Hunterdon County Department of Health

Public Health
Prevent. Promote. Protect.

www.co.hunterdon.nj.us/health.html

Karen DeMarco, MPH
Health Officer/Director

April 8, 2022

Carla Conner, Secretary
Clinton Township Board of Health
1225 Route 31, Suite 411
Lebanon NJ 08833

Re: Septic System Alteration Waiver
Municipality: Clinton Township
Block: 1 Lot: 22
Location: 24 Deer Hill Road

Hi Carla,

This department has septic alteration plans dated April 1, 2022 designed by E+LP to correct a malfunctioning system to an existing 3 bedroom dwelling with no expansion as stated in the application. The design incorporates an Norweco Cingular Green Advanced Treatment Unit which is NSF approved according to standards 40 and 245.

The design is in full conformance with 7:9A "Standards for Individual Subsurface Sewage Disposal Systems" except for the following waiver requests that will need to be acted on by the Board:

1. The horizon that the passing soil permeability test was performed in was only 30 inches in thickness, which does not meet the minimum 48 inches required in the Zone of Disposal. The engineer shall explain the soil testing on the property and provide testimony that this is the best design to address this issue.

In addition, all the requirements for Advanced Treatment devices shall be met including engineer certification, service provider maintenance contract, deed notice and auto dialer/telemetry device,

Since this is a malfunctioning system, and according to 7:9A 3.3(e) 2 i and ii, and the system is closer to being in full conformance with the chapter than the original system, the Board can consider the waiver requests.

The engineer shall be available at the next meeting to present the waiver requests to the Board.

If you have any questions, please call.

Very truly yours,

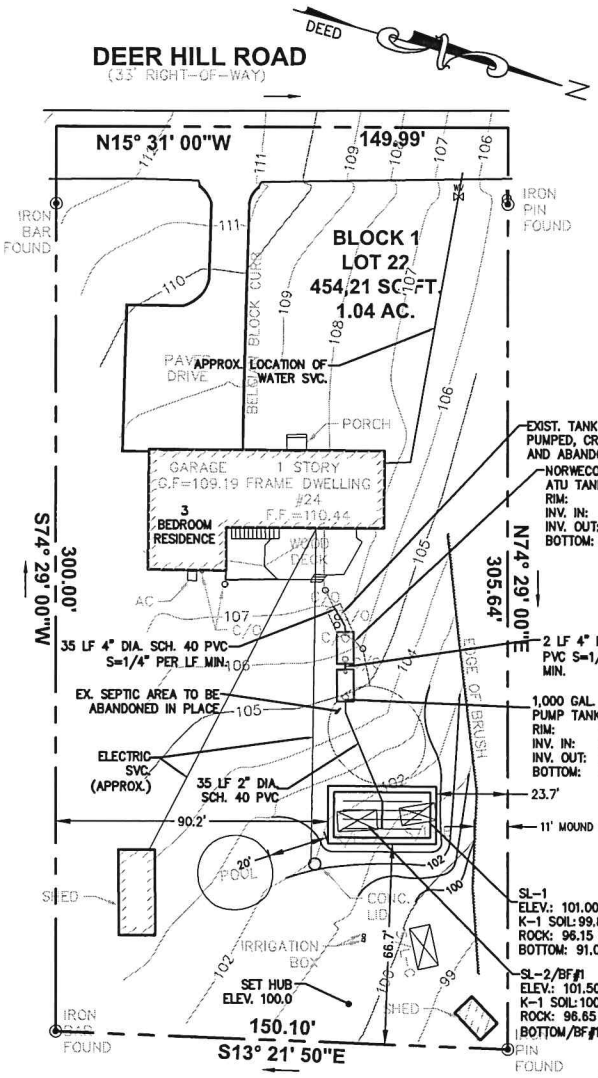
ORIGINAL IS SIGNED AND ON FILE AT HUNTERDON COUNTY HEALTH DEPARTMENT

Robert Vaccarella, REHS
Principal Environmental Health Specialist

RV:dv

cc: Wayne Ingram, PE

ct1_22



40 0 40

SCALE 1" = 40 FT

WAIVERS:

-LESS THAN 48" ZONE OF DISPOSAL IN PASSING SOILS.

DESIGN CRITERIA

TYPE OF SYSTEM: PRESSURE DOSED ATU

TYPE OF DISPOSAL BED: MSR

DESIGN NO. OF BEDROOMS: 3
DESIGN VOLUME OF SEWAGE: 500 GPD

DISPOSAL BED AREA: 15' X 32' (480 SF)
(19' X 36' W/ BUFFER)

BASED ON 0.956 SF PER GAL. OF SEWAGE REQUIRED, 478 SF REQUIRED

ZONE OF TREATMENT SOILS:
SELECT FILL: 18" N.J.A.C. 7:8A FILL SPEC.
MATERIAL
ZONE OF DISPOSAL SOILS:
SELECT FILL: 90" N.J.A.C. 7:8A FILL SPEC.
MATERIAL

ATU TANK SIZE: NORWECO 960-500

PUMP TANK SIZE: 1,000 GALLONS

MAINTENANCE NOTES:

THE INDIVIDUAL SUBSURFACE SEWAGE DISPOSAL SYSTEM SHALL BE MAINTAINED IN ACCORDANCE WITH N.J.A.C. 7:9A, THE HUNTERDON COUNTY HEALTH DEPARTMENT AND ANY APPLICABLE MANDATORY MAINTENANCE PROGRAM.

MAINTENANCE ACTIVITIES SHALL INCLUDE, BUT NOT LIMITED TO, INSPECTION OF THE SEPTIC TANK, PUMP TANK, CONNECTING PIPES, AND THE DISPOSAL FIELD. THE SEPTIC TANK SHALL BE PUMPED OUT AT REGULAR INTERVALS. EFFLUENT FILTER SHALL BE MAINTAINED IN SUCH A WAY TO PREVENT SOLIDS, SCUM, OR FLOATABLES FROM ENTERING THE EFFLUENT DISTRIBUTION NETWORK AND DISPOSAL FIELD. EFFLUENT FILTER TO BE INSPECTED AT TIME OF PUMPING AND RINSED FREE OF DEBRIS. EFFLUENT FILTER TO BE INSPECTED AND RINSED CLEAN AT TIME OF EVERY PUMP OUT, REPLACE AS NECESSARY.

CONSTRUCTION NOTES:

CONTRACTOR RESPONSIBLE FOR SITE ACCESS, TREE TRIMMING AND REMOVAL, AND RESTORING SITE BACK TO PRE EXISTING CONDITION AFTER DISPOSAL SYSTEM CONSTRUCTION.

CONTRACTOR RESPONSIBLE FOR COORDINATING AESTHETICS WITH HOME OWNER.

CONTRACTOR TO VERIFY ALL ELEVATIONS PRIOR TO SETTING TANKS OR FIELD.

SURVEY NOTES:

PLAN REFERENCES SURVEY PREPARED BY E&LP DATED MARCH 2022.

NOTES:

THE SEPTIC SYSTEM IS NOT LOCATED WITHIN WETLANDS OR WETLAND TRANSITION AREAS.

NO KNOWN UNDERGROUND STORAGE TANKS ARE PRESENT ON THE PROPERTY (PER OWNER).

ALL TANKS SHALL BE TESTED FOR WATERTIGHTNESS AFTER INSTALLATION.

THE SEPTIC SYSTEM HAS BEEN DESIGNED IN A MANNER THAT WILL PREVENT ANY INCREASE IN STORMWATER RUNOFF TO OR PONDING ON ADJOINING PROPERTIES AS A RESULT OF THE INSTALLATION OF THE SYSTEM.

EXISTING SEPTIC TANK TO BE PUMPED CRUSHED AND ABANDONED.

PRIOR DISPOSAL SYSTEM TO BE ABANDONED IN PLACE IN ACCORDANCE WITH HEALTH DEPARTMENT STANDARDS.

ALL TREES WITHIN 10' OF DISPOSAL FIELD SHALL BE REMOVED.

NO FOUNDATION DRAINS EXIST OR ARE PROPOSED.

THERE ARE NO OFF-SITE WELLS WITHIN 100' OF THE DISPOSAL FIELD. THERE ARE NO DISPOSAL FIELDS WITHIN 50' OF THE DISPOSAL FIELD.

A PERMANENT NON-CORROSIVE MARKER SHALL BE ATTACHED TO THE INSIDE OF THE RISER OR COVER OF ALL TANKS THAT SHALL INCLUDE THE PERMIT NUMBER, SYSTEM TYPE, DESIGN CRITERIA AND DATE OF INSTALLATION.

NO.	REVISION	BY	DATE

E&LP
140 WEST MAIN STREET HIGH BRIDGE, NJ 08829
(908) 238-0544 FAX: (908)238-9572
C.O.A. #: 24GA28021500
A PROFESSIONAL ASSOCIATION

TITLE:
LOPES RESIDENCE
INDIVIDUAL SUBSURFACE SEWAGE DISPOSAL SYSTEM
CLINTON TOWNSHIP, HUNTERDON COUNTY

LOCATION: 24 DEER HILL ROAD
BLOCK 1 LOT 22
CLINTON TOWNSHIP
HUNTERDON COUNTY, NJ

4/1/22
WAYNE J. INGRAM, P.E. & P.L.S. LICENSE #24GB04258200 DATE

DATE: 4/1/22			
PROJECT NO.: 0122092	DESIGNED BY: JBM	CHECKED BY: WJI	
FILENAME: SITE.DWG	SCALE: 1" = 40'	SHEET NO.: 1 OF 5	

GENERAL NOTES

1. ALL CONSTRUCTION PRACTICES AND PROCEDURES SHALL BE IN COMPLIANCE WITH N.J.A.C. 7:9A.
2. ALL CONSTRUCTION PRACTICES AND PROCEDURES SHALL BE IN COMPLIANCE WITH THE HUNTERDON COUNTY (AND/OR CLINTON TOWNSHIP) BOARD OF HEALTH.
3. THE DESIGN HAS BEEN BASED UPON THE RESULTS OF SOIL TESTING IN THE LOCATIONS SHOWN ON THE PLAN. THE ENGINEER OR CONTRACTOR SHALL NOT BE RESPONSIBLE FOR ALTERATIONS REQUIRED DUE TO CONDITIONS NOT VISIBLE OR IDENTIFIED DURING SOIL TESTING.

EXCAVATION

1. EXCAVATION FOR THE DISPOSAL FIELD SHALL BE IN ACCORDANCE WITH THE FOLLOWING PROCEDURES:
   a. ADEQUATE MEASURES SHALL BE USED TO INSURE THAT THE BOTTOM OF THE DISPOSAL BED IS LEVEL.
   b. IN SOIL TEXTURES OTHER THAN SANDS OR LOAMY SANDS, EXCAVATION WHICH EXPOSES THE INFILTRATIVE SURFACE OF THE DISPOSAL FIELD SHALL NOT BE CARRIED OUT WHEN THE SOIL MOISTURE CONTENT IS ABOVE THE LOWER PLASTIC LIMIT. THIS MEANS THAT WHEN A SMALL LUMP OF SOIL, TAKEN FROM THE DEPTH OF THE PROPOSED EXCAVATION, CAN BE ROLLED OUT WITH THE FINGERS TO FORM A WIRE OR ROD, ONE-EIGHTH OF AN INCH IN THICKNESS, AND DOES NOT CRUMBLE WHEN HANDLED, THE SOIL IS TOO WET TO PROCEED WITH THE EXCAVATION.
   c. EXCAVATION SHALL BE CARRIED OUT IN A MANNER THAT WILL AVOID UNNECESSARY COMPACTION OF THE DISPOSAL FIELD BOTTOM AND SIDE WALLS. HEAVY EQUIPMENT SUCH AS BULLDOZERS OR FRONT-END LOADERS SHALL NOT BE DRIVEN OVER THE EXPOSED INFILTRATIVE SURFACE OF THE DISPOSAL FIELD. EXCAVATION SHOULD BE CARRIED OUT WITH A BACKHOE OPERATING FROM OUTSIDE THE PERIMETER OF PREVIOUSLY EXCAVATED PORTIONS OF THE DISPOSAL BED. IF IT BECOMES NECESSARY TO WALK ON THE DISPOSAL FIELD BOTTOM, A SUITABLE BOARD SHALL BE LAID OVER THE SOIL TO AVOID TRAMPLING.
   d. ANY SMEARED OR COMPACTED SOIL SURFACES WHICH HAVE BEEN PRODUCED ON THE BOTTOM OR SIDEWALLS OF THE EXCAVATION SHALL BE REMOVED TO EXPOSE A FRESH SOIL SURFACE WHICH IS ROUGH AND UNEVEN.
   e. WORK SHOULD BE SCHEDULED SO THAT THE BOTTOM AND SIDEWALLS OF THE EXCAVATION WILL NOT BE EXPOSED TO RAINFALL OR WIND-BLOWN SILT BETWEEN THE TIME OF EXCAVATION AND THE TIME OF FINAL INSPECTION AND BACKFILLING. ANY LOOSE SOIL OR DEBRIS WHICH IS WASHED INTO OR OTHERWISE DEPOSITED WITHIN THE EXCAVATION AS A RESULT OF THE EXCAVATION REMAINING OPEN TO THE ELEMENTS SHALL BE CAREFULLY REMOVED PRIOR TO BACKFILLING.

