

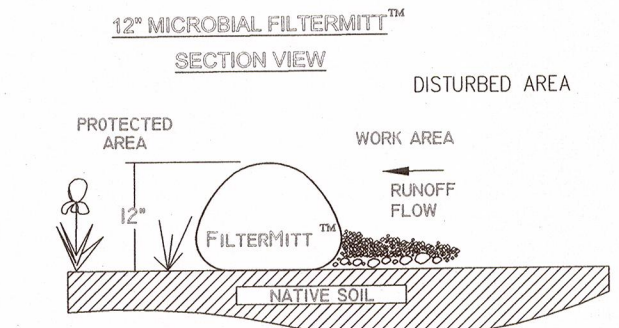
DATE OF TEST: MARCH 17, 2021		WITNESS: KARL DROWN	
TEST PIT # 1: ELEV.: 103.30		SOIL EVALUATOR: BRAD FITZGERALD, P.E.	
DEPTH FROM SURFACE FEET	SOIL HORIZON	SOIL TEXTURE (UNSELL)	SOIL COLOR (MUNSELL)
1 0 - 12	A	SANDY LOAM	10YR 3/2
2 12 - 24	B	LOAMY SAND	10YR 5/6
3			
4			
5 24 - 102	C	LOAMY SAND	2.5Y 5/3
6			
7			
8			
9			
PERCOLATION RATE: 12 M.P.I. @ 42"		COBBLES & STONES	
GROUNDWATER: MOTTLING @ 18" (EL.: 101.80), WEEPING @ 48"			

DESIGN CALCULATIONS			
CAPACITY REQUIRED - RESIDENTIAL USE:			
DESIGN FLOW:			
2 BEDROOMS @ 110 Gal/Day/Bedroom = 220 Gal/Day			
TITLE 5 REQUIRES 3 BEDROOM DESIGN = 330 Gal/Day			
REHOBOTH REQUIRES A 25% SIZE INCREASE			
330 Gal/Day X 125% = 412.5 Gal/Day Required			
CAPACITY PROVIDED:			
SEPTIC TANK:			
DESIGN FLOW = 330 Gal/Day			
X 200%			
REQUIRED SIZE = 660 Gal/Day			
SIZE PROVIDED = 1,500 Gal/Day			
LEACHING FACILITY:			
DESIGN PERCOLATION RATE: 12 MPI			
SOIL TEXTURAL CLASS: CLASS I			
LONG TERM ACCEPTANCE RATE (LTAR): 0.56 GPD/SF			
412.5 GPD/0.56 = 737 S.F. REQUIRED			
USING INFILTRATOR QUICK4 PLUS STANDARD CHAMBERS			
737 S.F. / 4.73 S.F./L.F. = 155.73 L.F. REQUIRED			
155.73 / 4 = 39 QUICK4 PLUS CHAMBERS REQUIRED			
USE 5 ROWS OF 8 QUICK4 PLUS CHAMBERS			
FIELD DIMENSIONS: 14.17' X 35' = 495 Sq. Ft.			
40 QUICK4 PLUS CHAMBERS PROVIDES 423 Gal/Day			
SYSTEM IS NOT DESIGNED FOR A GARBAGE GRINDER			
OR WATER SOFTENER BACKWASH.			

TEST PIT INFORMATION	
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CONSERVATION COMMISSION NOTES:

- EROSION CONTROL IS TO BE INSTALLED ADJACENT TO THE CONSTRUCTION SITE TO PREVENT POLLUTION AND SILTATION OF THE WETLANDS. IT IS TO BE STAKED IN TO PREVENT UPLIFT AND PIPING.
- IF DEWATERING IS NEEDED DURING CONSTRUCTION, A HAYBALE STILLING BASIN IS TO BE INSTALLED UPHILL FROM THE EROSION CONTROL BARRIER, AS FAR FROM THE WETLANDS AS POSSIBLE.
- UPON COMPLETION OF CONSTRUCTION, ALL EXPOSED SURFACES ARE TO BE EVENLY GRADED, LOAMED TO A DEPTH OF 4", AND SEEDED WITH A MIX OF STABILIZING GRASSES, TOLERANT OF MOWING AND FOOT TRAFFIC.
- IF SEASONAL CONDITIONS PREVENT SEEDING, THE EXPOSED SURFACES SHALL BE COVERED WITH HAY OR STRAW, TO PREVENT EROSION.
- THERE IS TO BE NO FILLING OF ANY RESOURCE AREAS.
- THERE SHALL BE NO STOCKPILING OF CONTAMINATED SOILS WITHIN ANY RESOURCE AREAS OR BUFFER ZONES.
- UNLESS OTHERWISE NOTED, THE EROSION CONTROL SHALL BE CONSIDERED THE LIMIT OF CLEARING AND WORK.
- THE WETLANDS WERE FLAGGED ON APRIL 5, 2021 BY BOB GRAY OF SABATIA, INC.

