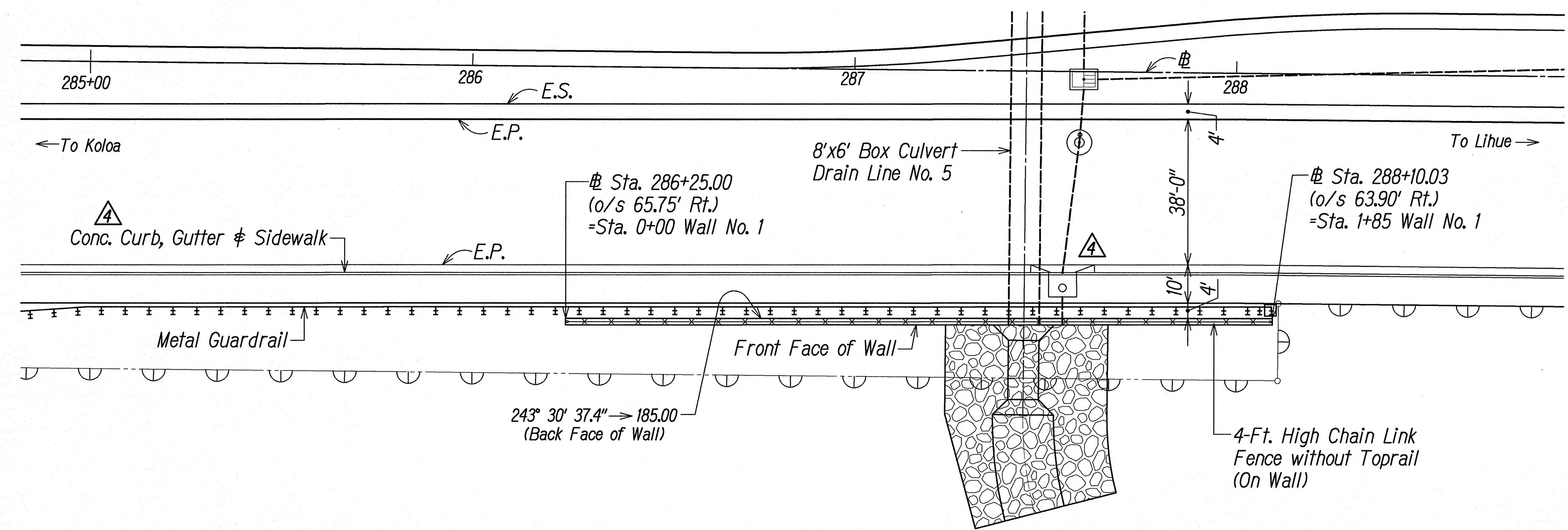


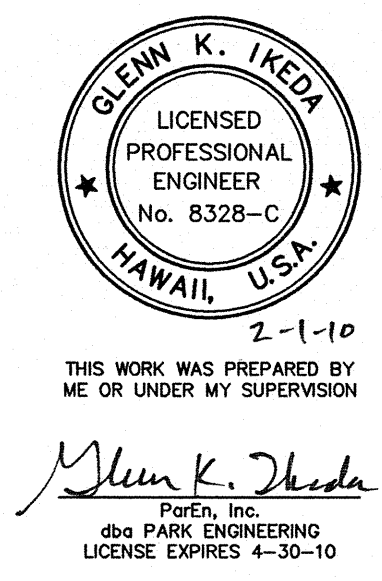
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-050-1(31)	2009	C.O.119	452



PLAN - RETAINING WALL NO. 1 (SRW)
Scale: 1" = 20'

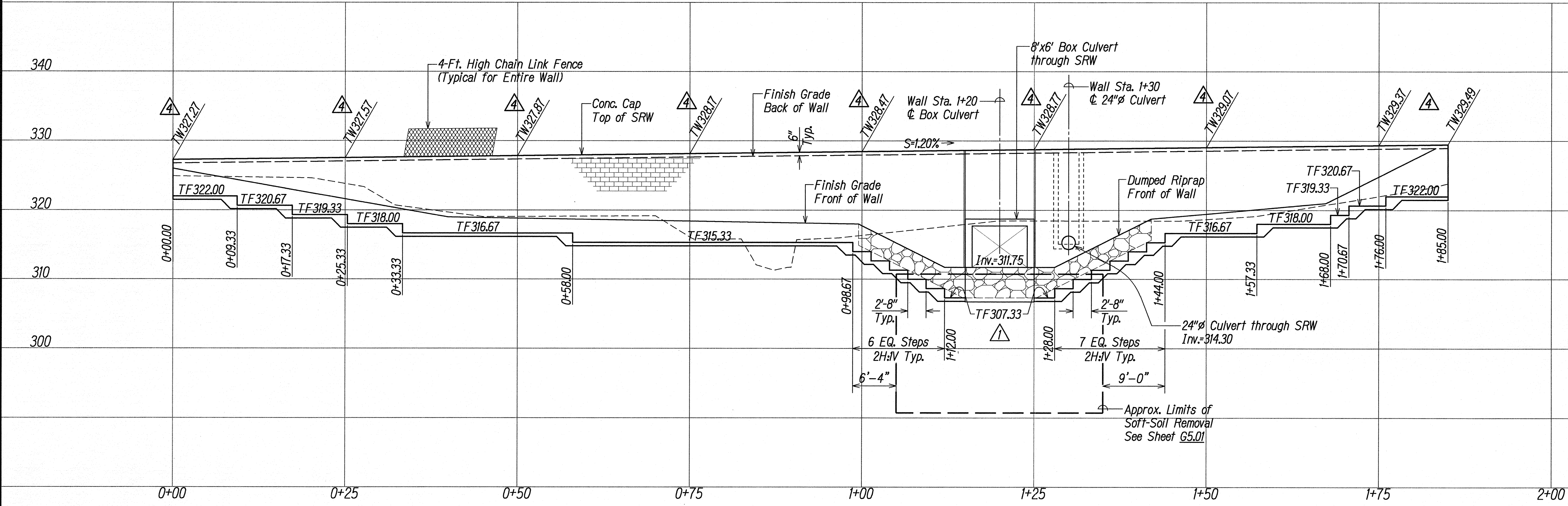
Related Plan Sheets:
For Profile, See Sheet RW2 and S4.
For Cross Sections, See Sheet RW3.
For Structural Notes, See Sheets S1 and S2.
For Structural Details, See Sheets S3 and S6.

ORIGINAL PLAN	DATE
DRAWN BY	
CHECKED BY	
NOTED BY	
QUANTITIES BY	
CHECKED BY	



2/01/10	Added Conc. Curb, Gutter & Sidewalk (CGS). Removed Paved Shoulder and Grass Swale where replaced by CGS.
DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
SEGMENTAL RETAINING WALL (SRW) WALL NO. 1 PLAN	
KAUMUALII HIGHWAY WIDENING Vicinity of Anonui Street to Vicinity of Lihue Mill Bridge FEDERAL-AID PROJECT NO. NH-050-1(31)	
Scale: 1" = 20'-0"	Date: JAN. 2010
SHEET No. RW1 OF RW11 SHEETS	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-050-1(31)	2009	C.O. ADD.120	452



PROFILE - RETAINING WALL NO. 1
SCALE: 1/8" = 1'-0"

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

LIB2: STATE DOT\KAMUALII-1\PHASE1A REVISION\000\1\002-RW02-MPRO.dwg 1/15/10

GLENN K. IKEDA
LICENSED PROFESSIONAL ENGINEER
No. 8328-C
HAWAII, U.S.A.

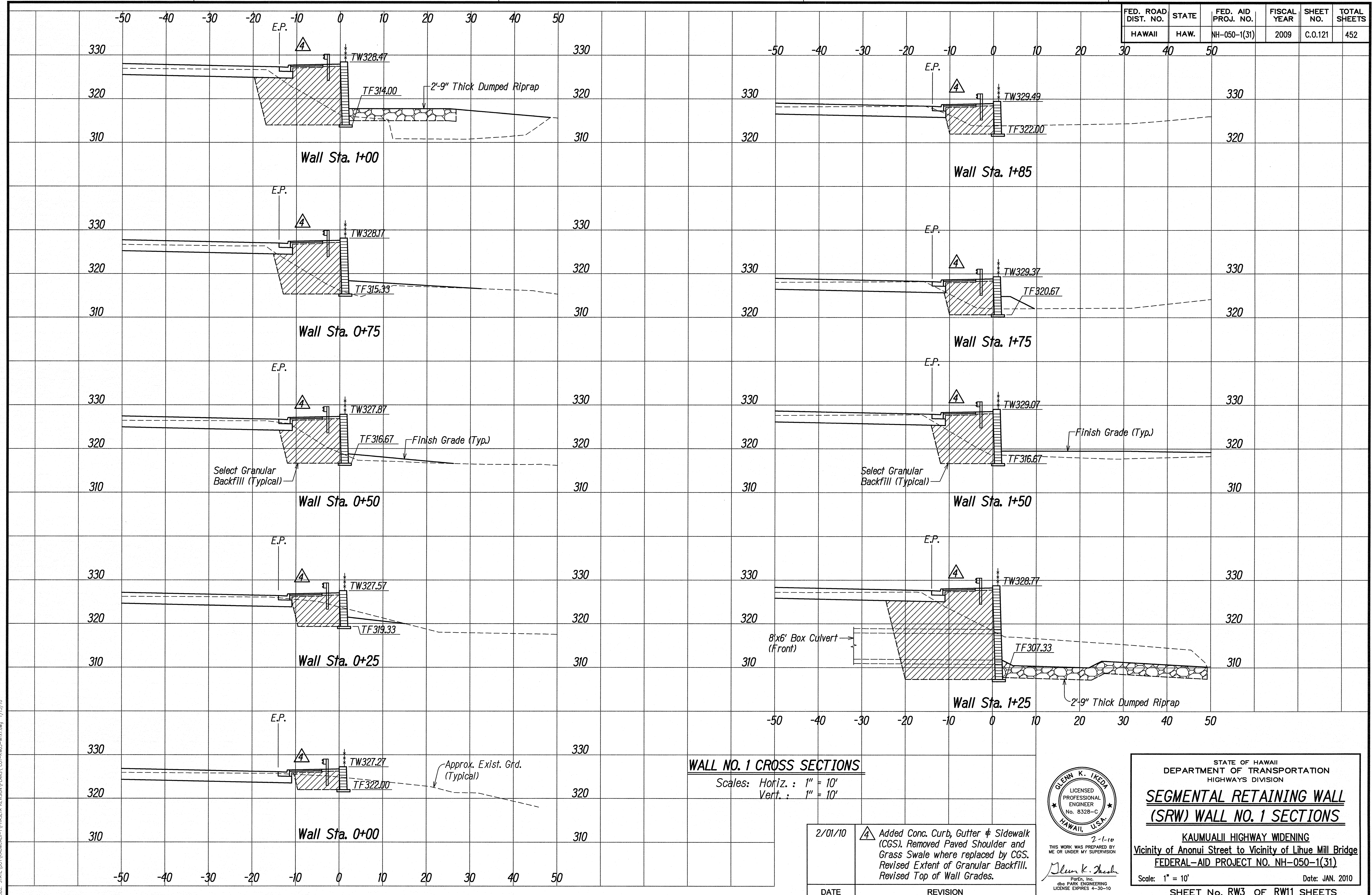
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Glenn K. Ikeda
P/E, Inc.
480 PARK ENGINEERING
LICENSE EXPIRES 4-30-10

2/01/10	Revised Top of Wall Grades
7/10/09	Revised Footing at Box Culvert
DATE	REVISION

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION
SEGMENTAL RETAINING WALL (SRW) WALL NO. 1 PROFILE
KAUMUALII HIGHWAY WIDENING Vicinity of Anonui Street to Vicinity of Lihue Mill Bridge FEDERAL-AID PROJECT NO. NH-050-1(31)
Scale: 1/8" = 1'-0" Date: JULY 2009

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-050-1(31)	2009	C.O.121	452



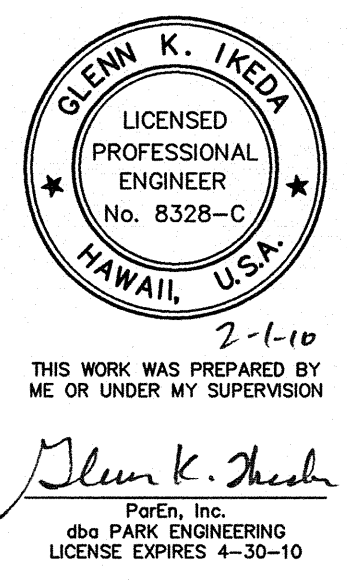
SURVEY PLOTTED BY	DATE
DRAWN BY	
TRACED BY	
CHECKED BY	
NOTE BOOK	
QUANTITIES BY	
CHECKED BY	
No.	

