

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0340(005)	2020	15	44

TRUE NORTH
SCALE : 1" = 40'

BEGIN PROJECT
Fed. Aid Proj. No. STP-0340(005)
Sta. (-)3+41.16

Sta. -1+00 LT. TO Sta. 3+66.67 LT.

Demolish and remove existing guardrail and install new Trailing-End Anchorage System 1 Each and approach terminal SoftStop 1 Each and new guardrail Type (MGS) W-Beam with spacer block and post 400 LF.

CURVE DATA

$\Delta = 08^{\circ}24'00''$
 $\Delta/2 = 04^{\circ}12'00''$
 $R = 538.84$
 $T = 39.57$
 $C = 78.93$
 $Lc = 79.00$

CURVE DATA

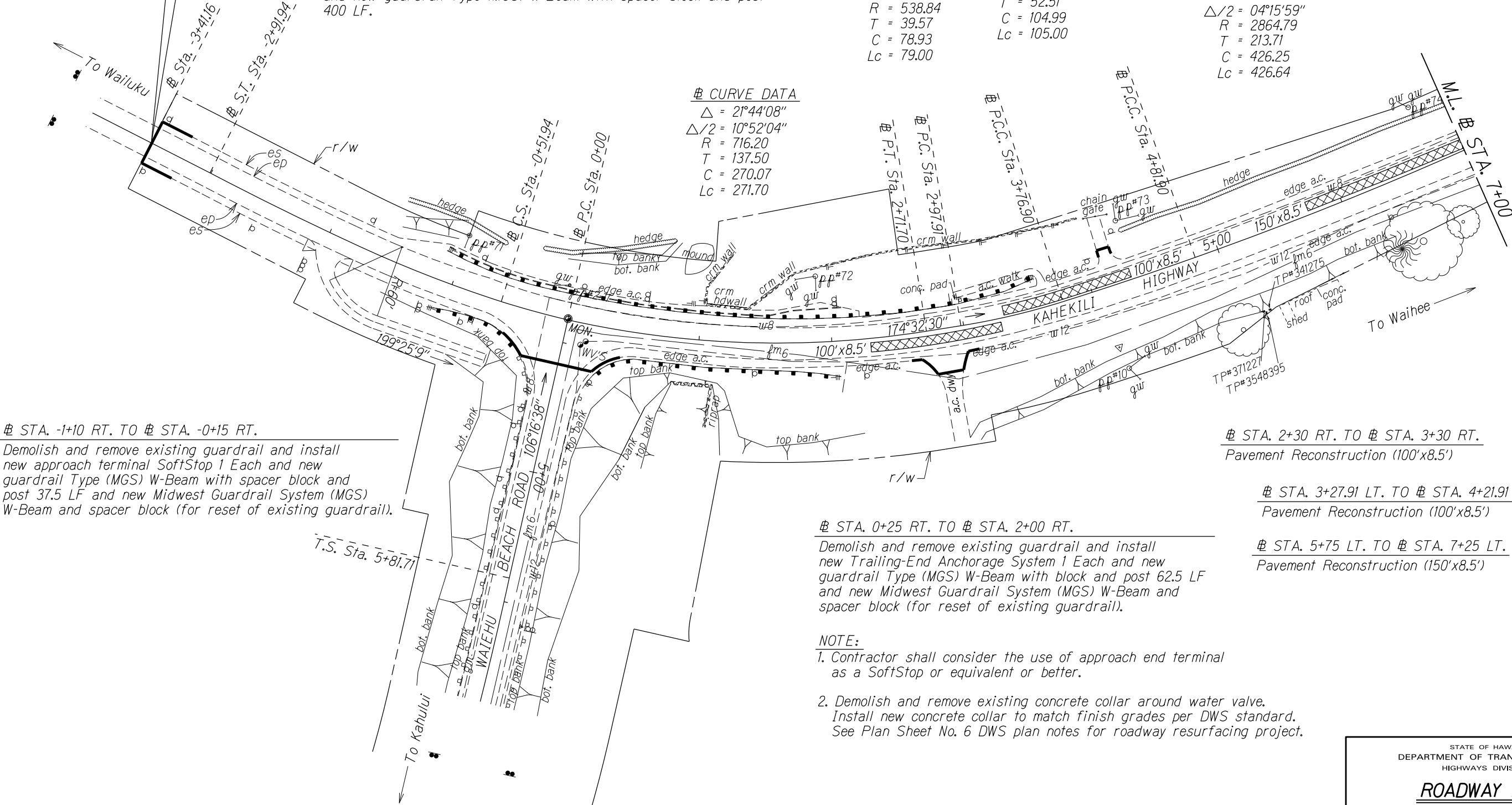
$\Delta = 02^{\circ}06'00''$
 $\Delta/2 = 01^{\circ}03'00''$
 $R = 2864.79$
 $T = 52.51$
 $C = 104.99$
 $Lc = 105.00$

CURVE DATA

$\Delta = 08^{\circ}31'58''$
 $\Delta/2 = 04^{\circ}15'59''$
 $R = 2864.79$
 $T = 213.71$
 $C = 426.25$
 $Lc = 426.64$

CURVE DATA

$\Delta = 21^{\circ}44'08''$
 $\Delta/2 = 10^{\circ}52'04''$
 $R = 716.20$
 $T = 137.50$
 $C = 270.07$
 $Lc = 271.70$



Sta. -1+10 RT. TO Sta. -0+15 RT.

