SEPTIC TANKS AND DISTRIBUTION BOXES

1. CERTIFICATION FOR FROST RESISTANCE (ACI 318–16–4.5.1) AND WATER TIGHTNESS (ACI 318–16–4.5.2 SHALL BE PROVIDED BY THE MANUFACTURER AND THE CERTIFICATION DISPLAYED ON THE TANK.
2. ALL INSIDE CONCRETE SURFACES SHALL BE SEALED WITH TWO COATINGS OF AN APPROPRIATE INERT COATING TO MINIMIZE CORROSION (COAL TAR PITCH). COATING OF PRE–CAST TANKS SHALL BE APPLIED BY THE MANUFACTURER PRIOR TO DELIVERY TO THE JOB SITE. DISTRIBUTION BOX MUST ALSO BE COATED.
3. ALL OPENINGS IN SEPTIC TANK TO BE SEALED WITH EMBECO 636 GROUT OR EQUIVALENT AND COVERED ON OUTSIDE WITH TAR.
4. OUTLET BAFFLES OR TEES SHALL BE PROVIDED WITH GAS DEFLECTION BAFFLE.
5. SEPTIC TANKS AND/OR PUMP PIT SHALL BE PLACED UPON A FIRM AND STABLE FOUNDATION SO THAT THE POTENTIAL FOR UNEVEN SETTLEMENT OR SHIFTING IS MINIMIZED. TANKS ARE TO BE INSTALLED DIRECTLY ON UNDISTURBED NATURAL SOIL. IF THE EXCAVATION IS DUG TO DEEP, IT SHALL BE BACKFILLED TO THE PROPER ELEVATION WITH COMPACT SAND. COMPACTED SAND TO BE OBSERVED BY DESIGN ENGINEER PRIOR TO INSTALLATION OF THE TANK.
6. BACKFILL SHALL BE OF EARTH SIMILAR TO THAT FOUND AT THE SITE AND SHALL BE FREE OF LARGE STONES, BROKEN MASONRY, STUMPS, AND OTHER WASTE MATERIALS. BERM MATERIAL TO BE CLAY RICH, COMPACTED IN SIX (6) TO TWELVE (12) INCH LIFTS.
7. TANK INVERT CONNECTIONS TO BE SEALED WITH AN EXPANDING GROUT OR A MANUFACTURED WATER–PROOF PIPE COUPLING WHICH IS INCORPORATED INTO THE WALL OF THE TANK.
8. AN INSPECTION PORT EXTENDING TO FINISHED GRADE SHALL BE PROVIDED OVER EACH TANK OR COMPARTMENT INLET OR OUTLET WHICH IS NOT DIRECTLY BELOW A MANHOLE. INSPECTION PORTS SHALL EXTEND TO FINISHED GRADE AND SHALL BE CONSTRUCTED OF 4" CAST IRON OR PVC PIPE WITH A LOCKED OR BOLTED CAP.
9. ALL MANHOLES SHALL BE EXTENDED FLUSH WITH FINISHED GRADE BY MEANS OF A RISER FITTED WITH A REMOVABLE, WATERTIGHT COVER. COVERS SHALL BE BOLTED OR LOCKED TO PREVENT ACESS BY CHILDREN. COVERS SHALL BE OF CAST IRON WHEN A CONCRETE RISER IS USED.
10. THE SEPTIC TANK(S) INSTALLATION SHALL BE SUCH THAT THE HIGH SEASONAL WATER TABLE SHALL BE NO HIGHER THAN ONE (1') FOOT BELOW THE OUTLET OR ANY JOINTS OF THE SEPTIC TANK.
11. THE INSTALLATION OF ALL SEPTIC TANKS SHALL PREVENT FLOTATION.

