

TWIN LAKES REGIONAL SEWER DISTRICT

GUIDELINES FOR INSTALLATION OF BUILDING SEWER TO GRINDER PUMP UNITS

AMENDED 2018

The following guidelines shall apply for all residential, commercial, industrial, governmental and institutional users connecting to the Twin Lakes Regional Sewer District (TLRSD) sanitary sewer system. These Guidelines cover construction of building sewer/laterals from serviced structures to the grinder pump units.

The provisions of this document are intended to retire existing septic systems and to implement uniform sewer connection procedures to prevent infiltration and inflow from entering the Districts sewer system.

I. ADMINISTRATIVE – BEFORE LATERAL/BUILDING SEWER EXCAVATION OR CONSTRUCTION BEGINS:

1. The property owner **MUST** apply for and receive a Sewer Connection Permit.
2. The cost of the Sewer Connection Permit is \$125.00 per connection (residential/detached structures) and \$125.00 per Grinder for Commercial/ Industrial/ Governmental/Institutional Users **and will expire in 90 days.**
 - a. The Sewer Connection Permit will be issued directly to the property owner.
 - b. It is the responsibility of the property owner to renew the Sewer Permit prior to or upon expiration.
 - i. All permits may be renewed at no charge for a second 90-day period provided that the application is filed prior to the expiration date.
 - ii. All permits issued after the 2nd 90-day period will be \$125.00.
 - iii. Fines per the Sewer Use Ordinance will be assessed for non-compliant connections, for permits not purchased, for failing to obtain a valid permit before connection, or failing to timely connect.
 - c. It is the responsibility of the property owner to provide the Sewer Connection permit to the TLRSD qualified contractor or other contractor listed on the permit.

- d. The Sewer Connection Permit must be posted in a conspicuous place on the property to be connected, remain in place during the entire period of connection, and be readily available, as inspectors must submit permit to the District after completed inspection.
 - e. Sewer Connection Permit automatically **expires** upon transfer of property. New property owner(s) must contact TLRSD and re-apply for the permit.
 - f. Any additional copies of the Sewer Connection Permit requested will be charged according to Policy 2006-01, Copying Fees and Charges.
 - g. "As-built" sketches of the sanitary connection are required.
 - i. The sketch shall be on 8 ½" x 11" paper showing the layout including the location of the house, grinder pump, and lateral along with pertinent distances.
 - ii. The sketch must also include the location of clean-outs, back-flows, 45's, 22.5's, pipe sections, ferncos, etc. as well as any other items placed underground during the connection process.
 - h. Sewer Connection Permits can be obtained at TLRSD at 921 W. Executive Court, Monticello, Indiana 47960 during regular business hours (Monday-Friday 8:00 a.m. – 4:00 p.m.).
3. Before building sewer excavation or construction begins, it shall be the responsibility of the property owner and/or contractor to have all underground utilities located.
- a. A free service is provided for utility locations by calling 811. There is a required 48-hour advance notice prior to the commencement of any excavation.

II. INSURANCE – BONDING

Per Ordinance 99-01, Sewer Use Ordinance, Section 5.4, Building Sewers:

"The owner of a building or premises to be provided sewage disposal service by the District or his authorized representative, shall be responsible, at his own cost, for the installation, connection and maintenance of the building sewer for such building or premises up to and including the service connection in accordance with the specifications of the District. No building sewer shall be covered until it has been inspected and approved as adequate and acceptable construction, size and location by the District. **The Owner and where appropriate, his authorized representative, shall indemnify and hold the District and its employees, agents and representatives free and harmless from any and all liabilities or**

responsibility for all injury, loss or damage that may result directly or indirectly from the installation, connection or maintenance of the building sewer.”

Prior to execution of the work, all contractors must procure and maintain insurance. In addition, all contractors and their subcontractors engaged in providing all or any part of the work connecting a building or buildings to the grinder unit, must furnish guaranteed surety to TLRSD in the form of a license/permit bond as specified below.

Insurance - Minimum

- | | |
|---|-------------|
| 1. General Liability | |
| a. General Aggregate | \$1,000,000 |
| b. Operations Aggregate | \$1,000,000 |
| c. Personal Injury | \$1,000,000 |
| d. Each Occurrence (Bodily injury/Property Damage | \$1,000,000 |
| e. Medical Expense (Any one person) | \$ 5,000 |
| f. Damage to Rented Premises | \$ 100,000 |

Bond - Minimum

- | | |
|-----------|----------|
| 1. Surety | \$10,000 |
|-----------|----------|

Homeowners completing work without a contractor shall either present a Property Owner's policy amended or obtain a separate policy to cover damages to the public sewer system from their activities. Such coverage shall be in an amount no less than \$10,000 and be evidenced by proof of insurance to be submitted at time of application.

