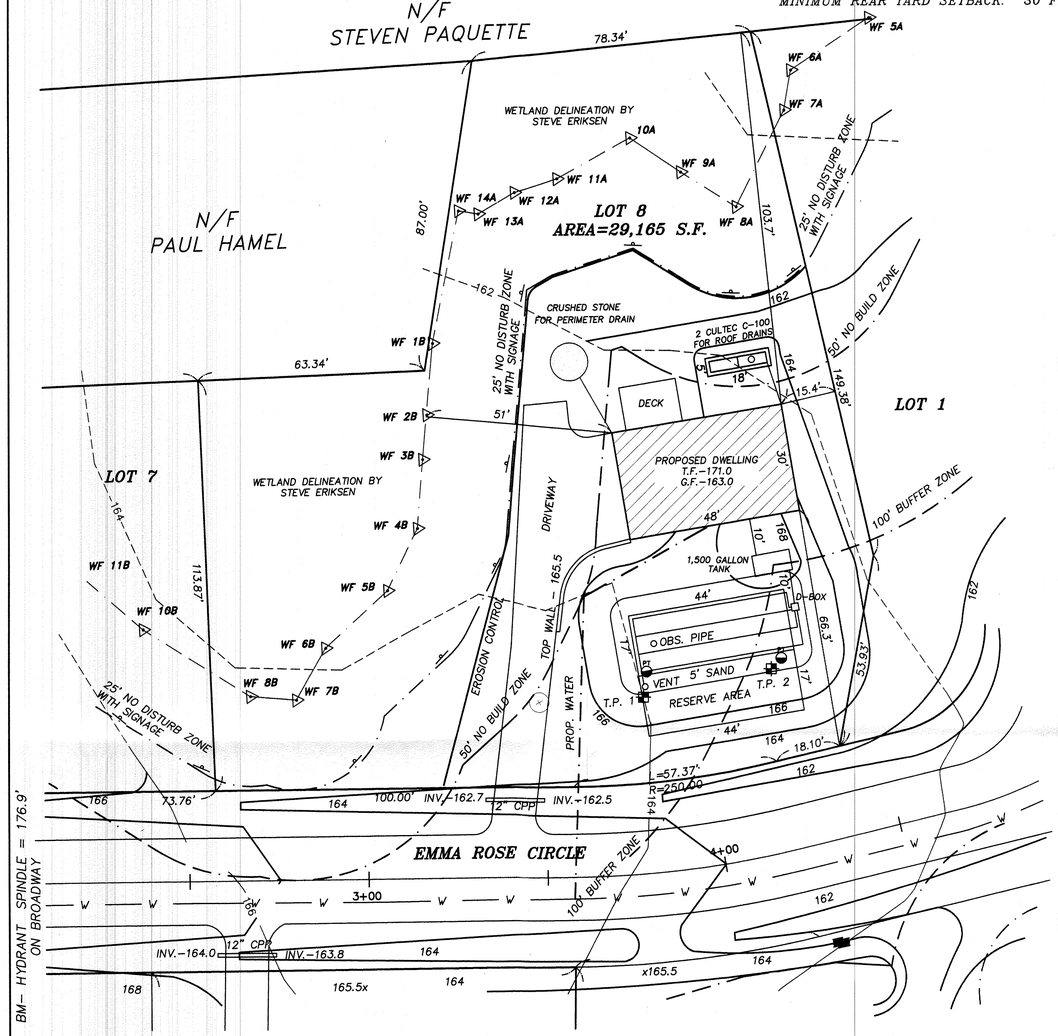
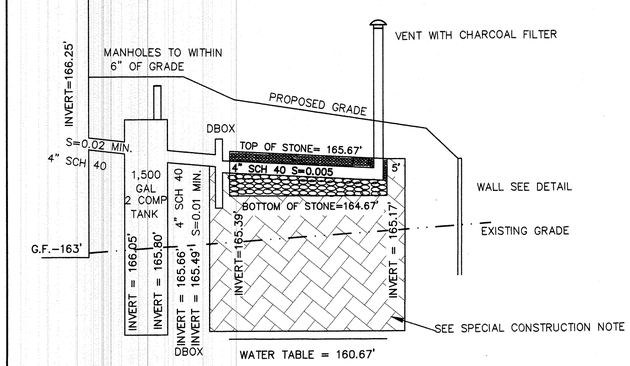
SITE PLAN 1"=20'

ZONING DISTRICT: RM
MINIMUM FRONT YARD SETBACK: 25 FT.
MINIMUM SIDE YARD SETBACK: 15 FT.
MINIMUM REAR YARD SETBACK: 30 FT.



