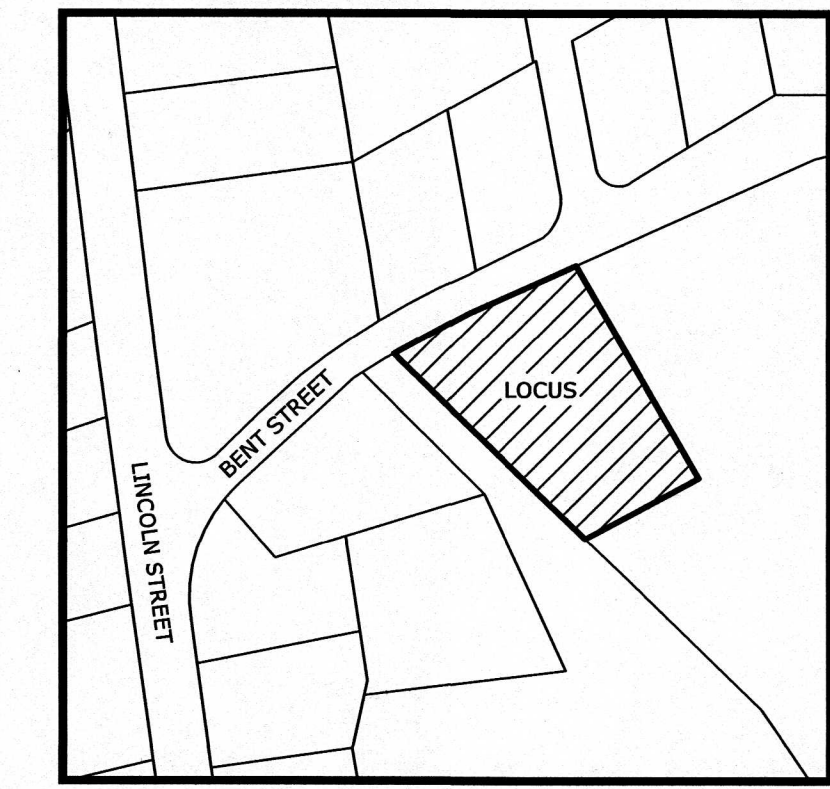


| SCHEDULE OF ELEVATIONS |        |                       |
|------------------------|--------|-----------------------|
| COMPONENTS             | DESIGN | DESCRIPTION           |
| FOUNDATIONS            | 301.68 | BUILDING SEWER INVERT |
| SEPTIC TANK            | 301.44 | INLET INVERT          |
|                        | 301.19 | OUTLET INVERT         |
| DISTRIBUTION BOX       | 301.04 | INLET INVERT          |
|                        | 300.87 | OUTLET INVERT         |

| SCHEDULE OF TRENCH ELEVATIONS |          |              |                      |                    |
|-------------------------------|----------|--------------|----------------------|--------------------|
| CHAMBER MODEL                 | TRENCH # | 4" INV.BEGIN | CHAMBER BOTTOM ELEV. | *CHAMBER TOP ELEV. |
| QUICK 4 STANDARD 8" INVERT    | 1        | 300.60       | 299.93               | 300.93             |
|                               | 2        | 299.43       | 298.76               | 299.76             |
|                               | 3        | 298.26       | 297.59               | 298.59             |
|                               | 4        | 297.09       | 296.42               | 297.42             |
|                               | 5        | 295.92       | 295.25               | 296.25             |



**LOCUS MAP**  
Scale 1" = 20'  
from Mass Mapper data layers  
to be considered approximate

### On-Site Sewage Disposal System

for  
**New Construction**  
with 4 bedrooms

Located at  
**Bent Street (Lot 1)**  
Franklin, MA

Assessors Map 215 Parcel 22  
Deed Book 39544 Page 389  
Plan Book 701 Page 94

Owned By  
**Stephen J. Kelleher**

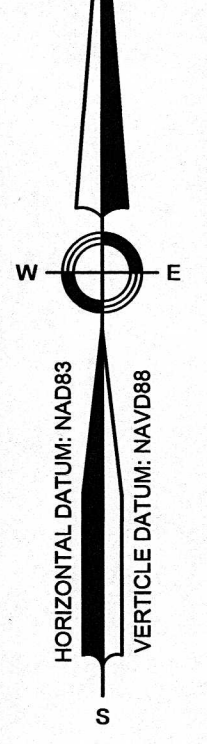
Applicant  
**Stephen J. Kelleher**  
3 Briarwood Road  
Norfolk, MA 02056

