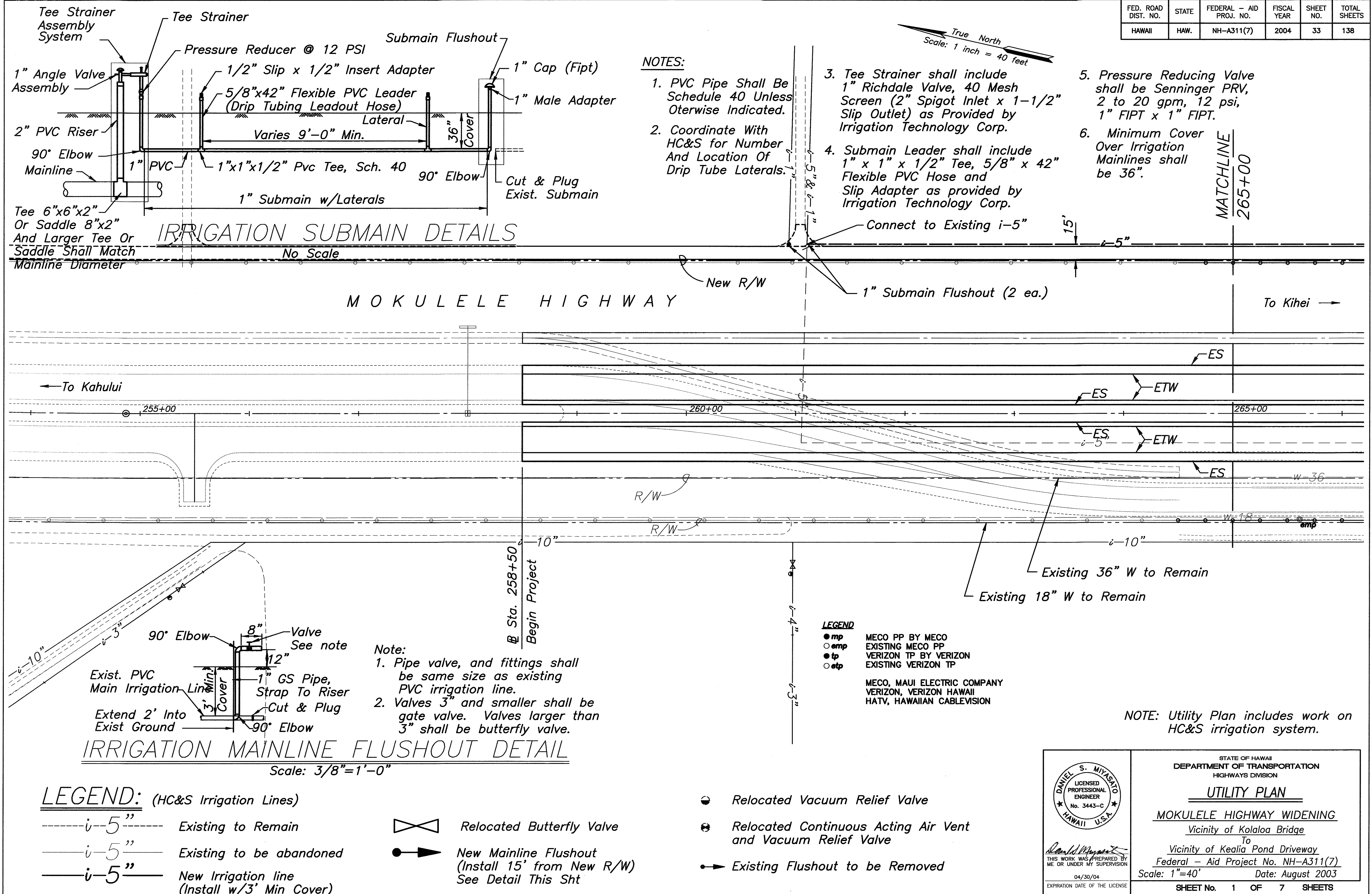
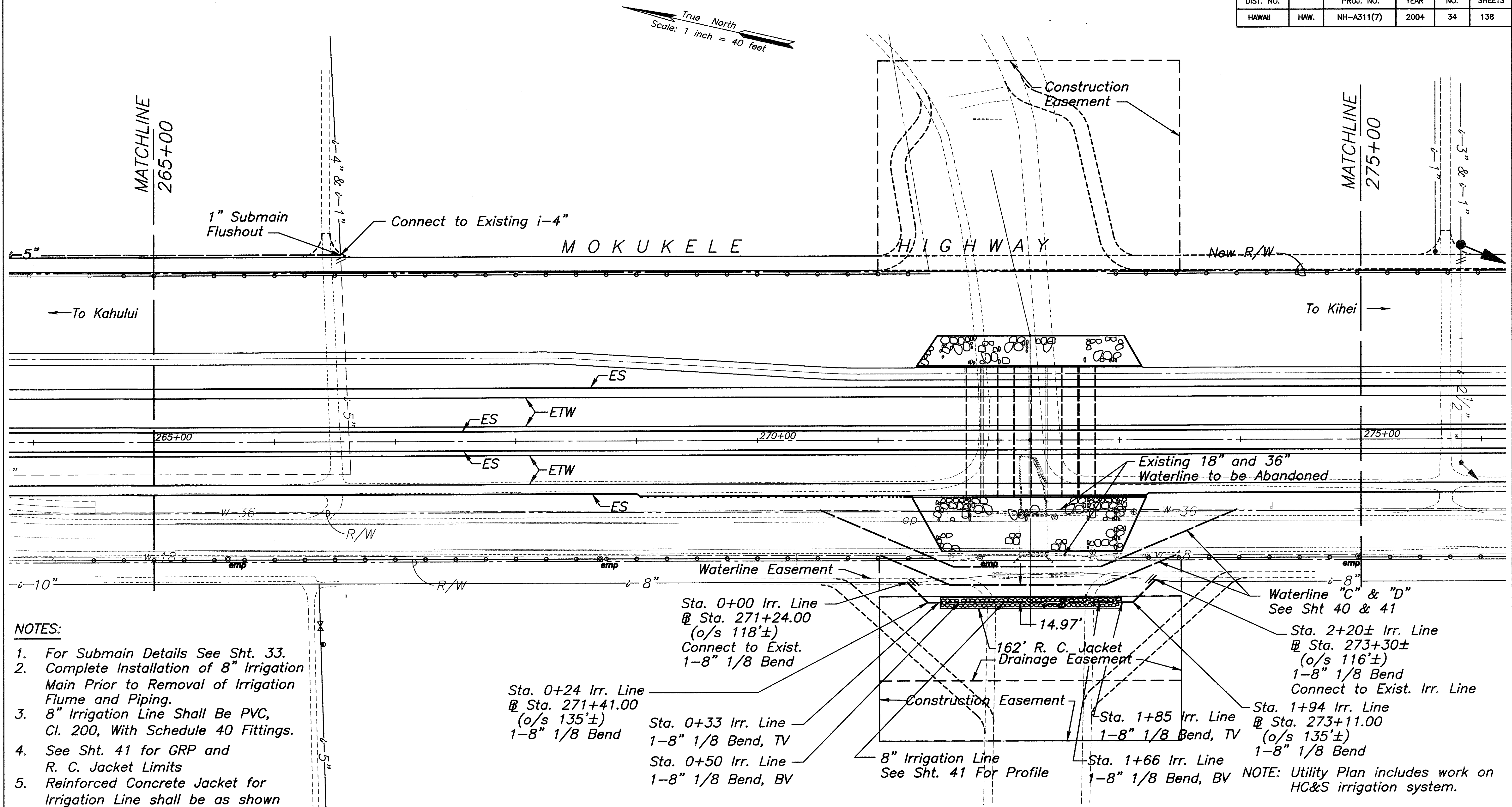


FED. ROAD DIST. NO.	STATE	FEDERAL - AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-A311(7)	2004	33	138



FED. ROAD DIST. NO.	STATE	FEDERAL - AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-A311(7)	2004	34	138



NOTES:

- For Submain Details See Sht. 33.
- Complete Installation of 8" Irrigation Main Prior to Removal of Irrigation Flume and Piping.
- 8" Irrigation Line Shall Be PVC, Cl. 200, With Schedule 40 Fittings.
- See Sht. 41 for GRP and R. C. Jacket Limits
- Reinforced Concrete Jacket for Irrigation Line shall be as shown for the Water System

LEGEND: (HC&S Irrigation Lines)

- i-5"--- Existing to Remain
- i-5"--- Existing to be abandoned
- i-5"--- New Irrigation line (Install w/3' Min Cover)

- Relocated Butterfly Valve
- New Mainline Flushout (Install 15' from New R/W) See Detail Sht 33

- Relocated Vacuum Relief Valve
- Relocated Continuous Acting Air Vent and Vacuum Relief Valve
- Existing Flushout to be Removed

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

UTILITY PLAN

MOKULELE HIGHWAY WIDENING

Vicinity of Kealia Pond Driveway

To
Vicinity of Kealia Pond Driveway

Federal - Aid Project No. NH-A311(7)

Scale: 1"=40' Date: August 2003

SHEET No. 2 OF 7 SHEETS

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

UTILITY PLAN

MOKULELE HIGHWAY WIDENING

Vicinity of Kealia Pond Driveway

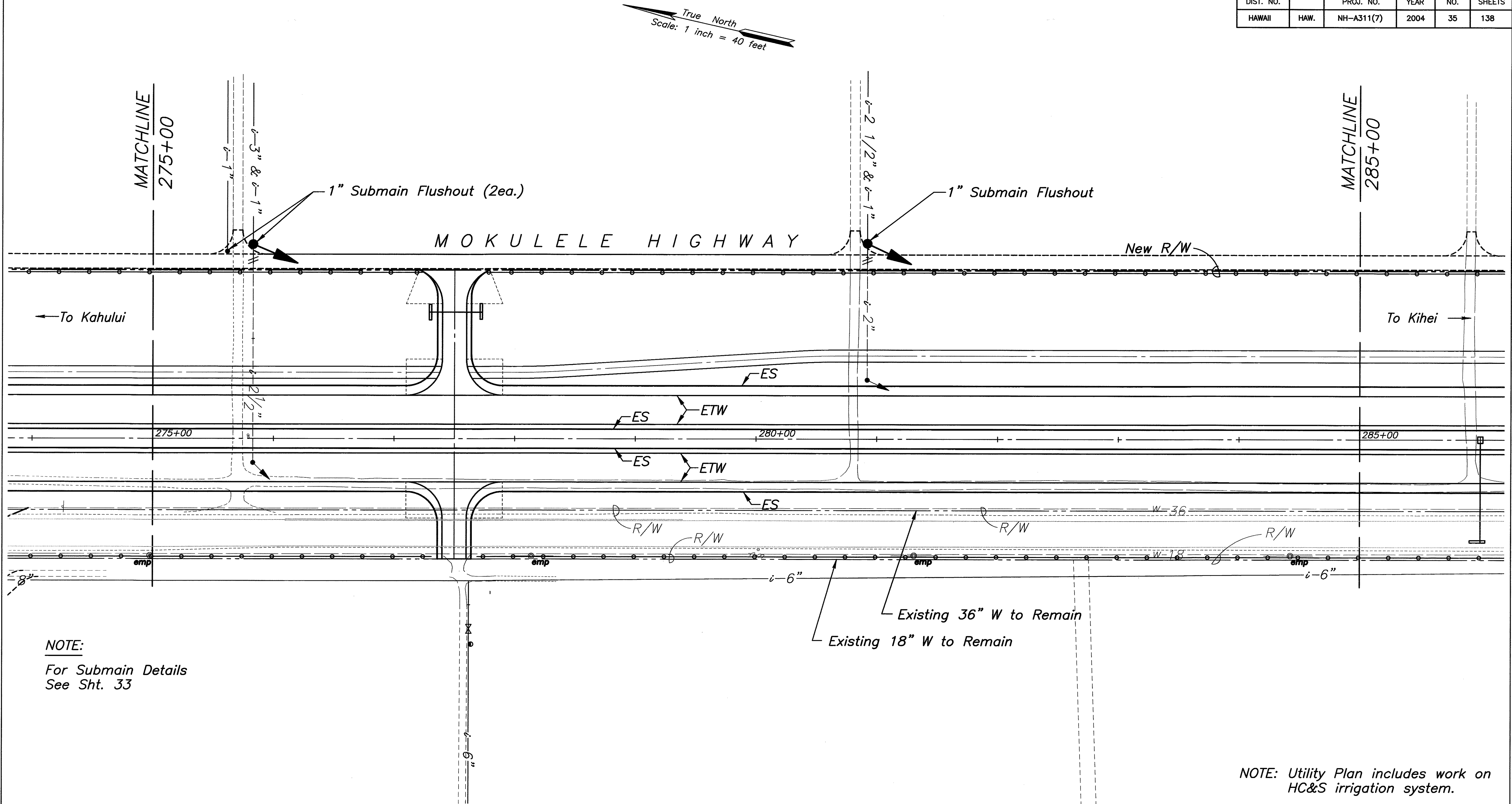
To
Vicinity of Kealia Pond Driveway

Federal - Aid Project No. NH-A311(7)

Scale: 1"=40' Date: August 2003

SHEET No. 2 OF 7 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL - AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-A311(7)	2004	35	138



LEGEND: (HC&S Irrigation Lines)

- Existing to Remain
- Existing to be abandoned
- New Irrigation line
(Install w/3' Min Cover)

- Relocated Butterfly Valve
- New Mainline Flushout
(Install 15' from New R/W)
See Detail Sht 33

- Relocated Vacuum Relief Valve
- Relocated Continuous Acting Air Vent
and Vacuum Relief Valve
- Existing Flushout to be Removed

NOTE: Utility Plan includes work on
HC&S irrigation system.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