CONSTRUCTION NOTES:

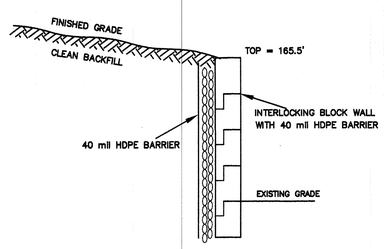
CONTRACTOR SHALL REMOVE ALL UNSUITABLE SOILS (A,B&FILL) IN AND 5 FEET AROUND PROPOSED LEACH AREA AND REPLACE WITH CLEAN GRANULAR SAND FILL IN COMPLIANCE WITH REGULATION 15.255 (3) - (6)



PROFILE - SEPTIC SYSTEM
1"=20' HORIZ. 1"=2' VERT.

TABLE OF BUFFER ZONE ALTERATIONS

BUFFER ZONE:	
75'-100'	= 2,873 S.F.
35'-75'	= 4,953 S.F.
0'-35'	= 1,684 S.F.



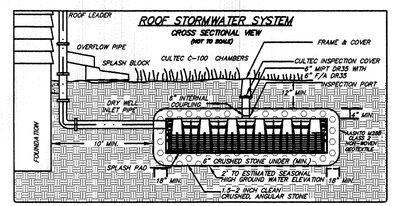
WALL DETAIL NTS

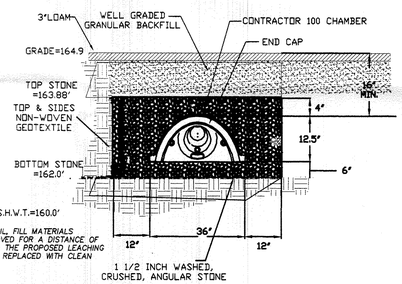
NOTES:

1. VERTICAL DATUM IS FROM SUBDIVISION PLAN.
2. CRUSHED STONE FILTER TO BE USED DURING CONSTRUCTION.
3. PERIMETER DRAIN SHALL BE 4" P.V.C. WITH CRUSHED STONE AND FILTER FABRIC PAPER.
4. AUTHORIZATION FROM THE HIGHWAY SUPERINTENDENT MUST BE RECEIVED PRIOR TO BACK FILLING (978)-374-2364.
5. TRENCH BACK FILL SHALL BE PERFORMED UNDER THE INSPECTION AUTHORIZED CITY PERSONAL.
6. WATER SERVICE TO BE CONNECTED PER CITY OF HAVERHILL SPECIFICATIONS.

LEGEND

74	EXISTING CONTOUR
	OBSERVATION HOLE
84	PROPOSED GRADE
	UTILITY POLE
	WETLAND SIGNS
WF A19	WETLAND FLAG





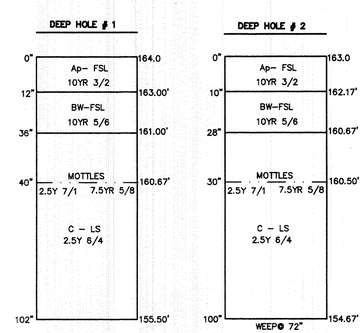
VOLUME STONE=(18'X6'X1.875')-(14X2units))X0.40 = 69.8 C.F.
TOTAL VOLUME = 69.8 C.F. + (14X2units) = 97.8 C.F.
VOLUME NEEDED = (0.5'/12')X1560S.F.= 65 C.F.

LEACHING CHAMBERS
"CONTACTOR 100" by CULTEC

I CERTIFY THAT ON 4/96 I HAVE PASSED THE EXAMINATION APPROVED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION AND THAT THE ABOVE ANALYSIS HAS BEEN PERFOMED BY ME CONSISTENT WITH THE REQUIRED, EXPERTISE AND EXPERIENCE DESCRIBED IN 310 CMR 15.018(2).