FILTER MATERIAL AND DRAINAGE FABRIC NOTES

FILTER MATERIAL SHALL MEET THE FOLLOWING REQUIREMENTS:

1. FILTER MATERIAL SHALL COVER THE DISTRIBUTION LINES AND EXTEND THE FULL WIDTH OF THE TRENCH OR BED, SHALL EXTEND BETWEEN 12 AND 18 INCHES DEEP BENEATH THE BOTTOM OF THE DISTRIBUTION LINES AND SHALL EXTEND AT LEAST TWO INCHES ABOVE THE TOP OF THE LINES.
2. THE FILTER MATERIAL SHALL BE WASHED GRAVEL OR CRUSHED STONE, FREE OF FINES, DUST, ASHES OR CLAY. REFER TO THE NEW JERSEY DEPARTMENT OF TRANSPORTATION STANDARD SIZES FOR COARSE AGGREGATES AS SHOWN IN FIGURE 26 OF APPENDIX A OF N.J.A.C. 7:9A. THE FILTER MATERIAL SHALL CONFORM IN SIZE AND GRADATION TO SIZE NUMBER 24, SIZE NUMBER THREE OR SIZE NUMBER FOUR.
3. THE FILTER MATERIAL SHALL BE COVERED WITH DRAINAGE FABRIC AS THE LAYING OF THE DISTRIBUTION LINES PROGRESSES. THE FOLLOWING REQUIREMENTS SHALL BE MET:
   a. EDGES OF ADJACENT SHEETS SHALL BE OVERLAPPED BY A MINIMUM OF SIX INCHES.
   b. DRAINAGE FABRIC SHALL BE SPECIFIED IN THE ENGINEERING DESIGN AND SHALL HAVE ADEQUATE TENSILE STRENGTH TO PREVENT RIPPING DURING INSTALLATION AND BACKFILLING, ADEQUATE AIR PERMEABILITY TO ALLOW FREE PASSAGE OF GASES, AND ADEQUATE PARTICLE RETENTION TO PREVENT DOWNWARD MIGRATION OF SOIL PARTICLES INTO THE FILTER MATERIAL.
   c. USE OF WATERPROOF PAPER IS PROHIBITED.
4. THE FILTER MATERIAL MAY BE LAID INTO THE EXCAVATION USING A BACKHOE, FRONT-END LOADER OR DUMP TRUCK PROVIDED THAT THIS OPERATION IS CARRIED OUT FROM SIDES OF THE SYSTEM RATHER THAN BY DRIVING OUT ONTO THE EXPOSED DISPOSAL FIELD INFILTRATIVE SURFACE. IN THE CASE OF LARGE BEDS, TRACKED EQUIPMENT MAY BE OPERATED WITHIN THE DISPOSAL BED PROVIDED THAT THE EQUIPMENT DOES NOT EXERT A GROUND PRESSURE IN EXCESS OF EIGHT POUNDS PER SQUARE INCH AND PROVIDED THAT THE FILTER MATERIAL IS PUSHED OUT IN FRONT OF THE VEHICLE WHILE MAINTAINING A MINIMUM THICKNESS OF ONE FOOT OF FILTER MATERIAL BELOW THE VEHICLE TRACKS AT ALL TIMES.

GENERAL CONTRACTOR NOTES:

CONTRACTOR TO OBTAIN ALL REQUIRED PERMITS PRIOR TO START OF CONSTRUCTION.

CONTRACTOR SHALL CONTACT ENGINEERING AND LAND PLANNING ASSOCIATES, INC. (E&LP) AT LEAST 48 HOURS PRIOR TO START OF THE CONSTRUCTION FOR SCHEDULING INSPECTIONS.

CONTRACTOR SHALL CONTACT E&LP FOR THE INSPECTION OF THE FOLLOWING STAGES OF CONSTRUCTION AT LEAST 24 HOURS IN ADVANCE (IF APPLICABLE):

- BOTTOM OF DISPOSAL BED OR SEEPAGE PIT EXCAVATION
- SELECT FILL SAMPLE
- TOP OF SELECT FILL EMPLACEMENT IN DISPOSAL BED
- TOP OF STONE AND LATERAL EMPLACEMENT
- SEPTIC/PUMP TANK OR DISPOSAL FIELD INSTALLATION
- PUMP PERFORMANCE/ALARM
- BACK FILL AND FINAL GRADE

CONTRACTOR MUST PROVIDE SAMPLE AND A QUARRY CERTIFICATE FOR SUITABLE FILL MATERIAL.

CONTRACTOR SHALL COORDINATE ANY CHANGES FROM THE PLAN WITH E&LP.

E&LP WILL STAKE OUT DISPOSAL BED AT CONTRACTOR'S REQUEST AND PER THE AGREEMENT WITH THE APPLICANT. CONTRACTOR MUST REQUEST DISPOSAL BED STAKEOUT AT LEAST 10 BUSINESS DAYS PRIOR TO START OF CONSTRUCTION.

CONSTRUCTION NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL LINES, ELEVATIONS, AND MEASUREMENTS, EXERCISING PRECAUTION TO VERIFY ALL DIMENSIONS SHOWN ON DRAWING.
2. THESE DRAWINGS DO NOT INCLUDE THE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. THE CONTRACTOR SHALL BE RESPONSIBLE TO INSURE "ON THE JOB" SAFETY FOR HIS EMPLOYEES, EMPLOYEES OF THE OWNER AND ALL OTHER PERSONS HAVING AUTHORIZED OR UNAUTHORIZED ACCESS TO THE WORK AND THE PUBLIC. CONTRACTOR SHALL PERFORM HIS WORK IN A SAFE MANNER AND IN COMPLIANCE WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS.
3. THE CONTRACTOR SHALL CONTACT THE DESIGN ENGINEER AS PRESCRIBED IN N.J.A.C. 7:9A OR WHENEVER CONSULTATION, CLARIFICATION OR INSPECTIONS ARE REQUIRED. THE CONTRACTOR SHALL CONTACT THE ENGINEER PRIOR TO EXCAVATION TO DISCUSS SPECIFIC REQUIREMENTS RELATIVE TO EXCAVATION, PLACEMENT AND CERTIFICATION OF FILL, ETC.
4. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE DESIGN ENGINEER SHOULD DEPARTURES FROM THE APPROVED DESIGN BECOME NECESSARY DUE TO CIRCUMSTANCES WHICH ARISE DURING CONSTRUCTION.
5. DRAINAGE FROM BASEMENT FLOORS, FOOTINGS OR ROOFS SHALL NOT ENTER THE DISPOSAL SYSTEM AND SHALL BE DIVERTED AWAY FROM THE AREA OF THE DISPOSAL FIELD. BACKWASH FROM WATER SOFTENERS SHALL NOT BE DISPOSED OF WITHIN THE DISPOSAL SYSTEM.
6. THIS SET OF PLANS HAS BEEN PREPARED FOR THE PURPOSES OF MUNICIPAL AND AGENCY REVIEW AND APPROVAL. THIS SET OF PLANS SHALL NOT BE UTILIZED AS CONSTRUCTION DOCUMENTS UNTIL ALL CONDITIONS OF APPROVAL HAVE BEEN SATISFIED ON THE DRAWINGS AND EACH DRAWING HAS BEEN REVISED TO INDICATE "ISSUED FOR CONSTRUCTION". THE PLANS SHALL NOT BE VALID UNLESS SIGNED AND SEALED BY THE DESIGN ENGINEER.
7. BEFORE EXCAVATING IN THE PROJECT AREA, THE CONTRACTOR IS TO VERIFY THE LOCATION OF ANY UNDERGROUND UTILITIES (GAS MAINS, ELECTRICAL LINES, TELEPHONE LINES, WATER AND SEWER MAINS, ETC.) THAT INTERFERE WITH CONSTRUCTION. SHOULD UNDERGROUND STRUCTURES OR FACILITIES INTERFERE WITH PROJECT CONSTRUCTION, THE ENGINEER SHALL BE NOTIFIED BEFORE PROCEEDING WITH WORK. THE CONTRACTOR SHALL NOTIFY ALL UNDERGROUND UTILITY COMPANIES 3 DAYS PRIOR TO COMMENCEMENT OF ANY EXCAVATION FOR ACCURATE FIELD LOCATIONS. FOR UTILITY MARKOUT, CALL 1-800-272-1000.
8. THE CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE ALL INSPECTIONS AS REQUIRED BY THE ENGINEER AND THE BOARD OF HEALTH, AND ALL OTHER TOWNSHIP AGENCIES OF JURISDICTION.
9. THE ENGINEER IS TO BE NOTIFIED IF ANY CONDITIONS ARE ENCOUNTERED THAT WOULD RENDER THIS PLAN UNCONSTRUCTABLE. THE ENGINEER SHALL ALSO BE NOTIFIED OF ANY DEVIATIONS FROM THE PLANS DURING CONSTRUCTION.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL INTERNAL PLUMBING LINES AND FOR THE CONNECTION OF THOSE LINES TO THE PROPOSED SYSTEM. THE OWNER SHALL BE RESPONSIBLE FOR IDENTIFYING ALL KNOWN LINES AND EXISTING SYSTEM COMPONENTS TO THE ENGINEER AND THE CONTRACTOR.
11. THE CONTRACTOR IS RESPONSIBLE FOR MEANS AND METHODS OF CONSTRUCTION AS WELL AS RESTORATION OF THE PROPERTY UPON COMPLETION OF THE INSTALLATION.
12. ALL COMPONENTS SHALL BE INSTALLED IN THE LOCATIONS SHOWN ON THE APPROVED DRAWINGS. ANY DEVIATIONS OR INTENT TO CHANGE LOCATION SHALL BE APPROVED BY THE DESIGN ENGINEER AND THE HEALTH DEPARTMENT. SEPTIC TANKS SHALL MAINTAIN A MINIMUM 50' SETBACK TO THE WELL AND DISPOSAL FIELDS SHALL MAINTAIN A MINIMUM 100' SETBACK FROM THE WELL UNLESS OTHERWISE NOTED.

BACKFILL AND FINAL GRADING

1. NO COMPONENT OF THE SEPTIC SYSTEM SHALL BE BACKFILLED UNTIL A FINAL INSPECTION HAS BEEN CONDUCTED BY THE ADMINISTRATIVE AUTHORITY OR ITS AUTHORIZED AGENT.
2. BACKFILL AND FINAL GRADING SHALL BE COMPLETED AS FOLLOWS:
   a. BACKFILL MATERIAL SHALL BE OF EARTH SIMILAR TO THAT FOUND AT THE SITE AND FREE OF LARGE STONES, TREE STUMPS, BROKEN MASONRY OR OTHER WASTE CONSTRUCTION MATERIAL.
   b. IN NO CASE SHALL BACKFILL MATERIAL BE MORE PERMEABLE THAN THE SURROUNDING SOIL.
   c. BACKFILL SHALL COMPLETELY COVER THE ENTIRE DISPOSAL FIELD AND SHALL BE GRADED SMOOTHLY INTO THE SURROUNDING TOPOGRAPHY ON ALL SIDES.
3. AFTER COMPLETION OF BACKFILL AND FINAL GRADING, THE BACKFILLED AREA SHALL BE SEEDED, OR SODDED, TO ESTABLISH A GOOD VEGETATIVE COVER AND TO PREVENT EROSION.
4. CONTRACTOR SHALL ENSURE THAT NO DEPRESSIONS ARE LEFT IN THE WORK AREA WHICH WOULD PREVENT THE CONTINUED FLOW OF SURFACE WATER IN THE MANNER DIRECTED ON THE ENGINEERED DESIGN. SWALES OR CONVEYANCES AROUND THE SYSTEM SHALL BE PROVIDED AS REQUIRED TO FACILITATE PROPER DRAINAGE.

FILL

FILL STANDARDS: (PER N.J.A.C. 7:9A-CHAPTER 10 REVISED APRIL 2, 2012)

FILL USED IN THE ZONE OF TREATMENT AND/OR THE ZONE OF DISPOSAL SHALL MEET THE FOLLOWING REQUIREMENTS:

1. ASTM C-136 TEST METHOD FOR SIEVE ANALYSIS OF FINE AND COURSE AGGREGATES MUST BE USED FOR CHARACTERIZING THE SELECT FILL.
2. THE MATERIAL SHALL MEET THE STANDARDS OF ASTM C33-93 STANDARD SPECIFICATION FOR CONCRETE AGGREGATE, OR
3. THE MATERIAL SHALL MEET THE FOLLOWING REQUIREMENTS:
   A. COURSE FRAGMENT CONTENT (GREATER THAN THE No.8 SIEVE) LESS THAN 15% BY VOLUME OR LESS THAN 20% BY WEIGHT;
   B. TEXTURAL ANALYSIS (COMPOSITION, WEIGHT, OF SIZE FRACTION PASSING THE PARTICULAR SIEVE AS STATED):
      100% MUST PASS A 3/8"SIEVE;
      BETWEEN 80% AND 100% MUST PASS THE No. 8 SIEVE (2.36mm);
      BETWEEN 50% AND 85% MUST PASS THE No. 16 SIEVE (1.18mm);
      BETWEEN 25% AND 60% MUST PASS THE No. 30 SIEVE (0.6mm);
      BETWEEN 10% AND 30% MUST PASS THE No. 50 SIEVE (0.3mm);
      BETWEEN 2% AND 10% MUST PASS THE No. 100 SIEVE (0.15mm).
4. PERMEABILITY FOR THESE MATERIALS IS ESTABLISHED WITHIN THE RANGE OF 6-20 IN/HR.
5. SELECT FILL SHALL BE TESTED FOR FINE AND VERY FINE SAND, AND BE 25% OR LESS BY WEIGHT.
6. COMPACTION OF SELECT FILL MUST BE PERFORMED IN 1' (MAX.) LIFTS.
7. SELECT FILL SHALL BE DELIVERED AND STOCKPILED AT THE SITE FOR TESTING BY AN APPROVED SOILS LABORATORY AND CERTIFIED BY A PROFESSIONAL ENGINEER, INDICATING THE PERMEABILITY RATE AND TEXTURAL ANALYSIS OF THE MATERIAL.