III. CONNECTION GUIDELINES

1. The use of mechanical excavation (digging) equipment is prohibited within four (4) feet of the grinder unit.
 - a. All excavations (digging) four (4) feet or closer to grinder unit **must** be by hand only.
2. The Property owner may do their own lateral work from inside the structure to the sanitary sewer connection at the grinder unit.
3. If the property owner is contracting out the installation of the lateral, it is suggested using a TLRSD qualified contractor, who has completed the steps in sub-paragraph b, below.
 - a. "Qualified" contractors are insured (\$1,000,000 minimum) and bonded (\$10,000 minimum). The contractors bond is classified as a "License & Permit" bond.

- b. "Qualified" contractors and their employee(s) engaged in the installation and connection of sanitary sewers to the TLRSD sewer system shall have attended one complete TLRSD training session, as well as any mandatory review sessions required on the "Installation and Connection of Sanitary Lateral Piping". The complete training session is 3 hours and requires the attendance of a company principal and/or its designated representative; the foreman for each crew must attend the training and be on site during installation if more than one crew is working. Without certification of attendance, proof of insurance and bonding, contractors shall not be included on the list of "qualified" contractors provided by TLRSD.
 - c. "Qualified" contractors are independent contractors and **ARE NOT** agents or employees of TLRSD.
4. Prior to final connection to the collection system, it shall be required to disconnect all non-waste producing units from the building sewer line (i.e. sump pumps, foundation drains, roof down spouts, etc.).
- a. Under no circumstances may groundwater, rainwater or any other source inflow be discharged into the sanitary sewer system. Excess groundwater and/or rainwater allowed into the system either through leaky joints or direct connections reduces the design capacity of the treatment plant for the sanitary wastes. Further, it uses up the future capacity of the treatment plant so that other dwellings or businesses cannot hook on to the collection system.
 - b. For these reasons all building sewers shall be constructed with new material from within three (3) feet of the building structure to the sanitary grinder pump.
 - c. The inspector will check specifically for the complete disconnection of ALL non-wastewater connections before approving the installation of the building sewer.
 - i. This will require the inspector's entrance into the building and/or basement.
 - ii. It will be the responsibility of the contractor/property owner to ensure that the inspector has access to building or basement. If not, the installation will not be approved until access is available.
5. Under no circumstances may sand, grit, grease, oils, solvents, gasoline or any other such substances be discharged into the sanitary sewer system.
6. Non-residential properties engaged in food service or food processing must include an acceptable and District approved grease trap.

7. Property owners will be responsible for the maintenance of the building sewer from the building to the grinder unit. If a grease tap is installed it is the property owners responsibility to maintain. Strict adherence to these guidelines is essential in order to prevent costly future maintenance problems and higher sewer fees.
8. Property owner and/or qualified/non-qualified contractors must comply with the Twin Lakes Regional Sewer District Sewer Use Ordinance and Sewer Rate Ordinance. Violations of the Ordinances and/or these Guidelines can result in the imposition of a fine.
9. Any modifications to plumbing shall be performed in accordance with Local and State Code.

IV. MATERIALS REQUIREMENTS

1. Building sewers/laterals pipe and fittings shall be a minimum of four (4) inches in diameter and shall have elastomeric joints, conforming to the requirements of ASTM F-77 and ASTM D-3212 standards, commonly called "push-on" joints.
2. Glued joints **ARE NOT** permissible.
 - a. All joints shall be watertight and be of "push on" elastomeric type, or neoprene with stainless steel bands (commonly called Fernco's or Mission couplings)
3. PVC pipe and fittings shall be schedule SDR-35 or greater quality.
4. Cleanout tees shall be "double direction" sweep design (Two Way Cleanout).
5. Backflow preventers shall be those as approved and specified by TLRSD.
6. All vertical pipe materials shall have frost sleeve with cap (it may be made of corrugated plastic material).

