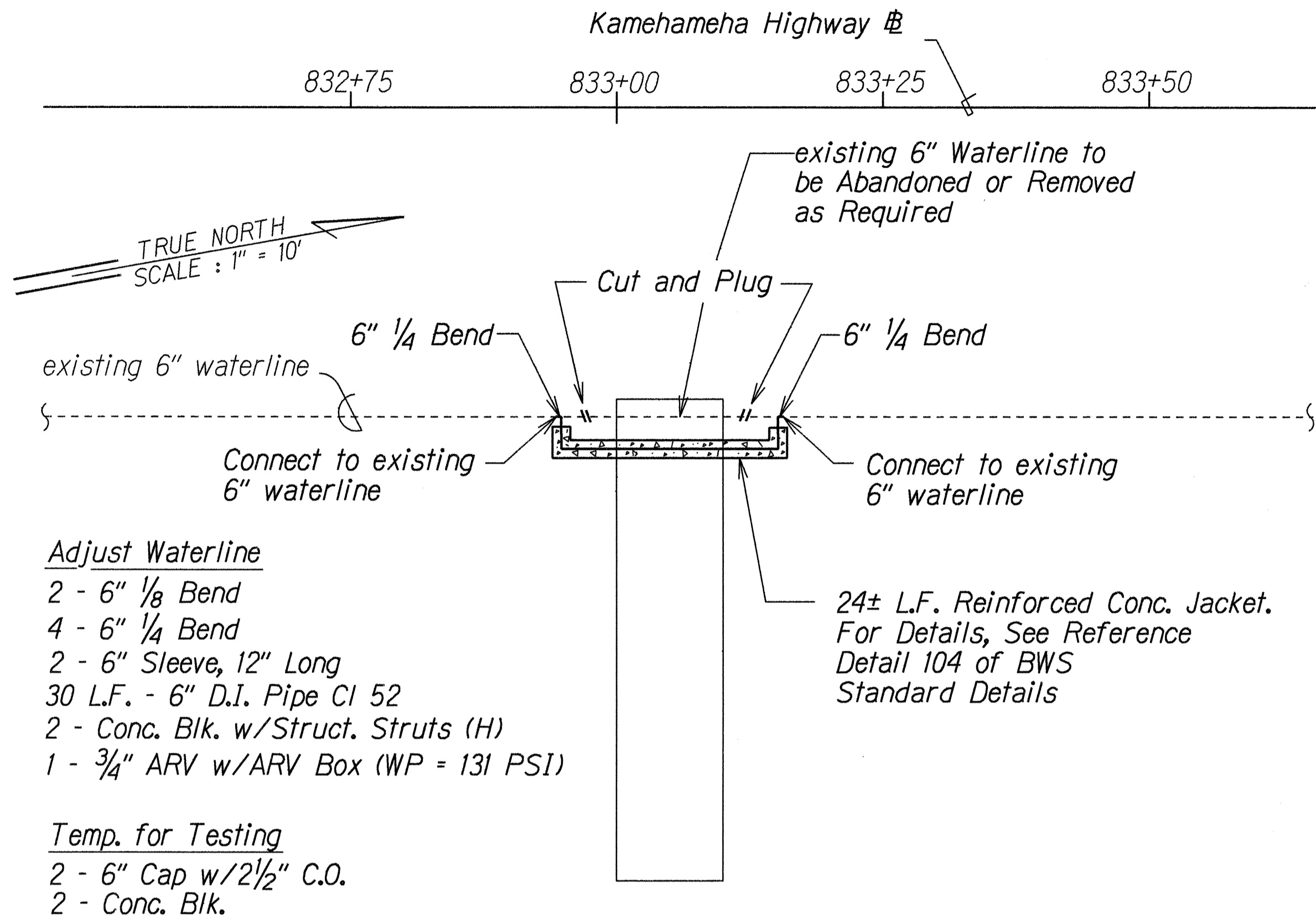


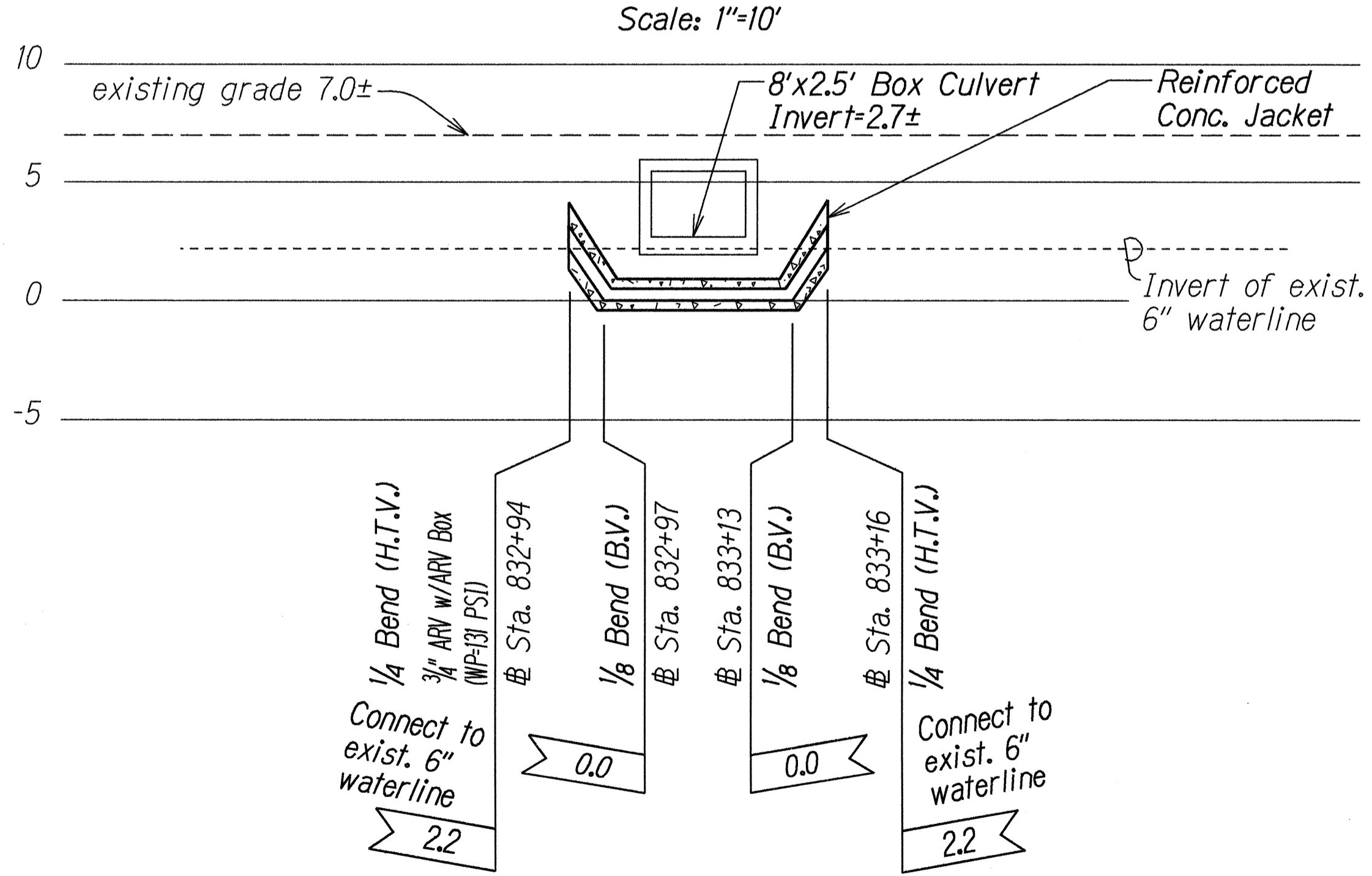
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	83D-01-98	2000	18	19



Adjust Waterline
2 - 6" 1/8 Bend
4 - 6" 1/4 Bend
2 - 6" Sleeve, 12" Long
30 L.F. - 6" D.I. Pipe CI 52
2 - Conc. Blk. w/Struct. Struts (H)
1 - 3/4" ARV w/ARV Box (WP = 131 PSI)

Temp. for Testing
2 - 6" Cap w/2 1/2" C.O.
2 - Conc. Blk.

