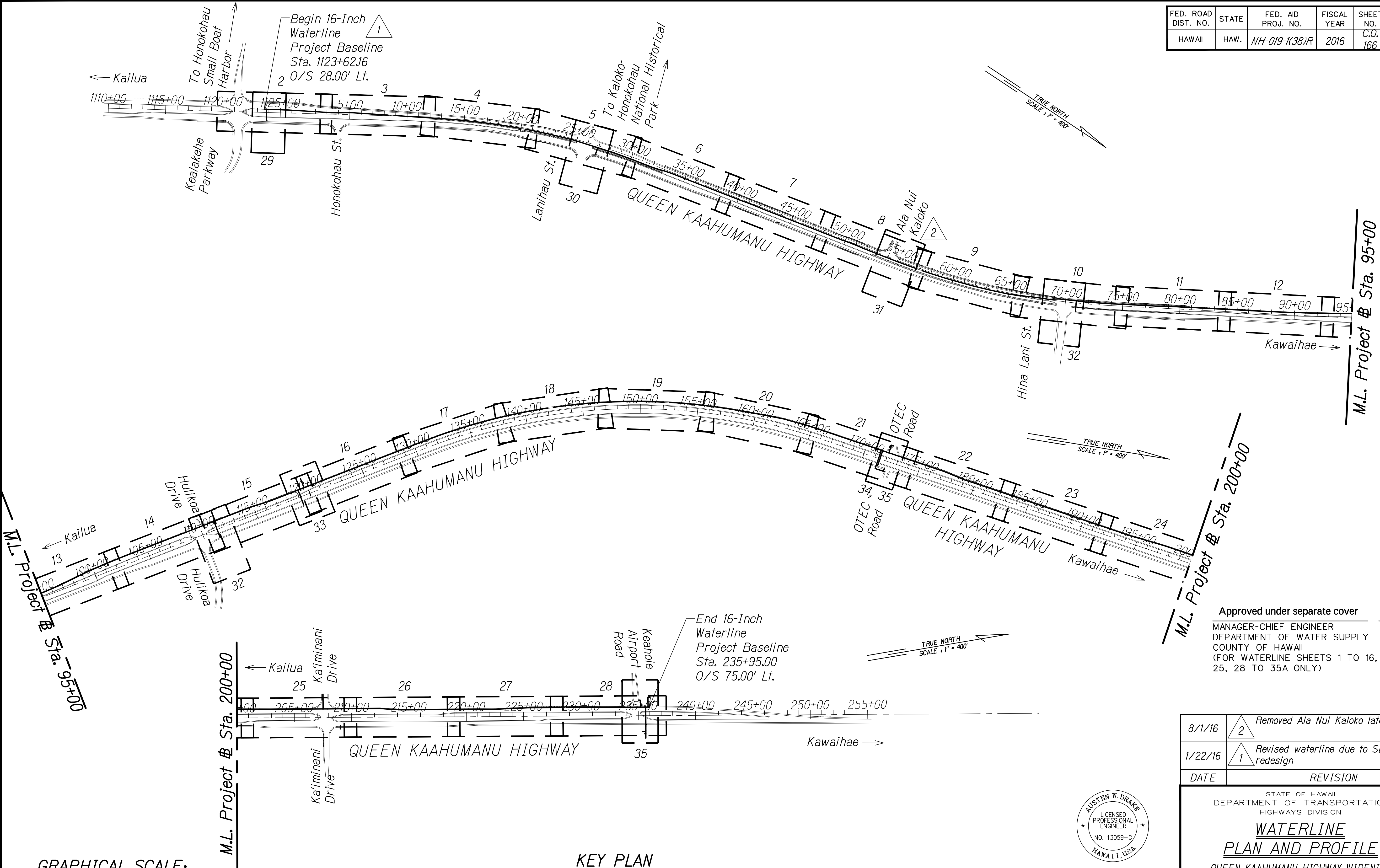
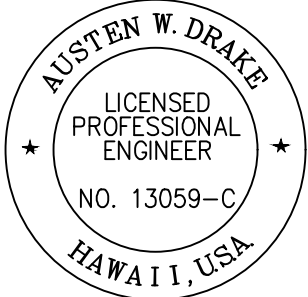


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-019-1(38)R	2016	C.O. 166	528



Approved under separate cover
MANAGER-CHIEF ENGINEER
DEPARTMENT OF WATER SUPPLY
COUNTY OF HAWAII
(FOR WATERLINE SHEETS 1 TO 16, 21, 25, 28 TO 35A ONLY)

8/1/16	2	Removed Ala Nui Kaloko lateral
1/22/16	1	Revised waterline due to SB # redesign
DATE	REVISION	



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.
Austen W. Drake APRIL 30, 2018
SIGNATURE EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**WATERLINE
PLAN AND PROFILE**

QUEEN KAAHUMANU HIGHWAY WIDENING
Kealahoe Pkwy. To Keahole Airport Rd.(Ph. 2)
Federal Aid Project No. NH-019-1(38)R
Scale: AS NOTED Date: OCTOBER 2016

SHEET No. 1 OF 35 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-019-1(38)R	2016	C.O. 167	528

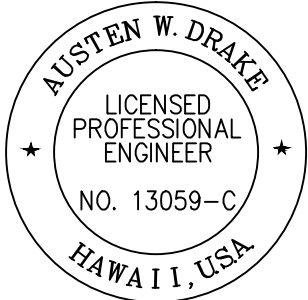
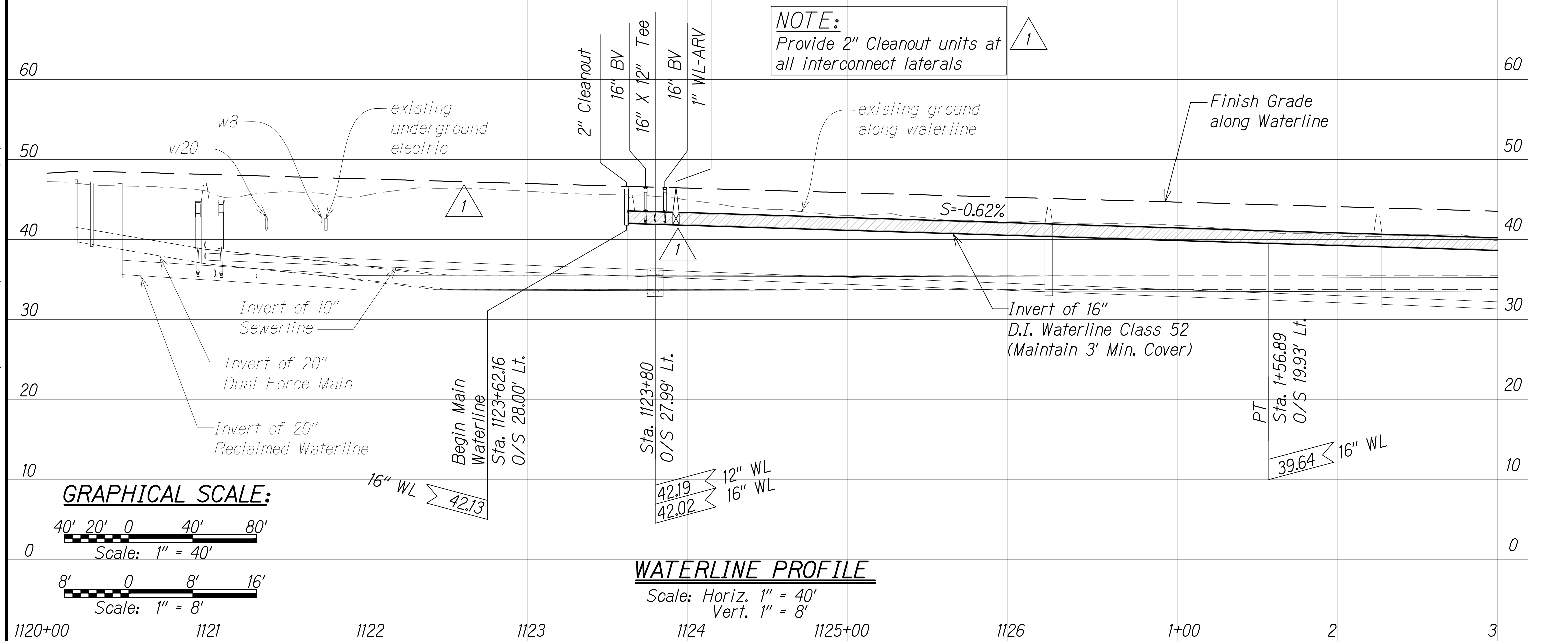
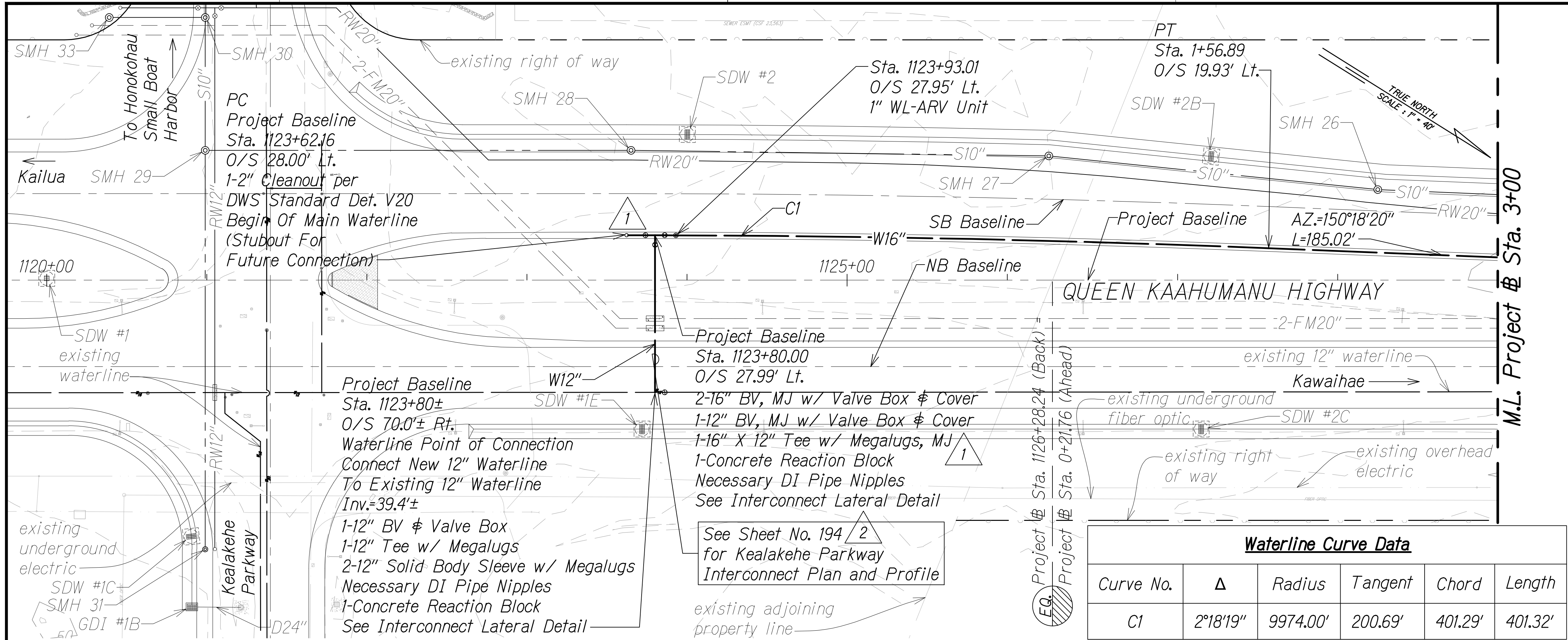
LEGEND:

- Finish Grade along Waterline
- S10" Sewerline
- W16" Waterline
- RW20" Reclaimed Water
- 2-FM20" Dual Force Main
- Sewer Manhole
- 1" Air Release Valve (ARV)
- Butterfly Valve (BV)
- Clean out
- Shallow Drywell
- Grated Drop Inlet
- Sewer Lateral
- Water Lateral
- Reclaimed Water Lateral
- existing waterline (w)
- existing underground fiber optic
- existing overhead electric
- existing underground electric

Waterline Curve Data					
Curve No.	Δ	Radius	Tangent	Chord	Length
C1	2°18'19"	9974.00'	200.69'	401.29'	401.32'

ORIGINAL PLAN	DATE
NO. 1	7/29/2016 5:23 PM
DESIGNED BY	
CHECKED BY	
QUANTITIES BY	
NOTED BY	
DATE	

W:_CIVIL_3D_PROJECTS\2008_003_001_GBI_QUEEN_K_Hwy_WIDENING\01_CIVIL_DRAWINGS\167_WATER_PP-02.DWG 7/29/2016 5:23 PM



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Austen W. Drake APRIL 30, 2018
SIGNATURE EXPIRATION DATE OF THE LICENSE

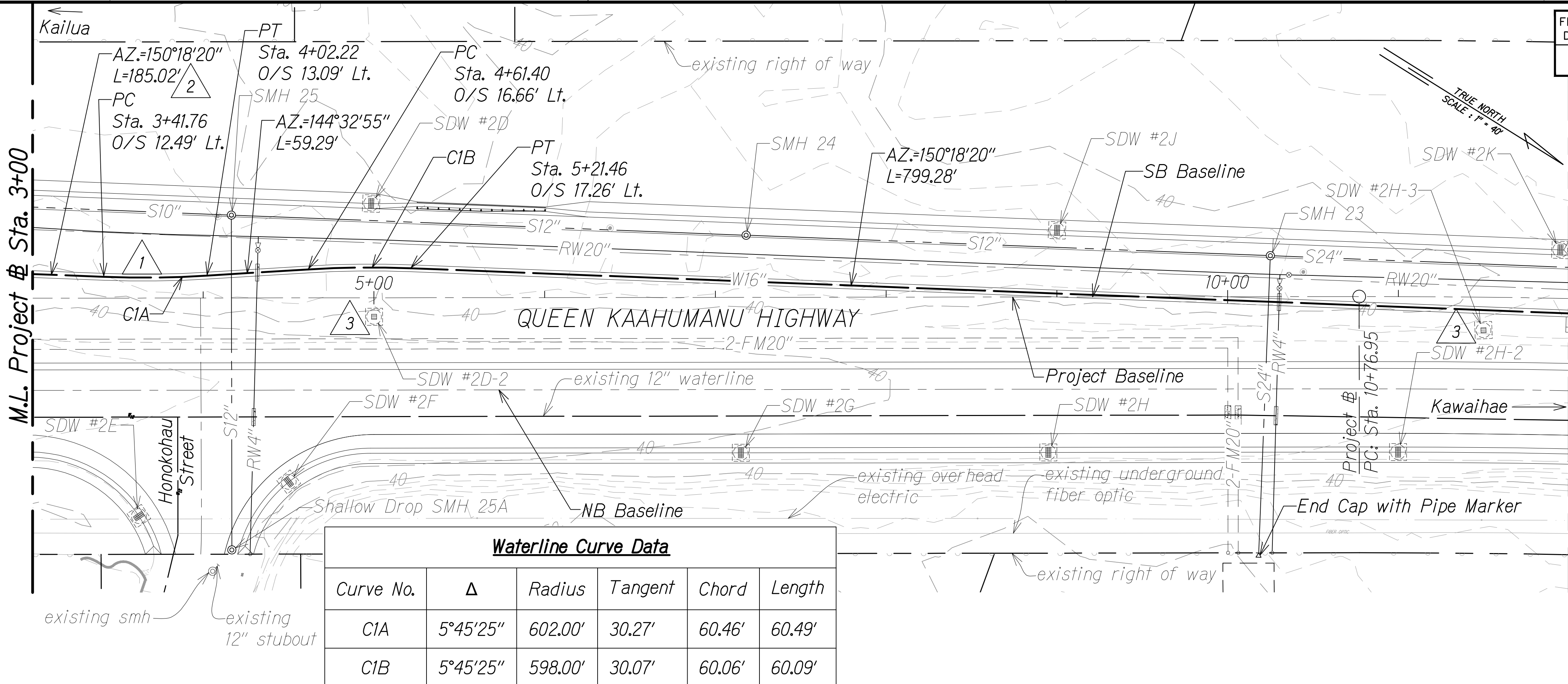
8/1/16	2	Revised sht. ref.
1/22/16	1	Revised utility alignment & profile due to SB & redesign; Added EG profile, cleanout note & megalugs; Revised ARV to downstream of BV
DATE	REVISION	

SHEET No. 2 OF 35 SHEETS

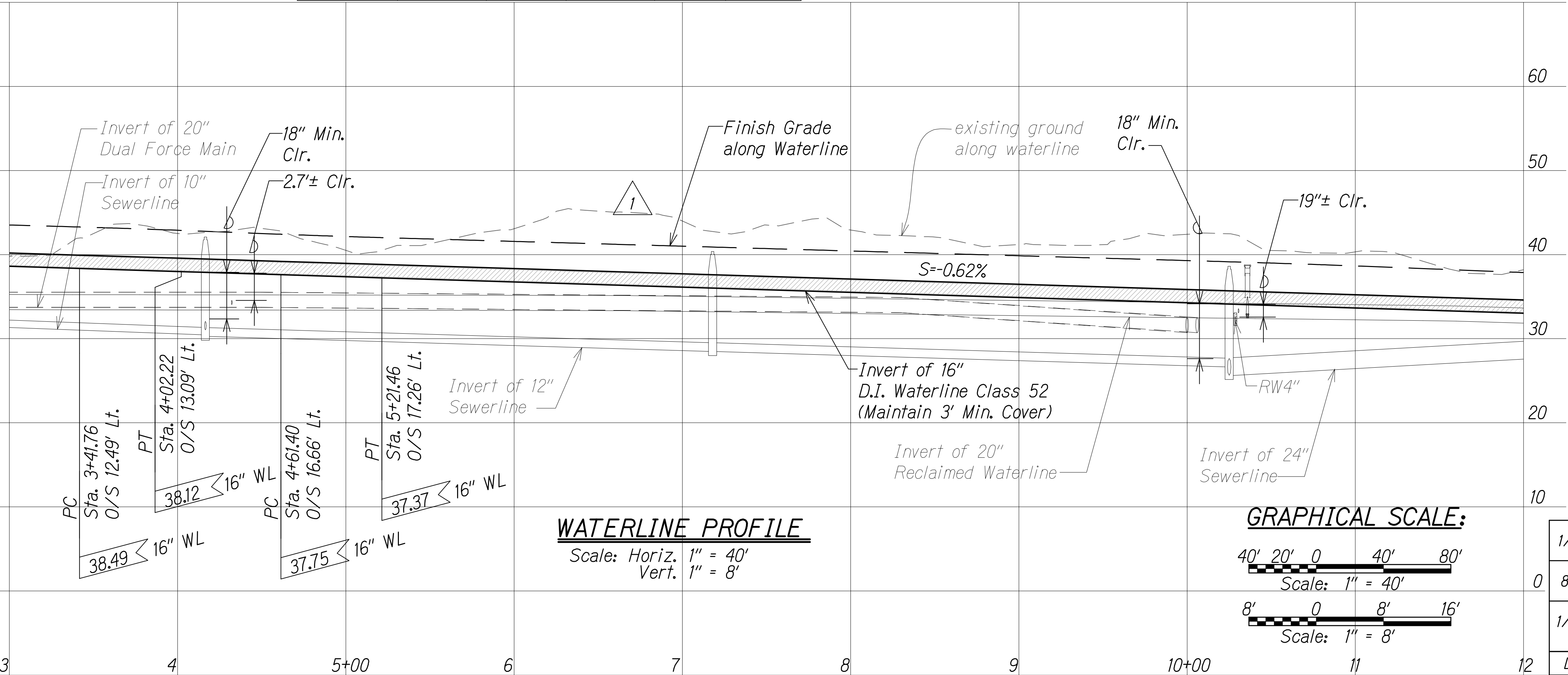
C.O. 167

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

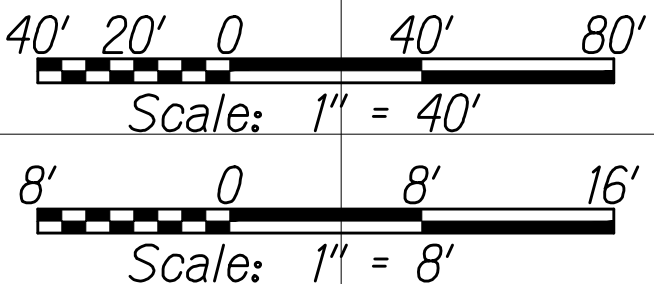
W:_CIVIL 3D PROJECTS\2008_003_001 GBI QUEEN K HWY WIDENING\01 CIVIL DRAWINGS\168 WATER PP-03.DWG 2/8/2017 3:06 PM



Waterline Curve Data					
Curve No.	Δ	Radius	Tangent	Chord	Length
C1A	5°45'25"	602.00'	30.27'	60.46'	60.49'
C1B	5°45'25"	598.00'	30.07'	60.06'	60.09'



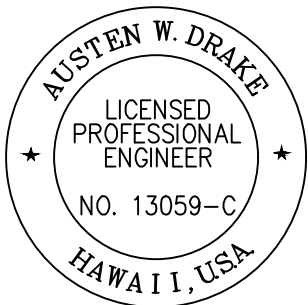
GRAPHICAL SCALE:



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-019-1(38)R	2016	C.O. 168	528

LEGEND:

- Finish Grade along Waterline
- S10" Sewerline
- W16" Waterline
- RW20" Reclaimed Water
- 2-FM20" Dual Force Main
- Sewer Manhole
- Shallow Drywell
- Sewer Lateral
- Reclaimed Water Lateral
- existing waterline (w)
- existing underground fiber optic
- existing overhead electric



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Austen W. Drake APRIL 30, 2018
SIGNATURE EXPIRATION DATE OF THE LICENSE

1/31/17	3	Added new SDW
8/1/16	2	Added azimuth
1/22/16	1	Revised utility alignment & profile due to SB & redesign; Added EG profile
DATE	REVISION	

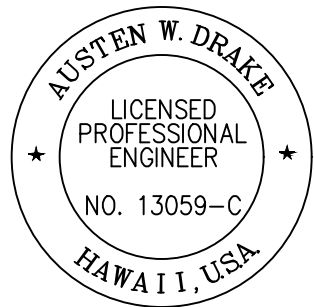
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-019-1(38)R	2016	C.O. 169	528

LEGEND:

- Finish Grade along Waterline
- S10" Sewerline
- W16" Waterline
- RW20" Reclaimed Water
- Sewer Manhole
- 1" Air Release Valve (ARV)
- Blow Off Valve (BOV)
- Butterfly Valve (BV)
- Shallow Drywell
- existing waterline (w)
- existing blow off line
- existing underground fiber optic
- existing overhead electric

LEGEND FOR AS-BUILT POSTINGS

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

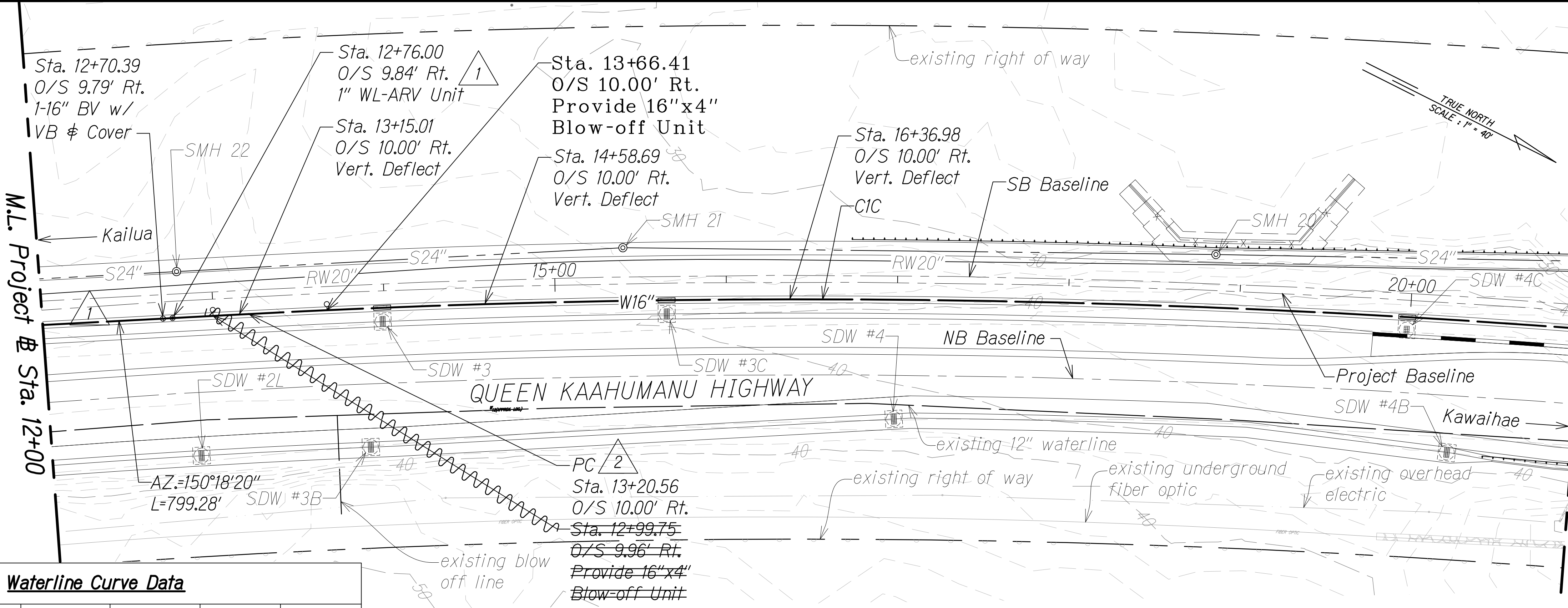


THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.
Signature: Austin W. Drake
EXPIRATION DATE OF THE LICENSE: APRIL 30, 2018

8/1/16	2	Changed PT to PC
1/22/16	1	Revised utility alignment & profile due to SB & redesign; Added EG profile; Added ARV per DWS comment
DATE	REVISION	

SHEET No. 4 OF 35 SHEETS

C.O. 169

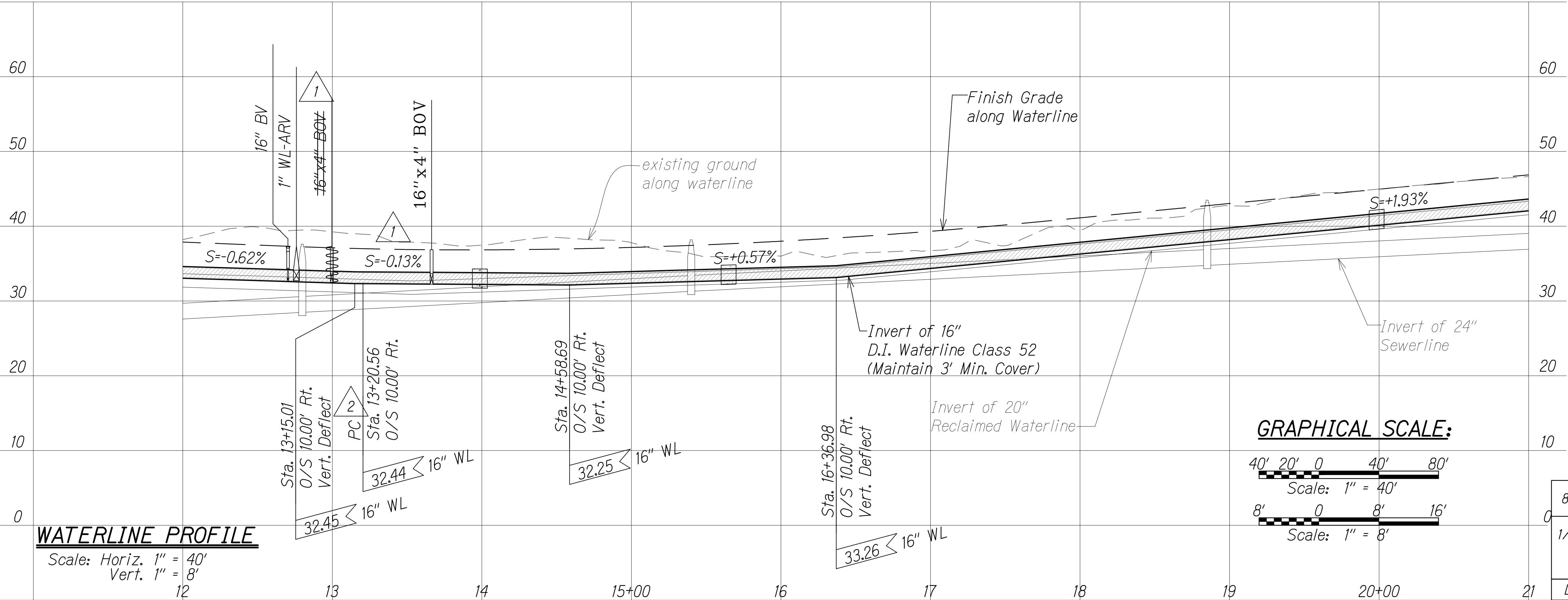


Waterline Curve Data

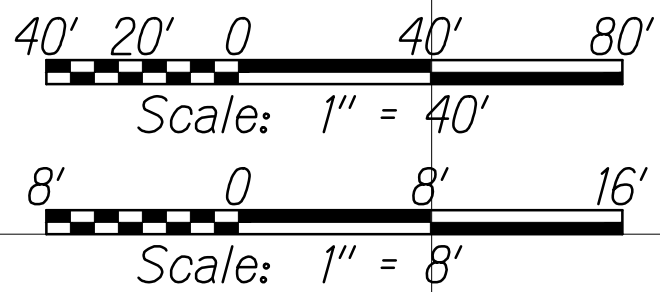
Curve No.	Δ	Radius	Tangent	Chord	Length
CIC	10°51'27"	6044.00'	574.39'	1143.63'	1145.34'

WATERLINE PROFILE

Scale: Horiz. 1" = 40'
Vert. 1" = 8'



GRAPHICAL SCALE:



"AS-BUILT"

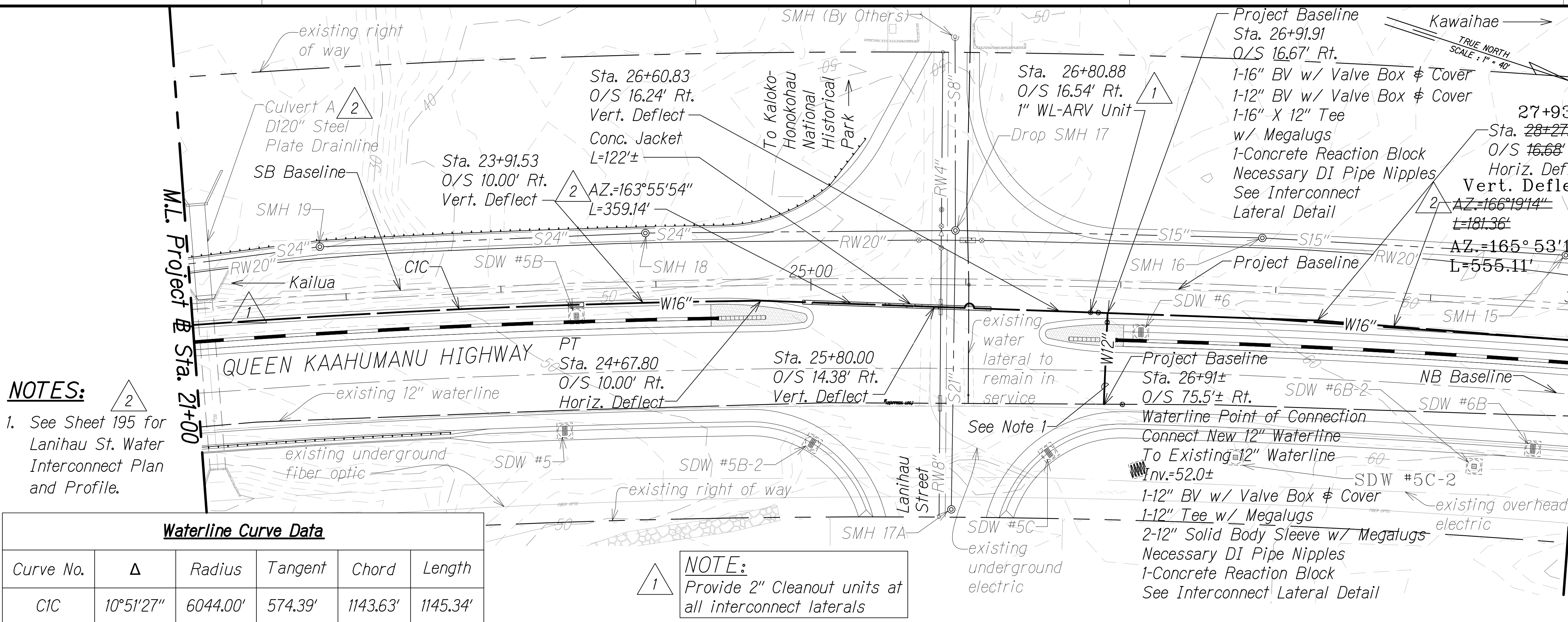
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ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	
No.	DESIGNED BY	
	QUANTITIES BY	
	CHECKED BY	

W:_CIVIL_3D PROJECTS\2008_003_001_GBI QUEEN K HWY WIDENING\01 CIVIL DRAWINGS\169 WATER PP-04.DWG 6/25/2019 7:02 PM

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

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NOTES:

1. See Sheet 195 for Lanihau St. Water Interconnect Plan and Profile.

Waterline Curve Data

Curve No.	Δ	Radius	Tangent	Chord	Length
CIC	10°51'27"	6044.00'	574.39'	1143.63'	1145.34'

NOTE:
Provide 2" Cleanout units at all interconnect laterals

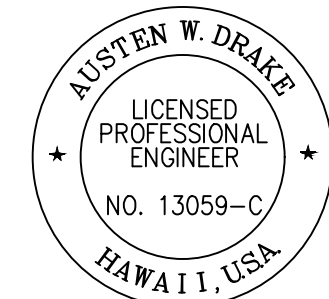
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-019-1(38)R	2016	C.O. 170	528

LEGEND:

- Finish Grade along Waterline
- Sewerline
- Waterline
- Reclaimed Water
- Sewer Manhole
- 1" Air Release Valve (ARV)
- Butterfly Valve (BV)
- Shallow Drywell
- Sewer Lateral
- Water Lateral
- Reclaimed Water Lateral
- existing waterline (w)
- existing underground fiber optic
- existing overhead electric
- existing underground electric

LEGEND FOR AS-BUILT POSTINGS

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



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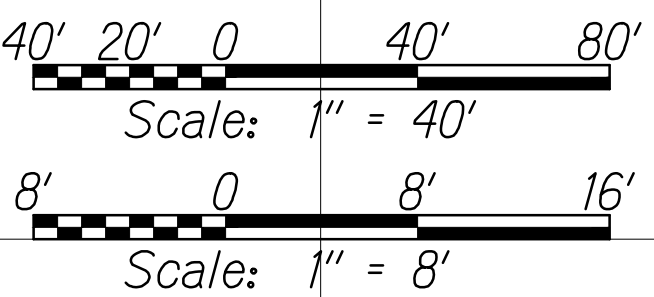
Austin W. Drake
SIGNATURE

APRIL 30, 2018
EXPIRATION DATE OF THE LICENSE

WATERLINE PROFILE

Scale: Horiz. 1" = 40'
Vert. 1" = 8'

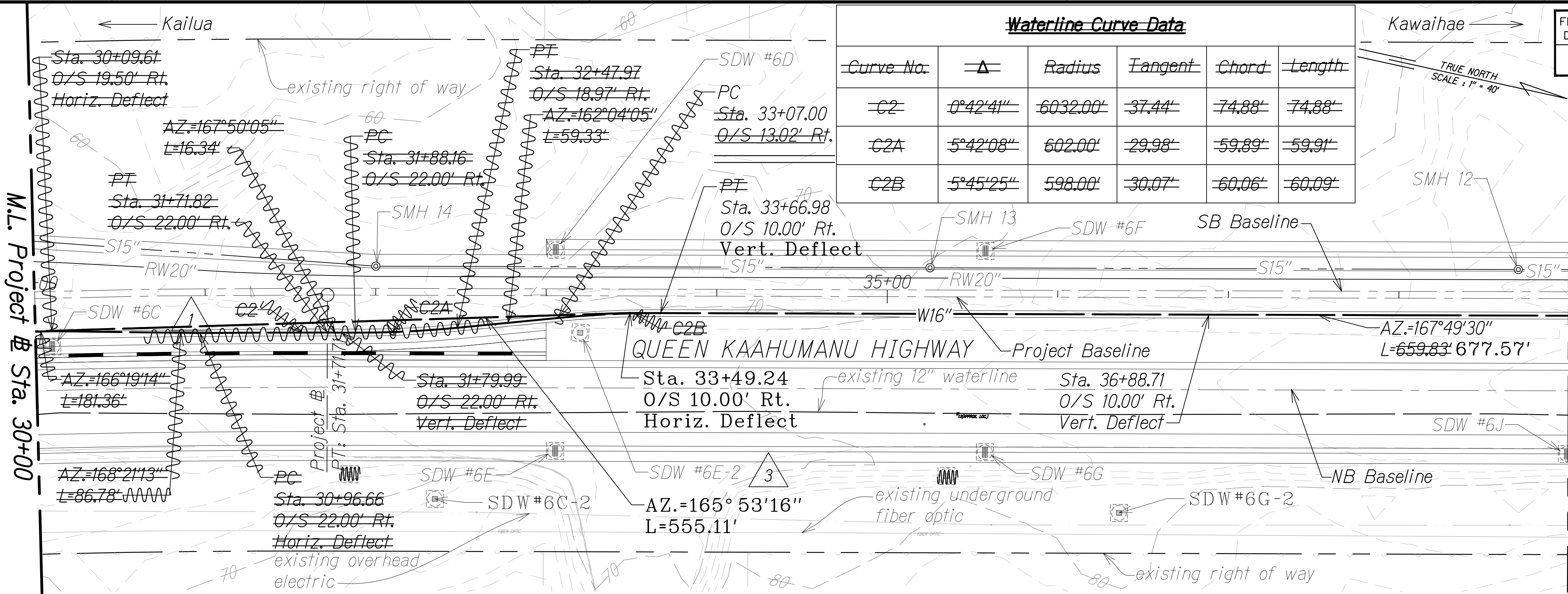
GRAPHICAL SCALE:



8/1/16	2	Revised sht. ref.; Added culvert ID & azimuth
1/22/16	1	Revised utility alignment & profile due to SB & redesign; Added ARV per DWS comment, EG profile, cleanout note & conc. jacket for cover more than 5'; Removed proposed NPS lateral
DATE		REVISION

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

W:_CIVIL_3D PROJECTS\2008_003_001_GBI QUEEN K HWY WIDENING\01 CIVIL DRAWINGS\171 WATER PP-06.DWG 6/13/2019 5:24 PM



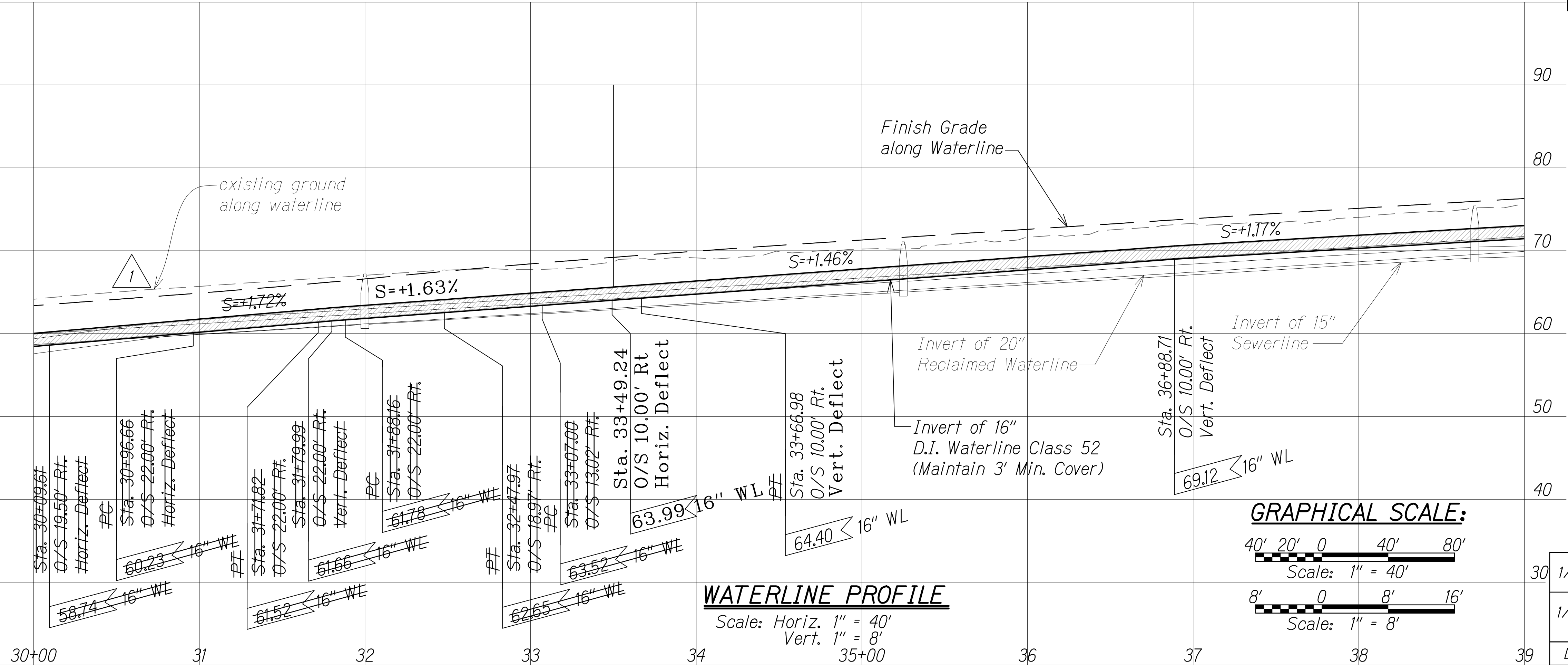
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-019-1(38)R	2016	C.O. 171	528

LEGEND:

- Finish Grade along Waterline
- S10" Sewerline
- W16" Waterline
- RW20" Reclaimed Water
- Sewer Manhole
- Shallow Drywell
- existing waterline (w)
- existing underground fiber optic
- existing overhead electric

LEGEND FOR AS-BUILT POSTINGS

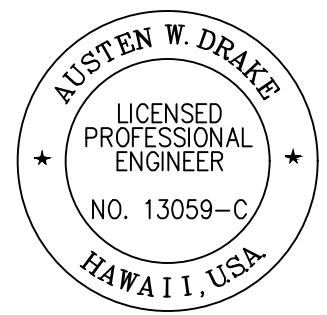
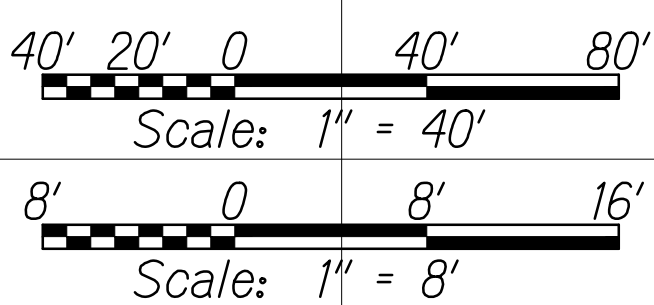
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- Double line for as-built deletion
- Roadway Text for as-built posting



WATERLINE PROFILE

Scale: Horiz. 1" = 40'
Vert. 1" = 8'

GRAPHICAL SCALE:



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Signature: Austin W. Drake
Expiration Date: APRIL 30, 2018

1/31/17	Added new drywell
1/22/16	Revised utility alignment & profile due to SB & redesign; Added EG profile
DATE	REVISION

SHEET No. 6 OF 35 SHEETS

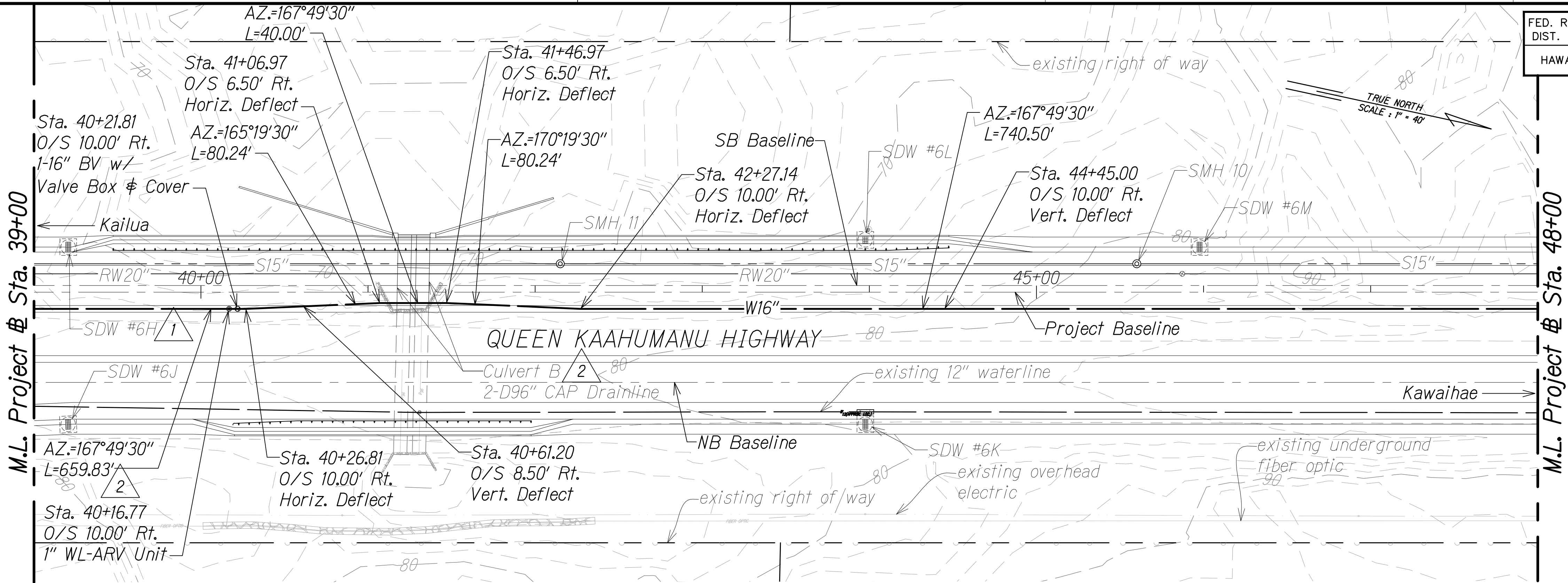
"AS-BUILT"

6/26/2019 11:58 AM

C.O. 171

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

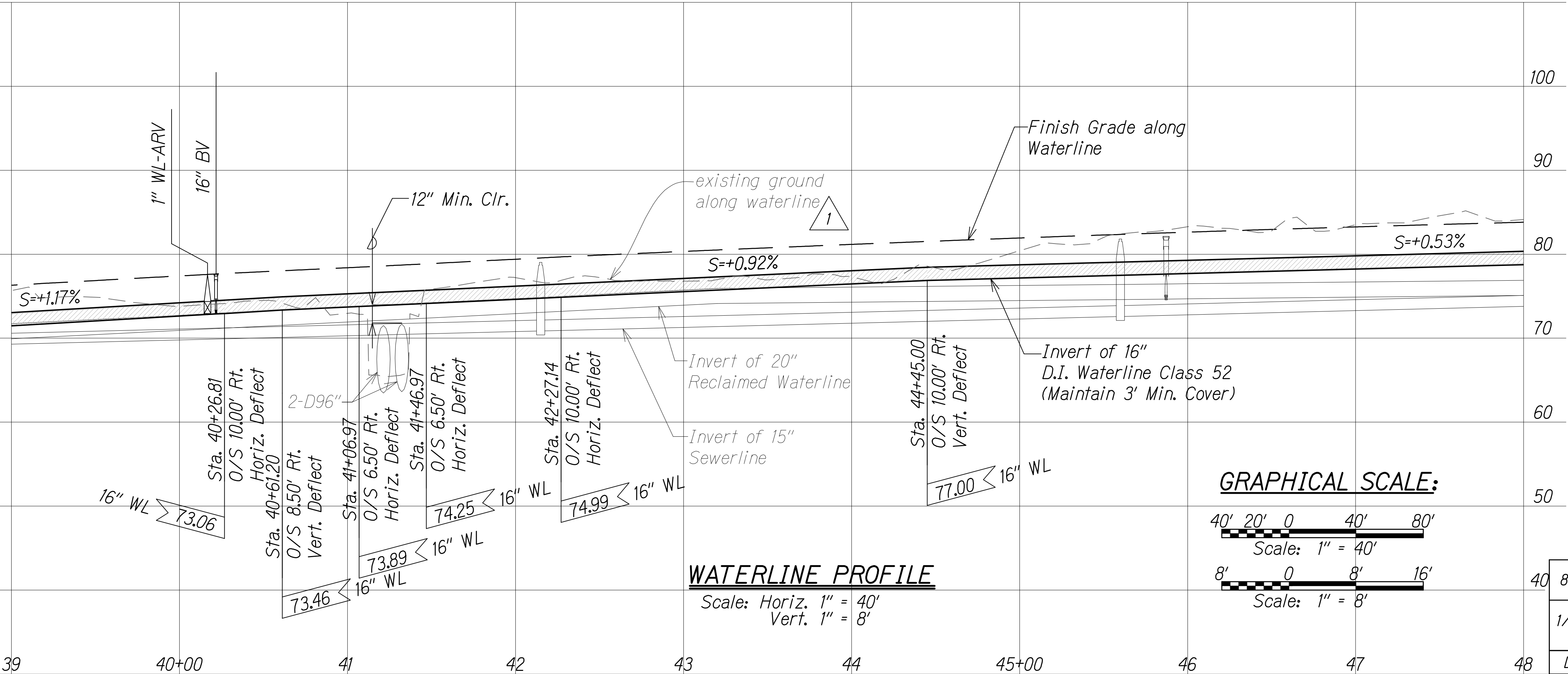
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FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-019-1(38)R	2016	C.O. 172	528

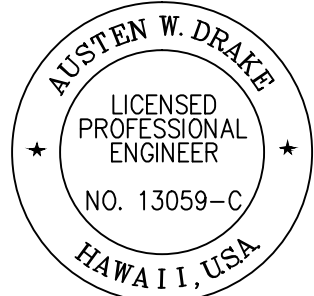
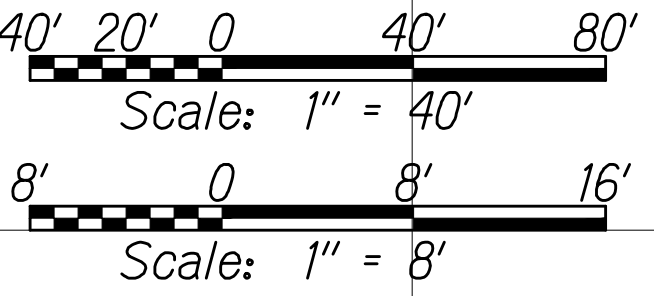
LEGEND:

- Finish Grade along Waterline
- S10" Sewerline
- W16" Waterline
- RW20" Reclaimed Water
- Sewer Manhole
- 1" Air Release Valve (ARV)
- Butterfly Valve (BV)
- Shallow Drywell
- Sewer Lateral
- existing waterline (w)
- existing underground fiber optic
- existing overhead electric



WATERLINE PROFILE
Scale: Horiz. 1" = 40'
Vert. 1" = 8'

GRAPHICAL SCALE:



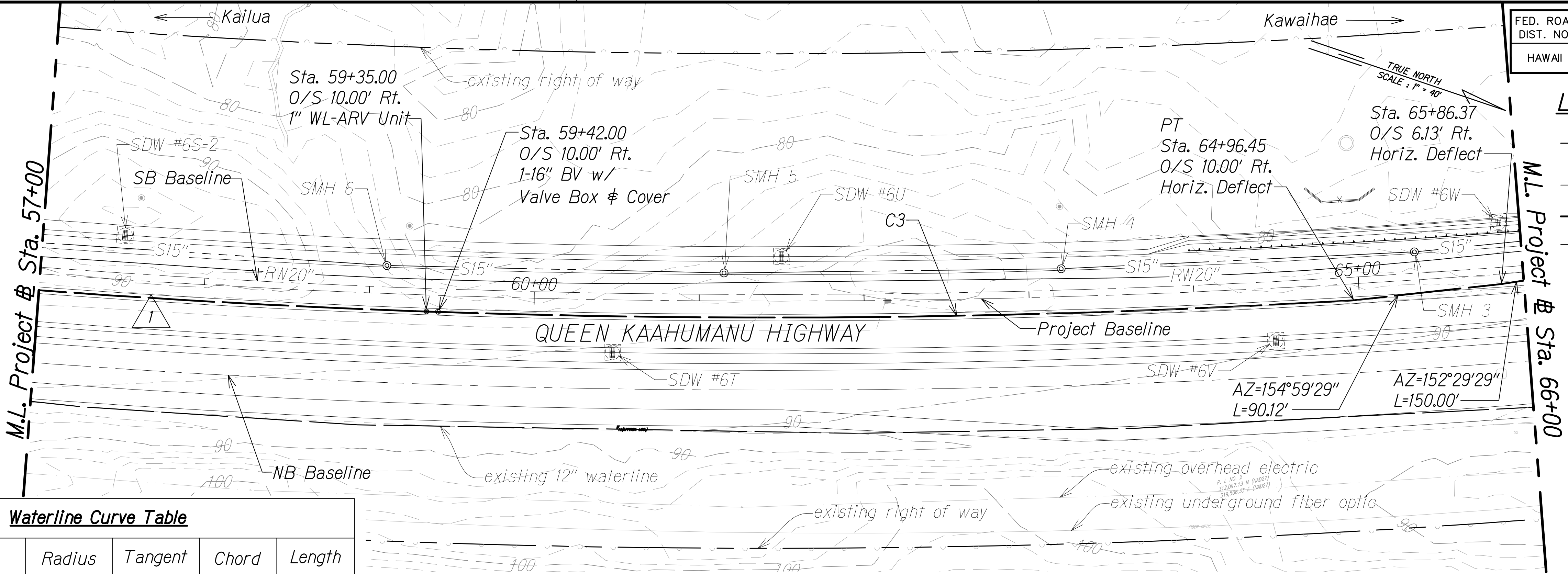
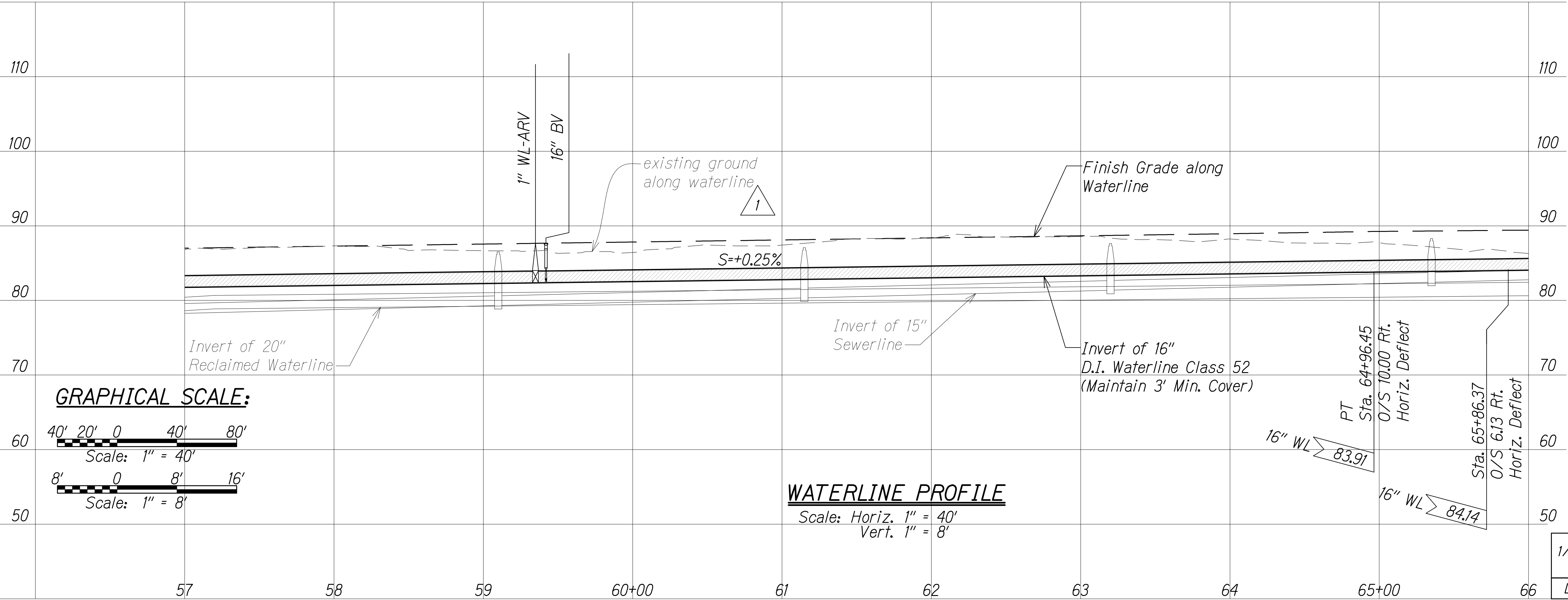
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.
Austen W. Drake
SIGNATURE
APRIL 30, 2018
EXPIRATION DATE OF THE LICENSE

8/1/16	2	Added culvert ID & azimuth
1/22/16	1	Revised utility alignment & profile due to SB & redesign; Added EG profile
DATE		REVISION

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

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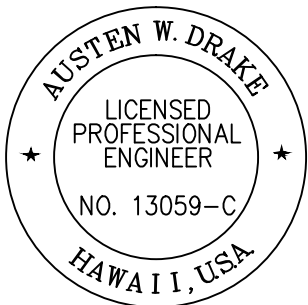
Waterline Curve Table					
Curve No.	Δ	Radius	Tangent	Chord	Length
C3	9°56'22"	5956.00'	517.91'	1031.92'	1033.21'



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-019-1(38)R	2016	C.O. 174	528

LEGEND:

- Finish Grade along Waterline
- S10" Sewerline
- W16" Waterline
- RW20" Reclaimed Water
- Sewer Manhole
- 1" Air Release Valve (ARV)
- Butterfly Valve (BV)
- Shallow Drywell
- existing waterline (w)
- existing underground fiber optic
- existing overhead electric