Demolish and remove existing guardrail and install new approach terminal SoftStop 1 Each and new guardrail Type (MGS) W-Beam with spacer block and post 37.5 LF and new Midwest Guardrail System (MGS) W-Beam and spacer block (for reset of existing guardrail).

Sta. 2+30 RT. TO Sta. 3+30 RT.

Pavement Reconstruction (100'x8.5')

Sta. 3+27.91 LT. TO Sta. 4+21.91 LT.

Pavement Reconstruction (100'x8.5')

Sta. 5+75 LT. TO Sta. 7+25 LT.

Pavement Reconstruction (150'x8.5')

Sta. 0+25 RT. TO Sta. 2+00 RT.

Demolish and remove existing guardrail and install new Trailing-End Anchorage System 1 Each and new guardrail Type (MGS) W-Beam with block and post 62.5 LF and new Midwest Guardrail System (MGS) W-Beam and spacer block (for reset of existing guardrail).

NOTE:

- Contractor shall consider the use of approach end terminal as a SoftStop or equivalent or better.
- Demolish and remove existing concrete collar around water valve. Install new concrete collar to match finish grades per DWS standard. See Plan Sheet No. 6 DWS plan notes for roadway resurfacing project.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

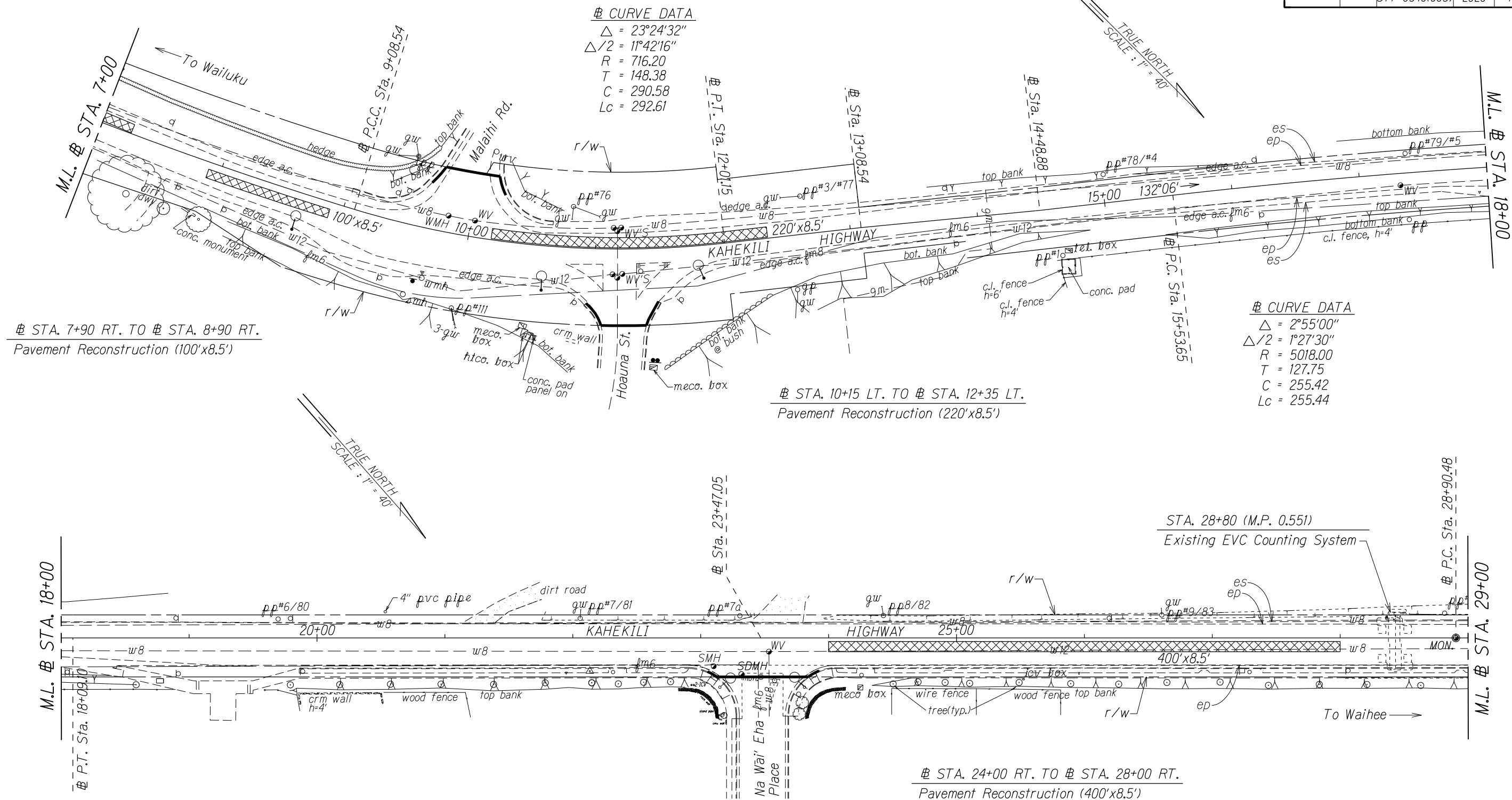
ROADWAY PLAN

KAHEKILI HIGHWAY RESURFACING
Waiehu Beach Road to Camp Maluhia
Federal-Aid Project No. STP-0340(005)

Scale: 1" = 40' Date: May, 2020

SHEET No. 1 OF 10 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0340(005)	2020	16	44



NOTE:

1. Demolish and remove existing concrete collar around water valve.
Install new concrete collar to match finish grades per DWS standard.
See Plan Sheet No. 6 DWS plan notes for roadway resurfacing project.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY PLAN

KAHEKILI HIGHWAY RESURFACING
Waiehu Beach Road to Camp Maluhia
Federal-Aid Project No. STP-0340(005)

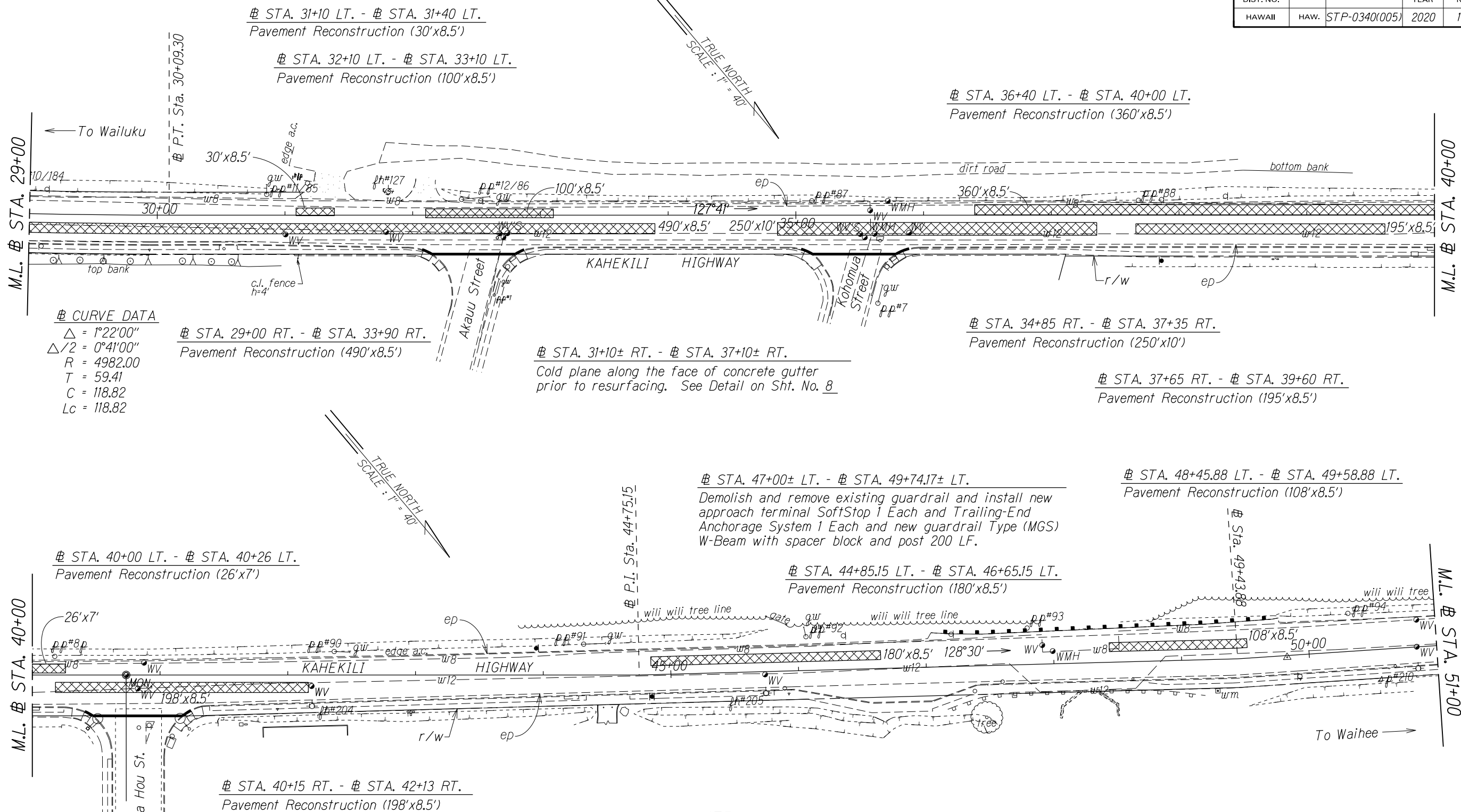
Scale: 1" = 40'

