+95.

S. Hirota
E. Nishiura
W.S. 29-J-1, Photostat of 1"=40' Plan

S. Hirota
S. Hirota

NOTE:
At ℄ Sta. 46+59.20
Grade Point Shifts
From ℄ North Lane
to Inside Edge of Pavement.

C.G. 213.52
C.G. 215.20
N.L. Sta. 44+15
S.L. Sta. 45+00
B.L. Sta. 45+11.04

Profile of Finish Grade at Inside Edge of Pavements

Profile of Existing Ground at ℄ North Lane

Approx. 100' of existing 12" Water Main

Approx. 100' of existing 6" Water Main

24" E.S. Reinf. Conc. Culv't Pipe
+1.972% E.P. North Lane
+1.998% E.P. South Lane
+2.05%
20" S.S. Reinf. Conc. Culv't Pipe
24" S.S. Reinf. Conc. Culv't Pipe
20" E.S. Reinf. Conc. Culv't Pipe across Main Highway
24" E.S. Reinf. Conc. Culv't Pipe across Main Highway
Profile of Existing Ground at ℄ South Lane

Fin. Grade at ℄
+4.101% North Lane
+4.236% South Lane
+9.97%
+2.98%
20" S.S. Reinf. Conc. Culv't Pipe
20" E.S. Reinf. Conc. Culv't Pipe across Main Highway
20" S.S. Reinf. Conc. Culv't Pipe
End of existing 6" Water Main
Beginning of existing 12" Water Main

NOTE:
At ℄ Sta. 47+61.04
Grade Point Shifts
From ℄ South Lane
to Inside Edge of Pavement

N.L. Sta. 41+65
S.L. Sta. 42+50
N.L. Sta. 46+65
S.L. Sta. 46+59.20
S.L. Sta. 47+50
B.L. Sta. 47+61.04

500' V.C. (S.L.)
500' V.C. (N.L.)

B.V.C. 203.27
B.V.C. 204.61
E.V.C. 218.45
E.V.C. 218.63
E.V.C. 220.19
E.V.C. 220.37

℄ North Lane Inside E.P.
℄ South Lane Inside E.P.

F.H.
Exc. = 2,407 c.y.
Emb. = 1,098 c.y.

SEE PRECEDING SHEET FOR QUANTITIES

SEE NEXT SHEET FOR QUANTITIES

5567.9

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAWAII	U-S-0630(1)	1956	10	170

KULA KOLEA TRACT
IMPROVEMENT DISTRICT No. 91

KALIHI VALLEY HOMES

KALIHI ELEMENTARY SCHOOL

TRUE NORTH
Scale: 1" = 50'

Note: For Intersection Details see sheets 5567.28 & 5567.29

Fill shaded area with surplus Adobe material; See Special Provisions.

Sta. 56+50(±) Install 24" E.S. RCC Pipe, ~~48~~ L.F. 48.5
2 - Type "C" C.B.
Estimated Quantities
Struc. Exc. = ~~65~~ c.y. 43.
Class "A-1" Conc. = ~~1.4~~ c.y. 14.2
Reinf. Steel = 100 lbs.
2-Type "B" C.I.C.B. Frame & Cover

COMPOUND CURVE DATA
℄ North Lane

Δ = 17° 30' 20"	Δ = 17° 00' 40"
½Δ = 8° 45' 10"	¼Δ = 8° 30' 20"
R = 2917.0'	R = 2,917.07'
T = 505.62'	T = 515.83'
L = 925.94'	L = 946.13'
C = 923.12'	C = 943.30'

S.E. = 0.06'/ft.
Runoff Dist. = 150' from P.C. & P.T.

CURVE DATA
BASE LINE

Δ = 24° 31' 00"	
½Δ = 17° 15' 30"	
R = 2400'	
T = 749.00'	
L = 1445.83'	
C = 1434.07'	

COMPOUND CURVE DATA
℄ South Lane

Δ = 17° 30' 20"	Δ = 17° 00' 40"
½Δ = 8° 45' 10"	¼Δ = 8° 30' 20"
R = 2424.4'	R = 2,286.70'
T = 375.21'	T = 341.96'
L = 740.60'	L = 678.95'
C = 737.73'	C = 676.46'

S.E. = 0.06'/ft.
Runoff Dist. = 200' from P.C. & P.T.

Sta. 62+50(±) ~ Install 24"
E.S. R.C.C. Pipe, w/conc. collars, 60 L.F.
1-Type "C" Catch Basin w/Double Throat
Estimated Quantities
Struc. Exc. = ~~10~~ c.y. 11.8
Class "A-1" Conc. = ~~0.6~~ c.y. 0.2
Reinf. Steel = ~~80~~ lbs. 125

Sta. 62+58 (±) ~ Install 36" 320
E.S. R.C.C. Pipe w/conc. collars, 40 L.F.
1-Conc. ~~Head Wall~~ Drop Intake
Estimated Quantities
Class "B-1" Conc. = ~~8.7~~ c.y. 4.1
~~Reinf. Steel = 66 lbs.~~
Struc. Exc. = ~~60~~ c.y. 18

NOTE: See Sheet No. 28 for location of Gas Main

End of Return to G5+70
Install Wood Guard Rail with Conc. Posts at N. Lane 360 L.F.

Sta. 63+00 ~ Install 24" E.S. RCC Pipe 43'
1-Type "C" Catch Basin w/Double Throat
Estimated Quantities
Struct. Exc. 57.7 c.y.
Class "A-1" Conc. 7.8 c.y.
Reinf. Steel 125 lbs.
1-Type "C" Frame & Cover

NOTE: SEE SHEET No. 25 FOR DETAIL
24" ES RCC Pipe
Construct CRM Wall
CRM = 12.6 c.y.
Exc. = 33.2 c.y.
C.B.

Decelleration Lane & Return to Sta. 70+95
145 L.F. Type "E" Curb
848 L.F. Type "EG" Curb & Gutter
Traffic Island
65 L.F. Type "B" Curb
8 L.F. Type "C" Curb

Median Strip
168 L.F. Type "A" Curb
8 L.F. Type "C" Curb

NOTE: See Sheet No. 28 for Utilities Crossings & A-1 Intersection

DELETED
~~Sta. 65+75 (±) ~ Install 30"~~
~~E.S. R.C.C. Pipe 70.2 L.F.~~
~~2 - Conc. Headwall~~
~~1 - Type "C" Catch Basin~~
~~Estimated Quantities~~
~~Struc. Exc. = 127 c.y.~~
~~Class A-1 Conc. = 6.8 c.y.~~
~~Class B-1 Conc. = 4.3 c.y.~~
~~Reinf. Steel = 197 lbs.~~
~~1 - Type B C.I.C.B. Frame & Cover~~

Sta. 62+48 to 70+93
Type "A" Curb = 45 L.F.
Type "AG" C. & G. = 800 L.F.

Acceleration Lane & Return
45 L.F. Type "E" Curb
833 L.F. Type "EG" C. & G.
Traffic Island
133 L.F. Type "B" Curb
8 L.F. Type "C" Curb

End of return to B.L. Sta. 65+50 (S. Lane)
Construct wood guard rail w/Conc. Post. Approx. 370 L.F.

Construct New C.R.M. retaining Wall. For details see Sheet 5567.75

Construct New Conc. retaining Wall For details see Sheet 5567.75

Existing Conc. retaining Wall

Existing C.R.M. Wall

Sta. G1+50 & G2+30
Extend Conc. Drain Boxes
See Sheet 5567.36
Class A-1 Conc. = ~~2.5~~ c.y. 2.0
Reinf. Steel = ~~378~~ lbs. 327
Reset M.H. Frame & Cover = 2

Acceleration Lane & Return
56 L.F. Type "EG" Curb & Gutter
274 L.F. Type "E" Curb
73 1/9 c.y. P.C.C. Pav't
Traffic Island
65 L.F. Type "B" Curb
8 L.F. Type "C" Curb

Transverse grade of acceleration lane to be continuation of super on main road.

Adjust Sewer MH to New grade

A.C. Traffic Rail, 50 L.F.

℄ North Lane
Demolish Exist. SMH and Construct New conc. MH.

BL Sta. 59+35
End Type "AG" Curb & Gutter

Base Line

BL Sta. 59+20 to 59+35
Type "AG" C. & G. = 61.8 L.F.

BL Sta. 56+50 to end of return (S. Lane) ~ Construct wood guard rail w/Conc. post.
Approx. 635 L.F.

Construct CRM Wall
Approx. 175 L.F. 343
Est. Quant.: CRM = ~~2.2~~ c.y.
Exc. = 6.1 c.y.

Hon. Gas Co. gas line
See Sheet No. 28

Transverse grade of deceleration lane to be 0.014 per ft.

Transverse grade of deceleration lane to be level

Decelleration & Acceleration Lane
335 L.F. Type "A" Curb
3 L.F. Type "C" Curb
81 ~~78~~ c.y. P.C.C. Pav't.

Decelleration Lane & Return
365 L.F. Type "E" Curb
187 L.F. Type "EG" Curb & Gutter
80.8 ~~84~~ c.y. P.C.C. Pav't.
Traffic Island
320 L.F. Type "B" Curb
8 L.F. Type "C" Curb

See Sheet 5567.75 for Relocation of Building.

U.S. Army Signal Corp Duct Line

Approximate location of Water Main

P.I. #3

B.L. P.C.C. Sta. G2+12.0

North Lane P.C.C.

South Lane P.C.C.

B.L. P.T. Sta. 69+27.75

North Lane P.T.

South Lane P.T.

Admin. Bldg.

EMMELINE ROAD

KAMEHAMEHA IV ROAD

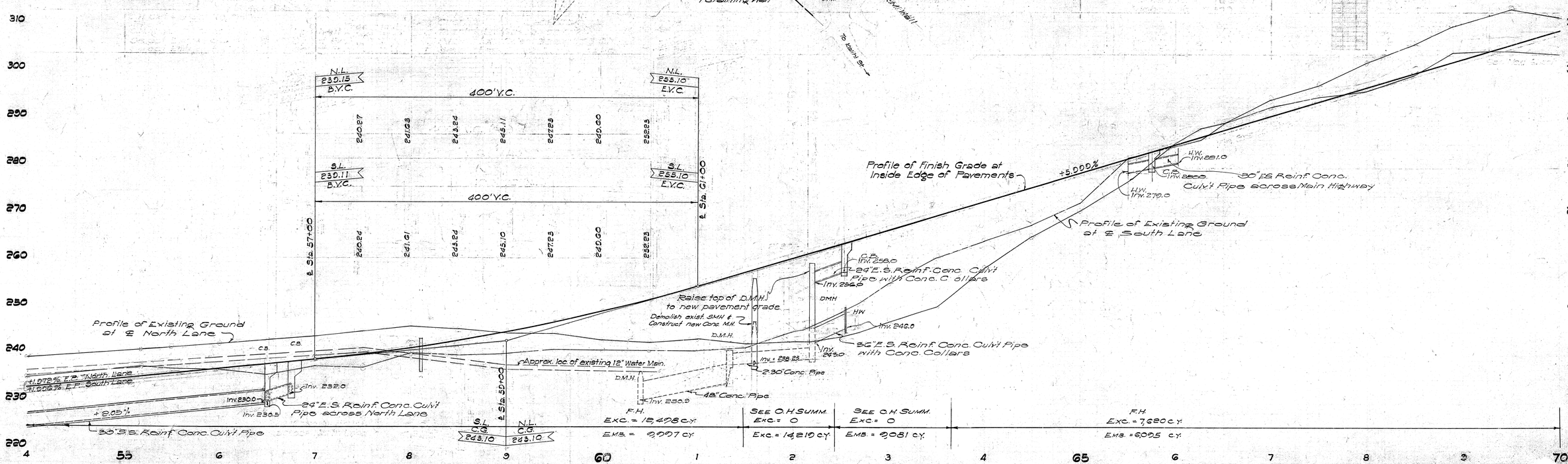
HALINA STREET

To Kalihi St.

