

Operation & Maintenance Recommendations

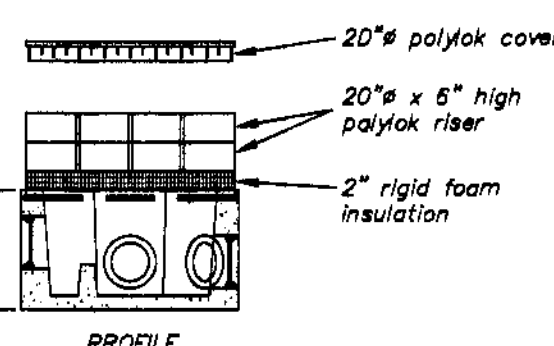
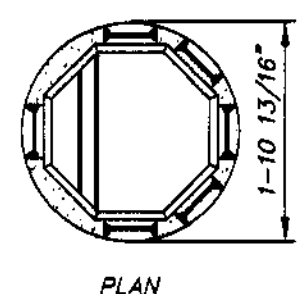
- The septic tank's purpose is to settle out solids, contain the scum and pass treated effluent. Bacteria within the septic tank helps decompose the solids. Should any solids pass through the septic tank into the system, premature clogging of the piping, stone or native soil beneath the system is likely to occur. Only human wastes should enter the sewage system, water use should be conservative and cleaning agents cannot enter the system, as they kill bacteria.
- Once per year, the depth of scum and sludge in the septic tank should be measured and the tank shall be pumped.
 - The sludge level is within 12 inches of the bottom of the outlet.
 - The scum layer is within 3 inches of the top of the outlet.
 - If A or B is anticipated to occur prior to the next inspection.
 - In any case, the tank shall be pumped at a maximum 4-year interval.
- Once a year, the septic tanks, pump chambers, distribution box and effluent filter should be inspected by a qualified professional. The person that performs the inspection is cautioned to consult with a health professional prior to performing the above items. Any settled solids should be removed from the distribution box and the effluent filter should be cleaned.
- Above items 1-3 are intended to prolong the life of the system, not guarantee it.
- The Designer is not responsible for use of the system in ways that are not consistent with the design of the system such as but not limited to chemicals, septic system additives, garbage disposals, backwash from softeners or other water treatment devices, poor maintenance, or abnormal weather.

Construction Specifications

- Note: Prior to construction, the contractor shall notify DigSafe (1-888-DIGSAFE), and the engineer will pre-approve all materials, including stone.
- The outlet pipe from the septic tank to the distribution box shall be 4 inches SDR35 PVC, at a minimum slope of 1/8 inch/ft. The pipe shall be laid on undisturbed ground or properly bedded.
 - A distribution box shall be installed between the septic tank or pump station, if applicable and the absorption trenches. The distribution box shall be set level, on undisturbed ground to evenly distribute the effluent to each distribution line. Adequate provisions shall be taken to assure the stability and accessibility of the distribution box for inspections. Levelness of the distribution box shall be witnessed by the engineer and an authorized Town Representative.
 - Each distribution line shall connect individually to the distribution box and exit at the same slope for the first 5 feet to 10 feet. The pipe connecting the distribution box to the distribution lines shall be watertight and laid on undisturbed ground or properly bedded.
 - When the trenches have been excavated, the sides and bottom shall be raked to loosen any smeared soil surfaces.
 - Construction equipment shall be kept off the area to be used for sewage disposal as much as possible to prevent compaction of the soils.
 - Placement of crushed stone in the trenches shall be initiated immediately after trench excavation is completed. This will require that the engineer and authorized Town Representative be present at the time of completion of trench excavation (see inspection specifications).
 - 18 inches of clean crushed stone (3/4 to 1-1/2 inches) shall be placed in the bottom of the trenches in accordance with the plans. The distribution line shall be carefully placed on the bedding at a uniform slope (1/8 inch per 10 feet) and covered with at least 2 inches of stone. The ends of the distribution lines shall be capped.
 - The grading shall direct run-off away from the septic system areas and be smooth and free of pockets with sufficient slope to ensure drainage.

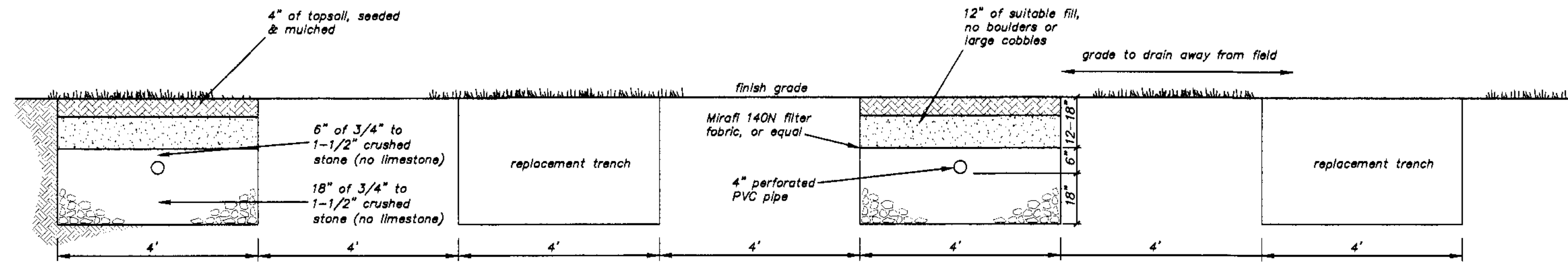
Inspection Requirements

- The contractor shall notify the engineer and authorized Town Representative a minimum of 24 hours in advance for inspection of the bottom of the trenches prior to placement of stone and piping.
- The contractors shall notify the engineer and authorized Town Representative a minimum of 24 hours in advance for inspection of the system prior to backfilling, including the distribution box (levelness check) and septic tank.
- Lots requiring pump stations: witnessing of pump on, off and alarm operation. Check of pumping rate and emergency storage volume.
- This design must be inspected by LaRose Surveys, P.C., Bristol, Vermont to ensure compliance with these plans. LaRose Surveys, P.C. waives any and all responsibility and liability for problems that arise from failure to follow specifications, and the design intent that the plans convey, and from failure to have been notified by the contractor for inspections.



- Notes:
- Distribution box to be set on 6" of granular base.
 - "Dial-A-Flow" or equal flow equalizers are required.
 - Distribution box and Dial-A-Flow equalizers shall be water leveled.
 - All pipe penetrations shall be sealed with water plug non-shrink hydraulic cement.
 - Distribution box cover shall be set so that it is flush with finish grade.

Pre-Cast Distribution Box

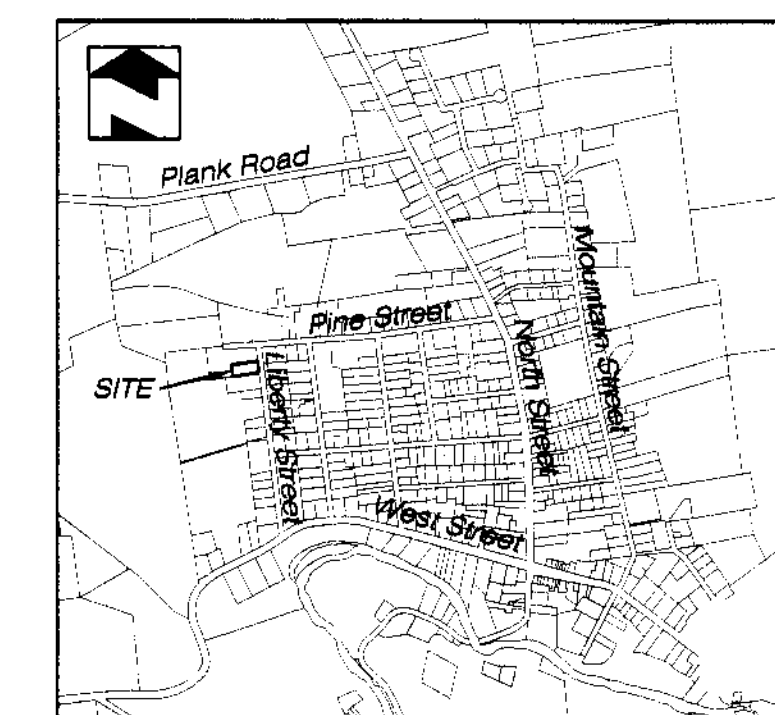
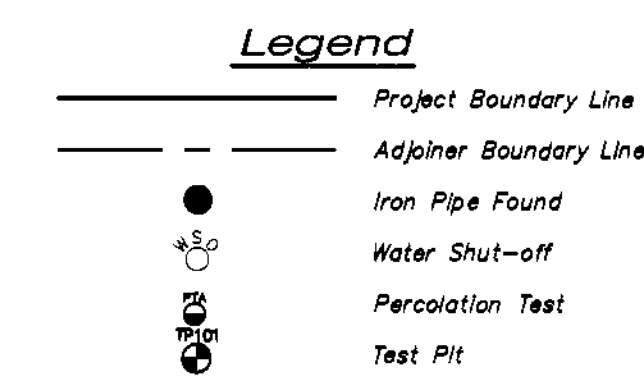


- Notes:
- Do not allow construction traffic, driving, or parking on top of the system.
 - Trench excavations shall be level over the entire length and level across the trenches.
 - The trench sidewalls and bottom shall be undisturbed. Prior to backfilling, call for inspection and rake any smeared soils.

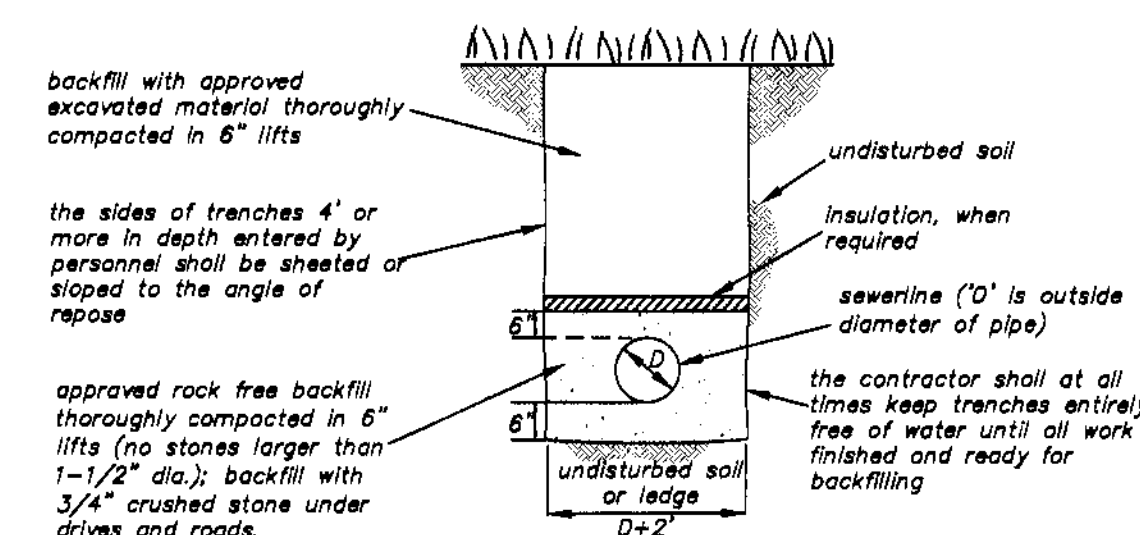
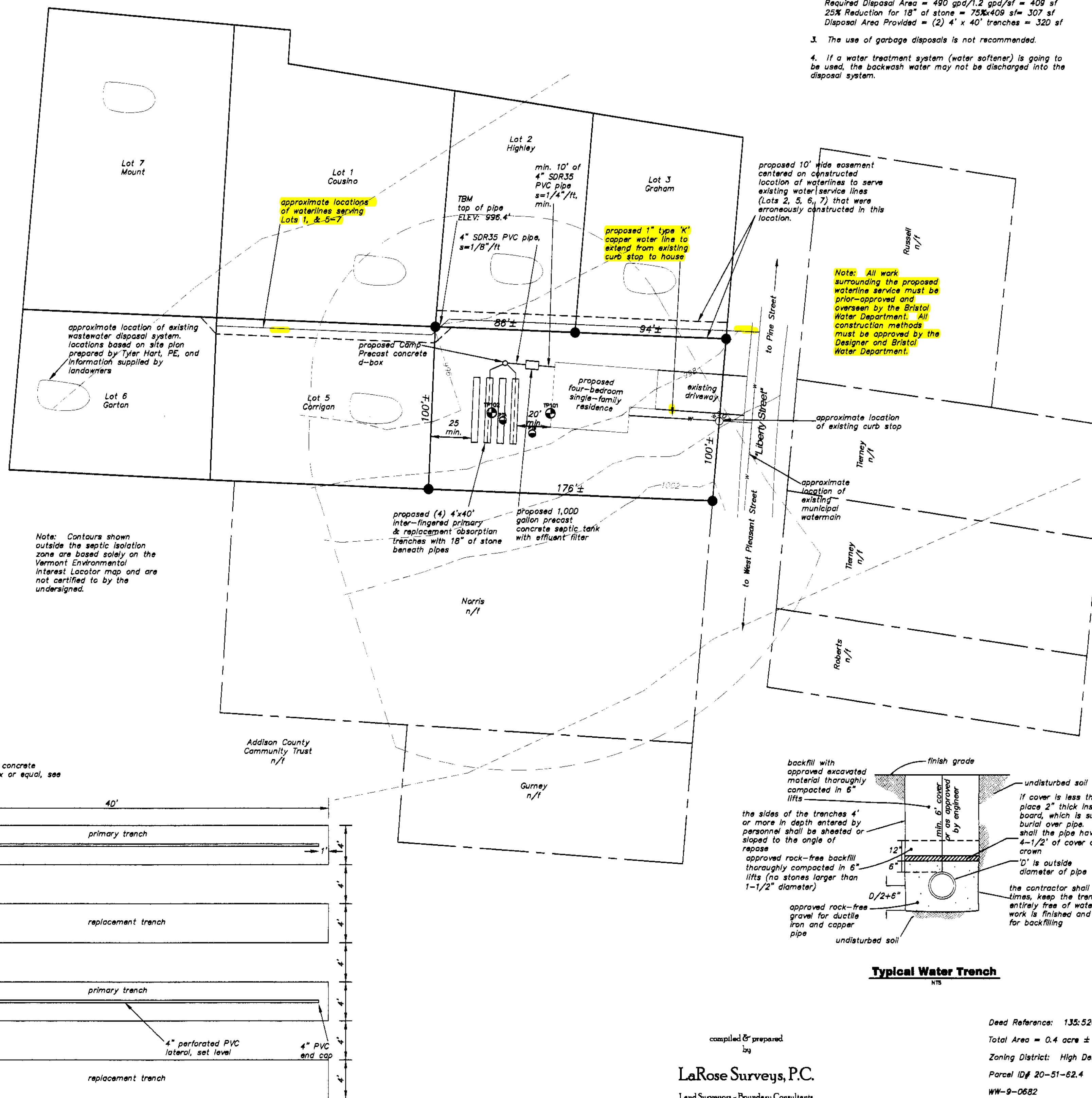
Typical System Detail

