

SECTION SP-22 – TEMPORARY WATER STORAGE TANKS

22.1. **GENERAL:** The Contractor shall furnish and install the temporary water storage tanks in accordance with “Water System Standards,” State of Hawai‘i, dated 2002, as amended and the construction drawings.

22.2. **SUBMITTALS:** The Contractor shall submit shop drawings and manufacturer’s data on the temporary water storage tanks, fittings, piping, joints, etc. and certify that the product provided meets the specified item.

22.3. DELIVERY, STORAGE, AND HANDLING

22.3.1 Deliver all materials to job site properly marked to identify the structure for which they are intended and at such intervals to ensure uninterrupted progress of the work. Markings shall correspond to markings indicated on the shop drawings.

22.3.2 Store all members and materials off the ground using pallets, platforms, or other supports, but does not result in twisting or distorting the members.

22.3.3 Do not store materials on the structure in a manner that might cause distortion or damage to the members of the supporting structure.

22.4. SPECIFICATIONS

22.4.1 Tanks shall be polyethylene flat bottom, upright, opaque dark green colored cylindrical tanks molded in one-piece seamless construction for above ground vertical installation.

22.4.2 Tanks shall be NSF/ANSI 61: Drinking Water System Components – Health Effects certified.

22.4.3 Tanks shall have a storage capacity of at least 10,000 gallons.

22.4.4 Tanks shall have approximate dimensions of 142” diameter and 162” high.

22.4.5 Tank roof shall be domed and have a raised manway with approximate 24” diameter opening dimension. Tank roof shall have a 4” vent in accordance the construction drawings.

22.4.6 Tanks shall have 4” diameter pipe penetrations per the construction drawings. The penetrations shall have bulkhead fittings for water-tight seal and support. Tank connections must have adequate provisions for tank expansion/contraction due to temperature and load changes.

22.4.7 Tanks shall be equipped with a wind/seismic tank restraint system made of galvanized steel materials.

22.5. WARRANTY:

22.5.1 Provide three (3) year manufacturers’ warranty under provisions of this section. This warranty provides for cost of labor and materials for loss of water tightness, limited to amounts necessary to effect repairs necessitated by either defective material or

workmanship, with no dollar limitation.

- 22.5.2 Submit two (2) executed copies of the manufacturer warranties for the periods stipulated, starting from the date of substantial completion. Each warranty must be signed by an authorized representative of the issuing company.

22.6. PRODUCTS:

- 22.6.1 Temporary tanks shall be Part No. 32036, as manufactured by Snyder Industries, 6940 O Street, Suite 200, Lincoln, Nebraska or approved equal.
- 22.6.2 Bulkhead Fittings, as manufactured by Snyder Industries, 6940 O Street, Suite 200, Lincoln, Nebraska or approved equal.
- 22.6.3 Wind/Seismic Tank Restraint System, as manufactured by Snyder Industries, 6940 O Street, Suite 200, Lincoln, Nebraska or approved equal.

22.7. TANK FOUNDATION:

- 22.7.1 Temporary tanks shall be supported by reinforced concrete pad foundations.
- 22.7.2 The concrete pads shall 12' square and 6" thick.
- 22.7.3 Reinforcement shall consist of welded wire fabric 6x6 W2.9/W2.9.
- 22.7.4 Concrete mix design shall be DWS2500.
- 22.7.5 The pads shall be clean, smooth and level, so it fully supports the entire tank bottom with no deflection.
- 22.7.6 The wind/seismic tank restraint system shall be anchored in the concrete pad.

22.8. TANK INSTALLATION:

- 22.8.1 Tanks shall be installed according to the manufacturer's instructions.

22.9. TANK DECOMMISSIONING:

- 22.9.1 The 10,000-gallon temporary tanks shall be decommissioned after the permanent 1.0 MG tank is in service and after approval from the Department of Water. Decommissioning shall consist of the following:
 - 22.9.1.1 Drain each tank in accordance with NPDES Appendix F permit,
 - 22.9.1.2 Clean each tank to remove any accumulated dirt or debris,
 - 22.9.1.3 Dismantle appurtenant piping as described below, and
 - 22.9.1.4 Install a 4" D.I. plug and gasket on the 4" D.I. flange end (three each tank) as described below.
- 22.9.2 The following temporary tank components shall remain in place, and remain property of the Department of Water, at the end of the project:

- 22.9.2.1 10,000-gallon temporary tanks,
- 22.9.2.2 tank concrete foundations,
- 22.9.2.3 wind/seismic tank restraint systems,
- 22.9.2.4 bulkhead fittings (three each tank),
- 22.9.2.5 4" D.I. flange end (three each tank), and
- 22.9.2.6 4" vent with stainless steel insect screen.

22.9.3 The following temporary tank piping and appurtenances shall be removed and disposed of at the end of the project

- 22.9.3.1 Above ground 4" D.I. piping, fittings and valves,
- 22.9.3.2 4" D.I. caps shall be installed on open ends of abandoned piping, and
- 22.9.3.3 Concrete support blocks for the appurtenant piping,

22.10. PAYMENT: Payment for the furnishing, installation, connection and removal of the temporary tank system, except for the temporary tanks and the concrete pads and foundation, shall be part of the respective Lump Sum of the Proposal item.

END OF SECTION