GENERAL SEPTIC SYSTEM DESIGN NOTES

1. ALL WORK TO BE DONE IN ACCORDANCE WITH NJDEP "STANDARDS FOR SUBSURFACE SEWAGE DISPOSAL SYSTEMS.
2. DISPOSAL SYSTEM INSTALLER TO LOCATE BURIED UTILITIES ON SITE PRIOR TO CONSTRUCTION.
3. THERE ARE NO KNOWN WELLS WITHIN 100 FEET OF THIS PROPOSED DISPOSAL FIELD. THERE ARE NO ADJOINING SEPTIC SYSTEMS WITHIN 50 FEET OF THIS PROPOSED DISPOSAL FIELD.
4. THE DESIGN ENGINEER AND HEALTH DEPARTMENT SHALL RECEIVE A MINIMUM OF ONE WEEK'S NOTICE PRIOR TO BEGINNING CONSTRUCTION OF THE DISPOSAL SYSTEM.
5. GRADE AREA TO DIVERT SURFACE WATER AWAY FROM THE DISPOSAL AREA.
6. THE DESIGN ENGINEER IS TO PREPARE AN AS–BUILT PLAN UPON COMPLETION OF CONSTRUCTION.
7. ANY CONDITIONS DIFFERENT THAN SHOWN MUST BE REPORTED TO THE DESIGN ENGINEER.
8. PRIOR TO CONSTRUCTION:
   - A. SET A BENCHMARK IN THE IMMEDIATE DISPOSAL AREA.
   - B. STAKE OUT THE PROPOSED DISPOSAL FIELD.
9. GARBAGE GRINDERS AND BACKWASH FROM WATER SOFTENERS SHALL NOT BE DISCHARGED INTO THE DISPOSAL SYSTEM.
10. THERE ARE NO KNOWN WETLANDS WITHIN 150' THE DISPOSAL AREA.
11. ALL TREES WITHIN 10' OF THE DISPOSAL FIELD TO BE REMOVED
12. EXISTING SEPTICS ARE TO PUMPED BY A LICENSED SEWAGE SCAVENGER AND INSPECTED TO ENSURE THEY ARE WATERPROOF AND BAFFLES ARE IN PLACE. THEY SHALL BE REPAIRED AS NECESSARY AND REMAIN..
13. SURVEY INFORMATION IS BASED ON A PLAN PREPARED BY: THOMAS C. YEAGER, NJPLS No. 32656, DATED AUGUST 17, 2006

