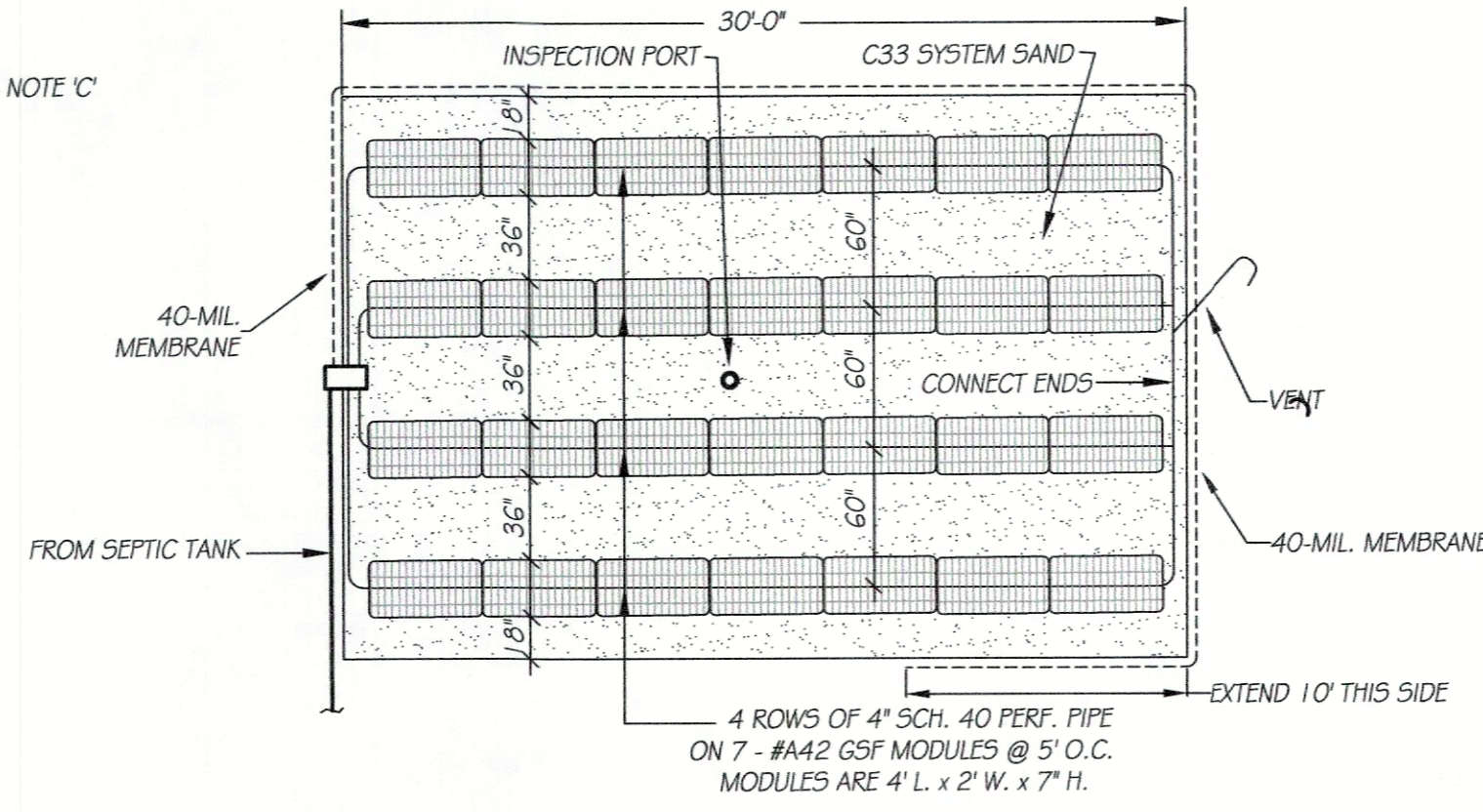
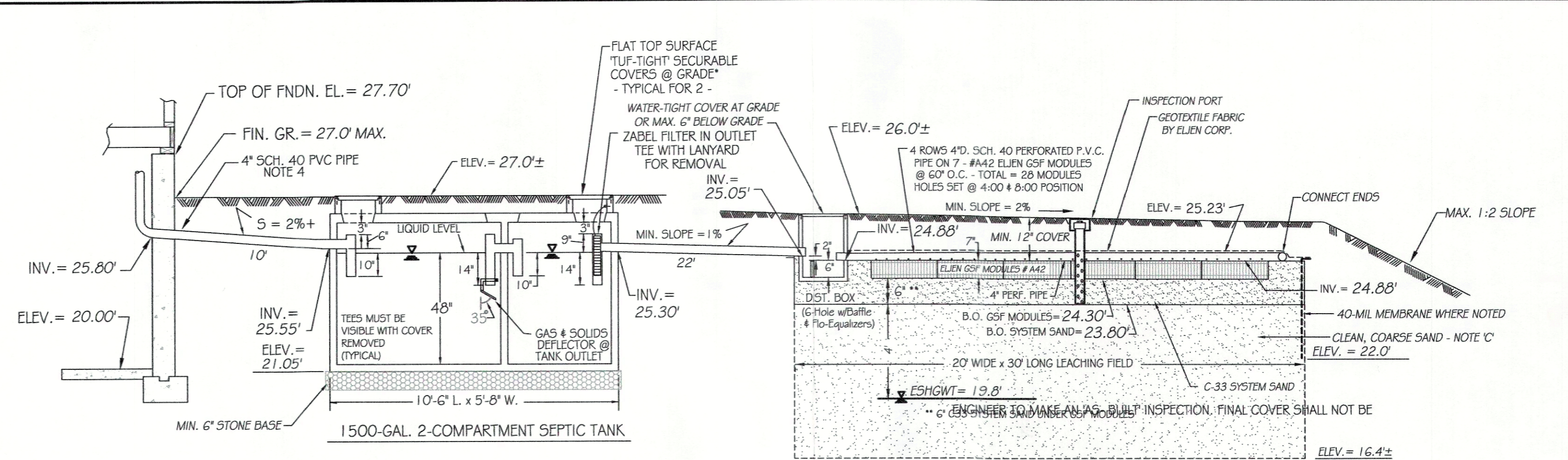