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Austen W. Drake APRIL 30, 2018
SIGNATURE EXPIRATION DATE OF THE LICENSE

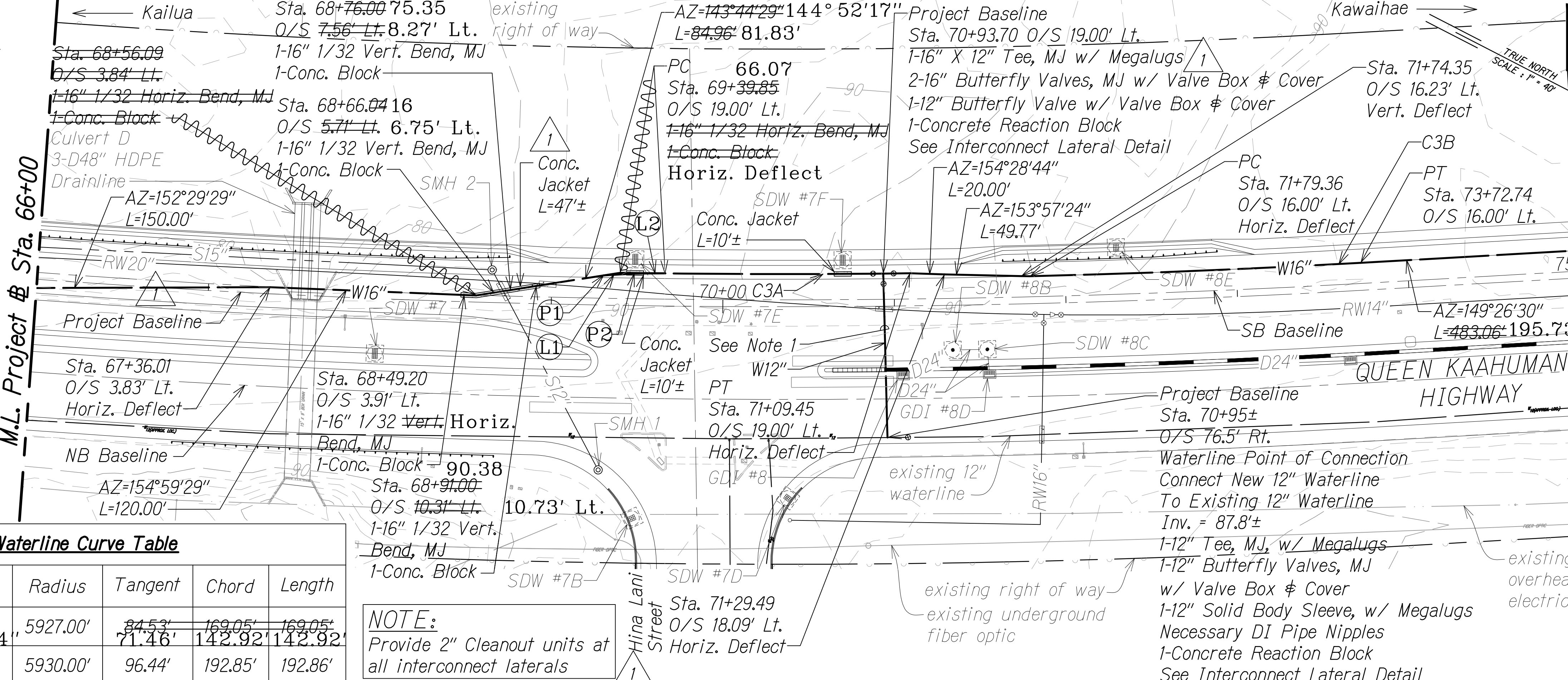
1/22/16	1	Revised utility alignment & profile due to SB & redesign; Added EG profile
DATE	REVISION	

SHEET No. 9 OF 35 SHEETS

NOTES:

1. See Sheet 197 for Hina Lani Water Lateral Plan and Profile.

2



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-019-1(38)R	2016	C.O. 175	528

LEGEND:

- Finish Grade along Waterline
- S10" Sewerline
- W16" Waterline
- RW20" Reclaimed Water
- Sewer Manhole
- Butterfly Valve (BV)
- Grated Drop Inlet
- Shallow Drywell
- Sewer Lateral
- Water Lateral
- Reclaimed Water Lateral
- existing waterline (w)
- existing underground fiber optic
- existing overhead electric

P1 Sta. 69+30.12
O/S 17.03' Lt.
Horiz. Deflect

P2 Sta. 69+48.08
O/S 18.36' Lt.
Horiz. Deflect

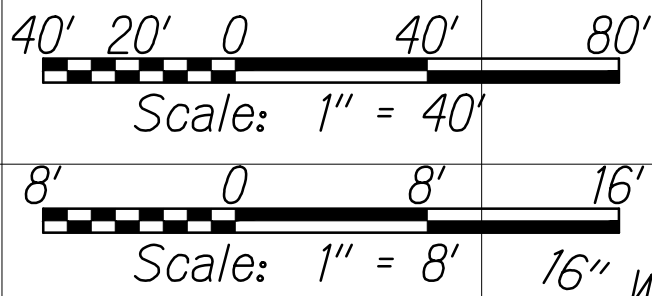
L1 Az.=149° 21'58"
L=17.95'

L2 Az.=151° 24'08"
L=17.95'

LEGEND FOR AS-BUILT POSTINGS

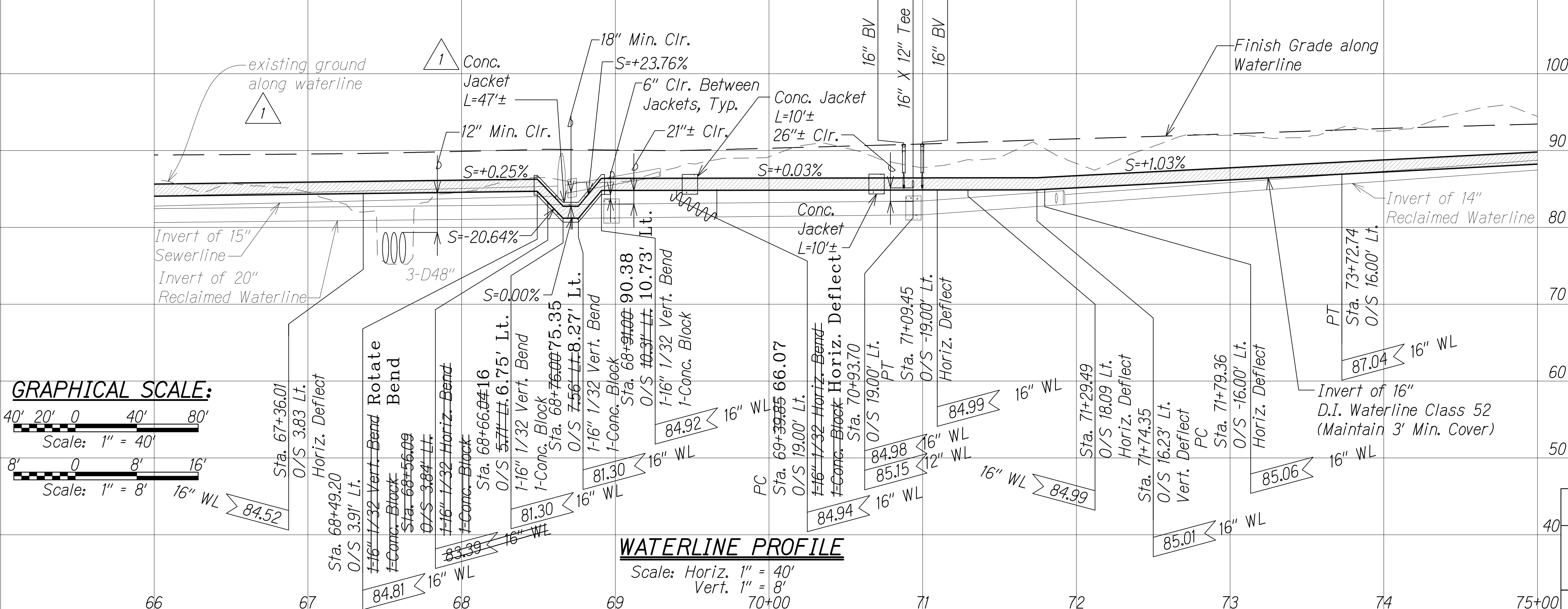
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- Double line for as-built deletion
- Roadway Text for as-built posting

GRAPHICAL SCALE:



WATERLINE PROFILE

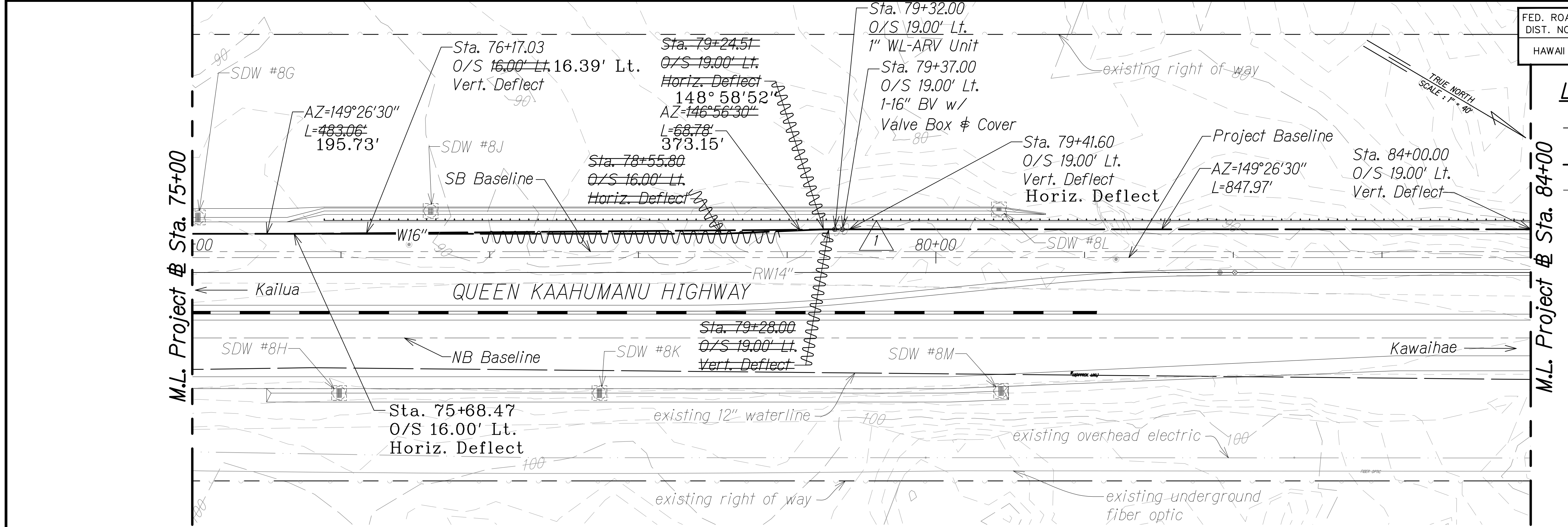
Scale: Horiz. 1" = 40'
Vert. 1" = 8'



DATE	REVISION
8/1/16	2 Revised sht. ref.; Added culvert ID
1/22/16	1 Revised utility alignment & profile due to SB & redesign; Added EG profile, cleanout note, megalugs & conc. jacket for cover more than 5'

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

W:_CIVIL 3D PROJECTS\2008_003_001 GBI QUEEN K HWY WIDENING\01 CIVIL DRAWINGS\176 WATER PB-11.DWG 6/13/2019 8:26 PM



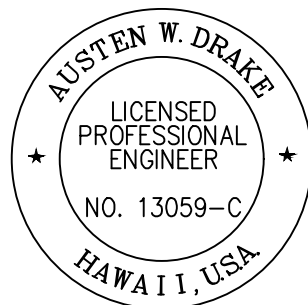
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-019-1(38)R	2016	C.O. 176	528

LEGEND:

- Finish Grade along Waterline
- W16" Waterline
- RW20" Reclaimed Water
- 1" Air Release Valve (ARV)
- Butterfly Valve (BV)
- Shallow Drywell
- existing waterline (w/)
- existing underground fiber optic
- existing overhead electric

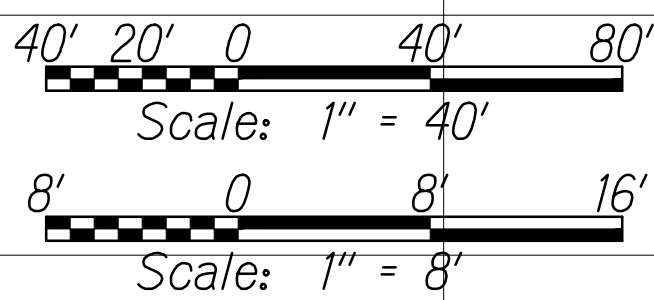
LEGEND FOR AS-BUILT POSTINGS

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



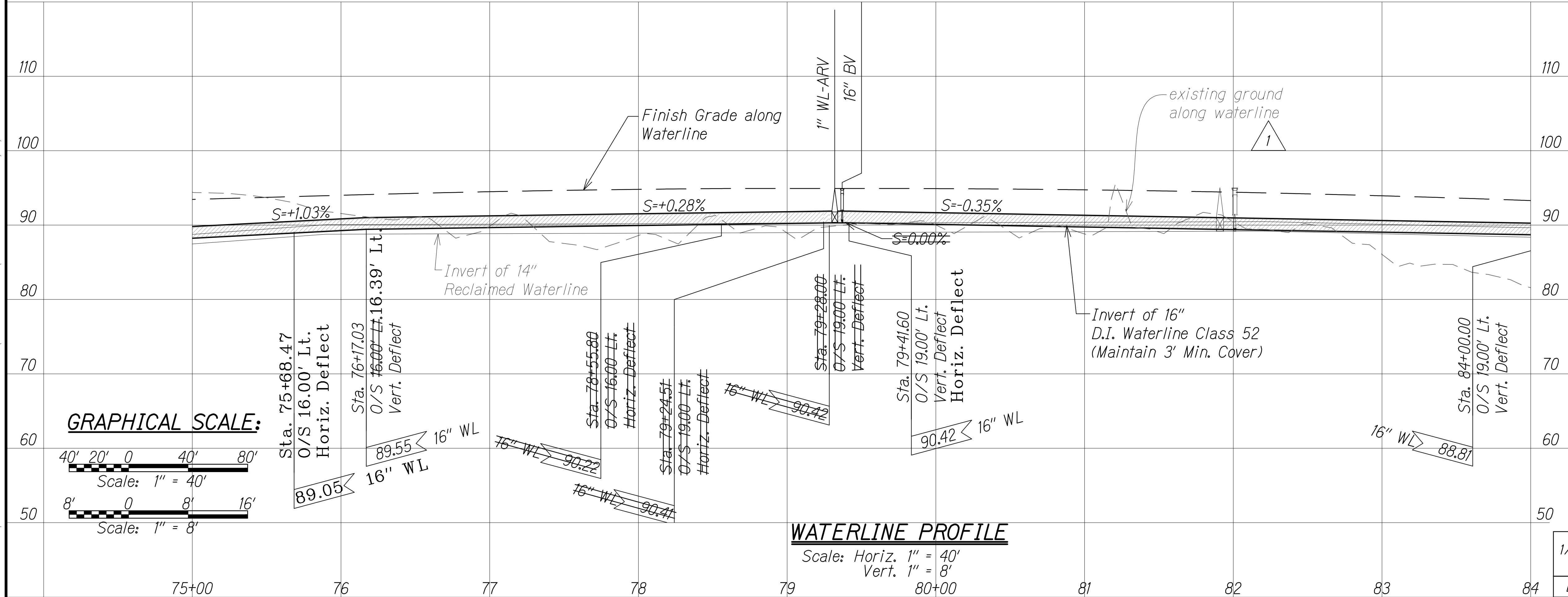
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.
Signature: Austin W. Drake
EXPIRATION DATE OF THE LICENSE: APRIL 30, 2018

GRAPHICAL SCALE:



WATERLINE PROFILE

Scale: Horiz. 1" = 40'
Vert. 1" = 8'



1/22/16	Revised utility alignment & profile due to SB & redesign; Added EG profile
DATE	REVISION

SHEET No. 11 OF 35 SHEETS

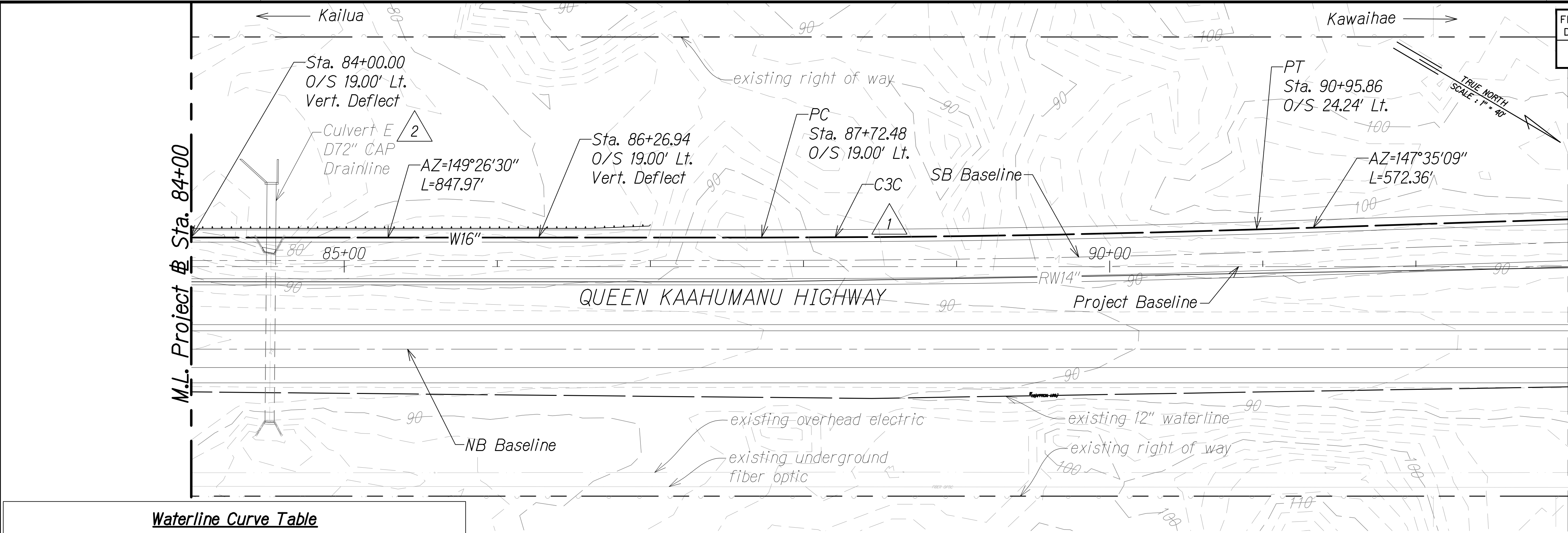
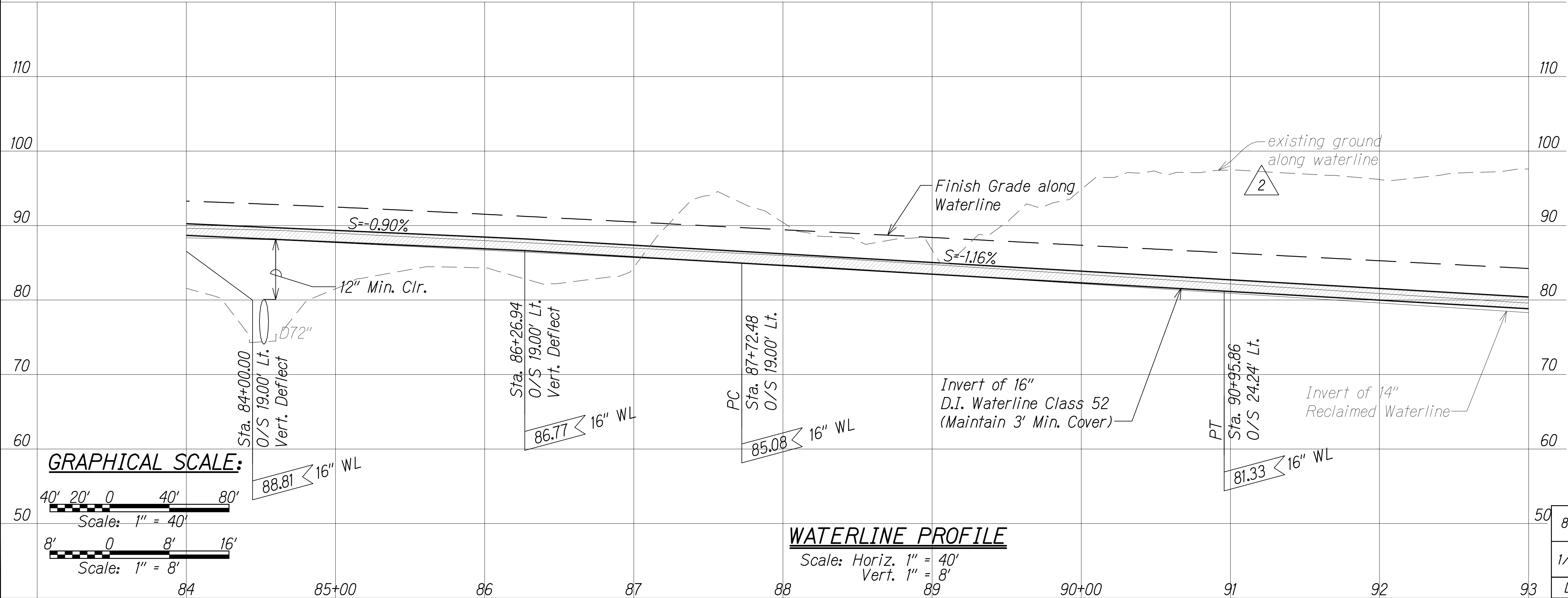
"AS-BUILT"

C.O. 176

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

W:_CIVIL 3D PROJECTS\2008_003_001 GBI QUEEN K HWY WIDENING\01 CIVIL DRAWINGS\177 WATER PP-12.DWG 7/29/2016 5:36 PM

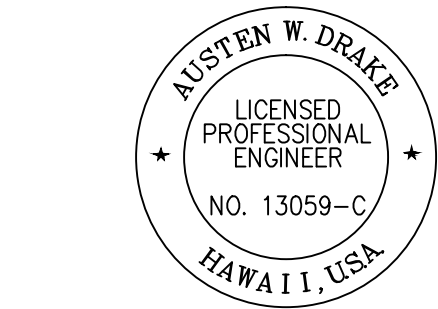
Waterline Curve Table					
Curve No.	Δ	Radius	Tangent	Chord	Length
C3C	1°51'21"	9985.00'	161.73'	323.42'	323.44'



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-019-1(38)R	2016	C.O. 177	528

LEGEND:

- Finish Grade along Waterline
- W16" Waterline
- RW20" Reclaimed Water
- existing waterline (w)
- existing underground fiber optic
- existing overhead electric



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

Austen W. Drake APRIL 30, 2018
SIGNATURE EXPIRATION DATE OF THE LICENSE

8/1/16	2	Added EG profile & culvert ID
1/22/16	1	Revised utility alignment & profile due to SB & redesign
DATE	REVISION	

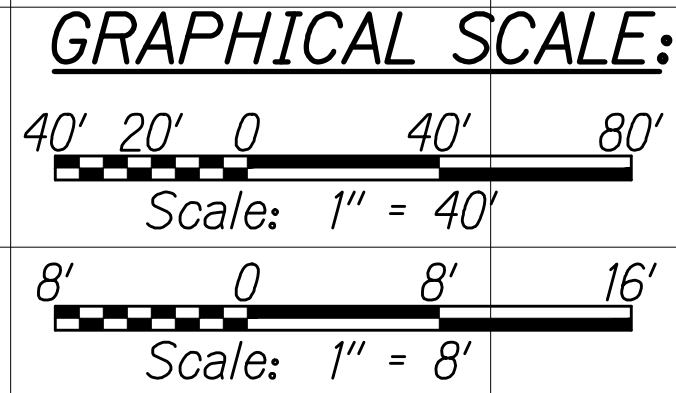
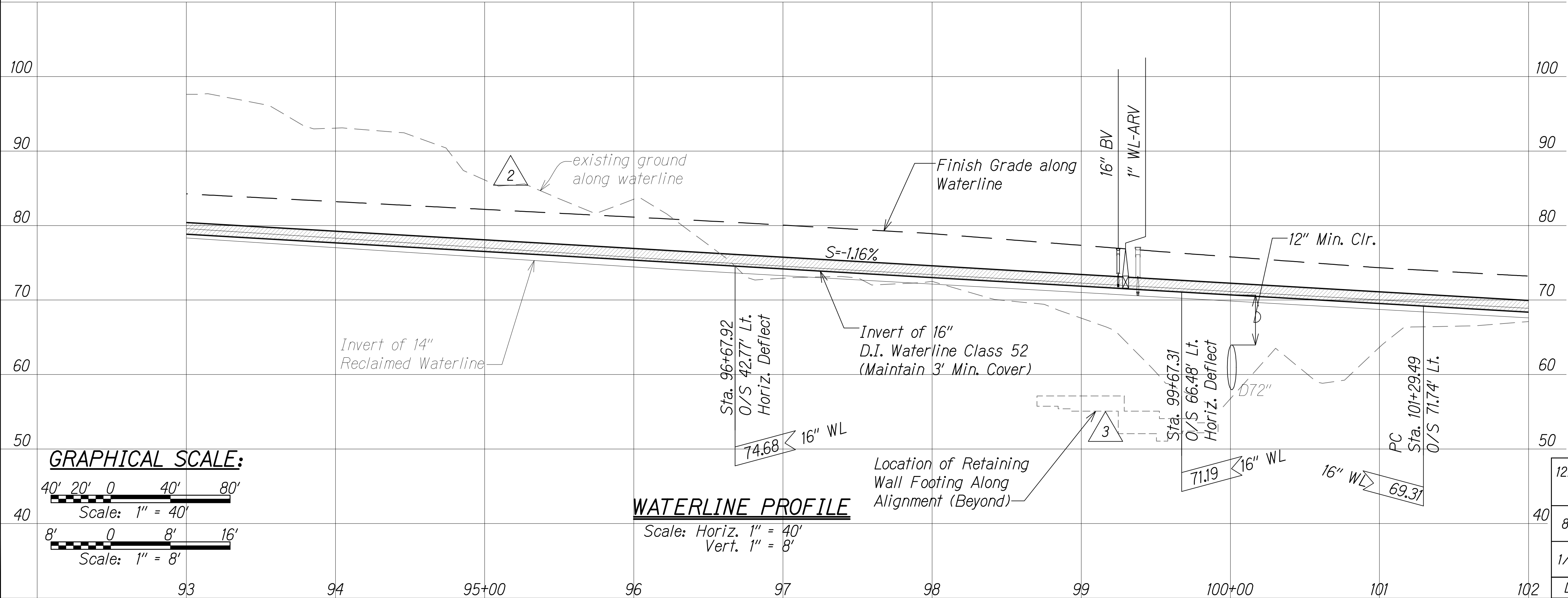
SHEET No. 12 OF 35 SHEETS

C.O. 177

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

W:_CIVIL 3D PROJECTS\2008_003_001 GBI QUEEN K HWY WIDENING\01 CIVIL DRAWINGS\176 WATER PP-13.DWG 1/11/2017 11:00 AM

Waterline Curve Table					
Curve No.	Δ	Radius	Tangent	Chord	Length
C3D	0°42'42"	10029.00'	62.29'	124.57'	124.57'



WATERLINE PROFILE

Scale: Horiz. 1" = 40'

Vert. 1" = 8'

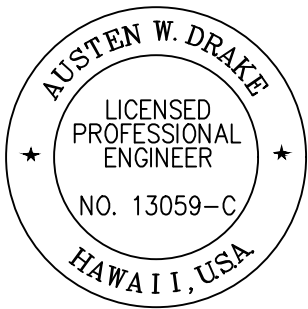
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-019-1(38)R	2016	C.O. 178	528

- LEGEND:**
- Finish Grade along Waterline
 - W16" Waterline
 - RW20" Reclaimed Water
 - 1" Air Release Valve (ARV)
 - Butterfly Valve (BV)
 - existing waterline (w)
 - existing underground fiber optic
 - existing overhead electric

Approved under separate cover

MANAGER-CHIEF ENGINEER
DEPARTMENT OF WATER SUPPLY
COUNTY OF HAWAII

DATE



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

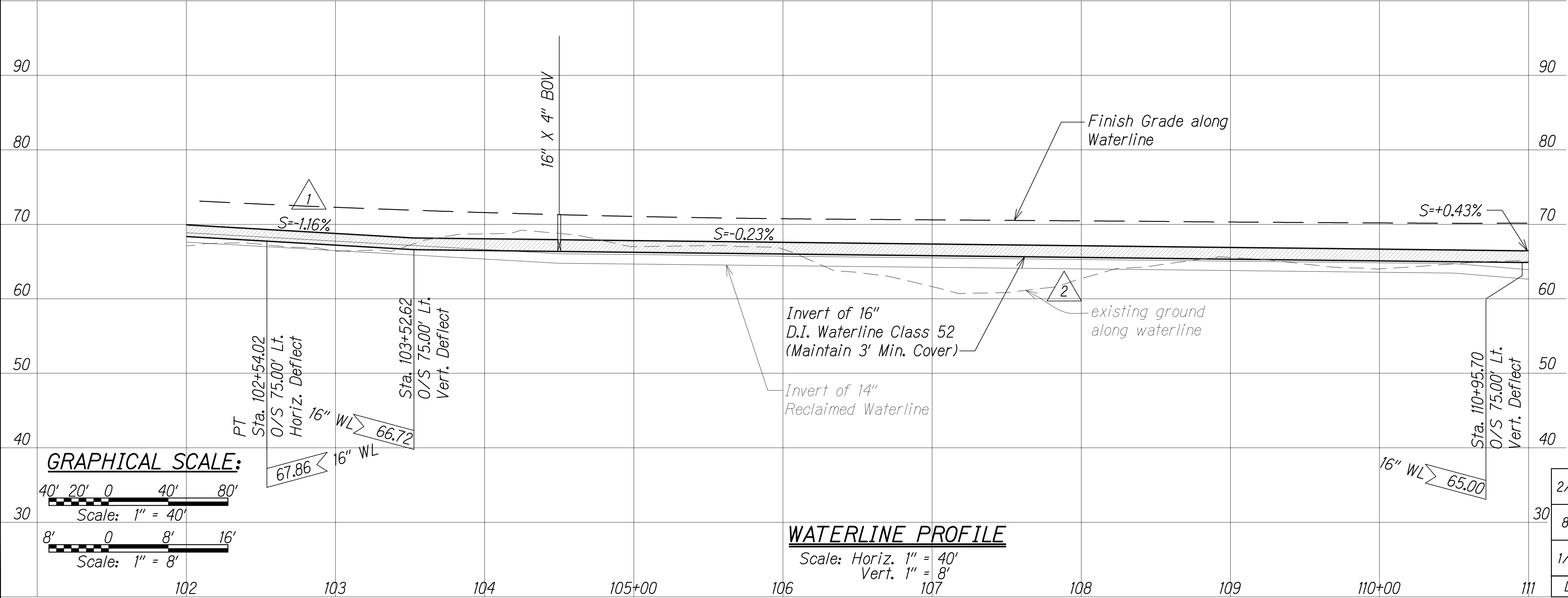
Austen W. Drake APRIL 30, 2018
SIGNATURE EXPIRATION DATE OF THE LICENSE

12/21/16	3	Added field buffer locations & revised arch site locations; Redesigned retaining wall
8/1/16	2	Added EG profile & culvert ID
1/22/16	1	Revised utility alignment & profile due to SB & redesign
DATE	REVISION	

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

W:_CIVIL_3D_PROJECTS\2008_003_001_GBI_QUEEN_K_Hwy_WIDENING\01_CIVIL_DRAWINGS\179_WATER_PP-14.DWG 2/20/2017 5:37 PM

Waterline Curve Table					
Curve No.	Δ	Radius	Tangent	Chord	Length
C3D	0°42'42"	10029.00'	62.29'	124.57'	124.57'

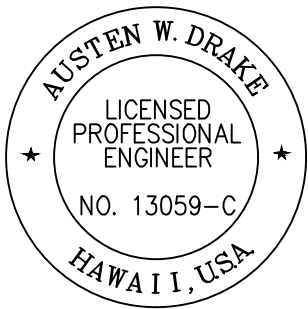


WATERLINE PROFILE
Scale: Horiz. 1" = 40'
Vert. 1" = 8'

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-019-1(38)R	2016	C.O. 179	528

LEGEND:

- Finish Grade along Waterline
- W16" Waterline
- RW20" Reclaimed Water
- Blow Off Valve (BOV)
- Shallow Drywell
- Reclaimed Water Lateral
- existing waterline (w)
- FIBER OPTIC
- existing underground fiber optic
- existing overhead electric



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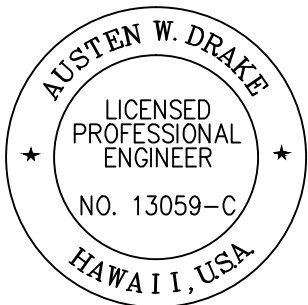
Austen W. Drake APRIL 30, 2018
SIGNATURE EXPIRATION DATE OF THE LICENSE

2/20/17	3	Shifted Hulikoa Drive Makai baseline to match exist.
8/1/16	2	Added EG profile
1/22/16	1	Revised utility alignment & profile due to SB & redesign
DATE	REVISION	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-019-1(38)R	2016	C.O. 180	528 522

- LEGEND:**
- Finish Grade along Waterline
 - W16" Waterline
 - RW20" Reclaimed Water
 - 1" Air Release Valve (ARV)
 - Butterfly Valve (BV)
 - Shallow Drywell
 - Water Lateral
 - Reclaimed Water Lateral
 - existing waterline (w)
 - existing underground fiber optic
 - existing overhead electric

NOTE:
Provide 2" Cleanout units at all interconnect laterals



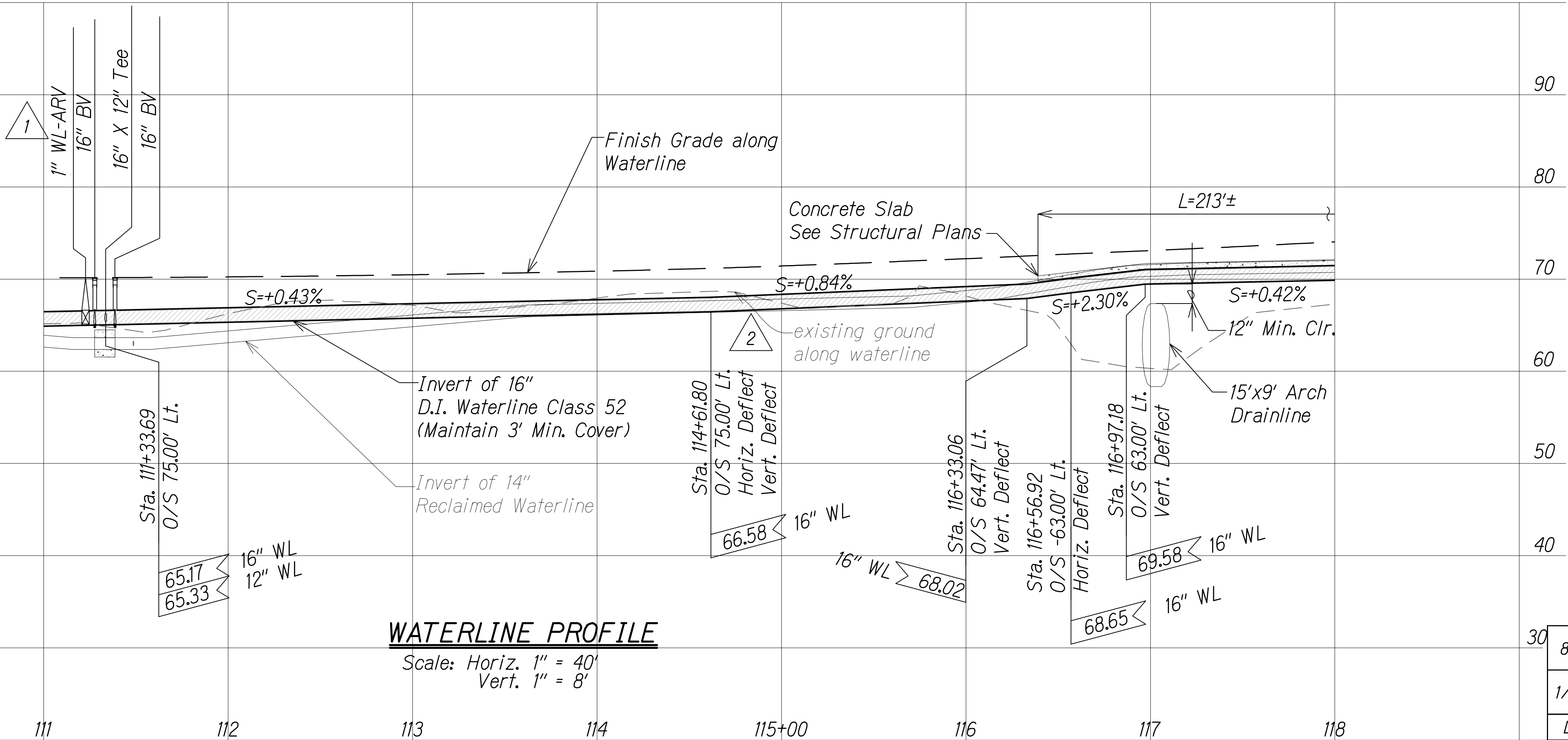
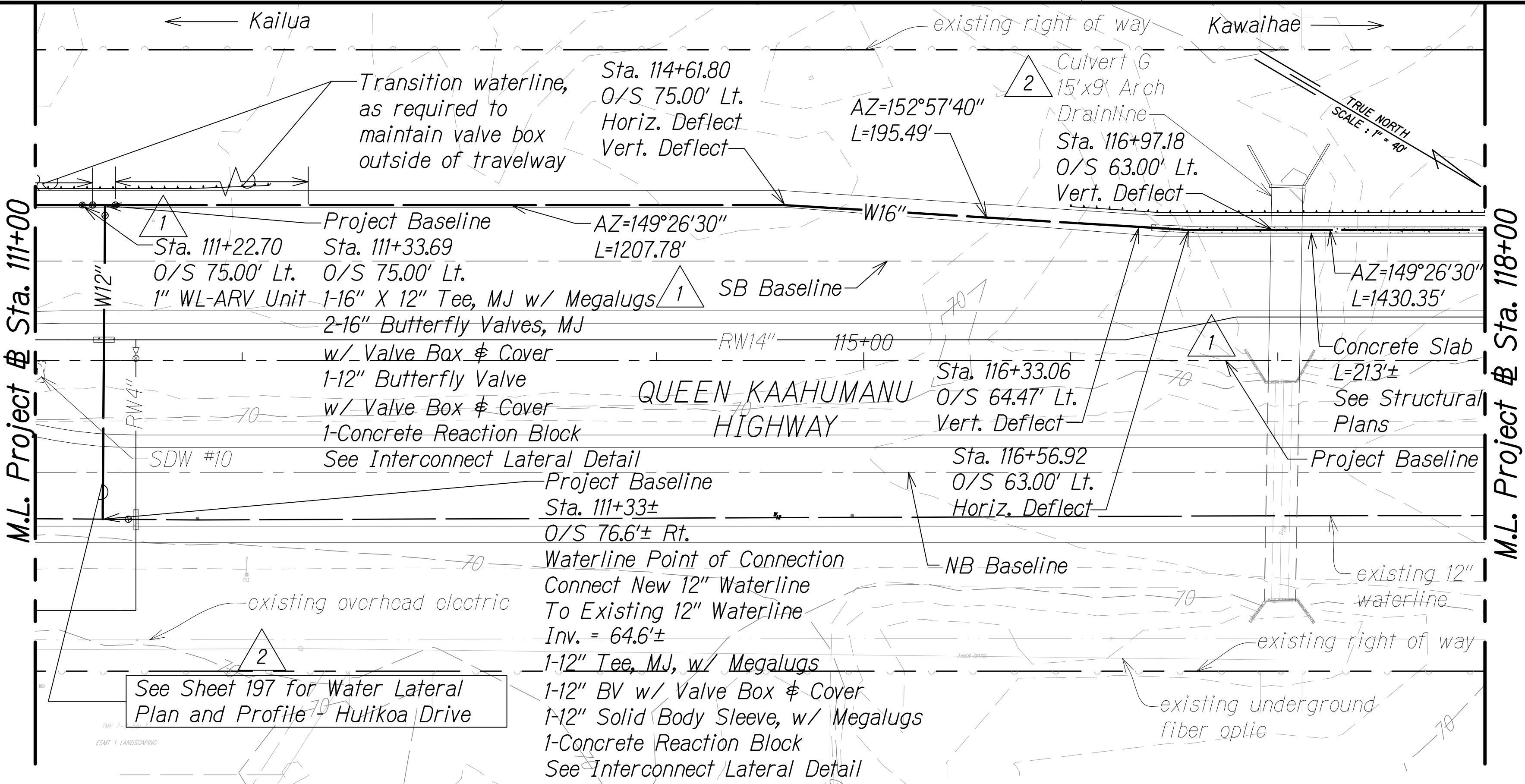
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.
Austen W. Drake APRIL 30, 2018
SIGNATURE EXPIRATION DATE OF THE LICENSE

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

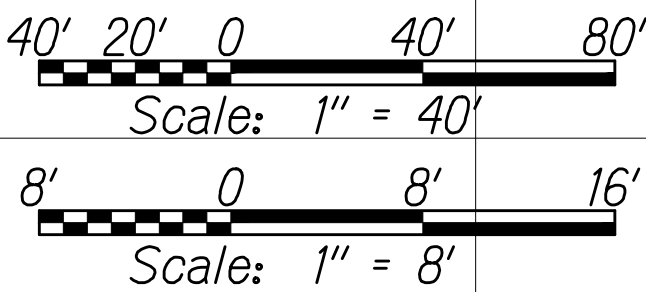
8/1/16	2	Added EG profile & culvert ID; Revised shf. ref.
1/22/16	1	Added ARV, cleanout note & megalugs; RW extension
DATE	REVISION	

SHEET No. 15 OF 35 SHEETS

C.O. 180



GRAPHICAL SCALE:

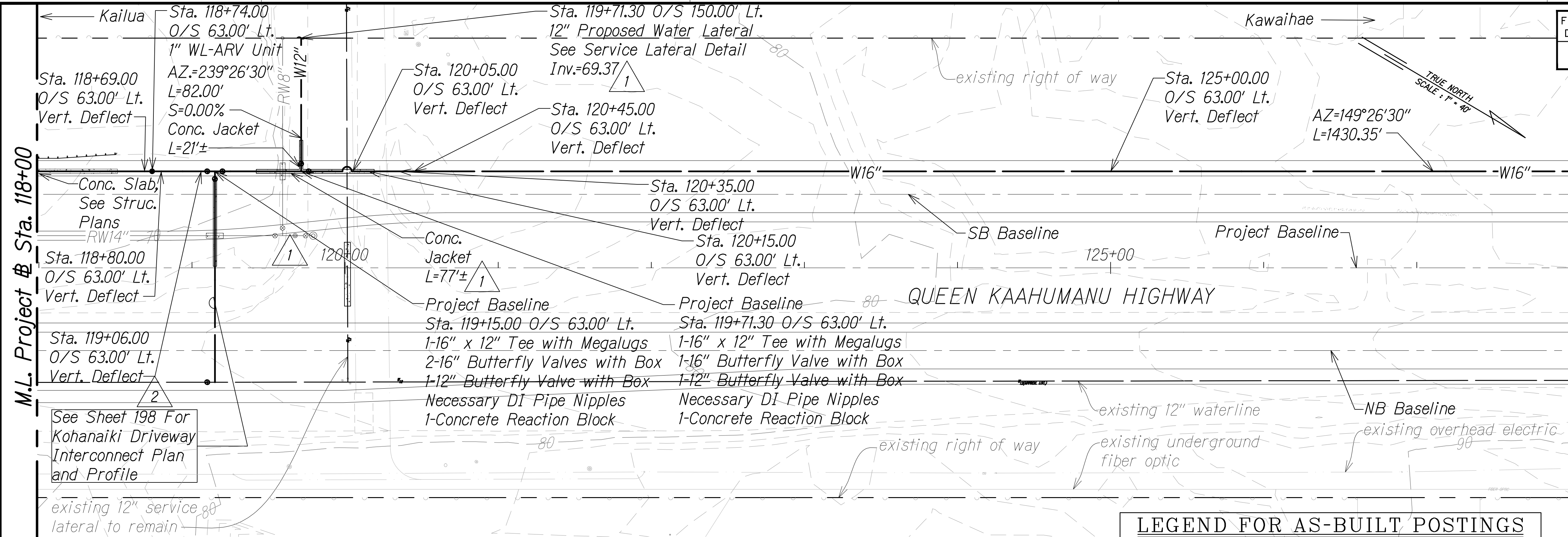


WATERLINE PROFILE
Scale: Horiz. 1" = 40'
Vert. 1" = 8'

"AS-BUILT"

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

W.L. CIVIL 3D PROJECTS\2008-2013-001 GRI QUEEN K HWY WIDENING\01 CIVIL DRAWINGS\181 WATER PP-16.DWG 6/10/2016 5:50 PM



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-019-1(38)R	2016	C.O. 181	528 522

LEGEND:

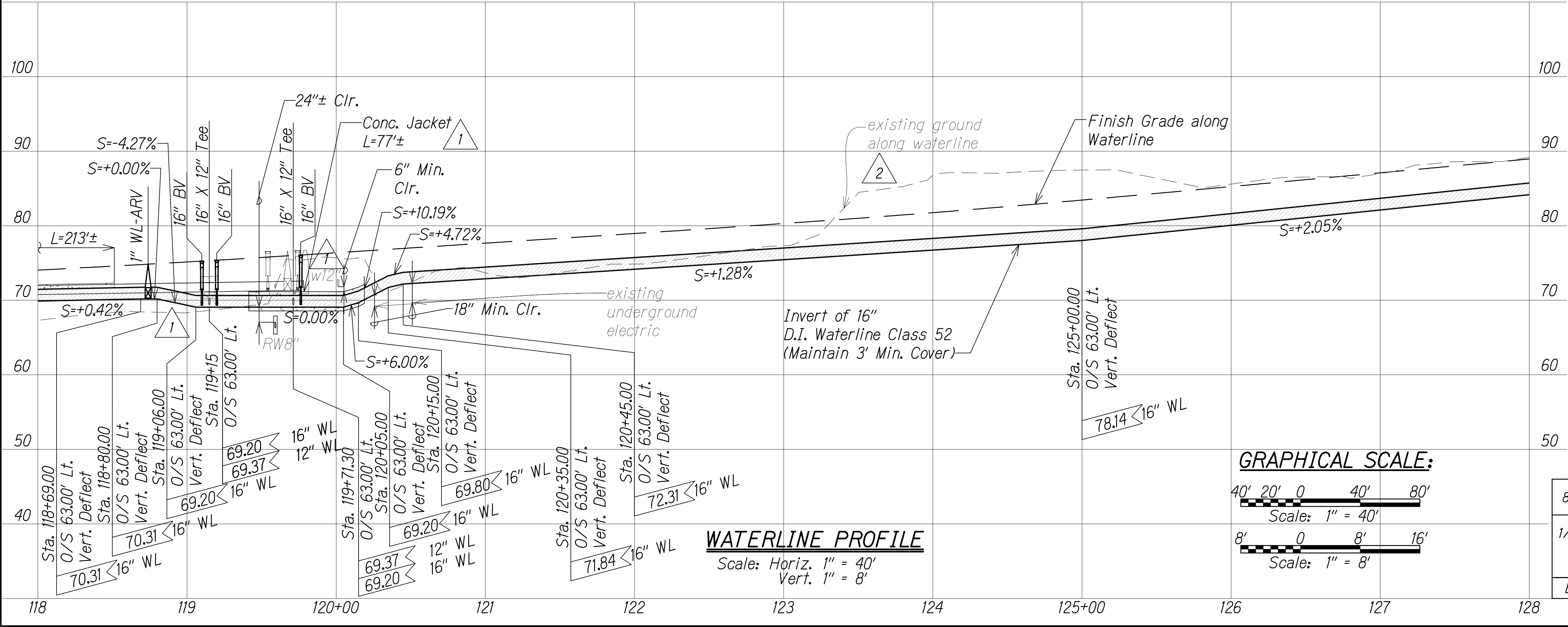
- Finish Grade along Waterline
- Waterline
- Reclaimed Water
- 1" Air Release Valve (ARV)
- Butterfly Valve (BV)
- Water Lateral
- Reclaimed Water Lateral
- existing waterline (w)
- existing underground fiber optic
- existing overhead electric

LEGEND FOR AS-BUILT POSTINGS

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

NOTE:

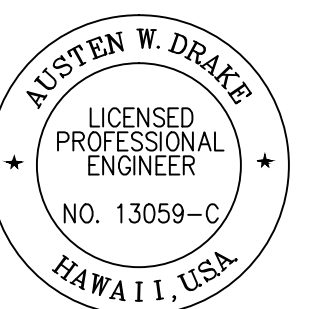
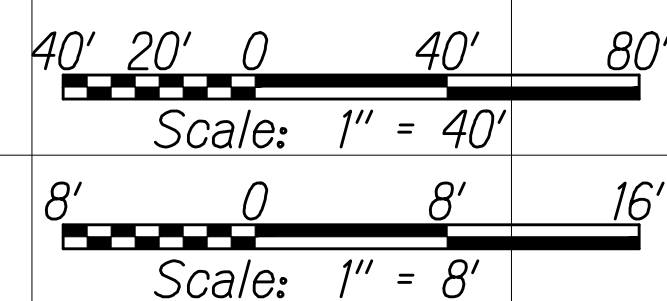
Provide 2" Cleanout units at all interconnect laterals



WATERLINE PROFILE

Scale: Horiz. 1" = 40'
Vert. 1" = 8'

GRAPHICAL SCALE:



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Austen W. Drake APRIL 30, 2018
SIGNATURE EXPIRATION DATE OF THE LICENSE

8/1/16	2	Added EG profile; Revised sht. ref.
1/22/16	1	Added conc. jacket for cover more than 5'; Added cleanout note; RW extension; Exist. W12" crossing elev. rev. and revised WL profile
DATE	REVISION	

SHEET No. 16 OF 35 SHEETS

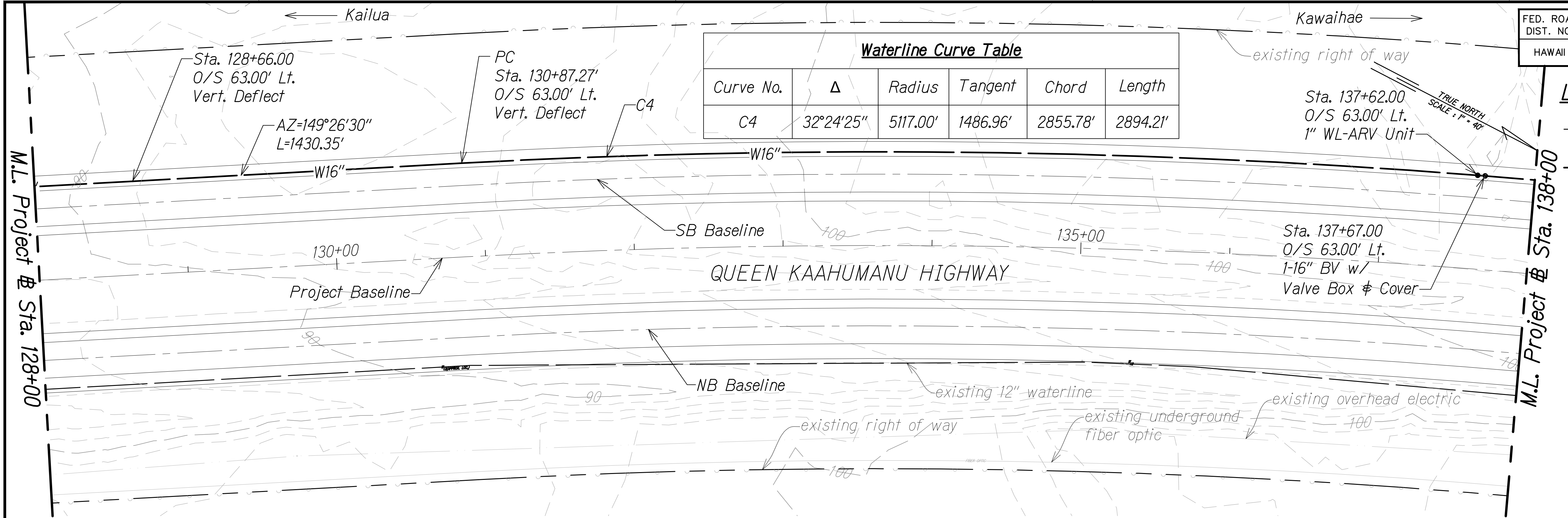
"AS-BUILT"

C.O. 181

ORIGINAL PLAN
DESIGNED BY
NOTED BY
QUANTITIES BY
CHECKED BY
No.

SURVEY PLOTTED BY
DATE
DESIGNED BY
DATE
NOTED BY
DATE
QUANTITIES BY
DATE
CHECKED BY
DATE

W.L. CIVIL 3D PROJECTS\2008_003_001 GBI QUEEN K HWY WIDENING\01 CIVIL DRAWINGS\182 WATER PP-17.DWG 8/5/2016 1:35 PM



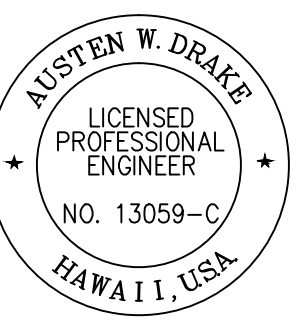
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-019-K(38)R	2016	182	528

LEGEND:

- Finish Grade along Waterline
- Waterline
- 1" Air Release Valve (ARV)
- Butterfly Valve (BV)
- existing waterline (w)
- existing underground fiber optic
- existing overhead electric

LEGEND FOR AS-BUILT POSTINGS

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

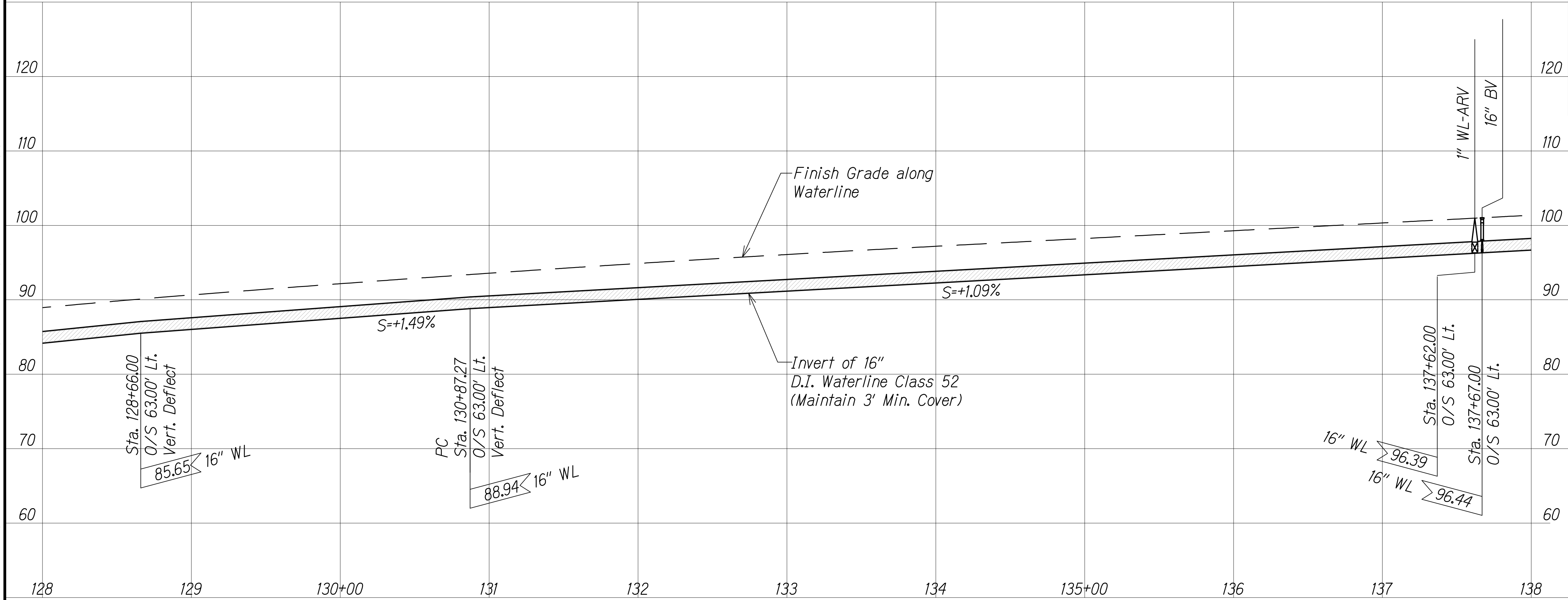


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Austen W. Drake APRIL 30, 2018
SIGNATURE EXPIRATION DATE OF THE LICENSE

