

Permit No. 2021163

Date Issued: 10/28/2021

Hopewell Township Health Department

201 Washington Crossing Pennington Road

Titusville, New Jersey 08560

Tel. (609) 737-0120 Fax (609) 737-6836

PERMIT

Applicant: Nancy Stenmhagen

Block: 98.01

Lot: 12.00

To: INDIVIDUAL SUBSURFACE SEWAGE DISPOSAL SYSTEM ALTERATION

Location: 402 Washington Crossing Pennington Road

Fee: \$625.00

24 Hour Inspection Notification Required

Authorized By:



This permit is NOT transferrable

Hopewell Township Health Department



TOWNSHIP of HOPEWELL
MERCER COUNTY
DEPARTMENT OF HEALTH

201 Washington Crossing Pennington Road
Titusville, New Jersey 08560-1410
Phone: 609.737.0120 Fax: 609-737-6836 www.hopewelltp.org



Public Health
Prevent. Promote. Protect.

10/28/2021

Nancy Stemhagen
402 Washington Crossing Pennington Road
Titusville NJ 08560

RE: Block: 98.01 Lot: 12.00 – 402 Washington Crossing Pennington Road

To Whom It May Concern,

Your application for an alteration to an onsite subsurface sewage disposal system has been approved with the following conditions:

SEWAGE DISPOSAL PERMITS ARE VALID FOR TWO YEARS FROM DATE OF ISSUE.

1. A copy of this letter must be forwarded to your construction contractor and sewage disposal installer prior to installation of said system.
2. The house location must be staked by a licensed surveyor or professional engineer to assure proper location and elevation as represented on the attached plan.
3. The sewage disposal system must be located and staked prior to installation by a licensed surveyor or professional engineer to guarantee the proper alignment of the system in the area of the soil tests, and to insure it will conform to all site restrictions as represented on the attached design.
4. The required elevation of the sewage disposal system should be verified by the licensed professional engineer or surveyor, the builder and the plumbing contractor as it relates to the foundation height, the point where the sewer line exits the dwelling and the height of the septic tank. If this is a gravity system and the minimum height of the sewer line is not maintained, an ejector system will be required after the septic tank.
5. An onsite conference is required with your installer and a representative from this office prior to installation of any part of this system. This should avoid any problem during the installation which can be costly to all parties concerned.
6. The design engineer must be notified at the beginning of the installation. Field measures must be made for the required as-built design, and grading plan certifications. The as-built must show soil test location, distances to the tank and D-box as measured from two fixed points, also, any changes caused by site conditions, construction changes and installation problems. If this is a raised system, the as-built grading plan must be certified by the engineer that it is as designed, showing all inverts and contour lines. The as-built will provide a detailed location of the installed system so it can be located once it is covered.

7. No excavating machinery shall be permitted in the excavation during construction. A track-hoe or back-hoe must be used to dig the excavation. Sand must be available at the start of construction to cover the bottom and to protect open fractures etc.
8. All trees within 10 feet of a conventional disposal system or within the area of the extended clay fill and sloped area of a raised disposal/mound system must be removed.
9. **All phases of construction of the disposal system must be inspected by the Health Department. It is your responsibility (or your contractors) to notify the Health Department by no later than 9:00 a.m. on every day that construction is underway so inspections can be scheduled. Systems will be dug up if not inspected by this office!**

10. A certificate of occupancy will not be issued if the system is not completed and the grades certified. Raised systems must be stabilized. All systems must be seeded or sodded and have established vegetative growth.

11. All septic tanks must comply with new tank requirements and also be provided with locking manhole access lids to final grade as required by N.J.A.C. 7:9A.

12. All sand and clay fill must be stock piled on site and certified by a licensed laboratory and by the design engineer once in place using a perc test.

13. Hopewell Township requires a two compartment septic tank 50% larger than required in NJAC 7:9a wherever a sewer ejector is utilized. This is in addition to the additional 250 gallons required per Twp Ord. 16-1.

14. DEED AMENDMENT REQUIRED for alternative systems

15. Copy of service contract to be provided to Health Department before final approval can be given.

Effective January 1, 1990, the New Jersey Department of Environmental Protection enacted a law requiring the certification and licensing of sewage disposal systems.

Very Truly Yours,



Peter Enea III

Registered Environmental Health Specialist



TOWNSHIP of HOPEWELL
MERCER COUNTY
DEPARTMENT OF HEALTH

201 Washington Crossing Pennington Road Titusville, New Jersey 08560-1410
Phone: 609.737.0120 Fax: 609-737-6836

SEPTIC SYSTEM APPROVAL
Advanced Treatment Unit (ATU) Requirements

Dear Resident,

The recently approved septic system design for your property includes an advanced treatment unit (ATU). The following requirements shall be met as a condition of the permit:

1. A maintenance contract with a manufacturers authorized representative shall be maintained at all times. A copy of the contract and subsequent renewals shall be furnished to the health dept. to evidence compliance with this requirement.
2. Inspections shall be completed as required and copies of inspection reports shall be submitted to the health dept. to evidence compliance with this requirement. Minimum inspections are required twice annually for the first two years of ATU operation and once annually thereafter.
3. A deed amendment shall be filed including the language provided on page 2 of 2. A copy of the filed deed with language included shall be furnished to the local health dept. to evidence compliance with this requirement.

If you are selling your home, the deed language may be addressed at the time of sale. You will see this language again in the approval letter for the sale.

You may contact this office at (609) 737-0120 with any questions you may have regarding this matter. Our office hours are Monday through Friday, 8:30 - 4:30

Sincerely,

Peter Enea III
Senior REHS

Advanced Wastewater Treatment System Deed Language

The following language must be added to the deed for the property and the amended deed filed with the Mercer County Clerk.

A copy of the sealed / recorded deed amendment must be provided to the health department.

“This property is provided with an Advanced Wastewater Pretreatment Device. It is the responsibility of the property owner to maintain it and provide routine service. An annual service contract with the system manufacturer’s representative must be kept in effect and submitted to the health department per township ordinance.

This statement may not be removed from the deed without the written authorization of the Hopewell Township Health Department.”

Hopewell Township Ordinance 16-12.2 Alternative Onsite Sewage System Standards Sub section 16-12.2 C. Deed Notification, Advisory of Alternative system. When any residential or commercial property is provided with a holding tank, [or] aerobic wastewater treatment system or any other alternative waste water system approved by NJDEP as part of the on-site wastewater disposal plan, the deed for the property shall be amended and filed with the county clerk. It must indicate the utilization of either component and include whatever requirements may have been imposed by the board of health or NJDEP on the owner. This shall be done to alert all future owners. The amendment must clearly state that this provision cannot be removed without the written authorization of the health department



TOWNSHIP of HOPEWELL

MERCER COUNTY

DEPARTMENT OF HEALTH

201 Washington Crossing Pennington Road Titusville, New Jersey 08560-1410
Phone: 609.737.0120 Fax: 609-737-6836

The Hopewell Township Health Department has reviewed your application for a Sewage Disposal System Alteration for your property located at Block **98.01**, Lot **12** also known as **402 Washington Crossing Pennington Rd.** The New Jersey Administrative Code precludes an administrative authority, like the Hopewell Township Health Department, from issuing an approval "where such installation, construction, alteration or repair will violate or otherwise not be in compliance with the requirements of this chapter." *N.J.A.C. 7:9A-1.6.* Your proposed alteration does not meet the strict requirements of the Code.

However, there are two exceptions. First, *N.J.A.C. 7:9A-3.3(d)* permits approval of an alteration to an existing sewage disposal system by an administrative authority if both of the following conditions are met:

- (1) If the scope of the alteration is such that it constitutes the practice of professional engineering according to *N.J.S.A. 45:8* and the rules adopted pursuant to the same, then such alterations shall be in conformance with plans and specifications signed and sealed by a licensed professional engineer; and
- (2) Alterations are made in such a way that those components of the system altered are in conformance with the requirements of this chapter or are closer to being in conformance with this chapter than the original components prior to the alteration.

[*N.J.A.C. 7:9A-3.3(d)*]

Second, "when alterations are made to correct a malfunctioning system, the alterations shall be made in conformance with (d) above and in a manner that will eliminate the cause of the malfunction and which, with proper operation and maintenance, will not result in future malfunctions." *N.J.A.C. 7:9A-3.3(e)*.

Based upon the information received from your engineer, the proposed design is for a three (3) bedroom dwelling at a flow rate of Five Hundred(500) gallons per day and does not allow for future increase in sewage volume or garbage disposal. The proposed design is not based upon successful permeability tests as required by *N.J.A.C. 7:9A*; however, the proposed design is intended to correct an existing malfunction and will bring the system into closer conformance with the requirements of *N.J.A.C. 7:9A* than the existing system.

Accordingly, approval for the alteration of the existing sewage disposal system at Block 98.01, Lot 12 is being granted to you pursuant to *N.J.A.C. 7:9A-3.3(d)* and (e).

Please note, that this approval is being granted to you based on the information submitted by, and the professional opinion of your engineer. The Hopewell Township Department of Health makes no guarantee as to the effectiveness of the proposed system as it has not been designed in accordance with the specifications of

N.J.A.C. 7:9A. Furthermore, notice of this exception shall be given to any prospective purchasers of this property by special mention in any contract of sale and by attaching this notice to any contract of sale.

Should you have any questions, please do not hesitate to contact this office.

Sincerely,



Peter Enea III
Senior REHS

I have read the above, understand and agree to all terms.