PLAN - 6" WATERLINE ADJUSTMENT
AT STA. 833+05±



PROFILE - 6" WATERLINE ADJUSTMENT
AT STA. 833+05

WATER NOTES

1. Unless otherwise specified, all materials and construction of water system facilities and appurtenances shall be in accordance with the City and County of Honolulu Board of Water Supply's "WATER SYSTEM STANDARDS", VOLUME 1, DATED 1985, THE "APPROVED MATERIAL LIST AND STANDARD DETAILS FOR WATER SYSTEM CONSTRUCTION", VOLUME 2, DATED 1985, THE "WATER SYSTEM EXTERNAL CORROSION CONTROL STANDARDS", VOLUME 3, DATED 1991, and all subsequent amendments and additions.
2. All plans approved by the Board of Water Supply are based solely on the adequacy of the water supply. All other features of the water systems, such as lines, grades, fittings, drainage, etc., and other features of improvements shall not be the responsibility of the Board of Water Supply. Compliance with the American Disability Act (ADA) requirements, shall not be the responsibility of the Board of Water Supply.
3. Test pressure shall be 200 psi.
4. The Contractor shall notify BWS Planning and Engineering Division, Construction Section in writing and submit four (4) sets of approved construction plans one week prior to commencing work on the water system.
5. The Contractor shall chlorinate the entire inside surface of each pipe and fitting with disinfection solution of 5 ounces of sodium hypochlorite mixed with 10 gallons of water (For connection only).
6. The Contractor shall be responsible for the protection of all water lines during construction. The Contractor shall be especially careful when excavating behind water lines, tees and bends wherever there is a possibility of water line movement due to the removal of supporting earth beyond the existing reaction blocks. The Contractor shall take whatever measure necessary to protect the water lines, such as constructing special reaction blocks (with BWS approved and/or modifying his construction method).
7. The existence and location of underground utilities and structures as shown on the plans are from the latest available data but is not guaranteed as to the accuracy of the encountering of other obstacles during the course of the work. The Contractor shall be responsible and shall pay for all damages to existing utilities. The Contractor shall not assume that where no utilities are shown, that none exist.
8. Prior to installation, the Contractor shall submit for approval by Board of Water Supply, the manufacturer's certification that all cast iron (gray or ductile) fittings for the project conform in all respects to the Water System Standards, dated 1985.
9. Polygon shape for mechanical joint glands as described in AWWA Standard CIII shall be "straight-sided" or an approved equal on a job to job basis.
10. Re-approval shall be required if this project is not under construction within a period of two years.
11. Contractor shall cut and plug all existing unused laterals at the main whether or not shown on the plans. The damaged area shall be repaired to an equal or better condition than the immediate area. All work shall be done at the expense of the Contractor.
12. Contractor shall obtain a NPDES permit prior to chlorination and/or dewatering. A copy of the permit shall be submitted to the Board of Water Supply, Planning and Engineering Division, Construction Section.

13. Pipe cushion shall be of high resistivity material. The Contractor shall submit a soil certification that high resistant cushion material has a resistivity greater than 5,000 OHM-CM. Remainder of the backfill material shall be as specified in Volume 1 of the Water System Standards. Pipe cushion and backfill shall contain no hazardous substances above regulatory action levels including but not limited to lead, asbestos, mercury, chromium, cadmium, zinc, strontium, and polychlorinated biphenyl's (PCB).
14. All ductile iron pipe, fittings and valves shall be wrapped with two layers of 8 mil. polyethylene wrap.
15. Cleaning shall be by the use of "pigs" introduced into the pipelines and run completely through all installed pipelines and all branch lines for fire hydrants. "Pigging" of service laterals is not required. Bare foam "pigs" shall be used to swab piping clean as each length of the pipeline is installed. Each "pig" consist of a cylindrical piece of polyurethane foam with a density of 3-7 pounds per cubic foot and vinyl-coated nose. Outside diameter of the "pig" shall be equal to 1 1/4 to 2 times its diameter. Prior to use, the "pig" shall be submerged in a chlorine solution of 1 oz. of 5% chlorine bleach in 5 gallons of water. "Pigging" of the pipeline shall be considered incidental to the installation of all new pipeline.
16. At all times during the construction, the Contractor shall maintain pedestrian and bicyclist passage around work areas.
17. All waterline construction requiring shutdown connection shall be scheduled for normal working hours at six (6) hours maximum down time.

7/27/00	Revise Waterline Adjustment.
DATE	REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

WATERLINE ADJUSTMENT DETAILS

At STA. 833+05±

KAMEHAMEHA HIGHWAY DRAINAGE IMP.

