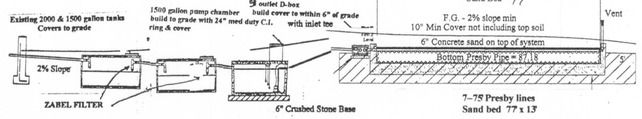
System Profile

Schedule of Elevations:

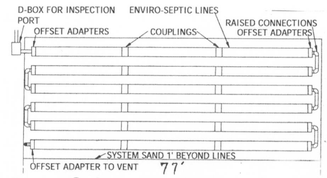
Benchmark		100.0
At house		89.75+/-
Septic tank	in	89.50+/-
	out	89.25+/-
Septic tank	in	89.00+/-
	Out	88.75+/-
Top Conc Sand		96.10
D- Box	in	95.44
	out	95.27
Presby invert	# 1	95.17
bottom		94.50
Bottom Conc. Sand		94.00
Bottom Septic Sand		92.0
ESHGW		88.0



System Detail

Here's a plan view of an Enviro-Septic® basic serial system.

Note: All systems require a D-Box as an observation port.



EXISTING 1500 GALLON PUMP CHAMBER

NOTES

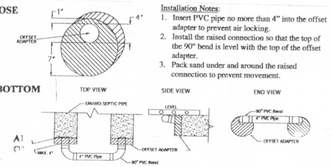
1. The pump chamber shall be a 1500 gal pump chamber as provided by SHEA Concrete Products Inc #TK-1000PC. Or approved equal.
2. The pump shall be provided with liquid float control switches and high water alarm control set as illustrated in detail. If an alternative chamber is used, float switch settings may have to be revised.
3. Control panel equipped with ON-OFF-MANUAL switching and visual & audible high water alarm shall be placed in the basement in a readily accessible location. Alarm circuit shall be separate from pump circuit.
4. All wiring shall conform to local and state wiring codes and shall be installed be a licensed electrician.
5. An 1/8" weephole shall be drilled in the 2 inch force main between the disconnect and the tank outlet.
6. Access to the pump chamber shall be provided with a 24" cast iron cover and frame brought to grade.

PUMP CHAMBER CALCULATIONS:

1500 GALLON TANK 48" TO BOTTOM OF OUTLET
1500 –48 = 31 GALS PER INCH
DOSE ONCE A DAY 550 GALLONS PER DOSE
550 – 31 = 18 INCHES

PUMP OFF	8"
PUMP ON	19"
ALARM ON	20"
RESERVE CAP	899GALS

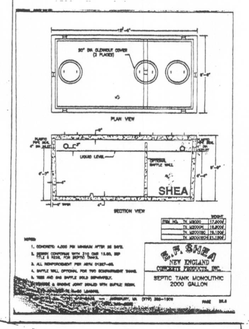
ALL MEASUREMENTS ARE FROM THE BOTTOM OF THE PUMP CHAMBER



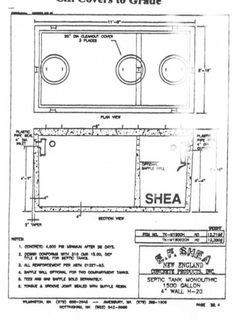
Installation Notes:
1. Insert PVC pipe no more than 4" into the offset adapter to prevent air locking.
2. Install the raised connection so that the top of the 90° bend is level with the top of the offset adapter.
3. Pack sand under and around the raised connection to prevent movement.