Waney W. Stemhagen

Print Name of Owner



Signature of Owner

10-27-21
Date

2021-163

PD 14801

Page 1 of 7 Pages

HOPEWELL TOWNSHIP HEALTH DEPARTMENT

Block 98.01 Lot 12APPLICATION FOR PERMIT TO ALTER
AN INDIVIDUAL SUBSURFACE SEWAGE DISPOSAL SYSTEM

Form 1 - General Information:

- I. Name of Applicant (print): Nancy Stenbagen
- II. Applicant's Present Address: 402 Washington Crossing-Pennington Road, Titusville, NJ 08560
- III. Applicant's Phone Number: Day: 609-737-8646 Night: _____

BUILDING LOCATION MUST BE STAKED. DATE STAKED existing

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

- ☐ a. New Construction
- ☐ b. Alteration / No Expansion or Change of Use
- ☐ c. Alteration / Expansion or Change in Use
- ☒ d. Alteration / Malfunctioning System
- ☐ e. Repairs (in-kind replacement) / Malfunctioning System
- ☐ f. Repairs (in-kind replacement) / Not Malfunctioning
- ☒ g. Deviation from Standards
- ☐ h. New System Installed (existing structure)

V. Location of Project: Street Address 402 Washington Crossing-Pennington Road Zip Code 08560VI. Type of Facility: ☒ Residential ☐ Commercial / Institutional Specify Type of Establishment: _____VII. Type of Wastes to be Discharged: ☒ Sanitary Sewage ☐ Industrial Wastes ☐ Other - Specify Type: _____

VIII. 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 on to the surface of the ground
- ☐ Seepage of sanitary sewage or effluent into portions of building below ground
- ☐ Back-up of sanitary sewage, 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
- ☒ Direct discharges to ground water (no zone of treatment)

Describe the cause of the malfunction: saturated disposal field

IX. 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
- ☒ A system must be upgraded as part of a real estate property transfer
- ☐ A cesspool has been identified during a real estate property transfer and a conforming system must be installed
- ☐ A malfunctioning cesspool has been identified and a conforming system must be installed

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

☐ US Army Corps of Engineers ☐ NJDEP - Bureau of Flood Plain Management ☐ Other - Specify: _____

XI. 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 Nancy Stenbagen Date 10/12/21

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 wetlands 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 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: _____

OCT 21 2021

Health Department

HOPEWELL TOWNSHIP HEALTH DEPARTMENT

Block 98.01 Lot 12

APPLICATION FOR PERMIT TO ALTER
AN INDIVIDUAL SUBSURFACE SEWAGE DISPOSAL SYSTEM
Form 2a General Site Evaluation Data

I. Name of Site Evaluator (print): Mark B. Anderson
II. Business Address of Site Evaluator: _____

Business Phone Number of Site Evaluator: Bayer-Risse Engineering, Inc.
78 Route 173 West
Suite 6
Hampton, NJ 08827
(908) 735-2255

III. Business Phone Number of Site Evaluator: _____

IV. Special Site Limitations Identified (Check Appropriate Categories):

- ☐ Flood Plains ☐ Bedrock Outcrops ☐ Wetlands
☐ Excessively Stony ☐ Disturbed Ground ☐ Sink Holes
☐ Sand Dunes ☐ Steep Slopes
☒ Other - Specify limited area

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

VI. Considerations Relating to Disturbed Ground: ☒ N/A

- a. Type of Disturbance (Check Appropriate Categories):
☐ Filled Area ☐ Excavated Area ☐ Re-graded Area ☐ Subsurface Drains
☐ Other - Specify: _____
- b. Pre-existing Natural Ground Surface
Elevation Relative to Existing 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 = _____

VII. Hydraulic Head Test: ☒ N/A

- a. Hydraulically Restrictive Horizon: Depth Top to Bottom _____
- b. Piezometer A: Depth to Bottom: _____
Depth of Water Level (24 hrs.): _____
- c. Piezometer B: Depth to Bottom: _____
Depth of Water Level (24 hrs.): _____
- d. Witnessed by: _____

Signature _____ Date: _____

VIII. Attachments (Check items included):

- ☒ Site Plan
☒ Key Map Showing Location of Site on USGS Quadrangle or Other Accurate Map
☒ Key Map Showing Location of Site on USDA Soil Survey Map
☐ Other - Specify: _____

IX. 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. 7:14-8.

Signature of Soil Evaluator Mark B. Anderson Date 10/07/2021
Signature of Professional Engineer _____ Date 10/07/2021

N.J. License No. 33806 Seal

HOPEWELL TOWNSHIP HEALTH DEPARTMENT

Block 98.01 Lot 12

APPLICATION FOR PERMIT TO ALTER
AN INDIVIDUAL SUBSURFACE SEWAGE DISPOSAL SYSTEM
Form 2b Soil Log and Interpretation

1. Log Number SL 830-1 Method: ☒ Profile Pit ☐ Boring
2. Soil Log: Date Recorded: 05/05/2021

Depth (Inches)	Munsell Color Name and Symbol; Estimated Textural Class; Estimated Volume % Coarse Fragment, If Present; Structure; Moist or Dry Consistence; Mottling Abundance, Size and Contrast, If Present
Top - Bottom	
0-4"	Topsoil with fine/medium roots.
4-12"	7.5YR 4/4 Brown Silt Loam; subangular blocky, friable; < 10% gravel; no mottling; no seepage.
12-61"	Nonsoil; fractured shale with 25% fillings; no mottling; no seepage.
>61"	Machine Refusal. Basin Flood BF 830-1 performed at 60" (negative - 4" remaining after 24 hours)

2a. If mottling give reason for mottling: _____

3. Ground Water Observations:

- ☐ Seepage - Indicate Depth: _____
☐ Pie/Boring Flooded Depth after _____ hours = _____

4. Soil Limiting Zones:

- ☒ Fractured Rock Substratum - Depth to Top: 12"
☐ Massive Rock Substratum - Depth to Top: _____
☐ 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: IIsc

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 Soil Evaluator *Mark Byrd* Date 10/07/2021
Signature of Professional Engineer *[Signature]* Date 10/07/2021
N.J. License No. 33806 Seal

HOPEWELL TOWNSHIP HEALTH DEPARTMENT
APPLICATION FOR PERMIT TO ALTER
AN INDIVIDUAL SUBSURFACE SEWAGE DISPOSAL SYSTEM
Form 3a. Soil Permeability Data

Block 98.01 Lot 12

Assign a number for each test and a letter for each test replicate. Show test data and calculations on Form 3b, 3c, 3d, 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 (Number)	Replicate (Letter)	Depth (Inches)	Result*
Basin Flood	BF 830-1		60"	Negative

*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 of second filling, negative otherwise.

2. Design Permeability/Percolation Rate: Specify Test Number: BF 831-1
☐ Average of Test Replicates ☒ Single Replicate
☐ Slowest Replicate

3. Type of Limiting Zone Identified Test Number

4. Attachments (Check items included):

- ☐ Form 3b - Tube Permeameter Test Data - Number of Sheets: _____
☐ Form 3c - Soil Permeability Class Rating Test Data - Number of Sheets: _____
☐ Form 3d - Percolation Test Data - Number of Sheets: _____
☐ Form 3e - Piezometer Test Data - Number of Sheets: _____
☐ Form 3f - Pit Bailing Test Data - Number of Sheets: _____
☒ 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 Site Evaluator

Mark B. [Signature]

Date 10/07/2021

Signature of Professional Engineer

[Signature]

Seal

Date 10/07/2021

N.J. License No. 33806

HOPEWELL TOWNSHIP HEALTH DEPARTMENT

APPLICATION FOR PERMIT TO ALTER
AN INDIVIDUAL SUBSURFACE SEWAGE DISPOSAL SYSTEM

Form 3g: Basin Flooding Test Data

Block 98.01 Lot 12I. Test Number BF 830-1 Reference Soil Log: SL 830-2 Date Tested 08/30/2021II. Depth of Pit, ft.: 5III. Area of Pit, ft²: 50

IV. Description of Rock Substratum Within Test Zone:

Type of Rock: Fractured ShaleName of Formation: BrunswickAverage Fracture Spacing: 1-2"Type of Fractures: (Check Appropriate Category): ☐ N/A☐ Open (Wide), Clean - Width of Openings, mm = _____☒ Open (Wide), Infilled with Fines - Width of Openings, mm = 2-3☐ Tight (Closed)Orientation of Fractures: ☐ N/A☒ Horizontal (Parallel to Pit Bottom) or Nearly So.☐ Inclined.☐ Vertical (Parallel to Sides of Pit) or Nearly So.Hardness of Rock: ☐ N/A☐ Riprable with Hand Tools.☒ Not Riprable with Hand Tools, Riprable by Machine.☐ Not Riprable by Machine, Explosives Required.V. Time of First Basin Flooding: 10:57 AM 08/30/2021Volume of Water Added, Gal.: 174 gal (12")

VI. Result of First Basin Flooding:

☐ Basin Drained Within 24 hours - Indicate Time: _____☒ Basin Not Drained Within 24 hours. 10:57 AM 08/31/2021 (4" Remaining/ 58 gallons +/-)

VII. Time of Second Basin Flooding: _____

Volume of Water Added, Gal.: _____

VIII. Result of Second Basin Flooding:

☐ Basin Drained Within 24 hours - Indicate Time: _____☐ Basin Not Drained Within 24 hours.

IX. I hereby certify that the information furnished on Form 3g 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 10/07/2021

Signature of Professional Engineer

Date 10/07/2021N.J. License No. 33806

Seal

HOPEWELL TOWNSHIP HEALTH DEPARTMENT

Block 98.01 Lot 12

APPLICATION FOR PERMIT TO ALTER
AN INDIVIDUAL SUBSURFACE SEWAGE DISPOSAL SYSTEM

Form 4. General Design Data

I. Volume of Sanitary Sewage, gal. 500
☒ Residential: No. of Dwelling Units: 1 Total No. of Bedrooms: 3
☐ Expansion Attic (checked if yes)

☐ 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: _____
Describe nature of alteration or repairs: install pressure distribution disposal system

III. System Components:
a. Grease Trap Capacity, gal.: _____ 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, gal.: 1,300 (Norweco Singulair Green) ☒ Single(First) Compartment: 450
☒ Second Compartment: 500 ☒ Third Compartment: 350
d. Effluent Distribution:
Method: ☐ Gravity Flow ☒ Gravity Dosing
Dosing Device: ☒ Pump ☐ Siphon
e. Dosing Tank Capacities, gal. Total Capacity, gal.: 1000 Dose Volume, gal.: 125
Reserve Capacity, gal.: 649.4
f. Laterals
Number: 4 Total Length: 100'
Diameter: 1.0" Spacing: 3.75'
g. Connecting Pipe Diameter: 4" Length: 2'
h. Manifold Diameter: 2" Length: 15'
i. Disposal Field - Type of Installation: Mounded Soil Replacement
Design Permeability (Percolation Rate): 6-20 in/hr
Trenches - Width: _____ Total Length: _____
j. Seepage Pits: Design Percolation Rate: _____ Bed - Area: 600 SF
Total Percolating Area Provided: _____ Number of Pits: _____

IV. Attachments (Check items included):
☒ General Plan of System Showing Location of All System Components, No Larger Than 8 ½ Inches x 14 ½ 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: _____

V. I hereby certify that the information furnished on Form 4 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. 7:148.

