



DESIGN CRITERIA

1. Estimated Hydraulic Loading
3 bedrooms at 110 gals/day/bedroom = 330 gpd
Garbage disposal shall not be allowed with this system.

2. Septic tank size = 1500 gallons

3. Leaching Area Design Criteria
Percolation Rate = $\frac{4}{1}$ mpi (LOAMY SAND)
Soil Class Type = I (LOAMY SAND)
Allowable Loading Rate = $\frac{.74}{1}$ gpd/sf
Required Leaching Area = $\frac{330}{.74}$ gpd/sf = 446 sf
Leaching Area Provided = $\frac{1}{.30}$ bed X $\frac{1.15}{.30}$ ft bed width X $\frac{450}{.30}$ = 450 sf

4. Breakout
Breakout Elevation = 1005.45
Breakout Distance = 15 ft
Distance Provided = 15 ft.

LEGEND

242 - EXISTING CONTOUR
242 - PROPOSED CONTOUR
TP-1 - DEEP HOLE TEST PIT
PH-1 - PERCOLATION TEST
+ 238.6 - PROPOSED SPOT ELEVATION

GENERAL NOTES

- Unless otherwise noted, property lines shown are compiled from existing plans and deeds of record. Proposed buildings and septic system should be located by instrument survey prior to construction.
- All construction to conform to 310 CMR 15.000, "The State Environmental Code, Title 5" and the Board of Health requirements for the Town of WINCHENDON.
- The contractor shall install the system exactly as shown on this plan. If changes are necessary, the contractor must contact the Engineer in advance.
- Heavy machinery shall not be permitted to pass over the leaching area and the contractor shall stake and flag the soil absorption/leaching area perimeter upon completion.
- All piping shall be polyvinyl chloride (PVC) pipe per ASTM D1785 for sch.40 and ASTM D3034 for SDR35 where indicated on the profile, unless otherwise noted.
- The septic tank shall be a Graves Concrete H-10 1500 gallon monolithic tank.
- The distribution box (D-box) shall be a 5 outlet reinforced concrete box of H-10 load design (min.) with a watertight cover and conform to all the requirements of 310 CMR 15.232.
- All topsoil, subsoil and impervious material, if any, must be excavated and removed below and 5' beyond the soil absorption system area. Fill material shall consist of a clean granular sand, free from organic matter and deleterious substances. Mixtures and layers of different classes of soil not be used. The sand fill shall not contain any material larger than 2 inches. A sieve analysis, using a #4 sieve, shall be performed on a representative sample of the fill. Up to 45% by weight of the fill sample may be retained on the #4 sieve. Sieve analyses also shall be performed on the fraction of the fill sample passing the #4 sieve, such analyses must demonstrate that the material meets or exceeds each of the following specifications: 100% passing #4 sieve; 100% - 100% passing #50 sieve; 0% - 20% passing #100 sieve; 0% - 5% passing #200 sieve. (11/95 DEP SPEC)
- For proper performance, septic tank should be inspected at least once a year and pumped when the top of the sludge or solids layer is within 12" or less of the bottom of the outlet tee or the bottom of the scum layer is within 2 inches of the bottom of outlet tee (every 2 or 3 years). INSPECT & CLEAN THE TANK OUTLET FILTER EVERY YEAR!
- There are no other wells located within 150 feet of the proposed system.
- All site drainage shown hereon was approved through a stormwater permit application filed with the Winchendon Planning Board through an engineering review process.
- Benchmarks to be set for the septic prior to construction.

WETLAND REPLICATION DETAIL N.T.S.

ROW OF STAKED WATTLES

WETLAND

EXISTING GRADE

VARIES

PROPOSED GRADE

EXCAVATE REPLICATION AREA BELOW ADJACENT WETLAND ELEVATION

FILL WITH 4" HORIZON (TOPSOIL) FROM WETLAND AREA TO BE FILLED

12" MIN

6" MIN

10' MIN

SOIL TEST DATA

DEEP HOLE & PERC TESTS

PERFORMED BY: PAUL GRASEWICZ, P.E.

WITNESSED BY: JAMES ABARE & STEVE CALICHMAN, B.O.H. WINCHENDON

DATE: JUNE 13, 2022

| DEEP HOLE # | TP-6-3-1 | DEEP HOLE # | TP-6-3-2 | DEEP HOLE # | TP-6-3-3 | DEEP HOLE # | TP-6-3-4 |
|--|----------|--|----------|---|----------|---|----------|
| 10YR FSL | 0" | 10YR FSL | 0" | 10YR FSL | 0" | 10YR FSL | 0" |
| A | | A | | A | | A | |
| 10YR 2/2 | 8" | 10YR 2/2 | 7" | 10YR 2/2 | 8" | 10YR 2/2 | 8" |
| Bw | | Bw | | Bw | | Bw | |
| 10YR 3/6 | 21" | 10YR 3/6 | 16" | 10YR 3/6 | 20" | 10YR 3/6 | 16" |
| FINE SAND 2.5Y 6/6 | | FINE SAND 2.5Y 6/6 | | FINE SAND 2.5Y 6/6 | | FINE SAND 2.5Y 6/6 | |
| C1 | | C1 | | C1 | | C1 | |
| 10YR 6/2 | 31" | 10YR 6/2 | 23" | 10YR 6/2 | 32" | 10YR 6/2 | 30" |
| LOAMY SAND | | LOAMY SAND | | LOAMY SAND | | LOAMY SAND | |
| C2 | | C2 | | C2 | | C2 | |
| 72" | | 65" | | 69" | | 67" | |
| ESWT= 41" 7.5YR 5/8 | | ESWT= 32" 7.5YR 5/8 | | ESWT= 35" 7.5YR 5/8 | | ESWT= 35" 7.5YR 5/8 | |
| GRD EL. 1002.8 ESHWV EL. 999.4 WATER EL. N/A | | GRD EL. 1001.7 ESHWV EL. 999.2 WATER EL. N/A | | GRD EL. 1003.4 ESHWV EL. 1000.5 WATER EL. N/A | | GRD EL. 1003.6 ESHWV EL. 1000.7 WATER EL. N/A | |
| PERC TEST NUMBER | DEPTH | PERC RATE | NOTES | | | | |
| PERC-6-3-1 | 40" | 3 MPI | | | | | |
| PERC-6-3-2 | 39" | 4 MPI | | | | | |

| NO. | DESCRIPTION | DATE | BY |
|-----|-------------|------|----|
| | | | |
| | | | |

DESIGNED BY: TWF
DRAWN BY: TWF
CHECKED BY: PFG
DATE: 6/5/23
SCALE: 1"=20'
JOB NUMBER: 21183

PAUL R. GRASEWICZ
REGISTERED PROFESSIONAL ENGINEER
EXERCISE NO. 35306

PROPOSED SINGLE-FAMILY RESIDENCE SEPTIC SYSTEM DESIGN & NOI PLAN
MAP-8 LOT-242
DOYLE AVENUE; WINCHENDON, MA 01475
PREPARED FOR:
ASHER CONSTRUCTION, LLC
77 NASHUA ROAD
SHARON, NH 03458

GRAZ Engineering, LLC
323 WEST LAKE RD.; FITZ WILLIAM, NH 03447; (603) 585-6959

SHEET 1 OF 1