DES. STATE OF HAWAII - KAHALA - KAHALA REGION PLANS, C.O. RW3-RW11, 1/15/10

WALL NO. 1 CROSS SECTIONS

Scales: Horiz. : 1" = 10'
Vert. : 1" = 10'

2/01/10	Added Conc. Curb, Gutter & Sidewalk (CGS). Removed Paved Shoulder and Grass Swale where replaced by CGS. Revised Extent of Granular Backfill. Revised Top of Wall Grades.
DATE	REVISION



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

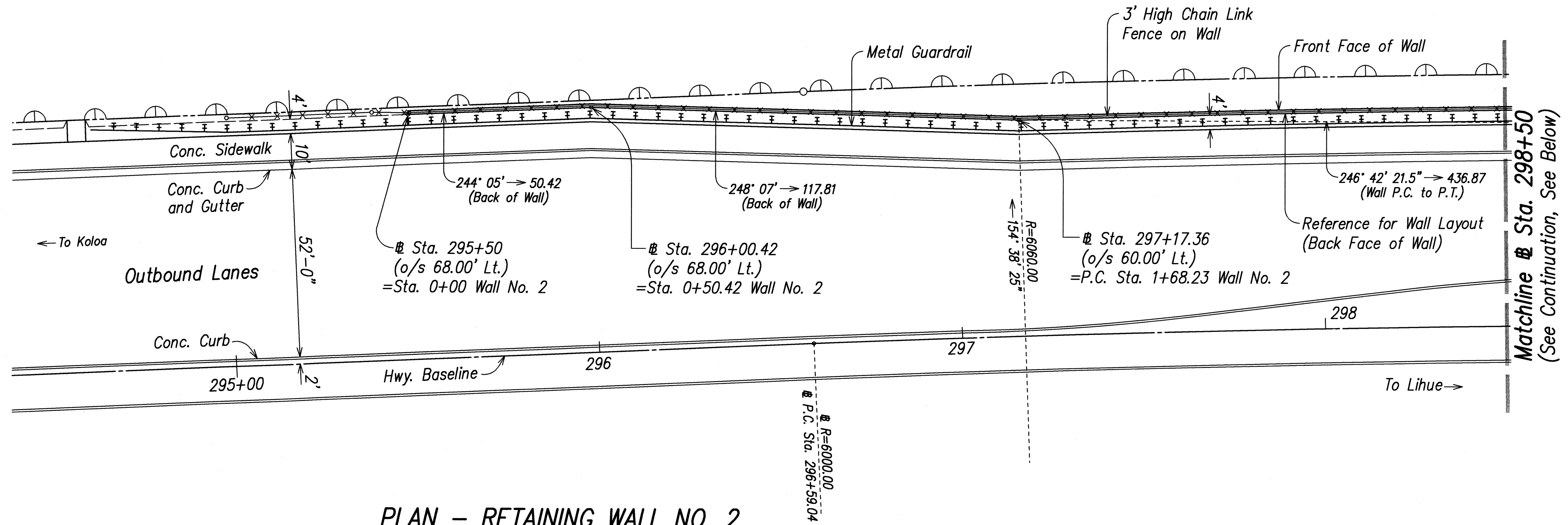
SEGMENTAL RETAINING WALL (SRW) WALL NO. 1 SECTIONS

KAUAI HIGWAY WIDENING
Vicinity of Anonui Street to Vicinity of Lihue Mill Bridge
FEDERAL-AID PROJECT NO. NH-050-1(31)

Scale: 1" = 10' Date: JAN. 2010

SHEET No. RW3 OF RW11 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-050-1(31)	2009	122	452



PLAN - RETAINING WALL NO. 2
Scale: 1" = 20'

Wall No. 2 Curve Data
(Reference Back of Wall)

$\Delta = 4^\circ 07' 53''$
 $\Delta/2 = 2^\circ 03' 56.5''$
 $R = 6060.00$
 $T = 218.58$
 $C = 436.87$
 $L_c = 436.97$

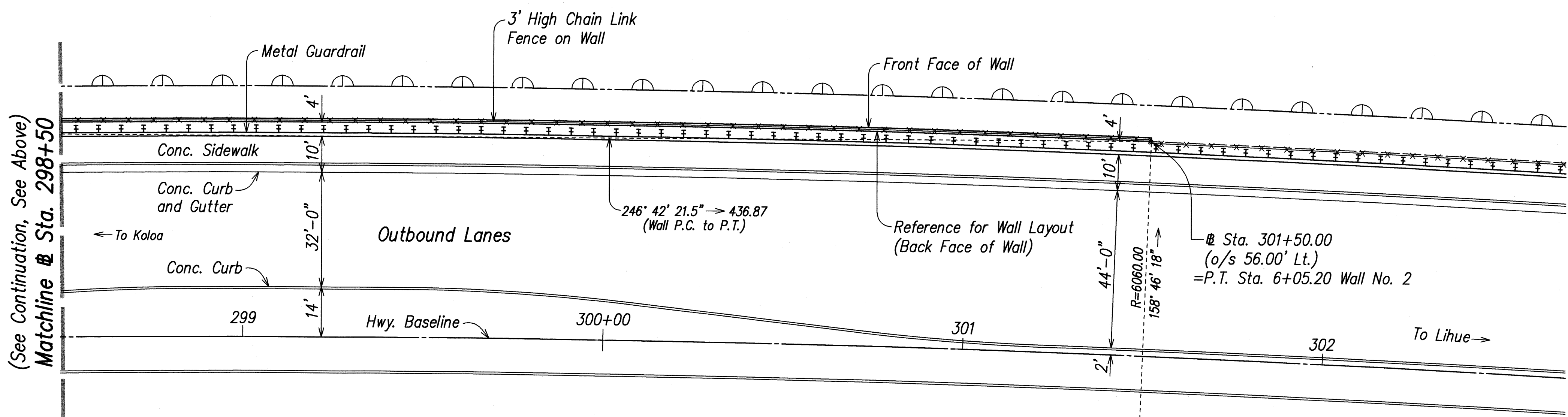
Related Plan Sheets:

For Profile, See Sheet RW5.

For Cross Sections, See Sheets RW6 and RW7.

For Structural Notes, See Sheets S1 and S2.

For Structural Details, See Sheet S7.



PLAN - RETAINING WALL NO. 2
Scale: 1" = 20'

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

LIB2: STATE OF HAWAII - PHASE 1A REVISIONS AND KAHU-050-1(31) Rev. 2/23/09



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Glen K. Ikeda
Parks, Inc.
dba PARK ENGINEERING
LICENSE EXPIRES 4-30-10

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

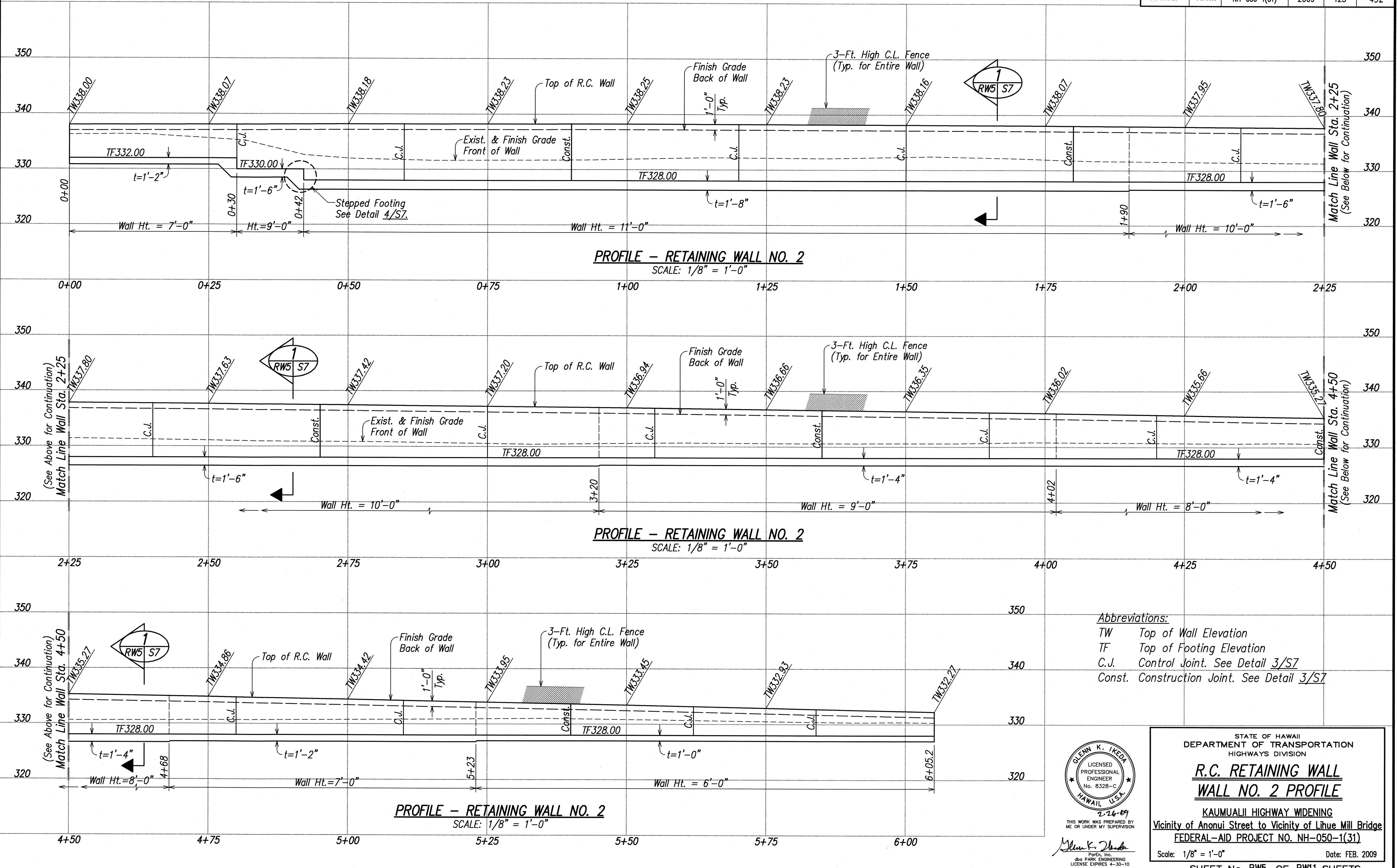
R.C. RETAINING WALL
WALL NO. 2 PLAN

KAUMUALI HIGHWAY WIDENING
Vicinity of Anonui Street to Vicinity of Lihue Mill Bridge
FEDERAL-AID PROJECT NO. NH-050-1(31)