Signature of Professional Engineer _____ Date 10/07/2021
N.J. License No. 33806 Seal _____

HOPEWELL TOWNSHIP HEALTH DEPARTMENT
Block 98.01 Lot 12
APPLICATION FOR PERMIT TO ALTER
AN INDIVIDUAL SUBSURFACE SEWAGE DISPOSAL SYSTEM

Form 5. Design of Pressure or Gravity Dose System

I. Configuration of Distribution Network:

Type of Manifold: ☒ End ☐ Central
Distribution Laterals: Number 4 Length, ft 25 Total Lateral Volume (V_l), gal. 4.1
Hole Diameter, ins. 1/4 Hole Spacing, ins. 36
Diameter of Laterals, ins. 1.0

II. Lateral Discharge Rate

Design Pressure Head at Distal End of Laterals, H_p , ft. 2.5
Hole discharge rate, Q , gpm: 1.18
Number of Holes per Lateral, n : 8
Lateral Discharge Rate, ($Q \times n$), gpm: 9.44

III. Manifold Length, ft. 15 Manifold Diameter, ins. 2

Total Manifold Volume (V_m), gal. 2.4

IV. System Discharge Rate, gpm 37.76

V. Dose Volume:

Design Volume of Sewage, gal/day 500
Design Permeability, in/hr 6-20 or Percolation Rate, min/in _____
Total Volume of Delivery Pipe (V_p), gal.: 2.9
Internal Volume of Distribution Network (V_i), ($V_p + V_m + V_l$), gal.: 9.4
Dose Volume, gal.: 125
Pump Tank Size (ft^3) 36.13

VI. a. Pump Selection:

Length of Delivery Pipe, ft. 18 Diameter of Delivery Pipe, ins. 2 Volume, gal. 2.9
Friction Loss in Delivery Pipe, H_f , ft. 0.50
Elevation of Dosing Tank Low Water Level 186.25
Elevation of Lateral Invert: 191.50
Elevation Head, H_e , ft 5.25
Total Operating Head, H_t ($H_p + H_f + H_e$), ft. 8.25
Pump Model Goulds 3885 WE03L Rated Horsepower 1/3
Pump Discharge Rate at Total Operating Head, gpm 75 +/-
Pump Displacement Volume, gal.: 7.5

b. Siphon Elevation:

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

VII. I hereby certify that the information furnished on Form 5 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 Professional Engineer _____ Date 10/07/2021
N.J. License No. 33806 Seal 8



4 AAA Drive, Suite 103
Hamilton, NJ 08691
609-689-1100

MEMORANDUM

TO: Peter Enea III SREHS, M.A.M.L
Hopewell Twp. Department of Health

FROM: James Bash, PE
For Herbert Seeburger, P.E., C.M.E., C.P.W.M.,
Interim Township Engineer

DATE: October 22, 2021

RE: Septic Grading Review #1
Block 98.01, Lot 12
402 Washington Crossing-Pennington Road
VCEA File No. 7004

Plan Reference for Grading Review:

- Septic System Alteration Design, 402 Washington Crossing-Pennington Road, Block 98.01 Lot 12, Hopewell Township, Mercer County, New Jersey, prepared by Bayer-Risse Engineering, Inc., dated 10/7/21, containing 9 sheets.

Grading Comments:

The noted plans are acceptable for grading.

OFFICE LOCATIONS

www.vancleefengineering.com

Lebanon, NJ 908-735-9500	Hamilton, NJ 609-689-1100	Toms River, NJ 732-573-0490	Freehold, NJ 732-303-8700	Bethlehem, PA 610-332-1772
Hillsborough, NJ 908-359-8291	Mt. Arlington, NJ 862-284-1100	Phillipsburg, NJ 908-454-3080	Doylestown, PA 214-345-1876	Leesport, PA 610-670-6630



TOWNSHIP of HOPEWELL
MERCER COUNTY
DEPARTMENT OF HEALTH

201 Washington Crossing Pennington Road Titusville, New Jersey 08560-1410

Phone: 609.737.0120 Fax: 609-737-6836

2021-163 **Septic System Construction Notes**
402- Wash X Penn

Block: 98.01 Lot: 12

Installer: Long Hill

Select Fill Source: North American Aggregates

Notes:

1-4-2022 Bottom of hole OK PE

1-6-2022 TOP of Sand OK PE

1-10-2022 Stone, pipe, Inspection ports

Tunks Set on Stone, Pump & Alarm
Old tank used OK PE



Hopewell Township Health Department
201 Washington Crossing-Pennington Rd.
Titusville, NJ 08560
Phone: (609) 737-0120 Fax: (609) 737-6836

http://www.hopewelltp.org/health_department.html

ONSITE (SEPTIC/PUMP/AEROBIC/OTHER) TANK WATER TIGHTNESS TEST CERTIFICATION

☐ Engineer ☒ Manufacturer

Permit Number: _____ Block: 98.01 Lot: 12

Street Address: 402 Washington's Crossing-Pennington Rd., Titusville, NJ 08540

Home Owner: Nancy Stenmagen

I, Frank Palka, certify that the Onsite Tank installed on the above referenced block and lot has passed the Watertightness Test as described by the ASTM, C-1227, or the National Precast Concrete Association (NPCA) testing criteria as set by N.J.A.C. 7:9A "Standards for Individual Subsurface Disposal Systems". Testing was performed including risers and inspection ports to grade.

1/6/2022

Signature Frank Palka

Date of Test _____

Composition of Tank: ☒ Concrete ☐ Fiberglass ☐ Polyethylene

Type of Tank: ☐ Septic ☒ Pump ☐ ATU ☐ Other _____

Size of Tank: 1000 _____ Gallons

Type of Test: ☒ Vacuum Testing ☐ Hydrostatic

Frank Palka

Name of Tester (Please Print) _____

Signature of Tester Frank Palka



Flemington Precast & Supply _____

Company Name _____

18 Allen Street, Flemington, NJ 08822 _____

Address _____

908-782-3246 _____

Phone Number with Area Code _____

Hopewell Township Health Department: Approved By _____

Date _____



TOWNSHIP of HOPEWELL

MERCER COUNTY

DEPARTMENT OF HEALTH

201 Washington Crossing Pennington Road
Titusville, New Jersey 08560-1410
Phone: 609.737.0120 Fax: 609-737-6836 www.hopewelltp.org



Public Health
Prevent. Promote. Protect.

January 21, 2022

RE:

402 Washington Crossing Pennington Road
Block 98.01 Lot 12
Septic Alteration install.

To Whom It May Concern,

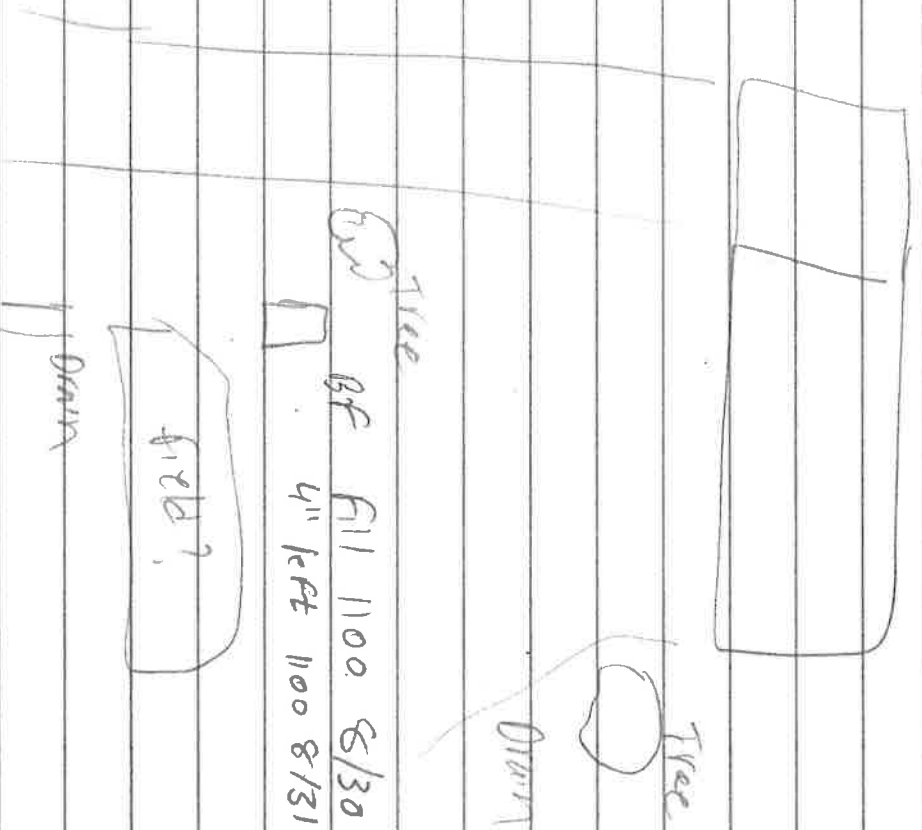
All field inspections for the above mentioned property have been completed as of January 21, 2022. At this time the Hopewell Township Health Department is only waiting on the final paperwork from Bayer Risse Engineering to close out the permit.