Res. Gar. Shed

B.M. ELEV. = 254.59
"+" on fire hydrant #482 on Kam IV Road near Halina St. 200' Right of Sta. G2+95

B.M. ELEV. = 281.57
Cement knob on C.R.M. lined Auwai mauka of wooden bridge on Halina St 27' Right of Sta. G5+50.



5567.1 ()

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET	TOTAL SHEETS
HAWAII	HAW	(13-06800)	1956	11	170

Revision - 25 Jan. 1957
Retaining wall added at sta. 69+25 to sta. 70+75

KALIHI ELEMENTARY SCHOOL

Class Rooms

Administration Bldg.

TRUE NORTH
Scale: 1" = 50'

Sta. 72+50 to 73+60 - Install 24" SS RCC Pipe, 10 lin. ft., 30" LS RCC Pipe, ~~160~~ L.F. 161 - C.H.W. 1 - C.D.I. ~~1 G.R.P.~~ Spillway.
Est. Quant.
Struc. Exc. = ~~195~~ c.y. 99
Class B-1 conc. = ~~39~~ c.y. 42
~~G.R.P. 1 each~~
Reinf. Steel = 42 lbs.

Sta. 71+50 to 72+68 - Install 36" LS RCC Pipe, ~~168~~ L.F. 173 - C.D.I. 1 - C.H.W. 173
Est. QUANT.
Struc. Exc. = ~~243~~ c.y. 248
Class B-1 Conc. = ~~106~~ c.y. 11
Reinf. Steel = ~~80~~ lbs. 75
(Invert of C.D.I. to be determined by inverts of existing 18" and 24" conc. pipes.)

Sta. 74+60 to 75+50 - Install 42" LS RCC Pipe, ~~168~~ L.F. and 161 - C.H.W. & 1 - C.D.I.
EST. QUANT.
Struc. Exc. = ~~171~~ c.y. 178
Class B-1 Conc. = ~~7.4~~ c.y. 6.96
Reinf. Steel = 60 lbs.

Existing 24" Conc. Drain Pipe Inv. 335.00

24" LS RCC Pipe (Extend Pipe into R/W)

~~G.R.P. Spillway~~ (See Section below)

Inv. 320.0

Sta. 75+50 to 77+~~75~~ (N.L.) 88
Construct Wood Guard Rail W/Conc. Post
Approx. ~~675~~ L.F. 288

Sta. 75+50 to ~~88+50~~ 78+50
Construct Paved Ditch
Approx. ~~1308~~ L.F. 301
EST. QUANT.
Ditch Exc. = ~~1016~~ c.y. 15.9
C-1 Conc. = ~~137.0~~ c.y. 31.8
Reinf. Steel = ~~3,266~~ lbs. 644

Inv. of Ditch @ D.I. = 321.0

Inv. 321.0

Type "EG" curb & gutter 336 lin. ft.
Type "E" curb. ~~60~~ lin. ft. 96

Sta. 73+65 to Sta. 74+55 61
Install 24" SSRCC Pipe 90 lin. ft.
Construct 1 Type "G" Catch Basin
Est. Quant.
Struc. Exc. = ~~40~~ 38 c.y.
Class "A1" Conc. = 6.0 c.y.
Reinf. Steel = 95 lbs.
1 Type "B" C.I. C.B. Frame & Cover

Proposed Access Road
(Work to be performed by others)

Existing Drainage Ditch

Back of Wall

TOP OF CONC. RET. WALL

Edge of Footing

Sta. 69+25 Beg. Ret. Wall

Sta. 70+75 End Ret. Wall

Rev: 1-25-57

South Lane, Pt. Sta. 60+27.75

North Lane, Pt. Sta. 70+

Boarding Hse

R/W

Paved Ditch

Type 4G Curb & Gutter

Type 2G Curb & Gutter

℄ North Lane

Baseline

℄ South Lane

Sta. 80+00

Inv. 324.0

Inv. = 289.0

Existing 36" Pipe CuN

Inv. 293.0

Inv. 314.2

Unpaved

Paved

EMMELINE ROAD

Construct Unpaved Ditch Approx. 145 L.F.
Est. Quant.
Ditch Exc. = 142 c.y.

Construct Paved Ditch Approx. 26 L.F.
Est. Quant.
Ditch Exc. = ~~14~~ c.y. 19.3
Class C-1 Conc. = ~~3.4~~ c.y. 4.
Reinf. Steel = ~~77~~ lbs. 98

Construct Paved Ditch Approx. 76 L.F.
Est. Quant.
Ditch Exc. = 34 c.y.
Class C-1 Conc. = 7.0 c.y.
Reinf. Steel = 180 lbs.

Sta. 70+10 - Construct 1 Type "B" Catch Basin. Install 24" SSRCC Pipe ~~28~~ 26 L.F. & 1 C.H.W.
Est. Quantities:
Struct. Exc. = ~~23~~ c.y. 26
Class A-1 conc. = ~~6.4~~ c.y. 6.7
Class B-1 conc. = 1.4 c.y.
Reinforcing Steel = 137 lbs
1 Type "B" C.I. C.B. Frame & Cover.

Sta. 80+00 to Sta. 80+00 (S.L.)
Construct Wood Guard Rail W/Conc. Post
Approx. 1200 lin. ft.

Existing Chain Link Fence

Water Tank

Res.

Construct AC Pav't to Hawn Electric Sub-station with 4" Water-bound Mix No. III Surface Course & 1½" A.C. to grade to meet top of curb or edge of pav't at the roadway.

Hawaiian Electric Sub-Station.

End of pav't to be determined in the field by the Engineer.

Proposed Access Road (Work to be performed by others) Sta. 80+10

B.M. ELEV. = 356.18
Spike in Electric Pole #9 near House #2851 Emmeline Road. 14' Right of Sta. 81+00

B.M. ELEV. = 316.44
Spike in Electric Pole #5 opposite house #2781 Emmeline Road. 15' Right of Sta. 73+75

Ground Line

Filter Material

4" Tile Drain (See Elev. for spacing)

Class D-1 Concrete. Construction joints with key - 30'-0" o.c.

Edge of Pav't.

30'-0" to ℄

14'-0"

33'-0" to ℄

TYP. SEC. ~ CONC. RET. WALL
Scale ~ 1" = 10'-0"

Typical tile drain spacing

150'-0"

30'-0" o.c.

Const. Jts. 30'-0" o.c.

Beg. Ret. Wall ℄ Sta. 69+25

End Ret. Wall ℄ Sta. 70+75

El. 298.50

El. 307.50

4" Tile Drains

Bot. of Footing

ELEV. ~ CONC. RET. WALL
Scale ~ 1" = 50'-0"

G.R.P.

SECTION of SPILLWAY
Scale: 1/8" = 1'-0"

℄ P.C. Sta. 79+43.83

Profile of Finished Grade at Inside Edge of Pavements

Profile of Existing Ground at ℄ South Lane

Profile of Existing Ground at ℄ North Lane

+5.000%

+5.884%

℄ Sta. 75+00 B.V.C.

℄ Sta. 75+00 C.G.

℄ Sta. 77+00 E.V.C.

Inv. 320.0

Inv. 321.0

200' V.C.

