

SOILS Fill over Eldridge (Michael Mariano, CSS #076)

SIZING 4 Bedrooms @ 600 GPD

Perc Rate: 6 minutes per inch
Design Rate: 10 minutes per inch
Minimum number of GSF units required: 28
Provided: 30 units in 3 rows of 10
Calcs.: 2021 Eljen Design Manual for NH, Table 2

SEPTIC TANK Existing 1250 gal. precast concrete tank by Genest, Sanford ME
Dimensions: 8'x6'x5'5"
Inspect to provide inlet and outlet baffles per Env-Wq 1010.07
Eljen requires an effluent filter at the tank outlet. Add a Zabel A-1800 or similar filter

D-BOX 3-Outlet precast concrete by Genest, or similar.
Dimensions: 12"x12"x14". Flow equalizers are not required by Eljen.

PIPE Bldg. sewer: existing Sch40 pipe to remain
Effluent line - 4" SDR26
All other 4" pipe: SDR 35
All pipe joints shall be solvent welded

CONNECTIONS Inlet to remain sealed with non-shrink mortar or plastic cement. (Waiver requested for Env-Wq 1010.8)
Outlet to be sealed with a watertight flexible joint connector

ELJEN GSF UNITS 30 units in 3 rows of 10
Join rows with a 4" PVC manifold. Rest manifold on ends of units for support
Provide low vent on manifold.

SAND BED Washed concrete sand meeting the requirements of ASTM C33 with <10% passing a #100 sieve and <5% passing a #200 sieve.

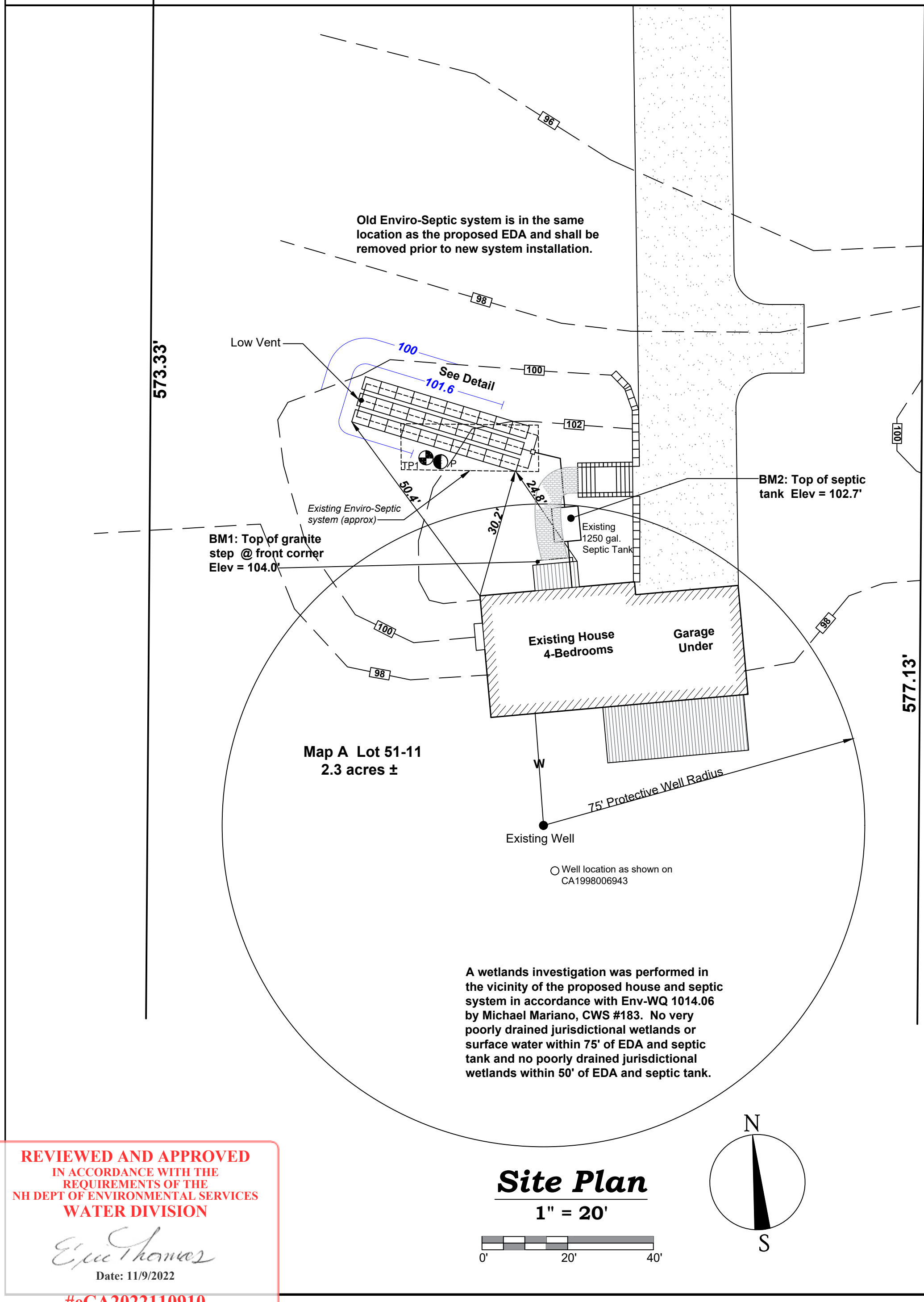
FILL After removing existing Enviro-Septic pipe and sand, scarify ground and backfill to Elev 99.5 with bank run sand.
Topsoil: 4" min., seeded and mulched as soon after inspection as possible.
Fill slopes: Re-shape to 3:1 and cap with 6" min. of heavy loam or silt loam