Peter Enea III

Senior REHS

402 Wash X Penn
98.01/12
Bayer Risse

Fail
8/30-8/31/24



2021-163

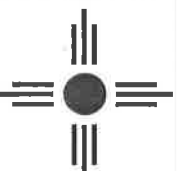
Septic System Alteration Design

for
Nancy Stemhagen
Township of Hopewell
OCT 21 2021
Block 98.01, Lot 12
Hopewell Township,
Mercer County, New Jersey
Health Department
October 7, 2021

SHEET INDEX	
Sheet #	Sheet Name
STE-1	Cover Sheet
STE-2	Key Maps
STE-3	Existing & Proposed Conditions
STE-4	Disposal Field Details
STE-5	Aerobic Treatment Tank Details
STE-6	Pump Tank Details
STE-7	Piping Details
STE-8	Design Notes
STE-9	General Notes

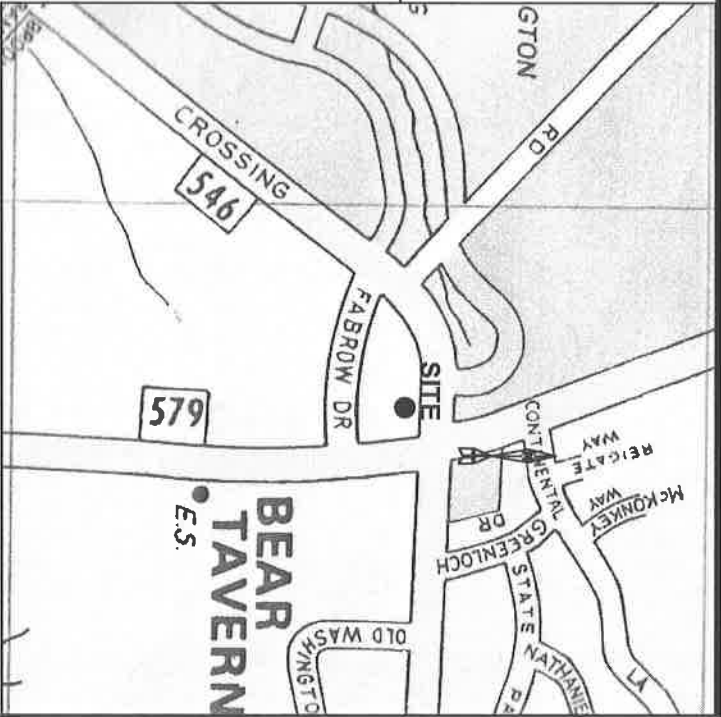
REVISION DESCRIPTION	DATE	APPROVED	DWG NO. STE-1


THEODORE H. BAYER, P.E.
New Jersey Professional Engineer License No. GE33806

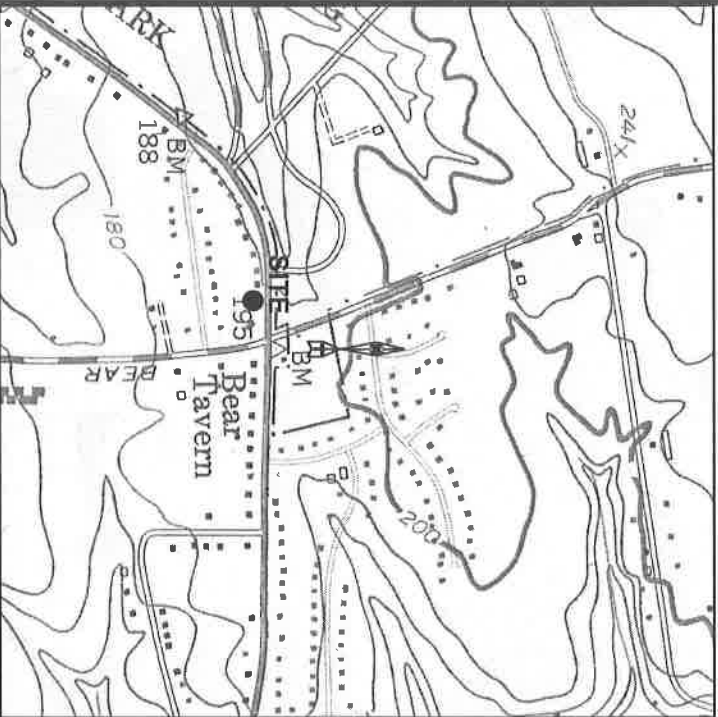


BAYER-RISSE ENGINEERING, INC.
78 ROUTE 173 WEST, SUITE 6
HAMPTON, NEW JERSEY 08827
PHONE 908-735-2255
Certificate of Authorization No. 24G427943900

SITE MAP
1:26,000



USGS HOPEWELL, NJ
QUADRANGLE
1:24,000



USDA MERCER COUNTY
SOIL SURVEY
1:15,840



Septic System Alteration Design
Key Maps

Nancy Stenhausen		Block 98.01, Lot 12		Hopewell Twp., Mercer Co., NJ		402 Washington Crossing-Pennington Rd	
DRAWN BY:	DESIGNED BY:	CHECKED BY:	DWG NO.	BRE JOB#:	SCALE:	DATE:	SHEET:
DA	DA	THB	STE-2	21-2377	As Noted	October 7, 2021	2 of 9

THEODORE H. BAYER, P.E.
New Jersey Professional Engineer License No. GE33806



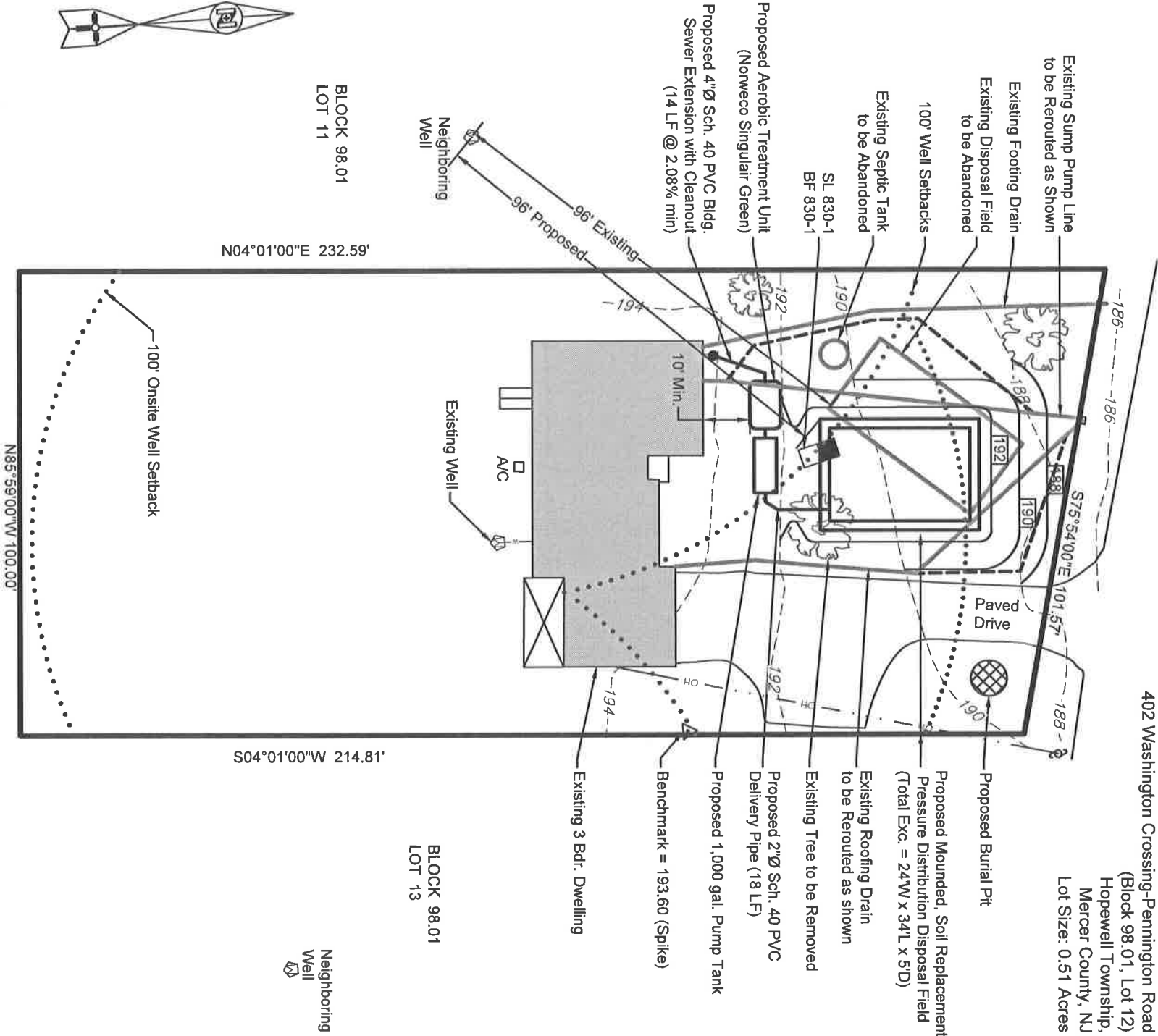
BAYER-RISSE ENGINEERING, INC.
78 ROUTE 173 WEST, SUITE 6
HAMPTON, NEW JERSEY 08827
PHONE 908-735-2255
Certificate of Authorization No. 24GA27943900

NOTES:

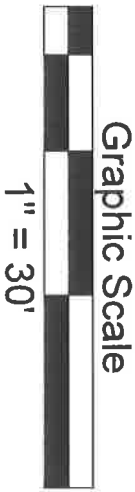
- 1. Based on field observations and in accordance with the NJDEP N.J.-GeoWeb, there are no wetlands or wetlands transition areas within the location of the proposed disposal system.
- 2. There are no disposal systems within 50' of the proposed disposal system.
- 3. Final grade to provide positive drainage of stormwater runoff from disposal field.
- 4. Contractor shall verify integrity of the existing building sewer and replace as necessary.

WAIVERS REQUIRED FOR:

- 1. Existing setback between onsite well and existing onsite disposal field = 76'± (Minimum setback = 100'); Proposed setback between onsite well and proposed advanced treatment disposal field = 69'± (Minimum setback = 100').
- 2. Existing setback between offsite well (Block 98.01, Lot 11) and existing onsite disposal field = 96'; Proposed setback between offsite well (Block 98.01, Lot 11) and proposed advanced treatment disposal field = 96'.
- 3. Basin flood not drained within 24 hours.