CROSS SECTION THRU FIELD
NOT TO SCALE
CLEAN, COARSE OVERDIG SAND - NOTE 'C'
** C-33 SYSTEM SAND UNDER GSF MODULES



PLAN VIEW - LEACHING FIELD
N.T.S.



SECTION THRU SYSTEM
NOT TO SCALE

LEACHING FACILITY - TOTAL LEACHING AREA = 600 S.F.

GENERAL NOTES:

- THIS SYSTEM DOES NOT MAKE PROVISION FOR A GARBAGE GRINDER NOR THE BACKFLUSH EFFLUENT FROM A WATER TREATMENT SYSTEM, NOR THE DISPOSAL OF PRESCRIPTION MEDICATIONS.
- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH MASS. TITLE 5 AND LOCAL BOARD OF HEALTH REGULATIONS EXCEPT AS PERMITTED BY VARIANCES AS NOTED HEREON. SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH D.E.P. GENERAL USE APPROVAL AND PRODUCT DESIGN AND INSTALLATION MANUAL FOR "ELJEN GSF GEOTEXTILE SAND FILTER" BY ELJEN CORPORATION, 125 McKEE ST., EAST HARTFORD CT 06108, BY AN INSTALLER WHO HAS BEEN CERTIFIED BY THE MANUFACTURER.
- ALL COMPONENTS SHALL BE INSTALLED ON A LEVEL, STABLE BASE THAT WILL NOT SETTLE. PIPE SHALL BE LAID ON A FIRM BASE, FREE OF STONES. PRE-CAST CONCRETE TANKS SHALL BE 110' AASHTO RATING TANK, CONSTRUCTED IN CONFORMANCE WITH TITLE 5 SECTION 15.226. DISTRIBUTION BOX SHALL HAVE COVER NOT MORE THAN 6" BELOW GRADE.
- BUILDING SEWER SHALL BE CAST IRON OR SCH. 40 P.V.C. PIPE; GRAVITY.
- SYSTEM SAND SHALL MEET ASTM C-33 REQUIREMENTS WITH 40% - 90% OF TOTAL TO BE COARSE AND VERY COARSE SAND, WITH NO MORE THAN 2% OF SAND PASSING A #200 SIEVE. THE INSTALLER SHALL SUPPLY A TEST REPORT TO THE ENGINEER SHOWING CONFORMANCE WITH ASTM C-33 STANDARD. THE ENGINEER MAY REQUIRE THAT SAND IN PLACE BE TESTED FOR ASTM C-33 STANDARD AND SAND THAT FAILS CERTIFICATION SHALL BE REPLACED AT NO EXPENSE TO THE OWNER. A MINIMUM OF 6 INCHES OF SYSTEM SAND SHALL BE PLACED AROUND THE CIRCUMFERENCE OF THE GSF MODULES.
- DO NOT INSTALL THE SYSTEM ON FROZEN GROUND OR LEAVE SYSTEM UNCOVERED FOR EXTENDED PERIOD OF TIME.
- THE INSTALLER SHALL NOTIFY THE ENGINEER IF SOIL CONDITIONS ARE FOUND DIFFERENT THAN SHOWN ON 'SOIL LOG'.
- PRIOR TO FINAL COVER OF SYSTEM, THE INSTALLER SHALL NOTIFY THE ENGINEER TO MAKE AN 'AS-BUILT' INSPECTION. FINAL COVER SHALL NOT BE PLACED UNTIL SYSTEM IS APPROVED BY THE ENGINEER AND THE BOARD OF HEALTH.
- THE CONTRACTOR SHALL LOAM & SEED ALL DISTURBED AREAS.