Scale: 1" = 20' Date: FEB. 2009

SHEET No. RW4 OF RW11 SHEETS

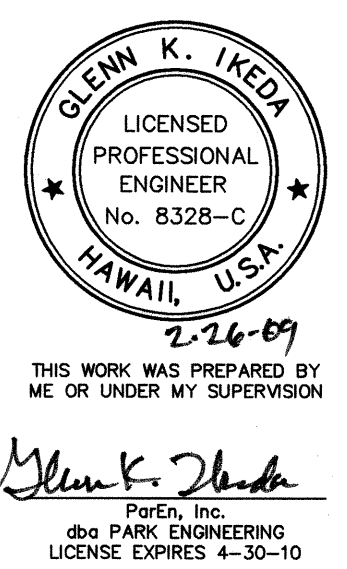
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-050-1(31)	2009	123	452



SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
NO.	

LIB2: STATE OF HAWAII - VEHICLE REPAIR PLANS - RW5 - APPROVED 2/25/09

Abbreviations:
TW Top of Wall Elevation
TF Top of Footing Elevation
C.J. Control Joint. See Detail 3/S7
Const. Construction Joint. See Detail 3/S7



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

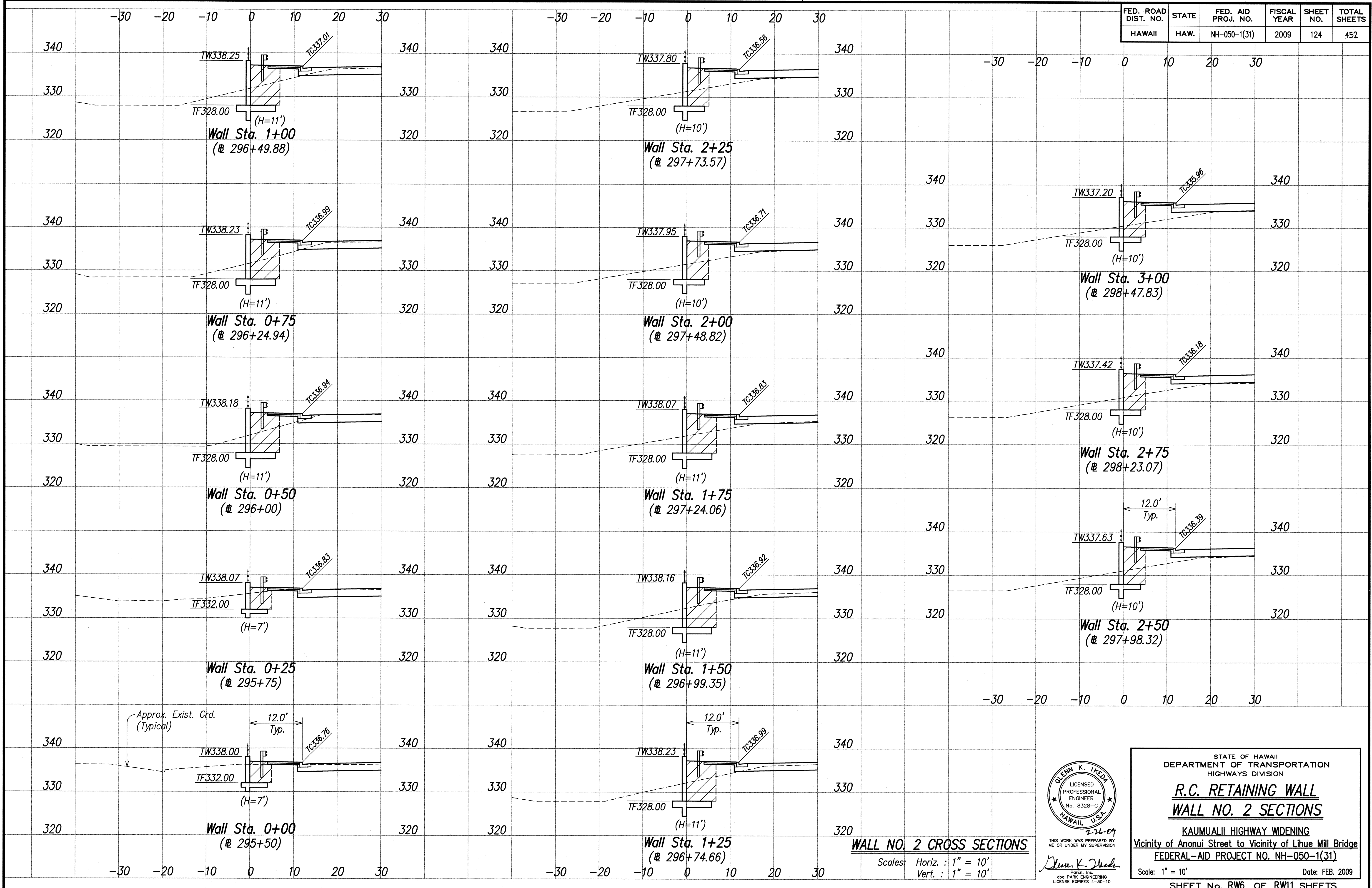
**R.C. RETAINING WALL
WALL NO. 2 PROFILE**

KAUMUALII HIGHWAY WIDENING
Vicinity of Anonui Street to Vicinity of Lihue Mill Bridge
FEDERAL-AID PROJECT NO. NH-050-1(31)

Scale: 1/8" = 1'-0" Date: FEB. 2009

SHEET No. RW5 OF RW11 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-050-1(31)	2009	124	452



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

100% STATE DOT STANDARD PLAN REVISION PLANS, KAHALA-PAHOE-MAUNA KAHALA ROAD, 1/25/08

WALL NO. 2 CROSS SECTIONS

Scales: Horiz. : 1" = 10'
Vert. : 1" = 10'

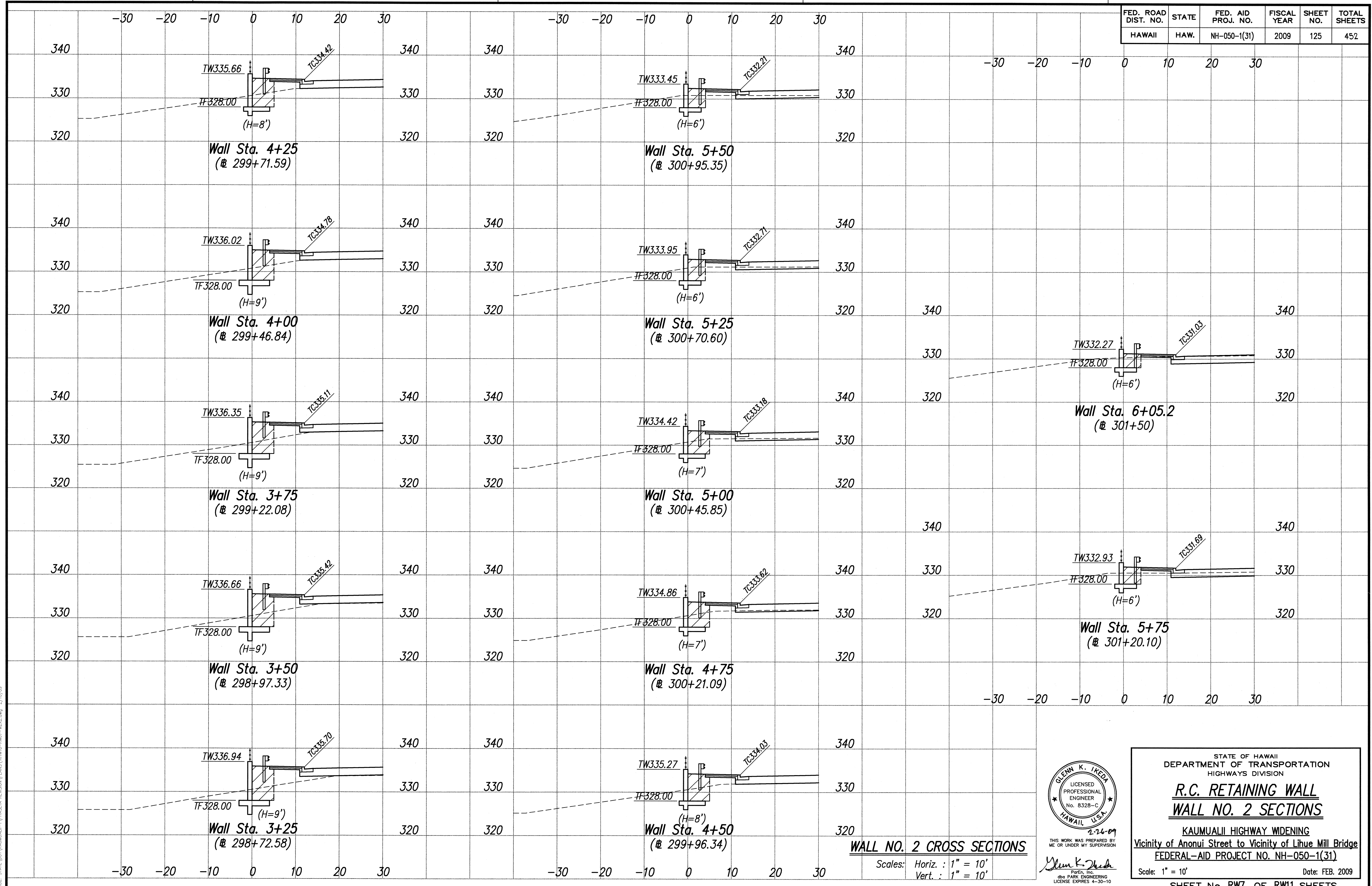


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Glenn K. Ikeda
P.E., Inc.
dba PARK ENGINEERING
LICENSE EXPIRES 4-30-10

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
R.C. RETAINING WALL
WALL NO. 2 SECTIONS
KAUAI HIGWAY WIDENING
Vicinity of Anonui Street to Vicinity of Lihue Mill Bridge
FEDERAL-AID PROJECT NO. NH-050-1(31)
Scale: 1" = 10'
Date: FEB. 2009
SHEET No. RW6 OF RW11 SHEETS

2-26-09

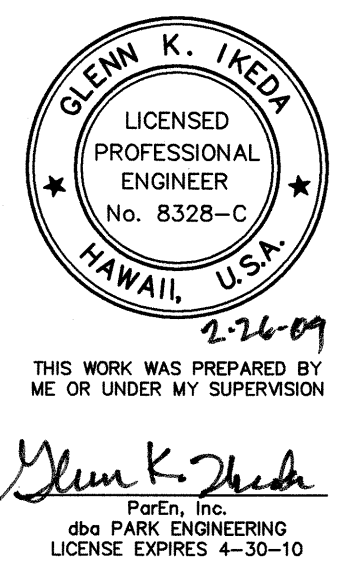
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-050-1(31)	2009	125	452



SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
NOTE BOOK	
No.	