V. INSTALLATION REQUIREMENTS

A. PREPARATION

1. Prior to beginning the lateral inspection and after utility lines have been located, the Contractor or homeowner shall photograph the grinder, the electrical panel and the lateral route to the sanitary connection.
2. Prior to the start of the work, both the location and elevation for the building sewer and grinder unit stub must be identified to determine if slope is available in the allowable distance.

2. Building sewers shall be installed using the shortest and most direct route to the grinder pump. Interior plumbing modifications are recommended if necessary to avoid excessive changes of directions in building sewer.

B. VENT

1. A 4" vent is required if no plumbing vent has been installed in the house.
 - a. The vent shall be located within 4' of the building on the building sewer.
 - b. Should extend approximately four (4) feet above grade.
 - c. Located after backflow and before clean out (Note this vent can also be utilized as a clean out)
 - d. The vent must incorporate a stainless steel screen.
 - e. Must have a removable top section (see Figure 1).
 - f. Shall have a full height vertical frost sleeve with cap (it may be made of corrugated plastic material).

C. CLEANOUT

1. A cleanout must be installed for routine maintenance.
2. Must be accessible.
3. One (1) required at the exit point of the building.
4. Sewer cleanouts shall be installed a maximum of every 100 feet along the building sewer.
5. There shall be one (1) installed when there is a horizontal directional change of ninety (90) degrees or greater.
6. Cleanouts shall extend to four (4) inches above finished grade.
7. Shall have a full height vertical frost sleeve with cap (it may be made of corrugated plastic material).
8. The cleanout shall be a double-direction tee fitting installed with adequate above grade access.
9. Cleanouts shall be the same diameter as the lateral sewer pipe, with a minimum size of 4 inches in diameter.

10. Cleanouts shall be covered with a removable type plug or cap—**no thin wall caps.**

D. BACKFLOW PREVENTER

1. A back-flow prevention valve must be installed on all building and structure lateral connections that are connected to any grinder unit.
2. Any backflow that is deeper than 14" CAN NOT be used as a cleanout. Lateral must have a clean out directly after it as the backflow is too deep and becomes a non-functional service point for trouble shooting of the grinder. Unless it is designed as serviceable and is approved for use by the TLRSD.
3. The back flow prevention valve shall be installed between structure and cleanout wherever possible.
4. The back-flow prevention device must be of like material as the building sewer lateral.
5. Shall be connected to sewer lateral with a FERNCO or Mission coupler.
6. Shall extend four (4) inches above finished grade level and must be completely accessible from ground level.
7. Shall have a full height vertical frost sleeve with cap (it may be made of corrugated plastic material).
8. The inspector will **NOT** approve for connection any installation without an approved back-flow prevention device.

E. LATERAL PIPING/BUILDING SEWER

1. Lateral sewers shall be installed using the shortest and most direct route to the grinder unit.
2. All fittings shall be installed to guide sewage in the direction of flow.
3. There shall be NO ninety (90) degree elbows installed in the lateral sewer system. Their use will cause the connection to be denied.
4. A directional change is defined as anything greater than forty five (45) degrees in ten (10) lineal feet.
5. If a directional change greater than forty five (45) degrees is required:

- a. The directional change must be accomplished with multiple fittings with at least four (4) inches of clear distance between them, and
 - b. It is suggested that a cleanout be installed between them.
6. The building sewer piping shall be at least 30 inches below grade whenever possible.
 7. The building sewer (lateral), four (4) inches in diameter shall be placed with a minimum uniform slope of $\frac{1}{4}$ inch per foot.
 - a. If pre-approved by the District, a six (6) inch diameter building sewer (lateral) shall be placed with a minimum uniform slope of $\frac{1}{8}$ inch per foot. A reducer may be required to connect to the stub.
 8. In instances where pressure sewer laterals must be connected, due to inadequate or negative slope between building and grinder unit, pipe shall be PVC schedule SDR 21 with push on joints.
 9. Bedding the pipe with sand or pea gravel is required from **4" below the pipe to 6" above the top of the pipe.**
 - a. Pipe must be bedded for inspection of pipe material and joints.
 - b. Some backfill may be used to stabilize the piping, however the inspectors must be able to determine slope, material type and view all joints.
 - c. **Native soils may be used only if they consist of sand or other similar materials.**
 - d. **Native materials that include vegetative or other organic material, any type of refuse, large pieces or fragments of concrete, large stones, boulders, clay, rock or other similar materials is unacceptable and shall not be used.**
 - e. Bedding shall be carefully placed up to the center line of the pipe, making sure the lower portion of the pipe is firmly bedded and supported.
 - f. The trench section from the center of the pipe to a point three (3) feet above the pipe shall be carefully backfilled with suitable excavated material, sand or pea gravel. The materials listed in section 9d are not suitable bedding materials.