DESCRIPTION	DATE	APPROVED

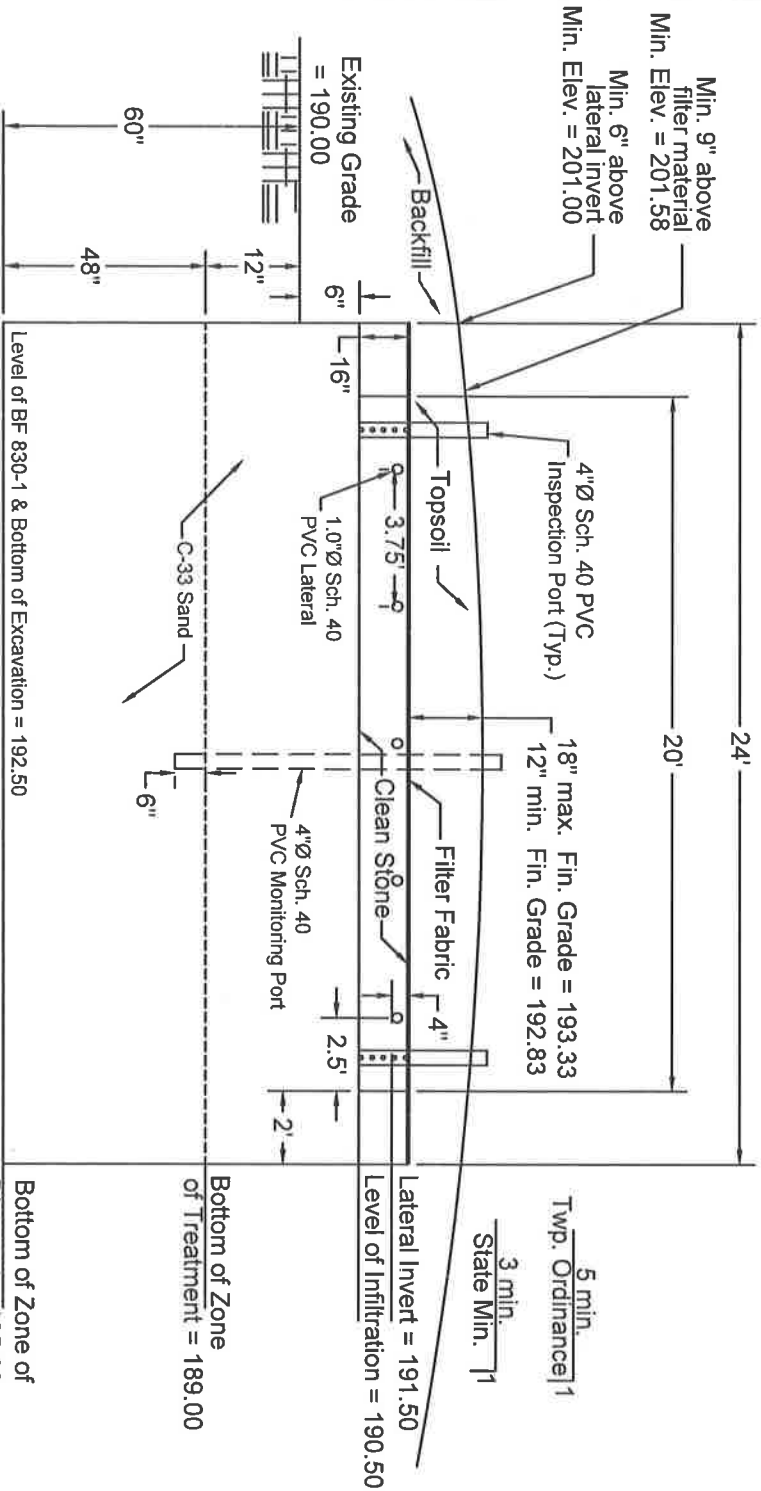


Septic System Alteration Designs
Existing & Proposed Conditions

Project	Block 98.01, Lot 12	Location	Hopewell Twp., Mercer Co., NJ	Address	402 Wasington Crossing-Pennington Rd
Checked By:	THB	DWG NO.	STE-3	BRE JOB#:	21-2377
Scale	As Noted				
Date	October 7, 2021				
Sheet	3 of 9				

[Signature]
C. H. BAYER, P.E.
Professional Engineer License No. GE33806

BAYER-RISSE ENGINEERING, INC.
78 ROUTE 173 WEST, SUITE 6
HAMPTON, NEW JERSEY 08827
PHONE 908-735-2255
Certificate of Authorization No. 24GA27943900

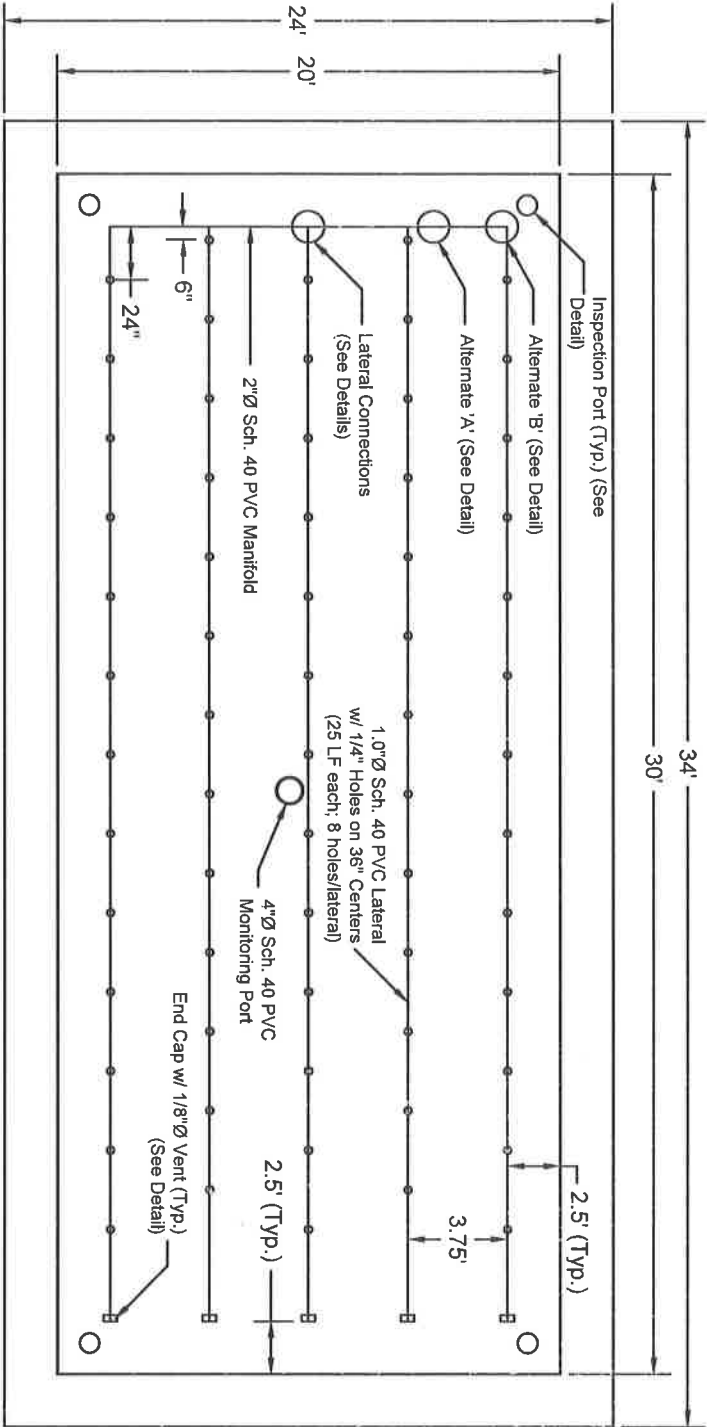


*Filter Fabric shall be a non-woven geotextile product (See General Note #18).

**Clean filter stone shall be NJDOT #3, 4, or 24 (See General Note #22)

DISPOSAL FIELD SECTION VIEW

Not to Scale



Note: Laterals shall be installed approximately level. The maximum slope shall be 2 in. per 100 ft.

DISPOSAL FIELD PLAN VIEW

Not To Scale

REVISION DESCRIPTION	DATE	APPROVED

Septic System Alteration Design
Disposal Field Details

DA	DA	THB	STE-4	BRE JOB#:	21-2377	SCALE:	As Noted	DATE:	October 7, 2021	SHEET:	4 of 9
Nancy Stenhausen Block 98.01, Lot 12 Hopewell Twp., Mercer Co., NJ 402 Washington Crossing-Pennington Rd											

THEODOR H. BAYER, P.E.
New Jersey Professional Engineer License No. GE33806



BAYER-RISSE ENGINEERING, INC.
78 ROUTE 173 WEST, SUITE 6
HAMPTON, NEW JERSEY 08827
PHONE 908-735-2255
Certificate of Authorization No. 246A27943900

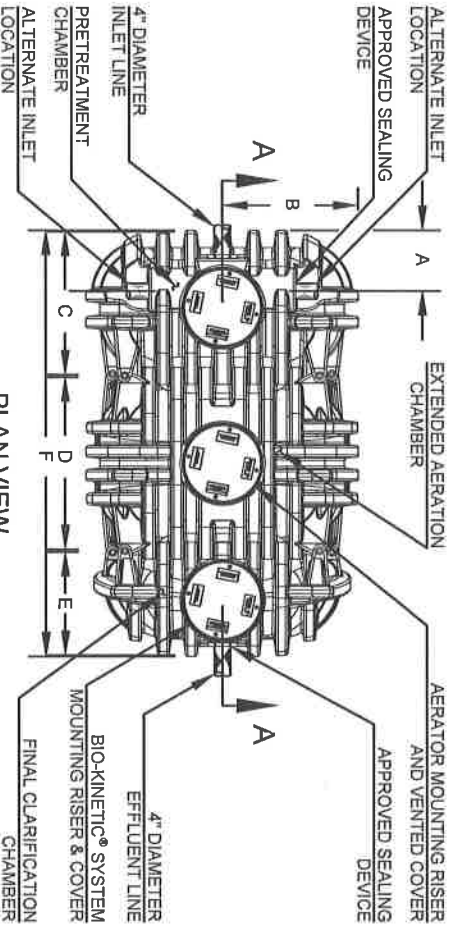


SERVICE PRO® CONTROL CENTER
(autodialer/telemetry control as specified by manufacturer)