LIBRARY STATE OF HAWAII - HONOLULU, HAWAII - 1515 KALANOA AVENUE - ROOM 402 - TEL: 535-2700 FAX: 535-2701

WALL NO. 2 CROSS SECTIONS
 Scales: Horiz. : 1" = 10'
 Vert. : 1" = 10'



STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

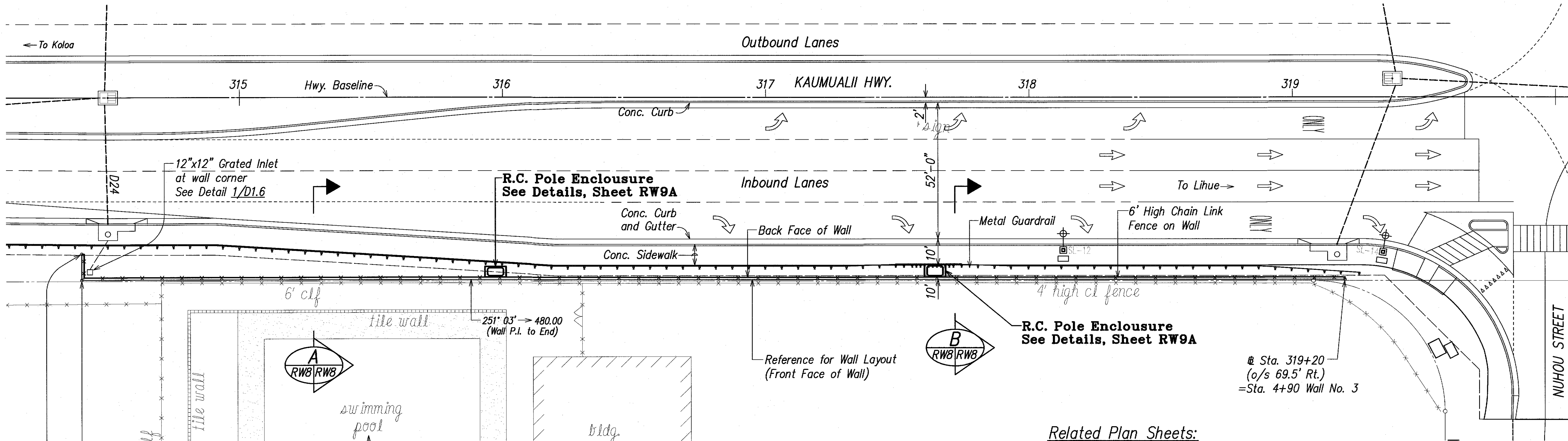
**R.C. RETAINING WALL
 WALL NO. 2 SECTIONS**

KAUAI HIGHWAY WIDENING
 Vicinity of Anonui Street to Vicinity of Lihue Mill Bridge
 FEDERAL-AID PROJECT NO. NH-050-1(31)

Scale: 1" = 10' Date: FEB. 2009

SHEET No. RW7 OF RW11 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-050-1(31)	2009	126	452



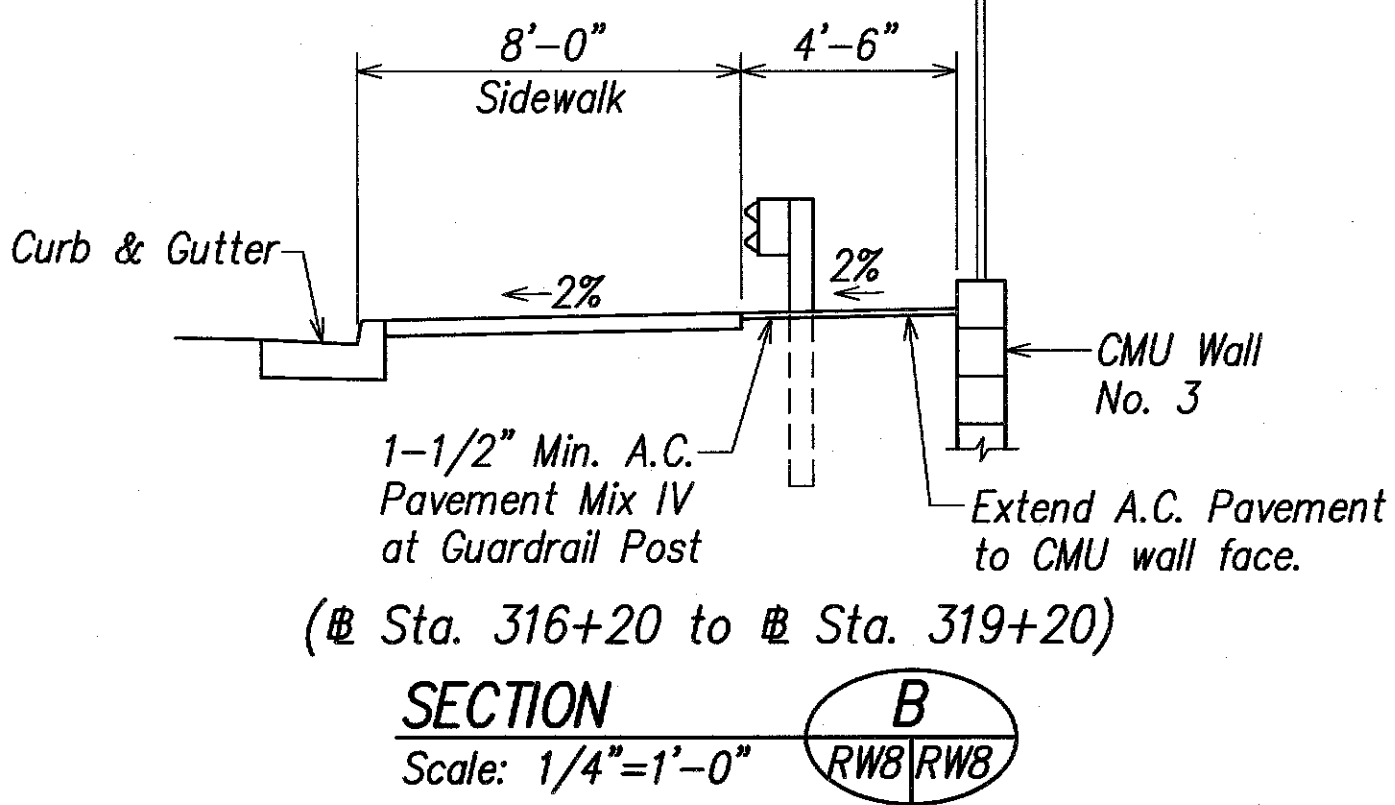
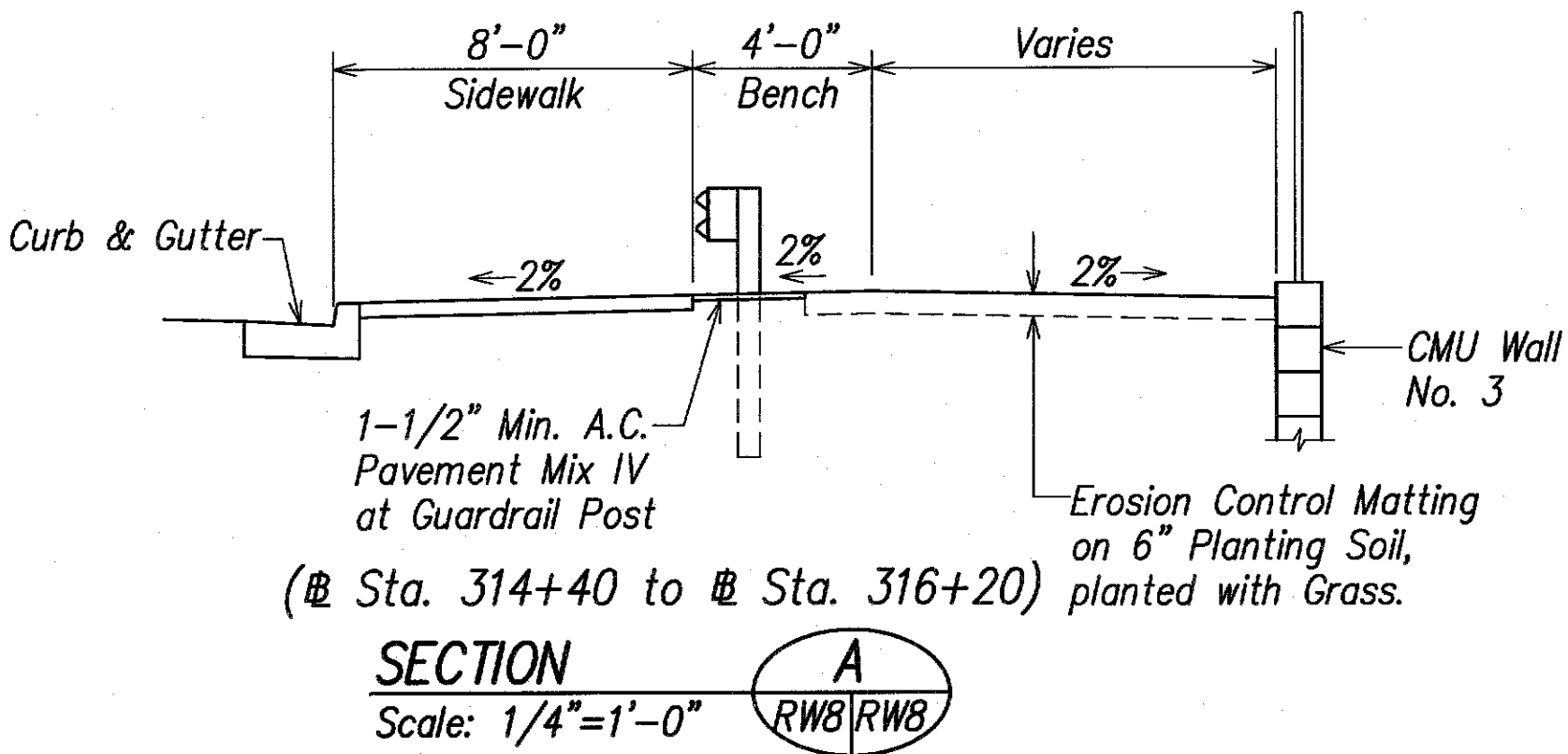
PLAN - RETAINING WALL NO. 3
Scale: 1" = 20'

Related Plan Sheets:
 For Profiles, See Sheet RW9.
 For Cross Sections, See Sheets RW10 and RW11.
 For Structural Notes, See Sheets S1 and S2.
 For Structural Details, See Sheet S10 and S11.
 For site-specific fencing, dust screen and work sequencing at YMCA site, See Plan Sheet C27.



