

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	ER-10(2)	1984	7	34

WATER NOTES:

The Standard Specifications for Waterworks Construction of the Department of Water, County of Kauai, are referred to and hereby made a part of this Contract and shall apply in all cases except when modified below or as called for otherwise in the plans or in the proposal.

1. The Contractor shall submit the name of its authorized superintendent on the job.
2. The Contractor shall arrange a pre-construction conference at least 10 days before construction and shall notify the Department of Water at least three (3) working days prior to start of construction.
3. The Contractor shall notify the Department of Water at least 24 hours prior to any pipe laying, backfilling, testing or chlorination to insure that inspectional services will be available.
4. In order to prevent unapproved materials from being ordered, the Contractor is invited to submit his material list description to the Department of Water for cross-check before ordering any material from the supplier.
5. Asbestos Cement Pipe shall be Class 150 conforming to the requirements of AWWA C400-65 for asbestos cement water pipe unless otherwise specified.

Whenever the words AC ends or slip joints are used, it shall mean either the Asbestos Cement "Fluid-Tite" (Certain-Teed), "Ring-Tite" (Johns-Manville) or "Permaflex" (Capco) ends.

6. Plastic pipes shall be PVC 1120, or PVC 1220 SDR 21, Class 200 PR with NSF seal of approval. Plastic pipes 1-1/2" and larger shall have "Ring-Tite" ends utilizing natural rubber rings as the sealing agent. No solvent welded joints except at fittings shall be allowed. Approved pipes are Johns-Manville "Ring-Tite," Ethyle Corp. Visqueen "Bell-Tite" and Certain-Teed "Fluid-Tite." Plastic pipes 1-1/4" and smaller may be of the solvent-welded type.
7. All cast iron fittings shall be cement-mortar lined.
8. All nuts and bolts for use with flanged joints shall be hot-dip galvanized.
9. All ductile iron pipe shall be cement-mortar lined.
10. Gaskets for flanged joints shall be "Flange-Tyte" gaskets manufactured by Reese Rubber Company, 1/8 inch thick, full-face, Satin Finish Red Rubber gaskets manufactured by Goodyear Tire and Rubber Company or approved equal.
11. Prior to the connection of any pipeline installed under this job to the existing main of the Department of Water, the pipeline installed shall be thoroughly cleaned, flushed and chlorinated.

Cleaning shall be by the use of "pigs" introduced into the pipeline and run completely through all installed pipelines excluding branch lines for fire hydrants and service laterals. "Pigs" shall consist of a cylindrical piece of polyurethane foam with density range of 1.25 to 1.45 pounds per cubic foot with a diameter 2" larger than the pipe to be cleaned and 18" long.

Payment for cleaning all installed pipelines shall not be measured nor paid for directly but shall be considered incidental to the project.

12. All asbestos-cement pipe and PVC pipeline installed below ground level with a continuous length in excess of 30 feet, with the exception of service laterals, shall have a continuous metalized tape with electro-physical properties buried in line with the pipe.

Metalized tape shall be blue and imprinted with the following, "CAUTION WATER LINE BELOW." Tapes shall be two inches in width and shall be readily detectable with any standard pipe or cable locator. An acceptable metalized tape is Metalized Terra Tape, Type D, manufactured by the Griffolyn Company, Incorporated.

All metalized tape shall be installed a maximum of 24 inches and a minimum of 12 inches below finished grade. In no instance will the tape be installed in the roadway structure including select borrow, base course or wearing surface. The tape shall be installed on top of a compacted layer of trench backfill prior to the installation of a succeeding layer of trench backfill material and placed as close as practical to a position directly above the installed pipeline.

Payment for metalized tape shall be considered incidental to the various water items.

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

APPROVED:

Raymond J. Suez
Manager and Chief Engineer
Department of Water,
County of Kauai

7-7-83
Date

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

WATER NOTES
KAUMUALII HIGHWAY
RECONSTRUCTION & PROTECTIVE
MEASURES AT KEKAHA (PHASE I)
FEDERAL AID PROJECT NO. ER-10(2)

Date: June, 1983

SHEET NO. 1 OF 1 SHEETS