Scale: 1" = 20'  
Date: October 7, 2022

### ZONING DISTRICT

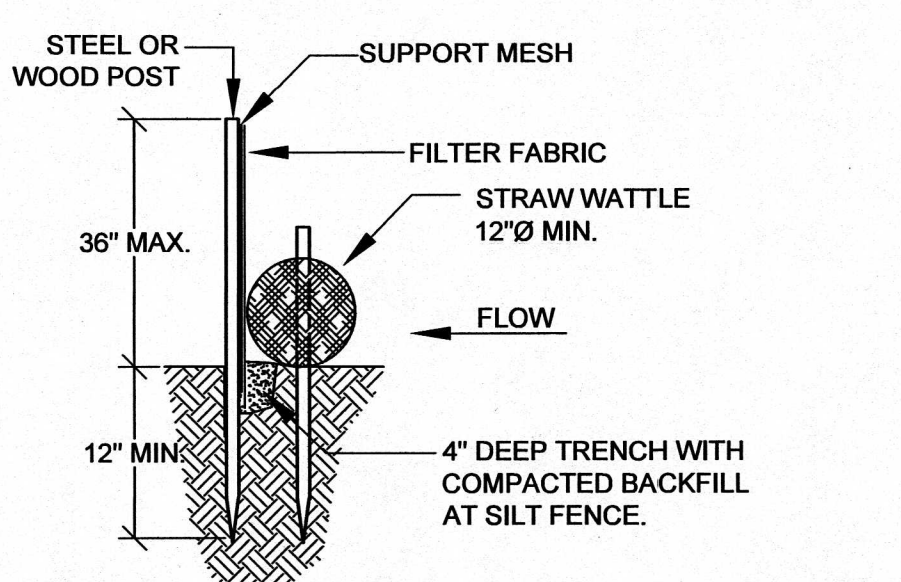
**RURAL RESIDENTIAL 1 (RR1)**

AREA: 40,000 S.F.  
FRONTAGE: 200 FT.  
FRONT YARD: 40 FT.  
SIDE YARD: 40 FT.  
REAR YARD: 40 FT.



**SYSTEM PROFILE**  
NOT TO SCALE

- NOTES:
- SILT FENCE SHALL BE PLACED ON SLOPE CONTOURS TO MAXIMIZE PONDING EFFICIENCY.
  - INSPECT AND REPAIR FENCE AFTER EACH STORM EVENT AND REMOVE SEDIMENT WHEN NECESSARY. 9" MAXIMUM RECOMMENDED STORAGE HEIGHT.
  - REMOVED SEDIMENT SHALL BE DEPOSITED TO AN AREA THAT WILL NOT CONTRIBUTE SEDIMENT OFF-SITE AND CAN BE PERMANENTLY STABILIZED.
  - DO NOT PLACE SILT FENCE IN STREAMS OR CONCENTRATED FLOW CONDITIONS.