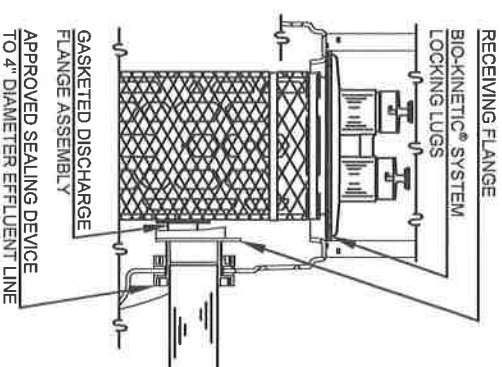
- TANK NOT RATED FOR VEHICULAR TRAFFIC.
- 12" MIN. SAND SHALL BE PLACED ALONG BOTTOM & SIDES OF TANK

GENERAL NOTES:

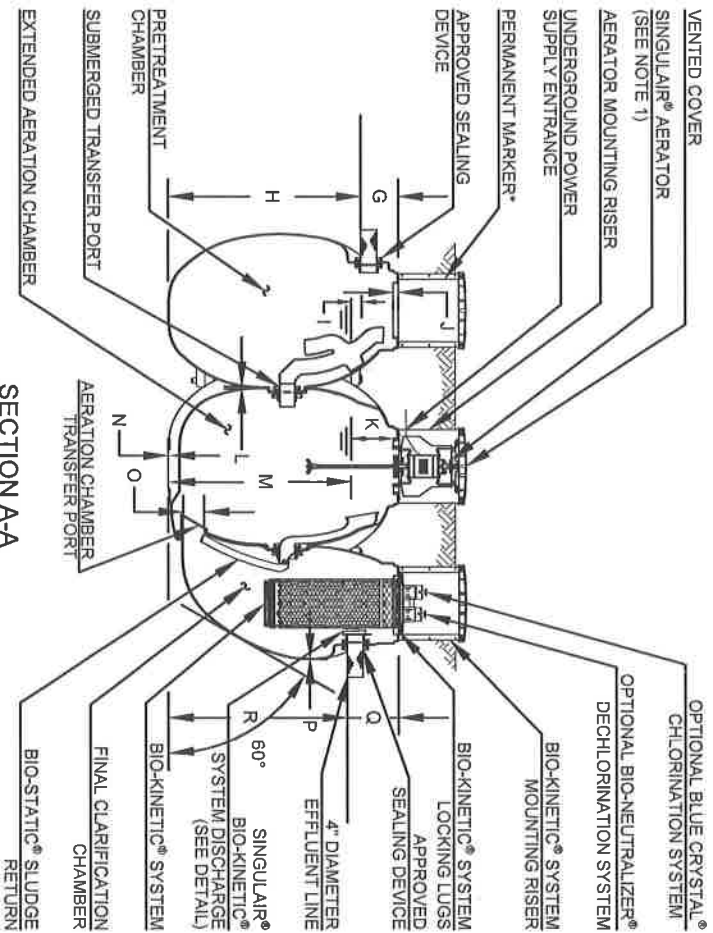
- SINGLAIR 9 AERATOR, AS TESTED AND ACCEPTED BY NSF.
- FALL THROUGH SINGLAIR PLANT FROM INLET INVERT TO OUTLET INVERT IS FOUR INCHES. INLET INVERT IS TEN AND ONE HALF INCHES BELOW TANK TOP.
- ON DEEPER INSTALLATIONS, RISERS MUST BE USED TO EXTEND AERATOR MOUNTING RISER AND BIO-KINETIC SYSTEM MOUNTING RISER TO GRADE. INSPECTION COVER ON PRETREATMENT CHAMBER MUST BE DEVELOPED TO WITHIN TWELVE INCHES OF GRADE.
- REMOVABLE COVERS ON RISERS ARE EACH SECURED TO PREVENT UNAUTHORIZED ACCESS.



PLAN VIEW



BIO-KINETIC® SYSTEM DISCHARGE DETAIL



NORWECO SINGLAIR GREEN AEROBIC TREATMENT UNIT
WITH SERVICE PRO® CONTROL CENTER

Not to Scale

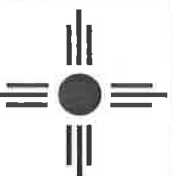
REVISION DESCRIPTION	DATE	APPROVED			

Septic System Alteration Design
Aerobic Treatment Tank Details

Nancy Sternhagen Block 98.01, Lot 12 Hopewell Twp., Mercer Co., NJ 402 Washington Crossing-Pennington Rd

DRAWN BY: DA	DESIGNED BY: DA	CHECKED BY: THB	DWG NO: STE-5	BRE JOB#: 21-2377	SCALE: As Noted	DATE: October 7, 2021	SHEET: 5 of 9
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THEODOR H BAYER, P.E.
New Jersey Professional Engineer License No. GE33806



BAYER-RISSE ENGINEERING, INC.
78 ROUTE 173 WEST, SUITE 6
HAMPTON, NEW JERSEY 08827
PHONE 908-735-2255
Certificate of Authorization No. 24G42794390

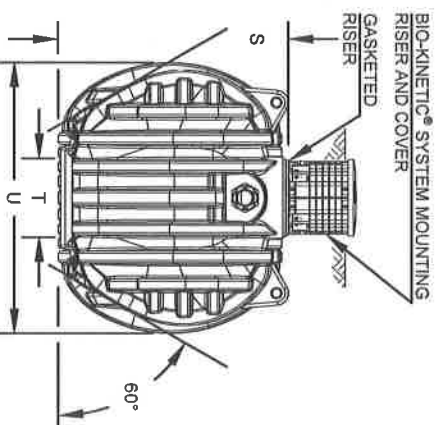
*A PERMANENT, NON-CORROSIVE MARKER A MINIMUM OF 6 (SIX) SQUARE INCHES IN SIZE SHALL BE ATTACHED TO THE MANHOLE COVER OR RISER IMMEDIATELY BELOW THE COVER AND CONTAIN THE FOLLOWING INFORMATION:

1. ADMINISTRATIVE AUTHORITY NAME & PERMIT #;
2. DATE OF INSTALLATION;
3. TYPE OF SYSTEM;
4. DESIGNED FLOW IN GALLONS PER DAY

NOTE: TOTAL SYSTEM CAPACITY: 1,300 GALLONS
RATED CAPACITY: 800 GALLONS PER DAY

INLET = 190.00

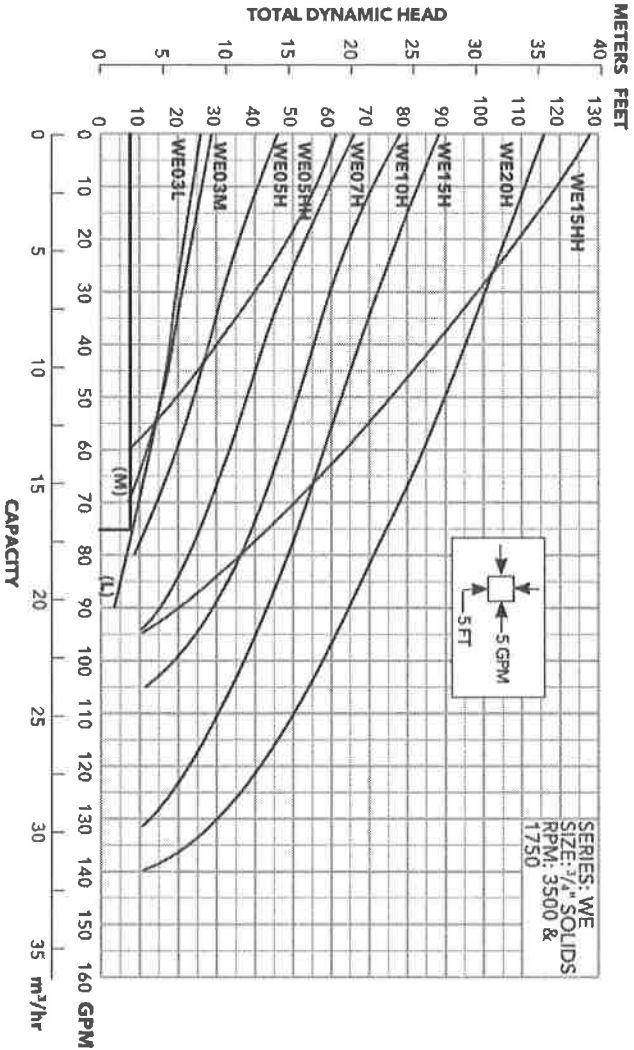
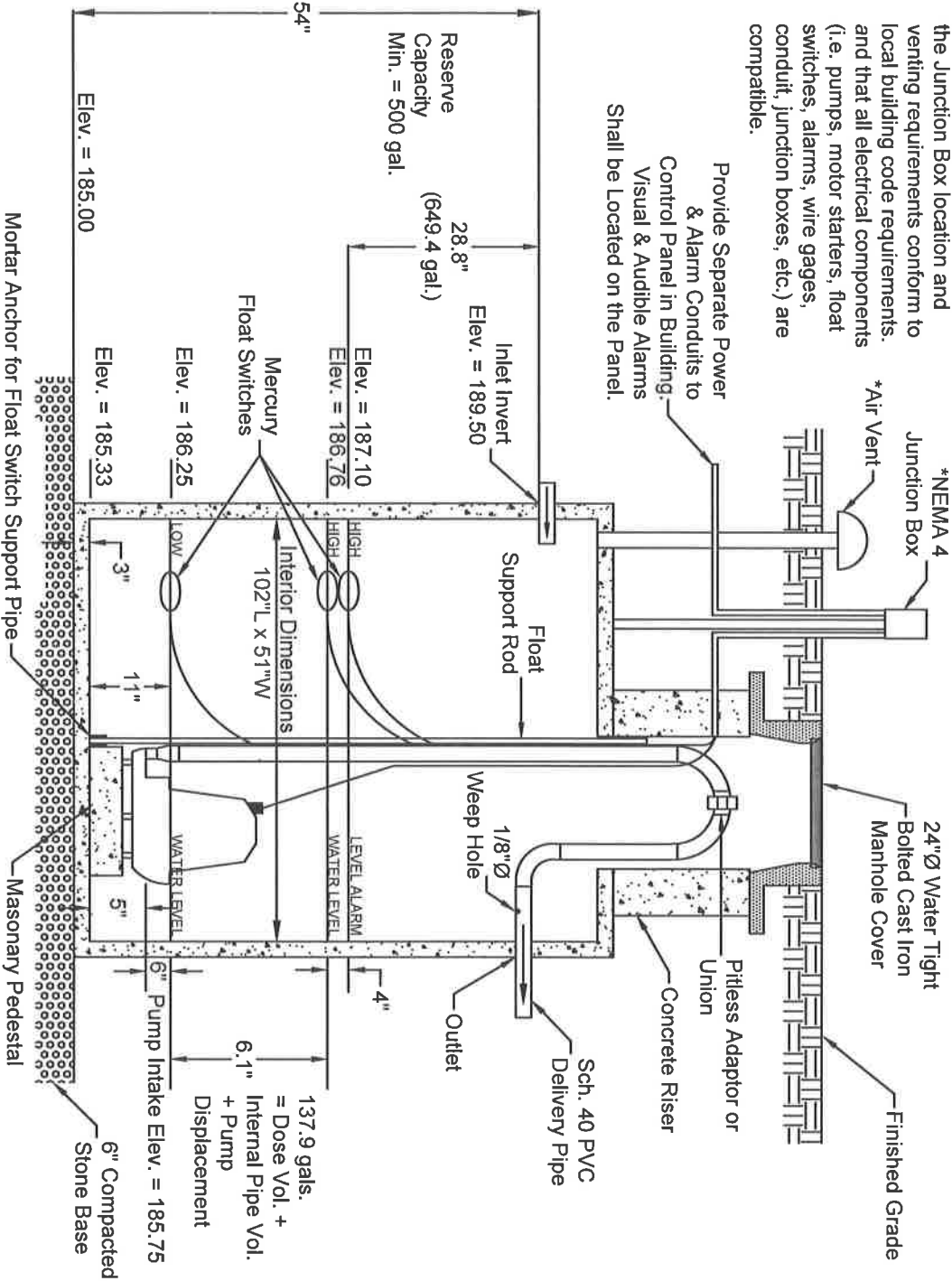
OUTLET = 189.67



