

WATERLINE NOTES

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	130B-01-07	2007	4	29

1. All work shall be done according to the Water System Standards, State of Hawaii, Dated 2002, as amended.

2. The Contractor shall inform the D.W.S. Engineer 72 hours prior to the beginning of any waterline work and two weeks prior to any connection, chlorination, shut-off or relocataion work.

3. The Contractor shall pay for all work, equipment and material furnished by the D.W.S.

4. All existing waterlines, waterline appurtenances and other utility locations shown on the plans are obtained from the latest reliable sources. The Contractor shall be responsible to verify the exact location of all utilities in the field and shall bear all costs for damages done during the contract period.

5. All connections to the existing Water System shall be done by the D.W.S. The Contractor shall perform all excavation, backfill, road repair, traffic control and provide equipment and materials necessary to complete the connection.

6. Where water shutoff of more than 3-hours becomes necessary, the Contractor, at his own expense, shall provide a temporary bypass line, size of which shall be determined by the D.W.S. Engineer. The D.W.S. Engineer also reserves the right to require bypass lines, regardless of the water shut-off period, if deemed necessary.

7. Minimum horizontal clearance between waterlines and other utilities shall be 8-feet (clear space - not centerline to centerline) for road right-of-ways 50 feet or less, and 10-feet for road right-of-ways of more than 50 feet.

8. Minimum vertical clearance between waterlines and other utilities shall be 12-inches provided the other utility is concrete jacketed, and 18-inches if no concrete jackets are used. In all applicable instances, the waterlines shall be at a grade higher than other utilities. Utilize perpendicular crossings where practicable.

9. All fittings (minimum Class 250) and gate valves (Resilient Type, Class 200) shall be ductile iron, with mechanical joints unless otherwise specified. Butterfly valves (MJ) shall be Class 250 with fusion epoxy coated interior unless otherwise specified.

10. All pipelines 4-inches or larger in diameter, shall be ductile iron, push on joints, Class 52, and all pipeline smaller than 4-inches in diameter shall be soft copper, Type "K", unless otherwise specified.

11. Pipe joint restraints for mechanical joint (MJ) fittings and MJ valves shall be "Megalug" series as manufactured by EBAA Iron, Inc., or an approved equal (wedge type), wherever called for on the plans and specifications.

12. 4' x 4' x 4" reinforced concrete slab for fire hydrant shall be reinforced with 6 x 6 x 10/10 welded wire fabric. Slab to slope away from hydrant at 2% in all directions.

13. The waterline shall be tested at a minimum of 225 psi or one-and-one-half times the static pressure at the low point (whichever is greater), under D.W.S. supervision. The testing shall be done just prior to paving, whenever applicable.

14. The Contractor shall be responsible for the chlorination of the Water System per the most current standards and shall bear all cost(s). The person(s) engaged to do the chlorination work must have the appropriate valid license to perform the work in the State of Hawaii.

15. Relocation of exsting meters shall be done under D.W.S. supervision. Relocations of customer service lines to relocated meters shall be copper (Type "K") and done by the Contractor. All work and materials shall be provided by the Contractor and considered incidental to the relocation work. Existing meter boxes damaged by teh Contractor shall be replaced at the Contractor's cost. When applicable, a dielectric union shall be used to connect the copper pipe to the customer's galvanized iron (G.I.) pipe.

16. Solder and flux used shall not contain more than 0.2% lead.

17. The D.W.S. will not assume ownership or grant any water service until the Water System is dedicated to the D.W.S. along with all necessary easements and documents.

18. When compaction tests are required, the Contractor shall be responsible to provide the D.W.S. with proctor results of materials to be used for that portion of the work requiring compaction. These results shall be certified and shall be furnished to D.W.S. one week prior to commencement of work. Cost for compaction tests shall be incidental to pipeline installation.

19. All newly installed waterlines shall have a 4 mil thick, 6-inch wide, non metallic blue warning tape over centerline of pipe labeled "Caution Waterline Buried Below" placed directly over the compacted cushion material and below the basecourse along the entire length of the trench.

20. Construction projects requiring temporary water service shall be metered and paid for by Contractor.

21. The Contractor shall be responsible to maintain and certify the record drawings (as-built drawings) as to accuracy and as-built condition, and a licensed Engineer shall certify the drawings. The Contractor shall then submit the record drawings and as-built tracings to the D.W.S.

ORIGINAL PLAN	DATE
DESIGNED BY	7/10/07
CHECKED BY	
IN CHARGE	
NOTED BY	
QUANTITIES BY	
REVISIONS	

APPROVED:

[Signature]
MANAGER, DEPT. OF WATER SUPPLY
COUNTY OF HAWAII

9/6/07
DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

WATERLINE NOTES

KEA'AU-PĀHOA ROAD
HIGHWAY ACCESS IMPROVEMENTS
Vicinity of Ka Ōhūwahu Street
Project No. 130B-01-07

Date: Oct. 2006

SHEET No. 1 OF 1 SHEETS