In the Vicinity of Polinalina Road

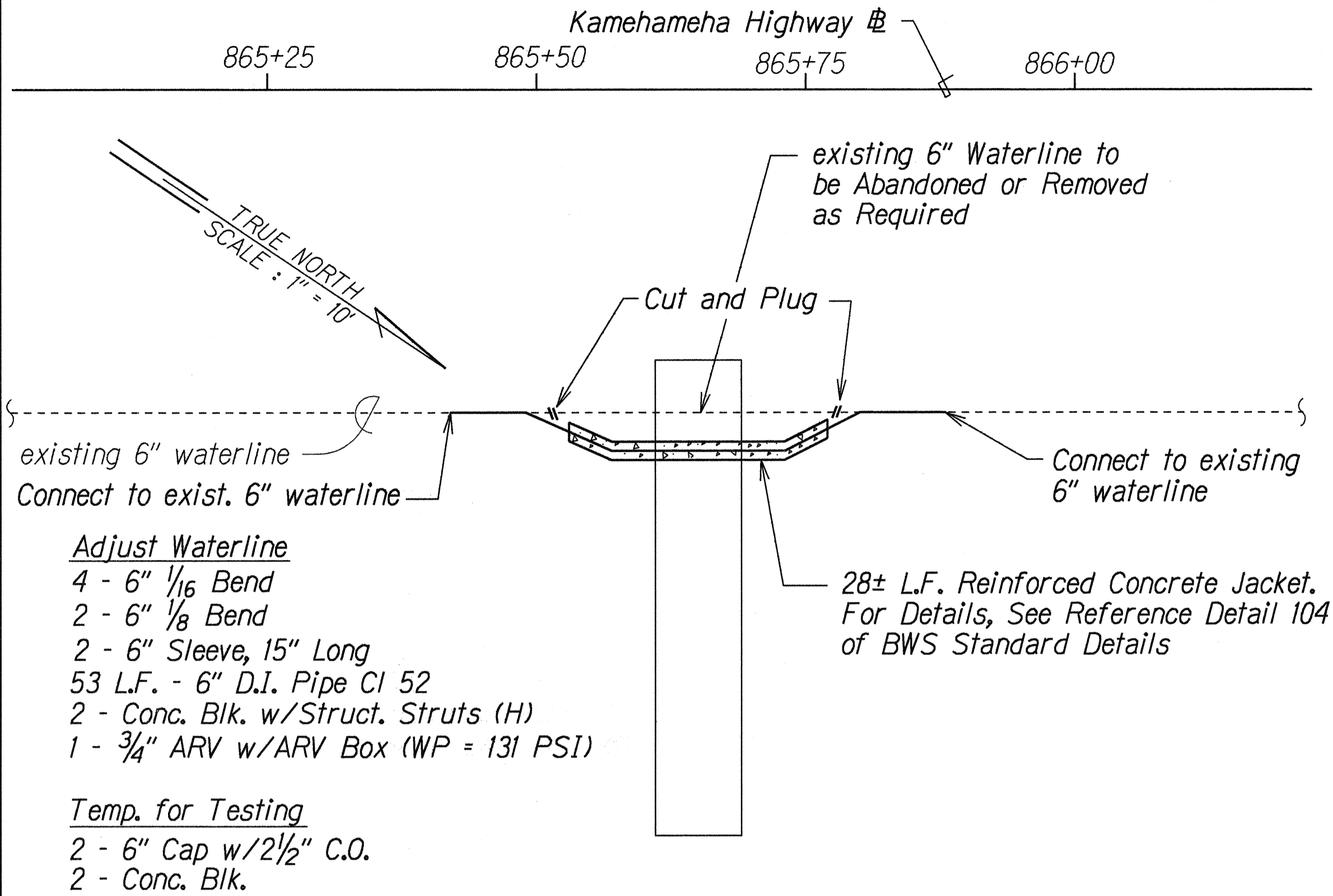
Project No. 83D-01-98

Scale: As Shown Date: September, 1999

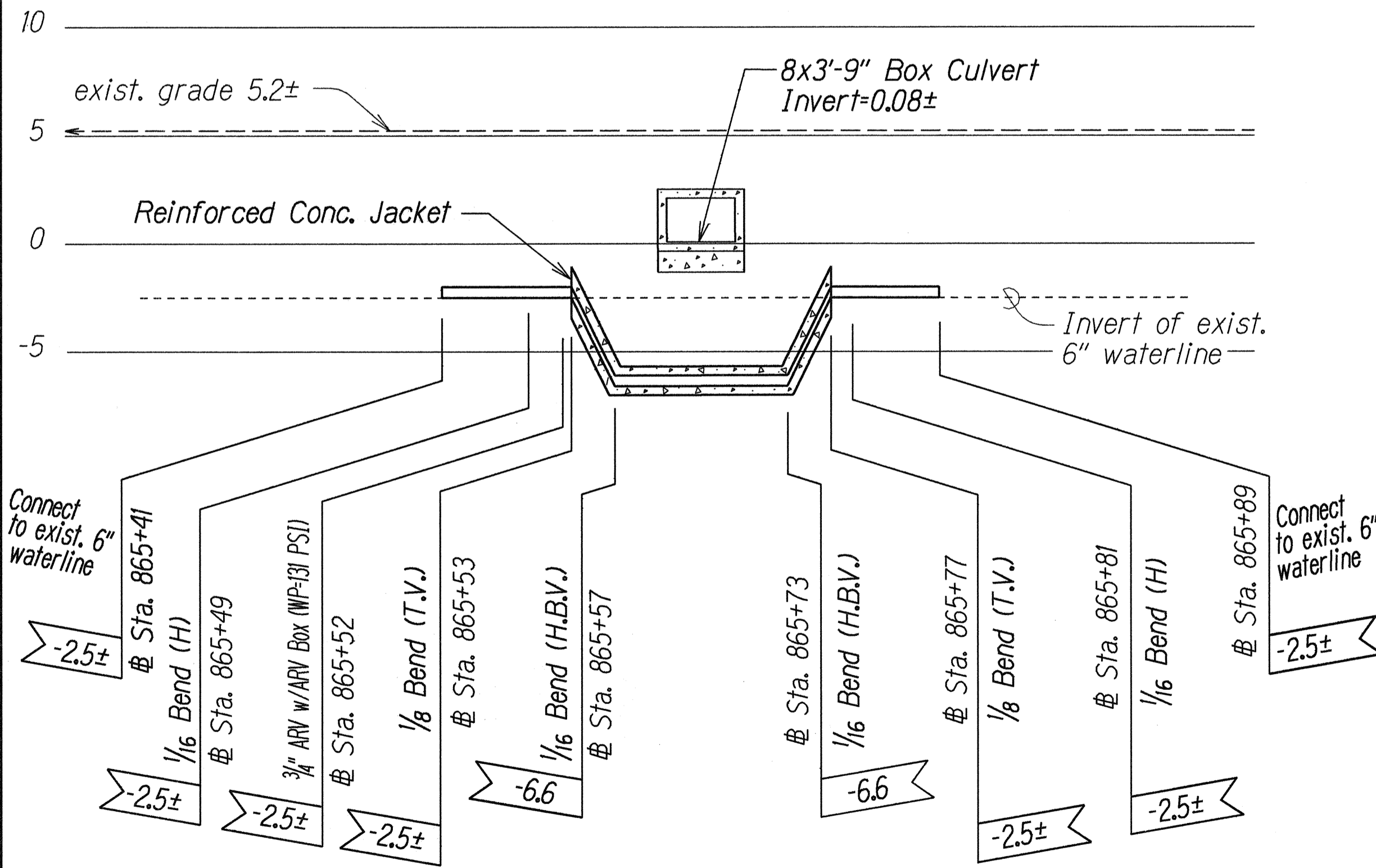
SHEET No. 1 OF 2 SHEETS

APPROVED:
Guthrie R. Dunge
for CHIEF, PLANNING AND ENGINEERING DIVISION,
BOARD OF WATER SUPPLY,
CITY AND COUNTY OF HONOLULU
DATE 7/28/00

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	83D-01-98	2000	19	19



PLAN - 6" WATERLINE ADJUSTMENT
AT STA. 865+65±
Scale: 1"=10'



PROFILE - 6" WATERLINE ADJUSTMENT
AT STA. 865+65±
Scale: Horiz.: 1"=10'
Vert.: 1"=5'

APPROVED:
Michael A. [Signature] 11/20/00
CHIEF, PLANNING AND ENGINEERING DIVISION, DATE
BOARD OF WATER SUPPLY, CV
CITY AND COUNTY OF HONOLULU

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

WATERLINE ADJUSTMENT DETAILS
At Sta. 865+65±
KAMEHAMEHA HIGHWAY DRAINAGE IMP.
In the Vicinity of Polinalina Road
Project No. 83D-01-98
Scale: As Shown Date: September, 1999
SHEET No. 2 OF 2 SHEETS

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTED WORK	DRAWN BY	11/23/99
DESIGNED BY	TRACED BY	
CHECKED BY	DESIGNED BY	
	CHECKED BY	