WATERLINE PROFILE

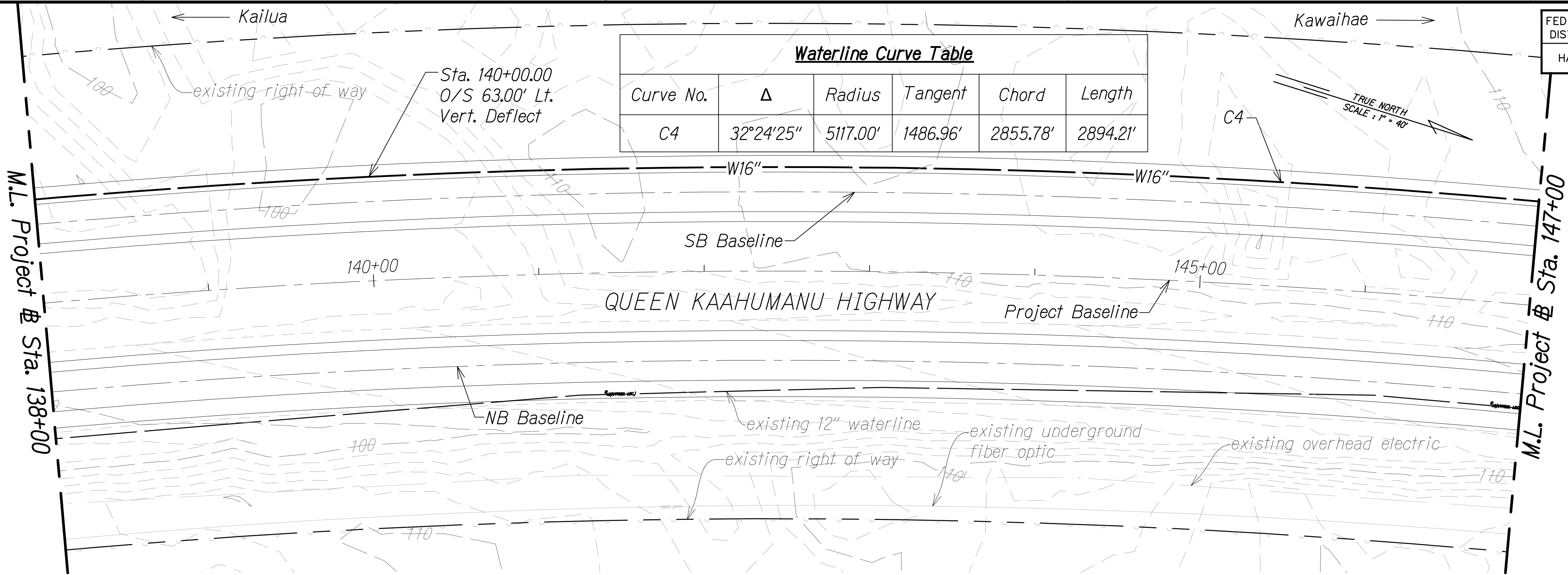
Scale: Horiz. 1" = 40'
Vert. 1" = 8'



"AS-BUILT"

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

W:_CIVIL 3D PROJECTS\2008_003_001 CBI QUEEN K HWY WIDENING\01 CIVIL DRAWINGS\183 WATER PP-18.DWG 8/5/2016 11:47 AM



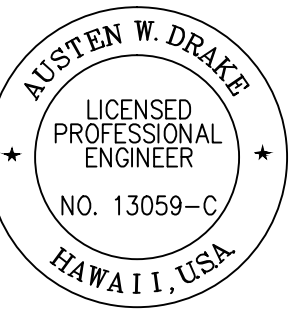
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-019-K(38)R	2016	183	528 522

LEGEND:

- Finish Grade along Waterline
- W16" Waterline
- existing waterline (w)
- FIBER OPTIC
- existing underground fiber optic
- existing overhead electric

LEGEND FOR AS-BUILT POSTINGS

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

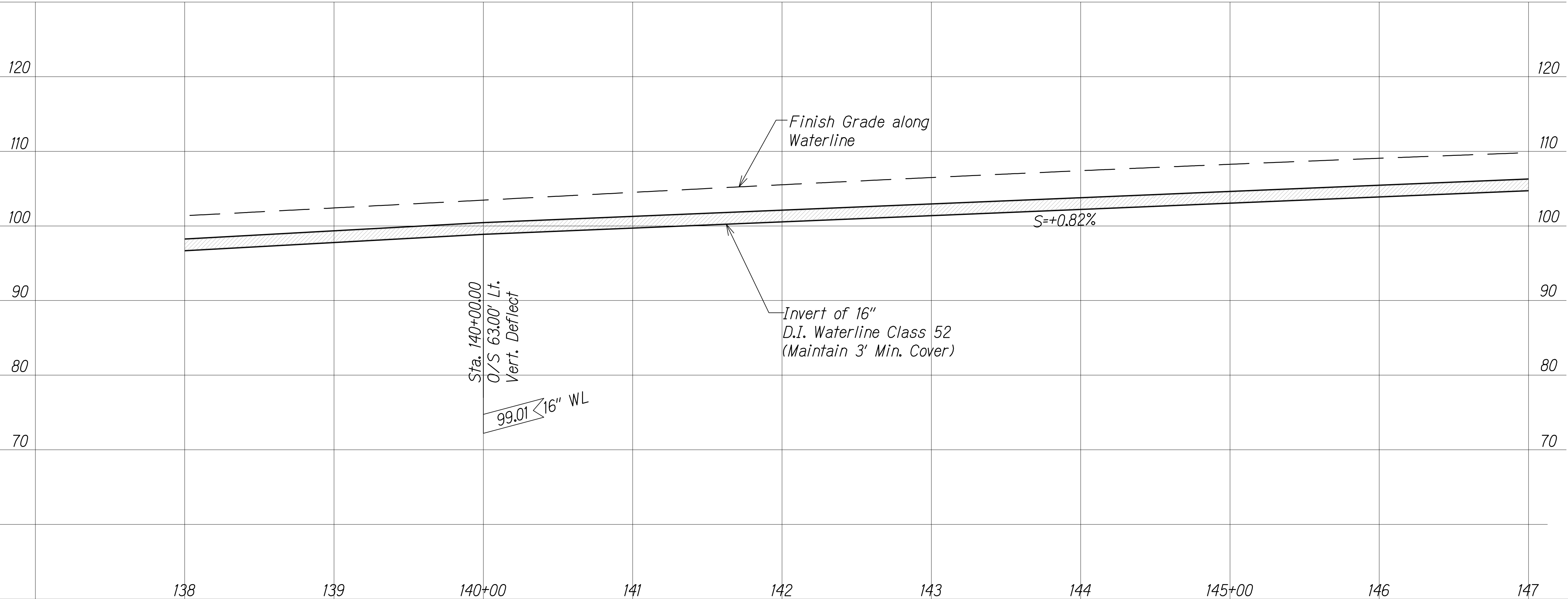


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Austen W. Drake APRIL 30, 2018
SIGNATURE EXPIRATION DATE OF THE LICENSE

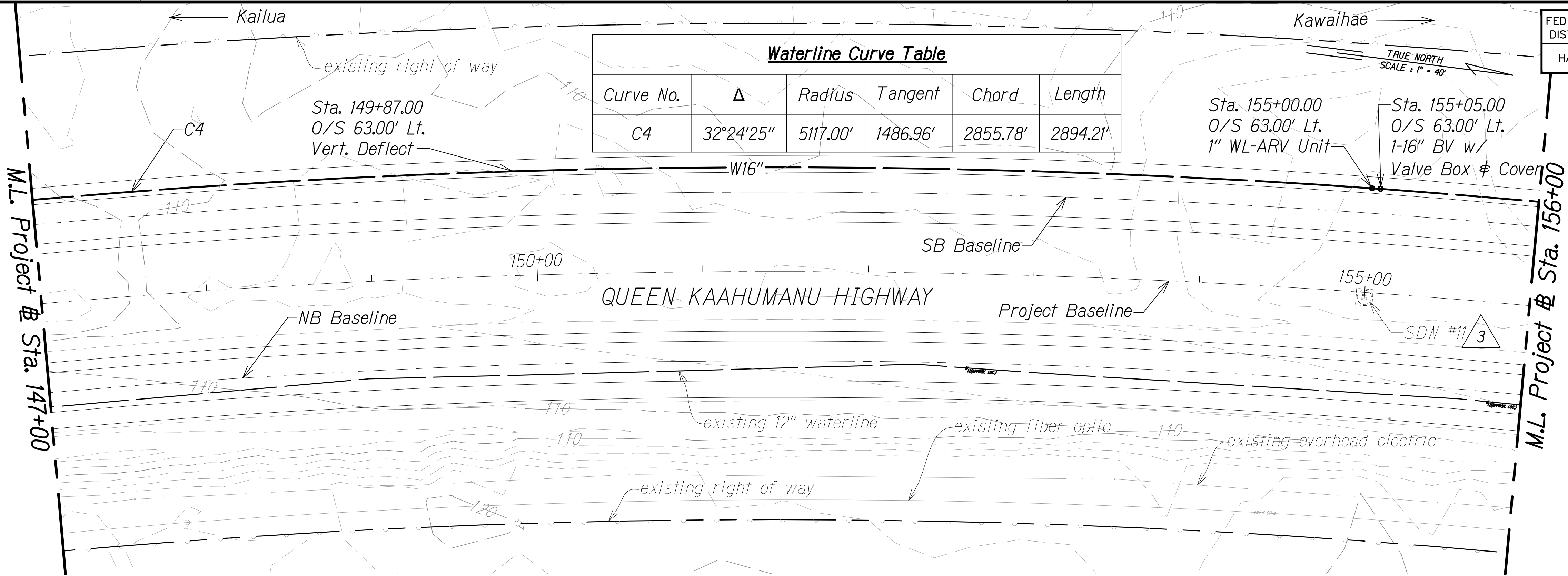
WATERLINE PROFILE

Scale: Horiz. 1" = 40'
Vert. 1" = 8'



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

W:_CIVIL 3D PROJECTS\2008_003_001 GBI QUEEN K HWY WIDENING\01 CIVIL DRAWINGS\0184 WATER PP-19.DWG 2/13/2017 1:24 PM



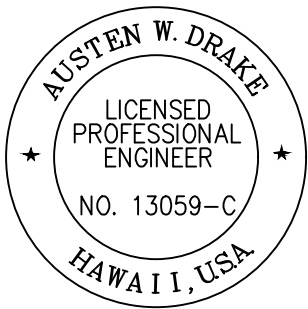
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-019-1(38)R	2016	C.O. 184	528

LEGEND:

- — — — — Finish Grade along Waterline
- W16" - — — — — Waterline
- ⊙ 1" Air Release Valve (ARV)
- Butterfly Valve (BV)
- ⊞ Shallow Drywell
- W₁₂ — — — — existing waterline (w)
- FIBER OPTIC — — — — existing underground fiber optic
- — — — — existing overhead electric

LEGEND FOR AS-BUILT POSTINGS

- ~~~~~ Squiggly line for as-built deletion
- ~~100.00~~ Double line for as-built deletion
- Roadway Text for as-built posting



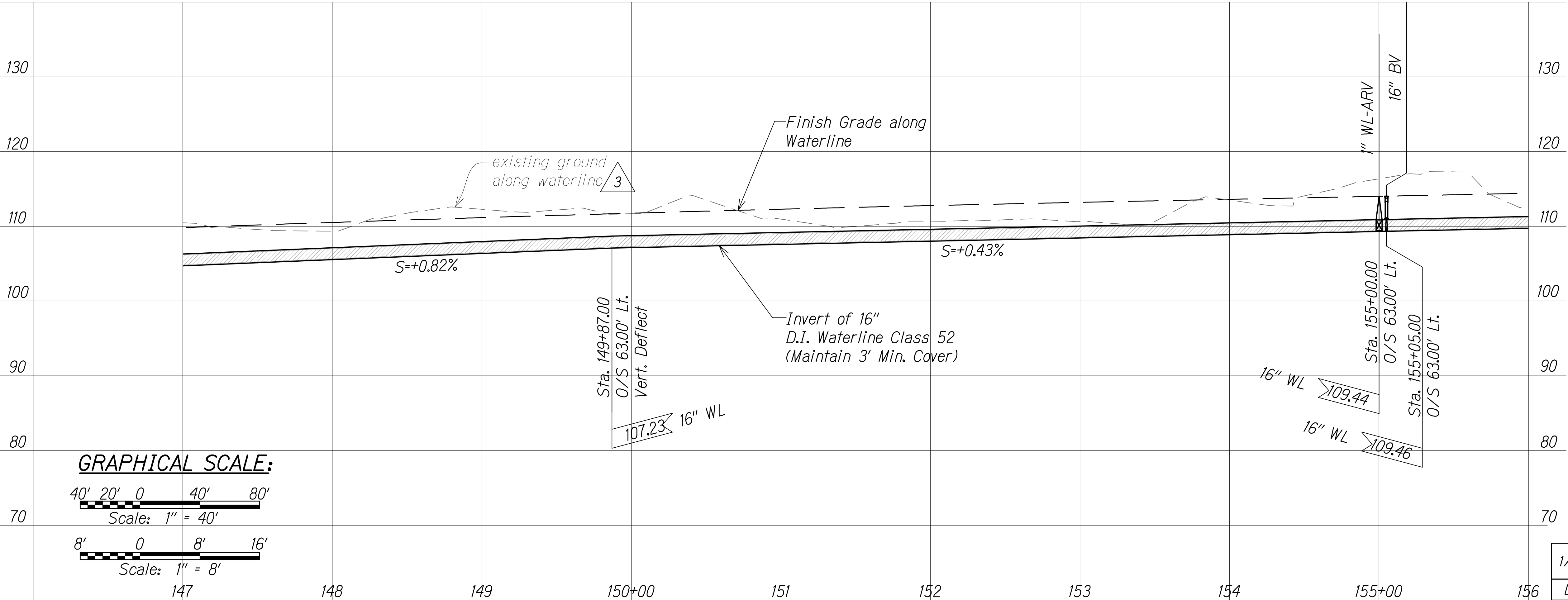
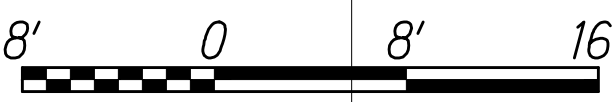
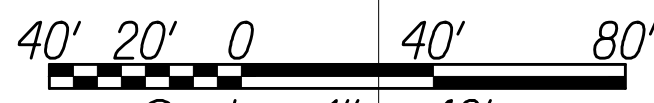
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

Austen W. Drake
SIGNATURE
APRIL 30, 2018
EXPIRATION DATE OF THE LICENSE

WATERLINE PROFILE

Scale: Horiz. 1" = 40'
Vert. 1" = 8'

GRAPHICAL SCALE:



1/31/17	3	Shown drywell & added EG profile
DATE	REVISION	

SHEET No. 19 OF 35 SHEETS

"AS-BUILT"

C.O. 184

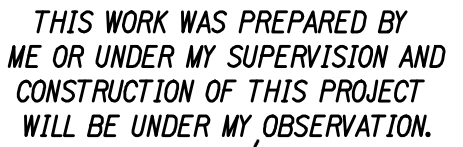
2/13/2017 1:25 PM

LEGEND:

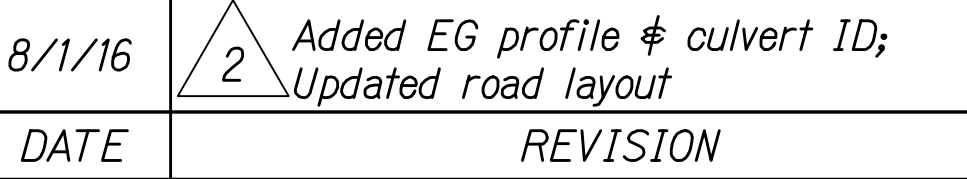
_____ *Finish Grade along*
 _____ *Waterline*
 — W16" — _____ *Waterline*
 _____ W₂ _____ *existing waterline (w)*
 _____ FIBER OPTIC _____ *existing underground*
 _____ fiber optic
 _____ ○ _____ *existing overhead*
 _____ electric

LEGEND FOR AS-BUILT POSTINGS

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



Austen W. Drake APRIL 30, 2018
SIGNATURE EXPIRATION DATE
OF THE LICENSE



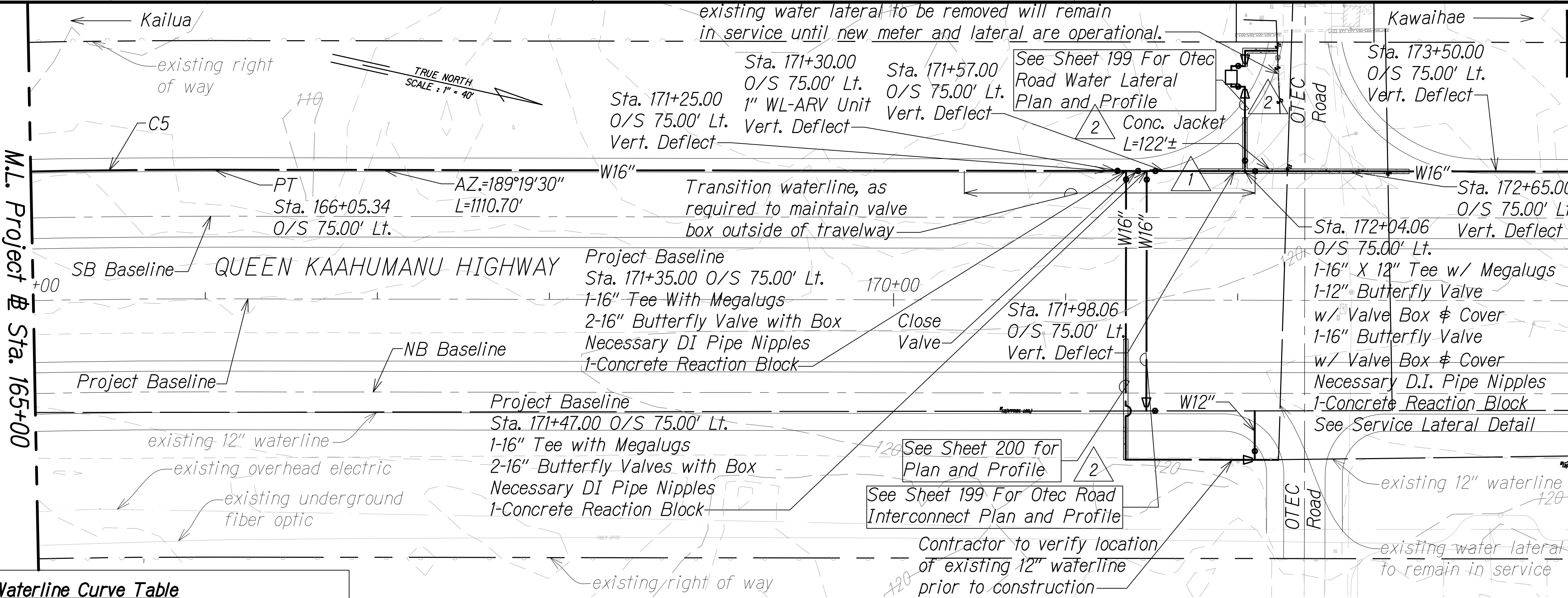
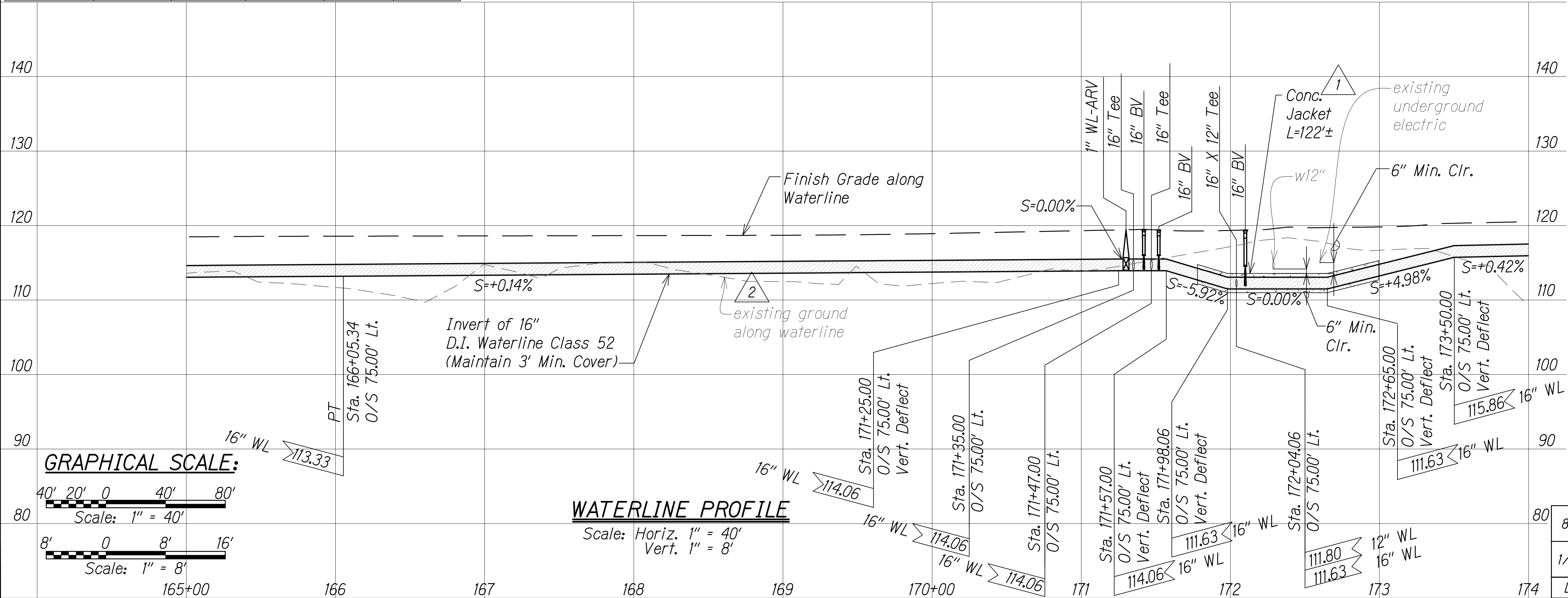
W:_CIVIL 3D PROJECTS\2008_003_001 GBI QUEEN K HWY WIDENING\01 CIVIL DRAWINGS\185 WATER PP-20.DWG 7/29/2016 10:10 AM

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

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

W:_CIVIL 3D PROJECTS\2008_003_001 GBI QUEEN K HWY WIDENING\01 CIVIL DRAWINGS\186 WATER PP-21.DWG 7/29/2016 10:39 AM

Waterline Curve Table					
Curve No.	Δ	Radius	Tangent	Chord	Length
C5	4°06'52"	5129.00'	184.24'	368.23'	368.31'



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-019-1(38)R	2016	C.O. 186	528 322

LEGEND:

- Finish Grade along Waterline
- Waterline
- 1" Air Release Valve (ARV)
- Butterfly Valve (BV)
- Water Lateral
- existing waterline (w)
- existing underground fiber optic
- existing overhead electric
- existing underground electric

NOTE:
Provide 2" Cleanout units at all interconnect laterals

LEGEND FOR AS-BUILT POSTINGS

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

AUSTEN W. DRAKE
LICENSED PROFESSIONAL ENGINEER
NO. 13059-C
HAWAII, USA

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.
Austen W. Drake
SIGNATURE
APRIL 30, 2018
EXPIRATION DATE OF THE LICENSE

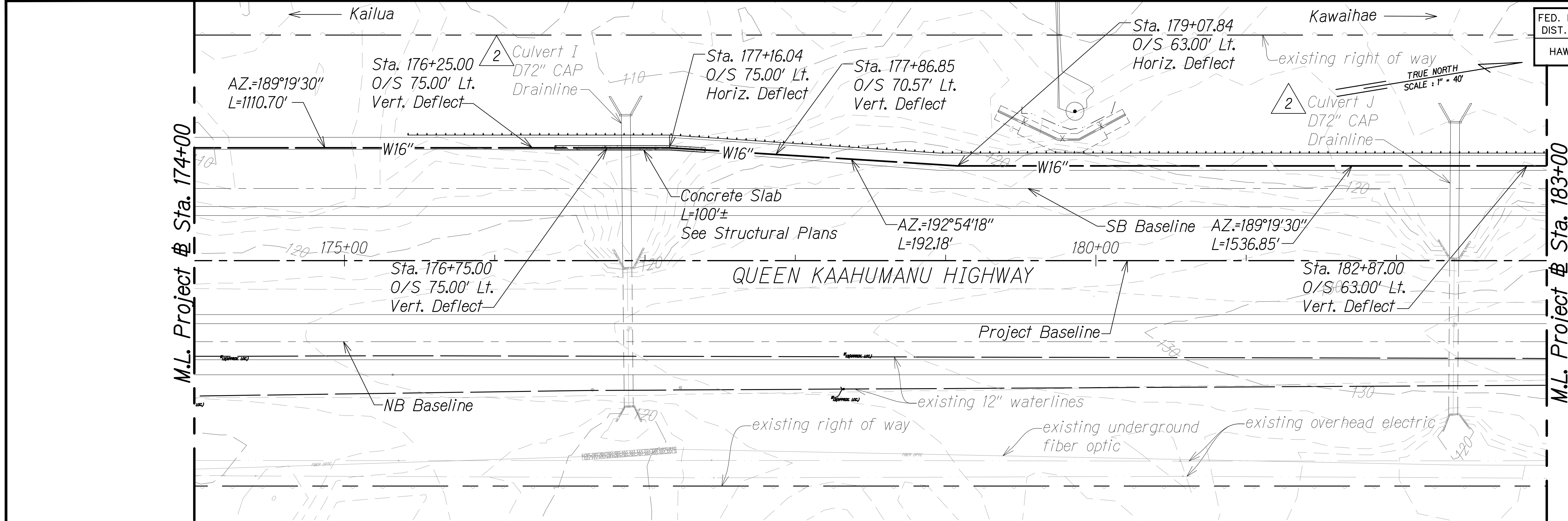
DATE	REVISION
8/1/16	2 Added EG profile; Revised sht. ref. & service lateral conn. at OTEC
1/22/16	1 Added conc. jacket for cover more than 5' & cleanout note

SHEET No. 21 OF 35 SHEETS

C.O. 186

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

W:_CIVIL 3D PROJECTS\2008_003_001 CBI QUEEN K HWY WIDENING\01 CIVIL DRAWINGS\187 WATER PP-22.DWG 2/8/2017 2:56 PM



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-019-1(38)R	2016	C.O. 187	528

LEGEND:

- Finish Grade along Waterline
- W16" Waterline
- existing waterline (w)
- existing underground fiber optic
- existing overhead electric

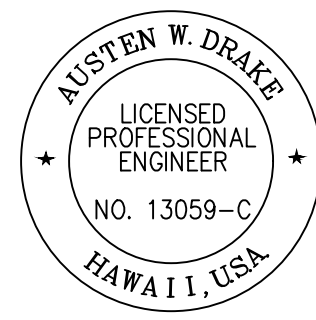
Approved under separate cover

MANAGER-CHIEF ENGINEER
DEPARTMENT OF WATER SUPPLY
COUNTY OF HAWAII

DATE

LEGEND FOR AS-BUILT POSTINGS

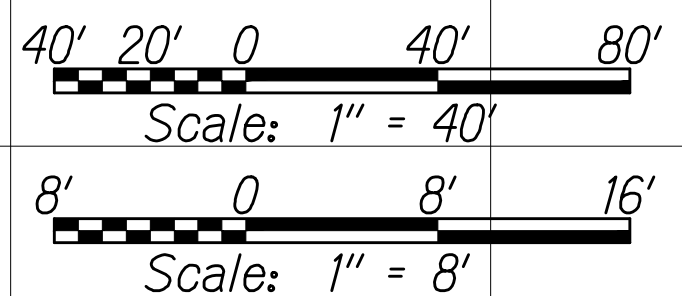
- Squiggly line for as-built deletion
- Double line for as-built deletion
- Roadway Text for as-built posting



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

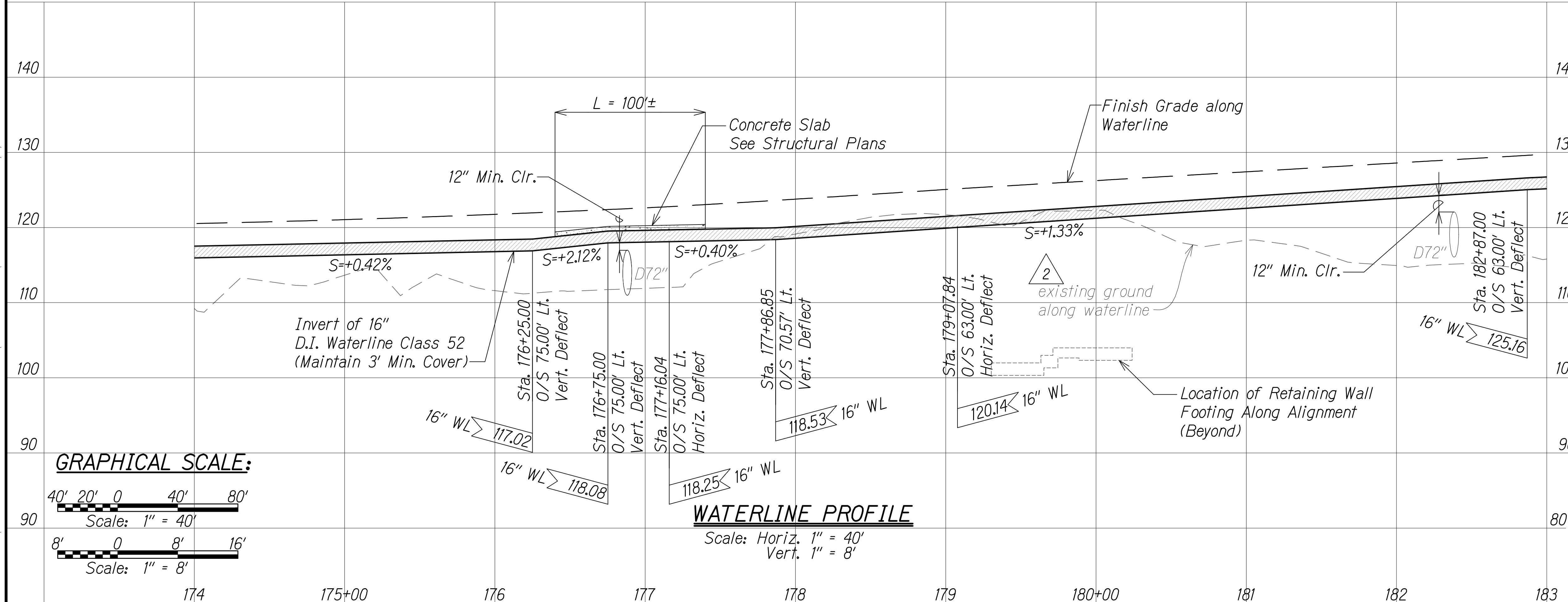
Austen W. Drake
SIGNATURE
APRIL 30, 2018
EXPIRATION DATE OF THE LICENSE

GRAPHICAL SCALE:



WATERLINE PROFILE

Scale: Horiz. 1" = 40'
Vert. 1" = 8'



12/21/16	3	Added field buffer locations & revised arch site locations; Redesigned retaining wall
8/1/16	2	Added EG profile & culvert ID
DATE	REVISION	

SHEET No. 22 OF 35 SHEETS

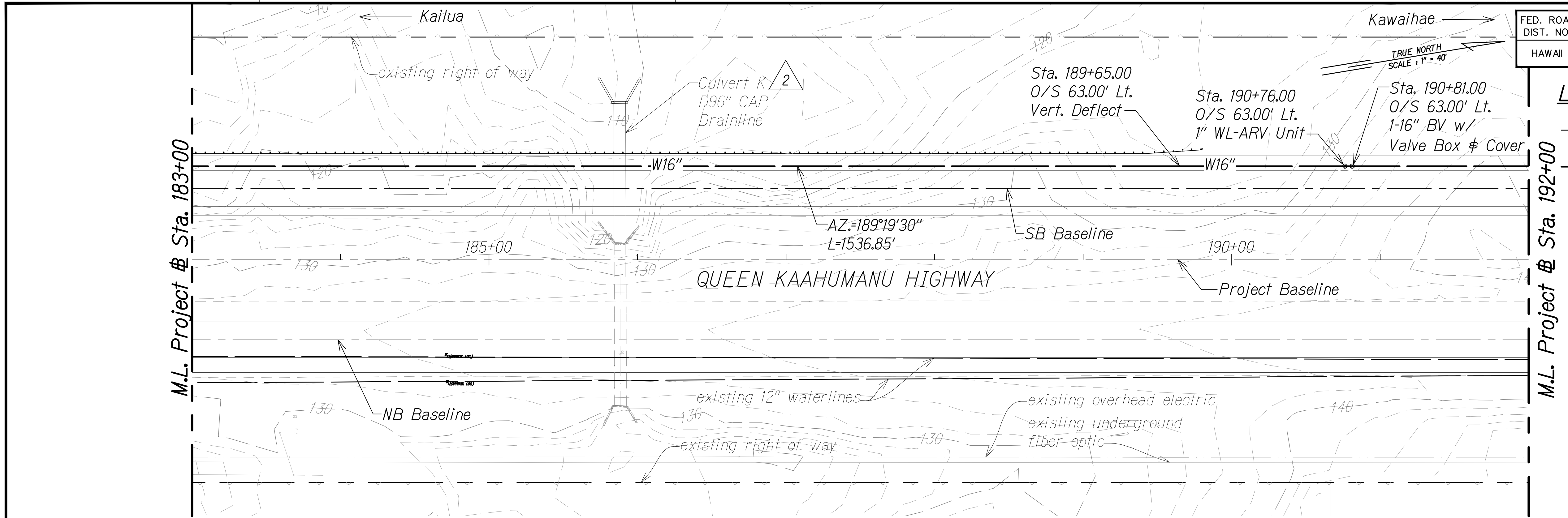
"AS-BUILT"

2/8/2017 2:56 PM

C.O. 187

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

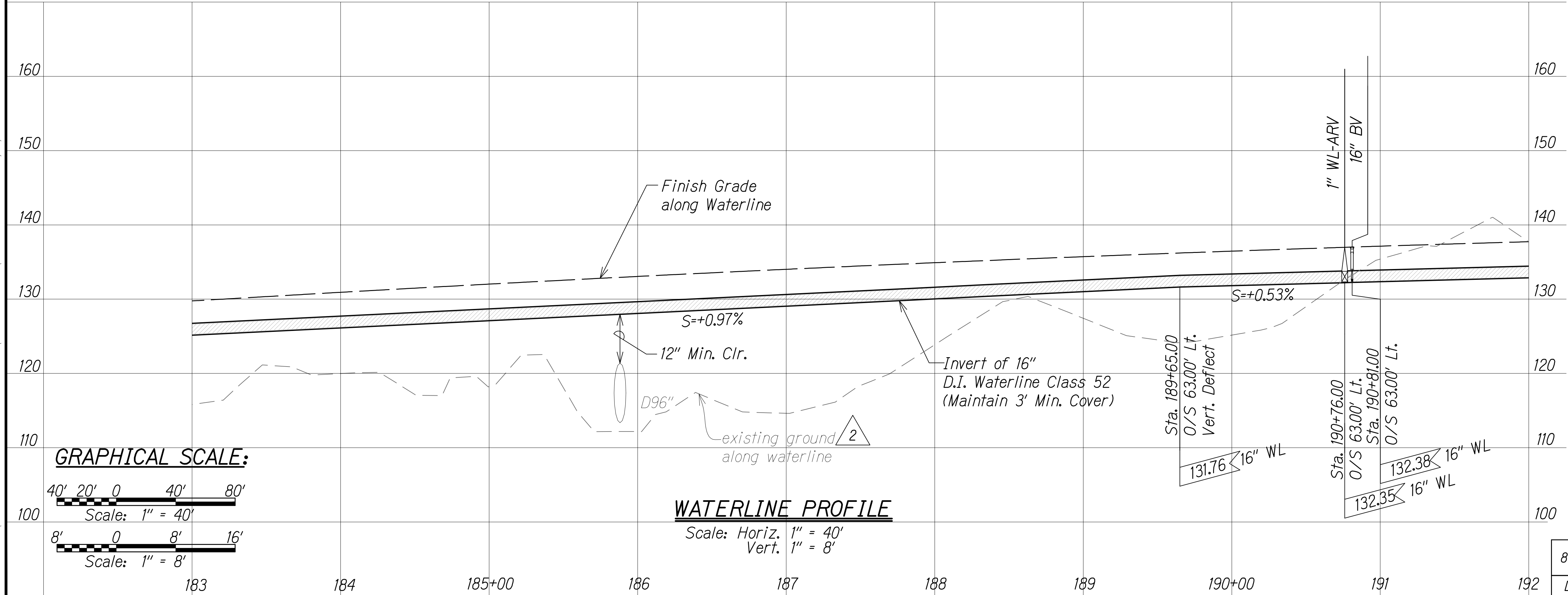
W:_CIVIL 3D PROJECTS\2008_003_001 GBI QUEEN K HWY WIDENING\01 CIVIL DRAWINGS\188 WATER PP-23.DWG 7/29/2016 3:36 PM



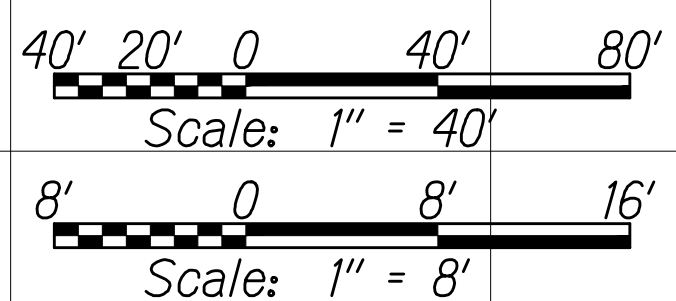
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-019-1(38)R	2016	C.O. 188	528 522

LEGEND:

- Finish Grade along Waterline
- Waterline
- 1" Air Release Valve (ARV)
- Butterfly Valve (BV)
- existing waterline (w)
- existing underground fiber optic
- existing overhead electric

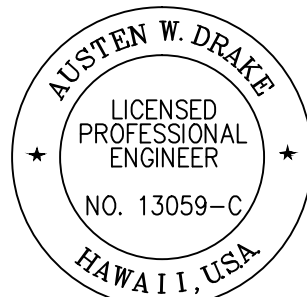


GRAPHICAL SCALE:



WATERLINE PROFILE

Scale: Horiz. 1" = 40'
Vert. 1" = 8'



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Austen W. Drake APRIL 30, 2018
SIGNATURE EXPIRATION DATE OF THE LICENSE

LEGEND FOR AS-BUILT POSTINGS

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

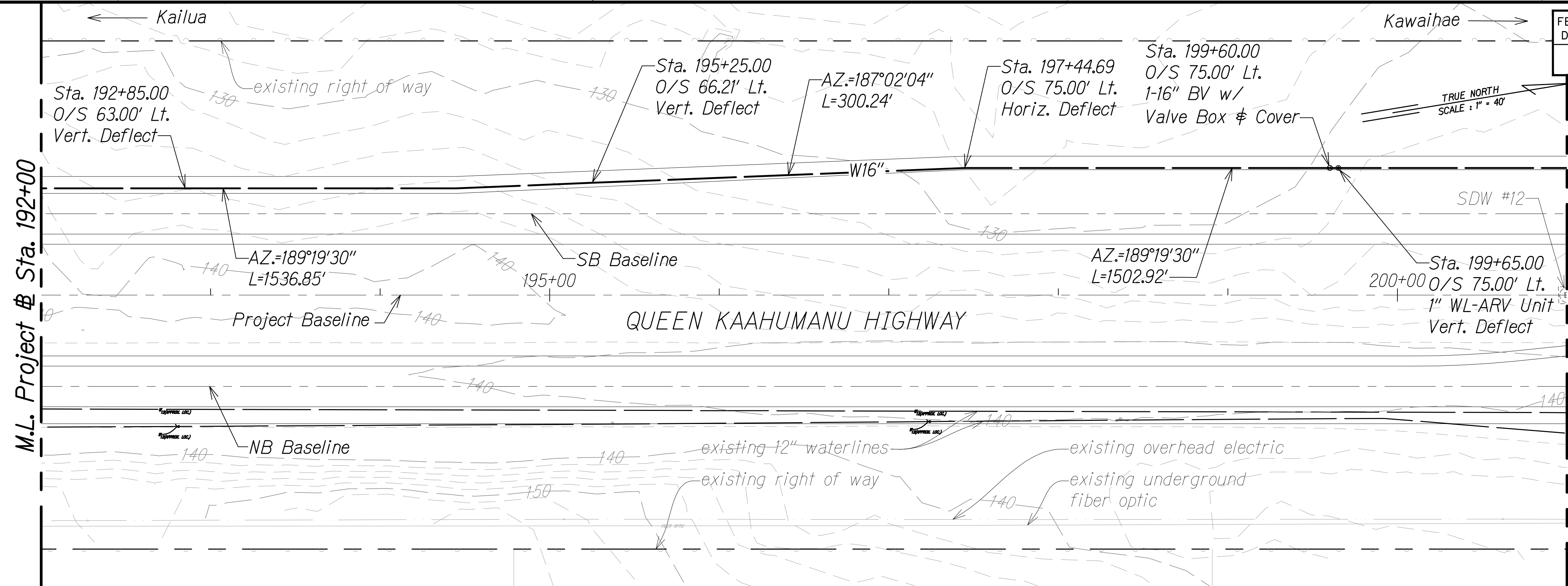
8/1/16	Added EG profile & culvert ID
DATE	REVISION

SHEET No. 23 OF 35 SHEETS

"AS-BUILT"

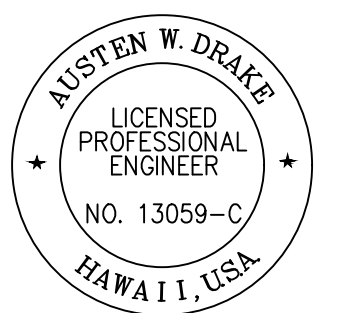
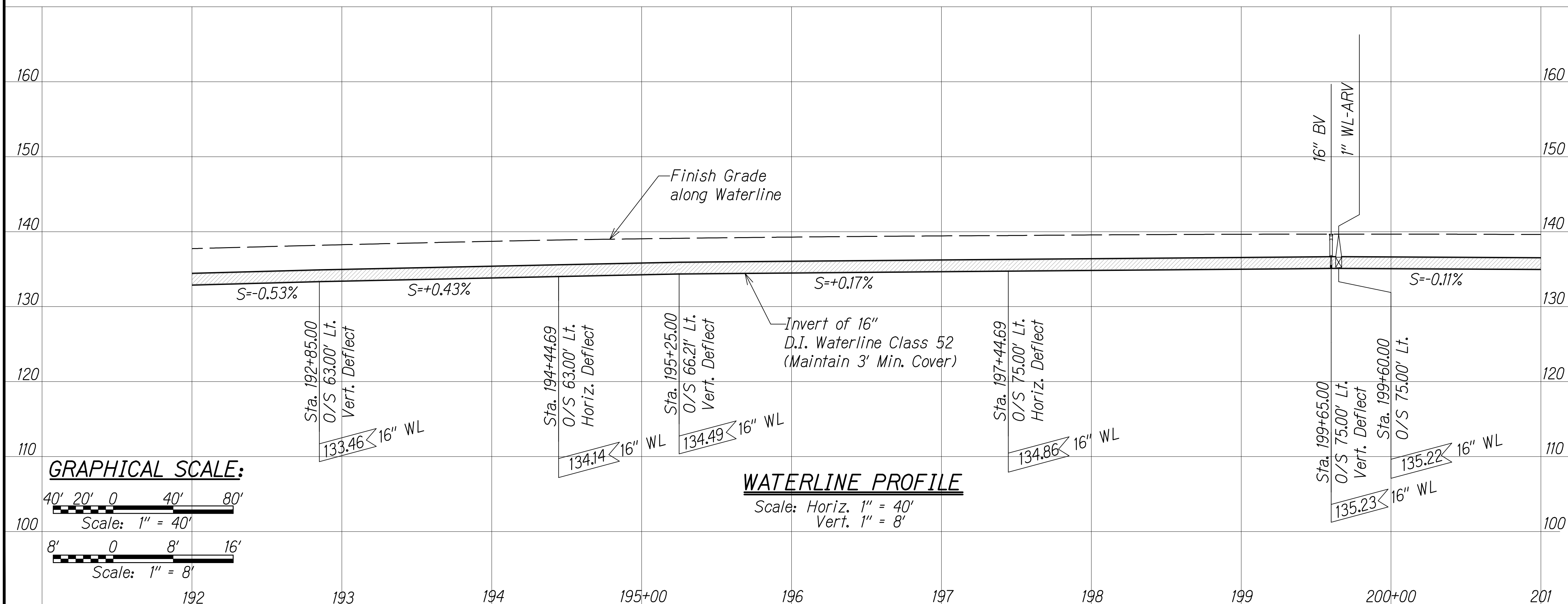
C.O. 188

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-019-1(38)R	2016	189	528 528



LEGEND:

-
- _____ *Finish Grade along Waterline*
 - W16" - _____ *Waterline*
 - *1" Air Release Valve (ARV)*
 - ⊗ *Butterfly Valve (BV)*
 - ⊠ *Shallow Drywell*
 - { _____ *Water Lateral*
 - _____ W_z _____ *existing waterline (w)*
 - _____ FIBER OPTIC _____ *existing underground fiber optic*
 - _____ ○ _____ *existing overhead electric*



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SIGNATURE EXPIRATION DATE
OF THE LICENSE

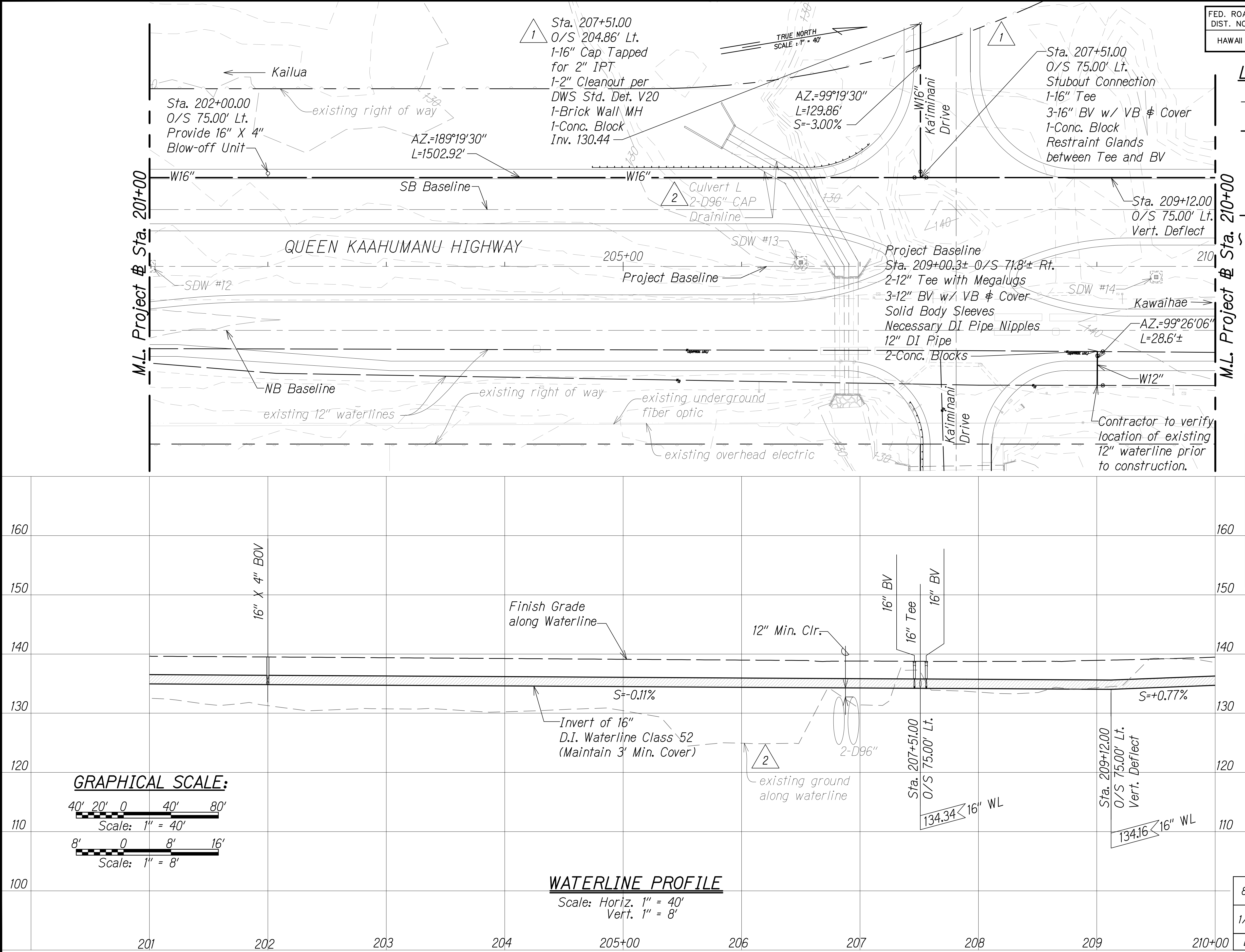
LEGEND FOR AS-BUILT POSTINGS

- | | |
|---|--|
|  | Squiggly line for
as-built deletion |
| 100.00 | Double line for
as-built deletion |
| Roadway | Text for as-built
posting |

2/13/2017 1:38 PM

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

W:_CIVIL_3D_PROJECTS\2008_003_001_GBI_QUEEN_K_Hwy_WIDENING\01_CIVIL DRAWINGS\190_WATER_PP-25.DWG 8/5/2016 1:29 PM



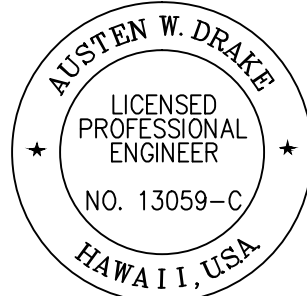
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-019-1(38)R	2016	C.O. 190	528 322

- LEGEND:**
- Finish Grade along Waterline
 - Waterline
 - Blow Off Valve (BOV)
 - Butterfly Valve (BV)
 - Shallow Drywell
 - Water Lateral
 - existing waterline (w)
 - existing underground fiber optic
 - existing overhead electric

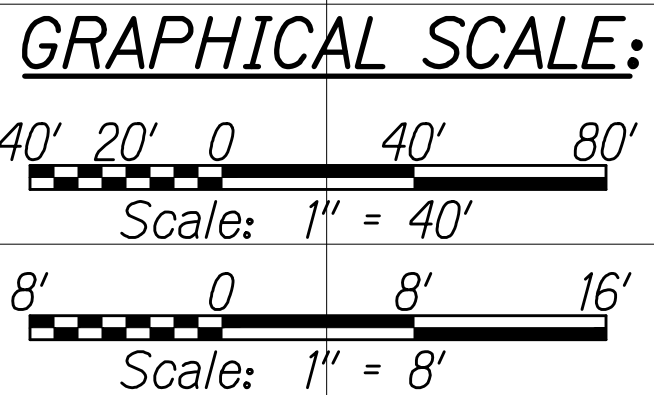
NOTE:
Provide 2" Cleanout units at all interconnect laterals

LEGEND FOR AS-BUILT POSTINGS

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



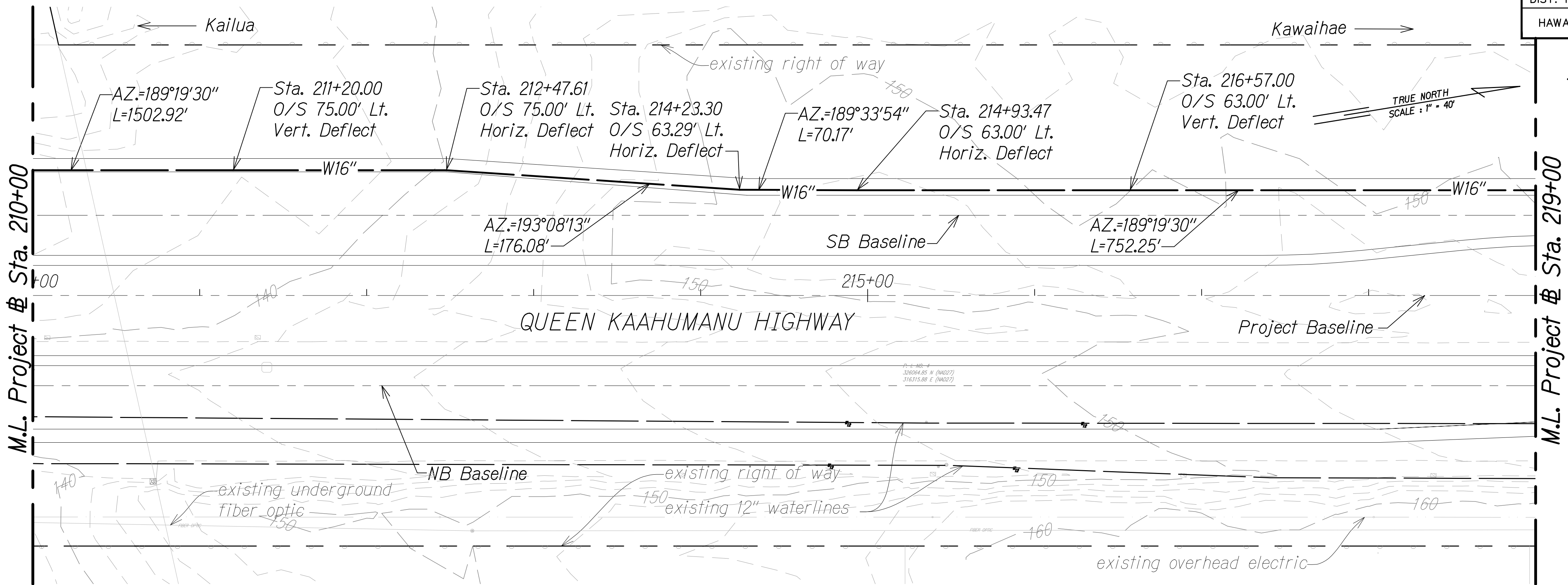
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Austen W. Drake APRIL 30, 2018
SIGNATURE EXPIRATION DATE OF THE LICENSE



WATERLINE PROFILE
Scale: Horiz. 1" = 40'
Vert. 1" = 8'

8/1/16	2	Added EG profile & culvert ID
1/22/16	1	Added Ka'imani stubout, cleanout note; Ka'imani ROW update
DATE	REVISION	

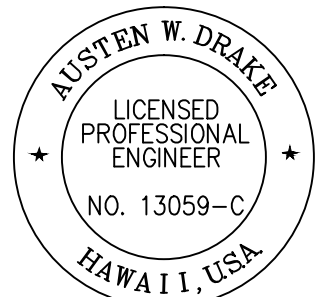
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-019-1(38)R	2016	191	528 522



- LEGEND:**
- — — — — Finish Grade along Waterline
 - W16\" — — — — — Waterline
 - — — — — existing waterline (w)
 - — — — — existing underground fiber optic
 - — — — — existing overhead electric

LEGEND FOR AS-BUILT POSTINGS

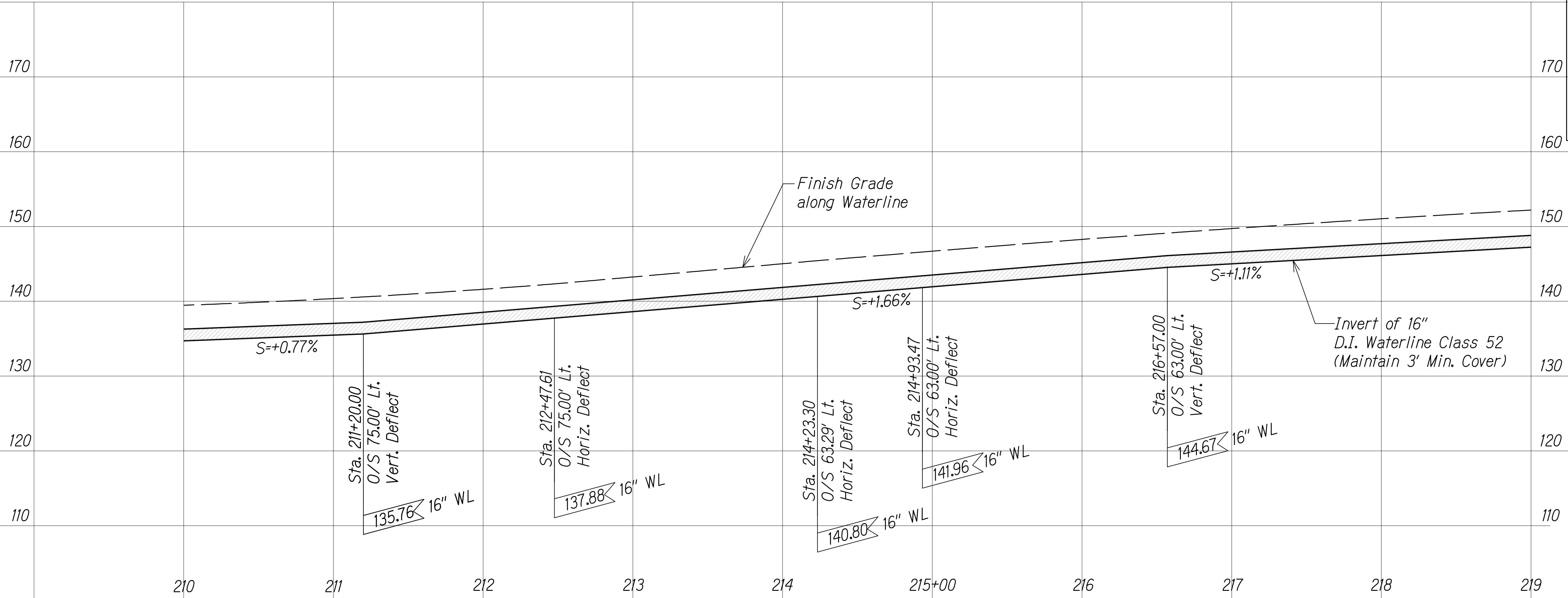
- ~~~~~ Squiggly line for as-built deletion
- ~~100.00~~ Double line for as-built deletion
- Roadway Text for as-built posting



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Austen W. Drake APRIL 30, 2018
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WATERLINE PROFILE

Scale: Horiz. 1\" = 40'
Vert. 1\" = 8'



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

W:_CIVIL 3D PROJECTS\2008_003_001 GBI QUEEN K HWY WIDENING\01 CIVIL DRAWINGS\191 WATER PP-26.DWG 8/5/2016 1:41 PM

LEGEND:

— — — — — *Finish Grade along Waterline*

--- *Waterline*

W16" --- *Waterline*

● *1" Air Release Valve (ARV)*

⊗ *Butterfly Valve (BV)*

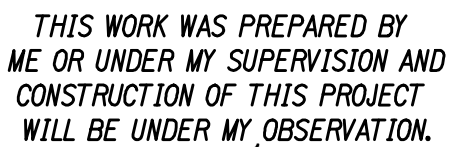
— W — *existing waterline (w)*

— F — *existing underground fiber optic*

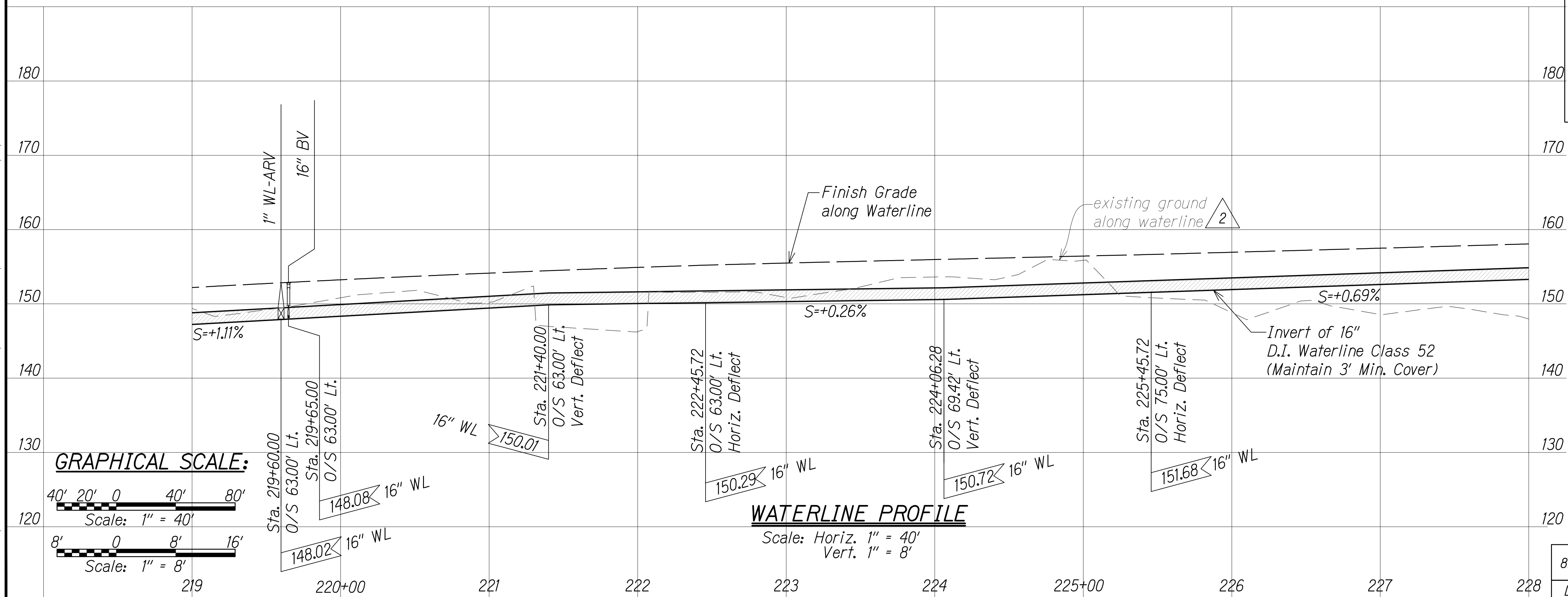
— ⊗ — *existing overhead electric*

LEGEND FOR AS-BUILT POSTINGS

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



Austen W. Drake APRIL 30, 2018
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OF THE LICENSE

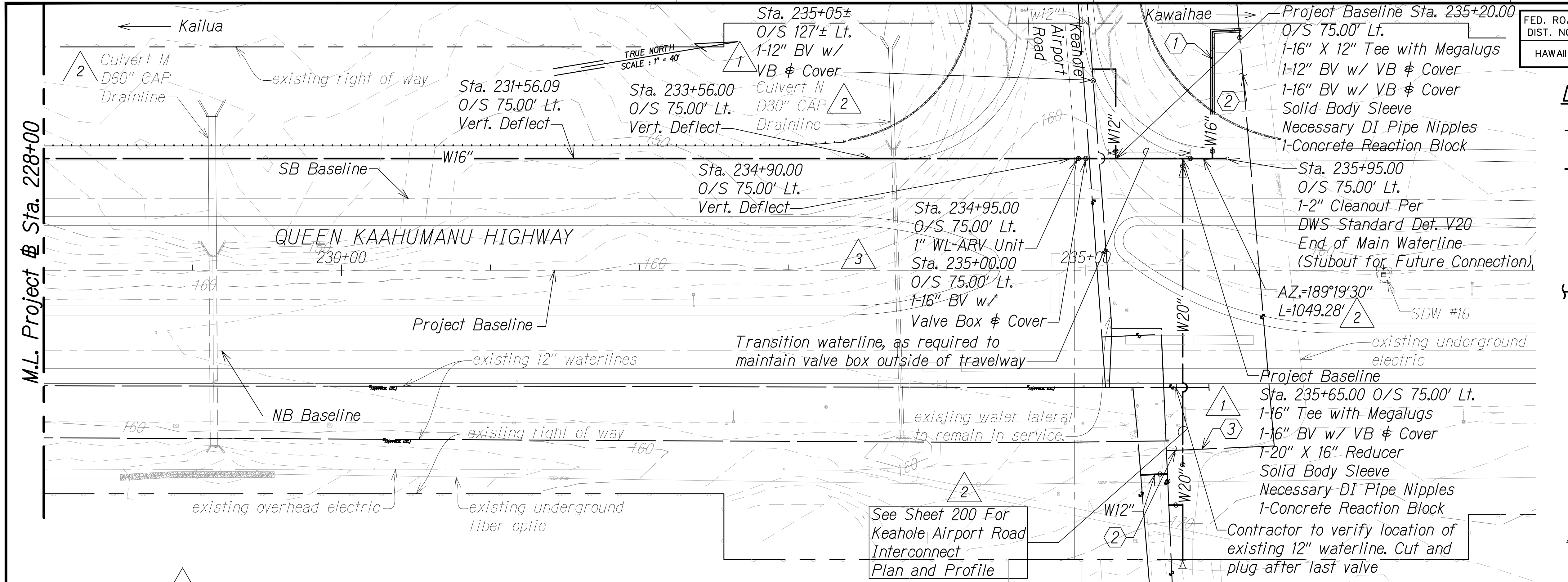


8/1/16	 Added EG profile & azimuth; Revised length
DATE	REVISION

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

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

W:_CIVIL_3D_PROJECTS\2008_003_001_GBI_QUEEN_K_Hwy_WIDENING\01_CIVIL_DRAWINGS\193_WATER_PP-28.DWG 2/13/2017 1:24 PM



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-019-1(38)R	2016	528 193	528 328

LEGEND:

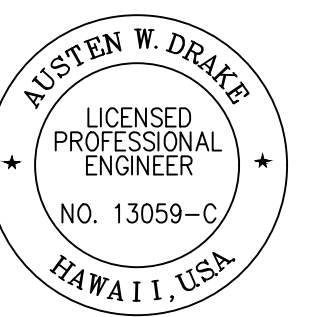
- Finish Grade along Waterline
- Waterline
- 1" Air Release Valve (ARV)
- Butterfly Valve (BV)
- Shallow Drywell
- Water Lateral
- existing waterline (w)
- existing underground fiber optic
- existing overhead electric
- existing underground electric

NOTE:

Provide 2" Cleanout units at all interconnect laterals

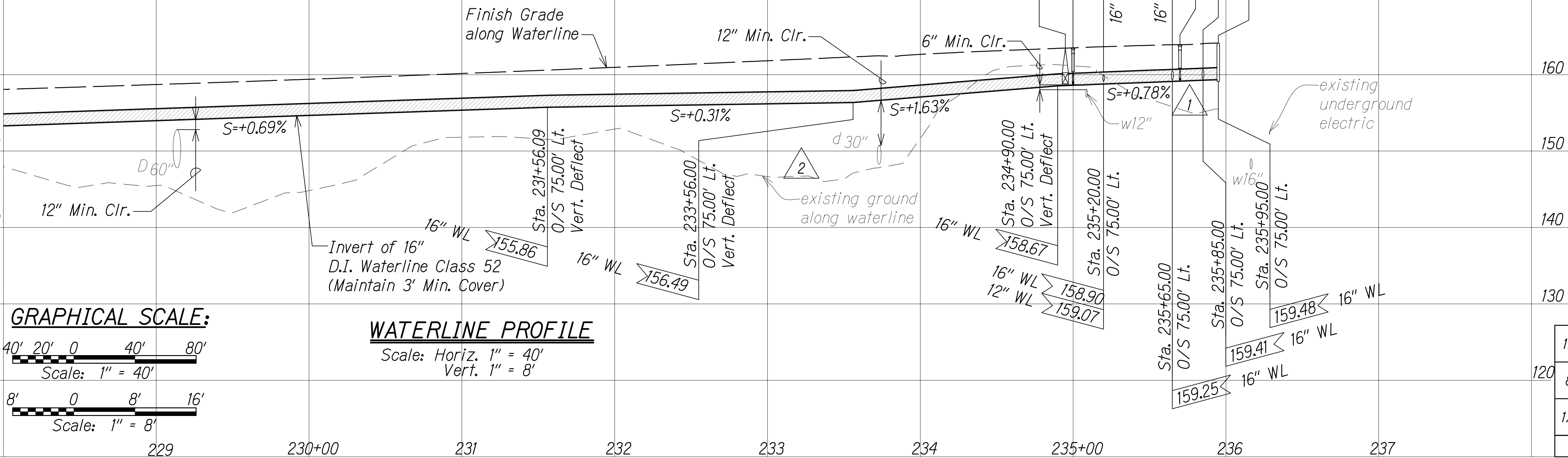
LEGEND FOR AS-BUILT POSTINGS

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

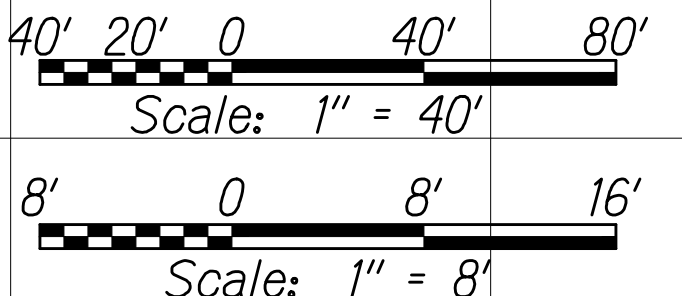


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- See Sheet 200S-1 for W16 Connection Plan and Profile
- Cut & Plug
- Exist. W16" shall remain in service until New W16" connection is operational



GRAPHICAL SCALE:

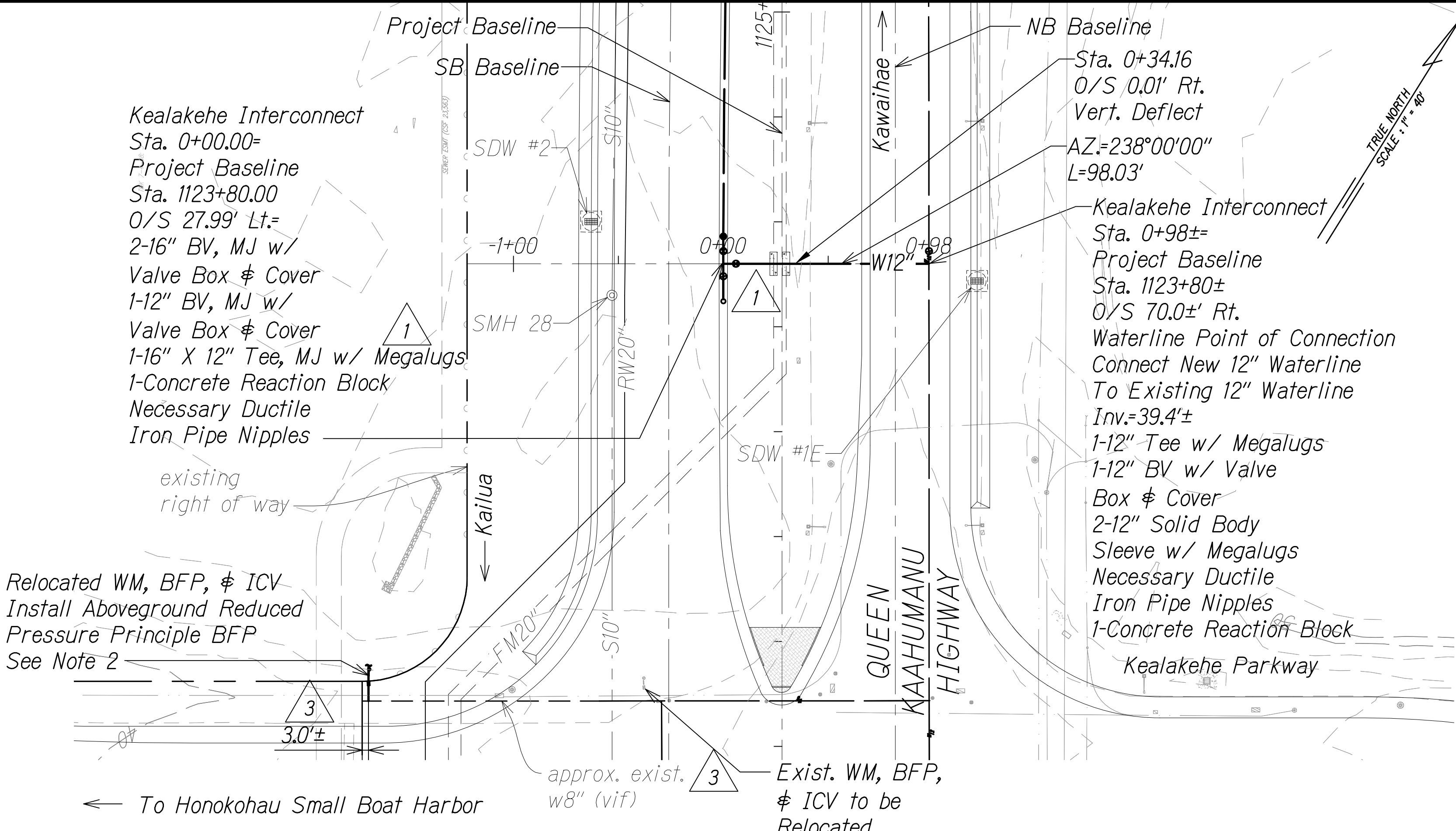


WATERLINE PROFILE

Scale: Horiz. 1" = 40'
Vert. 1" = 8'

1/31/17	Removed SDW #15
8/1/16	Added EG profile & culvert ID; Revised sht. ref. & length
1/22/16	Added 12" BV, new W16" connection, cleanout note and revised profile.
DATE	REVISION

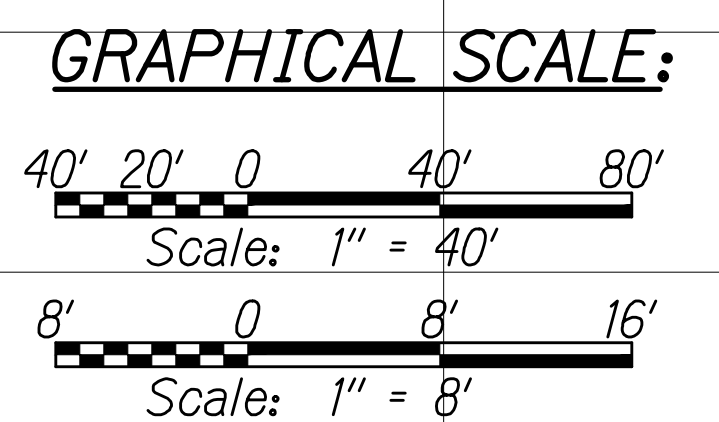
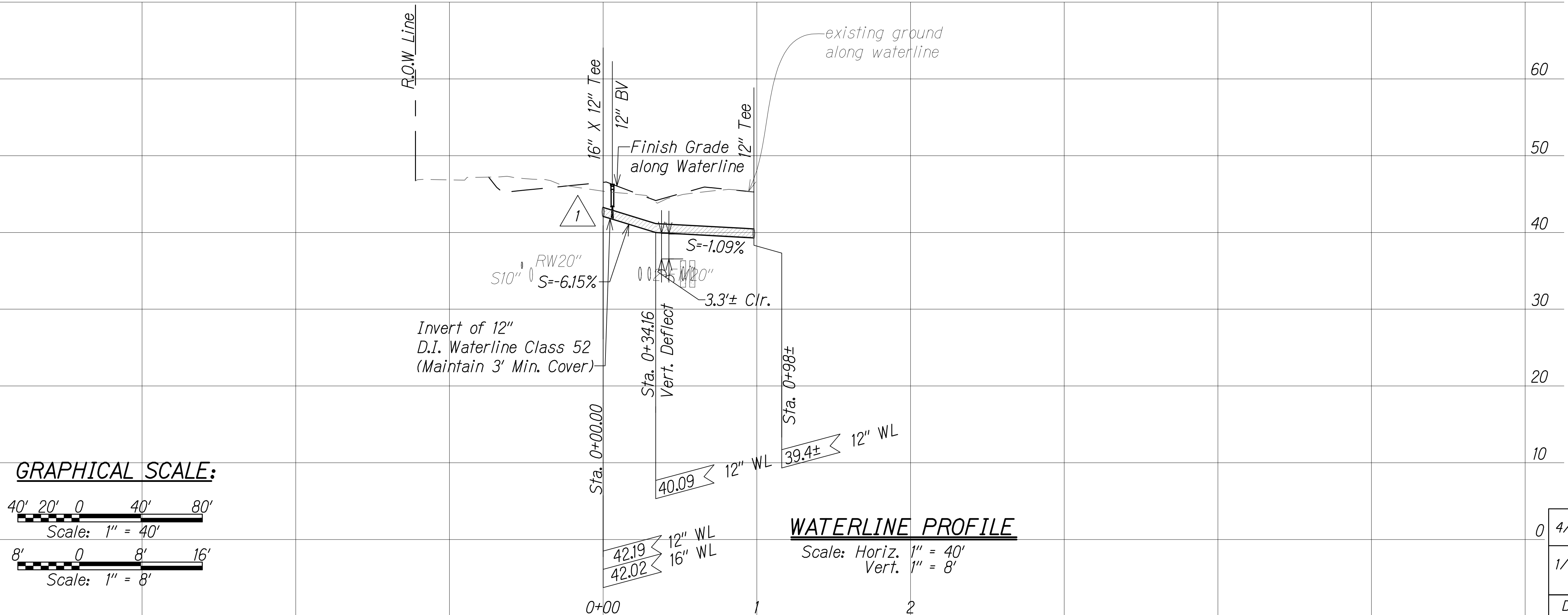
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-019-1(38)R	2016	C.O. 194	528



NOTES:

1. Provide 2" Cleanout units at all interconnect laterals.
2. Backflow device installation must be installed, where required, before water service is allowed. It must be installed on private property in accordance with DWS Det. V9 and departmental staff must approve the installation before water service can be started. If the distance between the meter and BFP is greater than 5' then the line between them shall be conc. encased. DWS cross-connection personnel must be present at time of conc. encasement. The service owner shall be responsible for the installation, maintenance, yearly testing and make provisions for water during the testing and maintenance of the BFP assembly.

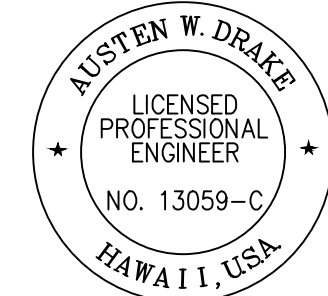
- LEGEND:**
- — — — — Finish Grade along Waterline
 - S10" - - - - - Sewerline
 - W16" - — — — — Waterline
 - RW20" — — — — — Reclaimed Water
 - 2-FM20" - - - - - Dual Force Main
 - ⊙ Sewer Manhole
 - Butterfly Valve (BV)
 - ⊞ Shallow Drywell
 - { — — — — — Water Lateral
 - W — — — — — existing waterline (w)
 - FIBER OPTIC — — — — — existing underground fiber optic
 - o — — — — — existing overhead electric
 - — — — — existing underground electric



WATERLINE PROFILE

Scale: Horiz. 1" = 40'

Vert. 1" = 8'



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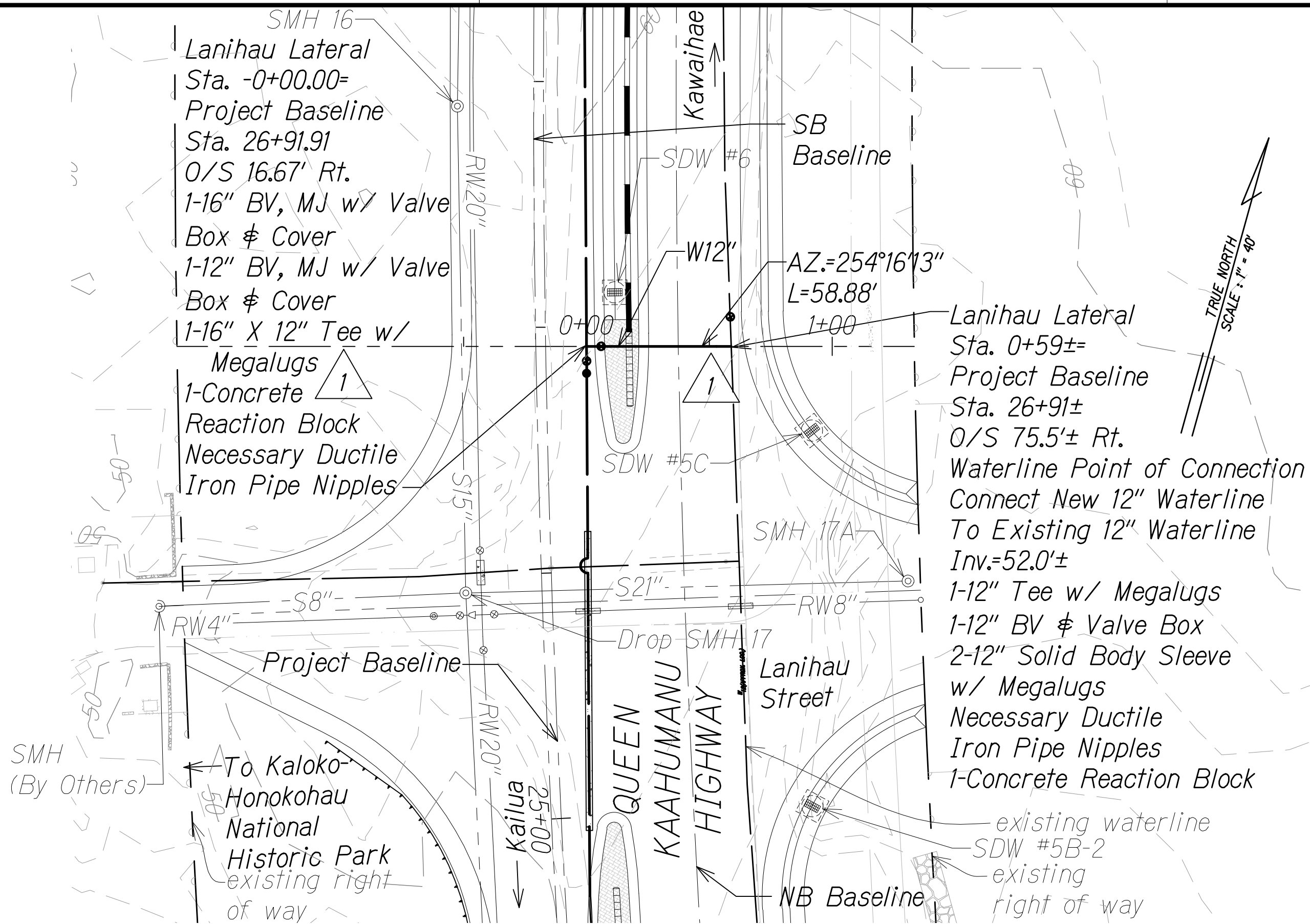
Austen W. Drake APRIL 30, 2018

SIGNATURE EXPIRATION DATE OF THE LICENSE

4/12/17	3	Relocated Harbor WM, BFP & ICV
1/22/16	1	Revised utility alignment & profile due to SB & redesign; Added cleanout note & megalugs
DATE	REVISION	

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

W:_CIVIL_3D_PROJECTS\2008_003_001_GBI_QUEEN K HWY WIDENING\01 CIVIL DRAWINGS\195 WATER PP-30.DWG 8/5/2016 1:58 PM



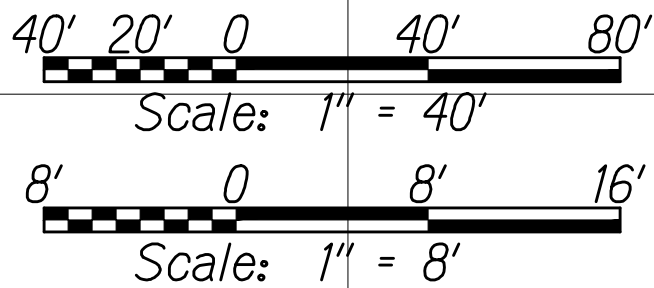
NOTE:
Provide 2" Cleanout units at all interconnect laterals

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-019-K(38)R	2016	C.O. 195	528 522

LEGEND:

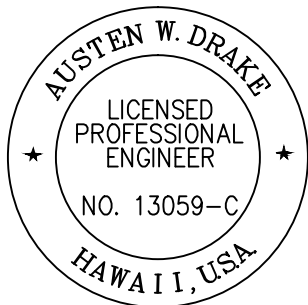
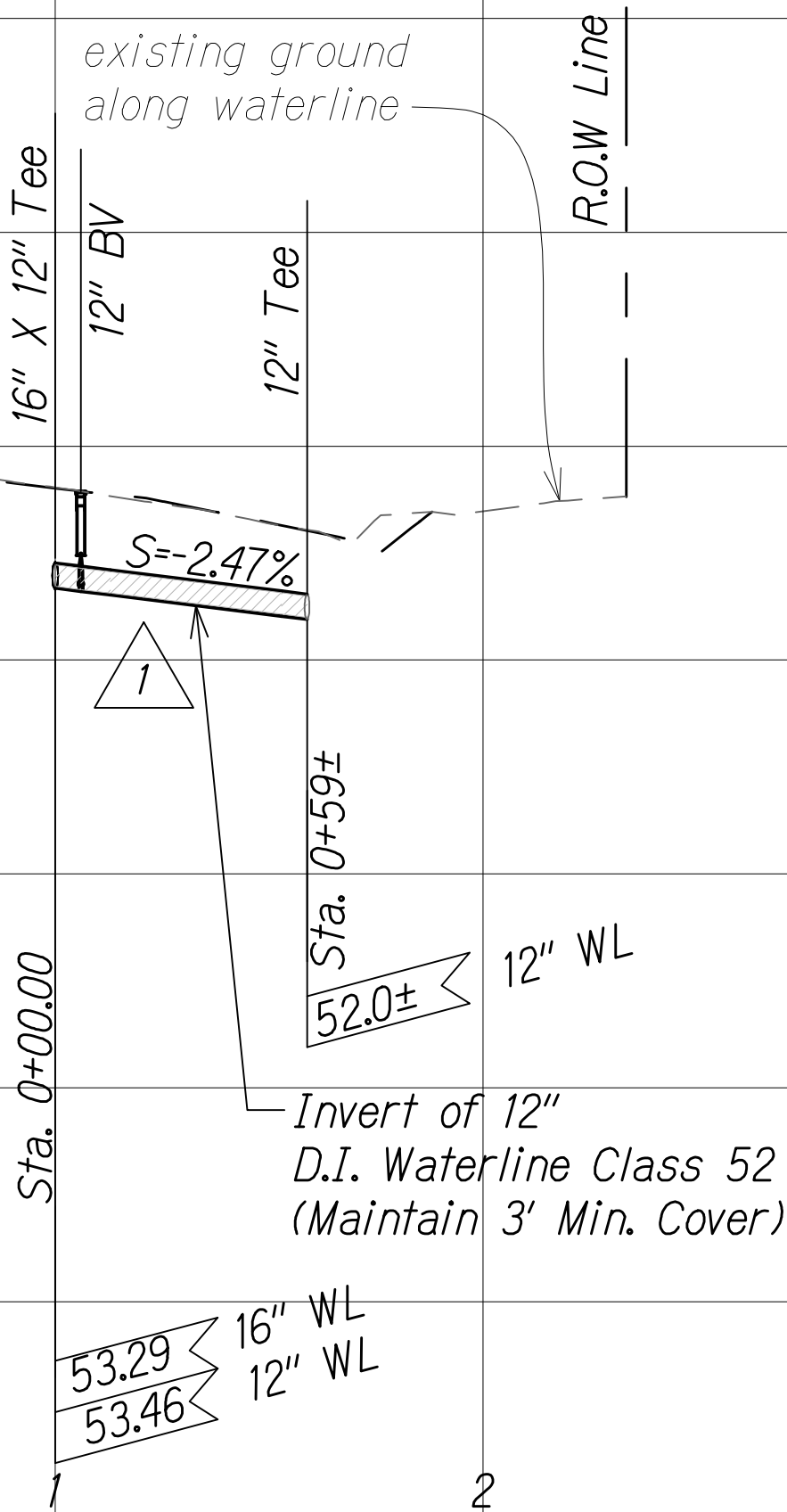
- Finish Grade along Waterline
- S10" Sewerline
- W16" Waterline
- RW20" Reclaimed Water
- Sewer Manhole
- 1" Air Release Valve (ARV)
- Butterfly Valve (BV)
- Shallow Drywell
- Sewer Lateral
- Water Lateral
- Reclaimed Water Lateral
- existing waterline (w)
- existing underground fiber optic
- existing overhead electric
- existing underground electric

GRAPHICAL SCALE:



WATERLINE PROFILE

Scale: Horiz. 1" = 40'
Vert. 1" = 8'



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

1/22/16	Revised utility alignment & profile due to SB & redesign; Added cleanout note & megalugs; Removed proposed NPS lateral
DATE	REVISION