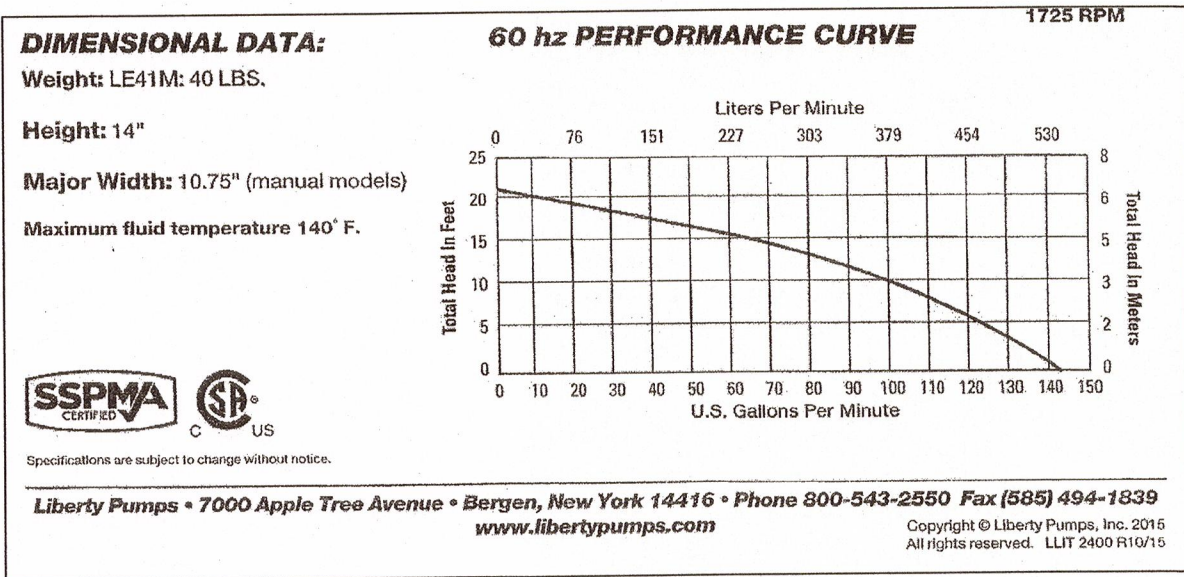


EROSION CONTROL DETAIL
n.t.s.

PUMP CALCULATIONS
CLASS I SOIL REQUIRES 4 DOSES/DAY
103 GALLONS TO BE PUMPED
PUMP CHAMBER INSIDE DIMENSIONS:
7.875' X 5.04' X 7.48 GAL/CF = 296 GAL/FT
103/296 = 0.38' TO BE PUMPED
ALARM FLOAT TO BE SET A MINIMUM
OF 1.53' BELOW THE OUTLET ELEVATION

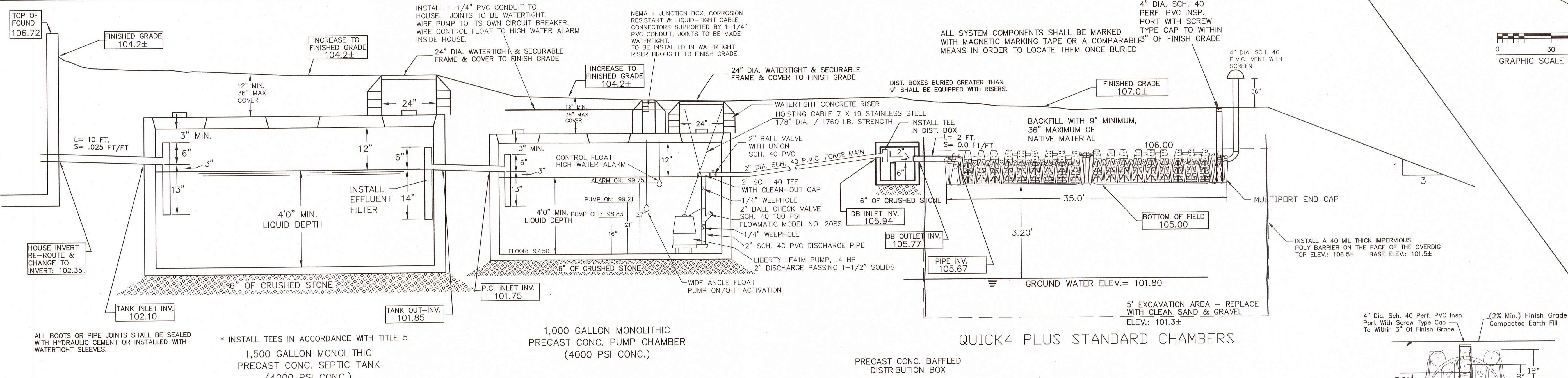
HEAD LOSS
STATIC HEAD: 105.94 - 98.83 = 7.11'
DYNAMIC HEAD: 2" SERV. 1' = 40', v = 3.0 FPS
EQUIV. LENGTHS: 1 TEE: 6.6'
1 CHECK VALVE: 12.0'
2 ELBOWS: 5.7'
24.3' SAY 25'
EQUIV. LENGTH: 40' + 25' = 65'
A = .02 SF r = .04
h_L = $\frac{(3.0)(65')}{[(1.318)(130)]^{1.85}} \times 1.85 = 1.62'$