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ParEn, Inc.
280 PARK ENGINEERING
LICENSE EXPIRES 4-30-16



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

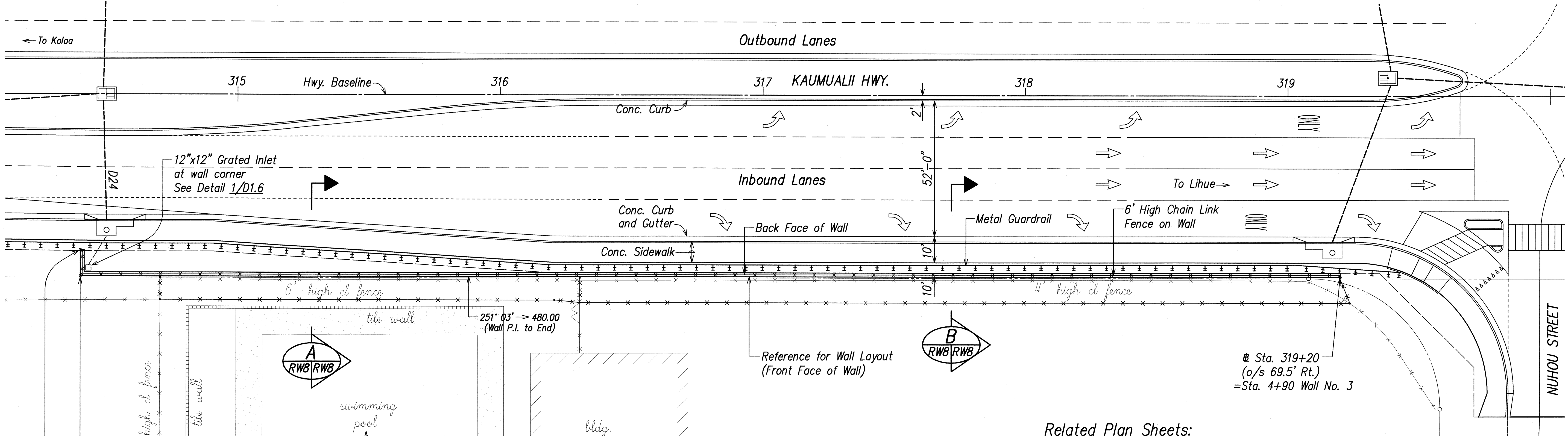
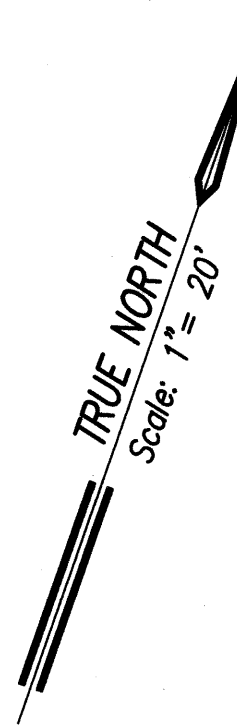
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

C.M.U. RETAINING WALL
WALL NO. 3 PLAN
 KAUMUALII HIGHWAY WIDENING
 Vicinity of Anonui Street to Vicinity of Lihue Mill Bridge
 FEDERAL-AID PROJECT NO. NH-050-1(31)
 Scale: 1" = 20' Date: JAN. 2010

SHEET No. RW8 OF RW11 SHEETS

"AS-BUILT"

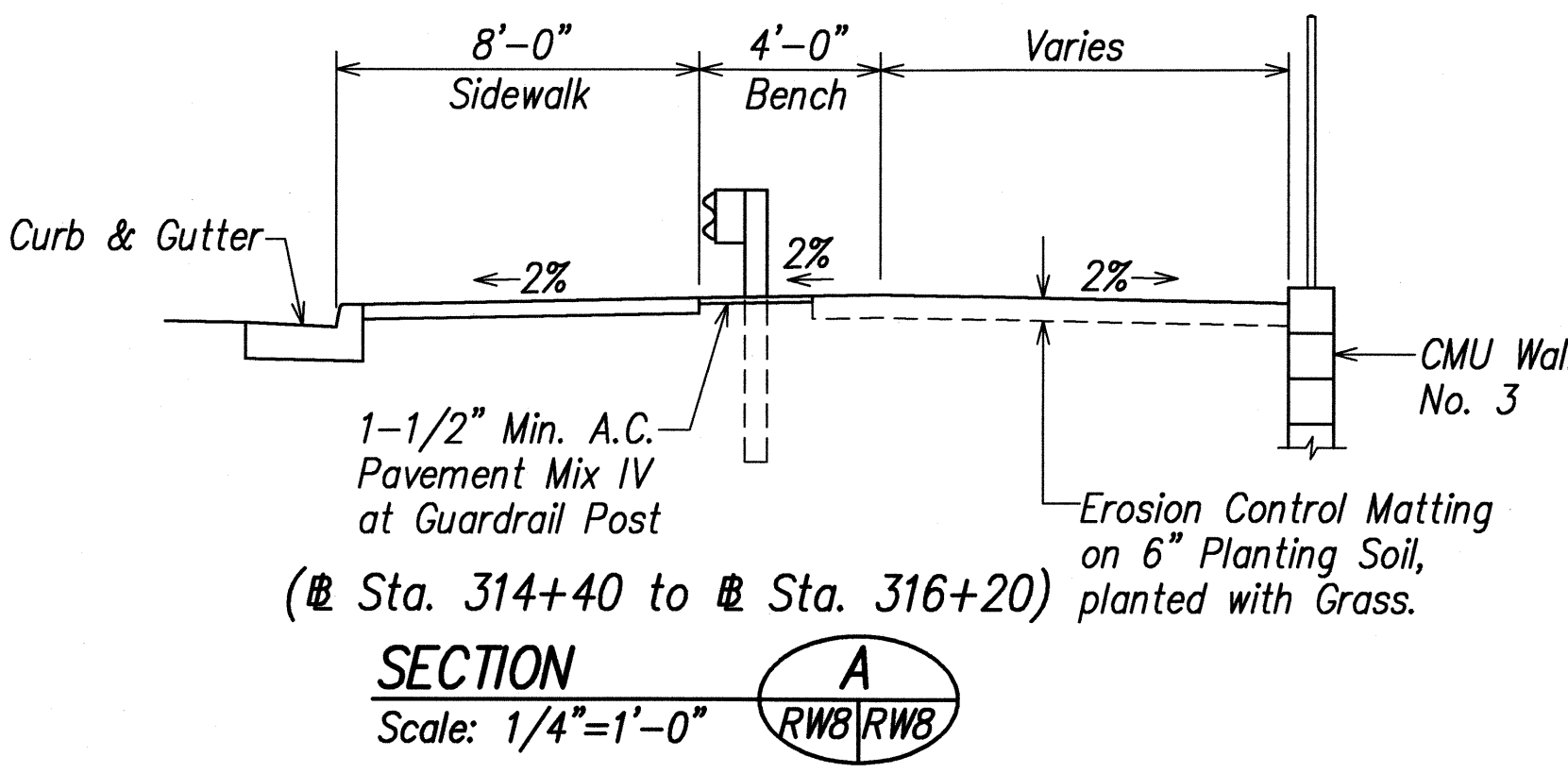
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-050-1(31)	2009	126	452



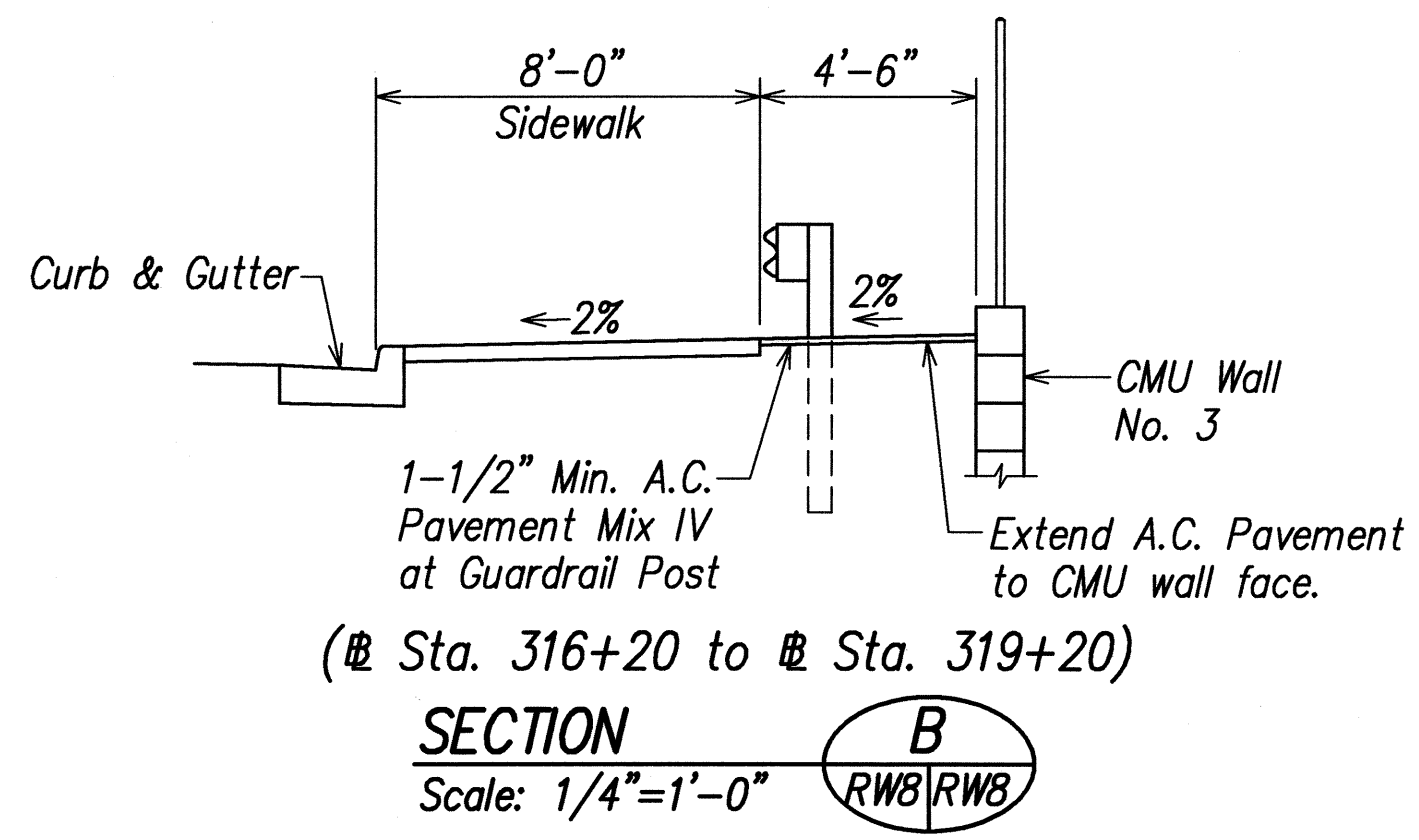
PLAN - RETAINING WALL NO. 3
Scale: 1" = 20'

Related Plan Sheets:
For Profiles, See Sheet RW9.
For Cross Sections, See Sheets RW10 and RW11.
For Structural Notes, See Sheets S1 and S2.
For Structural Details, See Sheet S10 and S11.
For site-specific fencing, dust screen and work sequencing at YMCA site, See Plan Sheet C27.

CAUTION(*):
Do not use any vibratory compaction equipment within 300 feet of the existing YMCA swimming pool. Approx. limits of restriction are from Sta. 312+00 to Sta. 319+00.