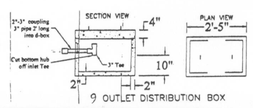
Existing 2000 Gallon Tank

Both tanks are 1 compartment

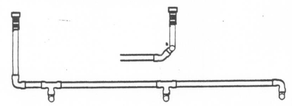


New 1500 Gallon Tank
Zabel filter & gas fl
C.L. Covers to Grade



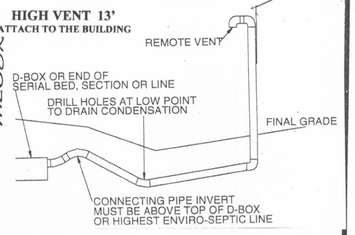


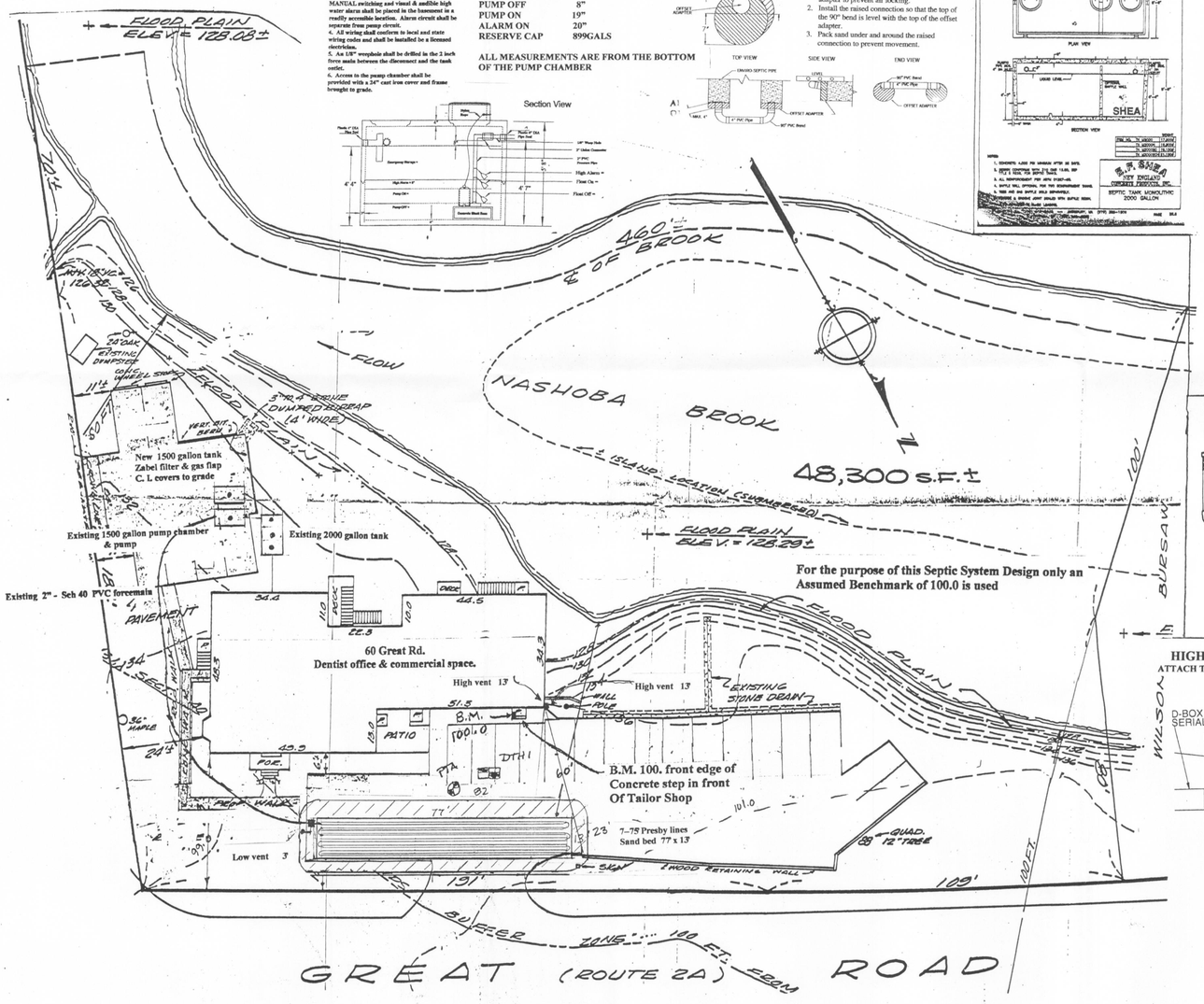
LOW VENT 3'
LOCATION & COLOR TO BE DETERMINED IN THE FIELD



Vent Detail

HIGH VENT 13'
ATTACH TO THE BUILDING





General Notes

1. **THE HOUSE AND LOT LINES ARE GRAPHIC ONLY, THEY ARE NOT THE RESULT OF AN INSTRUMENT SURVEY, IF PROXIMITY OF THE SYSTEM TO LOT LINES IS CRITICAL OR THERE IS A DISPUTE ABOUT THE LOCATION OF A LOT LINE THEN A SURVEY SHOULD BE PERFORMED BY A PROFESSIONAL LAND SURVEYOR.**
2. **THIS SEPTIC SYSTEM HAS NOT BEEN DESIGNED TO ACCOMMODATE A GARBAGE DISPOSAL UNLESS SO NOTED ON THE PLAN.**
3. **THIS SEPTIC SYSTEM SHOULD BE PUMPED ANNUALLY.**
4. **THIS SEPTIC SYSTEM IS LOCATED IN ZONE OF THE AQUIFER PROTECTION**
5. **THERE NO KNOWN WETLANDS WITHIN 100' AND NO DRAINS WITHIN 10' OF THE SEPTIC SYSTEM EXCEPT AS SHOWN.**
6. **THE PLAN SHOWS ONLY THOSE FEATURES THAT WERE APPARENT ON THE DATE OF THE TOPOGRAPHY. WE ARE NOT RESPONSIBLE FOR ANY UNMARKED OR IMPROPERLY MARKED UNDERGROUND STRUCTURES OR UTILITIES.**
7. ***DIG SAFE MUST BE CALLED BEFORE DIGGING 1- (800) 322-4844.***
8. **D-BOX OUTLETS TO BE LEVEL. FIRST 2' OF PIPE TO BE LAID LEVEL. IF THE SLOPE OF THE INLET PIPE EXCEEDS 8% A TEE MUST BE INSTALLED ON THE END OF THE PIPE INSIDE THE D-BOX AND CUT OFF 1" ABOVE THE OUTLET**
9. **ALL STONE SHALL BE DOUBLEWASHED. *NO TRAPROCK***
10. **SET SEPTIC TANK, PUMP CHAMBER (IF REQUIRED) AND D-BOX ON A 6" COMPACTED STONE BASE. INSTALL A GAS BAFFLE ON THE SEPTIC TANK OUTLET TEE.**