SITE SPECIFIC NOTES

1. GARBAGE DISPOSALS AND SUMP PUMPS CANNOT BE USED WITH THIS SEPTIC SYSTEM.
2. THIS SEPTIC SYSTEM IS NOT DESIGNED TO ACCOMMODATE A SEWAGE EJECTOR PUMP.
3. THERE ARE NO NEIGHBORING WELLS WITHIN 100 FT. OF THE PROPOSED DISPOSAL FIELD. THERE ARE NO DISPOSAL FIELDS WITHIN 50 FT. OF THE PROPOSED DISPOSAL FIELD.
4. THERE ARE NO KNOWN UNDERGROUND STORAGE TANKS PRESENT ON SITE (PER OWNER).

SEPTIC AND DOSING TANK

1. THE MINIMUM COMPRESSIVE STRENGTH FOR ALL CONCRETE SECTIONS SHALL BE 4000 P.S.I.
2. WATERTIGHTNESS TESTING SHALL BE PERFORMED BY THE TANK SUPPLIER AT THE DIRECTION OF THE CONTRACTOR AND PROOF OF CERTIFICATION SHALL BE PROVIDED TO THE ENGINEER BY THE CONTRACTOR

DISTRIBUTION NETWORK

1. SLOPE OF DISTRIBUTION LATERALS TO BE NO GREATER THAN 2" PER 100 FT.
2. ALL JOINTS TO BE WATERTIGHT.
3. CONNECTING PIPES AND DELIVERY PIPES SHALL BE LAID ON A FIRM FOUNDATION SATISFACTORY TO THE ADMINISTRATIVE AUTHORITY, AND IN ACCORDANCE WITH PLAN DETAILS.

NO.	REVISION	BY	DATE

E&LP
140 WEST MAIN STREET HIGH BRIDGE, NJ 08829
(908) 238-0544 FAX: (908)238-9572
C.O.A. #: 24GA28021500
A PROFESSIONAL ASSOCIATION

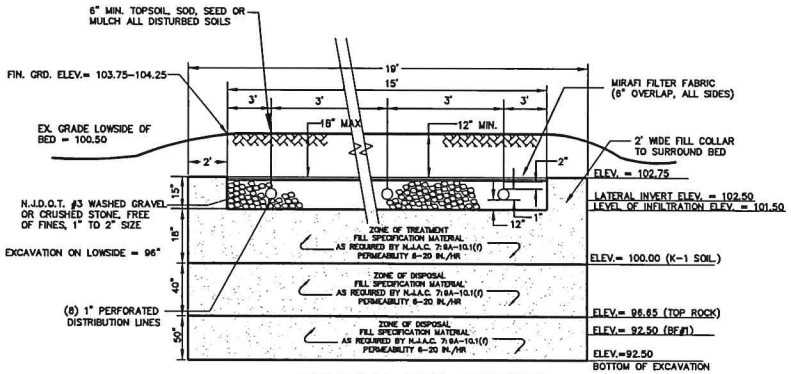
TITLE:

LOPES RESIDENCE
INDIVIDUAL SUBSURFACE SEWAGE DISPOSAL SYSTEM
CLINTON TOWNSHIP, HUNTERDON COUNTY

LOCATION: 24 DEER HILL ROAD
BLOCK 1 LOT 22
CLINTON TOWNSHIP
HUNTERDON COUNTY, NJ

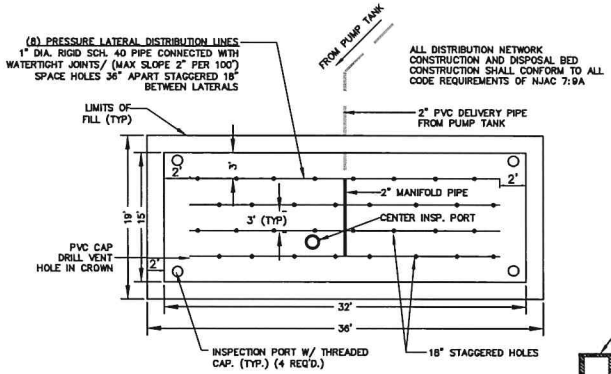
WAYNE JI_INGRAM, P.E. & P.L.S. LICENSE #24GB04258200 4/1/22

DATE: 4/1/22			
PROJECT NO.: 0122092	DESIGNED BY: JBM	CHECKED BY: WJI	
FILENAME: NOTES.DWG	SCALE: N.T.S.	SHEET NO.: 2 OF 5	



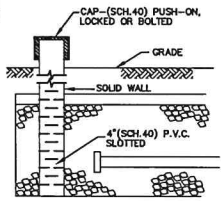
DISPOSAL BED SECTION

"MOUNDED SOIL REPLACEMENT" N.T.S



DISPOSAL FIELD PLAN

(N.T.S.)



INSPECTION PORT DETAIL

N.T.S.

ATU SYSTEM NOTES:
A DEED NOTICE MAY BE REQUIRED.

FOR THE LIFE OF THE SYSTEM, THE OWNER OF THE SYSTEM MUST HAVE IN PLACE A PREVENTATIVE MAINTENANCE AND MONITORING CONTRACT WITH AN AUTHORIZED SERVICE PROVIDER TO ENSURE IT IS FUNCTIONING PROPERLY AND TO OPTIMIZE TREATMENT PERFORMANCE. AS PART OF THIS CONTRACT, THE AUTHORIZED SERVICE PROVIDER MUST CONDUCT A VISUAL INSPECTION OF THE INTERNAL COMPONENTS, INCLUDING ANY TREATMENT MECHANICAL PARTS, AND MAINTAIN THE COMPLETE TREATMENT SYSTEM. UPON EXPIRATION OF A MAINTENANCE AND MONITORING CONTRACT, A NEW CONTRACT, WHICH SHALL BE AT LEAST ONE YEAR IN DURATION, SHALL BE ENTERED INTO BY THE PROPERTY OWNER WITH AN AUTHORIZED SERVICE PROVIDER. IF THE PROPERTY OWNER FAILS TO RENEW THE MAINTENANCE AND MONITORING CONTRACT, WRITTEN NOTIFICATION OF SUCH MUST BE DIRECTED, BY THE AUTHORIZED SERVICE PROVIDER, TO THE LOCAL ADMINISTRATIVE AUTHORITY.

GENERAL NOTES:
1. SINGULAIR AERATOR, AS TESTED AND ACCEPTED BY NSF.

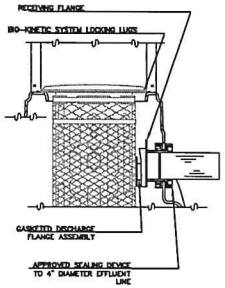
2. FALL THROUGH SINGULAIR PLANT FROM INLET INVERT TO OUTLET INVERT IS FOUR INCHES. INLET INVERT IS TEN AND ONE HALF INCHES BELOW TANK TOP.

3. ON DEEPER INSTALLATIONS, RISERS MUST BE USED TO EXTEND AERATOR MOUNTING RISER AND BIO-KINETIC SYSTEM MOUNTING RISER TO GRADE. INSPECTION COVER ON PRETREATMENT CHAMBER MUST BE DEVELOPED WITHIN TWELVE INCHES OF GRADE.

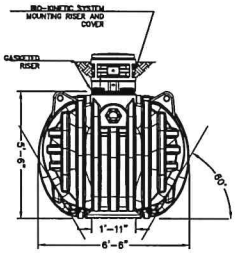
4. REMOVABLE COVERS ON RISERS EACH SECURED TO PREVENT UNAUTHORIZED ACCESS.

5. CONTACT THE LOCAL, LICENSED SINGULAIR DISTRIBUTOR FOR ELECTRICAL REQUIREMENTS.

6. SYSTEM SHALL BE EQUIPPED WITH AN AUTO-DIALER TO PROVIDE NOTIFICATION OF ANY ALARM CONDITIONS TO THE MAINTENANCE PROVIDER.



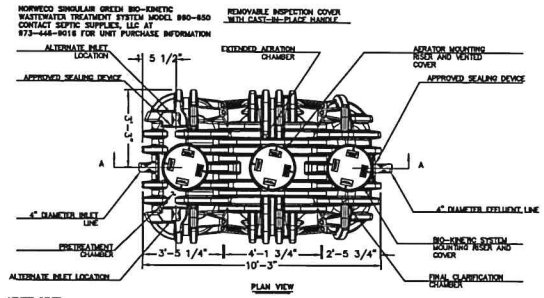
BIO-KINETIC SYSTEM DISCHARGE DETAIL

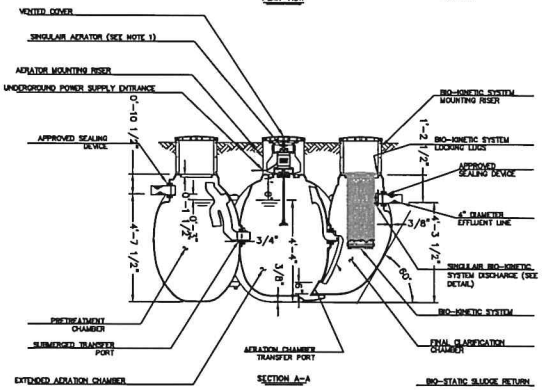


OUTLET END VIEW

NOTE:
TOTAL SYSTEM CAPACITY: 1,300 GALLONS
RATED CAPACITY: 800 GPD *

*MANUFACTURER AND DISTRIBUTOR SPECIFY SYSTEM CAN HANDLE A 4 BEDROOM RESIDENCE (650 GPD LOAD)





NO.	REVISION	BY	DATE

E&LP
140 WEST MAIN STREET HIGH BRIDGE, NJ 08829
(908) 238-0544 FAX: (908)238-9572
C.O.A. #: 24GA28021500
A PROFESSIONAL ASSOCIATION

TITLE:

LOPES RESIDENCE
INDIVIDUAL SUBSURFACE SEWAGE DISPOSAL SYSTEM
CLINTON TOWNSHIP, HUNTERDON COUNTY

LOCATION: 24 DEER HILL ROAD
BLOCK 1 LOT 22
CLINTON TOWNSHIP
HUNTERDON COUNTY, NJ

4/1/22

WAYNE J. INGRAM, P.E. & P.L.S. LICENSE #24GB04258200 DATE

DATE: 4/1/22			
PROJECT NO.: 0122092	DESIGNED BY: JBM	CHECKED BY: WJI	
FILENAME: DETAILS.DWG	SCALE: N.T.S.	SHEET NO.: 3 OF 5	

GENERAL NOTES:

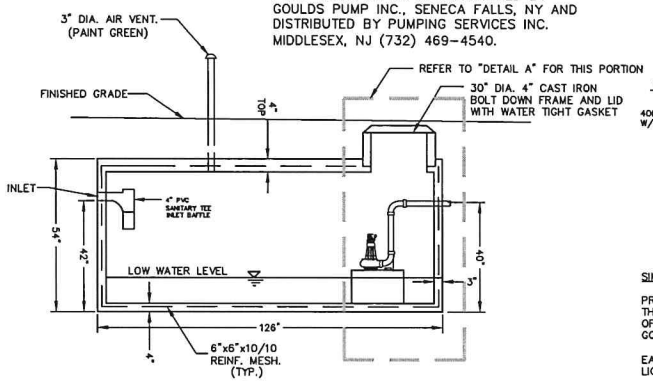
1. ALL ELECTRIC WORK TO CONFORM TO NEC, STATE AND LOCAL ELECTRICAL CODES FOR FOR HUNTERDON COUNTY, CLINTON TOWNSHIP)
2. ALL FITTINGS ARE SCHEDULE 80 SOLVENT WELDED FOR PRESSURE CONDITIONS
3. ALL ELECT. MATERIALS & WORK SHALL CONFORM TO NA. ELECT. CODE NFPA 70-CURRENT ED. AND LOCAL CODES
4. ALL SWITCHES MUST BE CORROSION & HUMIDITY PROOF
5. DISCONNECT BOX TO BE INSTALLED AT CONTROL PANEL.