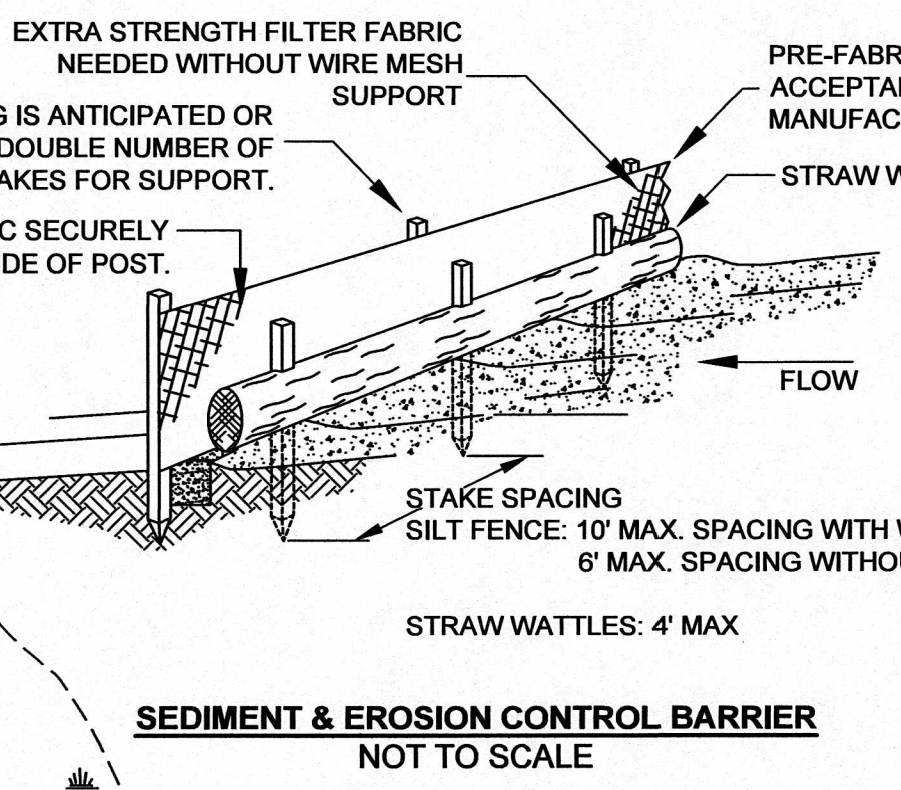
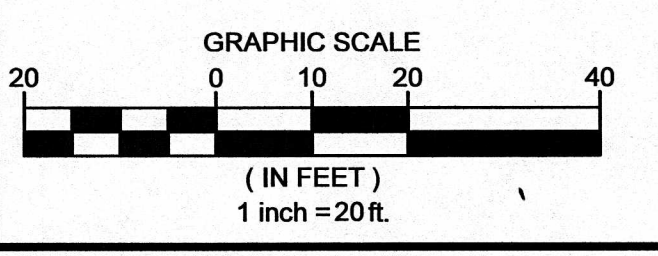
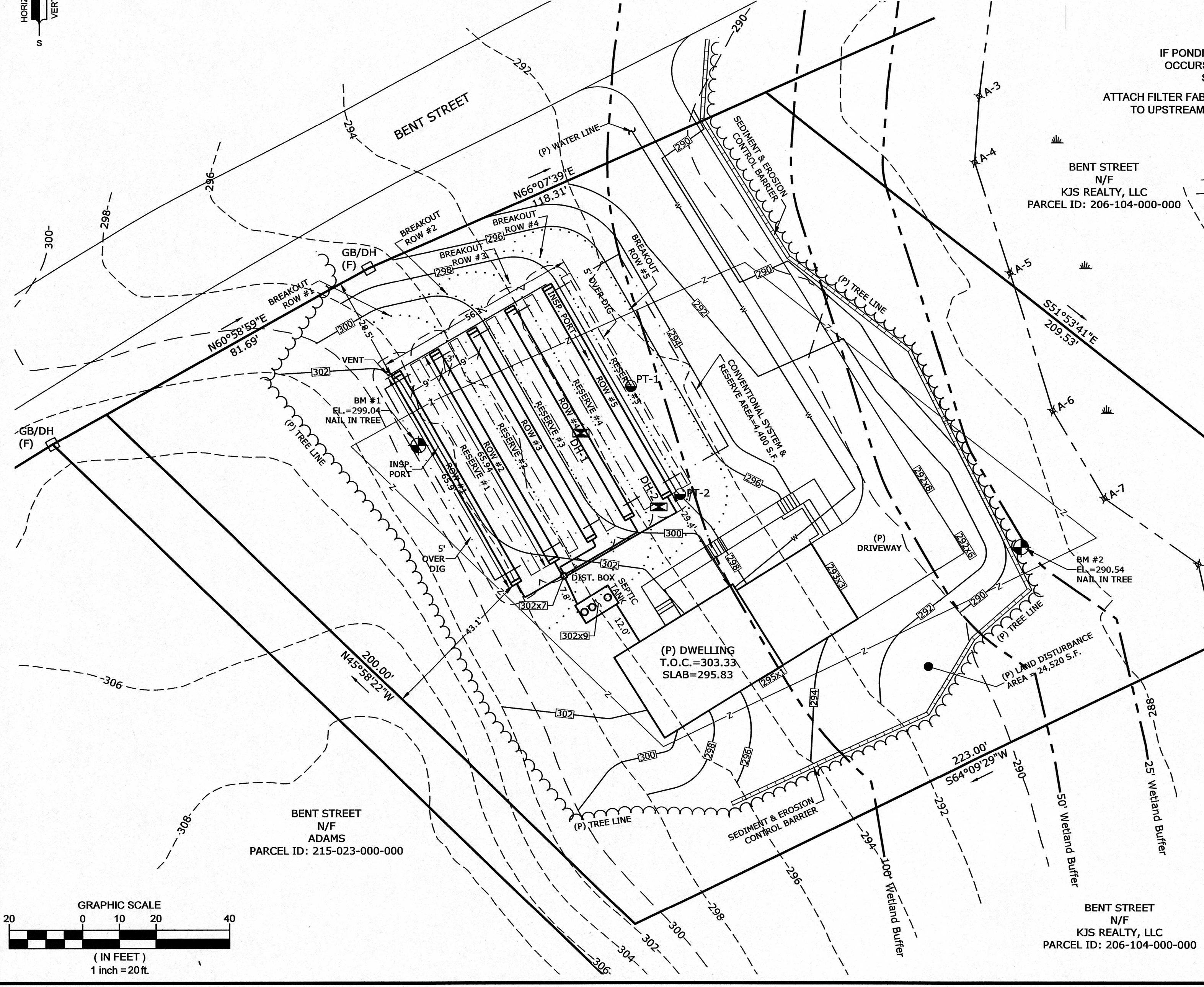