UTILITY PLAN

MOKULELE HIGHWAY WIDENING
Vicinity of Kolaloa Bridge
To
Vicinity of Kealia Pond Driveway
Federal - Aid Project No. NH-A311(7)
Scale: 1"=40' Date: August 2003

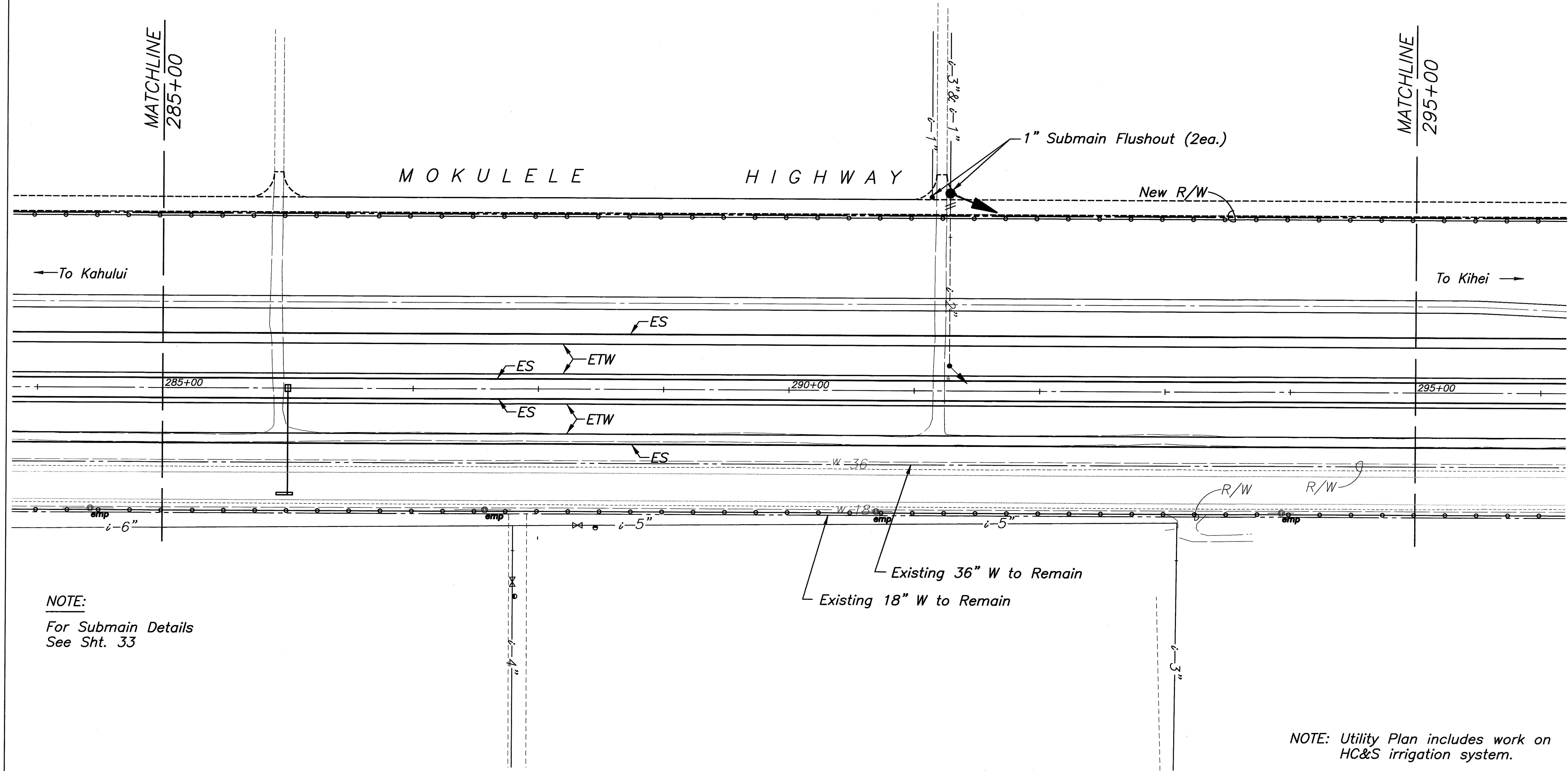
SHEET No. 3 OF 7 SHEETS

DANIEL S. MIYASATO
LICENSED PROFESSIONAL ENGINEER
No. 3443-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY
ME OR UNDER MY SUPERVISION
04/30/04
EXPIRATION DATE OF THE LICENSE

FED. ROAD DIST. NO.	STATE	FEDERAL - AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-A311(7)	2004	36	138

True North
Scale: 1 inch = 40 feet



NOTE:
For Submain Details
See Sht. 33

Existing 36" W to Remain
Existing 18" W to Remain

NOTE: Utility Plan includes work on
HC&S irrigation system.

LEGEND: (HC&S Irrigation Lines)

-----i-5"----- Existing to Remain
-----i-5"----- Existing to be abandoned
-----i-5"----- New Irrigation line
(Install w/3' Min Cover)

Relocated Butterfly Valve
New Mainline Flushout
(Install 15' from New R/W)
See Detail Sht 33

Relocated Vacuum Relief Valve
Relocated Continuous Acting Air Vent
and Vacuum Relief Valve
Existing Flushout to be Removed

DANIEL S. MIYASATO
LICENSED PROFESSIONAL ENGINEER
No. 3443-C
HAWAII U.S.A.