Date: May, 2020

SHEET No. 2 OF 10 SHEETS

SURVEY PLOTTED BY	DATE
DRAWN BY	2/18
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
me/jay	
z/hlm/2dgn	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0340(005)	2020	17	44



- NOTE:
- Contractor shall consider the use of approach end terminal as a SoftStop or equivalent or better.
 - Demolish and remove existing concrete collar around water valve. Install new concrete collar to match finish grades per DWS standard. See Plan Sheet No. 6 DWS plan notes for roadway resurfacing project.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY PLAN

KAHEKILI HIGHWAY RESURFACING
Waiehu Beach Road to Camp Maluhia
Federal-Aid Project No. STP-0340(005)

Scale: 1" = 40' Date: May, 2020

SHEET No. 3 OF 10 SHEETS

SURVEY PLOTTED BY	DATE
DRAWN BY	2/18
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
mei,ay	
z.klimp3dgn	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0340(005)	2020	18	44

STA. 52+00 LT. TO # STA. 55+66 LT.
Pavement Reconstruction (366'x7')

STA. 58+25 LT. TO # STA. 58+75 LT.
Pavement Reconstruction (50'x7')

STA. 60+70± LT. TO # STA. 80+80± LT.
Cold plane along the face of existing concrete curb to provide 6" in height after paving, and concrete driveway. See Detail Sht. No. 8

STA. 60+84 LT. TO # STA. 61+24 LT.
Pavement Reconstruction (40'x7')

STA. 66+30 LT. TO # STA. 66+80 LT.
Pavement Reconstruction (50'x10')

STA. 67+65.15 LT. TO # STA. 69+15.15 LT.
Pavement Reconstruction (150'x7')

STA. 65+45 RT. TO # STA. 66+75 RT.
Pavement Reconstruction (130'x7')

CURVE DATA
 $\Delta = 7^{\circ}32'00''$
 $\Delta/2 = 3^{\circ}46'00''$
 $R = 515.12$
 $T = 33.91$
 $C = 67.68$
 $Lc = 67.73$

CURVE DATA
 $\Delta = 17^{\circ}27'00''$
 $\Delta/2 = 8^{\circ}43'30''$
 $R = 271.76$
 $T = 41.71$
 $C = 82.45$
 $Lc = 82.77$

NOTE:
1. Demolish and remove existing concrete collar around water valve.
Install new concrete collar to match finish grades per DWS standard.
See Plan Sheet No. 6 DWS plan notes for roadway resurfacing project.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY PLAN

KAHEKILI HIGHWAY RESURFACING
Waiehu Beach Road to Camp Maluhia
Federal-Aid Project No. STP-0340(005)

Scale: 1" = 40' Date: May, 2020

SHEET No. 4 OF 10 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0340(005)	2020	19	44

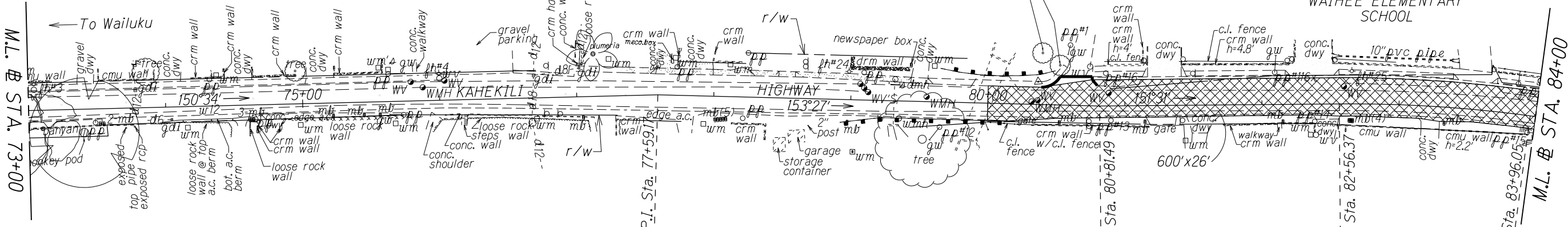
STA. 79+59.83± LT. TO # STA. 80+59± LT.

Demolish and remove existing guardrail and install new Trailing-End Anchorage System 1 Each and approach terminal SoftStop 1 Each and new guardrail Type (MGS) W-Beam with spacer block and post 25 LF.

STA. 80+80± LT. TO # STA. 85+00± LT.