Inv. 314.2

48" LS RCC Pipe

30" LS RCC Pipe

36" LS RCC Pipe

Inv. to be determined

Inv. 293.2

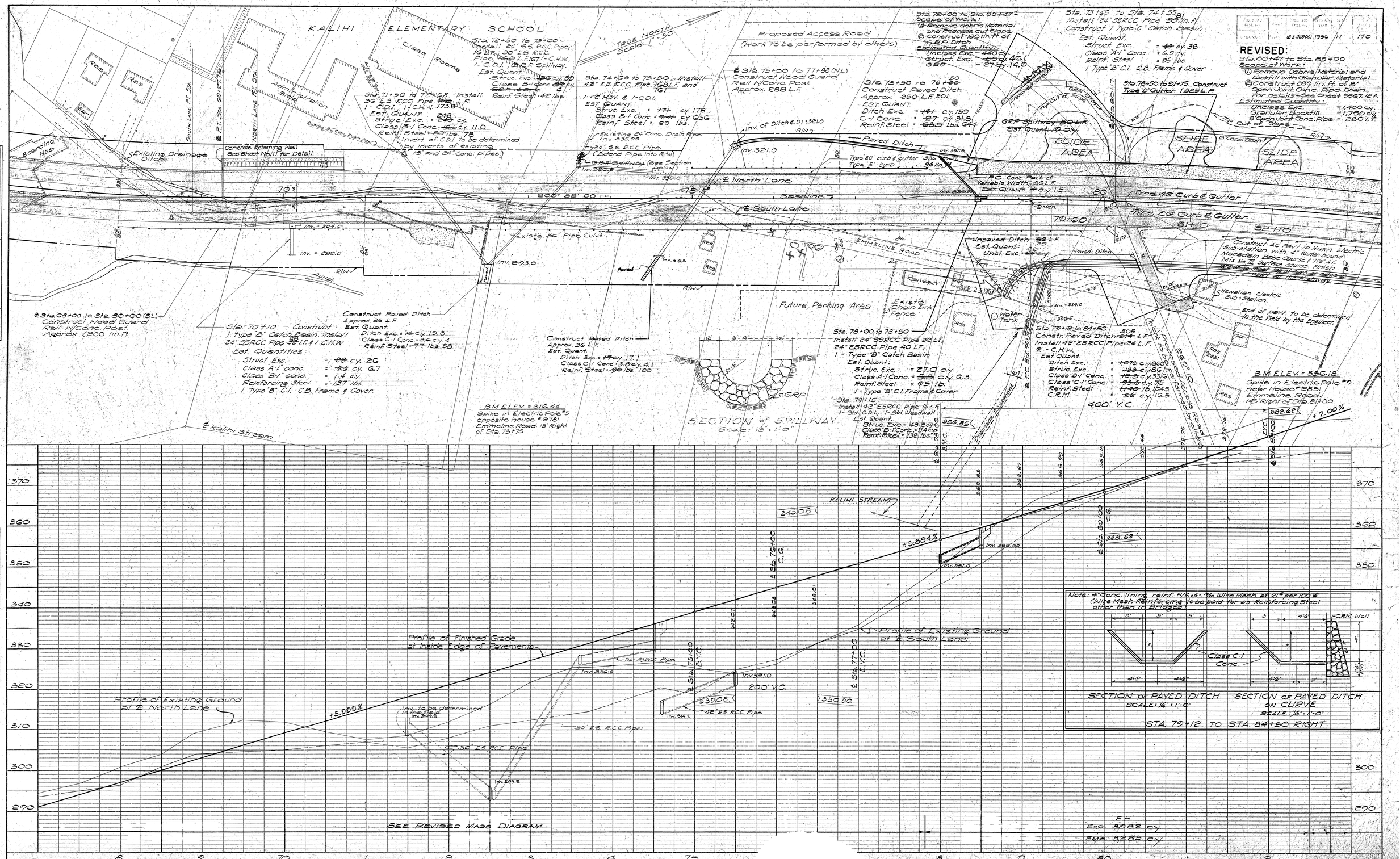
SEE PRECEDING SHEET FOR QUANTITIES

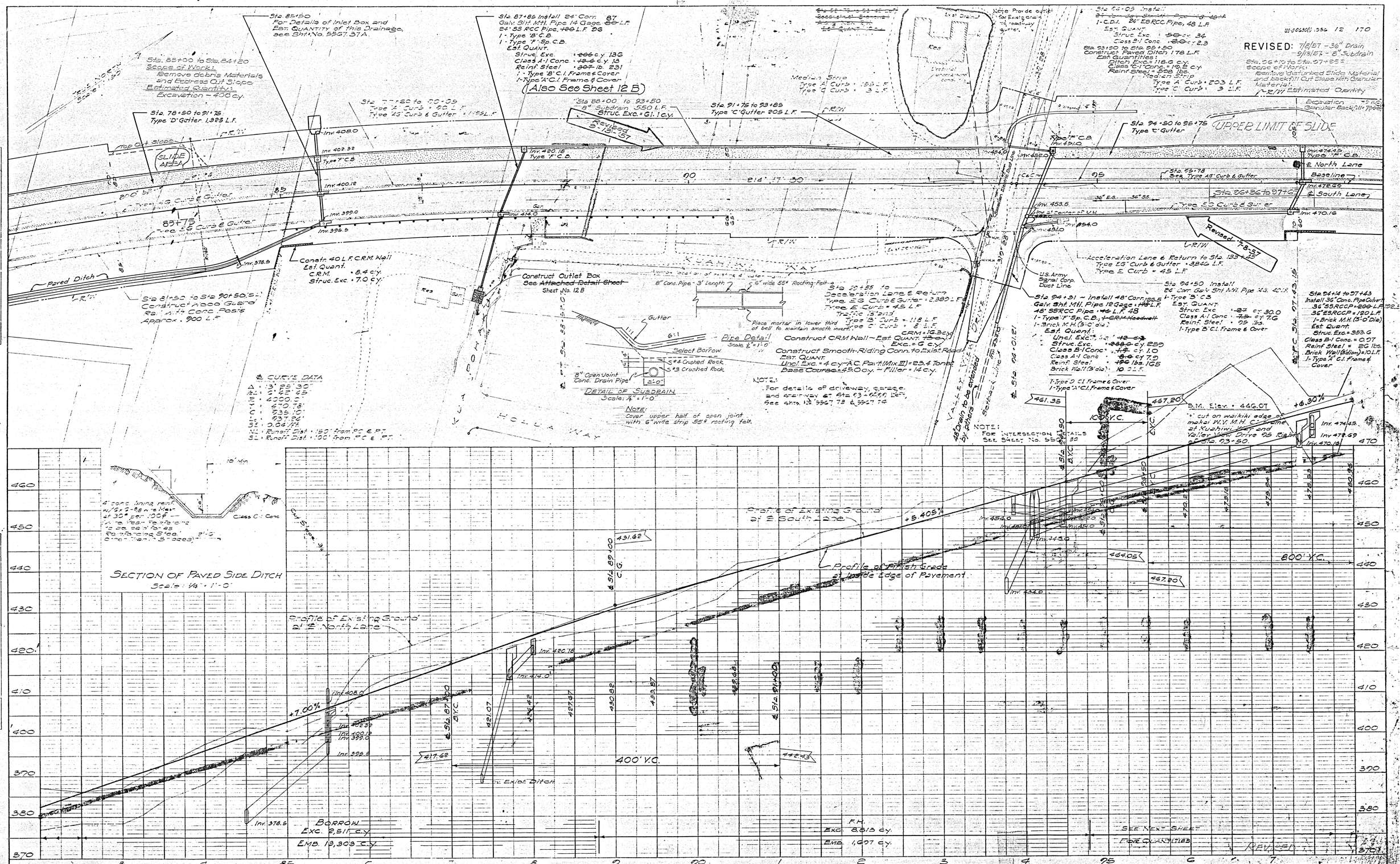
SEE D.H. SUMM.
EXC. = 2,330 C.Y.
EMB. = 24,150 C.Y.

F.H.
EXC. = 13,750 C.Y.
EMB. = 10,000 C.Y.

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

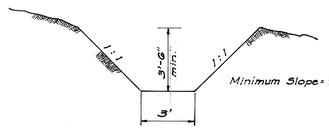
5567.11


KALIHI ELEMENTARY SCHOOL
Proposed Access Road
(Work to be performed by others)
TRUE NORTH Scale 1"=50'
Sta. 72+50 to 73+00 - Install 24" S.S. R.C.C. Pipe, 1G, 1 D.I., 30' L.S. R.C.C. Pipe, 1 Type 'L' I.C.H.W., 1 - C.D.I. & R.P. Spillway.
Est. Quant.
Struc. Exc. = 125 c.y. 50
Class B-1 Conc. = 30 c.y.
Reinf. Steel = 42 lbs.
Sta. 71+50 to 72+68 - Install 36" S.S. R.C.C. Pipe, 1 L.F. 1 - C.D.I., 1 C.H.W. 173.8
Est. Quant.
Struc. Exc. = 248 c.y.
Class B-1 Conc. = 46 c.y. 11.0
Reinf. Steel = 80 lbs. 78
(Invert of C.D.I. to be determined by inverts of existing 18" and 24" conc. pipes.)
Sta. 74+00 to 75+50 - Install 42" S.S. R.C.C. Pipe, 148 L.F. and 1G, 1 - C.H.W. & 1 - C.D.I.
Est. Quant.
Struc. Exc. = 77 c.y. 17.8
Class B-1 Conc. = 44 c.y. 0.96
Reinf. Steel = 60 lbs.
Existing 24" Conc. Drain Pipe Inv. 338.00
24" S.S. R.C.C. Pipe (Extend Pipe into R/W)
Sta. 73+65 to Sta. 74+55
Install 24" SSRCC Pipe 93 lin. ft.
Construct 1 Type 'C' Catch Basin
Est. Quant.
Struc. Exc. = 49 c.y. 38
Class A-1 Conc. = 6.0 c.y.
Reinf. Steel = 95 lbs.
1 Type 'B' C.I. C.B. Frame & Cover
Sta. 79+00 to Sta. 80+47
Scope of Work:
① Remove debris material and bedrock cut slope.
② Construct 180 lin. ft. of G.S.R. Ditch.
Estimated Quantity:
Unclass. Exc. - 440 c.y. 40.1
Struct. Exc. - 90 c.y.
G.S.R. - 27 c.y. 14.0
REVISED:
Sta. 80+47 to Sta. 85+00
Scope of Work:
① Remove debris material and backfill with Granular Material.
② Construct 280 lin. ft. of 8" Open Joint Conc. Pipe Drain. For details - See Sheet 5567.12 A
Estimated Quantity:
Unclass. Exc. = 1,400 c.y.
Granular Backfill = 1,750 c.y.
8" Open Joint Conc. Pipe = 280 l.f.
Sta. 75+50 to 76+50
Construct Paved Ditch
Approx. 350 L.F. 90.1
EST. QUANT.
Ditch Exc. = 191 c.y. 15.0
C-1 Conc. = 27 c.y. 31.8
Reinf. Steel = 635 lbs. 0.44
GRP Spillway 50 L.F.
Est. Quant. 1.0 c.y.
Sta. 78+50 to 81+75 Construct Type 'D' Gutter 1,325 L.F.
SLIDE AREA
Concrete Retaining Wall See Sheet No. 11 for Detail
Existing Drainage Ditch
℄ North Lane
℄ South Lane
Baseline
Type AG Curb & Gutter
Type EG Curb & Gutter
EMMELINE ROAD
Paved Ditch
Unpaved Ditch 90 L.F.
Est. Quant.: 22 c.y.
Uncl. Exc. = 42 c.y.
Construct AC Pavt. to Hawn. Electric Sub-station with 4" Water Bound Macadam Base Course & 1½" A.C. Mix No. III Surface Course. Finish grade to meet top of curb or pavement on the highway.
Hawaiian Electric Sub-Station.
End of pavt. to be determined in the field by the Engineer.
Existing 60" Pipe Culvert
Future Parking Area
Existing Chain Link Fence
Water Tank
Revised SEP 2 1957
Sta. 78+00 to 78+50
Install 24" SSRCC Pipe 32 L.F.
24" ESRCC Pipe 40 L.F.
1 - Type 'B' Catch Basin
Est. Quant.:
Struc. Exc. = 27.0 c.y.
Class A-1 Conc. = 5.3 c.y. 0.3
Reinf. Steel = 95 lbs.
1 - Type 'B' C.I. Frame & Cover
Sta. 79+15
Install 42" ESRCC Pipe 16 L.F.
1 - Std. C.D.I., 1 - Std. Headwall
Est. Quant.
Struc. Exc. = 43.5 c.y.
Class B-1 Conc. = 1.4 c.y.
Reinf. Steel = 138 lbs.
Sta. 79+12 to 84+50
Constr. Paved Ditch 505 L.F.
Install 42" ESRCC Pipe 24 L.F.
2 - C.H.W.
Est. Quant.
Ditch Exc. = 1,076 c.y. 600
Struc. Exc. = 183 c.y. 66
Class B-1 Conc. = 16.5 c.y. 33.0
Class C-1 Conc. = 93.8 c.y. 75
Reinf. Steel = 1,140 lb. 1,045
C.R.M. = 36 c.y. 16.5
400' Y.C.
Proposed Access Road (by others)
B.M. ELEV. = 356.18
Spike in Electric Pole #4 near House #2851 Emmeline Road. 145' Right of Sta. 81+00
382.62
+7.00%
Construct Paved Ditch Approx. 25 L.F.
Est. Quant.
Ditch Exc. = 14 c.y. 10.8
Class C-1 Conc. = 24 c.y. 4
Reinf. Steel = 77 lbs. 38
Sta. 70+10 - Construct 1. Type 'B' Catch Basin. Install 24" SSRCC Pipe 38 l.f. & 1 C.H.W.
Est. Quantities:
Struct. Exc. = 23 c.y. 20
Class A-1 conc. = 1.6 c.y. 0.7
Class B-1 conc. = 1.4 c.y.
Reinforcing Steel = 137 lbs
1 Type 'B' C.I. C.B. Frame & Cover.
Construct Paved Ditch Approx. 36 L.F.
Est. Quant.
Ditch Exc. = 17 c.y. 17.1
Class C-1 Conc. = 3.8 c.y. 4.1
Reinf. Steel = 90 lbs. 100
B.M. ELEV. = 316.44
Spike in Electric Pole #5 opposite house #2781 Emmeline Road. 15' Right of Sta. 73+75
℄ Sta. 63+00 to Sta. 80+00 (S.L.)
Construct Wood Guard Rail W/Conc. Post.
Approx. 1,200 lin. ft.
℄ Sta. 75+00 to 77+88 (N.L.)
Construct Wood Guard Rail W/Conc. Post.
Approx. 288 L.F.
℄ Kalihi Stream
SECTION of SPILLWAY
Scale: 1/8" = 1'-0"
Inv. 321.0
Inv. 330.0
Inv. = 289.0
Inv. 293.0
Inv. 324.0
Inv. 316.2
Inv. 338.80
Inv. 331.6
Inv. 321.0
Inv. 316.2
Inv. 320.2
Inv. 288.2
Inv. 293.2
Inv. 316.2
Profile of Finished Grade at Inside Edge of Pavements
Profile of Existing Ground at ℄ North Lane
Profile of Existing Ground at ℄ South Lane
+5.000%
+5.884%
Inv. to be determined in the field
36" E.S. R.C.C. Pipe
30" E.S. R.C.C. Pipe
42" E.S. R.C.C. Pipe
24" S.S. R.C.C. Pipe
KALIHI STREAM
34508
33508
350.00
200' V.C.
SEE REVISED MASS DIAGRAM
Note: 4" Conc. lining reinf. 4/6x6-10/10 Wire Mesh at 21# per 100 # (Wire Mesh Reinforcing to be paid for as Reinforcing Steel other than in Bridges.)
Class C-1 Conc.
Rock Wall
SECTION of PAVED DITCH SCALE: ½" = 1'-0"
SECTION of PAVED DITCH ON CURVE SCALE: ½" = 1'-0"
STA. 79+12 TO STA. 84+50 RIGHT
F.H.
Exc. 3,082 c.y.
Emb. 3,285 c.y.
PLATE 1 — PLAN-PROFILE O. P. R. & R. E. STANDARD
KEUFFEL & ESSER CO. NEW YORK
K & E Co. No. 146-IC
5567.11A


