

Installation Basics for On-Site Wastewater Treatment Systems

These are general installation principles only, based on industry standards and SJBPH regulations. Refer to SJBPH On-site Wastewater Treatment System (OWTS) Contractor's Handbook for more information and specific requirements.

1. Get a copy of the OWTS permit once it is issued, with SJBPH's Authorization to Construct signature and the Professional Engineer's OWTS design.
2. Carefully review the OWTS design and all permit conditions prior to any construction or installation:
 - A. Soil
 - If bedrock or groundwater is encountered at a depth that is inconsistent from that reported in the design, or a different soil type is encountered, stop construction and contact the engineer and SJBPH.
 - B. Pipe
 - Fall in the pipe to the tank should be at least $\frac{1}{4}$ " per foot and should be at least $\frac{1}{8}$ " per foot ($1\frac{1}{2}$ " per foot is recommended maximum) from tank to field.
 - The pipe to the tank must not have any short sweep 90° bends or "T" fittings. 90° elbows may be used in conjunction with a cleanout.
 - A building-sewer cleanout should be installed outside the foundation. If the tank is located more than 100 feet from the house, additional cleanouts must be installed every 100 feet.
 - Schedule 40 PVC pipe is recommended within the tank excavation. No pipe joints should be installed within the tank excavation. Joints should be placed on undisturbed ground outside the tank excavation.
 - Schedule 40 PVC pipe is required under roads and driveways.
 - Water line and irrigation ditch crossings or encroachment require sewer line (or water line) encasement.
 - C. Septic Tanks
 - Tanks must be set at least 5 feet from dwellings and 10 feet from property lines.
 - Tank must be set level and placed on a stable base to minimize settling.
 - Tank must have a minimum of 12 inches of cover.
 - Tanks should be pumped every 3-5 years (more often with a garbage disposal).
 - Tanks must be at least 50 feet from all water wells.

- All new tank installations require watertight riser and lid to access all compartments from grade.

D. Soil Treatment Area (STA) AKA leach field

- Field must be a minimum of 100 feet from all wells.
- Do not construct STA's while soil is wet or frozen.
- The infiltrative STA surface must be level.
- Inspection ports are required at the inlet and terminal end of each line; at all corners of a bed is acceptable. This helps delineate STA footprint.
- The STA must be graded to ensure positive drainage (away from) after settling and be protected from storm water run on, irrigation water, etc.
- To avoid soil compaction, heavy equipment should not enter the STA excavation.
- All traffic should be restricted from STA post-construction and livestock should be fenced out.

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3. Coordinate all installation activities and schedule inspections with the designer and SJBPH. Contact the Professional Engineer or SJBPH if you have any questions.
4. Contact the Environmental Health office at 970-335-2052 to inform SJBPH when you are about to start the installation, be sure to provide the OWTS Permit #, property owner's name, and address. This helps SJBPH to plan for upcoming fieldwork.
5. Contact the designer to inform him/her that you (as a licensed OWTS Installer) are ready to begin the installation/construction of the "approved" OWTS. Prior to any construction, arrange for the designer to meet with you at the site/property to stake out the location of the OWTS components, as needed.
6. Install the authorized OWTS design according to all Plans, specifications, and permit conditions. Have all solid sewer lines bedded and ready for cover.
7. Do not change the OWTS design specifications or system location or orientation unless authorized by the designer and SJBPH (best if all changes/approvals are in writing).
8. If your OWTS design includes a siphon or a pump (Uniform Pressure Distribution), then a Wet Test is required to verify uniform distribution and pressure. Orifices need to be straight-up (12:00 o'clock) to conduct the Wet Test. Ask your Professional Engineer or SJBPH if you have any questions.
9. Contact SJBPH, and the designer, when construction of the OWTS has been completed but not yet backfilled, to request a Construction Inspection. Two business days' notice is required. Remember, do not backfill the system until authorized to do so by the designer and SJBPH.
10. After the designer and SJBPH have inspected and approved the system installation, complete the backfilling, landscaping and surface diversion ditches as specified on the design. Contact the designer, or SJBPH, if required, for a final grade inspection.