

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-083-1(069)	2014	C.O.ADD. 13	50

BEGIN PROJECT
F.A. Project No. HSIP-083-1(069)
Sta. 554+00

* Note: 3
~~End treatment systems for this project shall be 37.5 L.F. total. For SKT-350 or equivalent, additional strong post W-Beam guardrail shall be added until that end treatment system is 37.5 L.F. total, and shall be made incidental to that end treatment item.~~

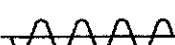
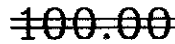
Existing posts are buried in 13" of AC/ACB. Care shall be taken when removing posts not to damage the travel lane. Fill in holes caused by post removal with HMA Pavement, Mix No. IV.
See detail on sheet No. C.O. 8 S-1 for installation of new posts.

Sta. 554+01.63±, Rt. to Sta. 555+48.75±, Rt. 3
Remove 120± L.F. existing guardrail and posts. Install 75.0 L.F. Strong Post W-Beam with FLEAT-350 or SKT-350 or equivalent on both approach and trailing ends 1± L.F. outwards from existing location. For FLEAT-350 connection, See Plan Sheet No. 10. For SKT-350 connection, See Plan Sheet No. 9.

Install 30 L.F. of double nested thrie beam and 37 L.F. of triple nested thrie beam spanning existing culvert. Excluding culvert span, new posts to match existing post spacing, but 1± L.F. outwards. Install SKT-350 end treatment at the approaching and trailing ends. Verify placement of posts and end treatment with Engineer prior to installation. Total length of guardrail end treatment should be 120 L.F.

CURVE DATA
Δ = 22°40'00"
R = 881.60'
T = 176.69'
C = 346.50'
Lc = 348.77'

	1	2
Δ	22° 37'00"	22° 40'00"
R	3,437.87'	881.95'
T	688.00'	176.80'
C	1,349.23'	347.76'
Lc	1358.00'	349.00'
S. E.	0.00 ft/ft	0.00 ft/ft

LEGEND FOR AS-BUILT POSTINGS
 Squiggly line for as-built deletion
 Double line for as-built deletion
Roadway Text for as-built posting

10/7/14

Revised Note

10/7/14

Revised Note

DATE	REVISION
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STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

HIGHWAYS DIVISION

ROADWAY PLANS

KAMEHAMEHA HIGHWAY SAFETY IMPROVEMENTS

Waikane Valley Road to Kaaawa Bridge

Federal Aid Project No. HSIP-083-1(069)

Scale: 1" = 40'

Date: August, 2014

SHEET No. 1 OF 12 SHEETS

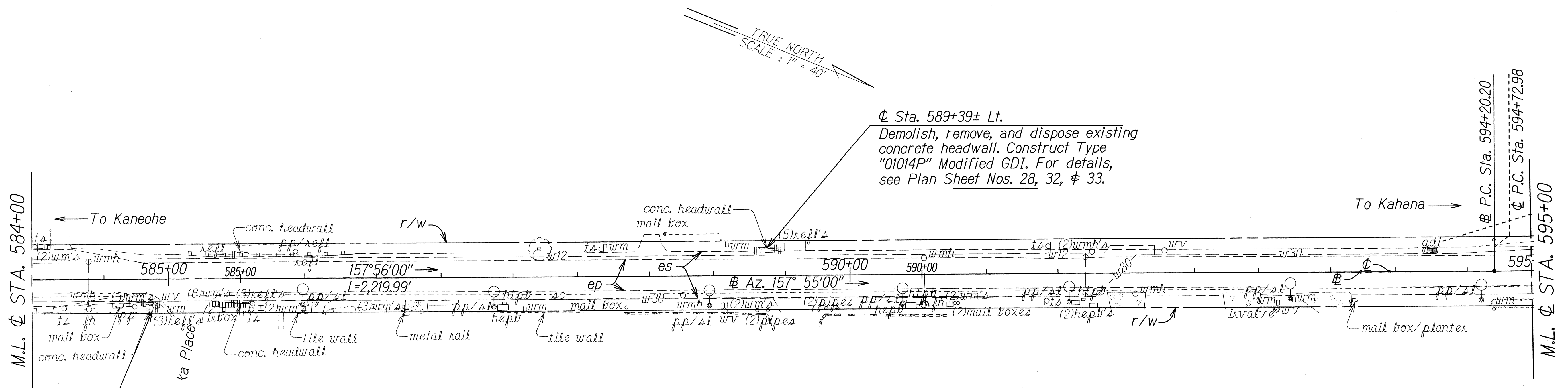
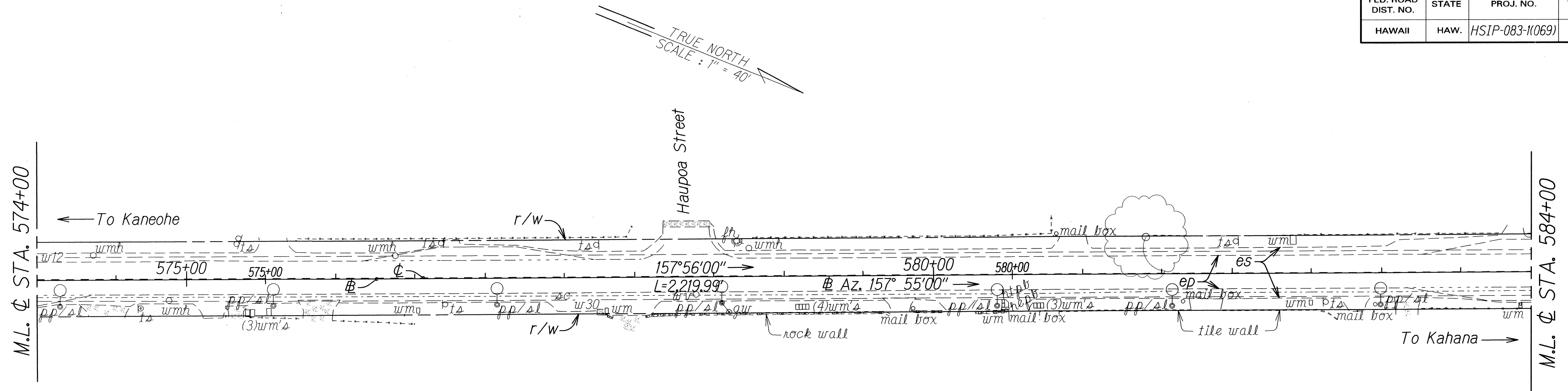
C.O. ADD. 13

DATE	
SURVEY PLOTTED BY	
DRAWN BY	
NOTED BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
QUANTITIES BY	
CHECKED BY	

Note: 1
The station numbers between Begin Project (Sta. 553+99.54 (BK) = Sta. 554+00.00 (AH)) to End Project (Sta. 804+25.47 (BK) = Sta. 818+74.10 (AH)) refer to the roadway Centerline and do not match the prior As-Built Baseline stations from Federal Aid Project No. NH-083-1(43). Details of this project reference the Centerline to better follow the center of the road.