DESIGN INTENT The bottom of the Eljen GSF units shall be installed at Elevation 100.0'. This elevation is 2.6' below the high corner of the disposal area and maintains a minimum 2.9' vertical separation to the seasonal high water table over the entire EDA

WAIVERS: Env-Wq1010.08 pipe to tank connections
Env-Wq 1008.04(c) minimum distances

NOTES:

1. Rebuild in place in event of future failure
2. The septic tank for this system is not sized to accommodate a garbage disposal unit. The use of a garbage disposal unit may contribute to system failure. A water softener which flushes back into the wastewater system shall not be used, as it may contribute to system failure.
3. This design complies with and must be installed in accordance with the Eljen Design and Installation Manual for NH, 2021.



Test Pits

TEST PIT 1 Described 00-11-97 by Michael Mariano, Designer #941. Verified 10-20-22 by boring in same location

00" - 06" Dark brown (10YR4/3) fine sandy loam fill; weak fine granular structure; moist, friable

06" - 12" Dark gray (10YR6/2) system sand fill; single grain; wet, non-sticky, non-plastic.

12" - 30" Enviro-Septic pipe and system sand.

30" - 54" Yellowish brown (10YR5/6) loamy sand fill; weak fine granular structure; moist, friable

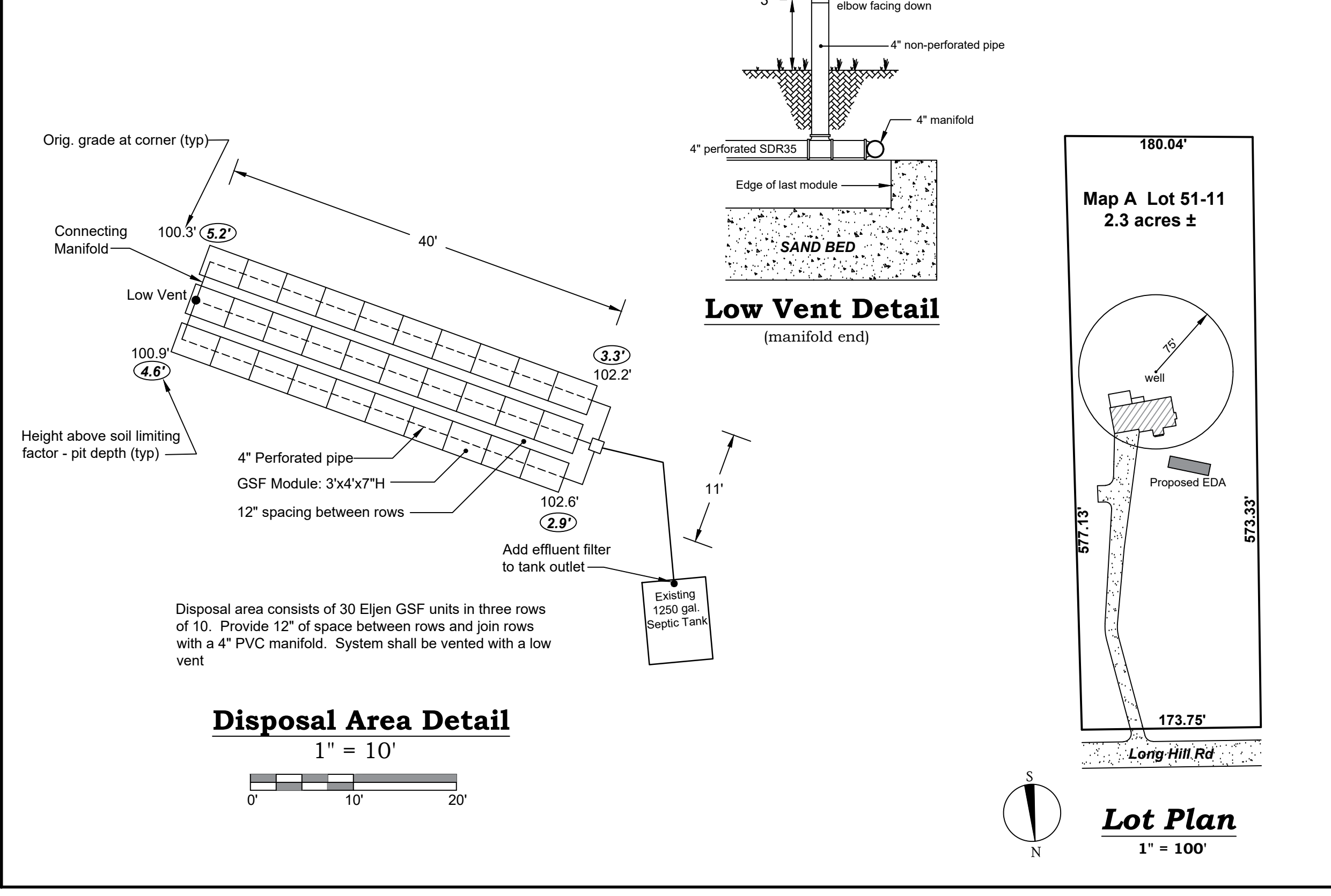
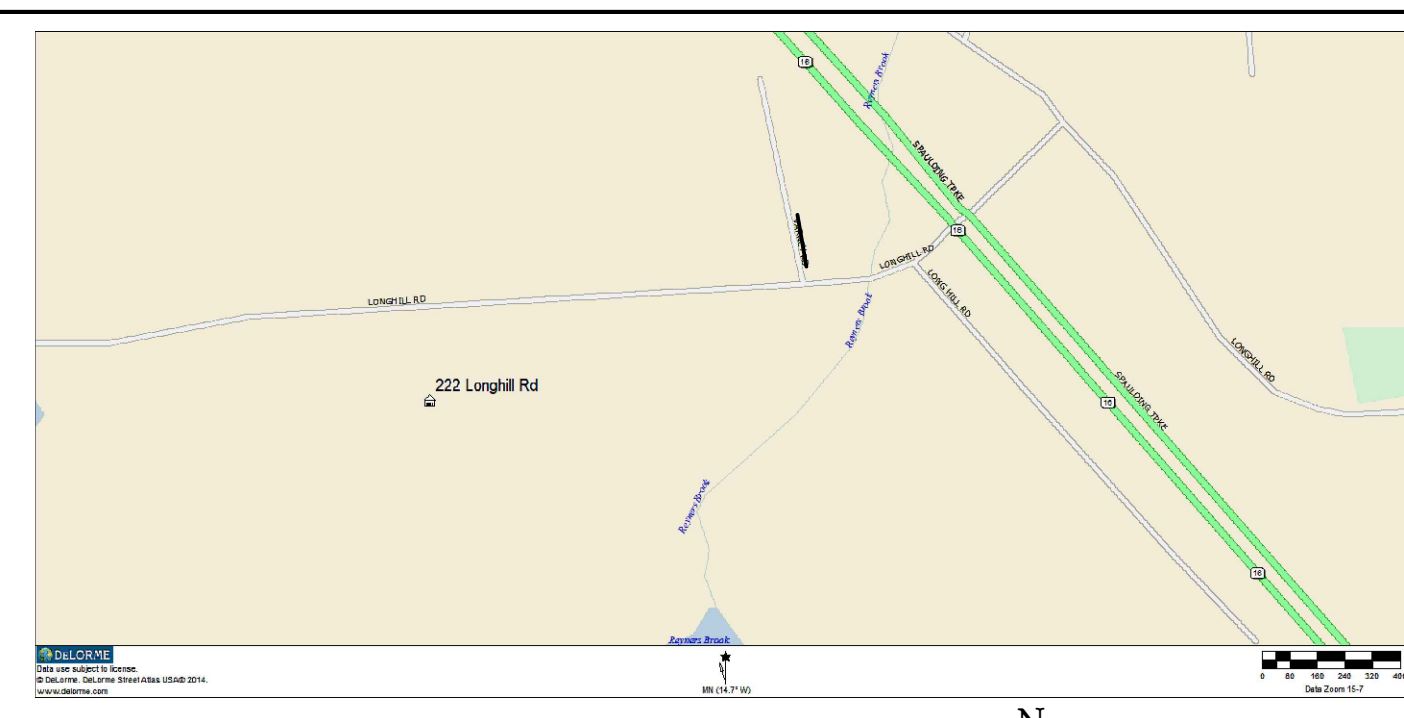
-----Original Ground Starts Here-----