Cold plane along the existing concrete gutter prior to resurfacing. See Detail on Sht. No. 8

WAIHEE ELEMENTARY SCHOOL



CURVE DATA

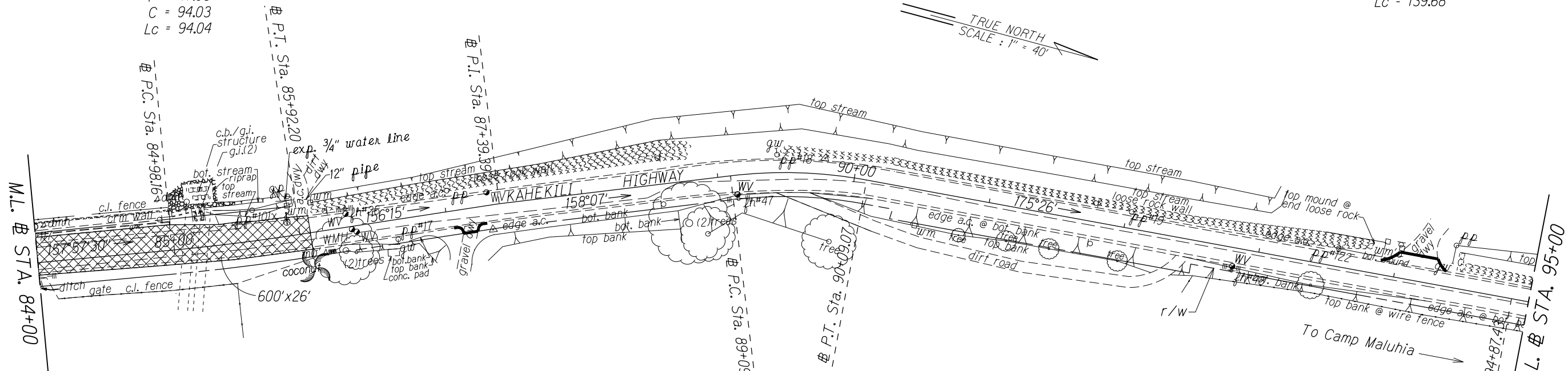
$\Delta = 3^{\circ}25'00''$
 $\Delta/2 = 1^{\circ}42'30''$
 $R = 1577.00$
 $T = 47.03$
 $C = 94.03$
 $Lc = 94.04$

STA. 78+89.33± RT. TO # STA. 80+26± RT.

Demolish and remove existing guardrail and install new Trailing-End Anchorage System 1 Each and approach terminal SoftStop 1 Each and new guardrail Type (MGS) W-Beam with spacer block and post 87.5 LF.

CURVE DATA

$\Delta = 8^{\circ}10'00''$
 $\Delta/2 = 4^{\circ}05'00''$
 $R = 980.00$
 $T = 69.96$
 $C = 139.57$
 $Lc = 139.68$



STA. 80+00 TO # STA. 86+00
Pavement Reconstruction (600'x26')

CURVE DATA

$\Delta = 17^{\circ}19'00''$
 $\Delta/2 = 08^{\circ}39'30''$
 $R = 330.00$
 $T = 50.25$
 $C = 99.36$
 $Lc = 99.74$

NOTE:

- Contractor shall consider the use of approach end terminal as a SoftStop or equivalent or better.
- Demolish and remove existing concrete collar around water valve. Install new concrete collar to match finish grades per DWS standard. See Plan Sheet No. 6 DWS plan notes for roadway resurfacing project.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY PLAN

KAHEKILI HIGHWAY RESURFACING
Waiehu Beach Road to Camp Maluhia
Federal-Aid Project No. STP-0340(005)

Scale: 1" = 40' Date: May, 2020

SHEET No. 5 OF 10 SHEETS

FED. ROAD DIST. NO.	STATE	FED. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0340(005)	2020	21	44

STA. 124+76 RT. TO STA. 126+33 RT.
Demolish and remove existing guardrail and terminal and install new Trailing End Anchorage System 1 Each and new guardrail Type (MGS) W-Beam with spacer block and post 75 LF and new Midwest Guardrail System (MGS) transition 28'-1 1/2".

STA. 124+76 LT. TO STA. 126+07 LT.

Demolish and remove existing guardrail and terminal and install new approach terminal SoftStop 1 Each and new guardrail Type (MGS) W-Beam with Strong Post 50 LF and new Midwest Guardrail System (MGS) transition 28'-1 1/2"

CURVE DATA
Δ = 40°00'00"
Δ/2 = 20°00'00"
R = 409.26
T = 148.96
C = 279.95
Lc = 285.72

CURVE DATA
Δ = 14°00'00"
Δ/2 = 07°00'00"
R = 546.08
T = 67.05
C = 133.10
Lc = 133.43

CURVE DATA
Δ = 14°00'00"
Δ/2 = 07°00'00"
R = 546.08
T = 67.05
C = 133.10
Lc = 133.43

CURVE DATA
Δ = 38°56'30"
Δ/2 = 19°28'15"
R = 282.48
T = 99.87
C = 188.32
Lc = 191.99

CURVE DATA
Δ = 50°48'44"
Δ/2 = 25°24'22"
R = 291.92
T = 138.65
C = 250.49
Lc = 258.89

STA. 121+55 LT.
Demolish and remove existing terminal and install new Trailing-End Anchorage System 1 Each.