**DESIGN FLOW CALCULATION:**  
Type of facility: Single family residence  
Number of bedrooms: 4  
Daily flow rate: 110 gpd/bedroom  
Design flow: 440 gpd

**SEPTIC TANK REQUIREMENTS:**  
Compartment 1: 200% of design flow  
2\*(880 gpd) = 880 gallons  
Compartment 2: 100% of design flow  
1\*(440 gpd) = 440 gallons  
Use dual compartment 1,500 gal septic tank

**REQUIRED LEACHING AREA CALCULATION:**  
Soil class: Class III  
Percolation rate: 50 min/inch  
Effluent loading: 0.20 gpd/s.f.  
Required leaching area:  $\frac{440 \text{ gpd}}{0.20 \text{ gpd/s.f.}} = 2,200 \text{ s.f.}$   
Effective Leaching Area =  $6.96 \text{ s.f./ft. of infiltrator}$   
\*From Approval for General Use - Quick 4 trench configuration

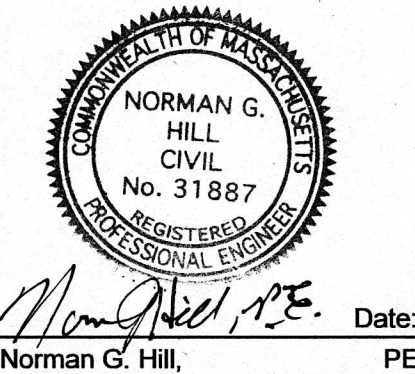
Infiltrators required =  $\frac{2,200 \text{ s.f.}}{(6.69 \text{ s.f./ft.})(4 \text{ ft/unit})} = 80 \text{ units}$   
Use 5 rows of chambers 16 infiltrator units each  
Total leaching area provided:  
 $[(80 \text{ units} * 4 \text{ ft/unit}) + (10 \text{ unit of end caps @ } 0.97')] * (6.96 \text{ ft}^2/\text{ft}) = 2,294 \text{ s.f.}$