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



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



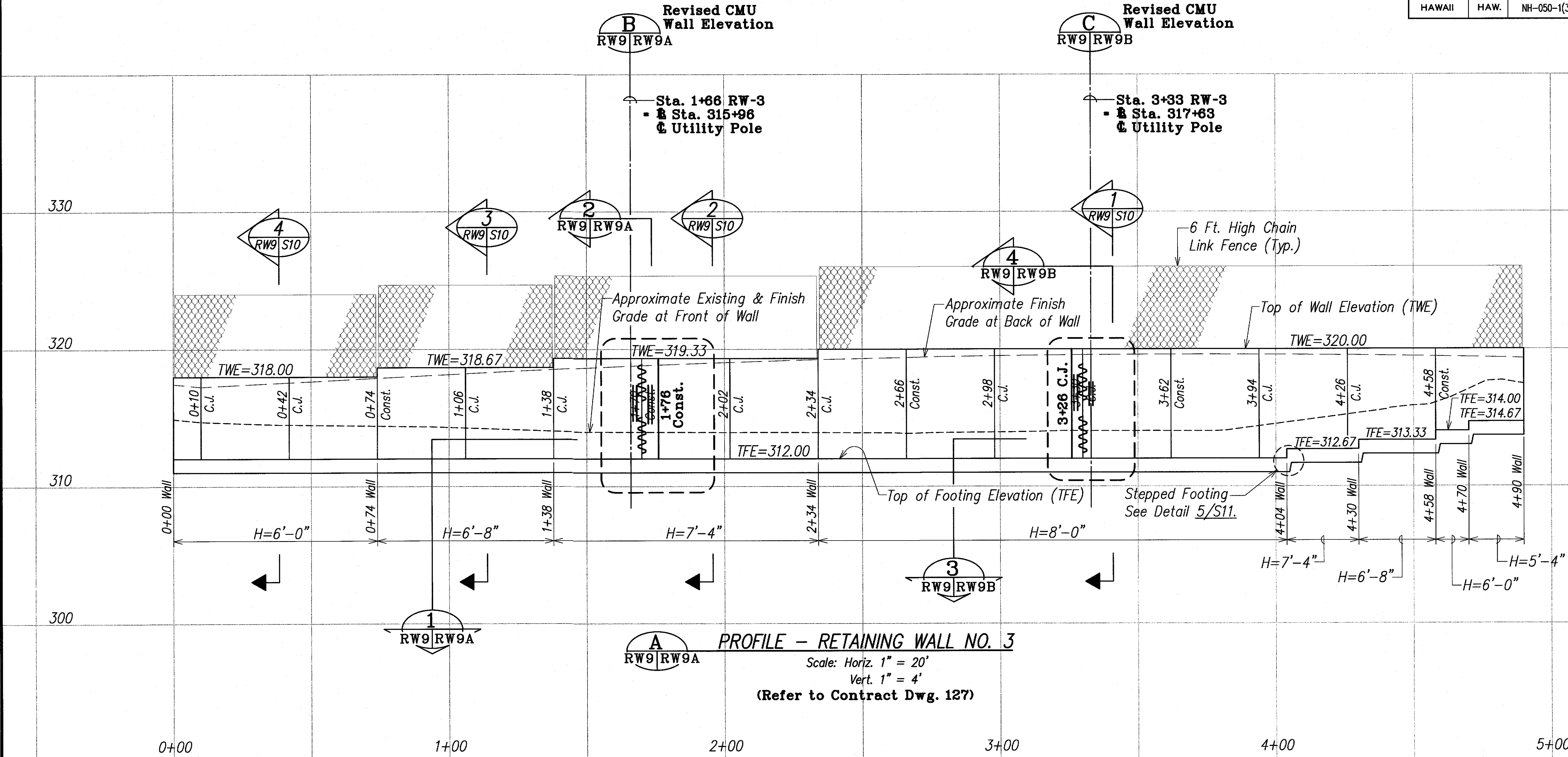
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Glenn K. Ikeda
ParEn, Inc.
dba PARK ENGINEERING
LICENSE EXPIRES 4-30-10

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
C.M.U. RETAINING WALL
WALL NO. 3 PLAN
KAUMUALII HIGHWAY WIDENING
Vicinity of Anonui Street to Vicinity of Lihue Mill Bridge
FEDERAL-AID PROJECT NO. NH-050-1(31)
Scale: 1" = 20'
Date: FEB. 2009
SHEET No. RW8 OF RW11 SHEETS

SURVEY PLOTTED BY	DATE
DRAWN BY	
CHECKED BY	
NOTED BY	
QUANTITIES BY	
CHECKED BY	

100% STATE DOT/KAUMUALII HIGHWAY WIDENING - RW8 - RW11 - 2/22/09

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-050-1(31)	2009	127	452



Abbreviations:

TWE Top of Wall Elevation

TFE Top of Footing Elevation

C.J. Control Joint. See Detail 2/S11.

Const. Construction Joint. See Detail 3/S11.

LEGEND FOR AS-BUILT POSTINGS

Squiggly line for as-built deletion

Double line for as-built deletion

Text for as-built posting

Roadway



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Park, Inc.
dba PARK ENGINEERING
LICENSE EXPIRES 4-30-16

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

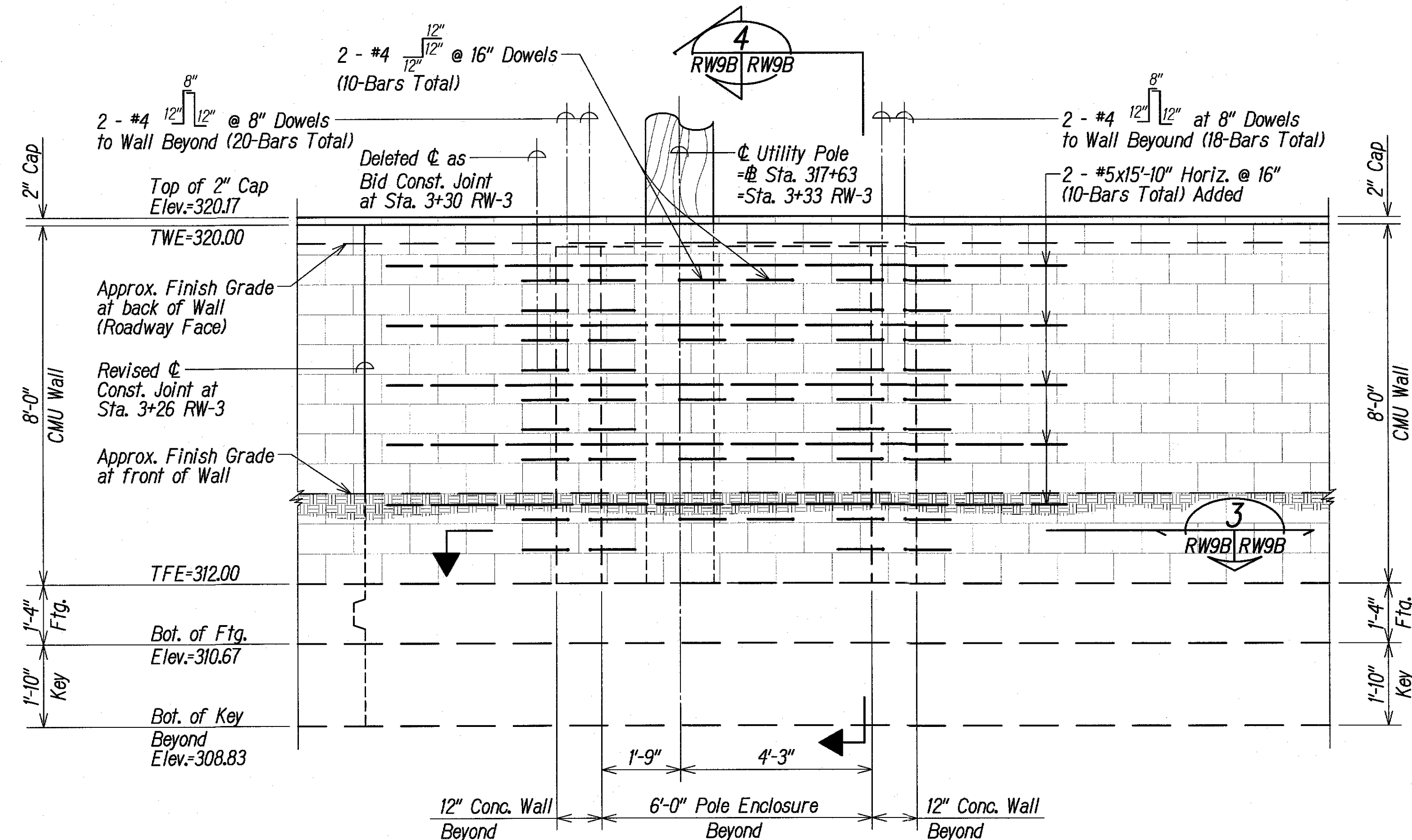
**C.M.U. RETAINING WALL
WALL NO. 3 PROFILE**

KAUMUALI HIGHWAY WIDENING
Vicinity of Anonui Street to Vicinity of Lihue Mill Bridge
FEDERAL-AID PROJECT NO. NH-050-1(31)