THIS WORK WAS PREPARED BY
ME OR UNDER MY SUPERVISION
04/30/04
EXPIRATION DATE OF THE LICENSE

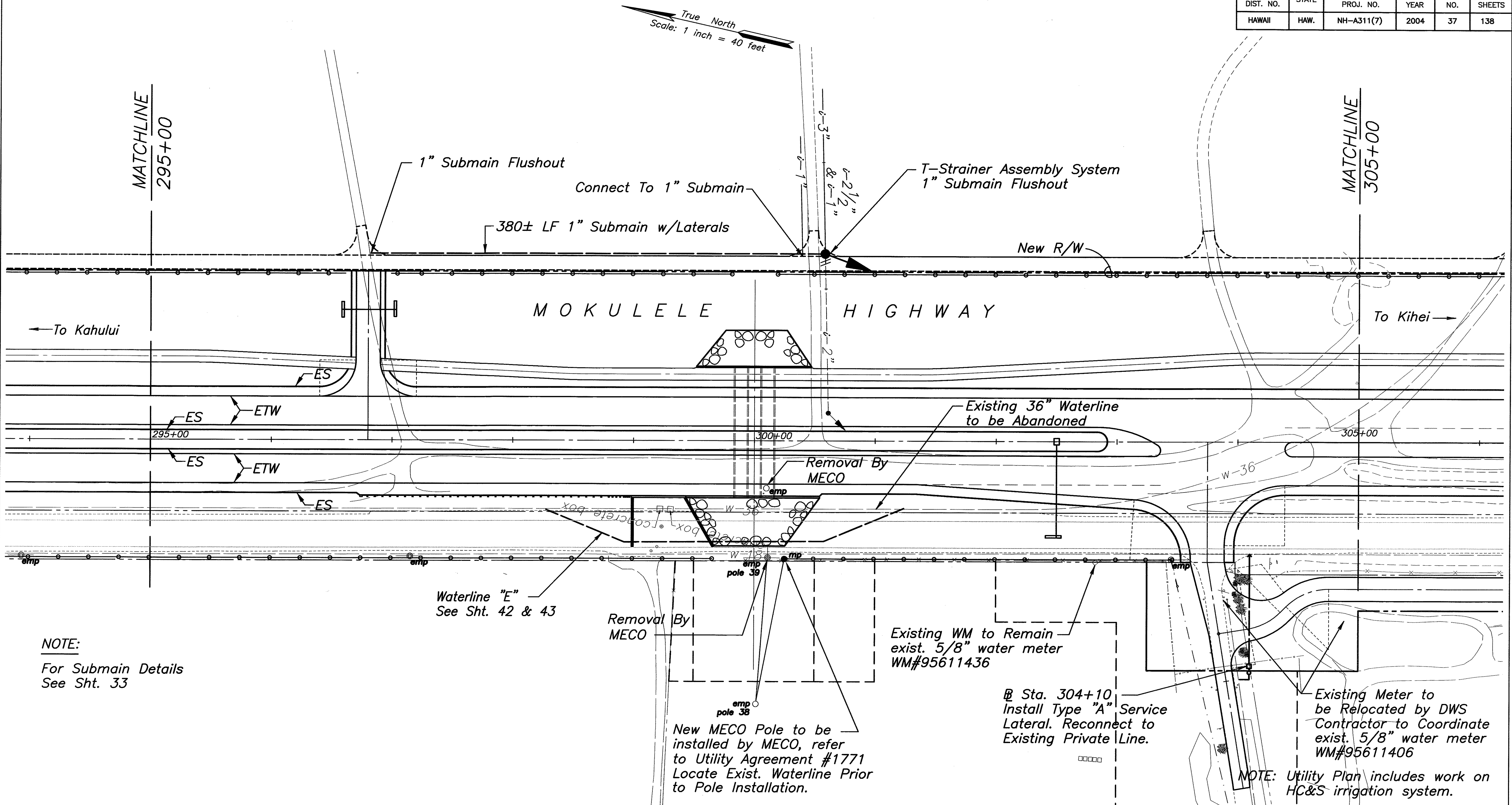
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

UTILITY PLAN

MOKULELE HIGHWAY WIDENING
Vicinity of Kolaloa Bridge
To
Vicinity of Kealia Pond Driveway
Federal - Aid Project No. NH-A311(7)
Scale: 1"=40' Date: August 2003

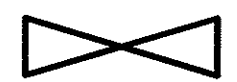
SHEET No. 4 OF 7 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL - AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-A311(7)	2004	37	138



LEGEND: (HC&S Irrigation Lines)

- i-5"--- Existing to Remain
- i-5"--- Existing to be abandoned
- i-5"--- New Irrigation line (Install w/3' Min Cover)

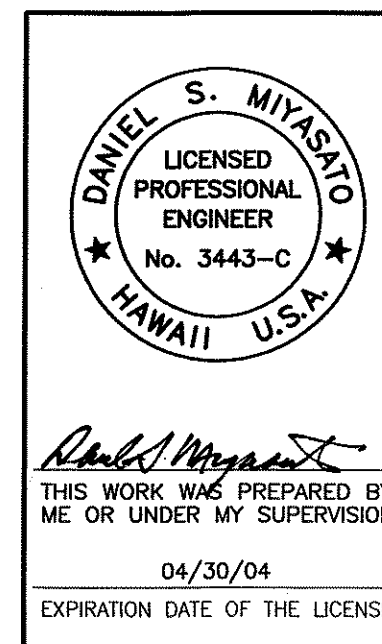


Relocated Butterfly Valve



New Mainline Flushout (Install 15' from New R/W) See Detail Sht 33

- Relocated Vacuum Relief Valve
- Relocated Continuous Acting Air Vent and Vacuum Relief Valve
- Existing Flushout to be Removed



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

UTILITY PLAN

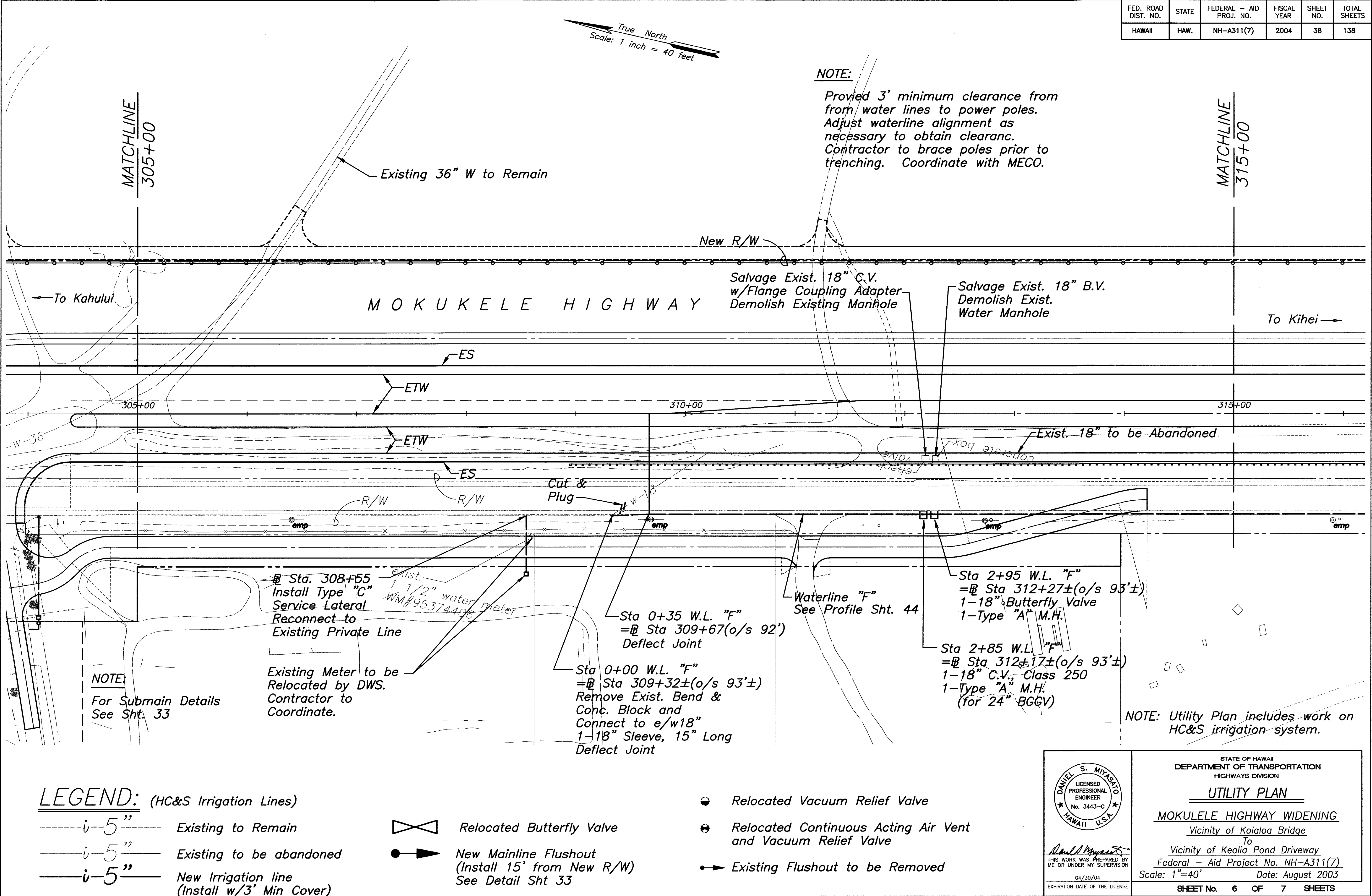
MOKULELE HIGHWAY WIDENING
Vicinity of Kaloa Bridge