"AS-BUILT"

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-083-1(069)	2014	14	50



ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DESIGNED BY	
QUANTITIES BY	CHECKED BY	

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

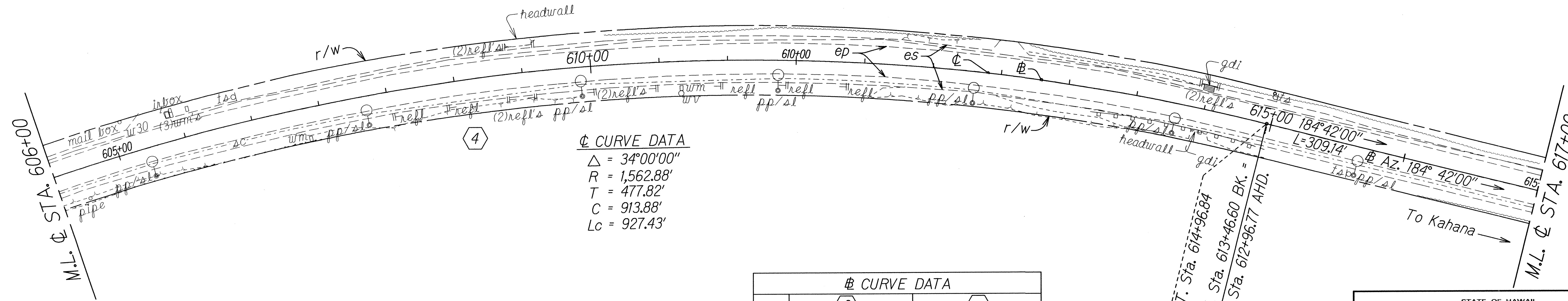
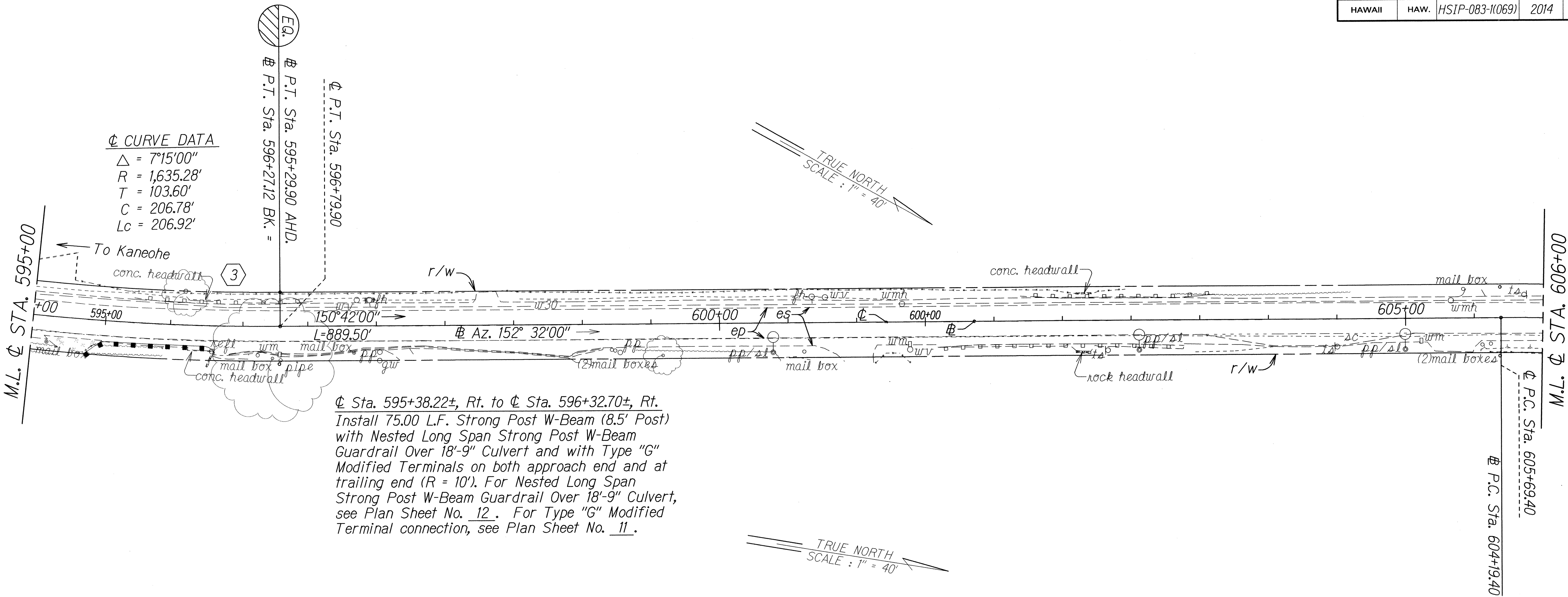
ROADWAY PLANS

KAMEHAMEHA HIGHWAY SAFETY IMPROVEMENTS
Waikane Valley Road to Kaaawa Bridge
Federal Aid Project No. HSIP-083-1(069)

Scale: 1" = 40' Date: August, 2014

SHEET No. 2 OF 12 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-083-1(069)	2014	15	50



ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	
DESIGNED BY	CHECKED BY	
QUANTITIES BY		
BY		