Scale: As Noted Date: JAN. 2010

SHEET No. RW9 OF RW11 SHEETS

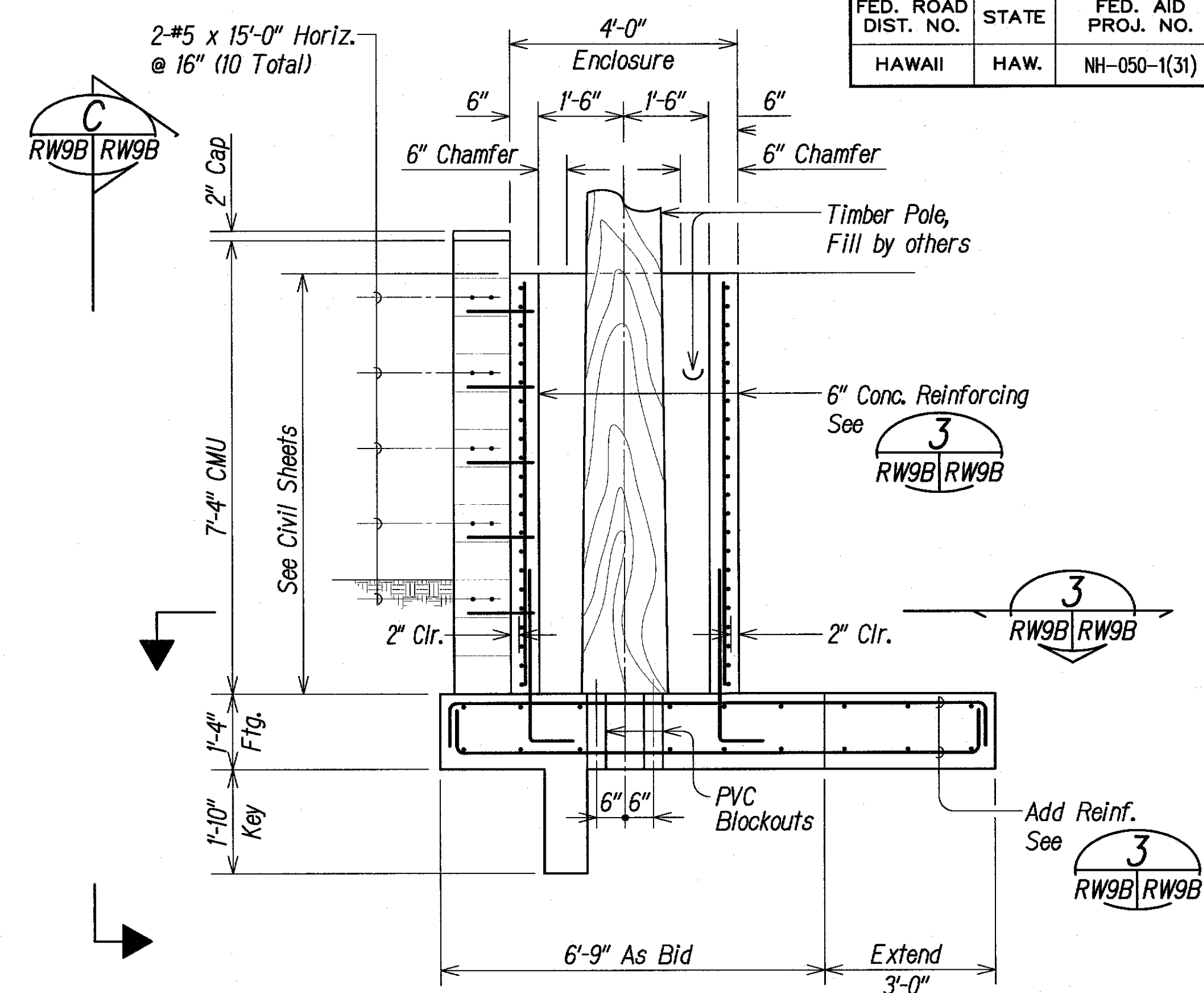
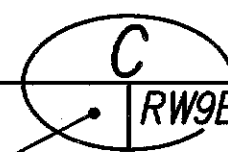
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-050-1(31)	2009	127S-2	452



RW-3 REVISED CMU WALL ELEVATION AT
UTILITY POLE STA. 317+63 = STA. 3+33 RW-3

Scale: 1/2" = 1'-0"

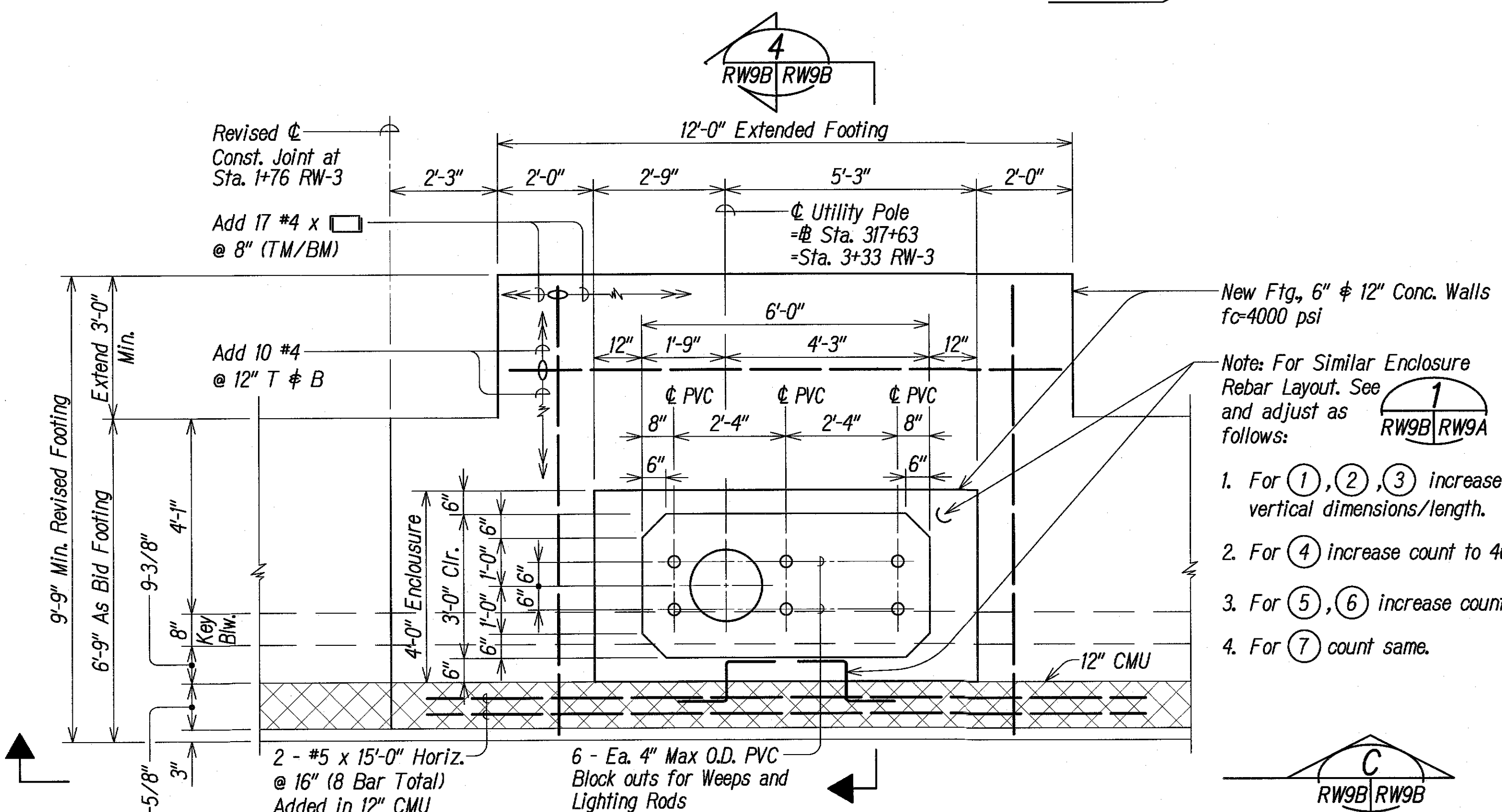
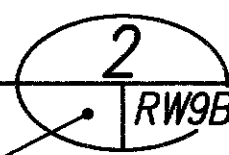
RW9, RW9B



SECTION AT UTILITY POLE ENCLOSURE
AT STA. 317+63 = STA. 3+33 RW-3

Scale: 1/2" = 1'-0"

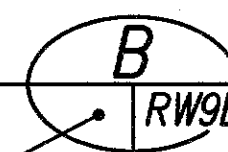
RW9, RW9B



UTILITY ENCLOSURE AT STA. 317+63 = 3+33 RW-3

Scale: 1/2" = 1'-0"

RW9, RW9A, RW9B

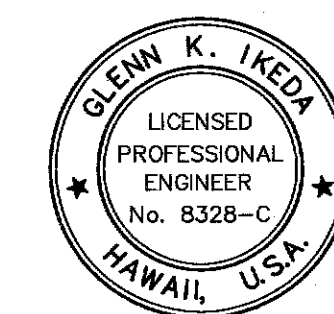


- 4 - #5 12" Vert. 4 Location = (16 Bar)
- 4 - #4 12" Vert. 4 Location = (8 Bar)
- 7 - #4 12" Vert. 2 Location = (14 Bar)
- #4 12" 8" @ 8" - 2 Location = (36 Bar)
- #4 12" 12" @ 4" Horiz. - 4 Location
- #5 x 12" 12" @ 4" Horiz. - 2 Location
- #4 x 12" 12" @ 16" - 2 Location (10 Bar)

LEGEND FOR AS-BUILT POSTINGS

	Squiggly line for as-built deletion
	Double line for as-built deletion
	Text for as-built posting

2/01/10	New Sheet for As-Built.
DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
C.M.U. RETAINING WALL WALL NO. 3 DETAILS	
KAUMUALI HIGHWAY WIDENING Vicinity of Anonui Street to Vicinity of Lihue Mill Bridge FEDERAL-AID PROJECT NO. NH-050-1(31)	
Scale: As Noted	Date: JAN. 2010
SHEET No. RW9B OF RW11 SHEETS	

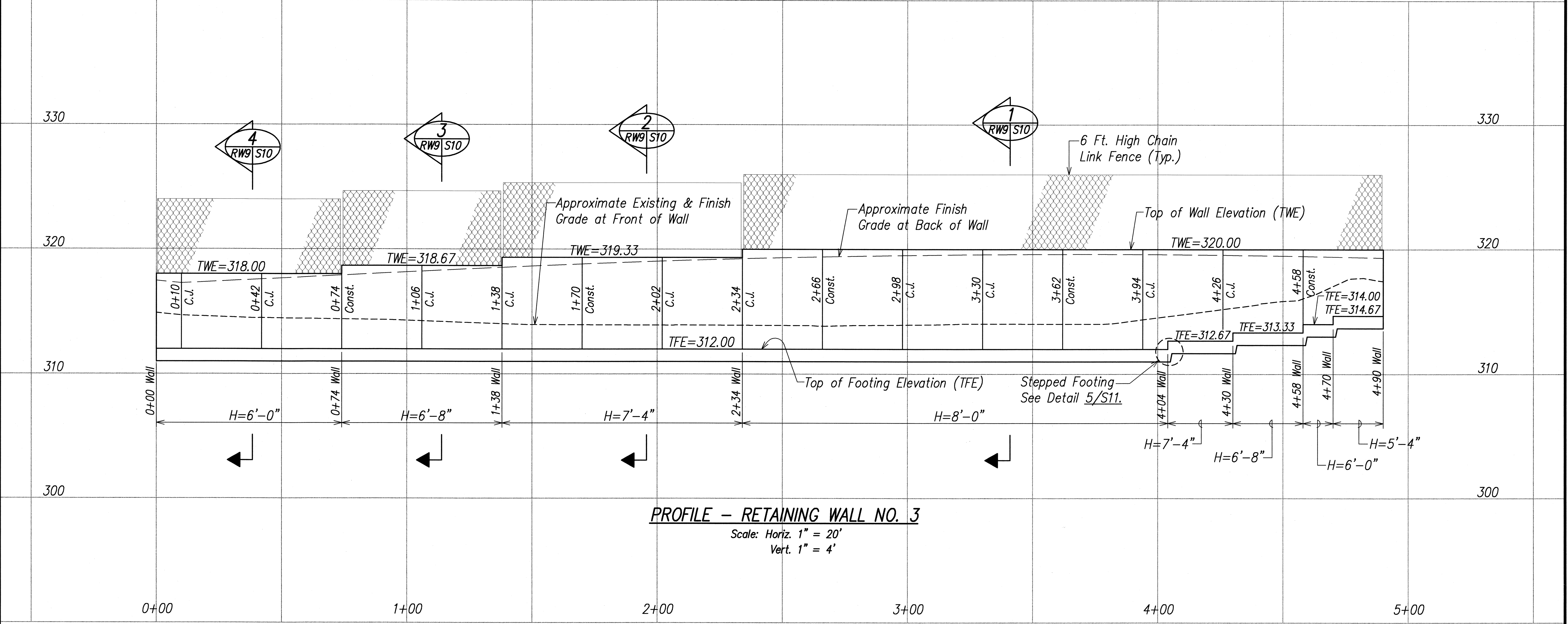


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dba PARK ENGINEERING
LICENSE EXPIRES 4-30-16

