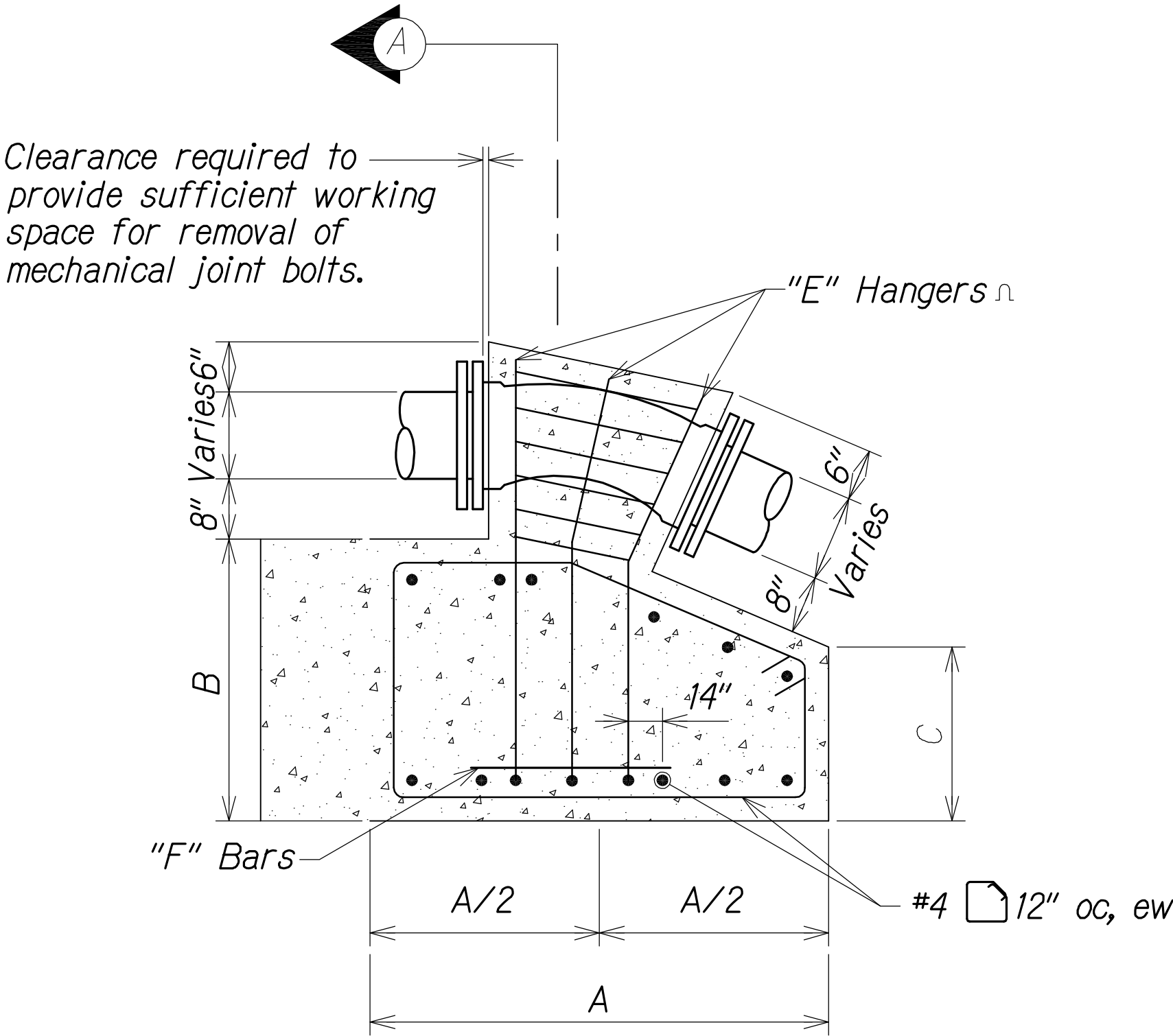


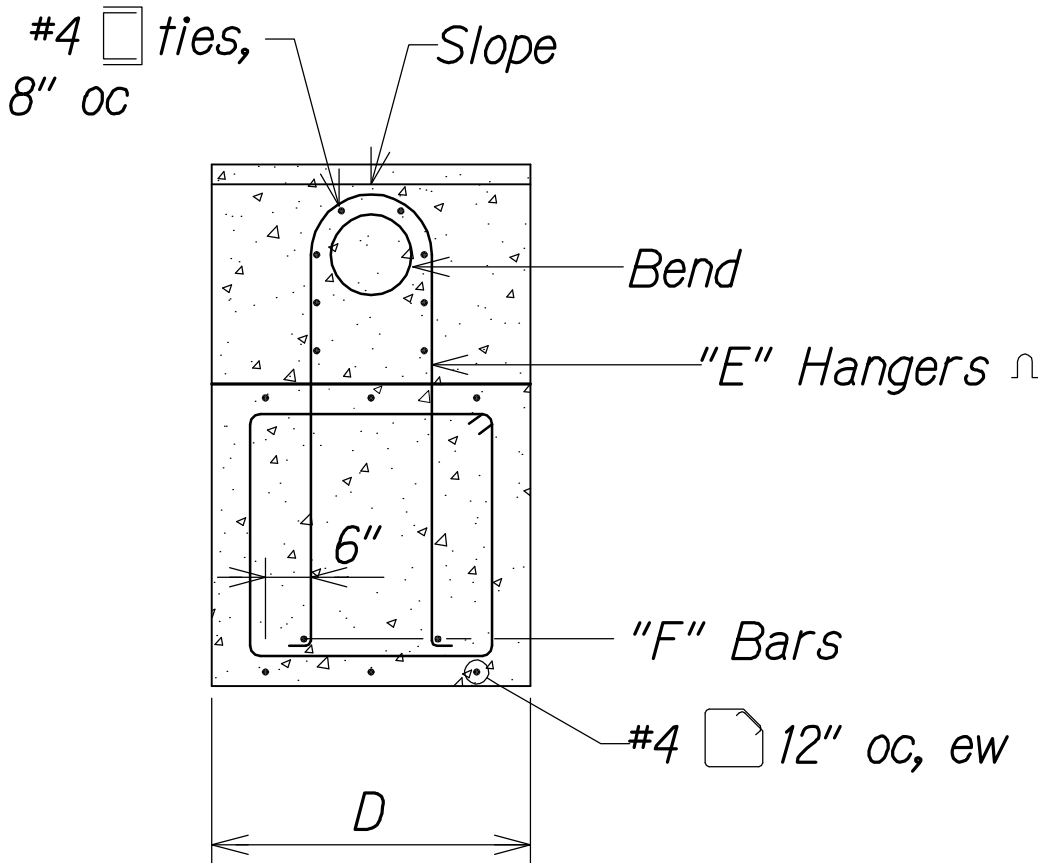
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0130(33)	2016	54	99



ELEVATION

Notes:

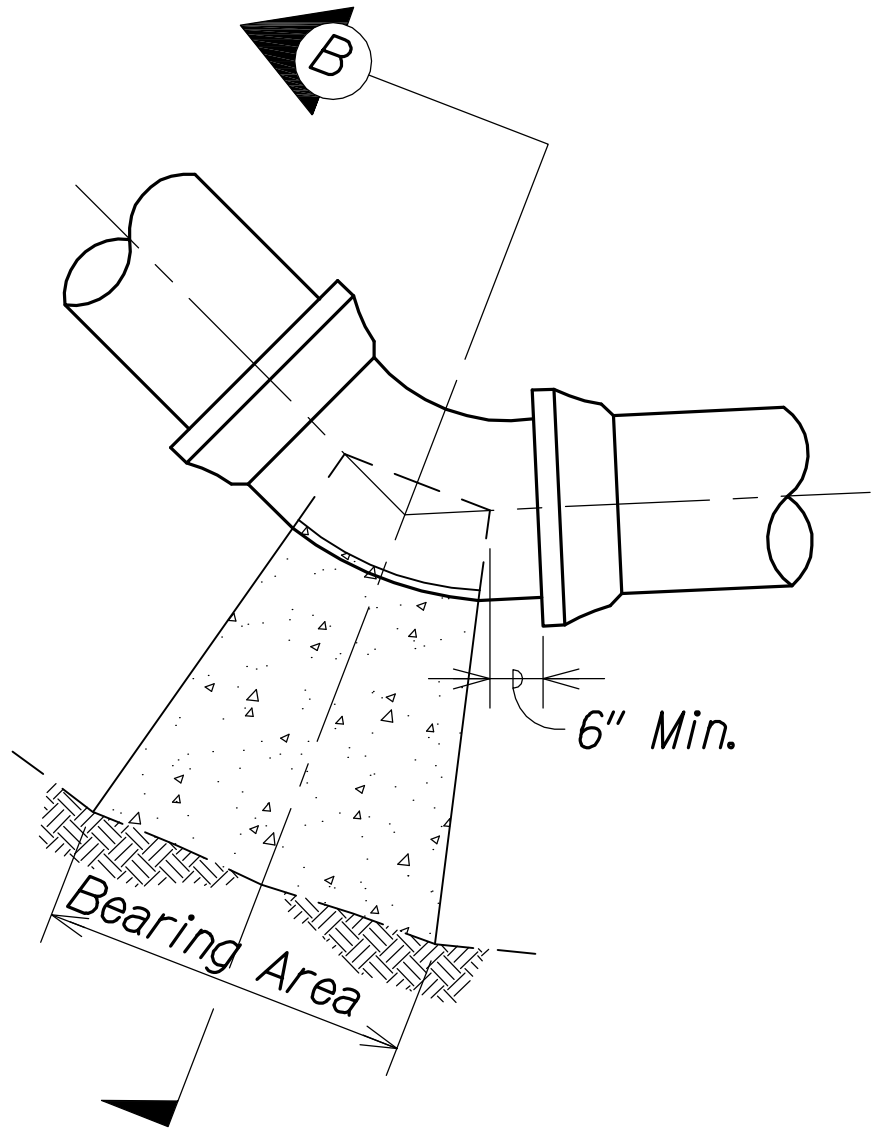
- DWS 2500 concrete.
- Min. 2" cover over all reinforcement.
- See B6 for schedule.
- AWWA C153 fittings not acceptable for this application (except DWS Hawaii).
- Unless otherwise noted, all reinforcing bars shall be ASTM A615, Grade 60.
- Megalug restraint glands required on top vertical bends.



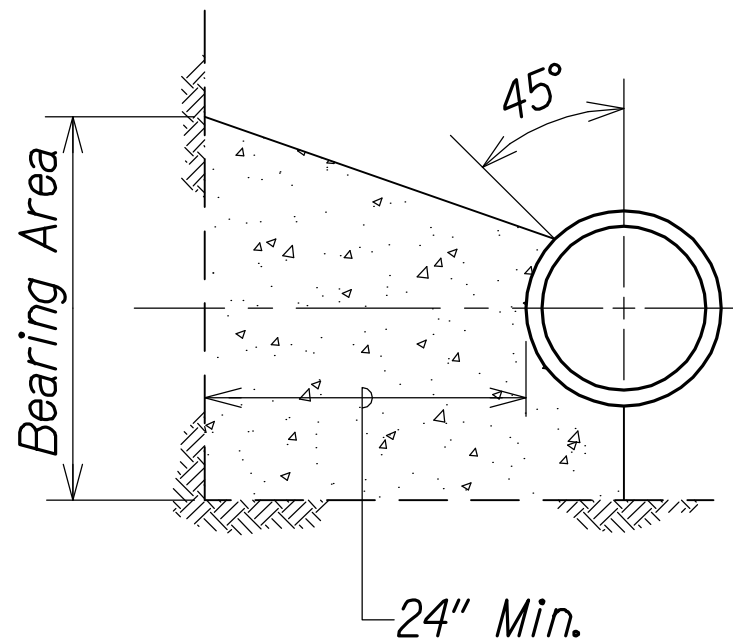
SECTION "A"

TOP VERTICAL THRUST BLOCK SCHEDULE							
SIZE	BEND	A	B	C	D	E	F
12"	1/4	6'-3"	6'-3"	6'-3"	5'-6"	(3)#7	(2)#7
	1/8	5'-6"	5'-6"	2'-9"	4'-6"	(2)#6	(2)#6
	1/16	5'-8"	4'-6"	3'-4"	2'-6"	(3)#4	(2)#4
	1/32	4'-3"	3'-9"	3'-3"	2'-0"	(2)#3	(2)#3