**SEDIMENT & EROSION CONTROL BARRIER**  
NOT TO SCALE

| SOIL TEST DATA                         |             |                         |                     |                      |
|--|-------------|-------------------------|---------------------|----------------------|
| DEEP HOLE OBSERVATION LOG              |             |                         |                     |                      |
| PERFORMED BY: THOMAS JOHNSON, SE#1141  |             | DATE: NOVEMBER 22, 2019 |                     |                      |
| WITNESS BY: WADE SAUCIER, HEALTH AGENT |             |                         |                     |                      |
| TEST HOLE                              | DEPTH (IN.) | SOIL HORIZON            | SOIL TEXTURE (USDA) | SOIL COLOR (MUNSELL) |
| DH-1                                   | 0-1         | O                       | -                   | 10YR 3/1             |
|  | 1-5         | A                       | F. SANDY LOAM       | 10YR 3/1             |
|  | 5-32        | B                       | SANDY LOAM          | 10YR 5/6             |
| DH-2                                   | 0-1         | O                       | -                   | 10YR 3/1             |
|  | 1-5         | A                       | F. SANDY LOAM       | 10YR 3/1             |
|  | 5-31        | B                       | SANDY LOAM          | 10YR 5/6             |
| MOTTLES @ 34" 7.5YR 5/6                |             |                         |                     |                      |
| MOTTLES @ 32" 7.5YR 5/6                |             |                         |                     |                      |

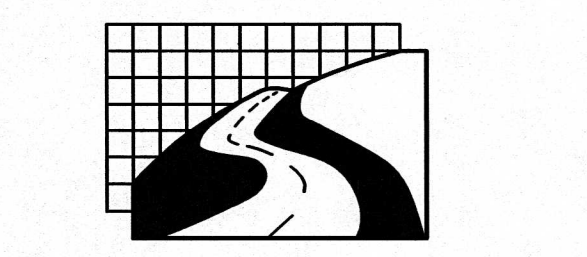
| HIGH GROUNDWATER DETERMINATION |                        | PERC TEST DATA |          |        |
|--------------------------------|------------------------|----------------|----------|--------|
| N/A                            | STANDING WATER         | DATE           | 11/22/19 |        |
| 32"                            | MOTTLES                | PERC #         | PT-1     | PT-2   |
| 115"                           | WEeping WATER          | OBS. HOLE #    | DH-1     | DH-2   |
| N/A                            | GROUNDWATER ADJUSTMENT | DEPTH OF PERC  | 38"      | 33"    |
| -2.67'                         | GROUNDWATER FOR DESIGN | PERC RATE      | 23 MPI   | 41 MPI |



Norman G. Hill, PE Date: 10-17-22  
PE #31887

### REVISIONS

| Date            | Description |
|-----------------|-------------|
| Field By: NH/PP | 9/2022      |
| Designed By: SB | 10/2022     |
| Drawn By: SB    | 10/2022     |
| Checked By: NGH | 10/2022     |



**Land Planning, Inc.**  
Civil Engineers • Land Surveyors  
Environmental Consultants

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Bellingham, MA 02019  
508-966-4130

**North Grafton**  
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N. Grafton, MA 01536  
508-839-9526

**Hanson**  
1115 Main Street  
Hanson, MA 02341  
781-294-4144

www.landplanninginc.com

|         |              |           |        |
|---------|--------------|-----------|--------|
| Date    | Oct. 7, 2022 | Sheet No. | 1 of 1 |
| Job No. | G22252       |           |        |