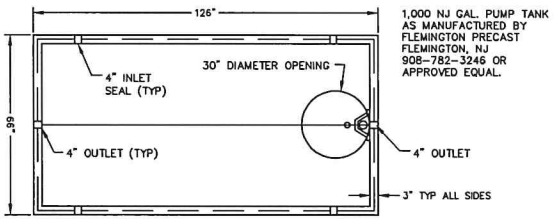
POWER EQUIPMENT

PUMP MOTOR SHALL BE PROVIDED WITH A CIRCUIT BREAKER AND A HP RATE CONTACTOR. THE CONTROL CIRCUIT SHALL BE PROVIDED WITH A CONTROL CIRCUIT BREAKER AND OPERATE ON 115 V 1 PHASE. THREE PUMP MOTOR STARTING CAPACITOR, RUN CAPACITOR AND RELAY SHALL BE MOUNTED IN CONTROL PANEL.

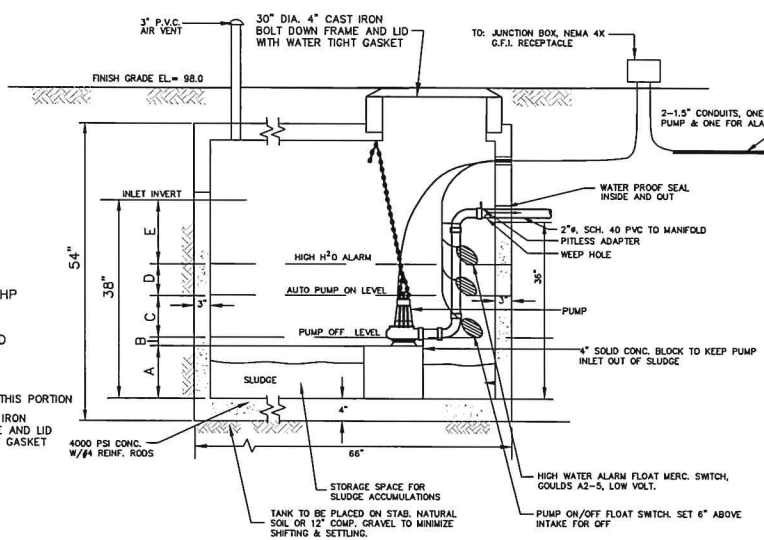
PUMP SPECIFICATIONS

ELECTRIC SUBMERSIBLE PUMP
GOULDS MODEL 3886-WS0311B
DESIGN POINT ~102 GPM @ 6.3' TDH, 1/3 HP
2" DISCHARGE, 1 PHASE ELECTRIC POWER.
PUMP SHALL BE AS MANUFACTURED BY GOULDS PUMP INC., SENECA FALLS, NY AND DISTRIBUTED BY PUMPING SERVICES INC. MIDDLESEX, NJ (732) 469-4540.





1,000 GAL PUMP TANK
(NTS)
(WITH PUMP SYSTEM)



PUMP CHAMBER DETAIL A
N.T.S.

SIMPLEX PUMP CONTROL PANEL:

PROVIDE FLOAT LEVEL CONTROL SYSTEM TO AUTOMATICALLY CONTROL THE OPERATION OF THE PUMP AS REQUIRED BY INFLUENT FLOW. FLOAT SWITCHES ARE TO SENSE THE PUMP OFF, PUMP ON, AND HIGH WATER ALARM CONDITION. FLOAT LEVEL SENSORS SHALL BE GOULD PUMP MODEL NO. A2-5 WITH SUFFICIENT CABLE AS REQUIRED FOR INSTALLATION.

EACH PANEL SHALL BE PROVIDED WITH HAND/OFF/AUTOMATIC SELECTOR SWITCH PUMP RUN LIGHT AND COUNTER.

PANEL SHALL INCLUDE EXTERNAL ALARM LIGHT AND ALARM HORN.

THE CONTROL PANEL SHALL BE AS MANUFACTURED BY GOULDS PUMPS INC., PROVIDED BY PUMPING SERVICES INC. AND BE SUITABLE FOR USE WITH THE 1/3 HP SEWAGE PUMP AND OPERATE ON 115 VOLT, 1 PHASE 3 WIRE 60 HZ ELECTRIC POWER. PART NO. S10020.

(A) 4" STATIC WATER LEVEL (PUMP OFF) = 125 GALS.

(B) 6" SEPARATION BETWEEN PUMP OFF LEVEL & PUMP INTAKE

(C) 4.5" SEPARATION BETWEEN PUMP ON & PUMP OFF LEVEL, YIELDING A DOSE VOLUME OF 140 GALS.

(D) 4" SEPARATION BETWEEN AUTO PUMP ON & HIGH WATER LEVEL.

(E) 19.5" RESERVE STORAGE CAPACITY, IN CASE OF PUMP OR POWER FAILURE, EQUAL TO 605 GALS.

ADVANCED WASTEWATER PRETREATMENT NOTES:

1. PRETREATMENT DEVICES SHALL HAVE OBTAINED AN NSF STANDARD 40 AND/OR STANDARD 245 CERTIFICATION AND MUST BEAR THE MARK OF NSF.
2. PRETREATMENT DEVICES SHALL INCLUDE IN THEIR DESIGN A TELEMETRY CONTROL PANEL, ATTACHED TO AN INTERNET-BASED INTERFACE THAT PROVIDES CONTINUOUS REMOTE MONITORING, INFORMATION MANAGEMENT, AND CONTROL OF THE ADVANCED WASTEWATER PRETREATMENT DEVICE, OR AN APPROVED EQUIVALENT SYSTEM TO NOTIFY AUTHORIZED SERVICE PROVIDER OF ALARM CONDITIONS.
3. PRETREATMENT DEVICES MUST BE WATERTIGHT AND DESIGNED IN A MANNER THAT CONSIDERS ALL STRUCTURAL EFFECTS ON THE TREATMENT UNIT FOR THE INTENDED INSTALLATION.
4. AN AUTHORIZED INSTALLER SHALL BE PHYSICALLY PRESENT AT ALL TIMES DURING THE INSTALLATION OF A NOOT PRETREATMENT DEVICE.
5. THE AUTHORIZED INSTALLER SHALL ENSURE THAT THE PROPERTY OWNER HAS BEEN PROVIDED WITH A COPY OF THE SERVICE CONTRACT AND AGREES TO COMPLY WITH THE REQUIREMENTS PRIOR TO INSTALLATION.
6. PRETREATMENT DEVICES SHALL BE INSTALLED IN ACCORDANCE WITH THE DEVICE MANUFACTURER'S INSTALLATION MANUAL.
7. THE AUTHORIZED INSTALLER SHALL BE IN POSSESSION OF ALL NECESSARY PERMITS, APPROVALS AND LICENSES BEFORE ATTEMPTING ANY PORTION OF THE INSTALLATION. ALL DOCUMENTATION MUST BE LOCATED ON-SITE FOR THE DURATION OF THE INSTALLATION.
8. FOLLOWING INSTALLATION, THE AUTHORIZED SERVICE PROVIDER SHALL INSPECT THE SYSTEM, COMPLETE A MANUFACTURER'S SYSTEM START-UP CHECKLIST, AND PROVIDE THE COMPLETED CHECKLIST TO THE ADMINISTRATIVE AUTHORITY. THE AUTHORIZED SERVICE PROVIDER SHALL BE PRESENT AT THE TIME OF START UP.
9. PRETREATMENT DEVICES SHALL BE MAINTAINED IN ACCORDANCE WITH N.J.A.C. 7:9A-12.2.
10. THE OWNER OF A SYSTEM THAT INCLUDES A PRETREATMENT DEVICE SHALL HAVE IN PLACE A SERVICE CONTRACT, THROUGHOUT THE LIFE OF THE SYSTEM, WITH AN AUTHORIZED SERVICE PROVIDER, IN ACCORDANCE WITH N.J.A.C. 7:9A-12.3.
11. PRETREATMENT DEVICES SHALL BE INSPECTED BY AN AUTHORIZED SERVICE PROVIDER ON THE FOLLOWING SCHEDULE, AT A MINIMUM:
    I. ONCE WITHIN 30 DAYS FOLLOWING THE SYSTEM START-UP;
    II. SUBSEQUENT TO INITIAL INSPECTION ABOVE, TWICE PER YEAR FOR THE FIRST TWO YEARS OF SYSTEM OPERATION, ONCE PER YEAR THEREAFTER;
    III. AT THE TIME OF TRANSFER OF THE PROPERTY WITH THE NEW SYSTEM OWNER; AND
    IV. INSPECTIONS SHALL BE CONDUCTED ON A MORE FREQUENT BASIS IF REQUIRED BY THE MANUFACTURER OR SYSTEM INTEGRATOR, AS APPLICABLE.
13. AIR BLOWER MUST BE LOCATED NO MORE THAN 50 FEET FROM PRETREATMENT DEVICE AND MUST BE DEDICATED TO A 110 30 AMP CIRCUIT.

NO.	REVISION	BY	DATE

E&LP
140 WEST MAIN STREET HIGH BRIDGE, NJ 08829
(908) 238-0544 FAX: (908)238-9572
C.O.A. #: 24GA28021500
A PROFESSIONAL ASSOCIATION

TITLE:
LOPES RESIDENCE
INDIVIDUAL SUBSURFACE SEWAGE DISPOSAL SYSTEM
CLINTON TOWNSHIP, HUNTERDON COUNTY

LOCATION: 24 DEER HILL ROAD
BLOCK 1 LOT 22
CLINTON TOWNSHIP
HUNTERDON COUNTY, NJ

3/28/22
WAYNE J. INGRAM, P.E. & P.L.S. LICENSE #24GB04258200 DATE

DATE: 4/1/22			
PROJECT NO.: 0122092	DESIGNED BY: JBM	CHECKED BY: WJI	
FILENAME: DETAILS.DWG	SCALE: N.T.S.	SHEET NO.: 4 OF 5	

AGRONOMIC SPECIFICATIONS FOR LAWNS AND SEPTIC SYSTEMS

GENERAL

1. All disturbed areas that are not being graded, not under active construction, or not scheduled to be permanently seeded within 30 days must be temporarily stabilized as per specifications below.

2. All exposed areas which are to be permanently vegetated, are to be seeded and mulched within 10 days of final grading.

3. **Straw mulch** (hay mulch may be substituted if approved by the District) is to be applied to all seedings at a rate of 1-1/2 to 2 tons per acre (approx. 100 to 120 bales per acre).

4. **Mulch anchoring is required** after mulching to minimize loss by wind or water. This is to be done using one of the methods (crimping, liquid mulch binders, netting, etc.) in the "Standards for Soil Erosion and Sediment Control in New Jersey".

5. Existing weedy and poorly-vegetated areas with less than 80 percent perennial grass cover must receive permanent stabilization (as specified below).

6. All bags need to be saved for lime, fertilizer, seed, and liquid mulch binder (if mulch anchoring method). Such proofs need to be submitted to the District inspector for verification of materials and quantities used for all seedings.

SEED-BED PREPARATION FOR ALL SEEDINGS

SUB-SOIL PREPERATION: Immediately prior to seeding and topsoil application, the surface should be scarified to a depth of 6" to 12" where there has been soil compaction (e.g. areas of heavy construction traffic). This practice is to be applied to all exposed areas where there is no danger to underground utilities (cables, irrigation systems, etc.)

TOPSOILING: Areas to be seeded should have a minimum of 5" of friable, loamy, topsoil free of objectionable weeds, stones and debris.

FINAL GRADING: Grading is to be smooth of ruts and free of objectionable stones, depressions, vehicle tracks, and tough ridges. There is to be positive drainage away from all buildings and dwellings. Refuse from seed-bed preparation (roots, sticks, stones, construction debris) must be disposed of properly.

LIMING/FERTILIZING: Apply limestone and fertilizer to soil test recommendations or as follows:

A. **Lime** is to be applied at the rate of **2 tons (4,000 lbs)** per acre. Lime may be any product type as long as the CCE (Calcium Carbonate Equivalency = 2 tons per acre. Pelletized and liquid products may be preferred because of their lack of dust and ease of handling but must meet the here-mentioned criteria.

B. **Starter fertilizer, specified as 10-10-10, is to be applied at 500 lbs. per acre**

C. **Lime and fertilizer** are to be worked into the soil to a depth of 4 inches

TEMPORARY SEEDING

Temporary seeding is to be used on all disturbed areas where permanent stabilization will not be accomplished for a period of up to 6 months.

Product	Rate	Recommended optimum seeding dates
Perennial ryegrass	100 lbs. per acre	3/15-5/15 & 8/15-10/1
Spring Oats	96 lbs. per acre	3/15-6/1 & 8/1-10/1
Winter Cereal Rye	112 lbs. per acre	8/1-11/15
Winter Barley	96 lbs. per acre	8/15-10/1
Pearl Millet	25 lbs. per acre	5/15-8/15
Sudan or Hungarian Millet	50 lbs. per acre	5/15-8/15

STABILIZATION WITH SOD

Stabilization with sod is permitted in areas where maintenance and irrigation are adequate to ensure proper establishment and longevity. Seedbed preparation is to be consistent with any other stabilization requirements. Lime and fertilizer bags are to be retained for District inspection. On a per grower basis, sod must be properly anchored to the slope in accordance with the NJ Standards for Soil Erosion and Sediment Control.