TYPICAL THRUST BLOCK AT TOP VERTICAL BENDS DETAIL
Not to Scale



PLAN - BENDS



SECTION "B"

MINIMUM BEARING AREA (sq. ft.)					
SIZE	TEES, CAPS	1/4 BENDS	1/8 BENDS	1/16 BENDS	1/32 BENDS
12"	7.5	11.0	6.0	3.0	1.5

TYPICAL THRUST BLOCK HORIZONTAL AND BOTTOM VERTICAL BENDS DETAIL
Not to Scale

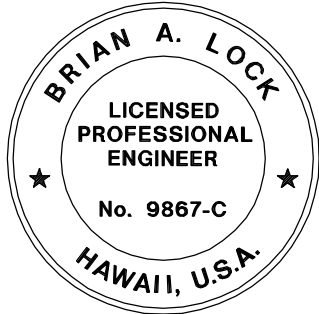
APPROVED

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.

APRIL 30, 2018
WILSON OKAMOTO CORPORATION LIC. EXP. DATE

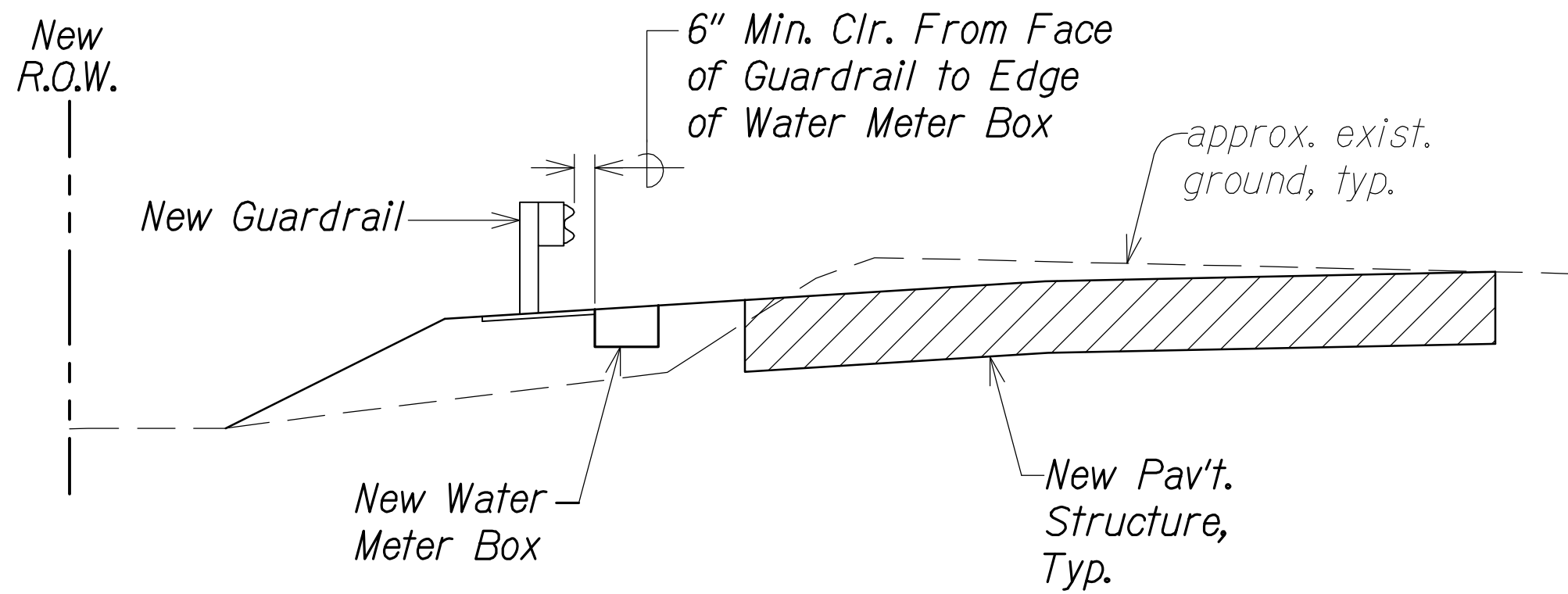
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