SHEET No. 30 OF 35 SHEETS

"AS-BUILT"

8/5/2016 1:58 PM

C.O. 195

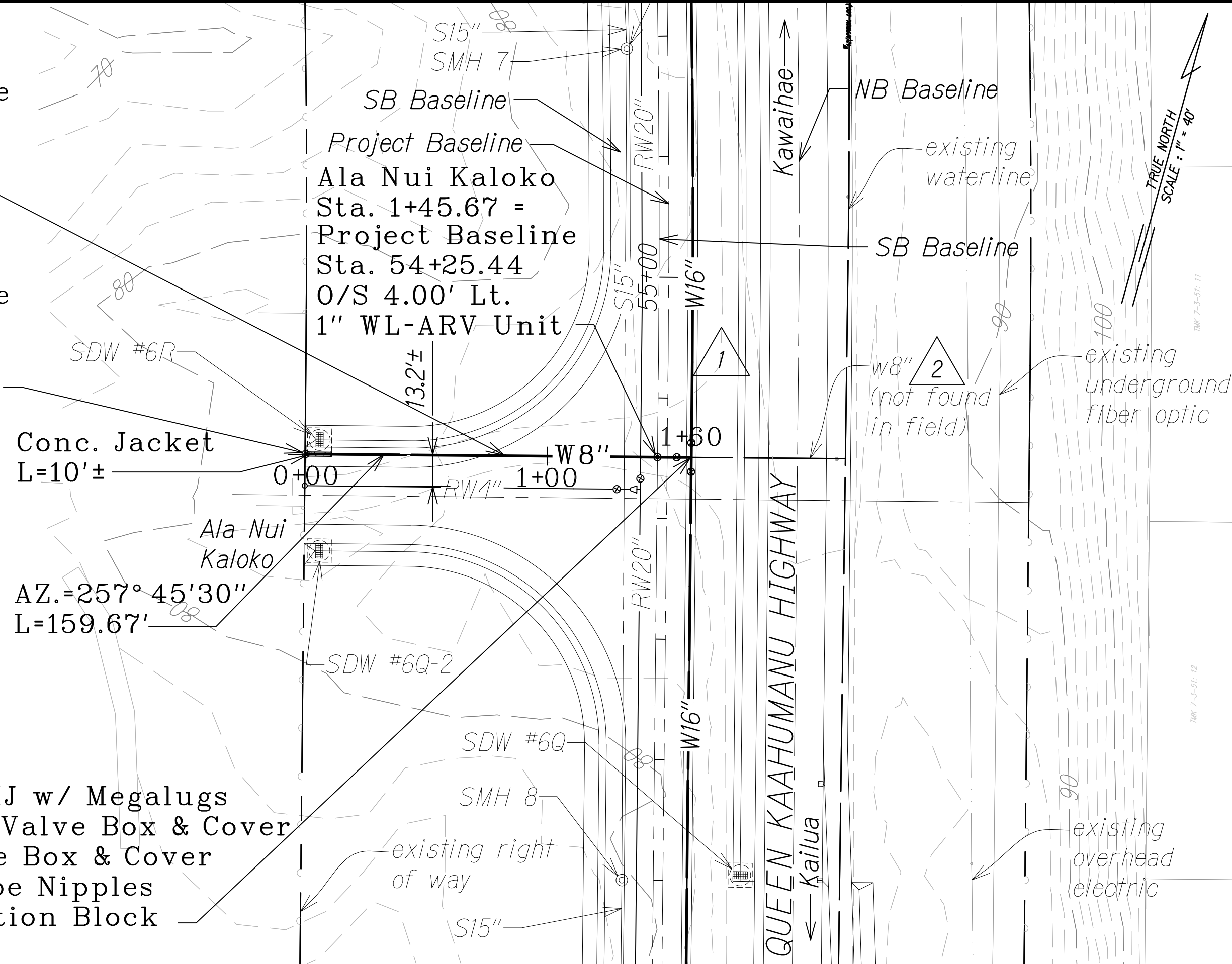
ORIGINAL PLAN	SURVEY PLOTTED BY _____		DATE _____
	DESIGNED BY _____		DATE _____
NOTE BOOK	DESIGNED BY _____		DATE _____
	QUANTITIES BY _____		DATE _____
No. _____		CHECKED BY _____	

W:_CIVIL_3D_PROJECTS\2008_003_001_GBI_QUEEN_K_Hwy_WIDENING\01_CIVIL DRAWINGS\196_WATER_PP-31.DWG 5/24/2019 7:28 PM

Ala Nui Kaloko
Sta. 0+82.60 =
Project Baseline
Sta. 54+25.37
O/S 67.07' Lt.
Vert. Deflect

Ala Nui Kaloko
Sta. 0+00 =
Project Baseline
Sta. 54+25.27
O/S 149.67' Lt.
1" WL-ARV Unit

Ala Nui Kaloko
Sta. 1+59.67=
Project Baseline
Sta. 54+25.46
O/S 10.00' Rt.
1-16" x 8" Tee, MJ w/ Megalugs
2-16" BV, MJ w/ Valve Box & Cover
1-8" GV w/ Valve Box & Cover
Necessary DI Pipe Nipples
1-Concrete Reaction Block



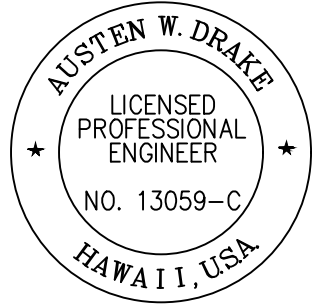
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-019-1(38)R	2016	C.O. 196	528

LEGEND:

- Finish Grade along Waterline
- S10" Sewerline
- W16" Waterline
- RW20" Reclaimed Water
- Sewer Manhole
- 1" Air Release Valve (ARV)
- Butterfly Valve (BV)
- Shallow Drywell
- Water Lateral
- Reclaimed Water Lateral
- existing waterline (w)
- existing underground fiber optic
- existing overhead electric
- existing underground electric

LEGEND FOR AS-BUILT POSTINGS

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

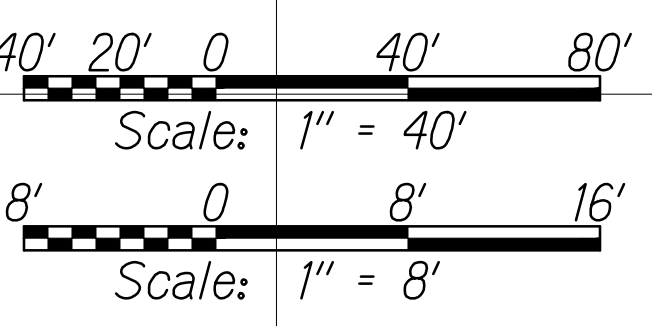


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Austen W. Drake APRIL 30, 2018
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OF THE LICENSE

WATERLINE PROFILE

Scale: Horiz. 1" = 40'
Vert. 1" = 8'

GRAPHICAL SCALE:



8/1/16	2	Sheet Deleted
1/22/16	1	Revised utility alignment & profile due to SB & redesign; Added megalugs and ARV per DWS comment
DATE	REVISION	

SHEET No. 31 OF 35 SHEETS

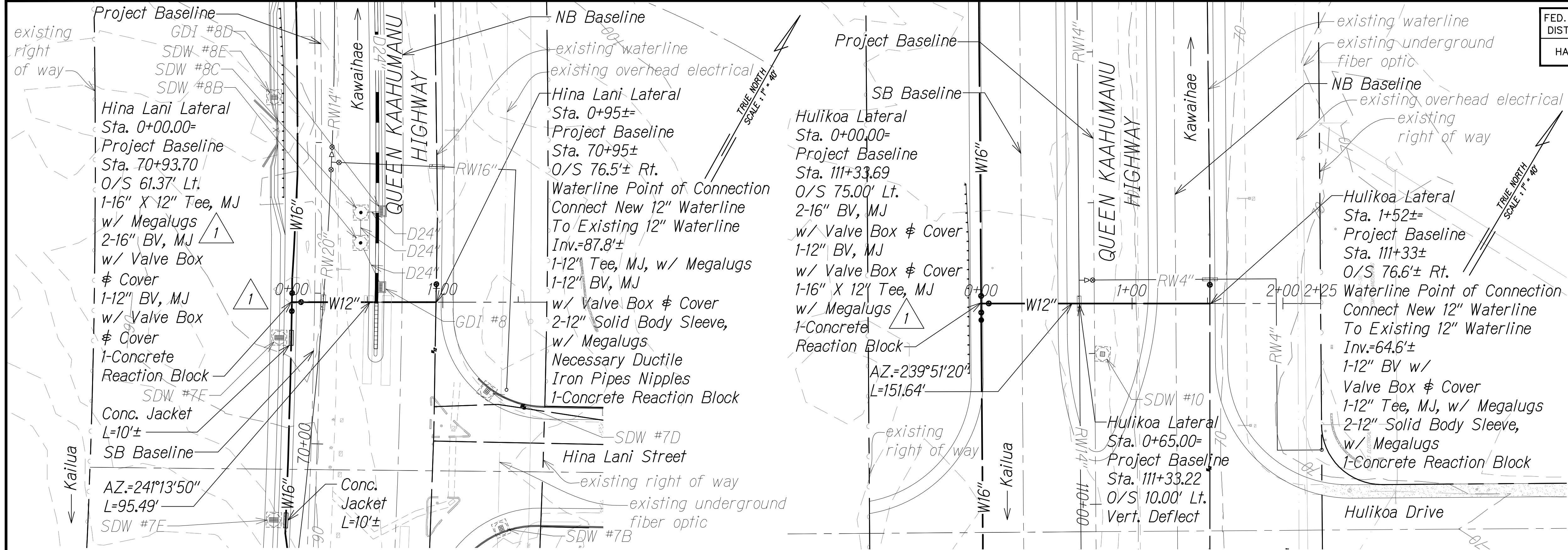
"AS-BUILT"

C.O. 196

5/27/2019 2:30 PM

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

W:_CIVIL 3D PROJECTS\2008_003_001 GBI QUEEN K HWY WIDENING\01 CIVIL DRAWINGS\197 WATER PP-32.DWG 8/5/2016 2:04 PM



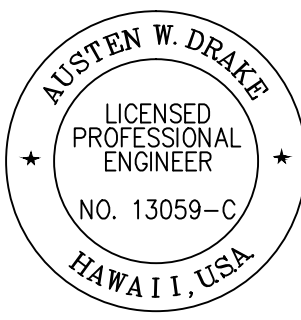
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-019-1(38)R	2016	C.O. 197	528 322

LEGEND:

- Finish Grade along Waterline
- Waterline
- Reclaimed Water
- Sewer Manhole
- 1" Air Release Valve (ARV)
- Butterfly Valve (BV)
- Grated Drop Inlet
- Shallow Drywell
- Water Lateral
- Reclaimed Water Lateral
- existing waterline (w)
- existing underground fiber optic
- existing overhead electric

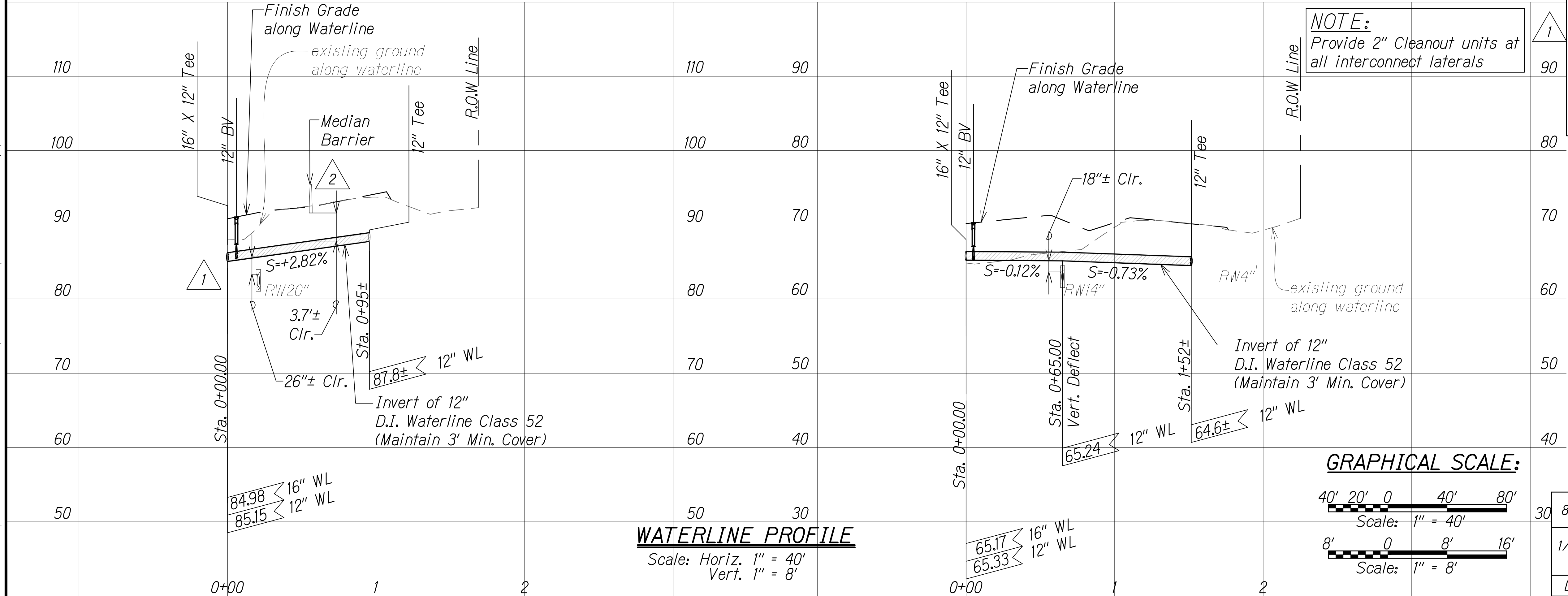
LEGEND FOR AS-BUILT POSTINGS

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

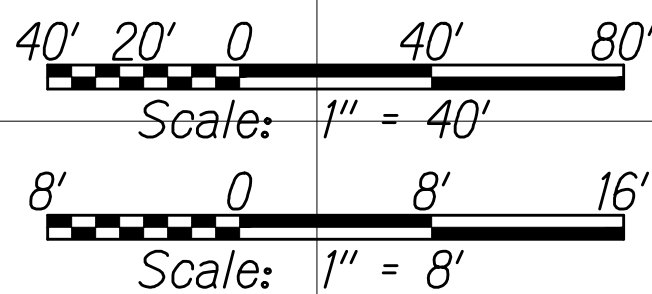


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Austen W. Drake APRIL 30, 2018
SIGNATURE EXPIRATION DATE OF THE LICENSE



GRAPHICAL SCALE:

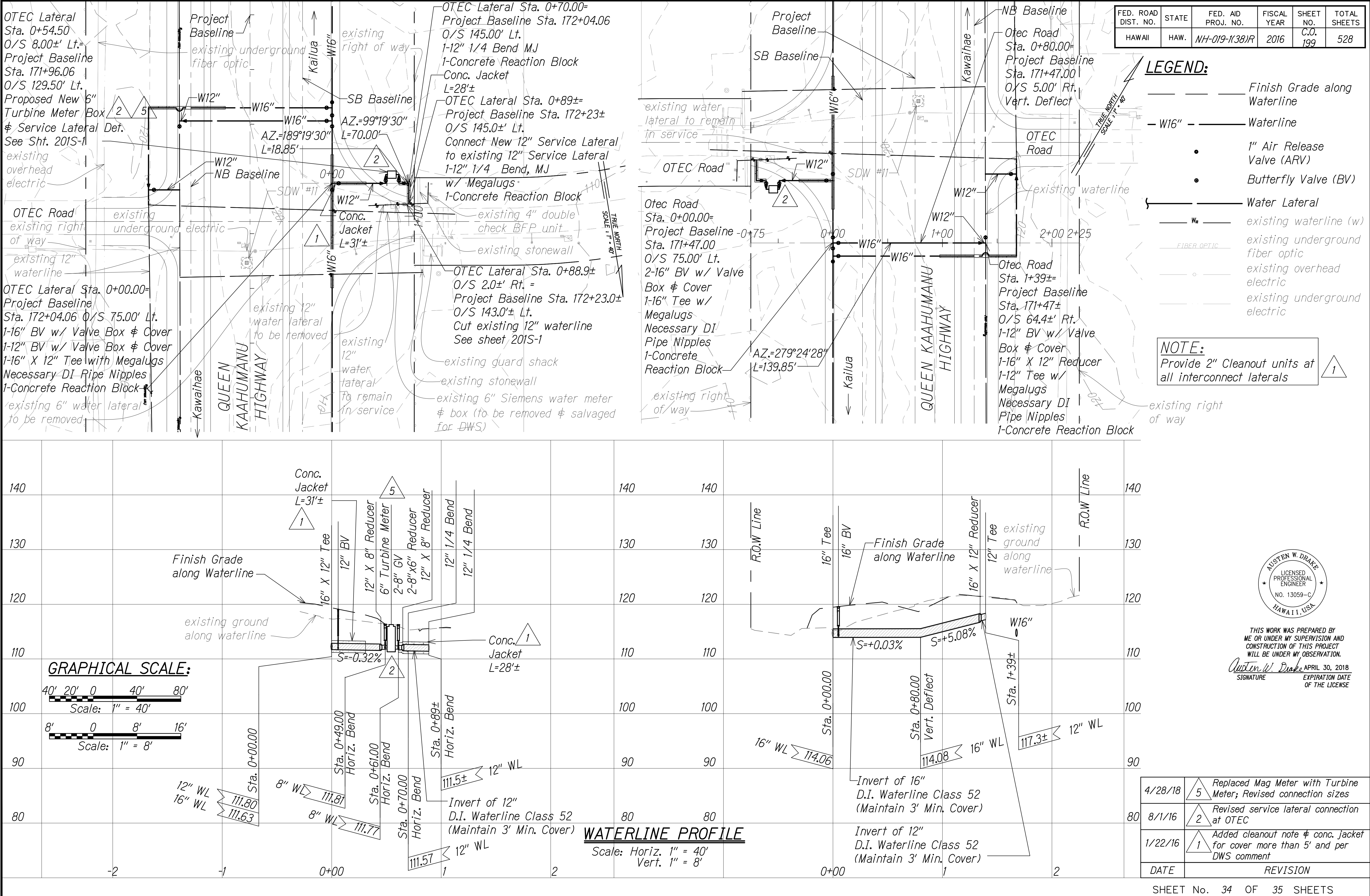


8/1/16	2	Revised median barrier type
1/22/16	1	Revised utility alignment & profile due to SB & redesign; Added cleanout note & megalugs
DATE		REVISION

SHEET No. 32 OF 35 SHEETS

"AS-BUILT"

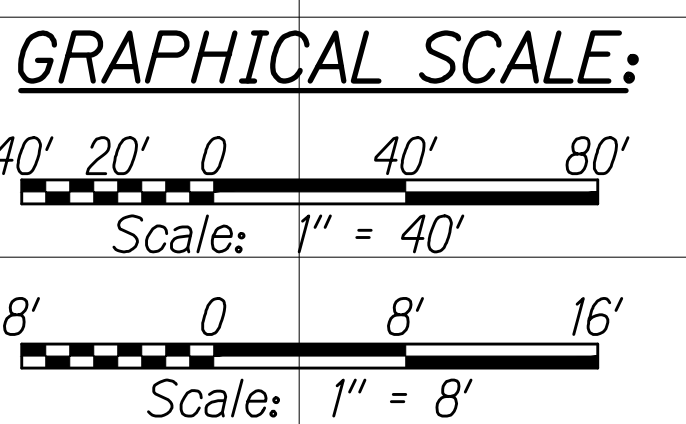
C.O. 197



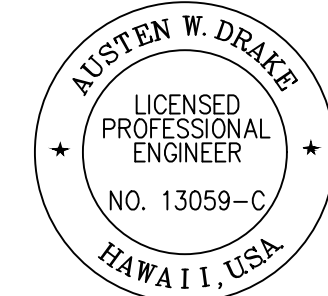
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-019-1(38)R	2016	C.O. 199	528

- LEGEND:**
- Finish Grade along Waterline
 - Waterline
 - 1" Air Release Valve (ARV)
 - Butterfly Valve (BV)
 - Water Lateral
 - existing waterline (w)
 - existing underground fiber optic
 - existing overhead electric
 - existing underground electric

NOTE:
Provide 2" Cleanout units at all interconnect laterals



WATERLINE PROFILE
Scale: Horiz. 1" = 40'
Vert. 1" = 8'



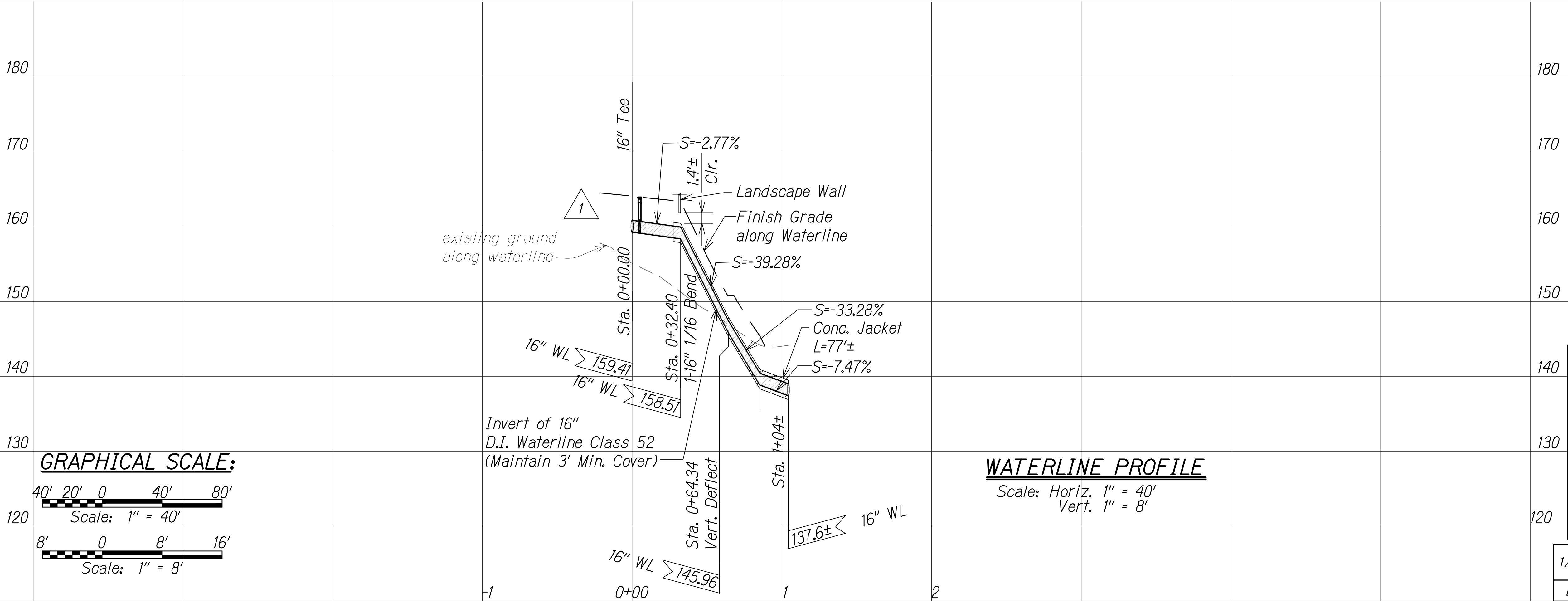
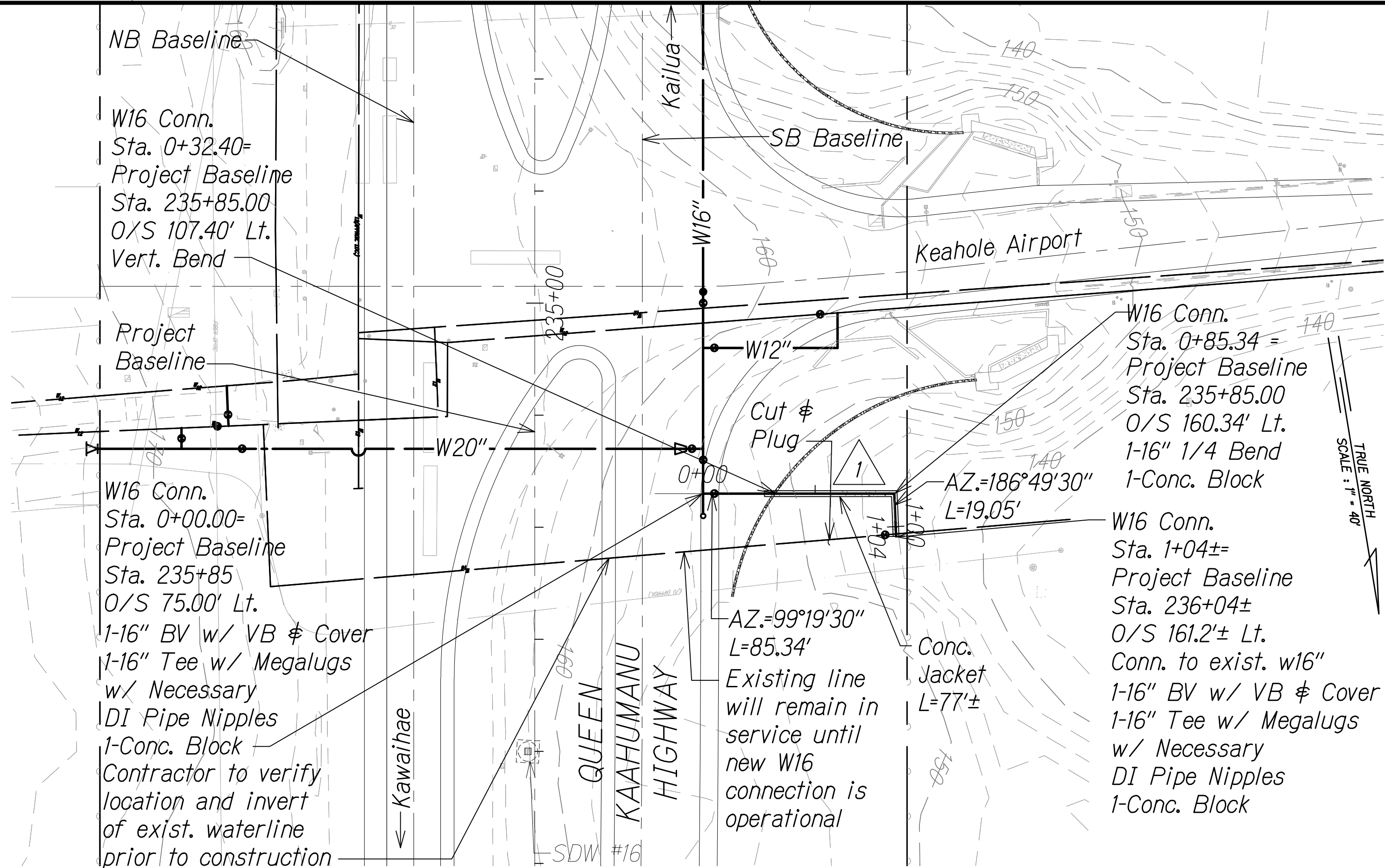
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Austen W. Drake APRIL 30, 2018
SIGNATURE EXPIRATION DATE OF THE LICENSE

4/28/18	5	Replaced Mag Meter with Turbine Meter; Revised connection sizes
8/1/16	2	Revised service lateral connection at OTEC
1/22/16	1	Added cleanout note & conc. Jacket for cover more than 5' and per DWS comment
DATE	REVISION	

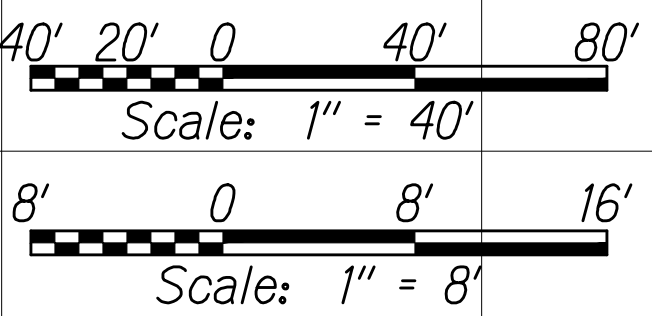
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-019-1(38)R	2016	200S-1	528 522

LEGEND:

- Finish Grade along Waterline
- Waterline
- 1" Air Release Valve (ARV)
- Butterfly Valve (BV)
- Shallow Drywell
- Water Lateral
- existing waterline (w)
- existing underground fiber optic
- existing overhead electric
- existing underground electric

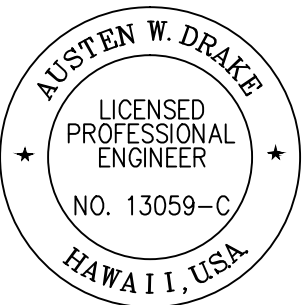


GRAPHICAL SCALE:



WATERLINE PROFILE

Scale: Horiz. 1" = 40'
Vert. 1" = 8'



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Austen W. Drake
SIGNATURE
APRIL 30, 2018
EXPIRATION DATE OF THE LICENSE

LEGEND FOR AS-BUILT POSTINGS

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

1/22/16	Added sheet; New W16 conn.
DATE	REVISION

SHEET No. 35A OF 35 SHEETS

"AS-BUILT"

C.O. 200S-1