10. At all times during the work, proper care must be taken to keep the trench and any other excavations free from any ground water and/or surface water.
 - a. Suitable equipment must be supplied and maintained to keep excavation dry until the sewer pipe bedding and backfill are complete.
 - b. Drain or pump water away from the work to a suitable location without interference to adjoining property.

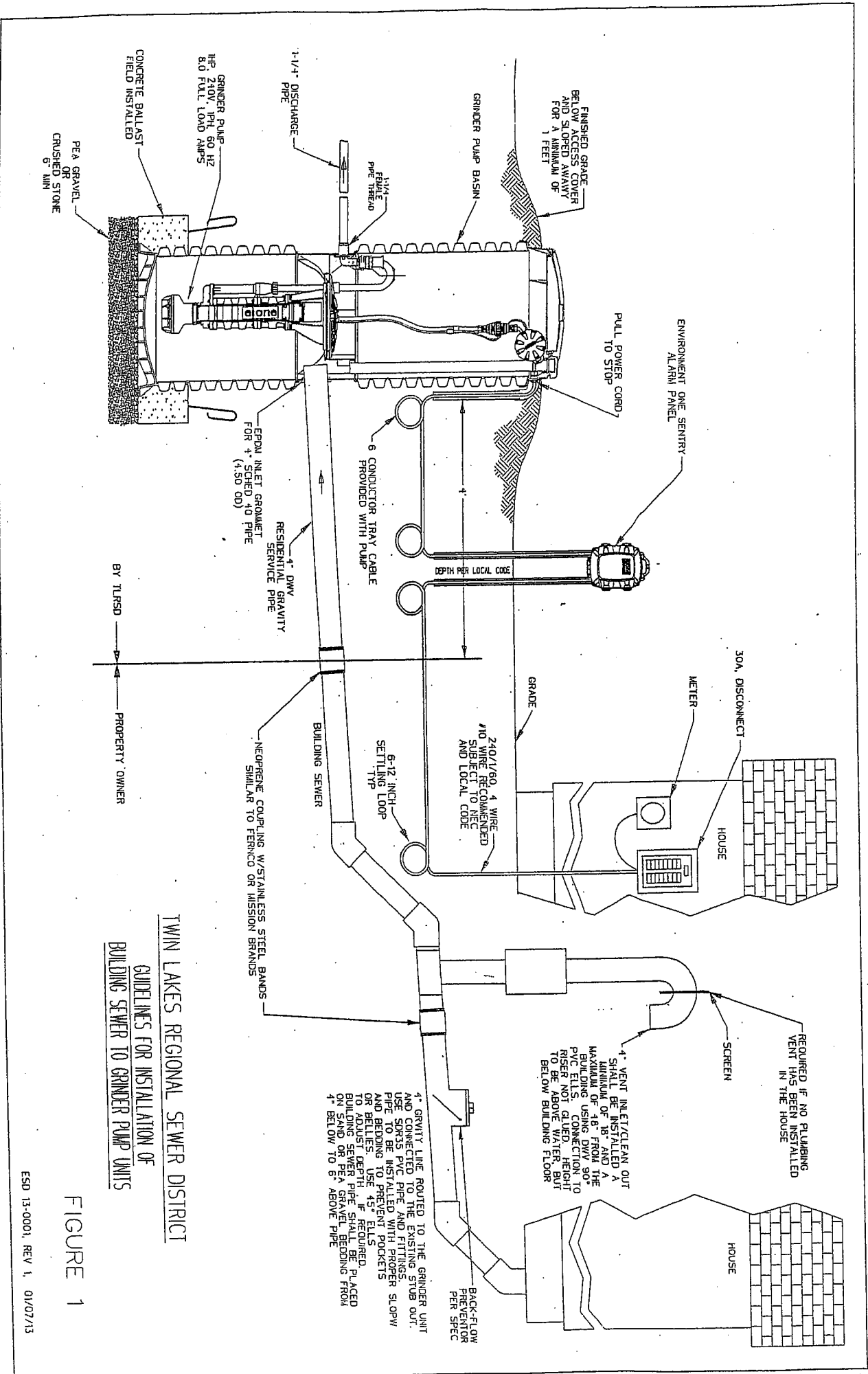
11. The grinder stub is to be marked with a black permanent marker at the point the stub enters the grinder unit.
 - a. The stub rests against a clip inside the grinder unit. Pushing the stub in will cause the pipe to jam against pump resulting in future back up of wastewater to the residence after connection has taken place.
 - b. The inspector will check for this marking.
 - i. If no marking is found, the inspector will terminate the connection work and call District to open and inspect grinder unit.
 - ii. All expenses incurred for this inspection will be billed to the property owner.