SOIL TEST DATA

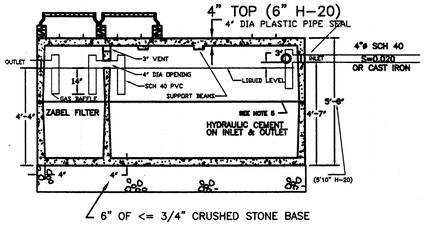
TESTS BY: GREG SAAB DATE: 11/25/15
WITNESS: LES GODIN PERCOLATION RATE(S): 7 & 10 MPI



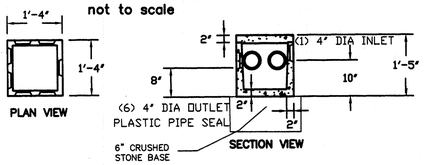
1,500 GALLON 2 COMPARTMENT TANK

SEPTIC TANK SHALL CONFORM IN ALL RESPECTS TO THE REQUIREMENTS OF TITLE 5, SECTIONS 15.223, 15.226, 15.227 AND 15.228

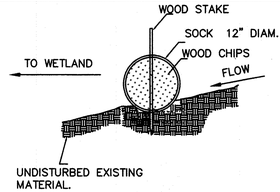
SHEA STANDARD TANK TO BE WATER TIGHT



DETAIL - DISTRIBUTION BOX
not to scale



NOTES: H-10 LOADING
1. CONCRETE: 4,000 PSI MINIMUM AFTER 28 DAYS.
2. DESIGN CONFORMS WITH 310 CMR 15.000, DEP TITLE 5 REGS, FOR DISTRIBUTION BOXES.
3. OUTLET PIPES MUST BE LAID LEVEL FOR 2'.



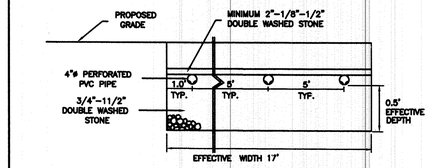
EROSION CONTROL
SILT SOCK

NOTES

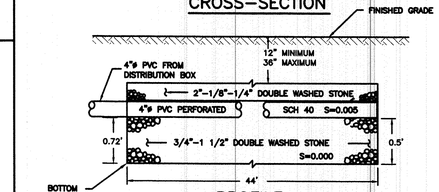
1. SAFETY MEASURES, DAY-TO-DAY CONTROL OF THE WORK AND CONSTRUCTION METHODS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
2. UNLESS SPECIFIED OTHERWISE HEREON, SYSTEM CONSTRUCTION SHALL CONFORM TO TITLE V OF THE STATE ENVIRONMENTAL CODE AND LOCAL BOARD OF HEALTH CODE.
3. ANY INTENDED REVISION OF PROPOSED ELEVATIONS AND/OR HORIZONTAL LOCATIONS AS SHOWN HEREON SHALL BE APPROVED BY THE ENGINEER AND THE LOCAL BOARD OF HEALTH PRIOR TO IMPLEMENTATION.
4. THIS PLAN IS FOR DESIGN AND CONSTRUCTION OF THE SEPTIC SYSTEM ONLY. PROPERTY LINES SHOW HEREON ARE APPROXIMATE.
5. ALL WORK ON LINES, GRADES AND DETAILS SHOWN IS TO BE DONE BY A LICENSED "DISPOSAL WORKS INSTALLER." THE CONTRACTOR SHALL NOTIFY THE PROPER INSPECTORS AND ALLOW SUCH TIME AS IS REQUIRED FOR INSPECTIONS.
6. ALL ERRORS, OMISSIONS AND CHANGE OF CONDITIONS AT THE SITE SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO PERFORMING THE RELATED WORK.
7. NO WETLANDS ARE LOCATED WITHIN 50 FEET OF THE PROPOSED SEPTIC SYSTEM.
8. THE SEPTIC TANK SHALL BE INSPECTED ANNUALLY AND PUMPED AS REQUIRED.
9. WATER SAVER TOILETS AND SHOWER HEADS SHOULD BE USED WITH THE SYSTEM.
10. THIS SYSTEM HAS BEEN DESIGNED FROM DATA REVIEWED AND ACKNOWLEDGED BY THE LOCAL BOARD OF HEALTH.
11. THE ISSUANCE OF A CONSTRUCTION PERMIT AND/OR A CERTIFICATE OF COMPLIANCE SHALL NOT IMPLY AS A GUARANTEE THAT THE SUBSURFACE SEWAGE DISPOSAL SYSTEM WILL FUNCTION SATISFACTORILY.
12. CONSTRUCTION OF LEACHING FACILITIES IN CLEAN GRANULAR FILL: CLEAN GRANULAR FILL SHALL BE DEFINED IN THE STATE ENVIRONMENTAL CODE, TITLE V, REGULATION 15.255 & SHALL CONFORM TO THE GRADATION SPECIFIED IN 15.255(3).
13. BENCHMARK TO BE SET PRIOR TO START OF CONSTRUCTION.
14. FINISH GRADE TO BE STABILIZED PRIOR TO ISSUANCE OF CERTIFICATE OF COMPLIANCE.
15. NO PUBLIC WATER SUPPLY IS LOCATED WITHIN 400' AND NO TRIBUTARY TO PUBLIC WATER SUPPLY IS LOCATED WITHIN 200' OF LEACHING FACILITIES.
16. ALL PLUMBING WORK WITHIN 10' OF HOUSE MUST BE DONE BY A LICENSED PLUMBER.
17. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UTILITIES BY CONTACTING DIG-SAFE AND MUNICIPAL UTILITIES PRIOR TO THE START OF EXCAVATION.