To
Vicinity of Kealia Pond Driveway
Federal - Aid Project No. NH-A311(7)

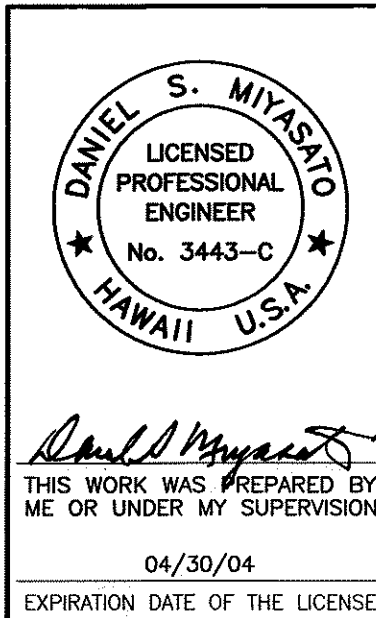
Scale: 1"=40' Date: August 2003

SHEET No. 5 OF 7 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL - AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-A311(7)	2004	38	138

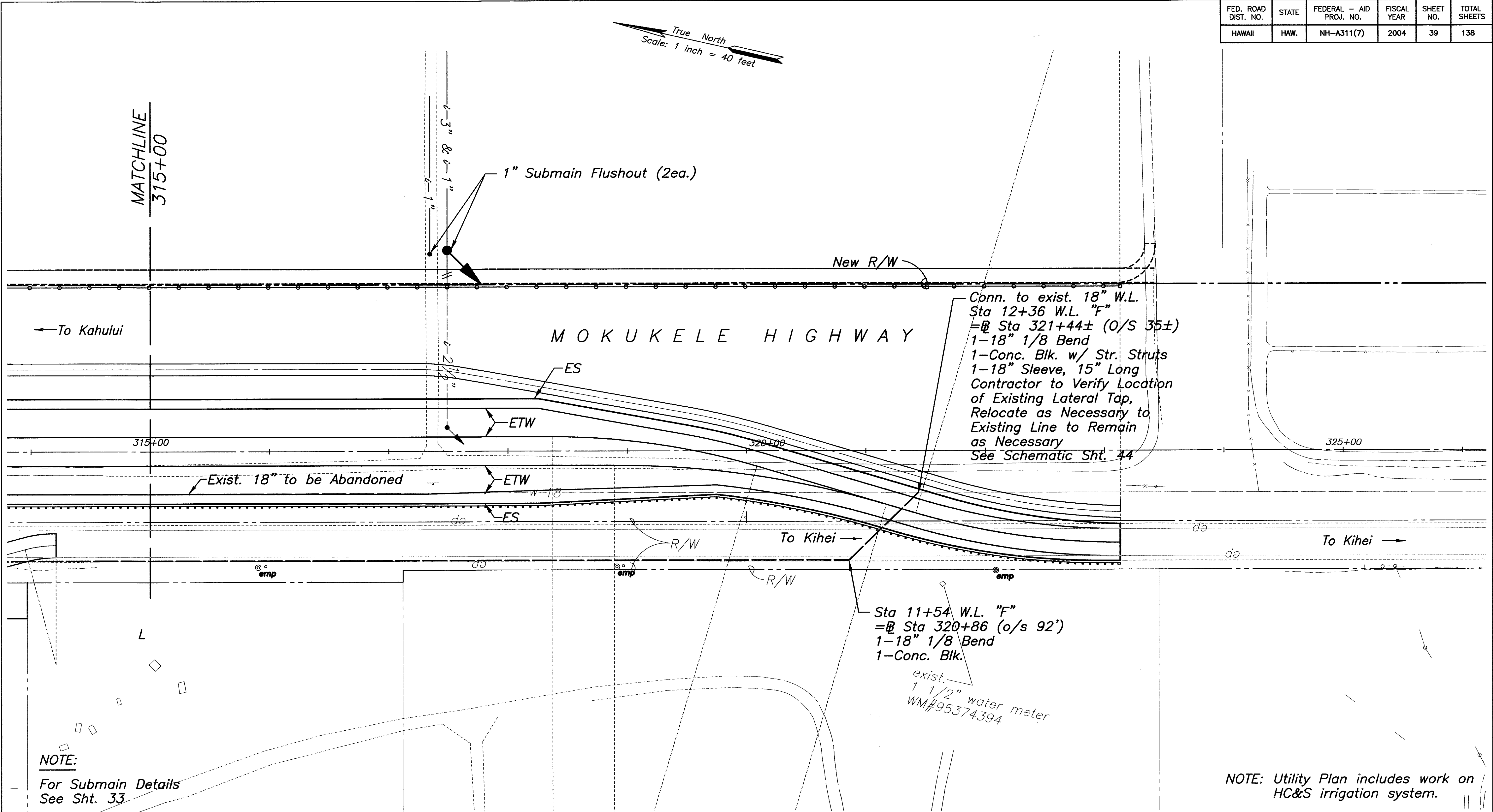


ORIGINAL PLAN	DATE
DESIGNED BY	
TRACED BY	
NOTE BOOK	
QUANTITIES BY	
CHECKED BY	
No.	



STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION
UTILITY PLAN
MOKULELE HIGHWAY WIDENING
Vicinity of Kolaloa Bridge
To Vicinity of Kealia Pond Driveway
Federal - Aid Project No. NH-A311(7)
Scale: 1"=40' Date: August 2003
SHEET No. 6 OF 7 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL - AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-A311(7)	2004	39	138



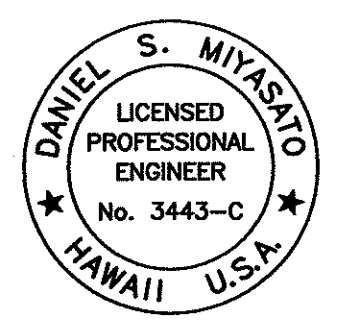
LEGEND: (HC&S Irrigation Lines)

- i-5"----- Existing to Remain
- i-5"----- Existing to be abandoned
- i-5"----- New Irrigation line
(Install w/3' Min Cover)

- Relocated Butterfly Valve
- New Mainline Flushout
(Install 15' from New R/W)
See Detail Sht 33

- Relocated Vacuum Relief Valve
- Relocated Continuous Acting Air Vent
and Vacuum Relief Valve
- Existing Flushout to be Removed

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

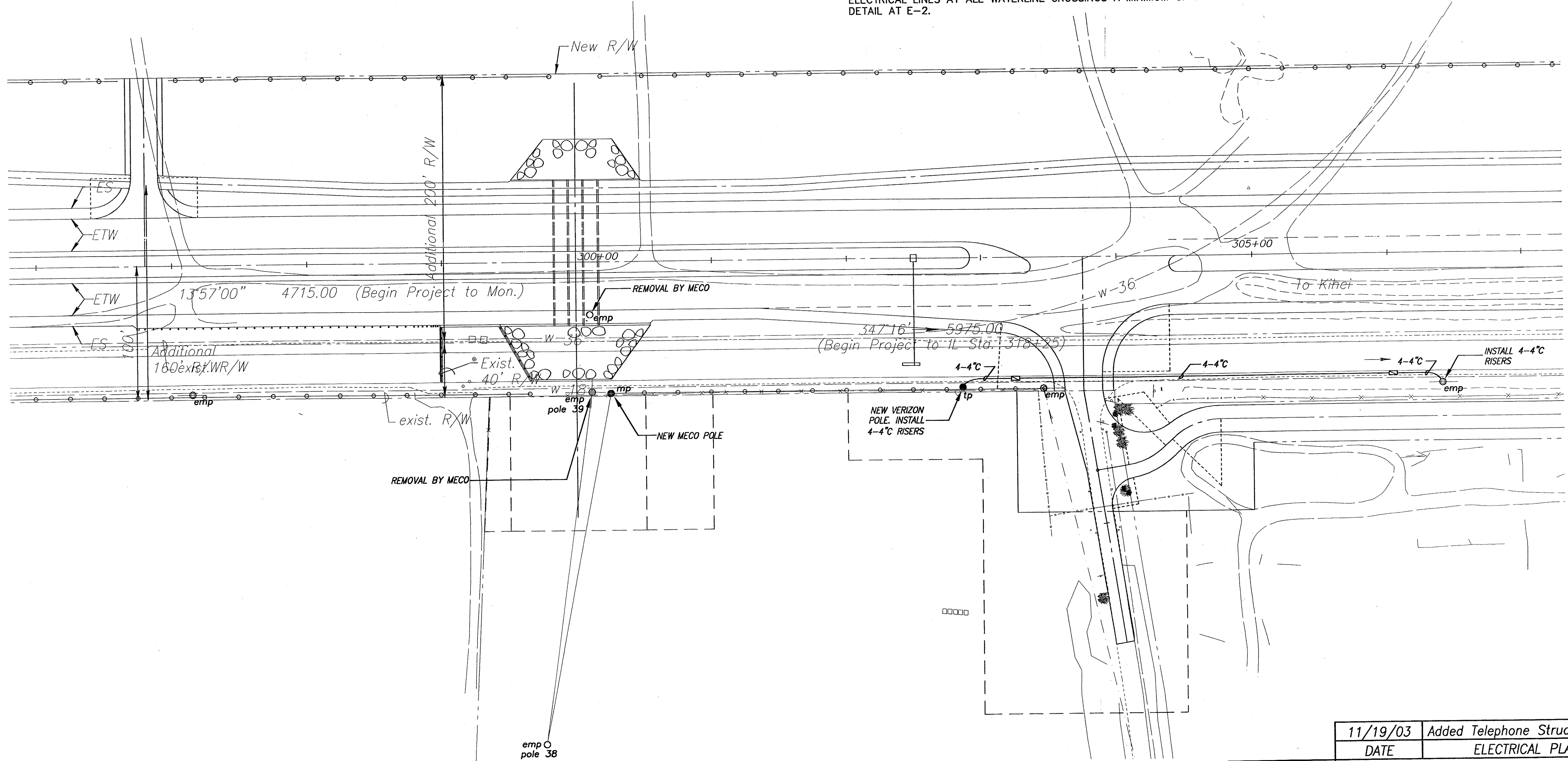
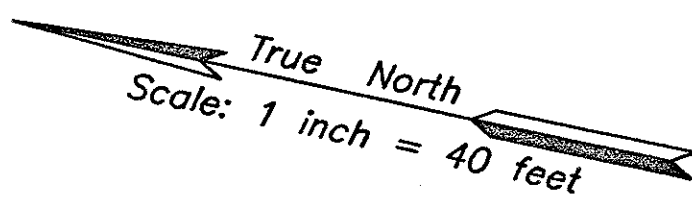


STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
UTILITY PLAN
 MOKULELE HIGHWAY WIDENING
 Vicinity of Kealia Pond Driveway
 Federal - Aid Project No. NH-A311(7)
 Scale: 1"=40' Date: August 2003
 SHEET No. 7 OF 7 SHEETS

FED. ROAD DIST. NO.	STATE	FEDERAL - AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-A311(7)	2004	ADD.39 S-1	138

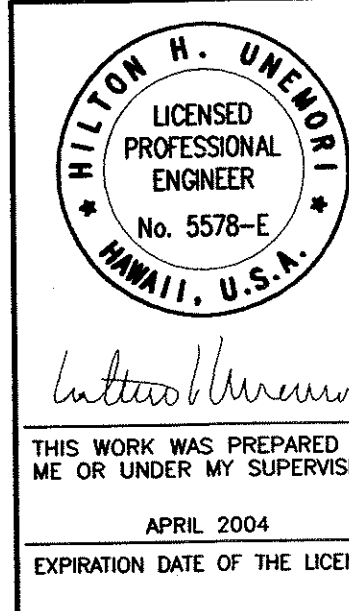
CONSTRUCTION NOTES:
CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS BEFORE COMMENCING WORK, INCLUDING, BUT NOT LIMITED TO STATE HIGHWAY PERMIT TO WORK ON STATE R.O.W. AND LAND USE AND CODES PERMIT TO WORK ON COUNTY R.O.W. CONTRACTOR SHALL COMPLY WITH ALL CONDITIONS OF THE PERMITS, INCLUDING PROVISIONS ON TRAFFIC CONTROL. TRAFFIC CONTROL PLANS AND CONSTRUCTION NOTES PROVIDED ELSEWHERE IN THESE DRAWINGS ARE APPLICABLE TO THIS WORK.

