

#### SIDE VIEW OF SEPTIC DISPOSAL MOUND, NTS VALVE BOX BALL VALVE 90° SWEEP or 2 45° bends I. TANK TO MEET ASTM C-478 REQUIREMENTS 2. TOP SEAM CONSTRUCTION. FLUSHING VALVE (TYPICAL) 3. SHIM: FLOUT DEVICES SHALL NOT DROP LOWER THAN THE OUTLET. NOT TO SCALE INSTALL A SHIM IF FLOOR IS LOWER THAN OUTLET. SHIMS MUST SUPPORT FLOUTS COMPLETELY & BE WIDE ENOUGH TO ACCOMODATE DRIFT. 4. FLOW DIVERTER: INLET FLOW SHALL NOT ENTER OR INTERFERE WITH THE FLOUT. DIVERT INLET FLOW WITH A TEE, ELBOW, OR SIMILAR BAFFLE TO A LEVEL EQUAL TO OR SLIGHTLY BELOW LOW LIQUID LEVEL. 4" SCH 40 OR 5. FLOW RATES AND CAPACITIES DEPEND ON SIZE OF TANK & DRAWDOWN USED. SDR 35 PVC PIPE. 4" SCH 40 OR SDR 35 PVC PIPE. \/ \/ \/ \/ \/ \/ 4" BOOTED PENETRATION: EFFLUENT SPILLS INTO 4" SCH 40 OR SDR 35 PVC SLOPE PIPE. OVERFLOW/VENT CAVITY & SINKS THE FLOU REDUCE TO 2" APPROXIMATELY 10' IN 2"-3"<sup>1</sup> ELEVATION ABOVE LATERAL PIPES IN MOUND. VENTED INLET TEE MUST HIGH LEVEL OUTLET TEE WITH STATE APPROVED BE INSTALLED WHEN THERE - 12" MIN. IS NO PRE-CAST BAFFLE. DRAWDOWN VOLUME EFFLUENT FILTER. 4 FLOUT REFLOATS WHEN PIPE EMPTIES RUBBER COUPLER DOSE VOLUME IS DEPENDENT UPON TANK PRECAST CONCRETE SEPTIC TANK. CONCRETE SHIM DIMENSIONS & DRAWDOWN. DOSE VOLUME

## SEPTIC TANK DETAIL (TYP.)

## 500 GALLON FLOUT TANK WITH 3" DISCHARGE,

#### TEST PIT LOGS: 7/6/22; by Todd Hill. Robert Pelosi also present; (rain previous night)

#### Harmon, Lot B, Leland Farm Rd, Middlesex

LIKELY NECESSARY)

Test pit # 1: No ledge to 42", dry. Estimated seasonal water table: 24".

1000 GAL. MINIMUM SIZE.. (LEDGE TANK

0-2": loamy topsoil. 10YR 3/4.

2-18": very fine sandy loam, very friable, ABK, 10YR 5/6.

18-21"; very fine sandy loam, very friable, ABK, 10YR 5/4.

21-24": very fine sandy loam, friable, ABK, 10YR 5/3.

24-42": loam, very firm, ABK, 10YR 4/2, faint redox.; dry.

Test pit # 2: No ledge or water. Est. SWT: 21".

0-2": loamy topsoil. 10YR 3/4.

2-18": very fine sandy loam, very friable, ABK, 10YR 5/6.

18-40": loam, firm, ABK, 10YR 4/2, faint redox. from 21"; dry.

Test pit # 3: No ledge or water. Est. SWT: 27".

0-2": loamy topsoil. 10YR 3/4.

2-20": very fine sandy loam, very friable, ABK, 10YR 5/6.

20-27"; very fine sandy loam, very friable, ABK, 10YR 5/3.

27-46": loam, firm, ABK, 10YR 4/2, faint redox.; dry.

Test pit # 4: No ledge, dry. Est. SWT: 18".

0-2": loamy topsoil. 10YR 3/4.