Sewage Design Information

- The proposed sewage disposal system shall be constructed in accordance with all applicable Town Regulations and the State of Vermont Environmental Protection Rules.
- Basis of design:
 - Number of bedrooms = 4
 - Number of occupants = 7
 - Number of gallons per day = 490
 - Percolation Rates = Perc Test Depth Rate (mp)
 - A 38" 6.3
 - B 35" 8.1
- Application Rate = $3 / (\text{sart}) = 3 / \text{sart}(6.3) = 1.2$
 Required Disposal Area = $490 \text{ gpd} / 1.2 \text{ gpd/ft} = 408 \text{ sf}$
 25% Reduction for 18" of stone = $75\% \times 408 \text{ sf} = 307 \text{ sf}$
 Disposal Area Provided = $(2 \text{ } 4' \times 40' \text{ trenches} = 320 \text{ sf}$
- The use of garbage disposals is not recommended.
- If a water treatment system (water softener) is going to be used, the backwash water may not be discharged into the disposal system.



Location Plan n.t.s.

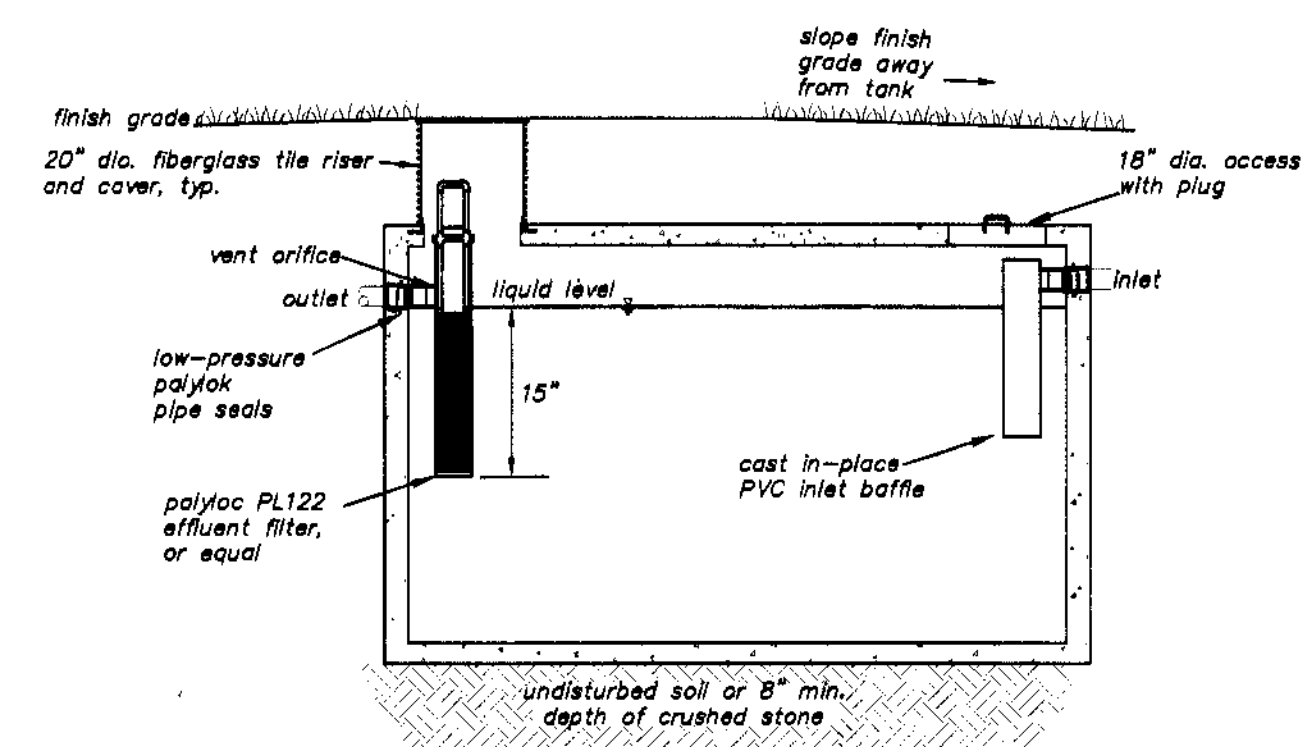


Sewerline Trench

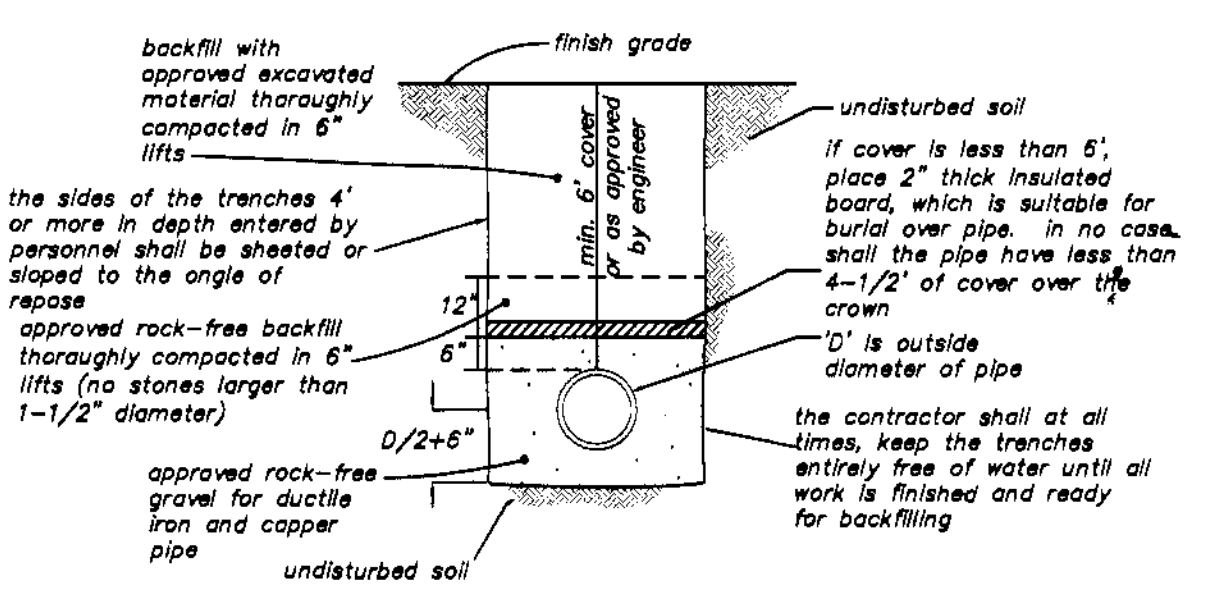
Drilled Well Isolation Distances

Item	Horizontal Distances (feet)		
	Disposal field	Septic tank	Sewer
Drilled well	50	50	50
Lake and pond impoundment - standing water	50	25	25
River, streams	50	25	10
Drainage swales, roadway ditches	25	50	b*
Main or municipal water lines	50	25	b*
Service water lines	25	25	b*
Roadways, driveways, parking lots	10	5	-
Top of embankment, or slope greater than 30%	25	10	10
Property line	25	10	10
Trees	10	10	10
Other disposal field or replacement area	10	10	-