DEPARTMENT OF WATER SUPPLY NOTES:
CONTRACTOR SHALL CONTACT DWS AT PHONE 243-7340 ONE WEEK PRIOR TO COMMENCING WORK. CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY EXACT DEPTH AND LOCATION OF EXISTING WATERLINES IN THE PROJECT AREA PRIOR TO COMMENCING WORK AND SHALL MEET WITH DWS PERSONNEL IN THE FIELD TO HELP LOCATE EXISTING WATERLINES IN THE PROJECT AS NECESSARY. MAINTAIN A MINIMUM OF THREE FEET CLEAR HORIZONTAL SEPARATION BETWEEN WATERLINES AND ELECTRICAL UTILITIES. MAINTAIN A MINIMUM OF SIX INCHES CLEAR VERTICAL SEPARATION BETWEEN WATERLINES AND ELECTRICAL UTILITIES AT CROSSINGS. CONCRETE JACKET ELECTRICAL LINES AT ALL WATERLINE CROSSINGS A MINIMUM OF FIVE FEET EACH WAY. SEE DETAIL AT E-2.



LEGEND
● mp MECO PP BY MECO
○ emp EXISTING MECO PP
● tp VERIZON TP BY VERIZON
☒ VERIZON 4'x6'HH, HTCO DWG. NO. 34029

MECO, MAUI ELECTRIC COMPANY
VERIZON, VERIZON HAWAII

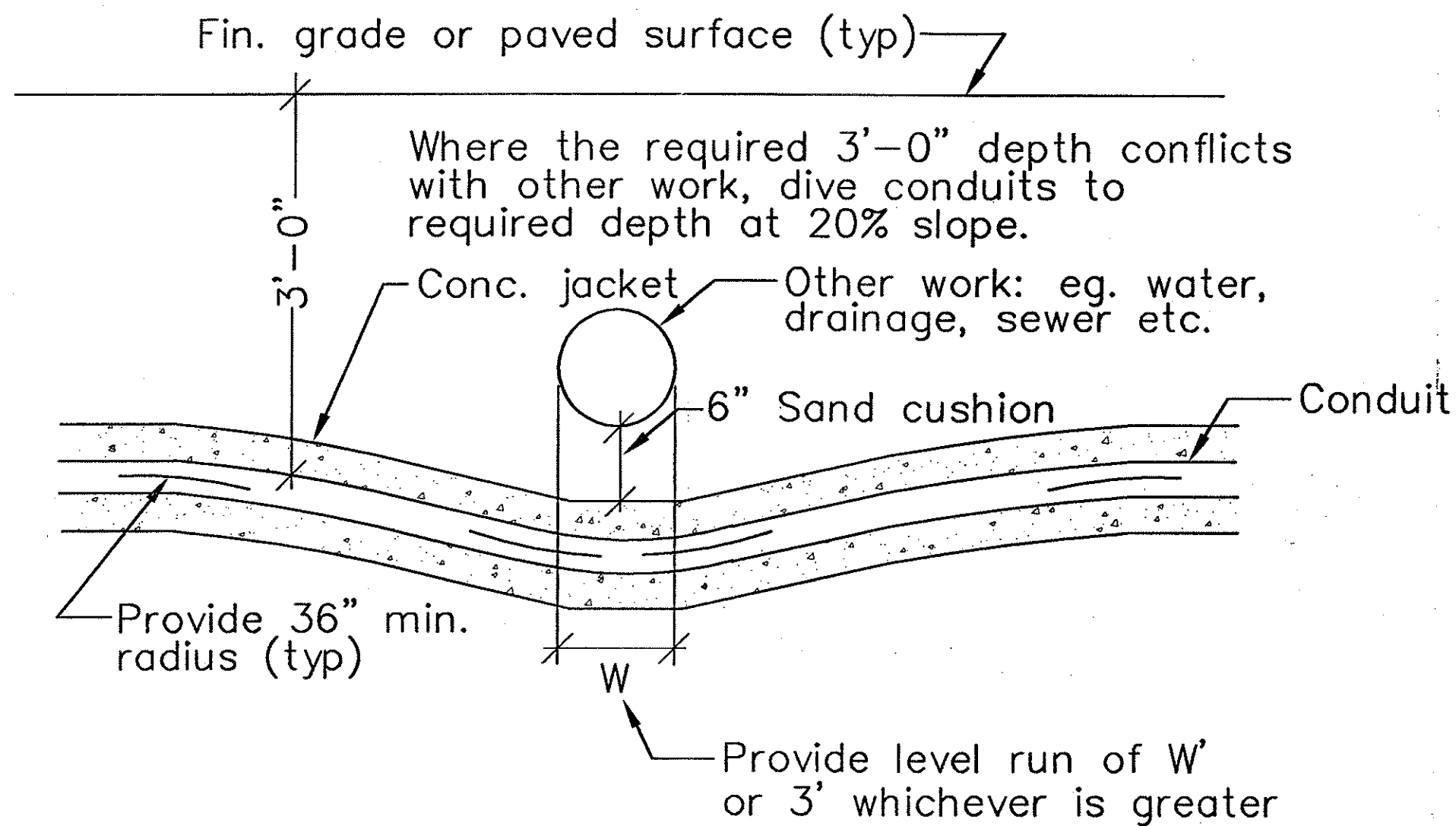


11/19/03	Added Telephone Structures
DATE	ELECTRICAL PLAN
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
ELECTRICAL PLAN	
MOKULELE HIGHWAY WIDENING	
Vicinity of Kolaloa Bridge	
To	
Vicinity of Kealia Pond Driveway	
Federal - Aid Project No. NH-A311(7)	
Scale: 1"=40'	Date: August 2003
SHEET No. E-1 OF 2 SHEETS	

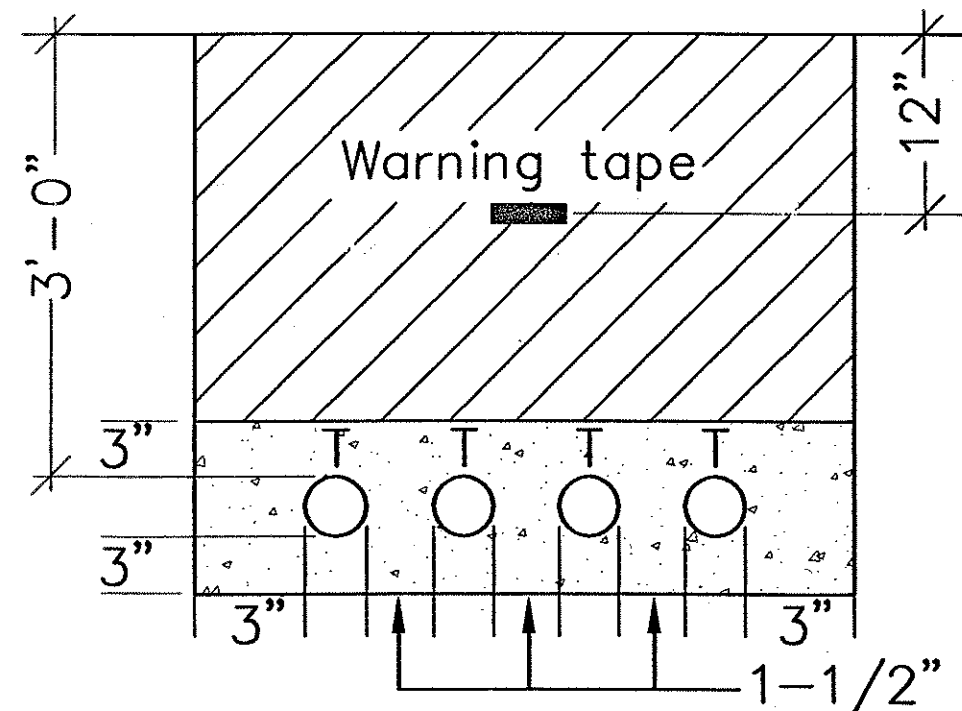
ADD. 39 S-1

SURVEY PLOTTED BY	DATE
DRAWN BY	
TRACED BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
No.	