OUTLET END VIEW

PER NJAC 7:9A-8.2(m)1: ALL TANKS, INCLUDING RISERS & INSPECTION PORTS TO THE HIGHEST JOINT, SHALL BE TESTED FOR WATER TIGHTNESS AFTER INSTALLATION & BEFORE BACKFILLING USING HYDROSTATIC OR VACUUM TEST. THE TEST SHALL BE PERFORMED AND CERTIFIED BY THE TANK MANUFACTURER OR ENGINEER.

*Note: Contractor to ensure that the Junction Box location and venting requirements conform to local building code requirements, and that all electrical components (i.e. pumps, motor starters, float switches, alarms, wire gages, conduit, junction boxes, etc.) are compatible.

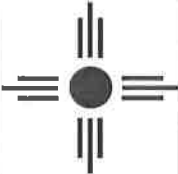


REVISION DESCRIPTION			DATE		APPROVED	

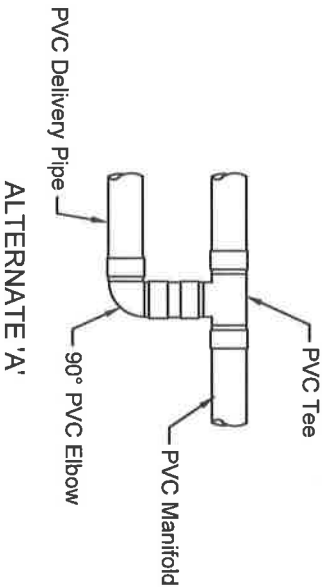
Septic System Alteration Design Pump Tank Details

Nancy Stenhausen		Block 98.01, Lot 12		Hopewell Twp., Mercer Co., NJ		402 Washintgon Crossing-Pennington Rd	
DRAWN BY:	DESIGNED BY:	CHECKED BY:	DWG NO.	BRE JOB#:	SCALE:	DATE:	SHEET:
DA	DA	THB	STE-6	21-2377	As Noted	October 7, 2021	6 of 9

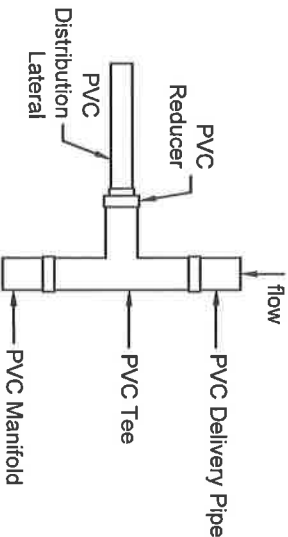
THEODORE H. BAYER, P.E.
New Jersey Professional Engineer license No. GE33806



BAYER-RISSE ENGINEERING, INC.
78 ROUTE 173 WEST, SUITE 6
HAMPTON, NEW JERSEY 08827
PHONE 908-735-2255
Certificate of Authorization No. 246A27943900



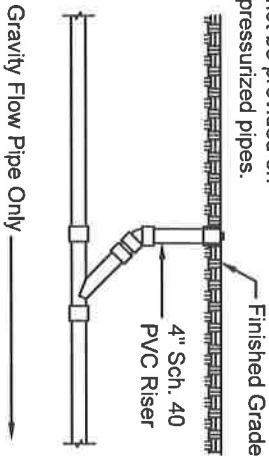
ALTERNATE 'A'



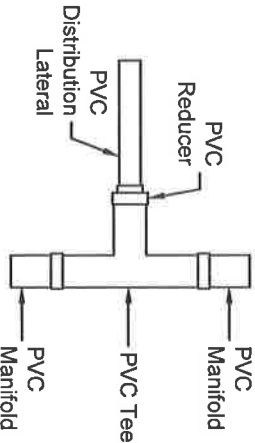
ALTERNATE 'B'

DELIVERY PIPE TO MANIFOLD CONNECTION
Not To Scale

NOTE: Cleanouts shall not be provided on pressurized pipes.

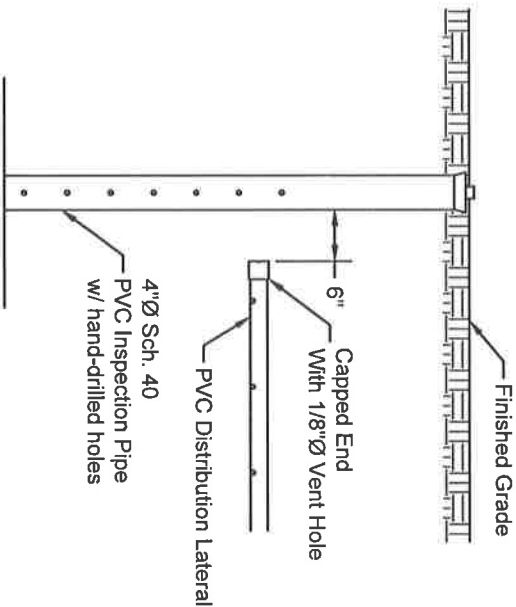
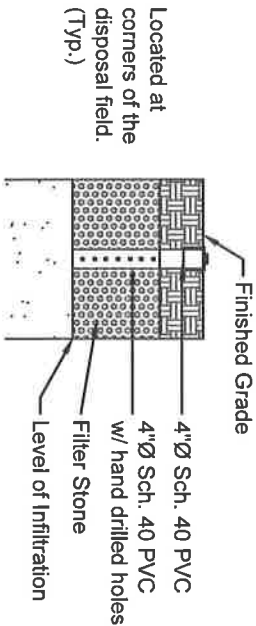


CLEAN OUT DETAIL
Not To Scale

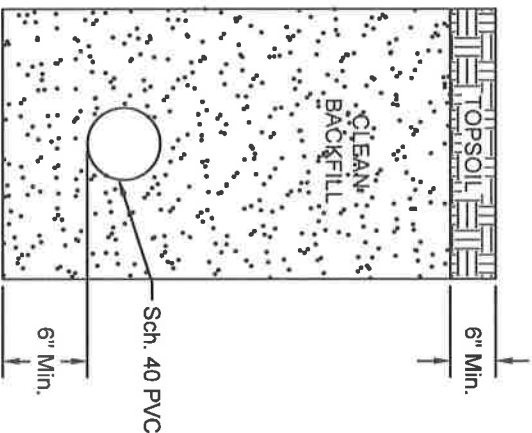


MANIFOLD TO LATERAL CONNECTION
Not to Scale

INSPECTION PORT DETAIL
Not To Scale



DISTRIBUTION LATERAL DETAIL
Not To Scale



Note:
Clean Backfill shall be free of large stone and objectionable material. Clean Backfill shall be compacted in 12 inch max. lifts.

FORCE MAIN BEDDING DETAIL
Not To Scale

REVISION DESCRIPTION	DATE	APPROVED

Septic System Alteration Design
Piping Details

Drawn By: DA	Designed By: DA	Checked By: THB	DWG NO: STE-7	BRE JOB#: 21-2377	SCALE: As Noted	DATE: October 7, 2021	SHEET: 7 of 9
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Nancy Stenhausen

Block 98.01, Lot 12

Hopewell Twp., Mercer Co., NJ

402 Washington Crossing-Pennington Rd

THEODORE H. BAYER, P.E.

New Jersey Professional Engineer License No. GE33806

BAYER-RISSE ENGINEERING, INC.