PERMANENT SEEDING

A. Seed is to be incorporated into the soil to a depth of 1/4" - 1/2".

B. Lawn seedings are to be a mixture of bluegrasses, turf-type fescues, and turf-type perennial ryegrasses to insure longevity, tolerance, and durability. No seed shall be accepted with a germination test date of more than 12 months old unless retested.

C. Pre-seasoned sod mixtures are recommended rather than mixing seeds yourself.

D. Seed mixture (as specified below) is to be applied at a minimum rate of 200 lbs. per acre of perennial seed.

E. **Optimum seeding period for Hunterdon County is from March 1 to May 15 and August 15 to October 1.** Outside of these periods, the seeding rates are to be increased by 50% (i.e. 300 lbs. per acre of perennial seed instead of the retained 200 lbs. per acre during optimum periods).

F. Seedings should receive an application of fertilizer such as 10-10-10 or equivalent at 400 lbs. per acre approximately 6 months after first application.

SEEDING MIXTURE FOR GENERAL SEEDING (favorable loamy)

40% turf-type tall fescue		60% Kentucky bluegrass
10% creeping red fescue	OR	20% turf-type perennial ryegrass
10% chewings fescue		20% chewings fescue
10% Kentucky bluegrass		
30% turf-type perennial ryegrass		

SEEDING MIXTURE FOR HIGH TRAFFIC & CRITICAL AREAS
(examples: athletic fields, waterways, diversions, etc.)

30% turf-type tall fescue
10% Kentucky bluegrass
10% turf-type perennial ryegrass

Other seed mixtures, such as blended varieties of perennial turf-type ryegrasses, turf-type tall fescues, or bluegrasses may also be acceptable if approved by the District.

DESIGN CRITERIA

STONE SIZE - USE ASTM C-33, SIZE No. 2 (2 1/2 TO 1 1/2") OR 3 (2 to 1"). USE CLEAN CRUSHED ANGULAR STONE. CRUSHED CONCRETE OF SIMILAR SIZE MAY BE SUBSTITUTED BUT WILL REQUIRE MORE FREQUENT UPGRADING AND MAINTENANCE.

THICKNESS-NOT LESS THAN SIX (6) INCHES.

WIDTH-NOT LESS THAN FULL WIDTH OF POINTS OF INGRESS OR EGRESS.

SOIL EROSION AND SEDIMENT CONTROL GUIDELINES FOR SEPTIC SYSTEM INSTALLATION AND ALTERNATIONS IN HUNTERDON COUNTY, NJ

1. The Hunterdon County Soil Conservation District requires an advanced 48-hour written notification prior to the start of any land disturbance. A failure of this notification prior to the start of construction will result in the issuance of a Stop Construction Order and may be cause for legal action. Notice may be faxed to (908) 788-0795 or mailed to:
   Hunterdon County Soil Conservation District
   687 Pittstown Road, Suite #1
   Frenchtown, NJ 08825
2. Land disturbance and construction work start includes any demolition or clearing that takes place on the project site. Appropriate Soil Erosion and Sediment Control measures must be installed and maintained.
3. A sediment barrier of either silt fence or haybales (properly staked and embedded) must be installed below (downslope side) of the septic system construction area.
4. Stone tracking pads or other measures approved by the Soil Conservation District are to be installed **at all** construction accesses to pavement. All stone tracking pads (stabilized construction entrance) **are** to be installed at a minimum of 100 ft. in length. Other reasonable methods or shorter lengths of tracking stone can be field determined and approved by the District Inspector. The contractor must keep all public roads and paved surfaces scraped and cleaned of sediment and tracking. All sediment spilled, dropped, washed, or tracked onto roadways (public or private) or other impervious surfaces is to be removed immediately.
5. Stormwater inlets near the septic system construction area and low in an active public roadway may require protection if elevated by the District inspector. Stormwater inlet protection may include haybales or clean stone bottle (stone sized 1 1/2"-2 1/2") that completely encircle, but not block the inlets.
6. All trees that are to be protected from injury during construction of the septic system are to be adequately marked in fenced-off prior to construction and maintained during construction. Fencing/marking are to be erected around and outside of tree drip line and root area.
7. If the excavated pit or trench area requires pumping/dewatering of rainfall or runoff, proper procedures are to be followed to remove suspended sediments in the water prior to discharge to downstream areas and/or watercourse. In most cases, a silt sack or hayvisa stone ring can be used at the discharge end. The District has further information on these methods found in the Standards for Soil Erosion and Sediment Control in New Jersey, pages 14-1to 14-7. Do not direct discharge pump water without employing an approved method. Call the District if you have questions. Health Department requirements are to be followed for dewatering of native disposal beds or leach field areas or any other area that may have contaminants other than sediment.
8. Steep banks, wetland buffers, waterways, and other sensitive areas are to be avoided by construction traffic. Wetland buffer and wetland areas are to be adequately marked in field prior to construction and maintained during construction.
9. If excess fill or any other material is to be removed from the site, the project owner/applicant shall be responsible for its proper disposal and will notify the Hunterdon County Soil Conservation District as to the planned disposal site location. Removal of any soil material from the septic system construction site without written authorization from the Hunterdon County Soil Conservation District is a violation of the state Soil Erosion and Sediment Control Act. A **Fill Disposal Worksheet (page 11) and authorization** is required prior to any excess soil material leaving the site. The same applies to additional soil material (other than select fill or stone from an operating quarry) to be brought onto the septic system site. Health Department requirements are to be followed for hauling off of material from a previous disposal bed or leach field.
10. Health Department rules and regulations on grading and slope are to be followed for the area of the septic system and/or expand. For all other disturbed areas, the maximum allowable vegetated slope is 2:1. Slopes in excess of 3:1 (between 2:1 and 3:1) require temporary erosion control matting such as excelsior "curlex" or equivalent, for stabilization. The matting is to be properly installed with specified overlap, check slots, anchoring spacing, and anchoring device type, gauge, and size.
11. The Hunterdon County Soil Conservation District certifies and inspects for soil erosion and sediment control measures and related resources only. District certification does not excuse or supercede any requirements, procedures, or permits of any other regulatory agency such as NJDEP, municipality, county, etc.
12. Hydroseeding/Hydromulching are not acceptable practices in Hunterdon County due to the high failure rate of seedings, steep topography, poor seed-to-soil contact and poor ground surface coverage. All seed must be incorporated into the soil. Hydroseeding equipment may be used in conjunction with straw/hay mulch for the purpose of anchoring the mulch with liquid mulch binders.
13. The project applicant and contractor are to be aware that additional Soil Erosion and Sediment Control measures may be required by the Soil Conservation District if field conditions or unforeseen situations warrant them.
14. The owner/applicant acknowledges that a written Report of Compliance is required from the District at the completion and permanent stabilization of the project. Failure to receive the Report of Compliance is a violation of the Soil Erosion and Sediment Control Act and may be cause for court action and penalties, pursuant to N.J.S.A. 4:24-55.
15. It is the policy of the Hunterdon County Soil Conservation District to periodically evaluate all projects to determine if the costs for review and inspection exceed the paid fees. Prior to the fees being exceeded an additional fee will be assessed.

FINAL GRADING: Grading is to be smooth of ruts and free of objectionable stones, depressions and rough edges. Conventional mowing equipment should be able to mow the resulting vegetation.

PERMANENT SEEDING: All areas are to be limed and fertilized as per the above Agronomic Specifications for Lawns and Septic Systems. The seed mixture is to consist of perennial lawn type seed. Seed mixtures that have a high percentage of annual seed (annual ryegrass, etc.), sometimes labeled "contractors mix" are not acceptable. Certified seed is to be used. The seed, fertilizer, lime, etc. labels/slips are to be saved, so that the District can verify the mixtures and the application rates. These labels/slips may need to be presented at the time of the compliance inspection.

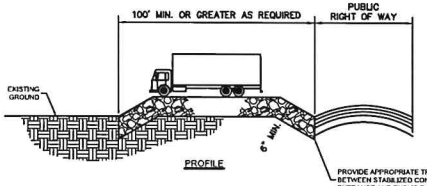
COMPLIANCE INSPECTION: The owner/applicant is responsible for calling the District office to schedule a final compliance inspection, a minimum of 2 working days in advance. We cannot guarantee an inspection on a particular date if less scheduling notice is given. The owner/applicant is also responsible for notifying the inspection, if work (stabilization) is not 100 percent completed, or act of nature (rain, wind, etc.) has disrupted stabilization efforts. A reinspection fee may be assessed (as per District Fee Schedule) for each additional inspection required until the project is stabilized satisfactorily.

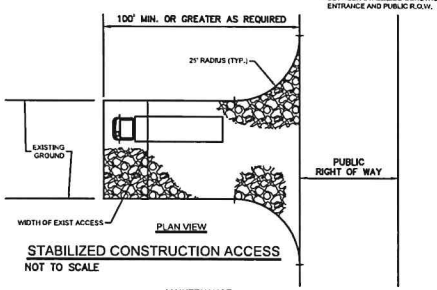
TEMPORARY REPORTS OF COMPLIANCE: Temporary Reports of Compliance are generally not a procedure for septic system installations; however, there may be times when it is impossible to complete the septic system and permanently stabilize within the 30-day period. The District accepts seedings (permanent stabilization) at all times of the year as long as the lot/project area can be properly final graded. When seeding out of the optimal seeding periods (March 1 - May 15 or August 15 - Oct. 1), seeding rates are to be increased by 50 percent. Regardless if the lot/project is temporarily or permanently stabilized, a temporary report of compliance is issued when a cash performance guarantee is posted to assure and guarantee stabilization during the winter months, starting November 1st and ending April 1st. The cash bond amount plus an administration fee is determined by the District Board, and is based on the amount of sewer disturbed (one acre being the minimum) and rounded to the nearest acre thereafter. Bonding is only for stabilization. If not permanently stabilized, the disturbed acreage must be mulched (to a minimum) and maintained throughout the winter months as a temporary stabilization practice. Other practices (silt fence, hay bales, etc.) may also be required if field conditions warrant.

OTHER IMPORTANT INFORMATION AND PROGRAMS FOR SEPTIC SYSTEM INSTALLATION:

REPORTS OF COMPLIANCE: These are issued when the entire disturbed area for the septic system is permanently stabilized. Permanent stabilization means that the entire project area or lot is final graded, topsoiled, limed, fertilized, seeded and mulched.

TOPSOILING: Areas to be seeded should have a minimum of 5" of topsoil free of objectionable stones and debris.

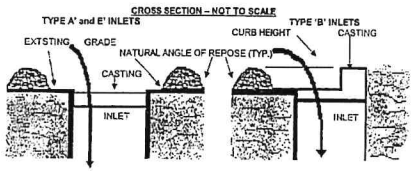




STABILIZED CONSTRUCTION ACCESS
NOT TO SCALE

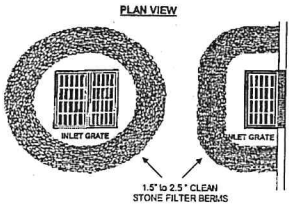
MAINTENANCE

THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO ROADWAYS. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE OR ADDITIONAL LENGTH AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED ONTO ROADWAYS (PUBLIC OR PRIVATE) OR OTHER IMPERVIOUS SURFACES MUST BE REMOVED IMMEDIATELY. WHERE ACCUMULATION OF DUST/SEDIMENT IS INADEQUATELY CLEANED OR REMOVED BY CONVENTIONAL METHODS, A POWER BROOM OR STREET SWEEPER WILL BE REQUIRED TO CLEAN PAVED OR IMPERVIOUS SURFACES. ALL OTHER ACCESS POINTS WHICH ARE NOT STABILIZED SHALL BE BLOCKED OFF.