"AS-BUILT"

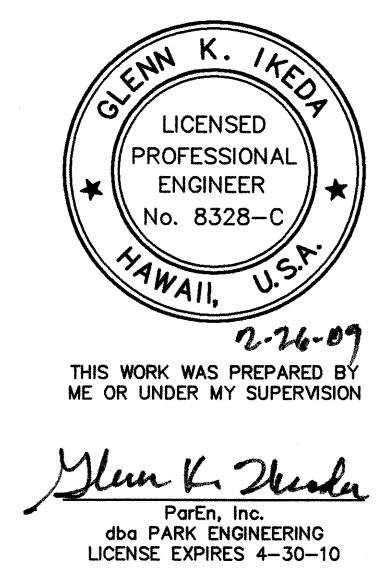
127 S-2

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-050-1(31)	2009	127	452



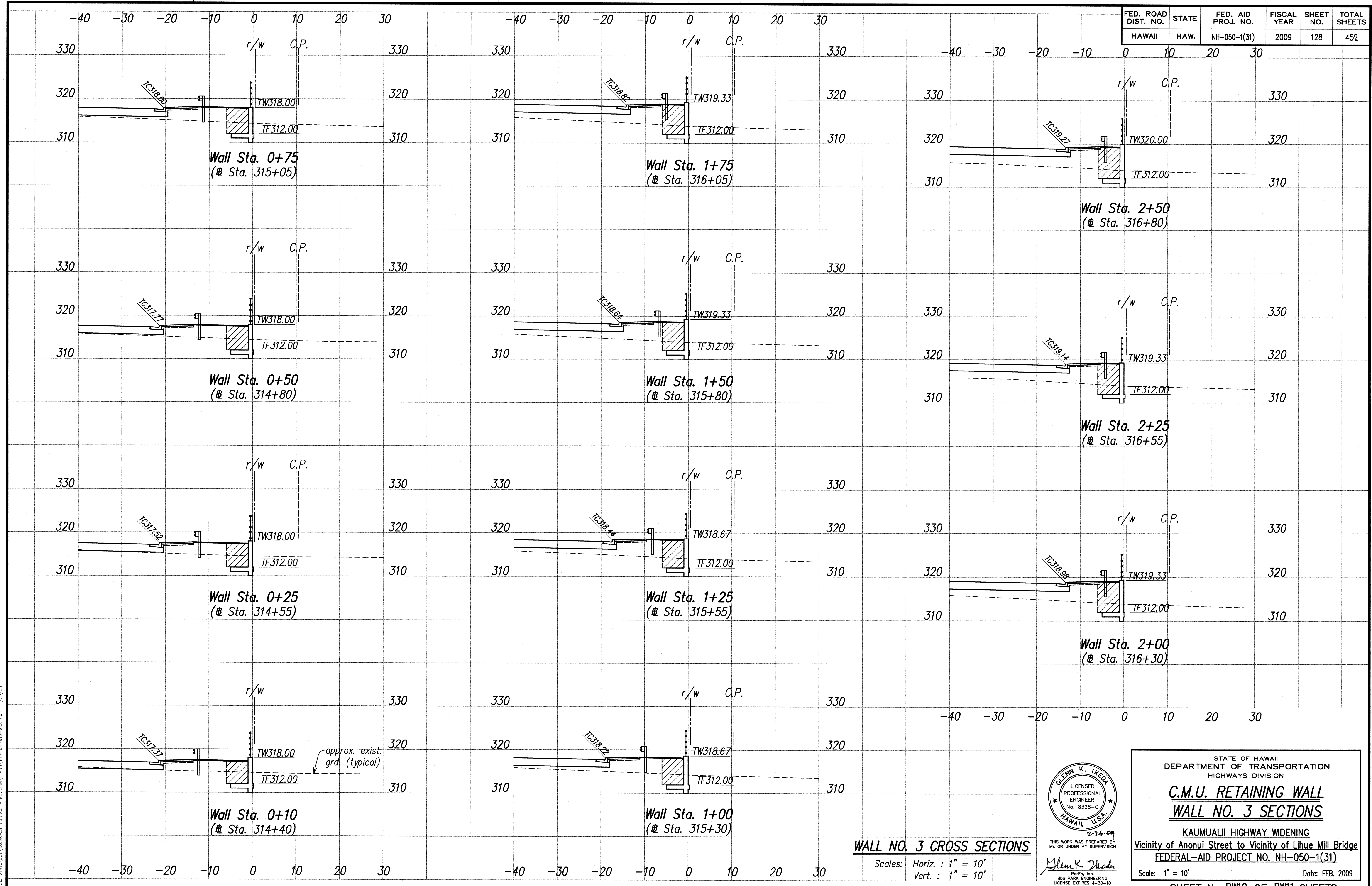
Abbreviations:
TWE Top of Wall Elevation
TFE Top of Footing Elevation
C.J. Control Joint. See Detail 2/S11.
Const. Construction Joint. See Detail 3/S11.

SURVEY PLOTTED BY	DATE
DRAWN BY	
TRACED BY	
CHECKED BY	
NOTE BOOK	
No.	



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
C.M.U. RETAINING WALL
WALL NO. 3 PROFILE
KAUMUALII HIGHWAY WIDENING
Vicinity of Anonui Street to Vicinity of Lihue Mill Bridge
FEDERAL-AID PROJECT NO. NH-050-1(31)
Scale: As Noted Date: FEB. 2009
SHEET No. RW9 OF RW11 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-050-1(31)	2009	128	452



SURVEY PLOTTED BY	DATE
DRAWN BY	
CHECKED BY	
NOTE BOOK	
QUANTITIES BY	
CHECKED BY	

100% STATE DOT KAHALA - KAPALEHA REGIONAL PLANS KAHALA-SPR-000-REV.000 11/25/08

WALL NO. 3 CROSS SECTIONS
 Scales: Horiz. : 1" = 10'
 Vert. : 1" = 10'



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 Glenn K. Ikeda
 P.E., INC.
 dba PARK ENGINEERING
 LICENSE EXPIRES 4-30-10

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

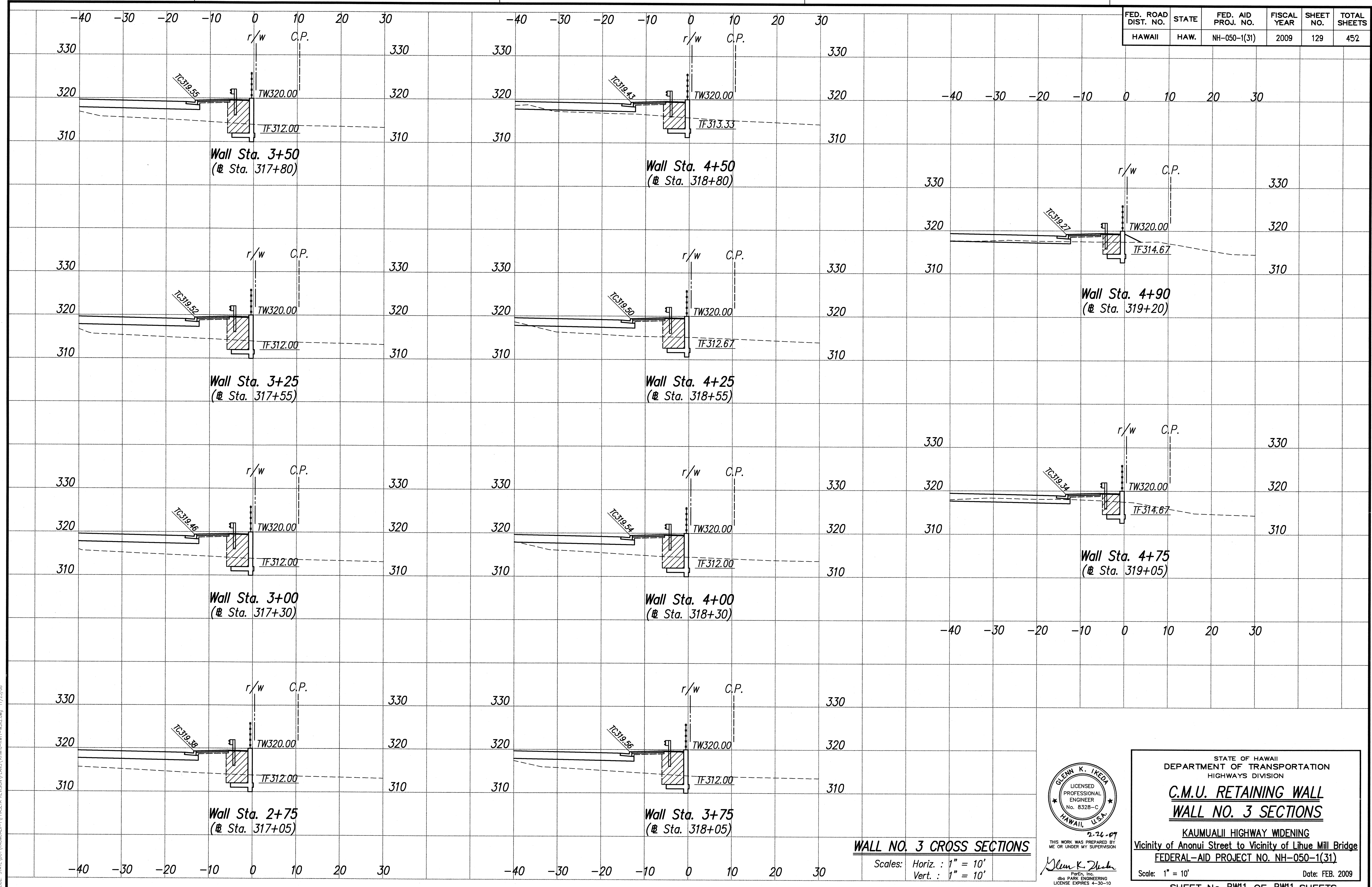
**C.M.U. RETAINING WALL
 WALL NO. 3 SECTIONS**

KAUMUALII HIGHWAY WIDENING
 Vicinity of Anonui Street to Vicinity of Lihue Mill Bridge
 FEDERAL-AID PROJECT NO. NH-050-1(31)

Scale: 1" = 10' Date: FEB. 2009

SHEET No. RW10 OF RW11 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-050-1(31)	2009	129	452



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

102 STATE OF HAWAII - PHASE 4 REVIEW (R) ASSESSMENT (R) 11/29/08

WALL NO. 3 CROSS SECTIONS
 Scales: Horiz. : 1" = 10'
 Vert. : 1" = 10'

GLENN K. IKEYA
 LICENSED PROFESSIONAL ENGINEER
 No. 8328-C
 HAWAII, U.S.A.
 2-26-07
 THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION
 GLENN K. IKEYA
 P.E., INC.
 dba PARK ENGINEERING
 LICENSE EXPIRES 4-30-10

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
**C.M.U. RETAINING WALL
 WALL NO. 3 SECTIONS**
 KAUMUALII HIGHWAY WIDENING
 Vicinity of Anonui Street to Vicinity of Lihue Mill Bridge
 FEDERAL-AID PROJECT NO. NH-050-1(31)
 Scale: 1" = 10' Date: FEB. 2009
 SHEET No. RW11 OF RW11 SHEETS