REVISED: 7/8/87 - 36" Drain
9/9/87 - 8" Subdrain
Sta. 86+00 to Sta. 97+85 ±
Scope of Work:
Remove disturbed Slide Material and backfill Cut Slope With Granular Material.
R/W estimated Quantity
Excavation ±7,100
Granular Backfill ±7,100
Sta. 85+50
For Details of Inlet Box and Est. Quantity of this Drainage, see Sht No. 5567.37A.
Sta. 87+85 Install 24" Corr. Galv. Sht. Mtl. Pipe 14 Gage, 87 L.F.
24" SS RCC Pipe, 96 L.F.
1 - Type "B" C.B.
1 - Type "F" Sp. C.B.
Est. Quant.
Struc. Exc. 136 c.y.
Class A-1 Conc. 13 c.y.
Reinf. Steel 831 lb.
1 - Type "B" C.I. Frame & Cover
1 - Type "A" C.I. Frame & Cover
(Also See Sheet 12 B)
Sta. 88+00 to Sta. 84+20
Scope of Work:
Remove debris Materials and Backfill Cut Slope
Estimated Quantity:
Excavation - 400 c.y.
Sta. 78+50 to 91+75
Type "D" Gutter 1,325 L.F.
Sta. 77+50 to 80+05
Type "A" Curb 53 L.F.
Type 2G Curb & Gutter 1,165 L.F.
Sta. 88+00 to 93+50
8" Subdrain 550 L.F.
Struc. Exc. 61.1 c.y.
Revised 9/8/87
Sta. 91+75 to 93+85
Type "C" Gutter 205 L.F.
Note: Provide outlet for Exist. drain to roadway gutter.
Sta. 84+05 Install
24" SS RCC Pipe, 48 L.F.
1 - C.D.I.
Est. Quant.
Struc. Exc. 34 c.y.
Class B-1 Conc. 2.3 c.y.
Sta. 93+50 to Sta. 98+50
Construct Paved Ditch 176 L.F.
Est. Quantities:
Ditch Exc. 118.6 c.y.
Class C-1 Conc. 19.8 c.y.
Reinf. Steel 598 lbs.
Median Strip
Type "A" Curb 203 L.F.
Type "C" Curb 3 L.F.
Median Strip
Type "A" Curb 155 L.F.
Type "C" Curb 3 L.F.
Sta. 94+50 to 96+75
Type "C" Gutter
UPPER LIMIT OF SLIDE
Top of Slope
SLIDE AREA
Inv. 408.0
Inv. 402.32
Inv. 400.12
Inv. 399.0
Inv. 398.5
Inv. 376.8
Inv. 420.18
Type "F" C.B.
Inv. 414.0
Inv. 454.0
Inv. 452.0
Inv. 474.43
Type "A" C.B.
℄ North Lane
Baseline
Inv. 472.66
Sta. 96+36 to 97+63
℄ South Lane
Sta. 95+78
See Type 4G Curb & Gutter
Type 2G Curb & Gutter
Inv. 453.6
Inv. 470.16
Inv. 454.0
Inv. 451.0
Revised 7/8/87
Acceleration Lane & Return to Sta. 133+25
Type 2G Curb & Gutter 384.6 L.F.
Type E Curb 45 L.F.
U.S. Army Signal Corp. Duct Line
Sta. 94+91 - Install 48" Corr. 66.5
Galv. Sht. Mtl. Pipe 12 Gage, 48 L.F.
48" SS RCC Pipe 46 L.F. 48
1 - Type "F" Sp. C.B.
1 - Brick M.H. (5'-0" dia.)
Est. Quant.
Unc. Exc. 12 c.y.
Struc. Exc. 250 c.y.
Class B-1 Conc. 1.0 c.y.
Class A-1 Conc. 7.0 c.y.
Reinf. Steel 165 lbs.
Brick M.H. (5' dia.) 10 L.F.
1 - Type D C.I. Frame & Cover
1 - Type "A" C.I. Frame & Cover
Sta. 94+50 Install
24" Corr. Galv. Sht. Mtl. Pipe 43. 40 L.F.
1 - Type "B" C.B.
Est. Quant.
Struc. Exc. 27 c.y. 30.0
Class A-1 Conc. 7.6 c.y. 7.6
Reinf. Steel 95 lbs.
1 - Type B C.I. Frame & Cover
Sta. 94+14 to 97+43
Install 36" Conc. Pipe Culvert
36" SS RCCP 290 L.F.
36" SS RCCP 120 L.F.
1 - Brick M.H. (5'-0" Dia.)
Est. Quant.
Struc. Exc. 353.6
Class B-1 Conc. 0.07
Reinf. Steel 20 lbs.
Brick Wall (8" diam.) 10 L.F.
1 - Type "A" C.I. Frame & Cover
Sta. 97+43.15
Sta. 93+50
Construct Outlet Box
See Attached Detail Sheet
Sheet No. 12 B
Construct Nodo Guard
Re. with Conc. Posts
Approx. 900 L.F.
Paved Ditch
Constr. 40 L.F. C.R.M. Wall
Est. Quant.
C.R.M. 8.4 c.y.
Struc. Exc. 7.0 c.y.
8" Conc. Pipe - 3' Length
6" wide 55# Roofing Felt
Sta. 20+85 to
Deceleration Lane & Return
Type 2G Curb & Gutter 2,389 L.F.
Type E Curb 45 L.F.
Type "C" 13 L.F.
Type "B" Curb 118 L.F.
Type "C" Curb 8 L.F.
CRM 16.3 c.y.
Place mortar in lower third of bell to maintain smooth invert.
Pipe Detail
Scale 1/2" = 1'-0"
Construct CRM Wall - Est. Quant. 73 c.y.
Exc. 6 c.y.
Construct Smooth-Riding Conn. to Exist. Road
Est. Quant.
Unc. Exc. 4 c.y. - A.C. Pav't (Mix III) 23.4 Tons
Base Course 450 c.y. - Filler 14 c.y.
Gutter
Select Borrow
8" Open Joint Conc. Drain Pipe
#4 Crushed Rock
#3 Crushed Rock
DETAIL OF SUBDRAIN
Scale: 1/4" = 1'-0"
Note:
Cover upper half of open joint with 6" wide strip 55# roofing felt.
NOTE:
For details of driveway, garage, and entrance way at Sta. 13+62.50 Lt., See shts. 12 & 5567.73 & 5567.74
NOTE:
For Intersection Details See Sheet No. 5567.30
Curves Data
Δ: 13° 55' 30"
Δ2: 21° 42' 45"
R: 4000.0'
T: 470.78'
C: 935.10'
L: 937.24'
S: 0.04/ft.
NL: Runoff Dist. 150' from P.C. & P.T.
SL: Runoff Dist. 100' from P.C. & P.T.
Section of Paved Side Ditch
Scale: 1/4" = 1'-0"
Profile of Existing Ground at ℄ South Lane
Profile of Finish Grade at Inside Edge of Pavement
Profile of Existing Ground at ℄ North Lane
+7.00%
+5.405%
+6.30%
800' V.C.
400' V.C.
Borrow
Exc. 2,811 c.y.
Emb. 19,303 c.y.
F.H.
Exc. 8,813 c.y.
Emb. 1,097 c.y.
See Next Sheet for Quantities
Revised
Plan
Profile
Surveyed
Plotted
Note Book
Alignment Checked
Rt. of Way Checked
Grades Checked
Structure Notes Checked
Date
By
No.
Plate 1 - Plan-Profile C.P.R. & R.E. Standard
Keuffel & Esser Co. New York
5567.121

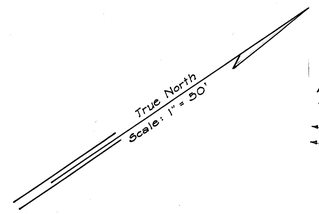
FED. ROAD DIST. No.	STATE	FED. AID PROJ. No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
HAWAII	HAW.	US-50-(230)	1957	128	170

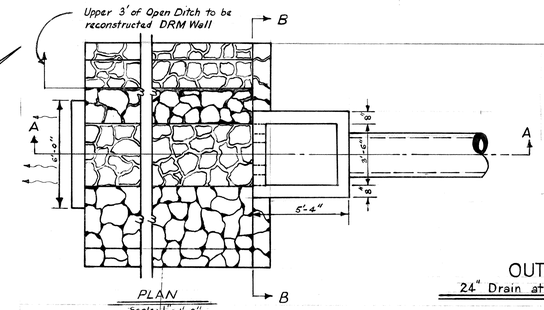
REVISED: 7/8/57 - 36" Drain
9/13/57 - 8" Subdrain.
10/23/57 - Collector Ditch



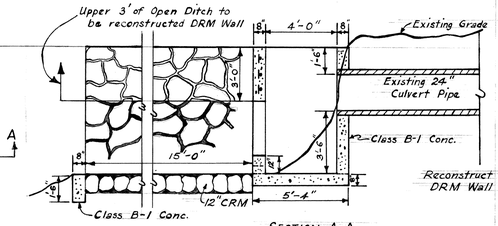
TYPICAL SECTION OF COLLECTOR DITCH

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



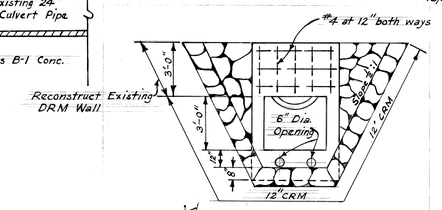


PLAN
Scale: 1/4" = 1'-0"