- GENERAL SEPTIC DESIGN NOTES**
- All elevations refer to NAVD 88. See plan for benchmark locations.
  - All construction shall conform to 310 CMR 15.00, Title 5.
  - This plan does not warrant or imply any subsurface soil conditions other than those observed at the immediate test pit locations. If unsuitable material is encountered, all construction shall cease, and the design engineer shall be contacted immediately.
  - Septic Tank and Distribution Box shall be set level and true to grade on a mechanically compacted stable base of 6" of 3/4" stone.
  - Areas disturbed during construction shall be stabilized to minimize erosion and control sedimentation. The area over the system shall be graded to a minimum of 2% slope to provide positive surface drainage. Place 4" loam and seed all disturbed areas of the project not otherwise improved.
  - This plan shall not be used for the reproduction of property lines, nor shall it be used as a mortgage plot plan or title survey. Conformance to local bylaws shall be determined by the owner prior to construction.
  - For proper performance, the septic tank should be pumped on an as-needed basis, but in no event shall the septic tank be pumped greater than every two years.
  - Any alterations must be reported to the design engineer prior to proceeding with construction.
  - The system must be inspected by the Board of Health or its agent and be certified by the design engineer.
  - Conservation Commission approval is required.
  - See 310 CMR 15.255 for fill specifications. See 310 CMR 15.247 for aggregate specifications.
  - All system components shall be marked with magnetic marking tape.
  - All trenches for utilities to be backfilled and compacted with granular materials free of rocks larger than 2".
  - All underground utility locations shown are based on field evidence and records provided to Land Planning, Inc. These locations should be considered approximate. Other utilities may exist which are not evident or for which record information was not found. The contractor must contact all utility companies and "Dig Safe" (888-DIG-SAFE) before excavation begins. We assume no responsibility for damages incurred as a result of utilities omitted or inaccurately shown.
  - It is the responsibility of the contractor to review all of the drawings and specifications associated with this project work and project scope prior to the initiation of construction. Should the contractor find a conflict with the documents, relative to the specifications or applicable codes, it is the contractor's responsibility to notify the project engineer of record in writing prior to the start of construction. Failure by the contractor to notify the project engineer shall constitute acceptance of full responsibility by the contractor to complete the scope of work as defined by the drawings and in full conformance with local regulations and codes.
  - Contractor is responsible for all excavation to be performed in accordance with current O.S.H.A. standards, as well as additional provisions to assure stability of contiguous structures, as field conditions dictate.
  - Construction of permanent structures upon the disposal system or the reserve area is prohibited.
  - All system components shall be marked with magnetic marking tape or a comparable means in order to locate them once buried.

- PROJECT SPECIFIC NOTES**
- Garbage disposal units are prohibited.
  - All interior plumbing, with the exception of water filtration, softening and conditioning systems, backwash or byproducts of from such, shall discharge to the proposed septic system.
  - All wetlands as defined by the Wetlands Protection Act are located within 100 feet.
  - The proposed septic system is not located within a Zone II Approved Wellhead Protection Area.
  - All known wells located within 200' of the proposed system have been shown on the plan.
  - All known septic systems within 150' of the proposed system have been shown on the plan.
  - This lot is not located within a special flood hazard zone per FEMA FIRMe Map #25021C0144E dated 7/17/2013
  - The Parcel Lies in the Rural Residential 1 (RR1) Zoning District.
  - A sign constructed of durable material shall be placed at the sewer clean out to the basement to indicate to the owner that the septic tank is as-built as well as basic information relative to the maintenance of the system. Also, the as built plan shall show tie distances to the effluent tee to two permanent markers. both the sign and maintenance information
  - Contractor to install at least one required inspection port in the SAS.
  - Vent pipe must have charcoal filter.
  - There are no public water supplies within 400' of this proposed septic

- DESIGNER REQUIREMENTS**
- Leaching area location to be staked in the field by Land Planning, Inc. prior to construction.
  - Land Planning, Inc. to be contacted to perform a bottom inspection once leaching area and 5' over dig (as applicable) are excavated.
  - Any changes to the layout of the septic design must be brought to the attention of Land Planning, Inc. for approval.
  - After all components are installed and before the system is back filled Land Planning, Inc. is to be contacted to perform a septic system asbuilt to verify the system components are installed correctly.
  - Land Planning, Inc. to receive a copy of the Title Five sand certification.
  - Once system is backfilled and final grading is complete Land Planning, Inc. is to be contacted to perform a final grading asbuilt.
  - Installer assumes full responsibility for the septic system if these 'Designer Requirements' are not complied with.