SYSTEM DESIGN DATA:

PERCOLATION RATE = 30 MIN. PER INCH
L.T.A.R. = 0.33 GPD/S.F.
DESIGN FLOW RATE: 3 B.R.'s @ 110 GPD = 330 GPD
MINIMUM LEACHING AREA FOR CONVENTIONAL SOIL ABSORPTION SYSTEM,
 $A_c = 330 \text{ GPD} / 0.33 \text{ GPD/S.F.} = 1,000 \text{ S.F.}$
MINIMUM LEACHING AREA FOR ELJEN GEOTEXTILE SAND FILTER
'GSF' ADVANCED TREATMENT SOIL ABSORPTION SYSTEM:
 $\text{MIN. } A_{gsf} = 1,000 \text{ S.F.} \times 60\% = 600 \text{ S.F.}$
3 B.R.'s @ 9 - #A42 GSF MODULES PER B.R. = 27 GSF MODULES (MIN.)
USE 4 ROWS WITH 7 - #A42 GSF MODULES PER ROW = 28 GSF MODULES
BOTTOM AREA = 20' W. x 30' L. = 600 S.F.
SIDE AREA = N/A = 0 S.F.
TOTAL LEACHING AREA = 600 S.F.
SYSTEM CAPACITY = (600 S.F. / 0.60) x 0.33 GPD/S.F. = 330 GPD

DOSING CALCULATION:

2 DOSES PER DAY FOR SANDY LOAM:
VOLUME PER DOSE = 330 GPD / 2 = 165 GALS. PER DOSE
VOLUME FT FOR 500 GAL. TANK = 125 GALS./FT.
165 GAL / (125 GAL/FT) = 1.32 FT. = 16" ±

EMERGENCY STORAGE CALCULATION:

AVAILABLE STORAGE: 51' - 24' = 27'
VOLUME PER FOOT OF TANK = 125 GAL./FT. = 10.4 GAL./IN.
AVAILABLE STORAGE = 27 IN. x 10.4 GAL./IN. = 280 GALS.
SPECIFIED TANK PROVIDES 24 HOURS OF EMERGENCY STORAGE

ZONING NOTES:

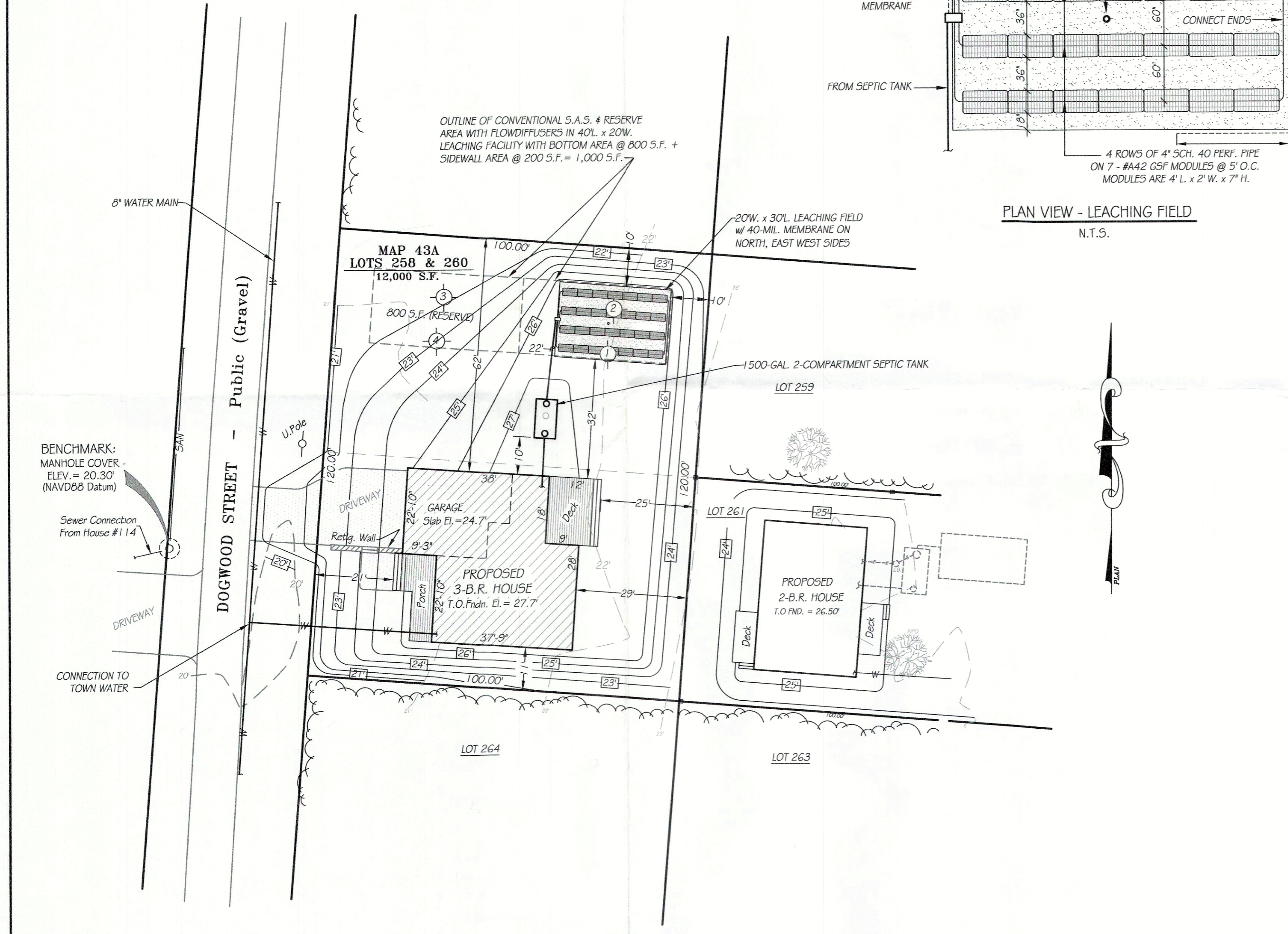
- THE SUBJECT PARCEL LIES WITHIN RURAL RESIDENCE ZONE 'RR' AND IS A LEGALLY PRE-EXISTING NON-CONFORMING LOT
MINIMUM LOT AREA = 30,000 S.F.; MINIMUM FRONTAGE = 140 FT.
MINIMUM SETBACKS: FRONT = 30 FT.; SIDES = 20 FT.; REAR = 30 FT.

NOTES:

- NOTE 'A': THIS PARCEL IS SHOWN AS LOTS 258 & 260 OF ASSESSORS MAP 43A.
NOTE 'B': THE PARCEL SHOWN HEREON DOES NOT LIE WITHIN A SPECIAL FLOOD HAZARD AREA AS DELINEATED ON F.E.M.A. COMMUNITY PANEL NO. 25005C0504F, DATED JULY 7, 2009.
NOTE 'C': REMOVE UNSUITABLE SOILS BENEATH THE LEACHING FIELD AND TO A 5-FOOT DISTANCE ON SIDES WHERE SHOWN, AND REPLACE WITH CLEAN, COARSE SAND UP TO LEVEL OF GEO-TEXTILE FILTER FABRIC AROUND THE SYSTEM, AND UP TO THE BOTTOM OF C-33 GRADE SAND BELOW THE SYSTEM SAND BED. THE BOTTOM & SIDES OF THE OVERDIG EXCAVATION SHALL BE SCARIFIED PRIOR TO PLACEMENT OF SAND FILL AND EQUIPMENT SHALL NOT BE OPERATED ON THE SCARIFIED SURFACES PRIOR TO BACKFILLING.
NOTE 'D': INSTALLER SHALL CONSTRUCT THE SYSTEM USING A PLAN BEARING THE APPROVAL OF THE BOARD OF HEALTH.
NOTE 'E': NOTIFY DIG-SAFE AND LOCAL UTILITIES PRIOR TO ANY EXCAVATION.
NOTE 'F': THIS DESIGN IS IN CONFORMANCE WITH MASS. TITLE 5 DEP GENERAL USE APPROVAL FOR ELJEN GSF FOR REDUCTION IN LEACHING AREA AND OMISSION OF 5-FOOT OVERDIG.

MAINTENANCE:

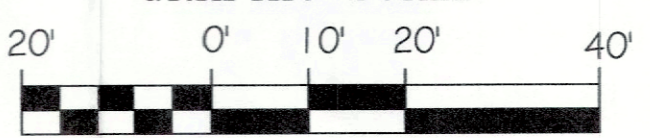
- SEPTIC TANK SHOULD BE PUMPED OUT EVERY 2 YEARS OR WHEN THICKNESS OF FLOATING SCUM LAYER EXCEEDS 6 INCHES. FAILURE TO PUMP OUT TANK WILL RESULT IN PREMATURE SYSTEM FAILURE.
- THE ZABEL FILTER SHOULD BE CLEANED EVERY 12 MONTHS AND WHEN THE SEPTIC TANK IS PUMPED OUT. FAILURE TO CLEAN THE FILTER WILL RESULT IN CLOGGING OF THE OUTLET TEE AND SEPTIC TANK BACKUP TO HOUSE.
- THE SEPTIC TANK AND LEACHING FIELD REQUIRE BACTERIAL PROCESSES TO DIGEST WASTES. AVOID EXCESSIVE USE OF BLEACH AND ANTI-BACTERIAL PRODUCTS TO ENSURE HEALTHY BIOLOGICAL ACTIVITY IN THE SEPTIC SYSTEM.



SITE PLAN

SCALE: 1" = 20 FT.

GRAPHIC SCALE



- LEGEND:
- EXISTING CONTOURS: 52'
 - PROPOSED CONTOURS: 54'
 - EDGE OF WETLANDS: [Symbol]
 - LIMIT OF BUFFER ZONE: [Symbol]
 - F.E.M.A. FLOOD ZONE: [Symbol]
 - ELECTRIC CONDUITS: [Symbol]
 - SPOT ELEVATIONS: x53.9
 - TEST PIT LOCATION: [Symbol]
 - SEPTIC TANK: [Symbol]
 - DELINEATION FLAG: #6
 - JUNCTION BOX: [Symbol]

SOIL LOG

T.P. # 1		T.P. # 2		T.P. # 3		T.P. # 4	
0'	A' SANDY LOAM 10 YR 3/2	0'	A' SANDY LOAM 10 YR 3/2	0'	A' SANDY LOAM 10 YR 3/2	0'	A' SANDY LOAM 10 YR 3/2
12"	B' LOAMY SAND (Stoney) 10 YR 4/4	12"	B' LOAMY SAND (Stoney) 10 YR 4/4	12"	B' LOAMY SAND (Stoney) 10 YR 4/4	12"	B' LOAMY SAND (Stoney) 10 YR 4/4
22"	Mottles @ 26"	22"	Mottles @ 26"	22"	Mottles @ 26"	22"	Mottles @ 26"
26"	C1' LOAMY SAND 2.5 Y 5/6	26"	C1' LOAMY SAND 2.5 Y 5/6	26"	C1' L. SAND 2.5 Y 6/4	26"	C1' L. SAND 2.5 Y 6/4
36"	C2' S.LOAM (Compact) 2.5 Y 6/4	36"	C2' S.LOAM (Compact) 2.5 Y 6/4	36"	C2' S.LOAM (Compact) 2.5 Y 6/4	36"	C2' S.LOAM (Compact) 2.5 Y 6/4
66"	C3' S.LOAM 2.5 Y 4/4	66"	C3' S.LOAM 2.5 Y 4/4	66"	C3' S.LOAM 2.5 Y 4/4	66"	C3' S.LOAM 2.5 Y 4/4
96"	Weeps @ 36"	96"	Weeps @ 36"	96"	Weeps @ 36"	96"	Weeps @ 36"
120"		120"		120"		120"	

* PERCOLATION TEST LOCATION: T.P. # 1 & 4; BOTTOM OF TEST HOLES = 42" & 44"; PERC. RATE & DETERMINATION OF SUB-SOIL CONDITIONS WERE DONE ON OCTOBER 16, 2024, AS WITNESSED BY DAVID FLAHERTY, R.S., FAIRHAVEN BOARD OF HEALTH AGENT.

PLAN OF SITE, PROPOSED HOUSE & SUBSURFACE SEWAGE DISPOSAL PREPARED FOR BENJAMIN REIS LOTS 258 & 260, DOGWOOD STREET FAIRHAVEN, MASS.

CAI Charon Associates, Inc. Consulting Engineers 323 Neck Road - Rochester, MA 02770 Tel: 508-763-8362 Fax: 508-763-9582

SCALE: AS NOTED DATE: FEBRUARY 20, 2025 REV. 1: SEPT. 15, 2025 (Hse. Footprint) REV. 2: SEPT. 25, 2025 (Hse. Location)

DWG. NO. SD-1