54" - 66" Yellowish brown (10YR5/6) fine sandy loam; weak fine granular structure; moist, friable.

66" - 72" Yellowish brown (10YR5/6) loamy sand; common redox concentrations (7.5YR5/6) and depletions (10YR6/1); moderate medium granular structure; moist, friable.

Estimated SHWT: 66"
Restrictive layer: none to 66"
Observed water; confined to Enviro-Septic failure - no ground water

PERC TEST 6 minutes per inch at 15" (1997 perc in native soil)
4 MPI in loamy sand fill used to raise old system
10 min per inch used for design calcs.



SEPTIC SYSTEM DESIGN
Replacement for Failing System
Dover - 222 Long Hill Rd
Paul Tiemann
222 Long Hill Rd
Dover NH 03820

Subdivision Approval: SA1995000541
Previous Construction Approval: CA1998006943
Construction Approval:

HIGHLAND SOIL SERVICES
75 PROSPECT STREET
SOMERSWORTH NH 03878
(603) 692-4457

MICHAEL MARIANO
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SEPTIC SYSTEM DESIGNER
WETLAND SCIENTIST
SITE EVALUATOR

10-31-2022

REVISIONS

Amended 11-09-2022: Added 2 GSF units to make equal rows
Added waiver request for Env-Wq 1008.04(c)

REVIEWED AND APPROVED
IN ACCORDANCE WITH THE
REQUIREMENTS OF THE
NH DEPT OF ENVIRONMENTAL SERVICES
WATER DIVISION

Eric Thomas
Date: 11/9/2022
#eCA2022110910