2-16": very fine sandy loam, very friable, ABK, 10YR 5/6.

16-40": loam, firm, ABK, 10YR 4/2, faint redox. from 18"; dry

#### BASIS OF WASTEWATER SYSTEM DESIGN:

3 bedroom house; Design flow: 420 gallons/day.

**Maximum application rate for pressurized mound:** 1.0 gals/sq. ft./day for stone beds.

Minimum Leach field area required: 420 sq. ft..

**Leach field area in mound provided:**  $42^{\circ}L \times 10^{\circ}W = 420 \text{ sq. ft. (stone bed, pressurized)}$ 

### **DESKTOP HYDROGEOLOCICAL ANALYSIS:**

Conservative Seasonal water table: 21". Slope: 12%. Soils: very fine sandy loam. (f): 18.7. Linear loading rate (LLR) = 10 gals/linear feet. LLR = h(water table mounding) x f.

TO BE SET FOR APPROX. 130 GALS.

 $10 = h \times 18.7..$  10/18.7 = .53' (7"). 21"-7" = 14" (induced seasonal water table)36" (required separation ) – 14" = 22" (minimum sand depth under stone in mound)

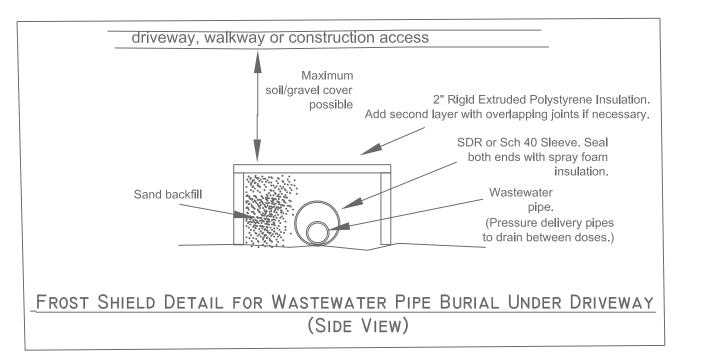
#### **BASIS OF WATER SUPPLY DESIGN:**

3 bedroom house.

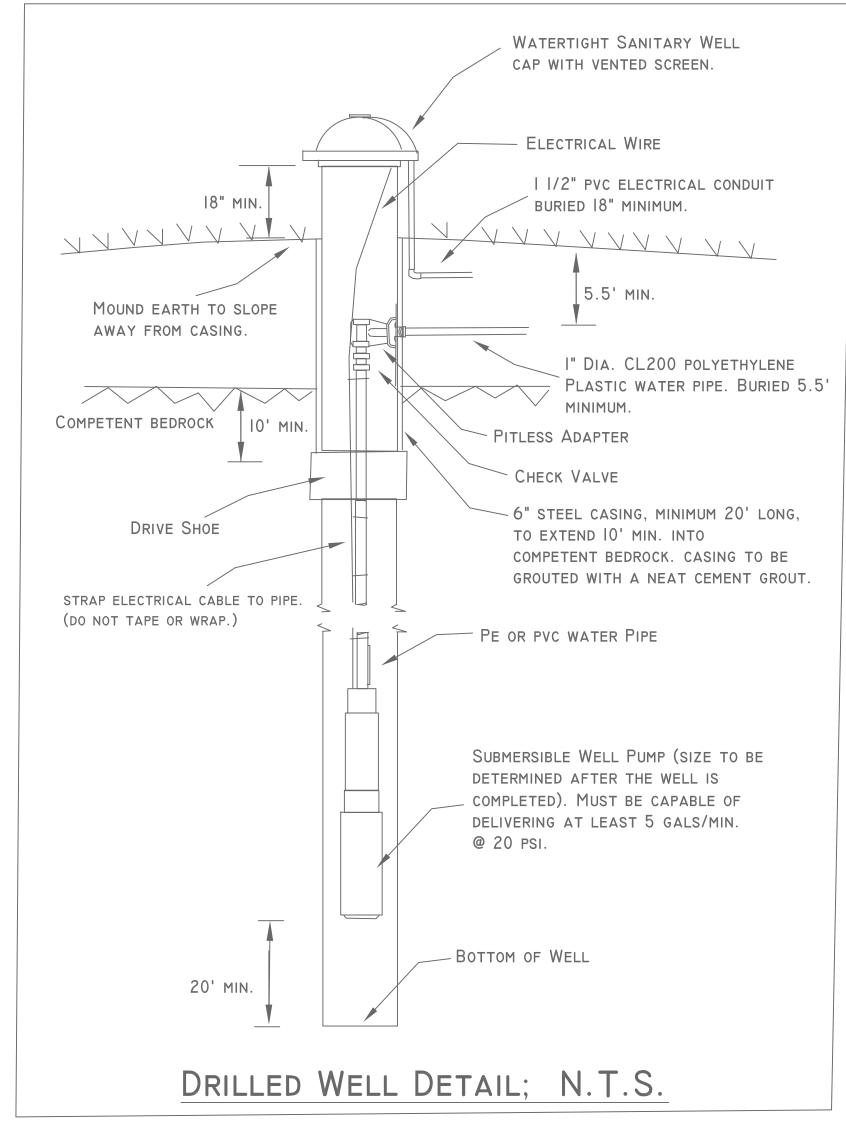
Design flow: 420 gallons/day. Average Day Demand: 560 gallons/day.