STA. 120+30±
Clean debris and silt upstream and downstream to right of way and within 24" drainline

CURVE DATA
Δ = 13°00'00"
Δ/2 = 06°30'00"
R = 588.05
T = 67.00
C = 133.14
Lc = 133.42

STA. 117+00 RT. - # STA. 120+00 RT.
Install RM-3 (White) with flexible post @ 25' o.c. 13 Each

STA. 117+00± LT. # RT. - # STA. 120+30± LT. # RT.
Cold plane along the existing concrete gutter prior to resurfacing. See Detail on Sht. No. 8

STA. 138+70 LT. TO # STA. 140+06.67 LT.
Demolish and remove existing guardrail and install new Trailing-End Anchorage System 1 Each and approach terminal SoftStop 1 Each and new guardrail Type (MGS) W-Beam with spacer block and post 75 LF.

STA. 120+00 RT. TO # STA. 122+15 RT.
Demolish and remove existing guardrail and install new approach terminal SoftStop 1 Each and new guardrail Type (MGS) W-Beam with spacer block and post 137.5 LF and new Midwest Guardrail System (MGS) transition 28'-1 1/2".

STA. 139+00 RT. - # STA. 140+00 RT.
Install RM-3 (White) with flexible post @ 25' o.c. - (5 each)

STA. 139+40±
Clean debris and silt upstream and downstream to right of way and within 24" drainline

STA. 140+00± LT. - # STA. 223+93± LT.
Cold plane along the face of existing A.C. curb to provide 6" in height after paving. See Detail on Sht. No. 8

NOTE:
Contractor shall consider the use of approach end terminal as a SoftStop or equivalent or better

NOTE:
1. Demolish and remove existing concrete collar around water valve.
Install new concrete collar to match finish grades per DWS standard.
See Plan Sheet No. 6 DWS plan notes for roadway resurfacing project.

STA. 121+48 LT. TO # STA. 122+15 LT.
Demolish and existing guardrail and install new Trailing-End Anchorage System 1 Each and new Midwest Guardrail System (MGS) transition 28'-1 1/2".

STA. 120+65 RT. - # STA. 122+15 RT.
Pavement Reconstruction (150'x7')

STA. 126+45 RT. - # STA. 127+25 RT.
Pavement Reconstruction (80'x7')

STA. 130+25±
Clean debris and silt upstream and downstream to right of way and within 24" drainline

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY PLAN

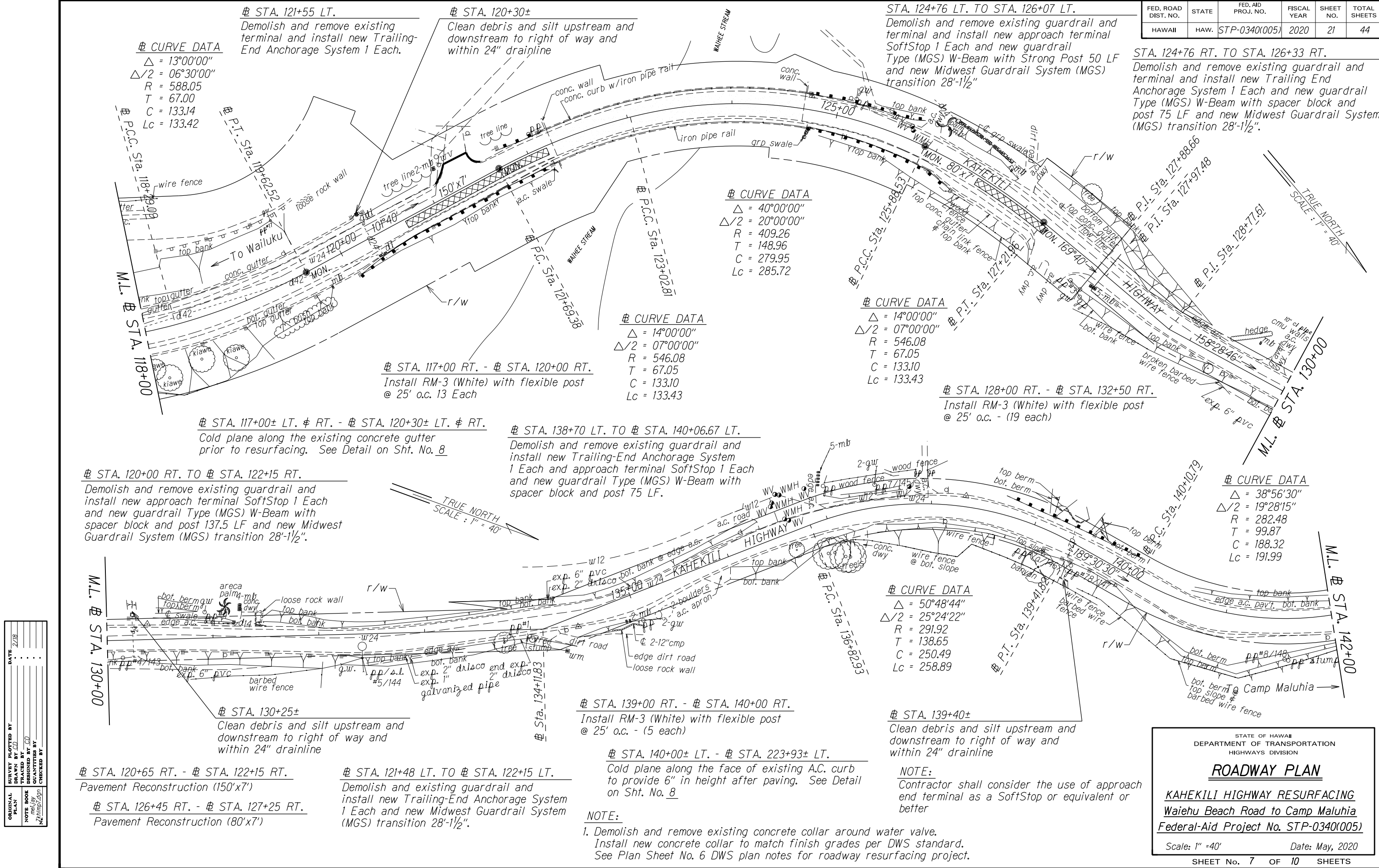
KAHEKILI HIGHWAY RESURFACING
Waiehu Beach Road to Camp Maluhia
Federal-Aid Project No. STP-0340(005)