Foundation, footing drains, curtain drains	35	10	-
Suction water lines	100	50	50

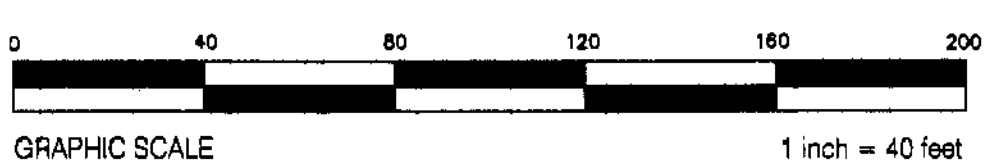
* a) see presumptive isolation zone on plan
 * b) see Vermont Water Supply Rule



- Design Notes:
- Concrete: 4,000 psi after 28 days. Reinforcing 6x6/10x10 and fibers.
 - Heavy-duty septic tank taps reinforced with 5/8" rebar @ 12" o.c. each way.
 - Keyed joint sealed with butyl rubber.
 - Excavation must be at least 12" wider and longer than tank size.
 - Provide watertight pipe connections using pre-fab 4" plastic boots or non-shrink grout.
 - The tank shall be leak-tested for 24 hours prior to backfilling.
 - The cover shall be child-proof.
- 1000 Gallon Seamless Precast Concrete Septic Tank**



Typical Water Trench



Typical System Layout

compiled & prepared by
LaRose Surveys, P.C.
 Lead Surveyors - Boundary Consultants
 Water & Septic System Designers
 P.O. Box 388 - 22A West Street
 Bristol, Vermont 05443
 802.453.3818
 www.larosesurveys.com
 info@larosesurveys.com

Deed Reference: 135:520
 Total Area = 0.4 acres ±
 Zoning District: High Density Residential
 Parcel ID# 20-51-62.4
 WW-9-0682

DEPARTMENT OF ENVIRONMENTAL CONSERVATION
 Approved By: David E. Swift
 Permit #: WW-1-0692-3
 DATE: July 25, 2011

a site plan showing lands of

D. CHAD & MICHELLE S. PERLEE



Liberty Street
 Bristol, Addison County, Vermont

March 1, 2011

PROJECT #11006

THE CONTRACTOR SHALL NOTIFY "DIGSAFE" AT 1-888-DIG-SAFE PRIOR TO ANY EXCAVATION.