WATER DETAILS

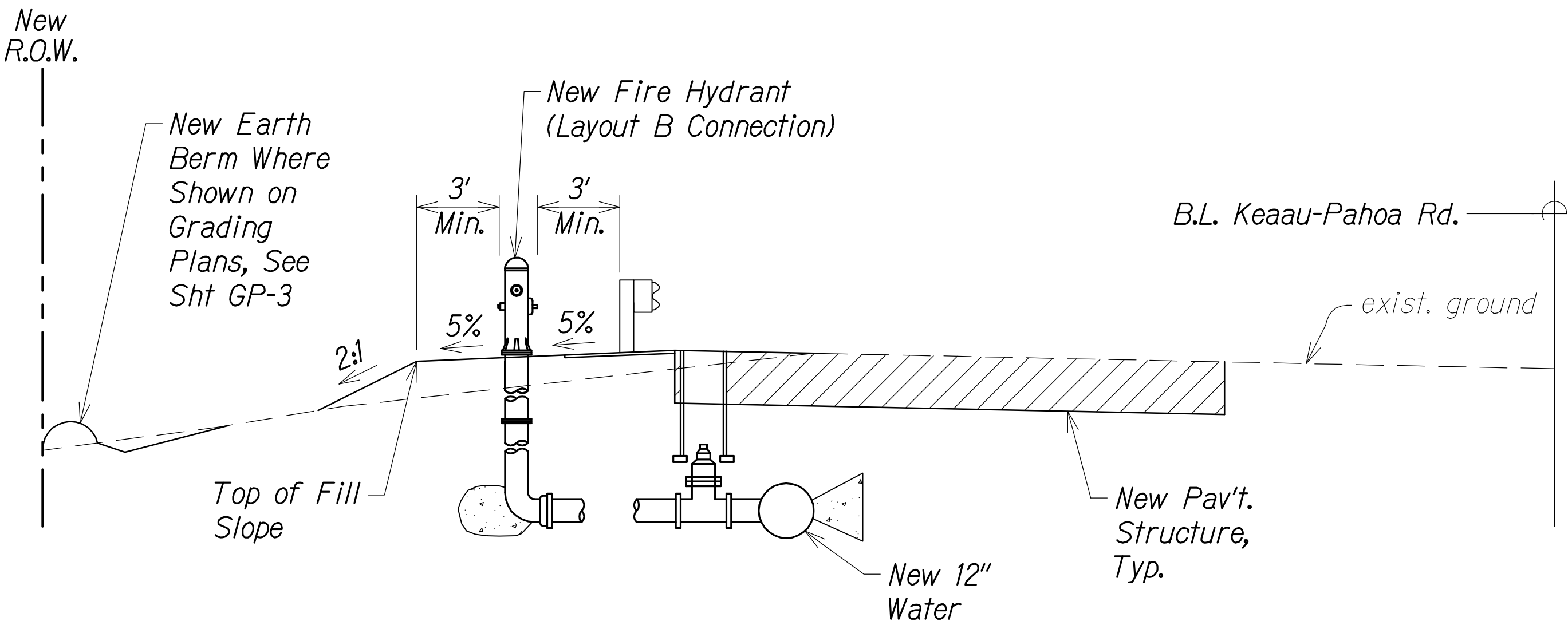
KEAAU-PAHOA ROAD, SHOULDER
LANE CONVERSION, PHASE 2
Shower Drive Intersection Improvements
Fed. Aid Proj. No. STP-0130(33)
Scale: As Noted Date: March 2016