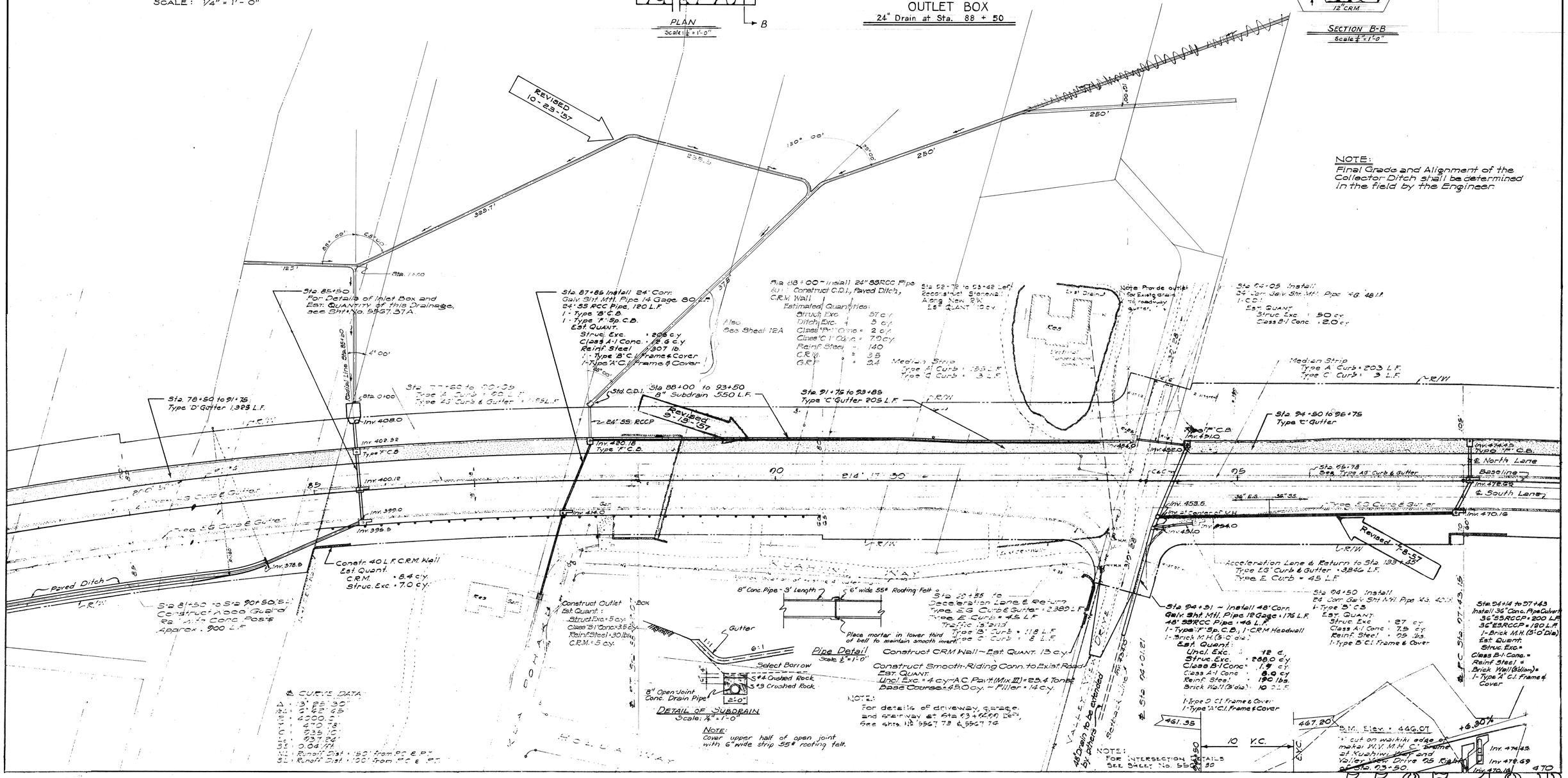


SECTION A-A
Scale 1/4" = 1'-0"

OUTLET BOX
24" Drain at Sta. 88 + 50



SECTION B-B
Scale 1/4" = 1'-0"


REVISED 10-23-57
Revised 9-13-57
Revised 7-8-57
Sta. 85+50 For Details of Inlet Box and Est. Quantity of this Drainage, see Sht. No. 55G7.37A.
Sta. 87+86 Install 24" Corr. Galv. Sht. Mtl. Pipe 14 Gage 80 L.F. 24" SS RCC Pipe, 120 L.F. 1-Type "B" C.B. 1-Type "F" Sp. C.B. Est. Quant. Struc. Exc. = 206 c.y. Class A-1 Conc. = 12.6 c.y. Reinf. Steel = 1,307 lb. 1-Type "B" C.I. Frame & Cover 1-Type "A" C.I. Frame & Cover
Sta. 88+00 - Install 24" SS RCC Pipe 40 L.F. Construct C.D.I., Paved Ditch, C.R.M. Wall. Estimated Quantities: Struct. Exc. = 57 c.y. Ditch Exc. = 5 c.y. Class "B-1" Conc. = 2 c.y. Class "C" Conc. = 7.0 c.y. Reinf. Steel = 140 C.R.M. = 3.5 G.R.P. = 2.4
Also See Sheet 12A
Sta. 78+50 to 91+75 Type "D" Gutter 1,325 L.F.
Sta. 88+00 to 93+50 8" Subdrain 550 L.F.
Sta. 91+75 to 93+85 Type "C" Gutter 205 L.F.
Sta. 94+50 to 96+75 Type "C" Gutter
Sta. 94+05 Install 24" Corr. Galv. Sht. Mtl. Pipe 46 L.F. 1-CC Est. Quant. Struc. Exc. = 50 c.y. Class B-1 Conc. = 2.0 c.y.
Sta. 94+91 - Install 48" Corr. Galv. Sht. Mtl. Pipe 12 Gage = 176 L.F. 48" SS RCC Pipe = 46 L.F. 1-Type "F" Sp. C.B., 1-CRM Headwall 1-Brick M.H. (5'-0" dia.) Est. Quant. Uncl. Exc. = 12 c.y. Struc. Exc. = 288.0 c.y. Class B-1 Conc. = 1.9 c.y. Class A-1 Conc. = 8.0 c.y. Reinf. Steel = 190 lbs. Brick Wall (8" dia.) = 10 L.F. 1-Type D C.I. Frame & Cover 1-Type "A" C.I. Frame & Cover
Sta. 94+50 Install 24" Corr. Galv. Sht. Mtl. Pipe 43 L.F. 1-Type "B" C.B. Est. Quant. Struc. Exc. = 27 c.y. Class A-1 Conc. = 7.9 c.y. Reinf. Steel = 95 lbs. 1-Type B C.I. Frame & Cover
Sta. 94+14 to 97+43 Install 36" Conc. Pipe Culvert 36" SS RCCP = 200 L.F. 36" SS RCCP = 190 L.F. 1-Brick M.H. (5'-0" Dia.) Est. Quant. Struc. Exc. = Class B-1 Conc. = Reinf. Steel = Brick Wall (8" dia.) = 1-Type "A" C.I. Frame & Cover
Sta. 81+50 to Sta. 90+50 (S.L.) Construct Guard Rail with Conc. Posts Approx. 900 L.F.
Construct 40 L.F. C.R.M. Wall Est. Quant. C.R.M. = 8.4 c.y. Struc. Exc. = 7.0 c.y.
Construct Outlet Est. Quant.: Struct. Exc. = 5 c.y. Class B1 Conc. = 3.5 c.y. Reinf. Steel = 30 lbs. C.R.M. = 5 c.y.
Construct C.R.M. Wall - Est. Quant. 13 c.y.
Construct Smooth-Riding Conn. to Exist. Road Est. Quant. Unc. Exc. = 4 c.y. A.C. Pav't (Mix III) = 23.4 Tons Base Course = 43.0 c.y. - Filler = 14 c.y.
Acceleration Lane & Return to Sta. 193+75 Type EG Curb & Gutter = 3,846 L.F. Type E Curb = 45 L.F.
Deceleration Lane & Return Type EG Curb & Gutter = 2,380 L.F. Type E Curb = 45 L.F. Traffic Island Type B Curb = 118 L.F. Type C Curb = 8 L.F.
Median Strip Type A Curb = 203 L.F. Type C Curb = 3 L.F.
Note: Provide outlet for Existing drain at roadway gutter.
Note: For details of driveway, garage, and stairway at Sta. 63+40.00 Lt., see shts. 11B 5567.73 & 5567.74
Note: For intersection details see sheet No. 55
Paved Ditch
Gutter
Select Borrow
8" Open Joint Conc. Drain Pipe
Pipe Detail Scale 1/2" = 1'-0"
DETAIL OF SUBDRAIN Scale: 1/4" = 1'-0"
Note: Cover upper half of open joint with 6" wide strip 55# roofing felt.
8" Conc. Pipe - 3' Length
6" wide 55# Roofing Felt
Place mortar in lower third of bell to maintain smooth mark
Curves Data
Note: Final Grade and Alignment of the Collector Ditch shall be determined in the field by the Engineer.
Baseline
℄ North Lane
℄ South Lane
Type "F" C.B.
Type "A" C.B.
Type "B" C.B.
Type EG Curb & Gutter
Type AG Curb & Gutter
Type E Curb
Type C Curb
Type D Gutter
Type C Gutter
Type "F" Sp. C.B.
Type "B" C.B.
Type "A" C.B.
Inv. 408.0
Inv. 402.32
Inv. 400.18
Inv. 399.0
Inv. 396.5
Inv. 378.5
Inv. 430.18
Inv. 414.0
Inv. 453.5
Inv. 470.16
Inv. 474.43
Inv. 478.69
Inv. 470.16
Inv. 461.35
Inv. 467.20
B.M. Elev. = 446.07
+6.30%
10 V.C.
Sta. 78+50
Sta. 81+50
Sta. 85+50
Sta. 87+86
Sta. 88+00
Sta. 91+75
Sta. 93+50
Sta. 94+05
Sta. 94+50
Sta. 94+91
Sta. 96+75
Sta. 97+43
Sta. 193+75
Sta. 194+50
Sta. 195+85
Sta. 196+50
Sta. 197+50
Sta. 198+50
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Sta. 214+50
Sta. 215+50
Sta.

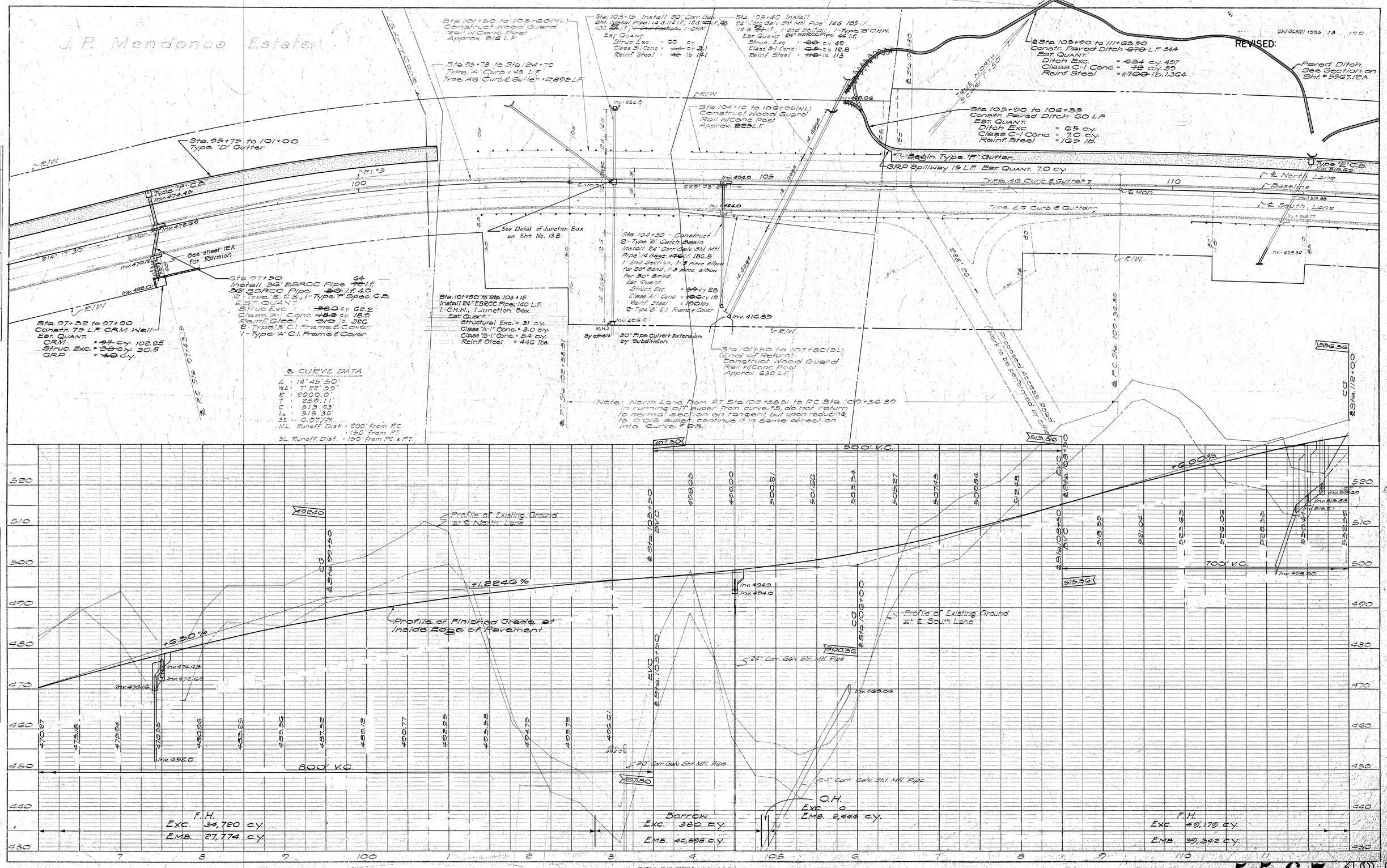


PLATE 1 — PLAN-PROFILE D.P.R. & R.E. STANDARD

KEUFFEL & ESSER CO., NEW YORK.