DISPOSAL FIELD NOTES

1. NO HEAVY MACHINERY (RUBBER TIRE) ALLOWED ON BED AREA DURING OR AFTER CONSTRUCTION.
2. CAUTION REQUIRED DURING CONSTRUCTION, SOIL SUBJECT TO SURFACE SMEARING. BEFORE PLACEMENT OF FILTER MATERIAL, ALL SIDEWALLS AND BOTTOM AREAS SHALL BE SCARIFIED. CONSTRUCTION SHALL NOT TAKE PLACE WHEN THE SOIL MOISTURE CONTENT IS ABOVE THE LOWER PLASTIC LIMIT.
3. THE FILL MATERIAL USED BELOW THE DISPOSAL FIELD SHALL MEET THE REQUIREMENTS FOR TEXTURE AND PERMEABILITY WHICH ARE PRESCRIBED IN 7:9A–10.1(F), AND:
   - A. A MINIMUM OF TWO PERCOLATION TESTS SHALL BE CONDUCTED AT THE LEVEL OF INFILTRATION AFTER THE FILL MATERIAL HAS BEEN INSTALLED. THESE TESTS SHALL BE PERFORMED AND WITNESSED BY THE ENGINEER OR THE ENGINEER'S REPRESENTATIVE.
   - B. COMPACTION MAY BE ACCOMPLISHED MANUALLY OR MECHANICALLY, BY TAMPING OR BY DRIVING OVER THE FILLED AREA IN A CONTROLLED PATTERN USING TRACKED VEHICLES. COMPACTION MAY ALSO BE ACCOMPLISHED BY PUDDLING.
4. WHEN FILL MATERIAL (FILTER SAND) IS PLACED WITHIN THE ZONE OF DISPOSAL, THE FILL MATERIAL SHALL MEET THE FOLLOWING REQUIREMENTS:
   - A. TEXTURAL ANALYSIS (COMPOSITION, BY WEIGHT, OF SIZE FRACTION PASSING THE 2 MM SIEVE): 90 PERCENT OR MORE FINE TO COARSE SAND; AND A MAXIMUM OF 25% FINE PLUS VERY FINE SAND
   - B. PERMEABILITY GREATER THAN SIX (6) INCHES PER HOUR OR A PERCOLATION RATE FASTER THAN TEN (10) MINUTES PER INCH.
5. THE SELECT FILL MATERIAL UTILIZED WITHIN THE ZONE OF TREATMENT SHALL MEET THE FOLLOWING REQUIREMENTS:
   - A. COARSE FRAGMENT CONTENT LESS THAN 15% BY VOLUME OR LESS THAN 25% BY WEIGHT;
   - B. TEXTURAL ANALYSIS (COMPOSITION, BY WEIGHT, OF SIZE FRACTION PASSING THE 2 MM SIEVE): 90 TO 95 PERCENT FINE TO COARSE SAND, FROM 5 TO 10 PERCENT SILT PLUS CLAY, MINIMUM OF 2 PERCENT CLAY; AND A MAXIMUM OF 25% FINE PLUS VERY FINE SAND
   - C. PERMEABILITY FROM SIX (6) TO TWENTY (20) INCHES PER HOUR OR PERCOLATION RATE FROM THREE (3) TO TEN (10) MINUTES PER INCH.
6. FILTER MATERIAL SHALL BE WASHED GRAVEL, CRUSHED STONE, OR CLEAN BANK GRAVEL RANGING IN SIZE FROM 3/4" TO 2–1/2", FREE OF FINES, DUST, ASHES, AND CLAY; DOT NUMBER 3, 4, OR 24.
7. FOUR (4") INCH PERFORATED PVC PIPE SHALL HAVE TIGHT JOINTS AND BE LAID AT 2"/100 FOOT SLOPE. PERFORATIONS SHALL BE EVENLY SPACED ALONG TWO ROWS RUNNING THE LENGTH OF THE PIPE, ON EACH SIDE, MIDWAY BETWEEN THE INVERT AND THE CENTER LINE WHICH SEPARATES THE UPPER AND LOWER HALVES OF THE PIPE. THE ENDS OF ALL DISPOSAL LINES SHALL BE CAPPED.
8. MANIFOLD LINES FROM DISTRIBUTION BOX TO LATERALS TO BE SOLID PVC.
9. 4" PVC INSPECTION PORTS WITH THREADED CAPS TO BE SET IN THE ENDS OF THE DISPOSAL BED. (USE SOLID PVC ABOVE GRAVEL)
10. FILTER MATERIAL SHALL BE COVERED WITH FILTER FABRIC (MARAFI # 140 OR EQUIVALENT) OR 4" THICK SALT HAY. EDGES OF ADJACENT SHEETS OF FILTER FABRIC SHALL OVERLAP SIX (6) INCHES.

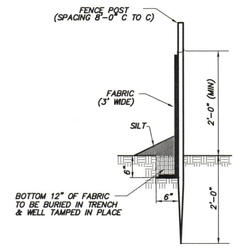
SEWER LINES

1. MINIMUM SLOPE OF SEWER LINE TO BE 1/4" PER FOOT.
2. BUILDING SEWER PIPE TO BE 4" SCHEDULE 40 PVC PIPE INSTALLED WITH 10" OF SAND ALL AROUND.