SHEET No. WD-1 OF 2 SHEETS

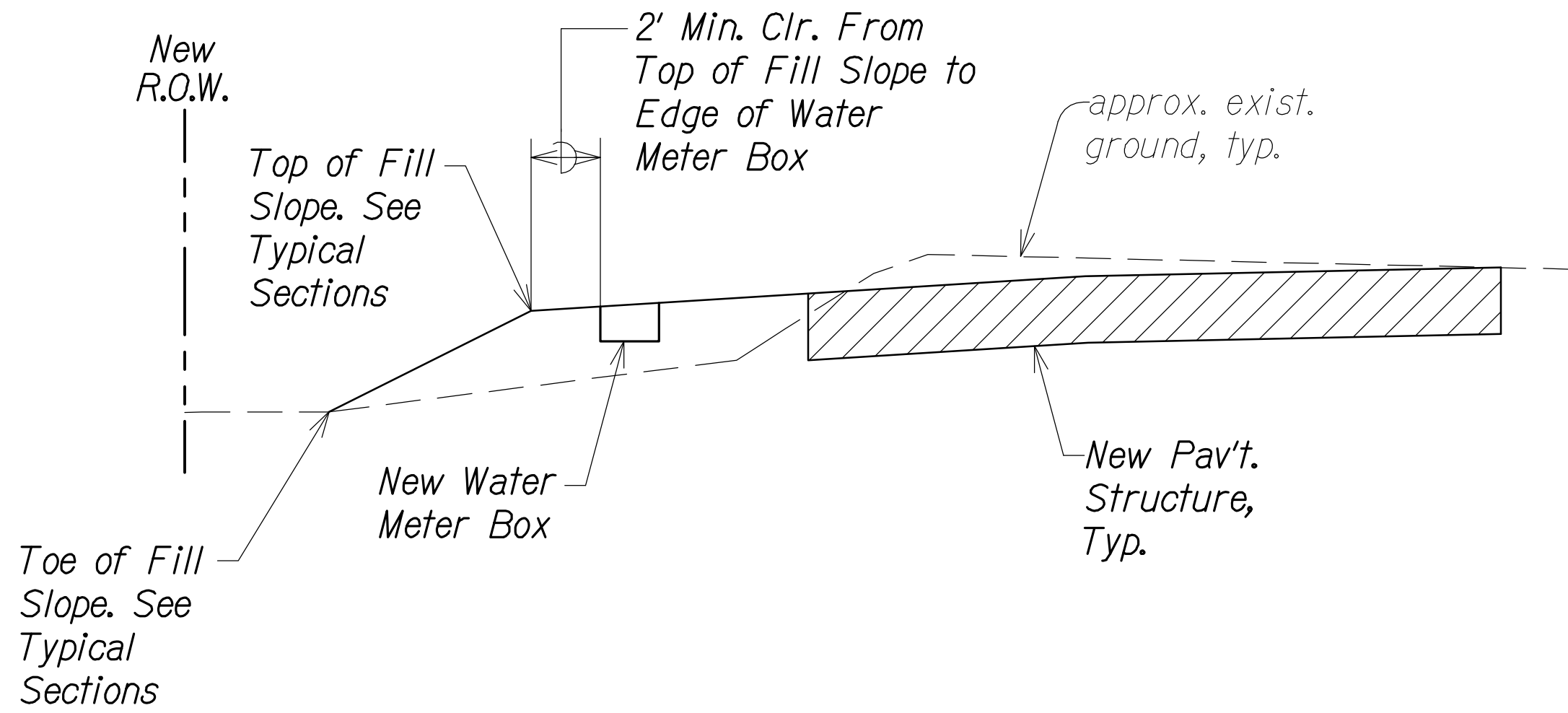
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0130(33)	2016	55	99