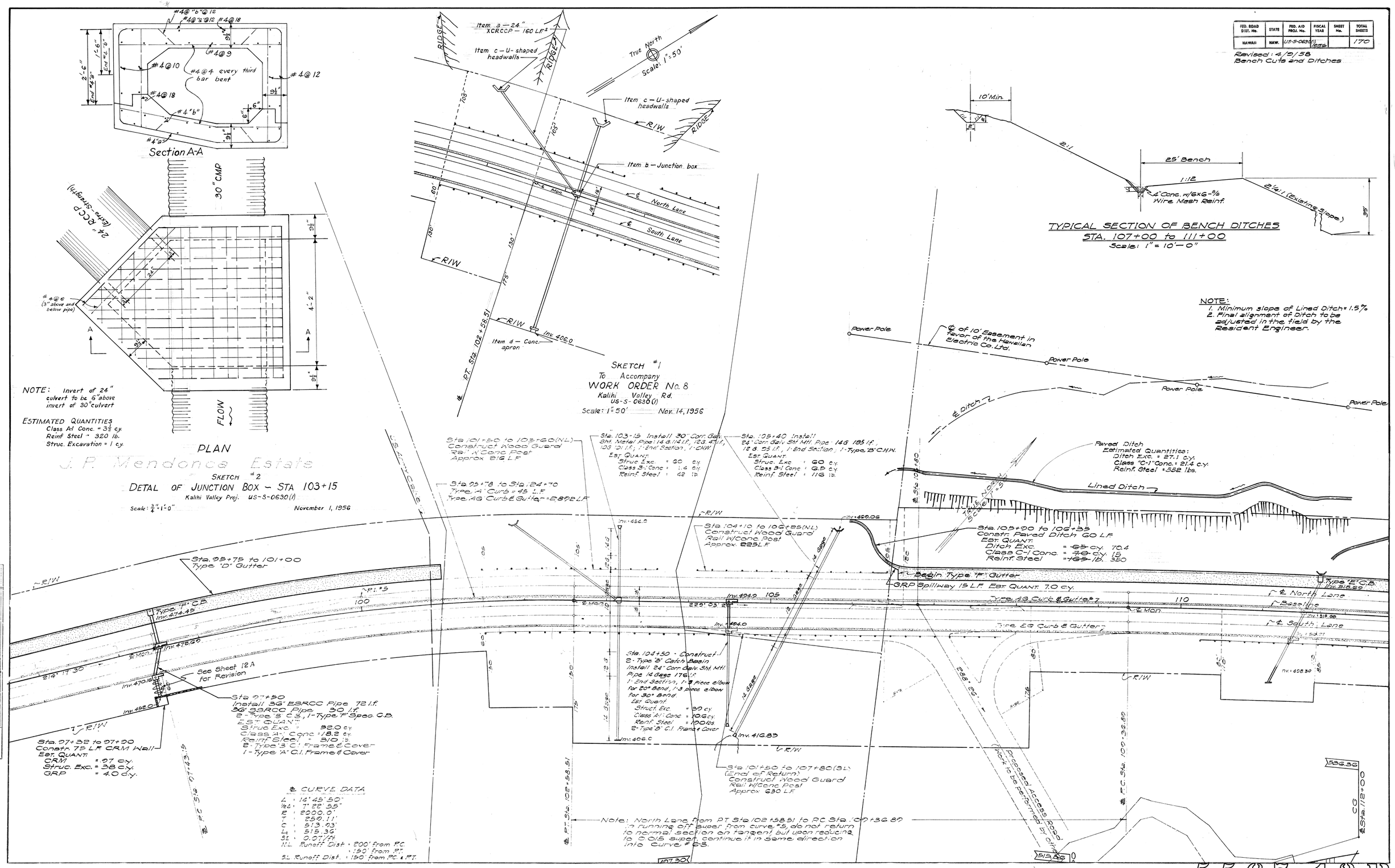
K & E Co. No. 34 6-1C

5567.13A

MARCH 1957

FED. ROAD DIST. No.	STATE	FED. AID PROJ. No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
HAWAII	HAW.	US-S-0630(1)	1956		170

Revised: 4/2/58
Bench Cuts and Ditches



5567.13 B

FED. ROAD DIST. No.	STATE	FED. AID PROJ. No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
HAWAII	HAW.	BRS-0630(2)	1986	14	170

Sta. 111+70 ~ For Details and Quantities of Storm Drain, See Sheet No. 5567.39

Sta. 111+76.50 to 115+08.50
Const. 320 L.F. Paved Ditch
EST. QUANT.
Ditch Exc. = 493 c.y.
Class C-1 conc. = 38.0 c.y.
Reinf. Steel = 900 lbs.

Sta. 115+15 ~ For Details and Quantities of Storm Drain, See Sheet No. 5567.40

Sta. 115+21.50 to 118+73.50
Constr. 320 L.F. Paved Ditch
EST. QUANT.
Ditch Exc. = 391 c.y.
Class C-1 conc. = 38.0 c.y.
Reinf. Steel = 900 lbs.

TRUE NORTH SCALE 1"=50'

Sta. 118+80 ~ For Details and Quantities of Storm Drain, See Sheet No. 5567.41

Sta. 118+86.50 to 121+85
Const. 240 L.F. Paved Ditch
EST. QUANT.
Ditch Exc. = 235 c.y.
Class C-1 Conc. = 25.0 c.y.
Reinf. Steel = 600 lbs.

Sta. 121+75 ~ Install 24" Corr. Galv. Sht. Mtl. Pipe 14 Gage 1-C.H.W., 1-End Section
EST. QUANT.
Struc. Exc. = 180 c.y.
Class B-1" Conc. = 1.4 c.y.
Reinf. Steel = 42 lbs.

Approximate Boundary of Halau

300' Approx.

Sta. 121+30 to 122+35
Construct Wood Guard Rail W/Conc. Post
Approx. 105 lin. ft.

New location of Boulder No. 2

New location of Boulder No. 1

Pile of Stones

Boulder No. 2

Boulder No. 1

D.R.M. Ditch

Drainage Stream

Paved Ditch

Inv. 528.0

Inv. 544.0

Inv. 485.0

Inv. 330.50

Inv. 339.90

Inv. 318.09

Inv. 550.30

Inv. 555.5

Inv. 520.05

Inv. 573.50

Inv. 567.0

Inv. 562.70

Inv. 529.31

Inv. 525.30

Inv. 518.80

Inv. 537.20

Inv. 533.62

Inv. 528.80

Inv. 513.27

Inv. 478.30

Inv. 500.0

Inv. 472.7

P.I. #68

℄ North Lane

℄ South Lane

Baseline

Type "A3" Curb & Gutter

Type "E6" Curb & Gutter

℄ Mon.

R/W

Sta. 114+60 to 117+00
Construct Wood Guard Rail W/Conc. Post
Approx. 240 lin. ft.

Sta. 118+40 to 119+10
Construct Wood Guard Rail W/Conc. Post
Approx. 70 lin. ft.

Sta. 121+10 to 122+60
Construct Wood Guard Rail W/Conc. post.
Approx. 150 lin. ft.

Demolish Existing C.R.M. Intake (Incidental to Und. Exc.)

B.M. ELEV. = 488.07
"X" on Conc. Pav't

KUI PL.

IKAHO PL.

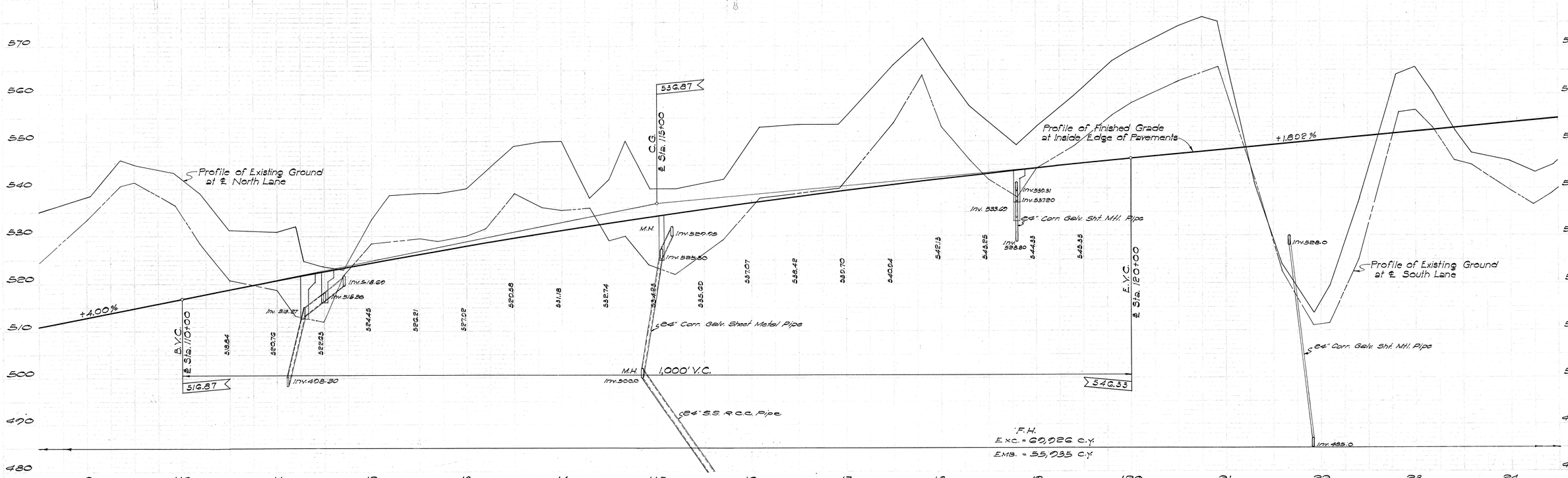
℄ P.C. Sta. 109+36.59

℄ P.T. Sta. 123+60.88

REVISED
SEE NEXT SHEET

℄ CURVE DATA

Δ	= 13° 40' 40"
P.I. Δ	= 9° 50' 20"
R	= 6000'
T	= 719.59'
C	= 1428.95'
L.C.	= 1428.33'
S.E.	= 0.015'/ft.
N.L. Runoff Dist.	= 100'
S.L. Runoff Dist.	= 0