Maximum Day Demand: 420 gals/day / 720 minutes = 0.58 gals./ min..

MOUND SAND SPECIFICATIONS THE FILL MATERIAL FROM NATURAL SOIL PLOWED SURFACE TO THE TOP OF OR BED SHALL BE SAND MEETING ONE OF THE FOLLOWING SIVEVE REQUIREMENTS OPENING (MM) PERCENT PASSING, BY WEIGHT 85 - 100 0.420 25 - 75 0.240 0 - 30 0.149 0 - 10 0.074 0 - 5 (2) (THIS IS ASTM SPEC. C 33 AND IS INTENDED FOR MANUFACTURED MATERIAL) OPENING, (MM) PERCENT PASSING, BY WEIGHT 80 - 100 1.190 25 - 60 10 - 30 0.149 2 - 10 OPENING (MM) PERCENT PASSING BY WEIGHT SIEVE NUMBER 9.500 85 - 100 0.420 30 - 50 200 0.074 0 - 5



#### APPROXIMATE PIPE INVERT ELEVATIONS: SEPTIC TANK OUTLET: 1392' +,-FLOUT TANK INLET: 1385' +,-FLOUT TANK OUTLET: 1382'; +,-4" TO 2" DELIVERY PIPE TRANSITION: 1378' +,-MOUND LATERALS: 1368' +,-



- Septic systems are not designed for discharges from garbage disposals, \*water softeners, toxic chemicals, or heavily chlorinated water. Backwash brine from water softeners should be plumbed into a separate Seepage pit.
- Septic tank to be pumped every three to five years, or as necessary. Filter to to be hosed off at least once per year, or as necessary.
- Well & Leach field area to be flagged by designer prior to construction.
- Contact designer (Todd Hill: 244-7835) to notify of construction initiation and to schedule septic system inspection(s).
- Sieve analysis from mound sand source must be provided to designer.

Todd Hill, Environmental Consulting & Design Licensed Designer BW # 341 phone: 802 244-7835 toddhill802@gmail.com

Design certification statement:

I, Todd Hill, a qualified designer in the state of Vermont, certify that the design-related information is true and correct, and that in the exercise of my professional judgment, the design of the potable water supply and wastewater system meets the technical standards

of the Vermont EPR's.

Todd Hill

# ANNMARIE HARMON TRUST

WATER & WASTEWATER DETAILS

LOT B. THERRIEN WOODS SUBDIVISION LELAND FARM ROAD, MIDDLESEX, VERMONT

FEBRUARY 10, 2023