78 ROUTE 173 WEST, SUITE 6

HAMPTON, NEW JERSEY 08827

PHONE 908-735-2255

Certificate of Authorization No. 246427943900

SOIL LOGS

1) SOIL LOGS

SL 830-1	August 30, 2021		
0-4"	Topsoil with fine/medium roots.		
4-12"	7.5YR 4/4 Brown Silt Loam; subangular blocky, friable; < 10% gravel; no mottling; no seepage.		
12-61"	Nonsoil; fractured shale with 25% fillings; no mottling; no seepage.		
>61"	Machine Refusal. Basin Flood BF 830-1 performed at 60" (negative)		

2) PERMEABILITY TESTS

Test Number	Field	Related Soil Log	Depth	Result
BF 830-1	Primary	SL 830-1	60"	Negative

3) DESIGN FLOW

- Existing 3-bedroom dwelling
- First bedroom @ 200 gpd = 200 gpd;
- 2 additional bedrooms @ 150 gpd / bedroom = 300 gpd
- Total Design Flow = 500 gpd

4) DISPOSAL FIELD, SEPTIC TANK, AND DOSING TANK SIZING

The disposal field is a mounded, soil replacement pressure distribution disposal bed system. An aerobic treatment unit shall be provided prior to disposal. N.J.A.C. 7:9A Table 10.2(e) requires a minimum of 0.956 sf/gpd for this type of system. The design permeability for this type of system is 6-20 in/hr. The Hopewell Township Health Department requires a minimum increase of 25% over the design rate.

500 gpd x 0.956 ft²/gpd x 1.25 = 597.5 ft².

Use a 20 ft x 30 ft disposal bed = 600 ft². (24 ft x 34 ft with buffer)

Use one 2" dia. Sch. 40 PVC end manifold system with five (5) 1.0" dia. Sch. 40 PVC laterals, 25' long on 3.75 ft centers (see detail). Laterals shall be hand drilled with 1/4" dia. holes on 3-ft centers. Holes shall be offset by 1.5 ft on adjacent laterals. All holes shall be hand reamed to remove burrs prior to assembly. The pump shall be a Goulds model 3885 WE03L (1/3 hp, 115 V, single phase) or approved equal; and shall be capable of delivering a minimum of 37.76 gpm at a total dynamic head of 8.25 ft.

- a) The existing septic tank shall be pumped and abandoned in place unless otherwise directed by the administrative authority (crushed/demolished or filled with sand). A licensed hauler shall pump the existing tank. Receipt of septage removed shall be submitted to the local Health Department.
- b) An advanced aerobic treatment unit with a telemetry control panel shall be provided. Per the manufacturer's recommendation, the unit shall be a Norweco Singlair Green. The unit shall be fit with inspection ports and risers flush with grade as necessary. (See Tank Detail)
- c) A 1,000 gallon concrete pump dosing tank with on/off float switches and high level alarm will be provided and will meet all the requirements of N.J.A.C. 7:9A-9.2 and 7:9A-8.2. (See Pump Dosing Tank Detail)
- d) Inspection ports shall be placed in the disposal field and shall extend down to the level of infiltration.
- e) A 4" dia. sch. 40 PVC monitoring port with lockable cap shall be placed in the disposal field and shall extend a minimum of six inches (6") below the bottom of the zone of treatment.

REVISION DESCRIPTION	DATE	APPROVED	

Septic System Alteration Design Design Notes

Nancy Stenmagen Block 98.01, Lot 12 Hopewell Twp., Mercer Co., NJ 402 Washintgon Crossing-Pennington Rd

DRAWN BY:	DESIGNED BY:	CHECKED BY:	DWG NO.	BRE JOB#:	SCALE:	DATE:	SHEET:
DA	DA	THB	STE-8	21-2377	As Noted	October 7, 2021	8 of 9

THEODORE H. BAYER, P.E.
New Jersey Professional Engineer License No. GE33806



BAYER-RISSE ENGINEERING, INC.
78 ROUTE 173 WEST, SUITE 6
HAMPTON, NEW JERSEY 08827
PHONE 908-735-2255
Certificate of Authorization No. 24GA27943900

GENERAL NOTES:

1. This Wastewater disposal system has been designed to be closer in conformance with the requirements of N.J.A.C. 7:9A, Standards for Individual Subsurface Sewage Disposal Systems, and the requirements of the Hopewell Township Health Department. This plan is not a survey and is to be used for construction of the septic system only. It is not intended to be used as a plot plan for construction of any structures or proposed improvements. With the granting of waivers and approval of the proposed system, Hopewell Township Health Dept. assume no responsibility for the system and shall be held harmless.
2. Property line information has been obtained from a location survey prepared by David E. Goldenbaum & Associates, Inc., dated August 7, 1996 as provided by the applicant/client. Topographic information has been obtained from a topographic survey prepared by Bohren and Bohren Associates date September 2021.
3. All soil testing was conducted by Bayer-Risse Engineering, Inc. on August 30, 2021 and witnessed by a representative of Hopewell township.
4. The Engineer and the Health Department shall be notified 48 hours prior to construction so that all inspections may be scheduled. All phases of the construction shall be inspected and approved by the Engineer and Health Department prior to backfilling.
5. Inspection Schedule
 - Stake out and stockpiling of sand
 - Open ditch
 - Sand emplacement, compaction, and percolation rate
 - Stone & Lateral emplacement
 - Tanks and final grading
6. Sand Specifications: C-33 Sand shall have:
 - A coarse fragment content (greater than No. 8 sieve) less than 15% by volume or less than 20% by weight
 - A textural analysis (composition by weight of the size fraction passing the particular sieve as stated):
 - 80%-100% passing No. 8 sieve; 50%-85% passing No. 16 sieve; 25%-60% passing No. 30 sieve; 10%-30% passing No. 50 sieve; 2%-10% passing No. 100 sieve.
 - Permeability from 6 - 20 in./hr. (percolation rate 3-15 min./in.)
7. All sand shall be stockpiled on-site and tested by the Engineer prior to placement into the disposal area.
8. Sand shall be installed in twelve inch (12") maximum lifts and compacted in conformance with N.J.A.C. 7:9A-10.4(f)(3). After installation and compaction, percolation tests shall be conducted at the level of infiltration in accordance with the number and placement requirements shown in Appendix C of N.J.A.C. 7:9A.
9. No wheeled vehicles are to be driven over any part of the disposal area.
10. The Engineer will inspect the entire installation of the system and provide a Suitable Fill Certification and Record Drawings to the Health Department.
11. Prior to the disposal bed stake out by the Engineer and any construction activities by the installer, the installer shall have all underground utilities located by the responsible utility company(ies). CALL 1-800-272-1000 BEFORE YOU DIG.
12. Construction information is based on topography of plan. Elevations may be modified after final survey.
13. Disposal area shall be graded so that surface runoff is diverted away from the disposal area.
14. The Engineer and the Health Department shall review and approve any deviations or field changes from this design.
15. The installer shall be responsible for obtaining any and all of the required permits prior to construction.
16. After completion of backfilling and final grading, all disturbed areas shall be raked, seeded and mulched to establish a vegetative cover in a manner acceptable to the Administrative Authority.
17. The installer shall ensure that all materials used in the construction of the system are in accordance with N.J.A.C. 7:9A et. seq. and meet the specifications of the design.
18. Filter fabric shall be a non-woven geotextile product (TerraTex SD or approved equal).
19. No trees are to remain within ten feet (10') of the disposal area.
20. Septic tank(s) shall be located a minimum of 10 ft and disposal areas shall be located a minimum of 25 ft from dwellings.
21. Septic tank(s) shall be located a minimum of fifty feet (50'), disposal area(s) shall be located a minimum of one hundred feet (100')**, and building sewer(s) shall be located a minimum of twenty-five feet (25') from a well. **WAIVER REQUIRED
22. Crushed stone filter material shall be NJDOT number 3, 4, or 24 size stone and be free of fines, dust, ashes, or clay.
23. All septic disposal fields shall be constructed at least 25 feet from excavated cuts (drop) greater than 2 feet.
24. There are no off-site wells within 100 ft and no off-site disposal fields within 50 ft of the proposed disposal field.
25. Bayer-Risse Engineering, Inc. makes no representation as to the location and/or adequacy of the internal plumbing and electric service. The limits of this design are from the septic tank to the disposal area.
26. This septic design has been based on the soil conditions and site constraints evident at the time soil testing was performed. If subsurface conditions present at the time of construction vary significantly from those documented during soil testing the contractor shall immediately cease construction and notify the Engineer and the Health Department so that appropriate action may be taken.
27. Garbage disposal units shall not be permitted with this sewage disposal unit. Water softeners shall not discharge into this disposal system.
28. All tanks shall be tested for water tightness upon installation of all tank connections including piping network, manholes and inspection ports as specified by the design.
29. An operation, maintenance and annual monitoring agreement (maintenance contract) shall be secured with an approved contractor provided by the manufacturer's representative of the proposed aerobic treatment unit for as long as the proposed design is installed and operational. All records and agreements shall be provided to the owner and kept with the house and provide a copy of the executed service contract with the administrative authority.
30. The aerobic treatment unit shall be installed by an authorized/certified installer (NEHA-CIOWTS: National Environmental Health Association – Certified Installer of Onsite Wastewater Treatment Systems) or overseen by the manufacturer's representative and shall be physically present at all times during installation of an advanced wastewater pretreatment device and either install or directly oversee the installation of the advanced wastewater pretreatment device.
31. The manufacturer's representative shall provide the aerobic unit with an autodialer or telemetry control device as required.
32. Bayer-Risse Engineering, Inc. is an authorized designer of the aerobic treatment system and is sufficiently knowledgeable of the technology to design the proposed system.
33. A deed notice indicating the required maintenance agreement and technology being utilized shall be filed for the property.

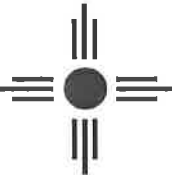
REVISION DESCRIPTION	DATE	APPROVED

Septic System Alteration Design
General Notes

Nancy Stenmhagen Block 98.01, Lot 12 Hopewell Twp., Mercer Co., NJ 402 Washintgon Crossing-Pennington Rd

DRAWN BY:	DESIGNED BY:	CHECKED BY:	DWG. NO.	BRE JOB#:	SCALE:	DATE:	SHEET:
DA	DA	THB	STE-9	21-2377	As Noted	October 7, 2021	9 of 9

THEODORE H. BAYER, P.E.
New Jersey Professional Engineer License No. GE33806



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