DESIGN CRITERIA

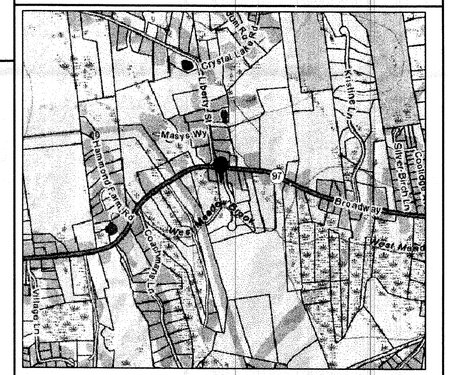
1. BUILDING TYPE: DWELLING
2. NO. OF BEDROOMS: 4
3. DESIGN FLOW: 4 x 110 GAL/BDRM/DAY = 440 GAL/DAY
4. FIELD PERCOLATION RATE: 7 & 10 M.P.I.
5. GARBAGE DISPOSAL : YES ___ NO X
6. EFFLUENT LOADING RATE: 0.60 GAL/DAY/SF
   SOIL CLASS: II DESIGN PERCOLATION RATE: 10 MIN/INCH
7. TOTAL LEACH AREA REQUIRED:
   LOCAL CODE: 734 S.F. TITLE 5 734 SQ. FT.
   PROVIDED: 748 SQ. FT.
   BED: 17' X 44' = 748 SQ. FT.
   BOTTOM: 748 SQ. FT. x 0.60 GAL/SQ. FT. = 448 GAL/DAY
   TOTAL: 748 SQ. FT. OR 448 GAL/DAY
8. LEACH AREA: 17 FOOT WIDE BY 44 FOOT LONG LEACHING BED, VENTED



CROSS-SECTION



PROFILE



PROPOSED SUBSURFACE SEWAGE DISPOSAL SYSTEM

FOR: JAMES A. MAHONEY & SONS INC.
AT: EMMA ROSE CIRCLE (LOT 8)
HAVERHILL, MASSACHUSETTS
MAP 539 BLOCK 439 LOT 10A

RECEIVED AUG 11 2016 Conservation Commission

DATE: AUGUST 8, 2016
SCALE: AS SHOWN
DWG: GCS
CHKD: C.A. MORIN, P.E.

COMMONWEALTH OF MASSACHUSETTS Clayton A. Morin 30949 CIVIL REGISTERED PROFESSIONAL ENGINEER

ESS 70 Bailey Court Haverhill, MA 01832 978.556.0284

NO.	DATE	REVISION