

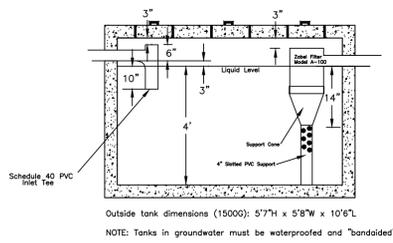
NOTE: All elevations referenced to 40.62' BENCH at catch basin frame and grate, Spring Street (NAVD88)

Soil Logs

| Elevation (Feet) | Observation Hole #1 |      |             |           |      |
|------------------|---------------------|------|-------------|-----------|------|
|                  | Perk Rate =         | Soil | Soil        | Soil      | Soil |
| 36.5             | 0-48                | Fill |             |           |      |
| 32.5             | 48-60               | A    | Loamy Sand  | 10 YR 3/3 | None |
| 31.5             | 60-72               | B    | Loamy Sand  | 10 YR 5/6 | None |
| 30.5             | 72-132              | C    | Coarse Sand | 2.5 Y 5/3 | None |

| Elevation (Feet) | Observation Hole #2 |      |             |           |      |
|------------------|---------------------|------|-------------|-----------|------|
|                  | Perk Rate =         | Soil | Soil        | Soil      | Soil |
| 37.6             | 0-16                | A    | Loamy Sand  | 10 YR 3/3 | None |
| 36.3             | 16-116              | C    | Coarse Sand | 2.5 Y 5/3 | None |

Tank Detail



NOTE: Tanks in groundwater must be waterproofed and "bonded"

Notes:

- On 1/7/2025 soil tests were made, as shown here, by Terence McSweeney, a Massachusetts Department of Environmental Protection (DEP) approved Soils Evaluator, with P. Brennan observing for the Board of Health. The logs of these tests are as follows, with location as #1 and #2 on this plan.
- All stone to be washed free of iron, fines, and dust. All "structures" to be precast concrete. All pipes to be P.V.C. Schedule 40, laid true to line and grade. All "structures" under pavement to be H-20 loading with cast iron covers and frames, set to grade, on all manholes.
- The existing SAS is to be abandoned and disposed of to the satisfaction of the health authority.
- It is the responsibility of the home owner to advise the site engineer of the location of all house plumbing prior to construction of the system.
- No part of the proposed system shall be buried greater than 3' below the surface of the ground.
- All work to conform to these plans, Title 5 of the Environmental Code (310 CMR 15.00 et. seq.) and supplementary regulations of the Hingham Board of Health.
- House plumbing to be set to the grades specified on this plan, as necessary, with a pipe slope minimum of 0.01.
- Geomat Leaching System to be placed on 6" bed of ASTM C-33 sand. These materials must meet the following sieve specifications:
  - 3/8" sieve 100% passing
  - #4 sieve 95 - 100% passing
  - #16 sieve 50 - 85% passing
  - #30 sieve 25 - 60% passing
  - #50 sieve 10-30% passing
  - #100 sieve 2-10% passing
- Results of sieve analysis submitted to Board of Health for approval prior to installation.

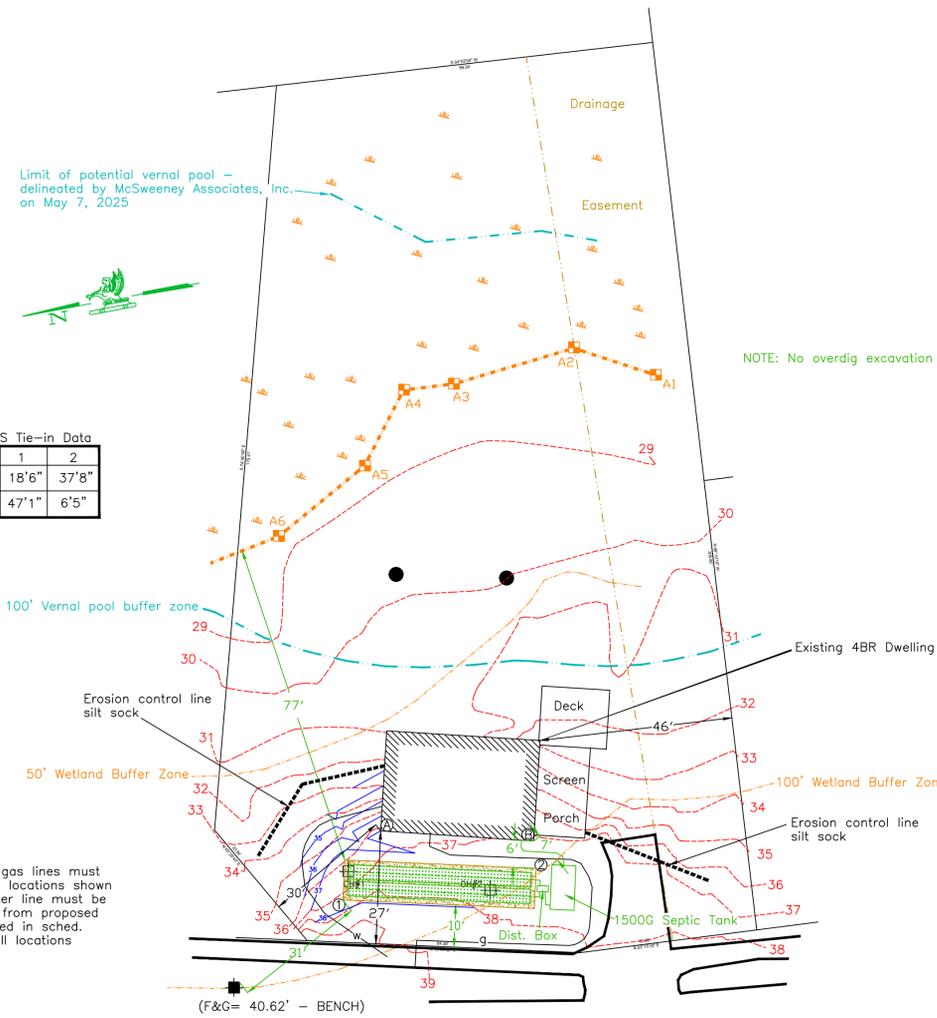
Calculations:

- 4 bedrooms, no disposal
- Est. Day Flow (EDF) = # B.R. x 110 G/Day  
EDF = 440 Gallons per day
- Perk rate = <2 min/inch, Class I soil (Sand in OH-2, C horizon)  
GeoMat loading rate with 6" ASTM C33 sand under, Class I soil, <2 m.p.i. perk rate = 1.50 G/D/SF
- Septic Tank = 2 x EDF with 1,500 G minimum  
440 x 2 = 880 Gallons - 1,500 Gallon (minimum allowable)
- Soil Absorption System (SAS)  
GeoMat size required = EDF/Loading rate  
(440 G)/(1.50 G/s.f.) = 293 s.f.  
GeoMat Leaching System 3900 (1" x 39" w) = 3.42 s.f./l.f.  
293 s.f./3.42 s.f./l.f. = 86 l.f. (required)  
Minimum sand bed = 440 G/D, with perk rate of <2 m.p.i., Class I soils = 400 s.f. (required)  
Use sand bed 9'w x 45'l (405 s.f. provided)

Proposed:

- 1,500 gallon septic tank
- Distribution box
- 405 s.f. sand bed (ASTM C-33 sand) - 9'w x 45'l x 6'd  
86 l.f. GeoMat Leaching System 3900, Two (2) rows each 39" w x 1' d x 43'l

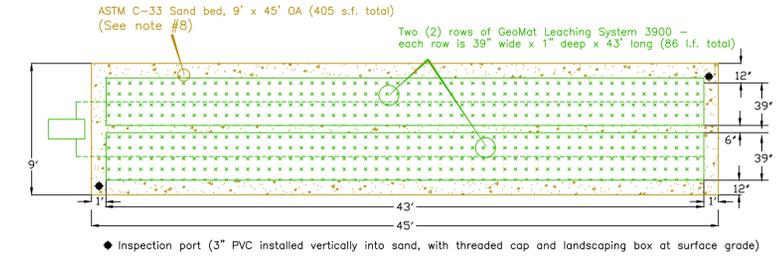
| SAS Tie-in Data |       |       |
|-----------------|-------|-------|
|                 | 1     | 2     |
| A               | 18'6" | 37'8" |
| B               | 47'1" | 6'5"  |



Spring Street

Site Detail Plan  
(1" = 20')

- 98 — = Proposed topographic line, with elevation
- 93 - - - = Existing topographic line, with elevation
- OH #1 = Observation hole, location and designation
- = Existing disposal system
- = Wetland flag, McSweeney Assoc., Inc., 11/13/2024
- A6 = Wetland resource area (BWV)



SAS Detail  
(not to scale)

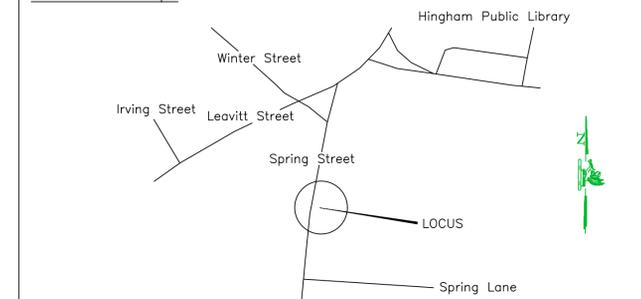
VARIANCES/DIVERGENCES REQUESTED:

- Town of Hingham, Section VII.E. SDS to wetland setback  
Proposed: 77' Required: 100'
- Town of Hingham, Section VII.F.7) SDS to drain lower than breakout setback  
Proposed: 31' Required: 50'
- 310 CMR 15.405(1)(b), septic tank to foundation wall setback  
Proposed: 7' Required: 10'

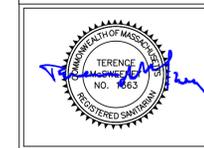
I certify that in the fall of 1997 I was approved by the Mass. Department of Environmental Protection as a Soils Evaluator and that the soils analysis contained herein was performed by me consistent with the training, expertise, and experience described in 310 CMR 15.018(2).

Terence McSweeney Date Terence McSweeney, R.S.

Locus Map



Lot Data:  
Deed: 59402/301 - 10/30/2024  
Hingham Assessors Map 81/103.B  
Reference Plan:  
Morse Engineering Co., Inc., 2/3/2025



Revisions:

- 5/1/2025 - Existing house (TM)
- 5/9/2025 - Add potential vernal pool (TM)

|   |   |  |
|---|---|--|
| McSweeney Associates, Inc.<br><b>McS</b><br>Environmental Engineering | Proposed Septic System<br>14 Spring Street<br>Hingham, Massachusetts  | Job Reference:<br>Spring 14<br>Scale:<br>As Noted                |
|   | 745 Winter Street, Hanson, MA 02341<br>Thomas F. McSweeney 1894-1977<br>Brian McSweeney 1923-2015<br>Terence K. McSweeney 781-826-4571<br>Colin T. McSweeney 781-570-9381 | Date:<br>2/26/2025<br>Drawn By:<br>T McS<br>Checked By:<br>C McS |