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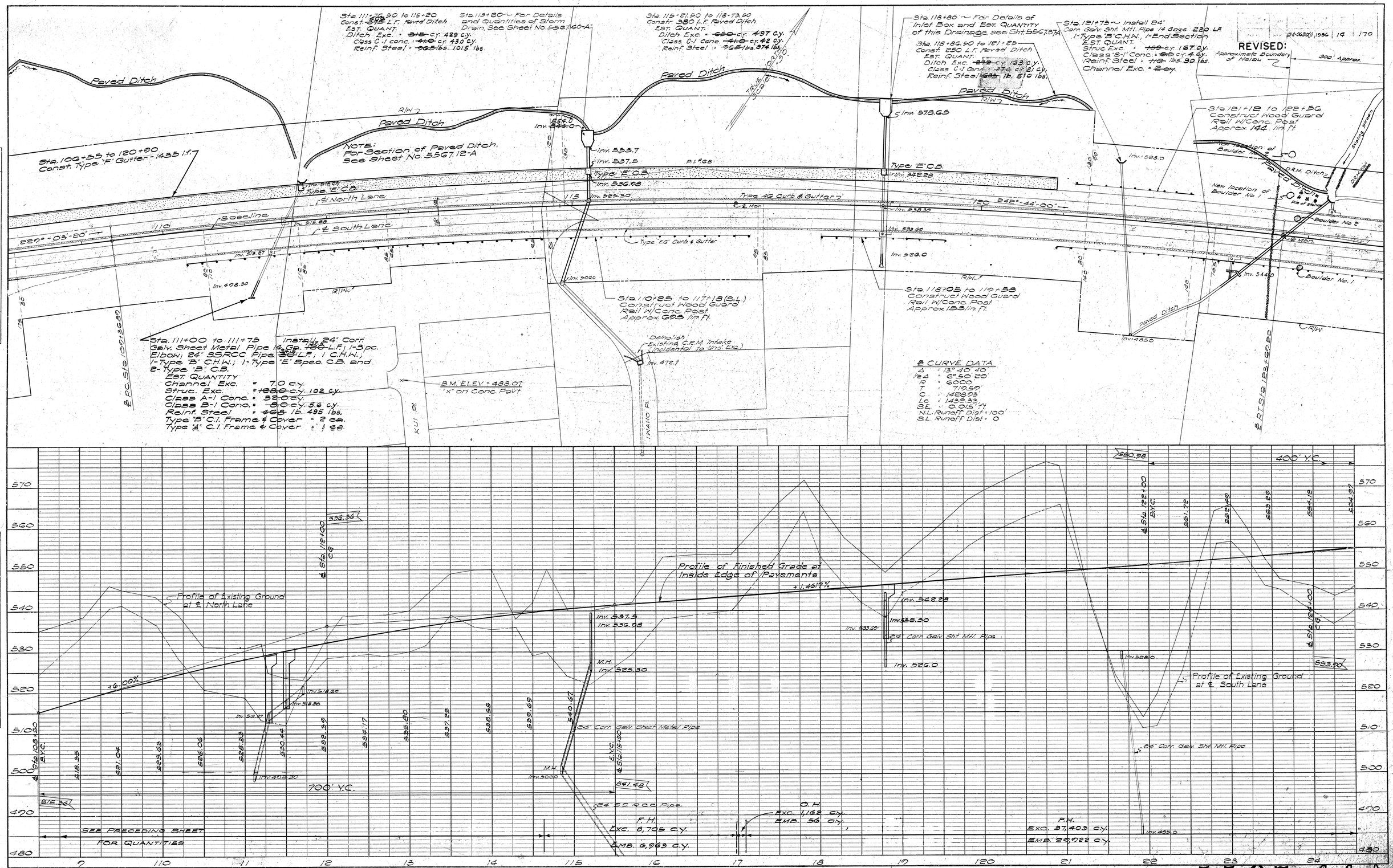


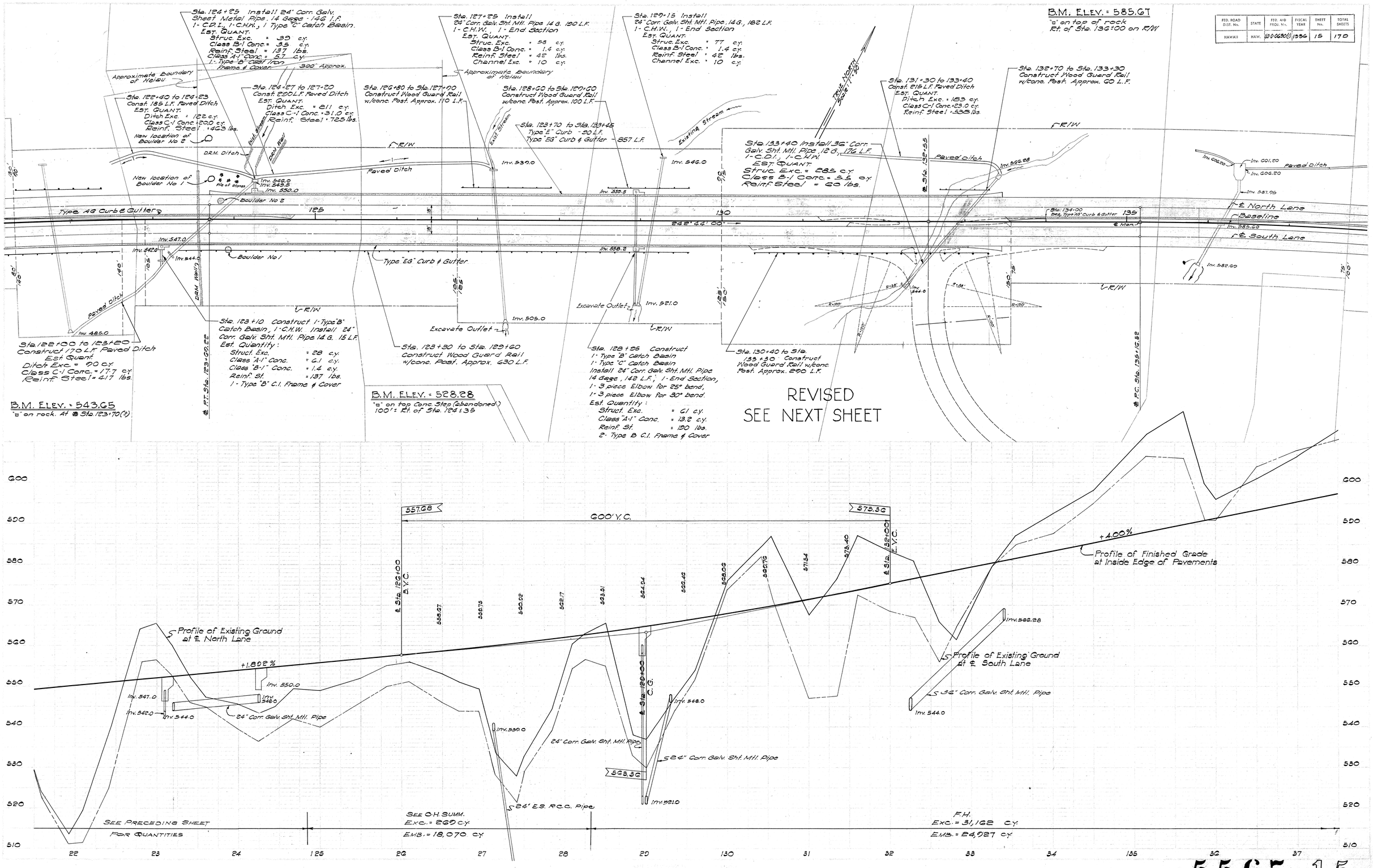
PLATE 1 – PLAN-PROFILE O. P. R. & R. E. STANDARD
KEUFFEL & ESSER CO., NEW YORK.

K & E Co. No. 346-IC
"IMPERIAL" TRACING CLOTH 47633

5567.14A

I-00

FED. ROAD DIST. No.	STATE	FED. AID PROJ. No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
HAWAII	HAW.	BR-5-(4)200(1)	1956	15	170



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STATE	DISTRICT	FEDERAL AID PROJECT	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	10A	U5-S-0530(1)	1966	15	170

REVISED:

Sta. 124+25 Install 24" Corn. Galv. Sheet Mtl. Pipe, 14 Gage ~~14 G L.F.~~ 157, 24" SSRCO Pipe 12 L.F. 1-Type "B" C.H.W.-C.H.W., 1 Type "C" Catch Basin.
EST. QUANT.
Struc. Exc. = ~~46~~ c.y. 52 c.y.
Class B-1 Conc = ~~31~~ c.y. 3.5 c.y.
Reinf. Steel = ~~833~~ lbs. 245 lbs.
Class A-1 Conc. = ~~6.5~~ c.y. ~~6.4~~ c.y.
1-Type "B" ~~CBF~~ Iron Frame & Cover

Approximate Boundary of Helau

Sta. 122+50 to 124+20 Const. 180 L.F. Paved Ditch
EST. QUANT.
Ditch Exc. = ~~170~~ c.y. 129 c.y.
Class C-1 Conc ~~220~~ c.y. 18.0 c.y.
Reinf. Steel = ~~462~~ lbs. 435 lbs.

Sta. 124+27 to 127+20 Const. 290 L.F. Paved Ditch
EST. QUANT.
Ditch Exc. = ~~411~~ c.y. 226 c.y.
Class C-1 Conc = ~~31.6~~ c.y. 31.6 c.y.
Reinf. Steel = ~~725~~ lbs. 700 lbs.

Sta. 126+80 to Sta. 127+70 Construct Wood Guard Rail w/conc. Post. Approx. 110 L.F.

Sta. 127+25 Install Pat. Corn. Galv. Sht. Mtl. Pipe 14 G. ~~150~~ 186 L.F. 1-Type "B" C.H.W. ~~1-End Section~~
EST. QUANT.
Struc. Exc. = ~~64~~ c.y. 40 c.y.
Class B-1 Conc. = ~~6.5~~ c.y. 6.3 c.y.
Reinf. Steel = ~~116~~ lbs. 162 lbs.
Channel Exc. = 10 c.y.

Approximate Boundary of Helau

Sta. 128+70 to Sta. 130+78 Construct Wood Guard Rail w/conc. Post. Approx. 108 L.F.

Sta. 129+15 Install 24" Corn. Galv. Sht. Mtl. Pipe, 14 G., 174 L.F. 1-Type "B" C.H.W., 1-End Section
EST. QUANT.
Struc. Exc. = ~~42~~ c.y. 41 c.y.
Class B-1 Conc. = ~~6.5~~ c.y. 5.5 c.y.
Reinf. Steel = ~~116~~ lbs. 102 lbs.
Channel Exc. = ~~10~~ c.y.

Sta. 120+35 to 120+80 Const. Paved Ditch 50 L.F.
EST. QUANT.
Ditch Exc. = ~~30~~ c.y. 53 c.y.
Reinf. Steel = ~~160~~ lbs. 203 lbs.

Sta. 123+70 to Sta. 120+90 Type "E" Curb 90 L.F. Type "EG" Curb & Gutter 510 L.F.

Sta. 133+00 Install 36" Corr. Galv. Sht. Mtl. Pipe, 12 Ga. ~~76 L.F.~~ 134 L.F. ~~36" SSRC Pipe 38 L.F.~~ 1-Type "B" C.H.W., 1-C.U.W.
EST. QUANT.
Struc. Exc. = ~~330~~ c.y. 220 c.y.
Class B-1 Conc. = ~~10.7~~ c.y. 11.4 c.y.
Reinf. Steel = ~~180~~ lbs. 187 lbs.
~~GRP Spillway 15 L.F. Est. Quant. 7.0 c.y.~~

Sta. 131+35 to 133+60 Const. 240 L.F. Paved Ditch
EST. QUANT.
Ditch Exc. = ~~270~~ c.y. 373 c.y.
Class C-1 Conc. = ~~20.0~~ c.y. 25 c.y.
Reinf. Steel = ~~612~~ lbs. 600 lbs.