Scale: 1" = 40' Date: May, 2020

SHEET No. 7 OF 10 SHEETS

SURVEY PLOTTED BY	DATE
2/18	
DESIGNED BY	
me/lay	
CHECKED BY	
2/klmp/dgn	

ORIGINAL PLAN
NOTE BOOK
DESIGNED BY
me/lay
CHECKED BY
2/klmp/dgn



M.L. # STA. 156+00

barbed wire fence

top bank

bot. bank

154+00

155+00

156+00

106°45'

edge a.c. @ barbed wire fence exp. 24" cmp

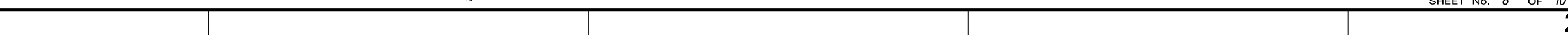
begin exp. 24" cmp

d

2.7.5

98.36

d way



⊕ STA. 173+00 RT. - ⊕ STA. 174+00 RT.
Pavement Reconstruction (100x7')

⊕ STA. 173+50 LT. - ⊕ STA. 174+50 LT.
Pavement Reconstruction (100x7')

⊕ STA. 184+80
Clean debris and silt upstream and
downstream to right of way and
within 24" drainline

⊕ STA. 179+97.76 RT. - ⊕ STA. 183+97.76 RT.
Pavement Reconstruction (400x7')

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0340(005)	2020	23	44

⊕ CURVE DATA
 $\Delta = 132^{\circ}40'30''$
 $\Delta/2 = 66^{\circ}20'15''$
 $R = 71.41$
 $T = 162.97$
 $C = 130.81$
 $Lc = 165.36$

⊕ STA. 173+00 LT. - ⊕ STA. 174+00 LT.
Install RM-3 (White) with flexible
post @ 25' o.c. - (5 each)

⊕ STA. 176+89 RT. TO ⊕ STA. 178+26.5 RT.
Demolish and remove existing guardrail and
terminal and install new approach terminal
SoftStop 1 Each and Trailing-End Anchorage
System 1 Each new guardrail Type (MGS)
W-Beam with spacer block and post 87.5 LF.

⊕ CURVE DATA
 $\Delta = 31^{\circ}23'30''$
 $\Delta/2 = 15^{\circ}41'45''$
 $R = 175.05$
 $T = 49.19$
 $C = 94.71$
 $Lc = 95.91$

⊕ CURVE DATA
 $\Delta = 26^{\circ}07'00''$
 $\Delta/2 = 13^{\circ}03'30''$
 $R = 377.97$
 $T = 87.67$
 $C = 170.80$
 $Lc = 172.29$

⊕ CURVE DATA
 $\Delta = 126^{\circ}04'30''$
 $\Delta/2 = 63^{\circ}02'15''$
 $R = 55.16$
 $T = 108.43$
 $C = 98.33$
 $Lc = 121.38$

⊕ CURVE DATA
 $\Delta = 23^{\circ}06'18''$
 $\Delta/2 = 11^{\circ}33'09''$
 $R = 331.36$
 $T = 67.73$
 $C = 132.72$
 $Lc = 133.62$

⊕ CURVE DATA
 $\Delta = 52^{\circ}07'07''$
 $\Delta/2 = 26^{\circ}03'33.5''$
 $R = 102.76$
 $T = 50.25$
 $C = 90.29$
 $Lc = 93.47$