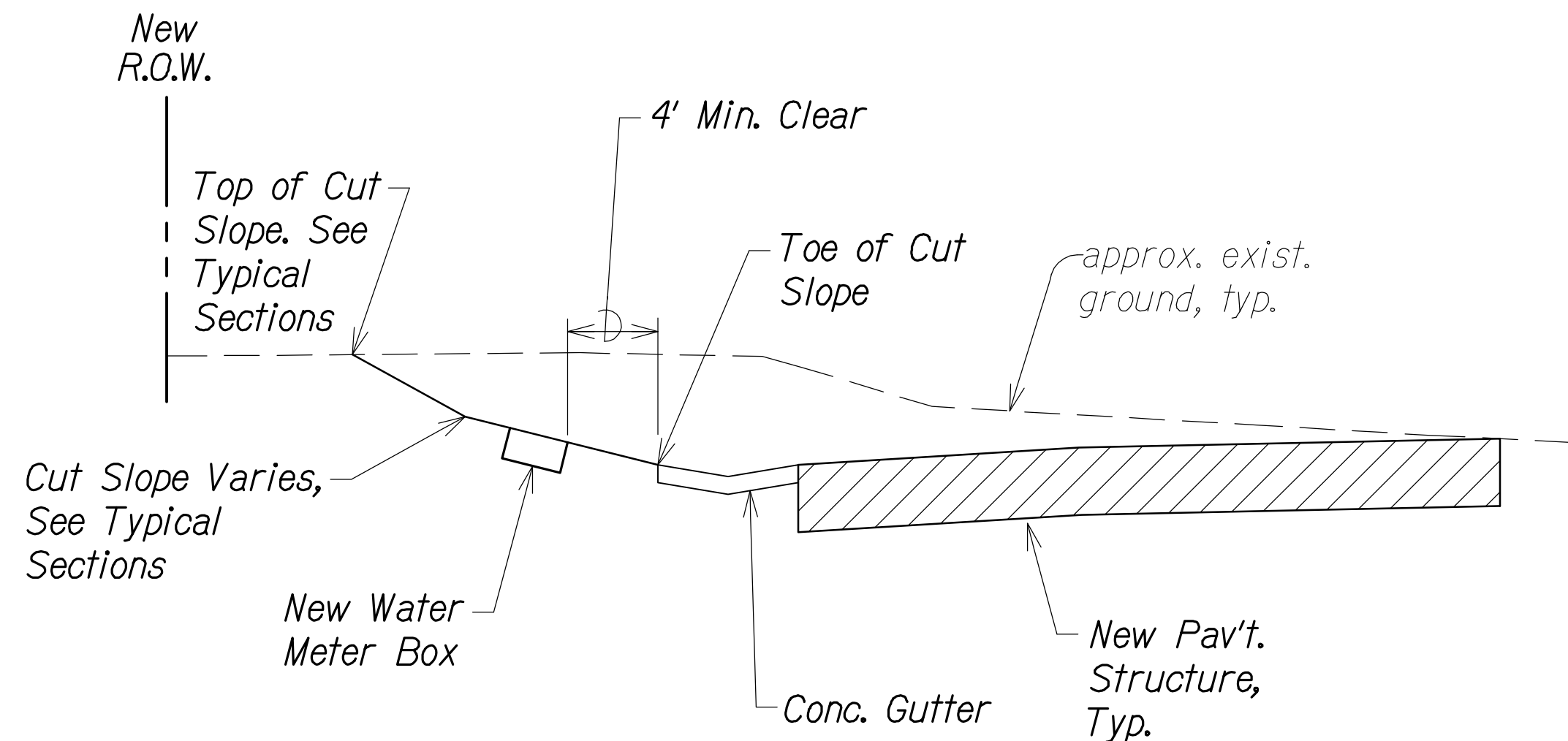
WATER METER BOX AT GUARDRAIL FACE
Not to Scale



FIRE HYDRANT CONNECTION NORTHBOUND
Not to Scale



WATER METER BOX IN FILL SECTION
Not to Scale



WATER METER BOX IN CUT SECTION
Not to Scale

APPROVED

Manager-Chief Engineer
Department of Water Supply
County of Hawaii
Date

LEGEND FOR AS-BUILT POSTINGS

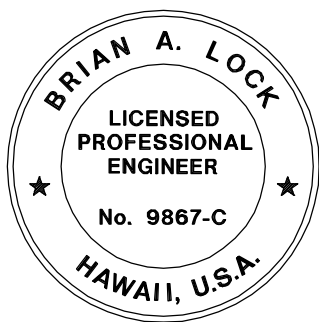
	Squiggly line for as-built deletion
	Double line for as-built deletion
Roadway	Text for as-built posting

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

WATER DETAILS

KEAAU-PAHOA ROAD, SHOULDER LANE CONVERSION, PHASE 2
Shower Drive Intersection Improvements
Fed. Aid Proj. No. STP-0130(33)
Scale: As Noted Date: March 2016

SHEET No. WD-2 OF 2 SHEETS



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

APRIL 30, 2018
WILSON OKAMOTO CORPORATION LIC. EXP. DATE

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