CURVE DATA		
	3	4
Δ	7° 15'00"	34° 00'00"
R	1635.28'	1562.88'
T	103.70'	477.80'
C	206.78'	916.66'
Lc	207.10'	927.20'
S. E.	0.00 ft/ft	0.00 ft/ft

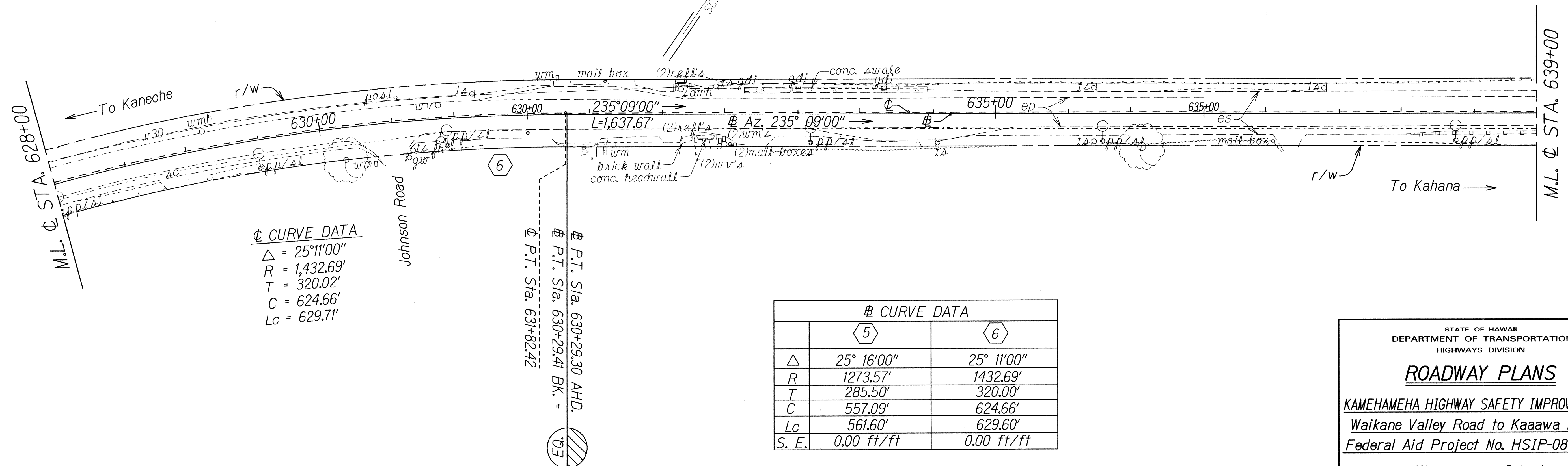
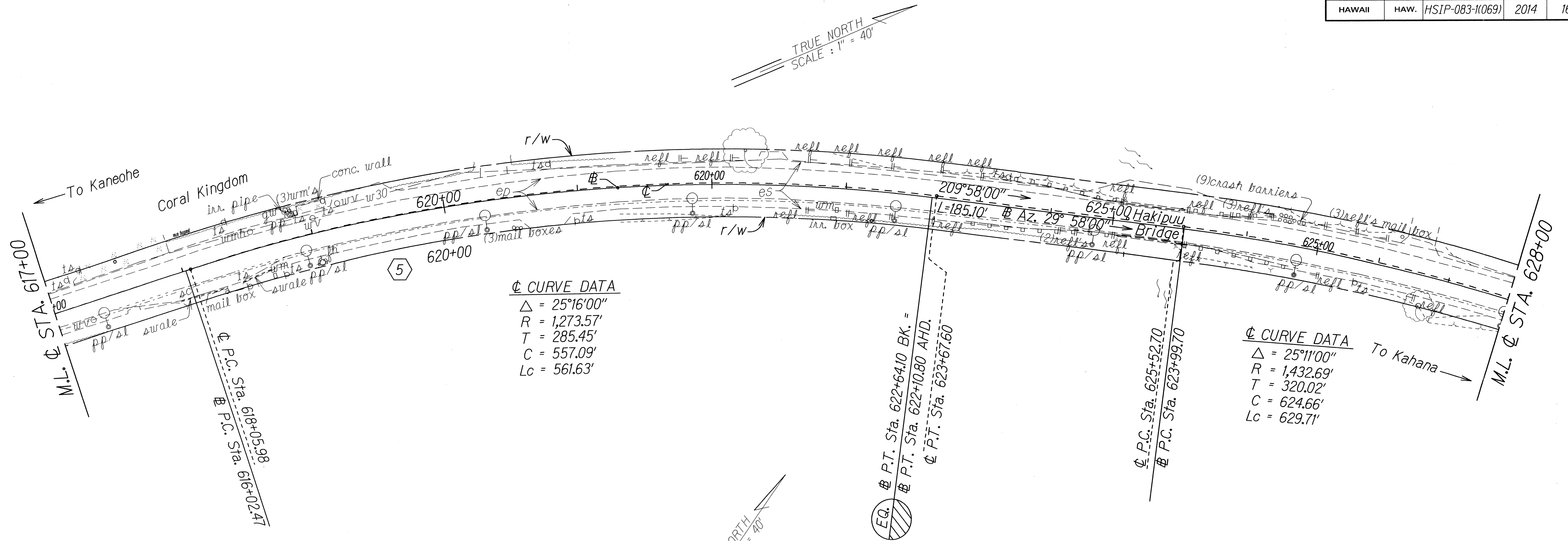
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY PLANS
KAMEHAMEHA HIGHWAY SAFETY IMPROVEMENTS
Waikane Valley Road to Kaaawa Bridge
Federal Aid Project No. HSIP-083-1(069)

Scale: 1" = 40'
Date: August, 2014

SHEET No. 3 OF 12 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-083-1(069)	2014	16	50



⌀ CURVE DATA		
	5	6
Δ	25° 16'00"	25° 11'00"
R	1273.57'	1432.69'
T	285.50'	320.00'
C	557.09'	624.66'
Lc	561.60'	629.60'
S E	0.00 ft/ft	0.00 ft/ft