⊕ CURVE DATA
 $\Delta = 27^{\circ}26'00''$
 $\Delta/2 = 13^{\circ}43'00''$
 $R = 245.11$
 $T = 59.83$
 $C = 116.24$
 $Lc = 117.36$

⊕ CURVE DATA
 $\Delta = 70^{\circ}14'00''$
 $\Delta/2 = 35^{\circ}07'00''$
 $R = 81.52$
 $T = 57.33$
 $C = 93.79$
 $Lc = 99.93$

⊕ CURVE DATA
 $\Delta = 109^{\circ}50'30''$
 $\Delta/2 = 54^{\circ}55'15''$
 $R = 80.00$
 $T = 113.92$
 $C = 130.94$
 $Lc = 153.37$

⊕ CURVE DATA
 $\Delta = 24^{\circ}00'00''$
 $\Delta/2 = 12^{\circ}00'00''$
 $R = 205.00$
 $T = 43.57$
 $C = 85.24$
 $Lc = 85.87$

⊕ CURVE DATA
 $\Delta = 46^{\circ}43'30''$
 $\Delta/2 = 23^{\circ}21'45''$
 $R = 150.00$
 $T = 64.79$
 $C = 118.96$
 $Lc = 122.33$

⊕ STA. 194+54
Clean debris and silt upstream and
downstream to right of way and
within 24" drainline

NOTE:
Contractor shall consider the use of approach
end terminal as a SoftStop or equivalent or
better

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY PLAN

KAHEKILI HIGHWAY RESURFACING
Waiehu Beach Road to Camp Maluhia
Federal-Aid Project No. STP-0340(005)

Scale: 1" = 40'

Date: May, 2020

SHEET No. 9 OF 10 SHEETS

SURVEY PLOTTED BY	DATE
2/18	
DESIGNED BY	
NOTED BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
QUANTITIES BY	
CHECKED BY	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0340(005)	2020	24	44

CURVE DATA

$\Delta = 134^{\circ}00'00''$
 $\Delta/2 = 67^{\circ}00'00''$
 $R = 25.00$
 $T = 58.90$
 $C = 46.03$
 $Lc = 58.47$

STA. 204+50±

Clean debris and silt upstream and downstream to right of way and within 24" drainline

STA. 210+50 RT. - # STA. 212+00 RT.

Install RM-3 (White) with flexible post @ 25' o.c. - (7 each)

CURVE DATA

$\Delta = 110^{\circ}40'00''$
 $\Delta/2 = 55^{\circ}20'00''$
 $R = 25.00$
 $T = 36.15$
 $C = 41.12$
 $Lc = 48.29$

CURVE DATA

$\Delta = 106^{\circ}30'00''$
 $\Delta/2 = 53^{\circ}15'00''$
 $R = 45.00$
 $T = 60.26$
 $C = 72.11$
 $Lc = 83.64$

CURVE DATA

$\Delta = 51^{\circ}20'00''$
 $\Delta/2 = 25^{\circ}40'00''$
 $R = 52.00$
 $T = 24.99$
 $C = 45.05$
 $Lc = 46.59$

CURVE DATA

$\Delta = 31^{\circ}00'00''$
 $\Delta/2 = 15^{\circ}30'00''$
 $R = 205.00$
 $T = 56.85$
 $C = 109.57$
 $Lc = 110.92$

CURVE DATA

$\Delta = 44^{\circ}27'00''$
 $\Delta/2 = 22^{\circ}13'30''$
 $R = 275.00$
 $T = 112.37$
 $C = 208.03$
 $Lc = 213.34$

CURVE DATA

$\Delta = 60^{\circ}49'00''$
 $\Delta/2 = 30^{\circ}24'30''$
 $R = 170.00$
 $T = 99.77$
 $C = 172.09$
 $Lc = 180.45$

END PROJECT

Fed. Aid Proj. No. STP-0340(005)

Sta. 226+81

STA. 205+00 LT. - # STA. 212+00 LT.

Install RM-3 (White) with flexible post @ 25' o.c. - (29 each)

STA. 207+60 LT. - # STA. 208+10 LT.

Pavement Reconstruction (50'x8')

STA. 223+15±

Clean debris and silt upstream and downstream to right of way and within 24" drainline

CURVE DATA

$\Delta = 23^{\circ}04'00''$
 $\Delta/2 = 11^{\circ}32'00''$
 $R = 385.00$
 $T = 78.56$
 $C = 153.95$
 $Lc = 155.00$

CURVE DATA

$\Delta = 132^{\circ}12'00''$
 $\Delta/2 = 66^{\circ}06'00''$
 $R = 85.00$
 $T = 191.81$
 $C = 155.42$
 $Lc = 196.12$

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY PLAN

KAHEKILI HIGHWAY RESURFACING
Waiehu Beach Road to Camp Maluhia
Federal-Aid Project No. STP-0340(005)

Scale: 1" = 40'

Date: May, 2020

SHEET No. 10 OF 10 SHEETS

SURVEY PLOTTED BY	DATE
DRAWN BY	2/18
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
mei/lay	
2/18/2020	