Coate Concrete Products



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Installation Check List

for installers and inspectors to meet the specified criteria of Hamilton County's Quality Installation Assurance Plan

Pre-Cast Concrete Septic Tank Specifications



Scope and Applicability

This specification will cover the requirements for the design, installation, of pre-cast concrete septic tanks. It will also provide requirements regarding the risers and other components, such as inlet/outlet seals, riser lids, etc. It is important to note that this is a specifica-

tion for the design and installation of pre-cast concrete septic tanks only, for other aspects such as location. sizing, and other uses of these tanks, it will be necessary for the Engineer/Individual specifying or using these tanks to obtain the guidance and direction of the **Heath District overseeing the project.**



General

The following are general requirements for all tanks regardless of their location or function:

- 1 Tanks, including any risers, riser to tank connections, and inlet/outlet seals shall be watertight.
- 2 In the field watertight tank test shall be performed in accordance with this specification or the Health District

requirements, whichever is the more stringent requirement.

3 Tanks shall be ballasted against flotation once set, until cover fill is placed over top of septic tank per minimum/maximum Depth Specification shown on Tank Drawings and approved for installation and operation according to this specification.



Design • Installation

Tank Excavation

1 The tank location approved by the Health District for the installation,

shall be excavated to the elevation provided on the design plans, plus an additional six



Tank Bedding

1 The bedding subgrade shall be placed in such a manner as to create a level-bearing surface, free of any rocks, boulders, or other deleterious materials that

- (6") inches for bedding and a minimum of twelve (12") inches wider on each side of the septic tank.
- 2 A firm and uniform base of virgin soil shall be achieved with the removal of any soft or organic soils.



may cause harm to the tank.

2 The installer shall provide and install a minimum of six (6") inches of washed pea gravel.

Tank Joint Seals 1 All tank joints shall be clean and free of debris prior to ay sealing material being applied. Check ✓or Initial 2 Joint sealant shall be ConSeal CS-665, Flexible

Butyl Resin Sealant or approved equal.

3 Sealant shall be applied in the valley of the joint groove (see joint detail) and allowed compress completely before backfilling around tank (see manufacturer specification).



- **Tank Backfilling** 1 Pea gravel or approved backfill material shall be placed around the tank at a minimum width of twelve (12").
- 2 Backfill material shall be placed in such a manner as to provide uniform support, which shall be compacted to 96% dry density under the piping entering and exiting the tank, no settlement.

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Installation Check List part 2

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Tank Riser Connections/Riser(s)

- 1 Riser connections shall be made with twentyfour (24") inch **Orenco Tank Adapters (PTRA24),** cast into the tank top to secure the riser and create a waterproof seal between the tank and riser.
- 2 Riser(s) shall be twenty-four (24") inch **Ultra-Rib Pipe (RR24XX).**
- 3 Riser(s) shall be attached to riser adapter, by roughening the contact surfaces of the riser and riser adapter and applying **Orenco Systems, Inc.** ADH100 adhesive.
- **4** Care should be taken when backfilling around riser to not affect riser seal, see adhesive manufacturers specifications for curing times.



Tank Inlet/Outlet Pipe Connections

1 Conectors shall be watertight and cast as part of the tank.

2 Connectors shall be Cast-A-Seal gaskets made by **Press-Seal Gasket Corporation.**



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Final Grade

1 See Detail Drawings for minimum and maximum burial depths.

Watertight Tank Field Test

All tanks shall be field tested for watertightness and have the test witnessed by the Health District, unless conditions for exemption of watertight field test procedures are met. Installers are permitted to perform these test procedures prior to the certifying test being witnessed by the **Health District (highly recommended)**. The following procedure is listed in step-by-step fashion and should be followed exactly:

- 1 Install tank, risers, inlet and outlet pipes per Health District's and this specification's requirements.
- 2 Fill tank with water so that the mid tank joint is submerged.
- 3 Check for leakage at this location.

- i. If no leakage noted, go to step #4.
- ii. If leakage noted:
- 1 Contact tank vendor to have leak repaired.
- 2 Repeat steps #2 and #3 until no leakage is noted.
- 4 Backfill around the tank per this specification.
- **5** Place fill material on top of tank to provide ballast.
- **6** Fill tank so that water is at least two (2") inches above the riser/tank joint. Allow time for concrete to absorb water (twenty-four (24) hours).
- **7** Add water as necessary to give no more than two (2") inches of water above the tank/riser joint, but at least above the tank/riser joint.
- **8** Water adjacent to the exterior of the tank is removed so that ponding is below the tank joint or outlet penetration, whichever is lower.



- i. Water level wiithin the riser is marked and time is noted.
 - ii. After one (1) hour, water level is checked against the mark.
 - **iii.** If water level has not changed: Tank passes. Water level changes: Tank is not watertiight. (The installer must take corrective action to find and repair leakage). Note: Tank repairs must be made in accordance with these specifications and acceptable to the Health District. After corrective action was taken, the above steps are repeated, usually at the next inspection or re-inspection.
 - iv. Test failures and repairs will be documented in the inspection record.



Health District must witness watertight tank test. The following steps are performed by the Health District: