Underground Septic Tanks & Pump Chambers

1.) Tanks shall be structurally sound and to withstand the

2.) Tanks shall be watertight and waterproof.

3.) Tanks shall be pre cast concrete, or approved equivalents.

4.) Manufacturers of septic tanks shall implement a quality control/ quality assurance program in conformity with ASTM standard C-1227-93. Tanks shall be embossed with a seal stating that this ASTM standard has been met. Tanks not embossed with a seal shall be rejected.

5.) Tanks shall be accessible for inspection and maintainance. No structures shall be located directly upon, above, or near the tanks which may interfere with performance, access, inspection, and pumping or repair.

6.) Inlet and outlet tees shall be of cast iron, schedule 40 pvc, or approved equal.

7.) Septic tanks shall be provided with at least three (3) 20" diameter manholes. Manholes shall be at the center and over each inlet and outlet tee. For compartment tanks, the center manhole shall be the access to the compartment connection. System designs in excess of 1,000 GPD, all manholes shall be made accessible. For system designs of 1,000 GPD or less at least one manhole shall be made accessible. If applicable provide watertight access port (risers),precast concrete or equivalent, with steps where appropriate. Manhole covers shall be removable, and of impermeable and durable material. Covers shall be within six inches of finished grade and shall be secured to prevent unauthorized access.

8.) INSTALLATION:

A) Tanks shall be installed true to grade on a level stable base that has been mechanically compacted, and on which six inches of crushed stone has been placed to ensure stability and to prevent settling.
Septic tank shall have a minimum of nine inches of cover.

B) The inlet and outlet tees shall be installed to the grades shown on the drawings. The tees shall extend a minimum of six inches above the flow line of the septic tank and shall be on the center line of the septic tank and located directly under the access manholes.Cross-sectional flow baffles shall not be used as substitutes for inlet or outlet tees.

C) FOR REPAIRS Contractor SHALL when connecting a new septic tank to an existing sewer line. Verify sewer line is Sch. 40 or C.I. in good condition or it shall be replaced. Also that: all out flow pipes from building run thru/to septic tank, and invs. are correct prior to any excavating. All work in conformance with Mass. State Plumbing Code.

DESIGN CRITERIA

9.) Unless otherwise noted (UON), the design of this system conforms to the requirements of the Commonwealth Of Massachusetts Environmental Code "Title V", and the requirements of the local board of health.

10.) The design of this system did not allow for the use of a garbage disposal.

11.) The septic tank shall be inspected and cleaned in accord with 310 CMR 15.300 and applicable local requirements.

12.) Grease trap; If applicable, shall be inspected every month, and shall be cleaned every 3 months or when the level of grease is 25% of the effective depth of the trap.

13.) The design of this system conforms with the following minimum distances from the proposed sanitary system:

A.) Surface water supply or gravel packed wells....400 ft.
B.) Tubular public wells....250 ft.
C.) Private potable wells....200 ft.
D.) non potable / irrigation wells....200 ft.
E.) Other sanitary soil absorbtion system.... 10 ft.
F.) Wetlands....100ft.

14.) No structures shall be located upon, above, or within 20' of the leaching facility. The reserve area (100% expansion) is considered to be the same as the leaching facility.

15.) The top of all system components, including the septic tank, distribution box or dosing chamber and soil absorption system, shall be installed no more than 36" below finish grade.

Leaching Chambers Area

16.) Leaching chamber shall be an ARC-36 HC. LEACHING chamber or engineer approved equal.

17.) All installations shall be true to line and grade.

18.) All piping shall be PVC SCH. 40

19.) Distribution pipe(s) shall have a minimum diameter of 4" and a minimum slope of 0.01.

20.) All unsuitable material including top soil and sub soil shall be removed as follows:
Remove soils to elevation , and a distance of ft. in all directions of the designated leaching field area.

21.) Removed soils shall be replaced with clean sand, meeting the requirements of 310 CMR 15.255(3).

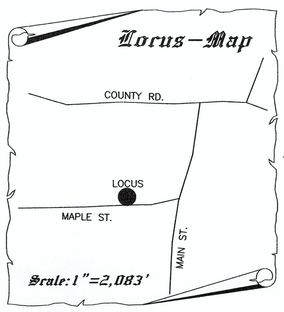
Inspection Schedule

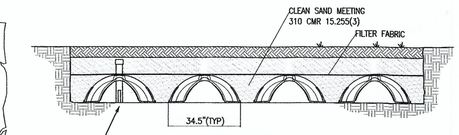
23.) To obtain the board of health certification, confirmation of the proper installation is required.

a.) After Excavation of unsuitable material
b.) Placement of the clean back fill Meeting 310 CMR 15.255(3)
c.) Installation of the system with all components exposed for inspection and preparation of "As Built" Plan.
d.) When existing ground elevations are changed a finished ground elev. "asbuilt" shall be required prior to certificate of compliance being issued.

Utility Notes

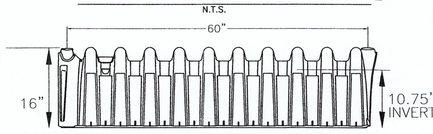
24.) The location of utilities are approximate only. Dig-Safe and other appropriate authorities shall be notified to verify actual locations, prior to any excavating. Relocate if / as required.

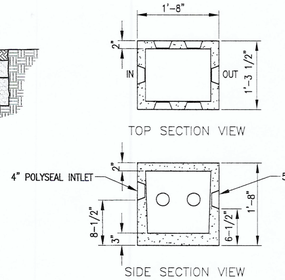




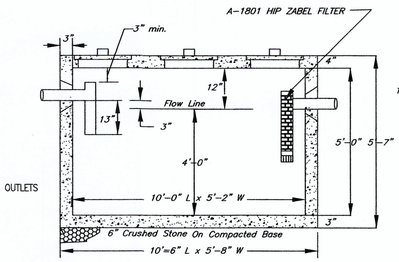
CROSS SECTION DETAIL
(NOT TO SCALE/PARTIAL VIEW)
THIS SYSTEM IS DESIGNED WITHOUT SPACING BETWEEN CHAMBER ROWS

ADS-ARC36-HD. LEACHING CHAMBERS DETAIL
N.T.S.

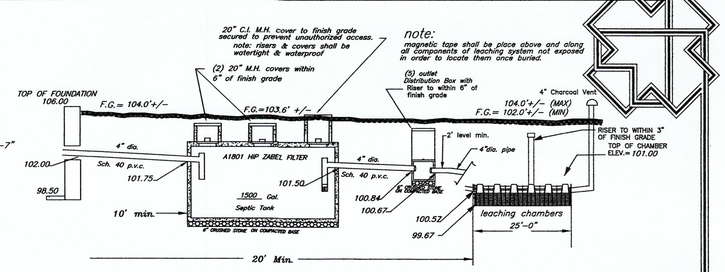




DISTRIBUTION BOX DETAIL
(5 OUTLET)
(NOT TO SCALE)



Proposed 1500 Gal.
Precast Concrete Septic Tank
NOT TO SCALE



Section Thru System

LOT 7-2-27
MELISSA TOFFOLONI
ANDREW MCDERMOTT
26 MAPLE STREET
PLYMPTON, MASS. 02367

BUFFER ZONE DISTURBANCE TABLE

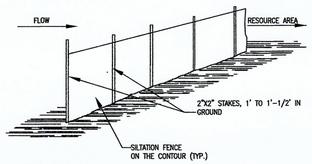
PROPOSED WORK WITHIN 25' SETBACK	0 S.F.
PROPOSED WORK BETWEEN 25' & 50' SETBACK	0 S.F.
PROPOSED WORK BETWEEN 50' & 100' SETBACK	16,257 S.F.

CONVENTIONAL SYSTEM
LAYOUT 20'X30' LEACHING
FIELD = 600 S.F.

PRIMARY S.A.S.	RESERVE AREA

NOTES:

1) LOCUS DOES NOT LIE IN A ZONE II WELL PROTECTION ZONE, BUT IS SERVICED BY A PRIVATE WELL.
2) LOCUS DOES NOT LIE IN A FLOOD HAZARD ZONE AS DETERMINED BY THE FIRM MAPS OR THE TOWN OF PLYMPTON ZONING MAP
3) THERE ARE NO WETLANDS, STREAMS, SURFACE OR SUBSURFACE DRAINS WITHIN 100' OF THE PROPODED SYSTEM.
4) THERE ARE NO KNOWN POTABLE WELLS WITHIN 200 FEET OF THE SOILS ABSORPTION SYSTEM, EXCEPT AS SHOWN.
5) THERE ARE NO ABUTTING FOUNDATIONS WITHIN 25' OF THE PROPOSED SOILS ABSORPTION SYSTEM.
6) THERE ARE NO KNOWN EASEMENTS WITHIN PROXIMITY OF THE SOILS ABSORPTION SYSTEM.



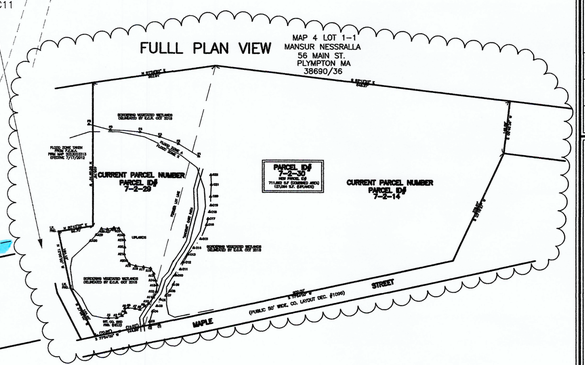
NOTES:
1. EROSION CONTROL DEVICES ARE TO BE PLACED PRIOR TO CONSTRUCTION AND ARE TO REMAIN IN PLACE UNTIL ALL CONSTRUCTION IS COMPLETED AND NEW SLOPES HAVE BEEN STABILIZED.
2. EROSION CONTROL DEVICES SHALL BE PLACED IN A ROW WITH ENDS TIGHTLY ABUTTING THE ADJACENT BALES.
3. THE EROSION CONTROL DEVICES SHALL BE EMBEDDED IN THE SOIL A MINIMUM OF 6".
4. SILTATION FENCES SHALL BE SECURELY ANCHORED IN PLACE BY STAKES

SILT FENCE

PARCEL ID#
7-2-14
7-2-29

710,310 S.F. (COMBINED TOTAL)
129,075 S.F. (TOTAL UPLANDS)

FULLL PLAN VIEW
MAP 4, LOT 1-1
MANSUR NESSRALLA
56 MAIN ST.
PLYMPTON MA
38680/36



Proposed Flow Line Grades		" As Built " Grades
INV. AT FOUNDATION	102.00	
INV. INTO SEPTIC TANK	101.75	
INV. OUT OF SEPTIC TANK	101.75	
INV. INTO DISTRIBUTION BOX	101.50	
INV. OUT OF DISTRIBUTION BOX	100.67	
INV. INTO CHAMBER BED	100.57	
BOTTOM OF CHAMBER BED	99.67	
WATER TABLE	94.33	

MOTTLES TEST PIT #3

T.P. 1
104.00
6" A SANDY LOAM 10YR 3/3 — 103.50
24" B LOAMY SAND 10YR5/8 — 102.00
C MED. SAND 2.5YR/3
132" — 93.00

T.P. 2
104.00
6" A SANDY LOAM 10YR 3/3 — 103.33
22" B LOAMY SAND 10YR5/8 — 102.17
40" PERC. RATE 2MIN./INCH
C MED. SAND 2.5YR/3
120" — 94.00

T.P. 3
102.00
10" A SANDY LOAM 10YR 3/3 — 101.17
20" B LOAMY SAND 10YR5/8 — 100.33
C MED. SAND 2.5YR/4
MOTTLES — 94.33
92" — 92.00
WEEPING @ 120" ELEV: 92.00

T.P. 4
104.00
10" A SANDY LOAM 10YR 3/3 — 103.17
20" B LOAMY SAND 10YR5/8 — 102.33
40" PERC. RATE 2MIN./INCH
C MED. SAND 2.5YR/4
120" — 94.00

SOIL LOGS

PERC. RESULTS <2 MIN./INCH
Present During Tests On 11/27/18
Agent: ROBERT TINKHAM
Soil Evaluator: JOE WEBBY JR.

Bench Mark
NAIL SET IN 24" PINE
ELEV: 101.91

DESIGN CALCULATIONS

NUMBER OF BEDROOMS = 4 ea.
GALLONS/ BEDROOM = 110 gal.
REQUIRED GPD = 440 gal.
REQUIRED LEACHING AREA = 440 / 0.74 (@<2 MIN/INCH) = 595 s.f.
LEACHING AREA PROVIDED = 600 s.f. > 595 s.f.
LEACHING CAPACITY = 444 gpd. > 440 gpd.

SEPTIC TANK SIZING CALCULATIONS
440 x 2 = 880 GAL. USE 1500 GAL. MINIMUM SEPTIC TANK

PROPOSED SOIL ABSORPTION SYSTEM SIZING CALCULATIONS
25 (CHAMBERS) x 5' L X 4.80 (EFFECTIVE LEACHING AREA SF/LF, PER MAN. SPEC) = 600 SF

Issue	Date	Description	Drawn	Design	Check	Resp. Eng.
#1	6/23/21	PROPOSED SANITARY SYSTEM				
#2	2/15/22	REVISE WETLANDS FLAGS				

PROPOSED Sanitary System

TOWN: PLYMPTON PARCEL ID# 7-2-29 & 7-2-14
LOCATION: MAPLE STREET
PREPARED FOR: PAUL D'ANGELO
SCALE: 1" = 40' DATE: JUNE 23, 2021

WEBBY ENGINEERING ASSOCIATES, INC.
Civil Engineers & Land Surveyors
180 County Road - Plympton, MA.
(781) 585-1164

JOSEPH E. WEBBY, JR. No. 28717 REGISTERED PROFESSIONAL ENGINEER — 2/16/2022
Prof. Land Surveyor

RICHARD ROBERT DeBENEDICTIS No. 28318 REGISTERED PROFESSIONAL ENGINEER
Prof. Engineer

W-5749