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

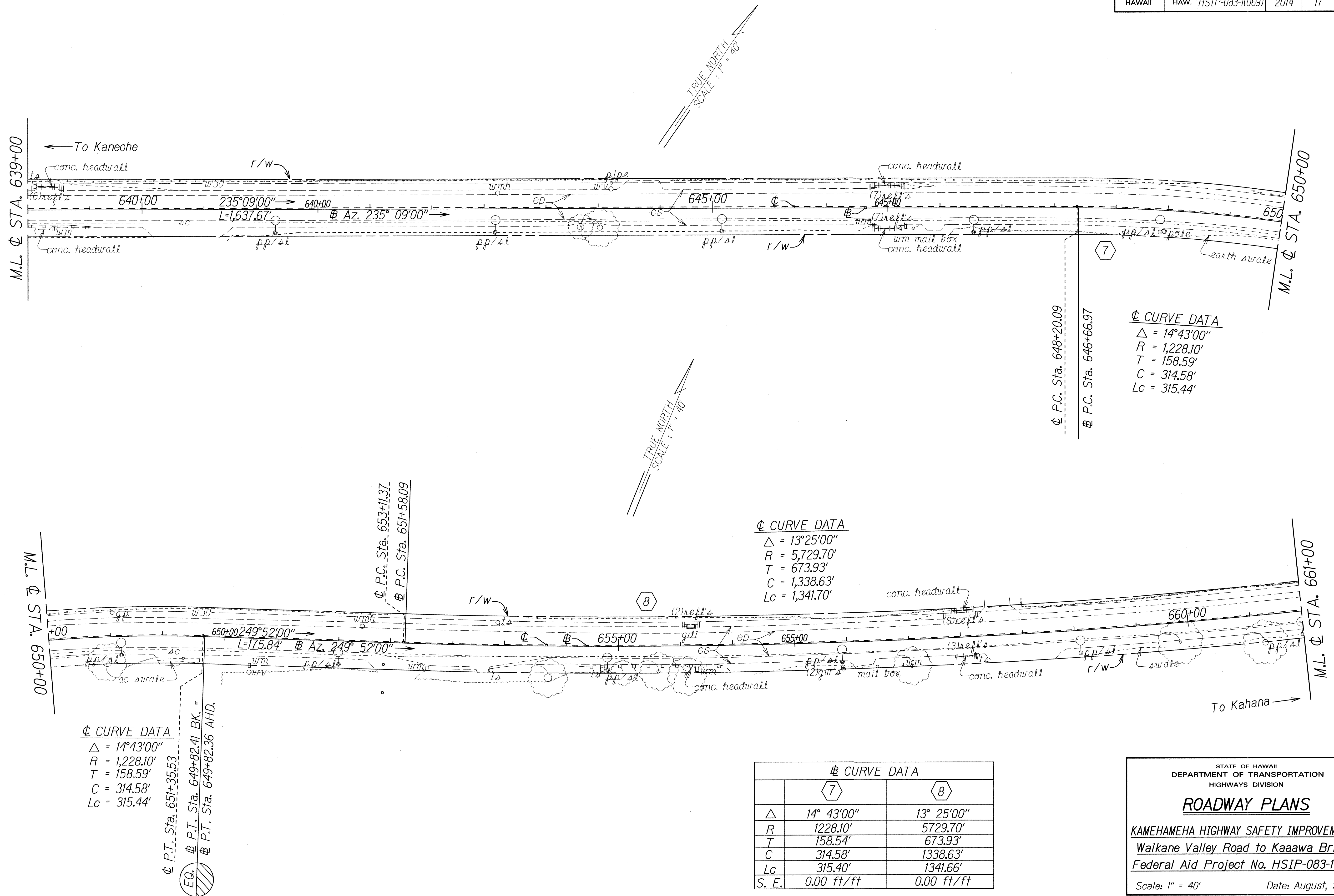
ROADWAY PLANS

KAMEHAMEHA HIGHWAY SAFETY IMPROVEMENTS
Waikane Valley Road to Kaaawa Bridge
Federal Aid Project No. HSIP-083-1(069)

Scale: 1" = 40' Date: August, 2014

SHEET No. 4 OF 12 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-083-1(069)	2014	17	50



⚡ CURVE DATA		
	7	8
Δ	14° 43'00"	13° 25'00"
R	1228.10'	5729.70'
T	158.54'	673.93'
C	314.58'	1338.63'
L_c	315.40'	1341.66'
$S. F.$	0.00 ft/ft	0.00 ft/ft