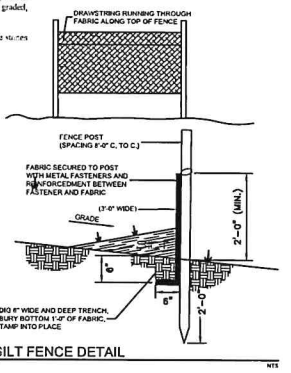


* STONE PILES NOT TO EXCEED CURB HEIGHT OR OBSTRUCT FLOW TO AN EXTENT THAT A FLOODING HAZARD IS CREATED

INLET PROTECTION DETAILS



NO STONE OR FILTERS SHALL BE PLACED OVER INLET OPENING



① **SILT FENCE DETAIL**
NTS

NO.	REVISION	BY	DATE

E&LP
140 WEST MAIN STREET HIGH BRIDGE, NJ 08829
(908) 238-0544 FAX: (908)238-9572
C.O.A. #: 24GA28021500
A PROFESSIONAL ASSOCIATION

TITLE:
LOPES RESIDENCE
INDIVIDUAL SUBSURFACE SEWAGE DISPOSAL SYSTEM
CLINTON TOWNSHIP, HUNTERDON COUNTY

LOCATION: 24 DEER HILL ROAD
BLOCK 1 LOT 22
CLINTON TOWNSHIP
HUNTERDON COUNTY, NJ

4/1/22
WAYNE J. INGRAM, P.E. & P.L.S. LICENSE #24GB04258200 DATE

DATE: 4/1/22			
PROJECT NO.: 0122092	DESIGNED BY: JBM	CHECKED BY: WJI	
FILENAME: SESC.DWG	SCALE: N.T.S.	SHEET NO.: 5 OF 5	

Fee Enclosed

- ☐ New Design $250.00
- ☒ Alteration $225.00
- ☐ Redesign $ 90.00 (Of previously approved design)
- ☐ Re-Review $ 15.00 (after initial plan rejection)

Receipt #_____

1st Re-Review Receipt # _____

2nd Re-Review Receipt # _____

Municipality Clinton Township Block 1 Lot 22

HUNTERDON COUNTY HEALTH DEPARTMENT
APPLICATION FOR PERMIT TO CONSTRUCT/ALTER
AN INDIVIDUAL SUBSURFACE SEWAGE DISPOSAL SYSTEM
Form 1 - General Information

1. Name of Applicant (print): Helder Lopes
2. Applicant's Present Address: 24 Deer Hill Road, Lebanon, NJ 08833
3. Applicant's Phone Number: Day 908-256-5130 Night _____
4. Applicant's email address: helderlop1959@gmail.com

BUILDING LOCATION MUST BE STAKED. DATE STAKED _____

4. Type of Permit Needed (Check applicable categories):

__ a. New Construction
__ c. Alteration/Expansion or Change in Use
__ e. Repair (in-kind replacement)/Malfunctioning System
X g. Deviation from Standards
X h. New system installed (existing structure)
X b. Alteration/No expansion or Change of Use
X d. Alteration/Malfunctioning System
___ f. Repair (in-kind replacement) System is not malfunctioning

5. Location of Project:

Street Address 24 Deer Hill Road Zip Code 08833

6. Type of Facility:

X Residential Commercial/Institutional _____
Specify Type of Establishment: _____

7. Type of Wastes to be Discharged:

X Sanitary Sewage _____ Industrial Wastes _____ Other – Specify Type

8. If d. or e. in 4. Above are checked, indicate the type of malfunction and its cause (check all that apply):

____ Contamination of nearby wells or surface water bodies by sanitary sewage or effluent
____ Ponding or breakout of sanitary sewage or effluent onto the surface of the ground
____ Seepage of sanitary sewage or effluent into portions of building below ground
____ Back-up of sanitary sewage into the building served, which is not caused by a physical blockage of the internal plumbing
____ Any manner of leakage observed from components that are not designed to emit sanitary sewage or effluent
X Direct discharges to ground water (no zone of treatment)
Describe the cause of the malfunction: system at end of useful life

9. Please expand on Question #4, above, by checking if any of the following apply:

____ A privy, outhouse, latrine or pit toilet is present, a system must be installed
X A system must be upgraded as part of a real property transfer
____ A cesspool has been identified during a real property transfer and a conforming system must be installed
____ A malfunctioning cesspool has been identified and a conforming system must be installed

10. Other Approvals/Certification/Waivers/Exemptions (attach to application):

_____ U.S. Army Corps of Engineers _____ N.J.D.E.P. – Bureau of Flood Plain Management
_____ Other - Specify:

11. I hereby certify that the information furnished on this application is true. I am aware that false swearing is a crime in this state and subject to prosecution.

Signature of Applicant Helder Lopes Date 3-31-22

NOTE:
The applicant is responsible for obtaining all other required Federal, State or local approvals prior to the commencement of work under this approval, including but not limited to, NJDEP permits to conduct activities in freshwater wetlands, freshwater wetland transition areas, or flood plain jurisdictions. Failure to obtain these permits prior to conducting regulated activities within these areas may result in removal of the system and or the assessment of significant civil penalties

---

FOR HUNTERDON COUNTY HEALTH DEPARTMENT USE ONLY

_____Application Denied, see attached letter

_____Application Approved

_____Application Approved Subject to Approval of NJDEP

_____Date of Action Signature of Authorized Agent _____

Name and Title _____

EXPIRATION DATE: _____

HUNTERDON COUNTY HEALTH DEPARTMENT
10/93 APPLICATION FOR PERMIT TO CONSTRUCT/ALTER/REPAIR
AN INDIVIDUAL SUBSURFACE SEWAGE DISPOSAL SYSTEM
Form 2a - General Site Evaluation Data

MUNICIPALITY: Clinton Twp BLOCK 1 LOT 22

1) Name of Site Evaluator (print) Joey McGuinness, Engineering & Land Planning Associates, Inc.

2) Business Address of Site Evaluator 140 West Main Street, High Bridge, NJ 08829

3) Business Phone Number of Site Evaluator (908)-238-0544

4) Special Site Limitations Identified (Check Appropriate Categories)

_____Flood Plains _____ Bedrock Outcrops _____Wetlands
_____Excessively Stony _____ Disturbed Ground _____Sink Holes
_____Sand Dunes _____ Steep Slopes
_____Other - Specify _____

5) Soil Logs - Enter on Form 2b - Use one sheet for each soil log.

6) Considerations Relating to Disturbed Ground:

A) Type of Disturbance (Check appropriate categories)
_____Filled Area _____Excavated Area _____Regrade/Area _____ Subsurface Drains
_____Other-Specify:_____

B) Existing Ground Surface
Elevation Relative to Ground Surface_____
Method of Identification _____

C) Suitability of Disturbed Ground
_____Unsuitable: Objects Subject to Disintegration or Change in Volume
_____ Excessively Coarse
_____Proctor Test performed -% Standard Proctor Density =_____

7) Hydraulic Head Test:

A) Hydraulically Restrictive Horizon: Depth Top to Bottom_____
B) Piezometer A: Depth to Bottom _____
Depth of Water Level (24 hours)_____

C) Piezometer B: Depth to Bottom_____
Depth of Water Level (24 hours)_____

D) Witnessed by:_____
Signature _____ Date

8) Attachments (Check items included)

☑ Site Plan
☑ Key Map Showing Location of Site on U.S.G.S. Quadrangle or Other Accurate Map
☑ Key Map Showing Location of Site on U.S.D.A. Soil Survey Map
____ Other - Specify_____

9)I hereby certify that the information furnished on Form 2a of this application (and the attachments thereto) is true and accurate. I am aware that falsification of data is a violation of the Water Pollution Control Act (N.J.S.A. 58:10A-1 et seq.) and is subject to penalties as prescribed in N.J.A.C. 7:14-9.

Signature of Soil Evaluator _____ Date 4/1/22

Signature of Professional Engineer _____ Date 4/1/22

N.J. License No. 24GB04258200 Seal

Sa 2b 05/2012

HUNTERDON COUNTY HEALTH DEPARTMENT
APPLICATION FOR PERMIT TO CONSTRUCT/ALTER/REPAIR
AN INDIVIDUAL SUBSURFACE SEWAGE DISPOSAL SYSTEM
Form 2b - Soil Log and Interpretation

MUNICIPALITY: Clinton Township BLOCK 1 LOT 22

1. Log Number SL-1 Method: Profile Pit ✓ Boring _____

2. Soil Log: Date Recorded 3/23/22

Depth (Inches)_____ Description:

0 - 14" Topsoil

14 - 58" 5YR 4/4; Clay Loam; 15% Gravel, 10% Cobble, 2% Stone; SAB, Moist, Friable

58 - 120" 5YR 5/4; Clay Loam; 30% Gravel, 20% Cobble, 5% Stone; SAB, Moist, Friable

2a. If mottling give reason for mottling:_____

3. Ground Water Observations:

_____Seepage - Indicate Depth_____

_____Pit/Boring Flooded _____ Depth after _____ Hours

4. Soil Limiting Zones:

_____Fractured Rock Substratum - Depth to Top _____

_____Massive Rock Substratum - Depth to Top 58"

_____Excessively Coarse Horizon - Depth Top to Bottom _____

_____Excessively Coarse Substratum - Depth to Top _____

_____Hydraulically Restrictive Horizon - Depth Top to Bottom _____

_____Hydraulically Restrictive Substratum - Depth to Top _____

_____Perched Zone of Saturation - Depth Top to Bottom _____

_____Regional Zone of Saturation - Depth to Top _____

5. Soil Suitability Classification: IISr

6. I hereby certify that the information furnished on Form 2b of this application is true and accurate. I am aware that falsification of data is a violation of the Water Pollution Control Act (N.J.S.A. 58: 10A-1 et.seq.) and is subject to penalties as prescribed in N.J.A.C. 7:14-8.

Signature of Site Evaluator _____ Date 4/1/22

Signature of Professional Engineer _____ Date 4/1/22

Seal

N.J. License No. 24GB0425282

Sa 2b 05/2012

HUNTERDON COUNTY HEALTH DEPARTMENT
APPLICATION FOR PERMIT TO CONSTRUCT/ALTER/REPAIR
AN INDIVIDUAL SUBSURFACE SEWAGE DISPOSAL SYSTEM
Form 2b - Soil Log and Interpretation

MUNICIPALITY: Clinton Township BLOCK 1 LOT 22

1. Log Number SL-2 Method: Profile Pit ✓ Boring _____

2. Soil Log: Date Recorded 3/23/22

Depth (Inches)_____ Description:

0 - 14"	Topsoil
14 - 58"	5YR 4/4; Clay Loam; 15% Gravel, 10% Cobble, 2% Stone; SAB, Moist, Friable
58 - 108"	5YR 5/4; Clay Loam; 30% Gravel, 20% Cobble, 5% Stone; SAB, Moist, Friable

2a. If mottling give reason for mottling:_____

3. Ground Water Observations:

_____Seepage - Indicate Depth_____

_____Pit/Boring Flooded _____ Depth after _____ Hours

4. Soil Limiting Zones:

_____Fractured Rock Substratum - Depth to Top _____

_____Massive Rock Substratum - Depth to Top 58"

_____Excessively Coarse Horizon - Depth Top to Bottom _____

_____Excessively Coarse Substratum - Depth to Top _____

_____Hydraulically Restrictive Horizon - Depth Top to Bottom _____

_____Hydraulically Restrictive Substratum - Depth to Top _____

_____Perched Zone of Saturation - Depth Top to Bottom _____

_____Regional Zone of Saturation - Depth to Top _____

5. Soil Suitability Classification: IISr

6. I hereby certify that the information furnished on Form 2b of this application is true and accurate. I am aware that falsification of data is a violation of the Water Pollution Control Act (N.J.S.A. 58: 10A-1 et.seq.) and is subject to penalties as prescribed in N.J.A.C. 7:14-8.

Signature of Site Evaluator _____ Date 4/1/22

Signature of Professional Engineer _____ Date 4/1/22

Seal

N.J. License No. 24GB0425282

HUNTERDON COUNTY HEALTH DEPARTMENT
APPLICATION FOR PERMIT TO CONSTRUCT/ALTER/REPAIR
AN INDIVIDUAL SUBSURFACE SEWAGE DISPOSAL SYSTEM
Form 3a - Soil Permeability Data

MUNICIPALITY: Clinton Township BLOCK 1 LOT 22

Assign a number for each test and a letter for each test replicate. Show test data and calculations on Form 3b, 3c, 3e, 3f or 3g. Use one sheet for each separate test or test replicate.

1. Summary of Data - Enter data for each test replicate on a separate line.

Type of Test	Test Date	Test Number	Replicate (letter)	Depth (inches)	Result*
Soil Class Rating	3/23/22	1	A/B	30"	K-1
Basin Flood	3/23/22	BF#1		108"	Fail

*For tube permeameter, pit-bailing and piezometer tests report results in inches per hour. For soil permeability class rating give soil permeability class number. For percolation test report result in minutes per inch. For basin flooding test report result as positive if basin drains completely within 24 hours after second filling, negative otherwise.

2. Design Permeability/Percolation Rate:Specify Test Number 6-20 in/hr

_____Average of Test Replicates ✓ Single Replicate
_____Slowest of Replicates

3. Type of Limiting Zone Identified Test Number
Massive Rock- BF#1

4. Attachments (Check items included):

_____Form 3b - Tube Permeameter Test Data - Number of Sheets _____

X Form 3c - Soil Permeability Class Rating Test Data - Number of Sheets 2

_____Form 3d - Percolation Test Data - Number of Sheets_____

_____Form 3e - Pit-Bailing Test Data - Number of Sheets _____

_____Form 3f - Piezometer Test Data - Number of Sheets _____

X Form 3g - Basin Flooding Test Data - Number of Sheets 1

5. I hereby certify that the information furnished on Form 3a of this application (and the attachments thereto) is true and accurate. I am aware that falsification of data is a violation of the Water Pollution Control Act (N.J.S.A. 58:10A-1 et seq.) and is subject to penalties as prescribed in N.J.A.C. 7:14-8.