Sta. 132+75 to Sta. 134+19 Construct Wood Guard Rail w/Conc. Post. Approx. 144 L.F.

Construct GRP Spillway
Est. Quant.
G.R.P. = 5 c.y.

Sta. 120+00 to 136+00 Type "E" Gutter = 610 l.f. P.C. Conc. Pav't. of Variable Width = 4.5 l.f.
EST. QUANT.
Class A-1 Conc. = 2.5 c.y.

B.M. ELEV. = 585.67
"a" on top of rock
Rt. of Sta. 136+00 on R/W

B.M. ELEV. = 543.65
"b" on rock. At ℄ Sta. 123+70(?)

B.M. ELEV. = 528.28
"a" on top Conc. Step (abandoned) 100' ± Rt. of Sta. 124+35

Sta. 122+00 to 123+60 Construct ~~150~~ L.F. Paved Ditch
Est. Quant.
Ditch Exc. = ~~90~~ c.y. 85 c.y.
Class C-1 Conc. = ~~17.7~~ c.y. 16.5 c.y.
Reinf. Steel = ~~417~~ lbs. 334 lbs.

Sta. 123+10 Construct 1-Type "B" Catch Basin, 1-C.H.W. Install 24" Corr. Galv. Sht. Mtl. Pipe 14 G. ~~15 L.F.~~ 22 L.F.
Est. Quantity:
Struct. Exc. = ~~28~~ c.y. 24 c.y.
Class "A-1" Conc. = ~~7.0~~ c.y. 6.8 c.y.
Class "B-1" Conc. = ~~3.0~~ c.y. 2.7 c.y.
Reinf. St. = ~~187~~ lbs. 95 lbs.
1-Type "B" C.I. Frame & Cover

Sta. 120+95 to Sta. 129+60 Construct Wood Guard Rail w/conc. Post. Approx. 865 L.F.

Sta. 128+55 Construct 1-Type "B" Catch Basin
Install 24" Corr. Galv. Sht. Mtl. Pipe 14 Gage ~~12.5~~ 12.5 L.F., 1-End Section, 1-3 piece Elbow for 25° bend, 1-3 piece Elbow for 30° bend.
Est. Quantity:
Struct. Exc. = ~~111~~ c.y. 11.0 c.y.
Class "A-1" Conc. = ~~6.2~~ c.y. 6.9 c.y.
Reinf. Steel = 95 lbs.
1-Type "B" C.I. Frame & Cover

Construct Paved Ditch
Est. Quant.
Ditch Exc. = 503
Class C1 Conc. 28.8
Steel = 388

Sta. 130+40 to Sta. 134+18 Construct Wood Guard Rail w/conc. Post. 378 L.F.

Grouted Rubble Paving on Fill Slope
EST. QUANT. ~~80~~ c.y. 16.1 c.y.

Unpaved Ditch ~~530~~ L.F.
Est. Quant.
Uncl. Exc. = ~~45.0~~ c.y. 72.0 c.y.

G.R.P. Spillway 15 L.F.
EST. QUANT. ~~7.0~~ c.y.
GRP = 4.2 c.y.
EXC. = 8 c.y.

Concrete Outlet Box

Moved 12.5' Mauka

Excavate Outlet

Construct Outlet Box (See attached sheet) detail below
C.R.M. = 4.78 c.y.

Excavate Inlet

Type "EG" Curb & Gutter

Type "AG" Curb & Gutter

Paved Ditch

Unpaved Ditch

Existing Stream

Exist. Stream

Exist. Wall

Emergency Exit

Rcc. Pavt. (2 c.y.)

Inv. 485.0 — Inv. 547.0 — Inv. 542.0 — Inv. 544.0 — Inv. 550.0 — Inv. 549.0 — Inv. 546.0 — Inv. 530.0 — Inv. 505.0 — Inv. 521.0 — Inv. 538.2 — Inv. 571.0 — Inv. 675.0 — Inv. 541.0 — Inv. 581.70 — Inv. 598.0

Pile of Stone — Boulder No 1 — Boulder No 2 — New location of Boulder No 1 — New location of Boulder No 2

℄ North Lane — Baseline — ℄ South Lane — U.S. ARMY SIGNAL CORP. DUCT LINE

℄ Mon. — 22° 22' 00"

R/W

℄ P.T. Sta. 123+00.22 — ℄ P.C. Sta. 135+12.52

SEE PRECEDING SHEET FOR QUANTITIES

BORROW
EXC. = 0
EMB. = 2,565 C.Y.

24" E.S. R.C.C. Pipe
O.H.
EXC. = 705 C.Y.
EMB. = 9,612 C.Y.

F.H.
EXC. = 51,337 C.Y.
EMB. = 28,068 C.Y.

PLAN

OUTLET BOX DETAIL — SECTION A-A

Note: If C.R.M. is used in place of B-1 Concrete, increase Wall and Slab thickness to 12"

Lakeline Highway U5-S-0530(1)

PROFILE

600' Y.C. — 400' Y.C. — 900' Y.C.

Profile of Existing Ground at ℄ North Lane

Profile of Finished Grade at Inside Edge of Pavements

Profile of Existing Ground at ℄ South Lane

+1.46 17%

+1.800%

-6.60%

24" Corr. Galv. Sht. Mtl. Pipe

Inv. 550.0 — Inv. 547.0 — Inv. 546.0 — Inv. 542.0 — Inv. 544.0 — Inv. 538.0 — Inv. 532.0 — Inv. 521.0 — Inv. 571.0 — Inv. 541.0

Fill Slope — Existing Stream — C.R.M. — 3" cuft Filter Material

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

K & E Co. No. 348-IC
"IMPERIAL" TRACING CLOTH 47633

5567.15A

FED. ROAD DIST. No.	STATE	FED. AID PROJ. No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
HAWAII	HAW.	US-S-0630(1)	1966	16	170

Sta. 135+85 to 136+25
Construct 55 L.F. Paved Ditch
Est. Quant.
Ditch Exc. = 25 c.y.
Class C-1 Conc. = 3.8 c.y.
Reinf. Steel = 138 lbs.

Sta. 136+20 For details and quantities of Storm Drain, See Sheet No. 5567.42

Sta. 136+45 to 141+45
Construct 525 L.F. Paved Ditch.
Est. Quant.
Ditch Exc. = 352 c.y.
Class C-1 Conc. = 55.0 c.y.
Reinf. Steel = 1,313 lbs.

H.E.Co. Electric Line

R/W

NEW FOREST RESERVE BOUNDARY

R/W

Paved Ditch

Inv. 601.20
Inv. 600.20
Inv. 587.75

Sta. 133+55 to Sta. 141+45.37
Type AG Curb & Gutter = 745 L.F.
Type A Curb = 45 L.F.

P.I. 87.B

140

℄ Mon.

℄ North Lane
Baseline
℄ South Lane

135

Inv. 585.60

Inv. 582.60

U.R/W

S23° 44' 00" E

S25° 11' 30" E

TO PROPOSED KALIHI TUNNEL

OLD FOREST RESERVE BOUNDARY

True North
Scale: 1" = 50'

Sta. 141+00 to 141+45.37
Construct Wood Guard Rail W/ Conc. Post
Approx. 45 L.F.

Sta. 141+45.37
END OF PROJ. No. US-S-0630(1)
END OF CONTRACT

P.T. Sta. 142+46.68

P.C. Sta. 135+16.52

Install F.A. Marker
US-S-0630(1)

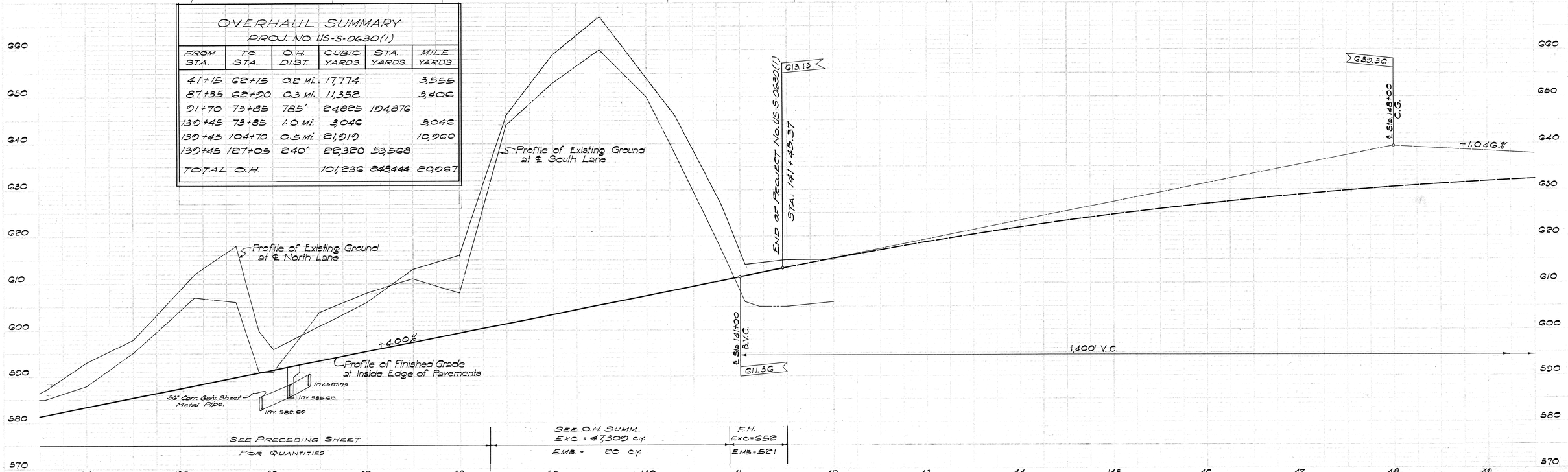
REVISED
SEE NEXT SHEET

CURVE DATA

Δ	10°27'30"
½Δ	5°13'45"
R	4,000.0
T	366.08'
C	729.12'
L_c	730.13'
S.L.	0.04 1/ft.
N.L. Runoff	150'
S.L. Runoff	100'

OVERHAUL SUMMARY
PROJ. NO. US-S-0630(1)

FROM STA.	TO STA.	O.H. DIST.	CUBIC YARDS	STA. YARDS	MILE YARDS
41+15	62+15	0.2 Mi.	17,774		3,555
87+35	62+50	0.3 Mi.	11,352		3,406
91+70	73+85	785'	24,825	194,876	
130+45	73+85	1.0 Mi.	3,046		3,046
130+45	104+70	0.5 Mi.	21,910		10,960
130+45	127+05	240'	22,320	53,568	
TOTAL O.H.			101,236	248,444	20,967



GENERAL NOTES

1. All Manholes within the roadway prism shall be adjusted to new grades as directed by the Engineer.
2. Location of Underground Utilities shown on the plans are approximate only. Contractor shall verify locations of same.
3. Top slab of Catch Basin shall be sloped to the finished grades of sidewalk, shoulder or median strip.
4. Concrete Curb Transition where type of curb changes or where curb is adjacent to Catch Basins shall be not less than 10'-0"
5. Location and Invert of Drainage Structures shall be adjusted to meet field Conditions.
6. All Buildings shall be demolished by the Contractor as incidental to Unclassified Excavation.
7. Azimuths referred to Makaweo Δ.
8. Bench Marks referred to mean sea level datum.

5567.16