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY PLANS

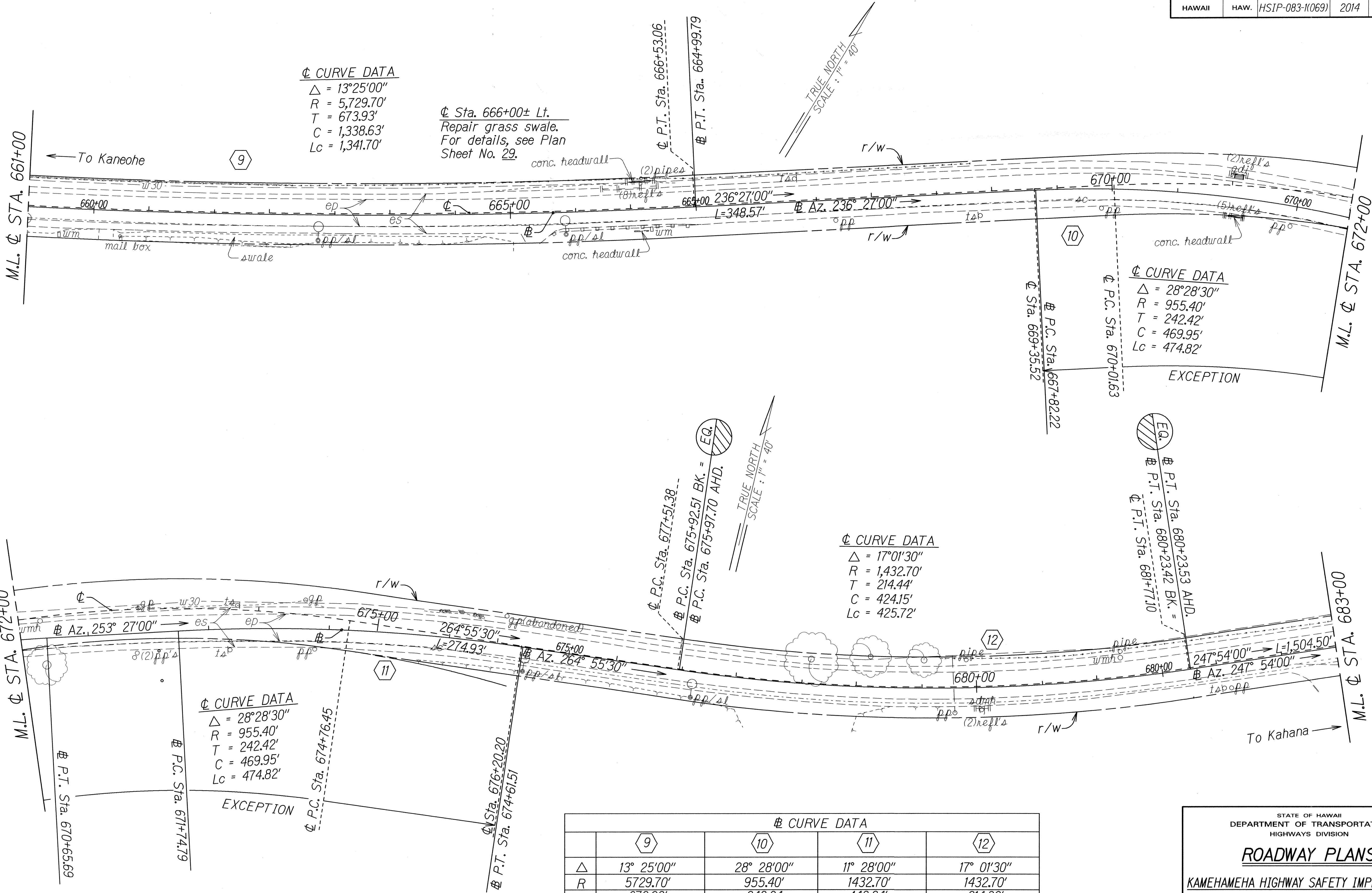
KAMEHAMEHA HIGHWAY SAFETY IMPROVEMENTS

Waikane Valley Road to Kaaawa Bridge

Federal Aid Project No. HSIP-083-1(069)

Scale: 1" = 40' Date: August, 2014

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-083-1(069)	2014	18	50



DATE	10/1/14
SURVEY PLOTTED BY	W. J. HARRIS
DESIGNED BY	W. J. HARRIS
QUANTITIES BY	W. J. HARRIS
CHECKED BY	W. J. HARRIS

	9	10	11	12
Δ	13° 25' 00"	28° 28' 00"	11° 28' 00"	17° 01' 30"
R	5729.70'	955.40'	1432.70'	1432.70'
T	673.93'	242.34'	143.84'	214.00'
C	1338.63'	282.43'	286.25'	424.15'
Lc	1341.66'	474.44'	286.54'	425.00'
S. E.	0.00 ft/ft	0.025 ft/ft	0.025 ft/ft	0.02 ft/ft