Signature of Soil Evaluator _____ Date 4/1/22

Signature of Professional Engineer _____ Date 4/1/22

Seal

N.J. License No. 24GB04258200

APPLICATION FOR PERMIT TO CONSTRUCT/ALTER/REPAIR
AN INDIVIDUAL SUBSURFACE SEWAGE DISPOSAL SYSTEM

Form 3c: Soil Permeability Class Rating Data

1. COUNTY:	Hunterdon	MUNICIPALITY:	Clinton Twp		
2. STREET:	24 Deer Hill Road	BLOCK:	1	LOT:	22
3. SOIL PIT/BORING NO:	SL-1	SAMPLE DEPTH:	30"	DATE COLLECTED:	03/23/2022
4. TEST NO	1	REPLICATE:	A		

5. COARSE FRAGMENT CONTENT:									
a. Total Weight of Sample (W.T.), grams							200.0		
b. Weight of Material retained on 2 mm sieve, (W.C.F), grams.							25.4		
c. Wt. % Coarse Fragment (W.C.F./W.T. x 100).							**12.7**		
6. Oven Dry Weight (24 Hrs, 105° C) of 40 Gram Air Dry Sample, grams, (Wt).							39.6		
7. Hydrometer Calibration, Rc.							2.5		
8. Hydrometer Reading- 40 seconds, grams, R1.							34.8		
Temperature of Suspension, °F.							47.0		
9. Corrected Hydrometer Reading, grams R1'.							**27.7**		
10. Hydrometer Reading 2 Hours, grams R2.							20.0		
Temperature of Suspension, °F.							48.0		
11. Corrected Hydrometer Reading, grams , R2'.							**13.0**		
12. % Sand : (Wt. - R1') / Wt. x 100 =	(	39.6	-	27.7	)	/	39.6	x 100=	**30.1**
13. % Clay = R2' / Wt. x 100 =	(	13.0	/	39.6	)	x	100=	**32.8**	
14. Sieve Analysis:									
a. Oven Dry Wt. (2 Hrs., 105 °C) Total Sand Fraction. (Soil Retained in 0.047 mm Sieve, grams							15.4		
b. Wt. Of Fine Plus Very Fine Sand Fraction. (Sand Passing 0.25 mm Sieve grams)							6.8		
c. % Fine Plus Very Fine Sand (b/a).							**44.2**		

15. Soil Morphology (Natural Soil Samples Only)
Structure of Soil Horizon Tested. . . . . Single Grain: SAB
Consistence of Soil Horizon Tested: Dry:_____ Moist: friable

16. Soil Permeability Class Rating (Based upon average textural analysis of this replicate and other replicate samples. K-1

17. I hereby certify that the information furnished on Form 3C of this application is true accurate. I am aware that falsification of data is a violation of the Water Pollution Control Act (N.J.S.A. 58:10A-J et. Seq.) and is subject to penalties as prescribed in N.J.A.C. 7:14-8.

SIGNATURE OF SITE EVALUATOR: _____ DATE: 3/23/2022

SIGNATURE OF PROFESSIONAL ENGINEER: _____

New Jersey Professional Engineer License No. 24GB042582

APPLICATION FOR PERMIT TO CONSTRUCT/ALTER/REPAIR
AN INDIVIDUAL SUBSURFACE SEWAGE DISPOSAL SYSTEM

Form 3c: Soil Permeability Class Rating Data

1. COUNTY: Hunterdon MUNICIPALITY: Clinton Twp
2. STREET: 24 Deer Hill Road BLOCK: 1 LOT: 22
3. SOIL PIT/BORING NO: SL-1 SAMPLE DEPTH: 30" DATE COLLECTED: 03/23/2022
4. TEST NO 1 REPLICATE: B

5. COARSE FRAGMENT CONTENT:								
a. Total Weight of Sample (W.T.), grams						200.0		
b. Weight of Material retained on 2 mm sieve, (W.C.F), grams.						28.7		
c. Wt. % Coarse Fragment (W.C.F./W.T. x 100).						**14.4**		
6. Oven Dry Weight (24 Hrs, 105° C) of 40 Gram Air Dry Sample, grams, (Wt).						39.6		
7. Hydrometer Calibration, Rc.						2.5		
8. Hydrometer Reading- 40 seconds, grams, R1.						33.5		
Temperature of Suspension, °F.						47.0		
9. Corrected Hydrometer Reading, grams R1'.						**26.5**		
10. Hydrometer Reading 2 Hours, grams R2.						19.5		
Temperature of Suspension, °F.						49.0		
11. Corrected Hydrometer Reading, grams , R2'.						**13.1**		
12. % Sand : (Wt. - R1') / Wt. x 100 =	(	39.6	-	26.5	) /	39.6	x 100=	**33.1**
13. % Clay = R2' / Wt. x 100 =	(	13.1	/	39.6	) x	100=	**33.1**	
14. Sieve Analysis:								
a. Oven Dry Wt. (2 Hrs., 105 °C) Total Sand Fraction. (Soil Retained in 0.047 mm Sieve, grams						16.1		
b. Wt. Of Fine Plus Very Fine Sand Fraction. (Sand Passing 0.25 mm Sieve grams)						6.8		
c. % Fine Plus Very Fine Sand (b/a).						**42.2**		

15. Soil Morphology (Natural Soil Samples Only)
Structure of Soil Horizon Tested. SAB
Consistence of Soil Horizon Tested: Dry: Moist: friable

16. Soil Permeability Class Rating (Based upon average textural analysis of this replicate and other replicate samples. K-1

17. I hereby certify that the information furnished on Form 3C of this application is true accurate. I am aware that falsification of data is a violation of the Water Pollution Control Act (N.J.S.A. 58:10A-J et. Seq.) and is subject to penalties as prescribed in N.J.A.C. 7:14-8.

SIGNATURE OF SITE EVALUATOR: DATE: 3/23/2022

SIGNATURE OF PROFESSIONAL ENGINEER:

New Jersey Professional Engineer License No. 24GB042582

140 West Main Street
High Bridge, NJ 08829
T: 908.238.0544 F: 908.238.9572

E&LP

APPLICATION FOR PERMIT TO CONSTRUCT/ALTER AN INDIVIDUAL SUBSURFACE SEWAGE DISPOSAL SYSTEM

Municipality: Clinton Township Block: 1 Lot: 22

Form 3g - Basin Flooding Test Data

1 Test # BF-1 Reference Soil Log SL-2 Date Tested 3/23/22

2 Depth of Pit (ft) 9.0

3 Area of pit (ft^2) 50

4 Description of rock substratum within test zone:

Type of Rock Frac. Shale

Name of Formation Brunswick

Average Fracture Spacing 3"

Type of Fractures

___ Open (wide), clean - width of openings (mm) ___

X Open (wide), infilled with fines - width of opening (mm) 1

___ Tight (closed)

Orientation of Fractures:

X Horizontal (parallel to pit bottom) or nearly so

___ Inclined

___ Vertical (parallel to sides of pit) or nearly so

Hardness of Rock:

___ Rippable with hand tools

X Not rippable with hand tools, rippable by machine

___ Not rippable by machine

5 Time/Date of 1st basin flooding 9:02 AM 3/23 Volume of water added, gal. 375

6 Result of 1st basin flooding:

___ Basin drained within 24 hours - indicate time/date ___

X Basin not drained within 24 hours

7 Time/Date of 2nd basin flooding ___ Volume of water added, gal. ___

8 Result of 2nd basin flooding:

___ Basin drained within 24 hours - indicate time/date ___

___ Basin not drained within 24 hours

9 I hereby certify that the information furnished on Form 3g of this application (and the attachments thereto) is true and accurate. I am aware that falsification of data is a violation of the Water Pollution Control Act (N.J.S.A. 58:10A-1 et seq.) and is subject to penalties as prescribed in N.J.A.C. 7:14-8.

Signature of Site Evaluator ___ Date 4/1/22

Signature and Seal of Professional Engineer ___

License # 24GB042582 Date 4/1/22

HUNTERDON COUNTY HEALTH DEPARTMENT
0/93 APPLICATION FOR PERMIT TO CONSTRUCT/ALTER/REPAIR
AN INDIVIDUAL SUBSURFACE SEWAGE DISPOSAL SYSTEM
Form 4 - General Design Data

MUNICIPALITY: Clinton Township BLOCK 1 LOT 22

I. Volume of Sanitary Sewage, gal. 500

✓ Residential: No. of Dwelling Units 1 Total No. of Bedrooms: 3
Expansion attic (y or n) n

_____ Commercial/Institutional - Indicate type of establishment and show method of calculation. If estimate is based on water meter data, indicate source of data, frequency of readings, average daily flow, and maximum recorded daily reading _____

II. Alterations or Repairs

a. Reason for Alteration or Repair (Check appropriate categories):
_____ Expansion or Change in Use _____ Upgrade Existing Facilities
✓ Correct Malfunctioning System _____ Other Specify _____

b. Describe Nature of Alteration or Repairs: Install ATU tank, pump tank and disposal field.

III. a. Grease Trap Capacities, gals. _____
Show Calculation Used: _____

b. Ejector/grinder pump or garbage disposal
Existing: Yes ____ No ✓
Proposed: Yes ____ No ✓
Note: If marked yes, tank and field must be enlarged by 50%

c. Septic Tank Capacities, gals. _____ First (Single) Compartment _____ Norweco 960-500
_____ Second Compartment _____ _____ Third Compartment _____

d. Effluent Distribution
Method: _____ Gravity Flow _____ Gravity Dosing
✓ Pressure Dosing
Dosing Device: ✓ Pump _____ Siphon

e. Dosing Tank Capacities, gals: Total Capacity 1,000 Dose Volume 140
Reserve Capacity 605

f. Laterals: Number 8 Total Length 112 Pipe Size 1" Spacing 3'

g. Connecting Pipe: Size 2" Length 35'

h. Manifold: Size 2" Length 9'

i. Disposal Field: Type of Installation MSR

Design Permeability (Percolation Rate) 6-20 in/hr
Trenches: Width _____ Total Length _____ Bed: Area 480 S.F.

j. Seepage Pits: Design Percolation Rate _____ Number of Pits: ____
Total Percolating Area Provided: _____

IV. Attachments (Check items included):

✓ General Plan of System Showing Location of All System Components, No Larger That 8 1/2 Inches X 14 1/2 Inches, Unless Prior Approval Given.
✓ X-Sections of Each System Component Including Grease Trap, Septic Tank,, Dosing Tank, Disposal Field, Seepage Pits and Interceptor Drains
✓ Pump Performance Curve
_____ Other - Specify _____

1. I hereby certify that the information furnished on Form 4 of this application (and attachments thereto) is true and accurate. I am aware that falsification of data is a violation of the Water Pollution Control Act (N.J.S.A. 58:10A-1 et seq.) and is subject to penalties as prescribed in N.J.A.C. 7:14-8.

Signature of Professional Engineer _____ Date 4/2/22

N.J. License No. 24GB042582

Seal

05/2012
SA5

HUNTERDON COUNTY HEALTH DEPARTMENT
APPLICATION FOR PERMIT TO CONSTRUCT/ALTER/REPAIR
AN INDIVIDUAL SUBSURFACE SEWAGE DISPOSAL SYSTEM
Form 5 - Design of Pressure or Gravity Dose System

MUNICIPALITY Clinton Township BLOCK 1 LOT 22

I.Configuration of Distribution Network:

Type of Manifold: ____ End ✓ Central
Distribution Laterals: Number 8 Length, ft 14 Spacing, ft 3' Volume: 4.5 gal
Hole Diameter, ins. 1/4" Hole Spacing, ins. 36"
Diameter of Laterals, ins. 1"

II.Lateral Discharge Rate:

Design Pressure Head at Supply End of Laterals, H, ft. 2.5'
Hole Discharge Rate, Q, gpm 1.18
Number of Holes per Lateral, n 4
Lateral Discharge Rate, (Q x n) gpm 4.7

III.Manifold Length, ft. 9 Manifold Diameter, ins. 2" Volume: 1.5 Gallons

IV.System Discharge Rate, gpm 37.9

V. a. Pump Selection:

Pump displacement volume: 3 Gallons
Diameter of Delivery Pipe 2" Length of Delivery Pipe 35' Volume: 5.7 Gallons
Friction Loss in Delivery Pipe, H_f, ft. 1.0
Elevation of Dosing Tank Low Water Level 99.7
Elevation of Lateral Invert 102.5
Elevation Head, H_e, ft. 2.8
Total Operating Head, H_t, ($H_p + H_f + H_e$), ft. 6.3
Pump Model Goulds 3886 Rated Horsepower 1/3
Pump Discharge Rate at Total Operating Head, gpm 102

b. Siphon Elevation:

Diameter of Delivery Pipe _____ Length of Delivery Pipe _____ Volume: _____
Friction Loss in Delivery Pipe, H_f, ft. _____
Velocity Head, H_v, ft. _____
Total Operating Head, H_t ($H_p + H_f + H_v$), ft. _____
Elevation of Lateral Invert _____
Elevation of Siphon Invert _____
Internal horizontal area of dosing tank in (ft^2) _____

VI. Dose Volume:

Design Volume of Sewage, gal/day 500
Design Permeability, in/hr 6-20 or Percolation Rate, min/in _____
Internal Volume of Distribution Network 11.8 Gallons
Dose Volume 140
Pump tank size in (ft^2) 50

VII. I hereby certify that the information furnished on Form 5 of this application (and attachments thereto) is true and accurate. I am aware that falsification of data is a violation of the Water Pollution Control Act (N.J.S.A. 58:10A-1 et seq.) and is subject to penalties as prescribed in N.J.A.C. 7:14-8.