12. The homeowner and/or contractor is to cut and remove the existing solvent weld cap from the end of the existing grinder unit gravity line stub and connect the new building sewer to it, using only a Fernco or a Mission coupling.

VI. SEPTIC TANKS ABANDONMENT

1. All existing septic tanks, holding tanks and drywells, including any and all buried containers and receptacles presently tied into the building and collecting waste, shall be disconnected and properly abandoned or removed.
2. All tanks, basins, containers, etc. shall, prior to backfill or removal, be cleaned (pumped) by a licensed septage service. Such work can be evidenced by a pumped/filled receipt.
3. Containers or receptacles constructed of materials subject to deterioration over a short period of time shall be removed and hauled from the site.
4. Contractors shall include in the costs of their projects the necessary septic tank pumping and filling per the County Health Department guidelines. A copy of the pumping/hauling receipt must be provided to the sewer district within ten (10) days from the completion of the connection project.

5. At the time of the connection/installation the **INLET** pipe to the septic tank and the discharge pipe from the septic tank **MUST** be permanently capped and left exposed for the inspector to see.
6. Under no circumstances shall connection to building sewer be made through septic tanks unless written permission is given by the District. In those cases, the written authorization will be attached to the Permit.
7. See enclosed requirements and guidelines regarding the Abandonment of Septic and Dose Tanks provided by the County Department of Health.
8. **Prior to backfilling** over the building sewer installation, all construction shall be:
 - a. Inspected and approved by an inspector from TLRSD for verification of compliance with the standards contained herein.
 - b. Any building sewer back-filled prior to inspection approval shall be required to be re-excavated at the property owner's expense, for proper inspection and approval.
 - c. The property owner or contractor must make available a source of water to properly test and cycle the grinder unit after connection.
 - d. Contact TLRSD at (574) 583-5649 or (877) 810-2814 after the installation is complete and a TLRSD inspector will be sent to complete the inspection.



TWIN LAKES REGIONAL SEWER DISTRICT
 GUIDELINES FOR INSTALLATION OF
 BUILDING SEWER TO GRINDER PUMP UNITS

FIGURE 1

Abandonment of Septic and Dose Tanks

Following connection to the Twin Lakes Regional Sewer District's (TLRSD) sanitary sewer system, property owners are required to properly abandon the existing tank or tanks.

Tank abandonment is required to prevent creation of a rodent/insect habitat that would present a health risk to persons living in the area. A copy of the regulatory justification is on the backside of this notice. Tanks to be abandoned shall include all septic tanks and dose tanks. Any grease traps or other system components required by the District need not be abandoned.

The tank(s) should be abandoned within 10 days of connection to the sanitary sewer system. The District will forward all non-compliant tank abandonments to the Health Department for their review/action.

The contents of the septic/dose tank shall be removed (pumped empty) and properly disposed of by a licensed waste management firm. Any pumps or other mechanical or electrical equipment in the tank shall be removed prior to abandoning the tank. After the tank or tanks are emptied, the tank(s) must be filled with sand or pea gravel. The tank(s) may be removed and disposed of in a licensed landfill if desired.

In those cases where a non-movable structure has been built above the tank, an opening is to be made into an accessible portion of the top or side. Following the removal of the tank contents, the tank is to be filled with material not subject to settling. The tank is to be filled avoiding the creation of a headspace between the top of the aggregate fill and underside of the top. Concrete may be substituted for a portion (top) or entire aggregate fill to more easily avoid leaving a headspace in the tank.

For drain or sewer line installations required through the area of the tank(s), the contents are to be removed and properly disposed of. Under no circumstances shall connection to building sewer be made through septic tanks unless written permission is given by the District. The tank should be removed or broken to ensure that water will not accumulate in the tank space. Fill material and pipe bedding must meet the requirements of the TLRSD.

It is important to make sure that the abandonment or the removal process is not a health or safety threat to those conducting the procedure, to the homeowners or to others in the community.