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY PLANS

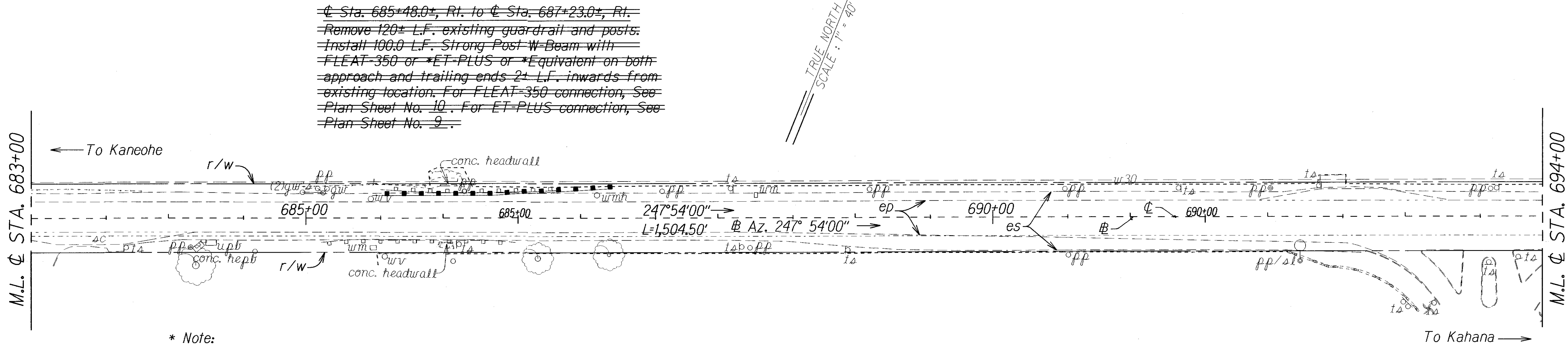
KAMEHAMEHA HIGHWAY SAFETY IMPROVEMENTS

Waikane Valley Road to Kaaawa Bridge

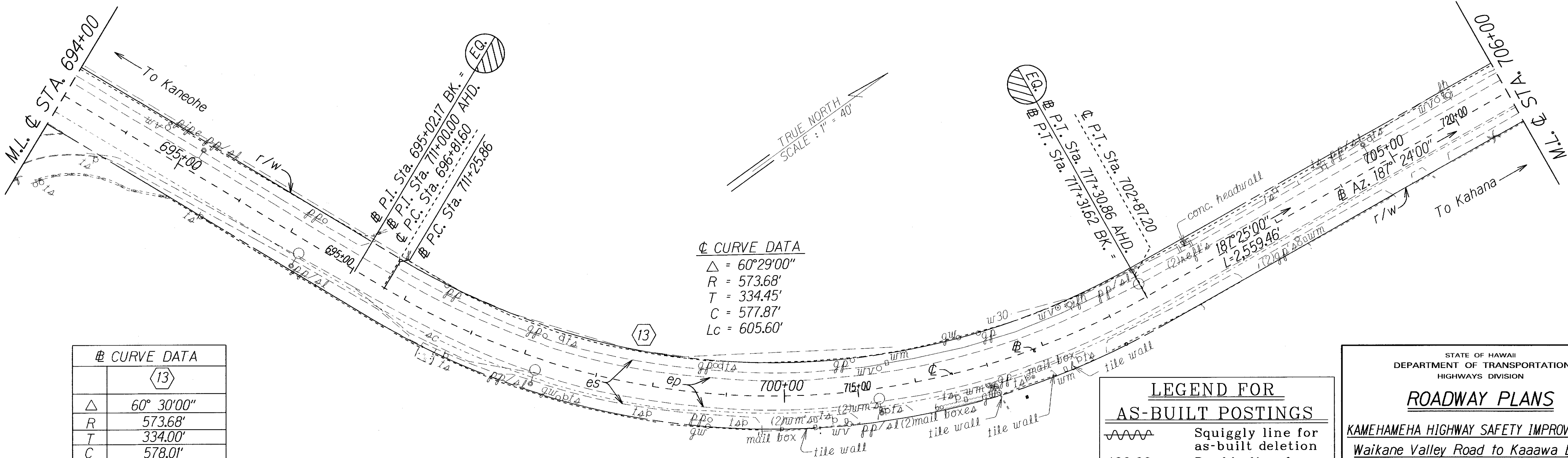
Federal Aid Project No. HSIP-083-1(069)

Scale: 1" = 40'
Date: August, 2014

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-083-11069	2014	19	50



* Note:
 End treatment systems for this project shall be 37.5 L.F. total.
 For ET-PLUS or equivalent, additional strong post W-Beam guardrail shall be added until that end treatment system is 37.5 L.F. total, and shall be made incidental to that end treatment item.



CURVE DATA	
Δ	60° 30'00"
R	573.68'
T	334.00'
C	578.01'
Lc	604.00'
S. E.	0.00 ft/ft

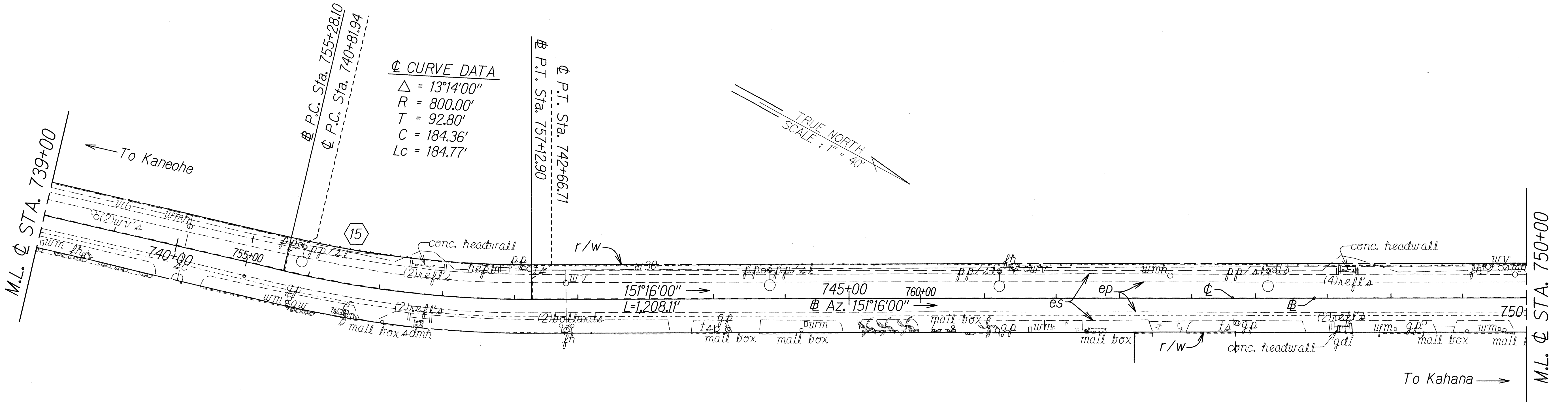
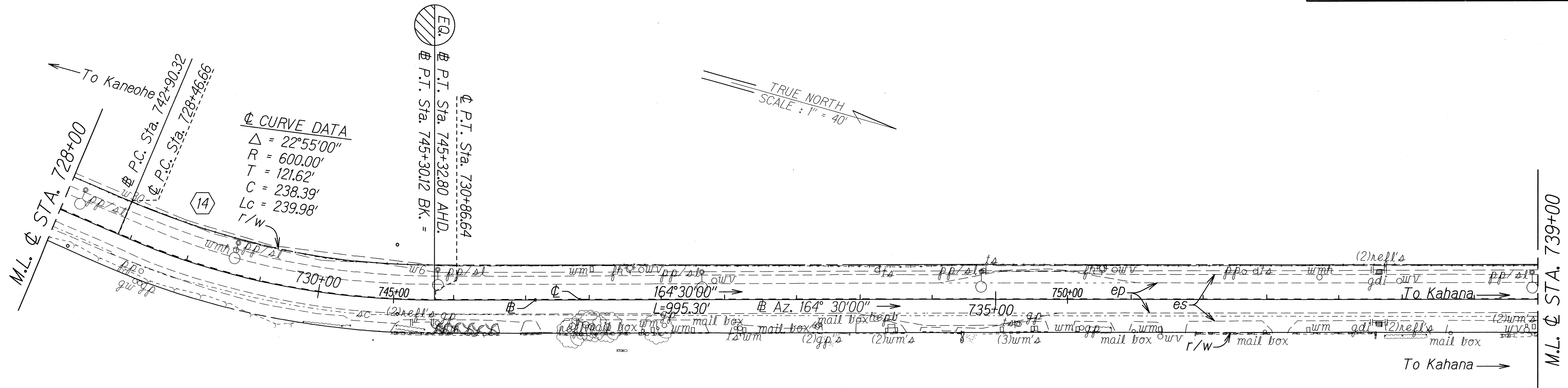
LEGEND FOR AS-BUILT POSTINGS	
	Squiggly line for as-built deletion
	Double line for as-built deletion
Roadway	Text for as-built posting

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

ROADWAY PLANS
 KAMEHAMEHA HIGHWAY SAFETY IMPROVEMENTS
 Waikane Valley Road to Kaaawa Bridge
 Federal Aid Project No. HSIP-083-11069
 Scale: 1" = 40' Date: August, 2014
 SHEET No. 7 OF 12 SHEETS

"AS-BUILT"

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-083-1(069)	2014	21	50



ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
DESIGNED BY	TRACED BY	
NOTED BY	DESIGNED BY	
QUANTITIES BY	QUANTITIES BY	
CHECKED BY	CHECKED BY	

CURVE DATA		
	14	15
Δ	22° 54'00"	13° 14'00"
R	600.00'	800.00'
T	121.50'	92.80'
C	238.22'	184.39'
Lc	239.80'	184.80'
S. E.	0.05 ft/ft	0.03 ft/ft

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

ROADWAY PLANS

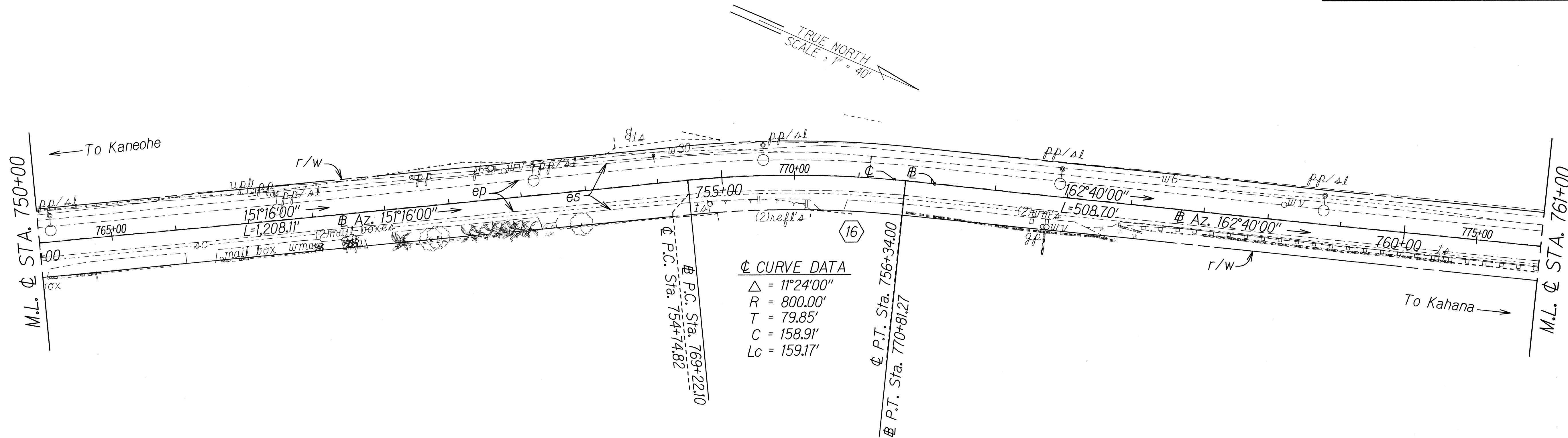
KAMEHAMEHA HIGHWAY SAFETY IMPROVEMENTS

Waikane Valley Road to Kaaawa Bridge

Federal Aid Project No. HSIP-083-1(069)

Scale: 1" = 40' Date: August, 2014

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-083-1(069)	2014	22	50



☺ CURVE DATA

Δ	= 31°51'00"
R	= 400.00'
T	= 114.13'
C	= 219.50'
Lc	= 222.35'

☺ CURVE DATA

Δ	= 31°29'00"
R	= 700.00'
T	= 197.31'
C	= 379.92'
Lc	= 384.64'

	16	17	18
Δ	11° 24'00"	31° 51'00"	31° 29'00"
R	800.00'	400.00'	700.0'
T	79.60'	114.10'	197.40'
C	158.91'	219.50'	379.82'
Lc	159.20'	222.30'	384.60'
S. E.	0.02 ft/ft	0.055 ft/ft	0.04 ft/ft

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

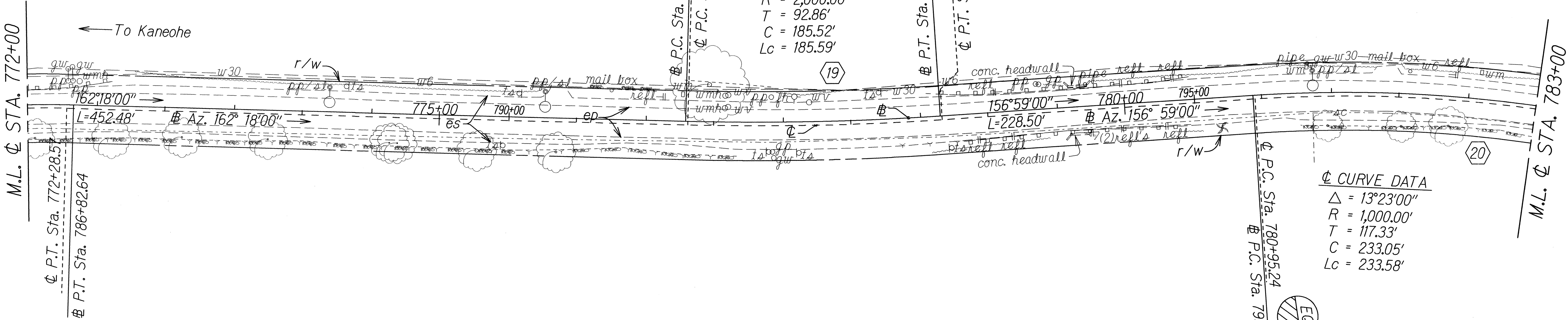
ROADWAY PLANS
KAMEHAMEHA HIGHWAY SAFETY IMPROVEMENTS
Waikane Valley Road to Kaaawa Bridge
Federal Aid Project No. HSIP-083-1(069)

