

SEWER NOTES

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-7241(002)	2012	7	81

1. All sewer construction shall be performed in accordance with the City's standard specifications, Sept. 1986, the Department of Public Works Standard Details, Sept. 1984, current City practices and Revised Ordinances of Honolulu, 1990 as amended, and the Design Standards of the Department of Wastewater Management Vol. 1, July 1993.

2. In the event that any change in alignment or grade for the proposed sewers are required due to unforeseen conflict with other utilities, the engineer in charge or the maker of the plans shall be responsible for the required changes which are to be presented to the Department of Planning and Permitting (DPP) for approval.

3. The contractor shall notify the Construction Management Branch, Wastewater Division, DDC, at 768-8788 or 768-8770 to arrange for inspection services and submit four (4) sets of approved construction plans seven (7) days prior to commencement of sewer work. The contractor shall pay for all inspection costs.

4. Crushed rock cradle is permitted where soil is stable. In areas of unstable soil, the maker of the plans and the construction engineer will determine the pipe support required.

5. Trees in the road right-of-way shall be situated a minimum of 5'-0" from the City's sewer lines.

6. The underground pipes, cables or ductlines known to exist by the engineer from his research of records are indicated on the plans. The contractor shall verify the location and depth of the facilities, including and affecting sewer lines, in the presence of the Wastewater inspector and exercise proper care in excavating the area. The contractor shall be responsible and shall pay for all damaged utilities.

7. Sewer lateral shall be clear of and not conflicting with any other utility. Minimum horizontal and vertical clearances shall be strictly observed and followed.

8. Slope for sewer laterals shall be 1.00% unless otherwise noted.

9. Building plumbing facilities shall be controlled by sewer lateral inverts.

10. The contractor shall be responsible for maintaining continuous sewer service to all affected areas during construction.

11. The consulting engineer shall submit to the DPP mylar "as-built" tracings of the construction plans as actually constructed, showing all changes from the original plans.

12. The contractor shall be responsible for any sewage spills caused during construction. The contractor shall notify the State Department of Health and utilize appropriate sampling and analyzing procedures. The contractor shall be responsible for all public notifications and press releases.

13. The contractor shall install "Rainstopper" manhole inserts in all sewer manholes with Type "SA" frame and cover.

14. All drop and shallow drop sewer manholes shall be lined with epoxy liners. Also, if the velocity exceeds 10 feet per second (fps), the sewer manhole shall be epoxy lined.

15. The contractor shall obtain approval for advance sewer riser agreement at the DPP and obtain building permit for plumbing work before any advance riser is made.

16. All sewer pipe joints within easements shall be wrapped with geotextile root barrier.

17. Sewer pipes 30 inches and larger shall be corrosion resistant material or protected internally with lining.

18. S4C pipe cradle seals shall be installed 10 feet from all sewer manholes to prevent soil migration. See Detail \_\_\_\_\_.

19. Geotextile fabric to envelope the pipe cradle and select backfill material shall be provided where water or unstable soil conditions are encountered.

20. Confined Space  
For entry by city personnel, including inspectors, into a permit required confined space as defined in 29 CFR part 1910.146(b), the contractor shall be responsible for providing:

1. All safety equipment required by the confined space regulations applicable to all parties other than the construction industry, to include, but not limited to, the following:

a. Full body harnesses for up to two personnel.

b. Lifeline and associated clips.

c. Ingress/egress and fall protection equipment.

d. Two-way radios (walkie-talkies) if out of line-of-sight.

e. Emergency (escape) respirator (10 minute duration).

f. Cellular telephone to call for emergency assistance.

g. Continuous gas detector (calibrated) to measure oxygen, hydrogen sulfide, carbon monoxide and flammables (capable of monitoring at a distance at least 20-feet away).

h. Personal multi-gas detector to be carried by inspector.

2. Continuous forced air ventilation adequate to provide safe entry conditions.

3. One attendant/rescue personnel topside (two, if conditions warrant it).

21. When connecting to a live sewer line, the contractor shall abide by all conditions that the State Department of Health sets forth to mitigate any wastewater spill that may occur. The contractor shall inform the City inspector five (5) working days prior to the actual connection. The contractor shall be responsible for any fines and penalties due to any spills resulting from the connection.

22. No rungs shall be installed inside new sewer manholes.

23. For sewer manhole adjustments upward less than 3", see STD. DETAIL S-25. For SMH adjustments upward greater than 3" or for any adjustments downward, reconstruct SMH top from below the cone section.

24. If contractor encounters flow monitoring devices such as special sewer manhole cover embedded with solar panels; notify C & C of Honolulu, ENV-CSM at 768-7272 to coordinate temporary removal.

25. Contractor shall maintain visibility and maintenance access to live sewer manhole locations at all times, including during non-work hours and paving operations.

26. Contractor shall use manhole debris catching device when performing manhole height adjustment work and remove any construction debris that has fallen into the manhole. Disposal of construction debris in the sewer system is strictly prohibited.

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**SEWER NOTES**  
KAHUAPAANI STREET RESURFACING  
Moanalua Fwy. to Salt Lake Blvd.  
Federal Aid Project No. STP-7241(002)

Date: May, 2012

SHEET No. 1 OF 1 SHEETS

7