11. **IF A VENT IS REQUIRED THE LOCATION WILL BE DETERMINED WITH THE OWNER**

DEEP TESTHOLES:

DTH 1 Elev. 99.50

0 - 72		fill
72 - 82	A	10yr3/2 sand loam
82 - 90	B	10yr5/8 loam sand
90 - 138	C	2.5y6/4 med sand

No H20 No mottles
ESHGW 138"

PTA Elev. 99.50

90' UTS
<2 MPI
9/10/07 10a
Dick Dolan soil evalustor
Brent Reagor Acton BOH

Percolation Test			
Test #	Depth	Elevation	Rate
1			

I certify that I have passed the examination approved by DEP and that the soil analysis has been performed by me consistent with the required training, expertise, and experience described in 310 CMR 15.018(2).

Richard Dolan
Soil Evaluator

Design Calculations

Commercial Building
1000 gals per day
<2MPI perc rate
2000 gallon existing tank
1500 gallon new tank
Both tanks are 1 compartment
1500 gallon existing pump chamber
1–9 MPI requires 500' of
Presby Enviro- Septic Lines
525 have been provided 1050 gpd
Sand bed 13 x 77 = 1001 s.f.
Meeting Acton BOH min. req.

Proposed Elevations

Benchmark		100.0
At house		89.75+/-
Septic tank	in	89.50+/-
	out	89.25+/-
Septic tank	in	89.00+/-
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D- Box	in	95.44
	out	95.27
Presby invert	# 1	95.17
bottom		94.50
Bottom Conc. Sand		94.00
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ESHGW		88.0

System Notes

Local Upgrade Approval

COMMONWEALTH OF MASSACHUSETTS STEVEN CALICHMAN No. 6900 REGISTERED SANITARIAN

9/29/07

STEVEN CALICHMAN R.S. CHO

I have reviewed this plan for compliance with 310 CMR 15.000 and applicable local regulations

No.	Revision/Issue	Date

ABC Cesspool
PLAN BY:
DICK DOLAN
292 High Street
Acton, MA 01720
(978)263-5802

Proposed Septic System

60 Great Rd.
Acton

Project	Sheet 1
Date	
Scale 1" = 20'	

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