TOTAL HEAD: 7.11' + 1.62' = 8.73' SAY 10'
LIBERTY LE41M PUMPS 100 GPM @ 10'



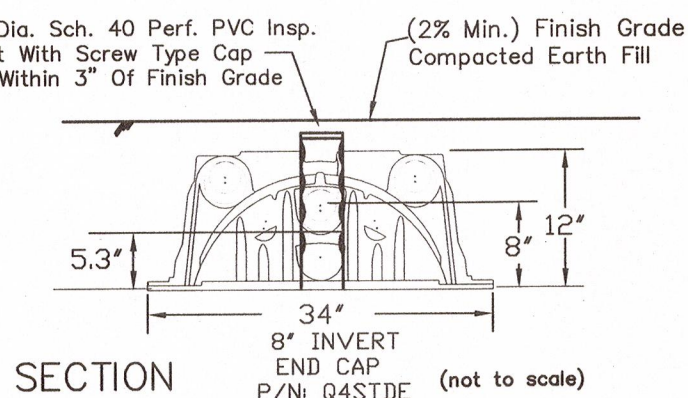
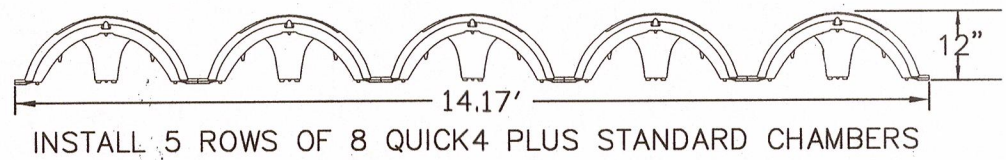
BUOYANCY CALCULATIONS

SEPTIC TANK SITS 4.20' IN WATER.
10.83' X 5.67' X 4.20' X 62.4 LBS/CF / 2000 LBS/TON = 8.05 TONS OF UPLIFT
SEPTIC TANK WEIGHS 5.5 TONS.
SEPTIC TANK HAS 1.01' OF COVER.
10.83' X 5.67' X 1.01' X 100 LBS/CF / 2000 LBS/TON = 3.10 TONS OF COVER
5.5 TONS + 3.10 TONS = 8.60 TONS > 8.05 TONS.
PUMP CHAMBER SITS 4.55' IN WATER.
8.38' X 5.54' X 4.55' X 62.4 LBS/CF / 2000 LBS/TON = 6.59 TONS OF UPLIFT
PUMP CHAMBER WEIGHS 5.0 TONS.
PUMP CHAMBER HAS 1.36' OF COVER.
8.38' X 5.54' X 1.36' X 100 LBS/CF / 2000 LBS/TON = 3.15 TONS OF COVER
5.0 TONS + 3.15 TONS = 8.15 TONS > 6.59 TONS.



TANKS & DIST. BOX FROM J & R PRE-CAST, INC.
16 COUNTY STREET BERKLEY, MA 02779
(508) 822-3311

SYSTEM PROFILE (not to scale)



A SEPTIC SYSTEM IN REHOBOTH, MA FOR MARILYN LEFFORT, TR.

DATE: MAY 13, 2021

SENNA FITZGERALD GILBERT ASSOCIATES
SFG ASSOCIATES, INC.
CIVIL ENGINEERS & LAND SURVEYORS
28 MAIN STREET LAKEVILLE, MA 02347
(508) 946-5258 TEL./FAX. (508) 947-1090