FED. ROAD DIST. NO.	STATE	FEDERAL - AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-A311(7)	2004	ADD.39 S-2	138



TYPICAL DUCTS CROSSING UNDER OTHER WORK
NTS

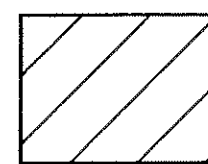


Note: See plan for number and size of conduits

TYPICAL ELECTRICAL AND TELEPHONE CONDUIT TRENCH
NTS

Duct Notes:

1. All conduits shall be PVC Schedule 40.
2. All conduits to contain a mule tape line Wesco Cat. #0725-9200 or equal.
3. After conduit is installed, the contractor shall pass a smooth bullet shaped wooden test mandrel through to test for freedom from burrs and obstructions the entire length of the conduits.
4. Backfill legend:

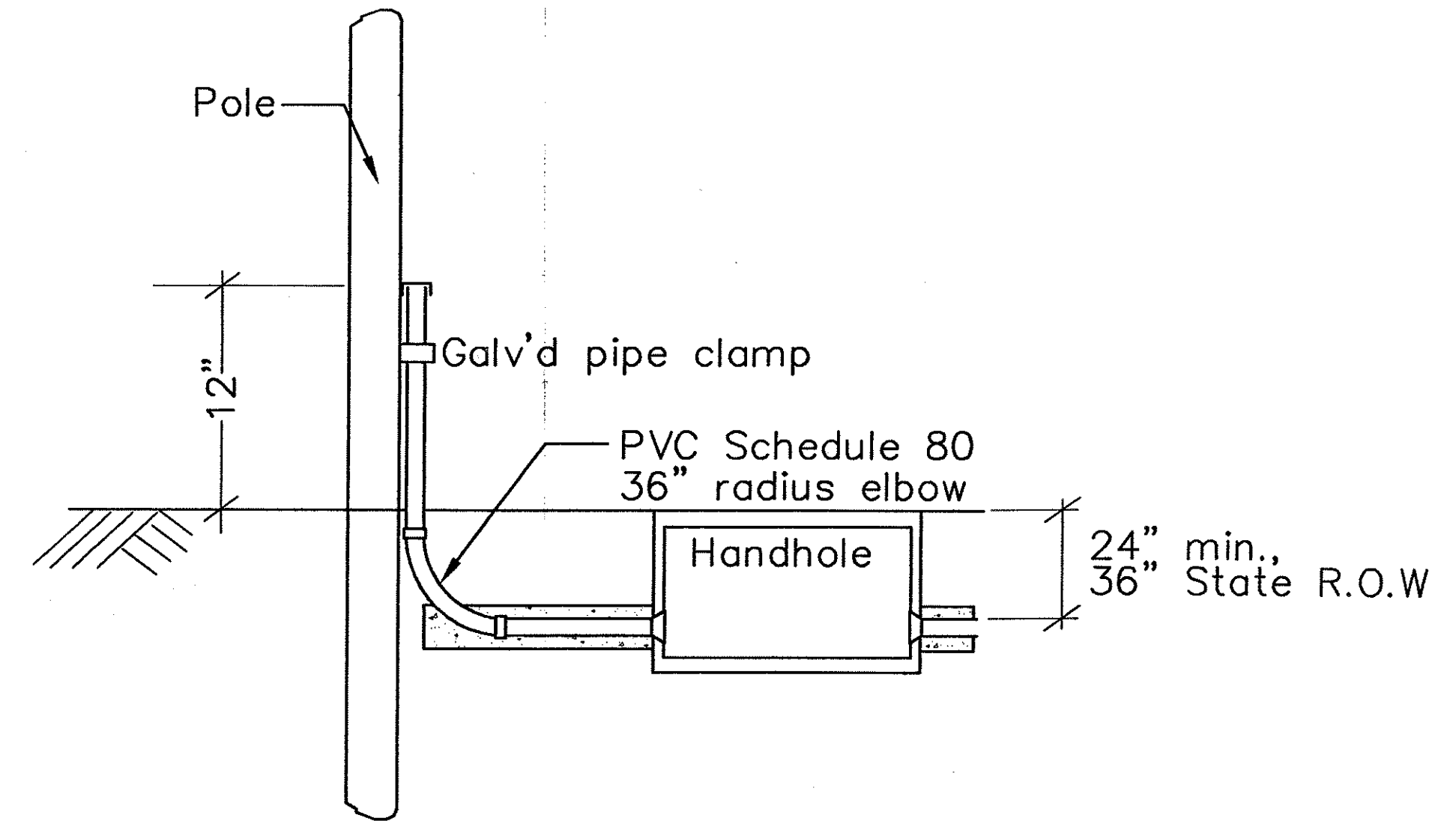


Type "A" backfill

Beach sand, earth or earth and gravel. If earth and gravel the maximum size shall be 1" and the mixture shall contain no more than 50% by volume of rock particles.

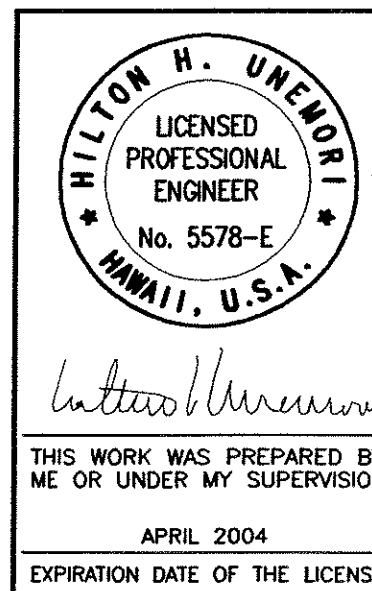


Concrete encasement shall be 2500psi in 28 days, max aggregate size shall be 3/4"



TYPICAL VERIZON RISER
NTS

11/19/03	Added Telephone Structures
DATE	ELECTRICAL PLAN



STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION
ELECTRICAL PLAN
MOKULELE HIGHWAY WIDENING
Vicinity of Kalaloa Bridge
To
Vicinity of Kealia Pond Driveway
Federal - Aid Project No. NH-A311(7)
Scale: 1"=40' Date: August 2003
SHEET No. E-2 OF 2 SHEETS

ADD. 39 S-2

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