SEPTIC SYSTEM DESIGN

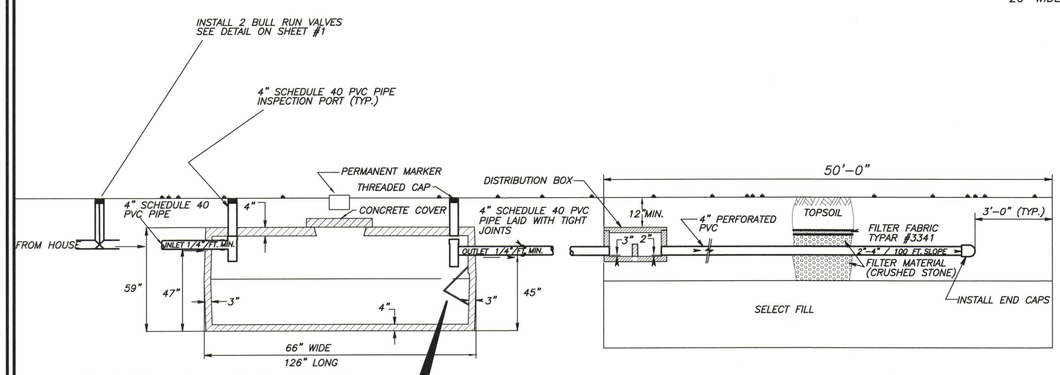
DESIGNED FOR A 5 BEDROOM HOUSE.
TOTAL DAILY SEWAGE VOLUME = 800 GAL/DAY.
DESIGN PERMEABILITY RATE = 6 – 20 IN/HR.
REQUIRED BOTTOM AREA/GPD = 1.61 SQ.FT./GPD
800 GAL/DAY X 1.61 SQ. FT./GPD = 1,288 SQ. FT.
CONSTRUCT A DISPOSAL BED
26' WIDE X 50' LONG X 7'–0" DEEP MIN.
10'–0" DEEP MAX.

FROM PROPOSED GRADE
(SEE SECTIONAL VIEW FOR MORE DETAIL)



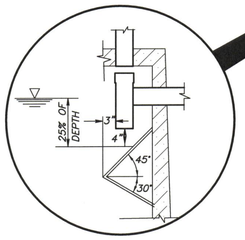
SILT FENCE DETAIL
NOT TO SCALE

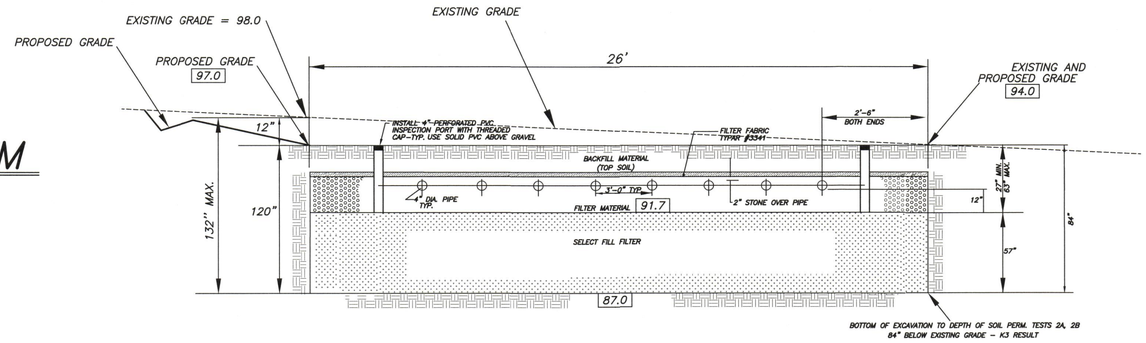
REF.: STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY, PAGE 4.13.13



STANDARD 1,250 GALLON SEPTIC TANK

PROFILE – DISPOSAL SYSTEM





SECTION VIEW ~ DISPOSAL SYSTEM

N.T.S.

Civil Engineers
Land Surveyors &
Professional Planners

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N.J. STATE BOARD OF P.E. & L.S.
CERTIFICATE OF AUTHORIZATION
No. 24GA27934500

GREGORY E. YANNACCONE
N.J. PROFESSIONAL ENGINEER
NO. 39904 DATE: 12/7/06

NOT VALID WITHOUT SIGNATURE AND RAISED SEAL

NO.	DATE	REVISION
1	12/11/06	EDIT PER HEALTH DEPT.

PROJECT TITLE :

RAUSCHKOLB PROPERTY

LOT 36 ~ BLOCK 26.01
CHESTER TOWNSHIP
MORRIS COUNTY, NEW JERSEY

SHEET TITLE :

DETAIL PLAN

DRAWN BY:	DATE:
GJK	11/14/06
CHECKED BY:	SCALE:
GEY	NTS

W.O. 206131
F.B. –
FILE:
COMP FILE: M:SEPTIC/206131/LOT36