Scale: 1" = 40'
Date: August, 2014

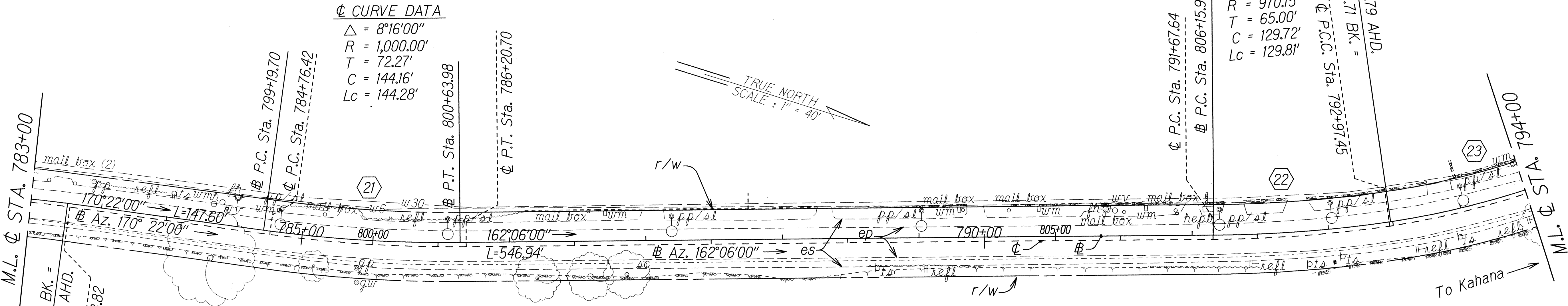
SHEET No. 10 OF 12 SHEETS

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DESIGNED BY	
QUANTITIES BY	CHECKED BY	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-083-1(069)	2014	23	50



CURVE DATA
 $\Delta = 13^\circ 23' 00''$
 $R = 1,000.00'$
 $T = 117.33'$
 $C = 233.05'$
 $L_c = 233.58'$



CURVE DATA
 $\Delta = 7^\circ 40' 00''$
 $R = 970.15'$
 $T = 65.00'$
 $C = 129.72'$
 $L_c = 129.81'$

	19	20	21	22	23
Δ	05° 19' 00"	13° 23' 00"	08° 16' 00"	07° 40' 00"	36° 56' 00"
R	2,000.00'	1000.00'	1000.00'	970.15'	600.00'
T	92.90'	117.30'	72.27'	65.00'	200.37'
C	185.52'	233.05'	144.16'	129.72'	380.10'
Lc	185.60'	233.60'	144.28'	129.81'	386.73'
S. E.	0.00 ft/ft	0.02 ft/ft	0.02 ft/ft	0.02 ft/ft	0.00 ft/ft

STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

HIGHWAYS DIVISION

ROADWAY PLANS

KAMEHAMEHA HIGHWAY SAFETY IMPROVEMENTS

Waikane Valley Road to Kaaawa Bridge

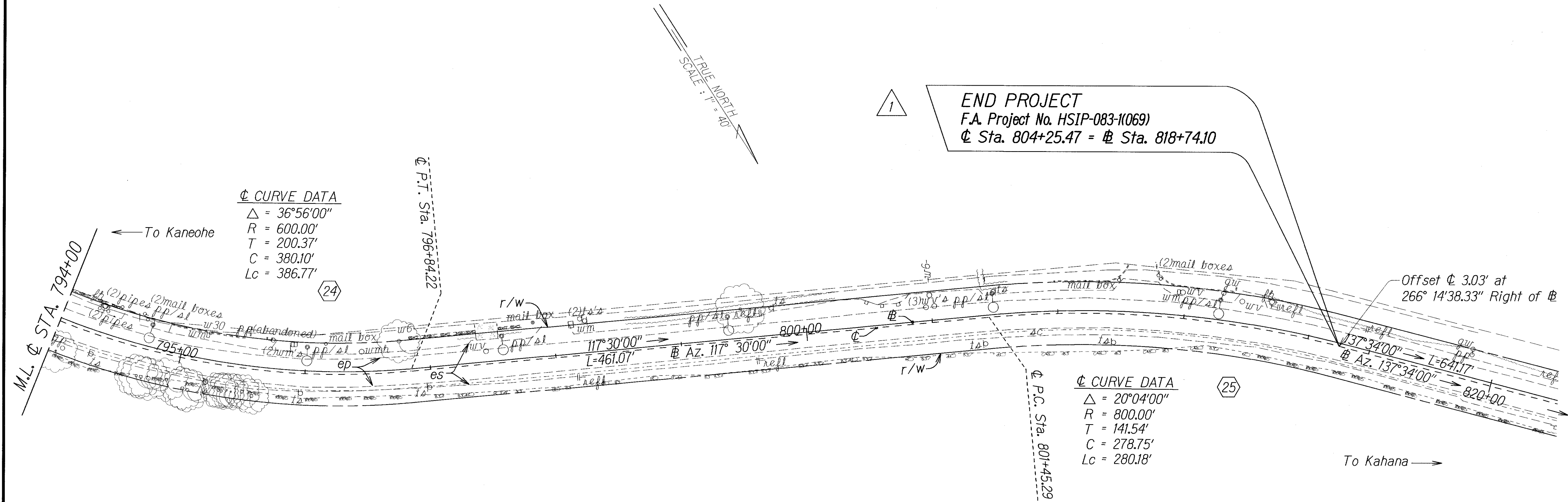
Federal Aid Project No. HSIP-083-1(069)

Scale: 1" = 40'

Date: August, 2014

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DESIGNED BY	
QUANTITIES BY	CHECKED BY	
N. K. M. C. G.		

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-083-1(069)	2014	ADD. 24	50



ORIGINAL PLAN	DATE
DESIGNED BY	
NOTED BY	
CHECKED BY	
DATE	

Curve Data		
	24	25
Δ	36° 56' 00"	20° 04' 00"
R	600.00'	800.00'
T	200.37'	141.54'
C	380.10'	278.75'
Lc	386.73'	280.16'
S. E.	0.00 ft/ft	0.00 ft/ft

	10/7/14	Delete Δ Equation Station
	10/7/14	Revised Stationing for End Project
DATE	REVISION	
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION <u>ROADWAY PLANS</u> <u>KAMEHAMEHA HIGHWAY SAFETY IMPROVEMENTS</u> <u>Waikane Valley Road to Kaaawa Bridge</u> <u>Federal Aid Project No. HSIP-083-1(069)</u> Scale: 1" = 40' Date: August, 2014		
SHEET No. 12 OF 12 SHEETS		