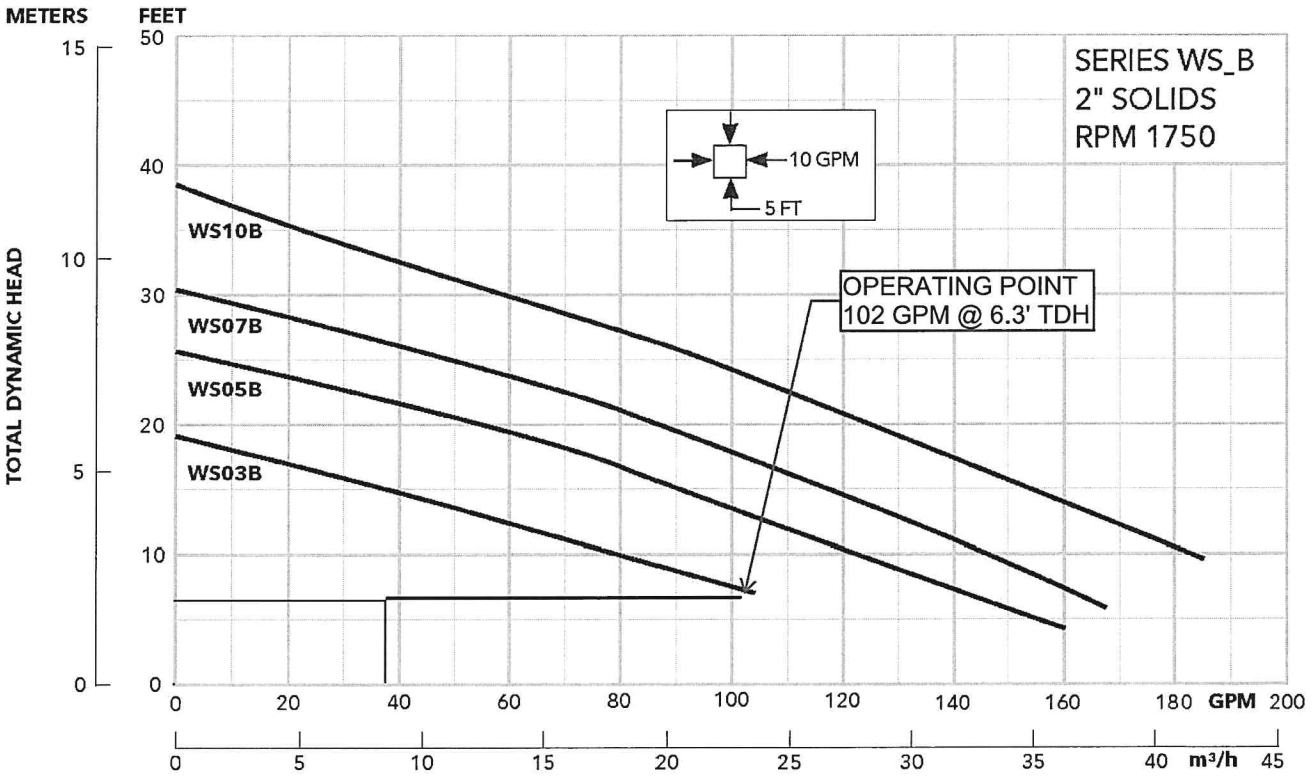
Signature of Professional Engineer _____ Date 4/1/22

N.J. License No. 24GB04258200

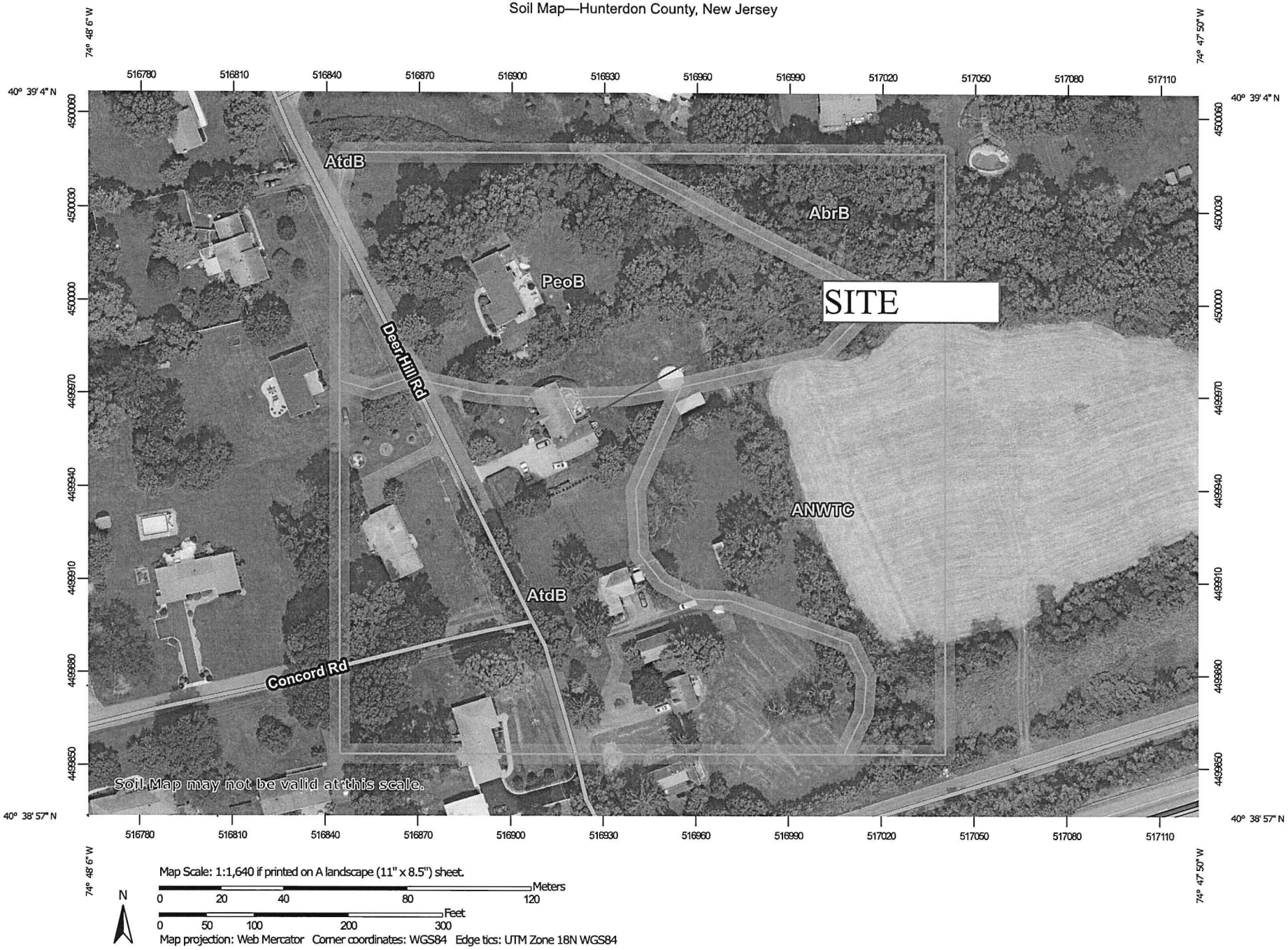
Seal

MODELS

Order Number	HP	Phase	Volts	RPM	Impeller Dia. (In.)	Max. Amps	LRA	KVA Code	Full Load Motor Eff.	Resistance		Wt. (Lbs.)
										Start	Line-Line	
WS0311B	*	*	115	*	4.69	10.7	30.0	M	54	11.9	1.7	63
WS0318B	0.33		208			6.8	19.5	K	51	9.1	4.2	
WS0312B			230			4.9	14.1	L	53	14.5	8.0	
WS0511B	0.5		115		5.00	14.5	31.1	J	55	9.3	1.4	65
WS0518B			208			8.0	19.5	K	51	9.1	4.2	
WS0512B			230			7.3	16.5	J	54	11.7	5.6	
WS0538B		3	200			3.8	12.3	K	75	NA	6.7	
WS0532B			230			3.3	9.7	K	75	NA	9.9	
WS0534B			460			1.7	4.9	K	75	NA	39.4	
WS0537B			575			1.4	4.3	K	68	NA	47.8	
WS0718B	0.75	1	208	1750	5.38	11.0	39.0	K	65	2.6	1.4	85
WS0712B			230			9.4	24.8	J	57	4.8	2.3	
WS0738B		3	200			4.1	21.2	H	74	NA	4.3	
WS0732B			230			3.6	17.3	J	76	NA	5.6	
WS0734B			460			1.8	8.9	J	76	NA	22.4	
WS0737B			575			1.5	7.3	J	71	NA	29.2	
WS1018B	1	1	208		5.75	14.0	39.0	K	65	2.6	1.4	
WS1012B			230			12.3	30.5	H	60	4.3	1.8	
WS1038B		3	200			6.0	21.2	H	74	NA	4.3	
WS1032B			230			5.8	17.3	J	76	NA	5.6	
WS1034B			460			2.9	8.9	J	76	NA	22.4	
WS1037B			575			2.4	7.3	J	71	NA	29.2	



Soil Map—Hunterdon County, New Jersey



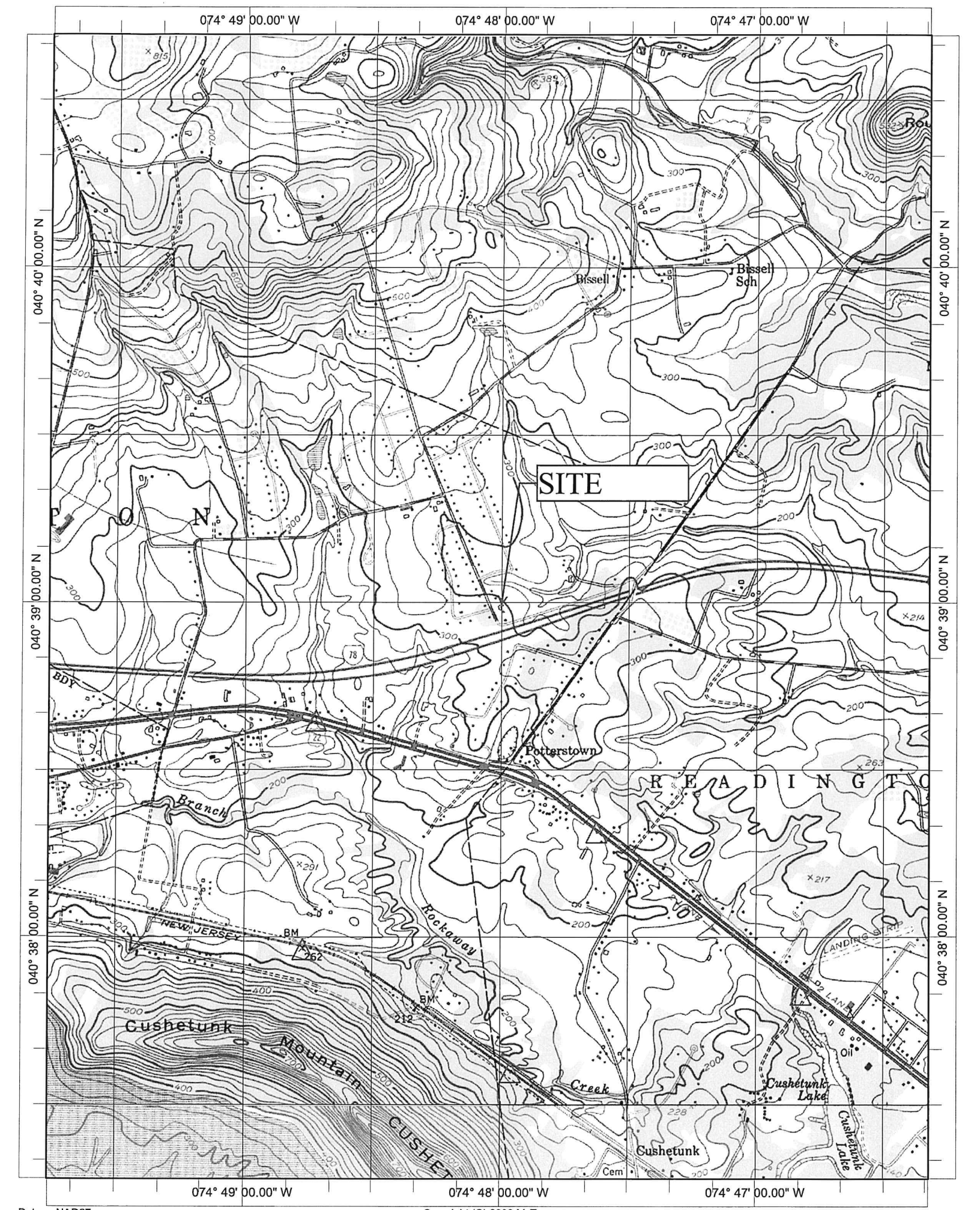
Map Scale: 1:1,640 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 20 40 80 120

Feet: 0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84



Datum: NAD27