

Revised to 4 Bedrooms

Form 4
General Design Data

1. Volume of Sanitary Sewage, gal. 650
- ☐ Residential: No. of Dwelling Units 1 Total No. of Bedrooms 4
- ☐ 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 _____

2. 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: _____

3. System Components:

- a) Grease Trap Capacity, gals _____
Show Calculation Used: _____

- b) Septic Tank Capacities, gals: ☒ First (Single) Compartment 1,250 gal
☐ Second Compartment _____ ☐ Third Compartment _____

- c) Effluent Distribution Method: ☒ Gravity Flow ☐ Gravity Dosing ☐ Pressure Dosing
Dosing Device: ☐ Pump ☐ Siphon

- d) Dosing Tank Capacities, gals:
Total Capacity _____; Dose Volume (Vd) _____; Reserve Capacity _____

- e) Laterals: Number 9; Total Length 360; Pipe Diameter 4"; Spacing 36"

- f) Connecting Pipe: Diameter 4" Length 7'

- g) Manifold: Diameter _____; Length _____

- h) Disposal Field: Type of Installation C
Design Permeability (Percolation Rate) 3 min. to 15 min. per inch
Trenches: Width _____; Total Length _____; Bed Area 1,350 sq. ft.

- i) Seepage Pits: Design Percolation Rate _____
Number of Pits _____ Total Percolating Area Provided _____

4. Attachments (Check items included):

- ☒ General Plan of System Showing Location of All System Components
☒ 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) _____

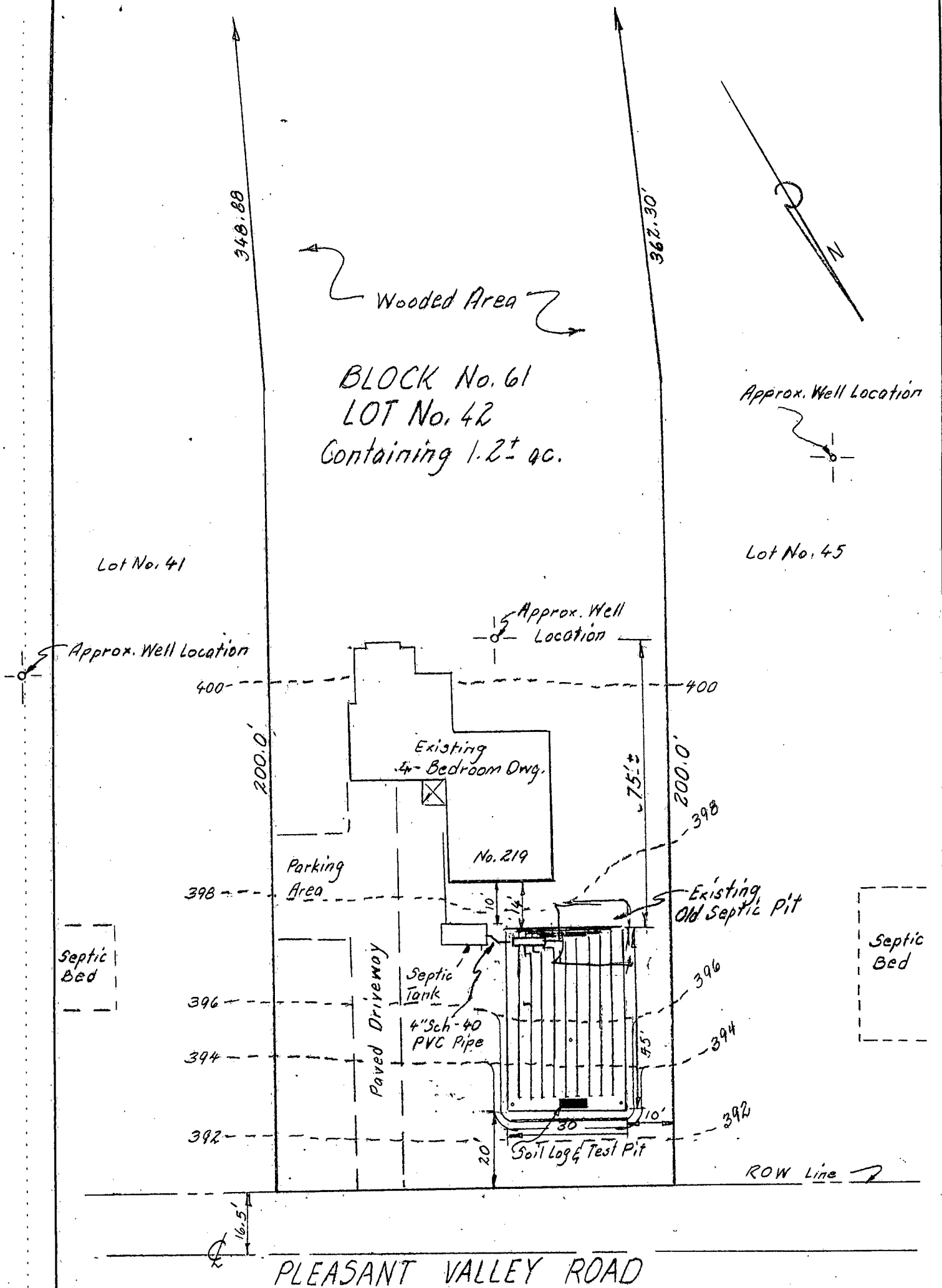
I hereby certify that the information furnished on Form 4 of this application (and attachments thereto) is true and accurate. I am aware that falsification of data is a violation of the Water Pollution Control Act (N.J.S.A. 58:10A-1 et seq.) and is subject to penalties as prescribed in N.J.A.C. 7:14-8.

Signature of Professional Engineer

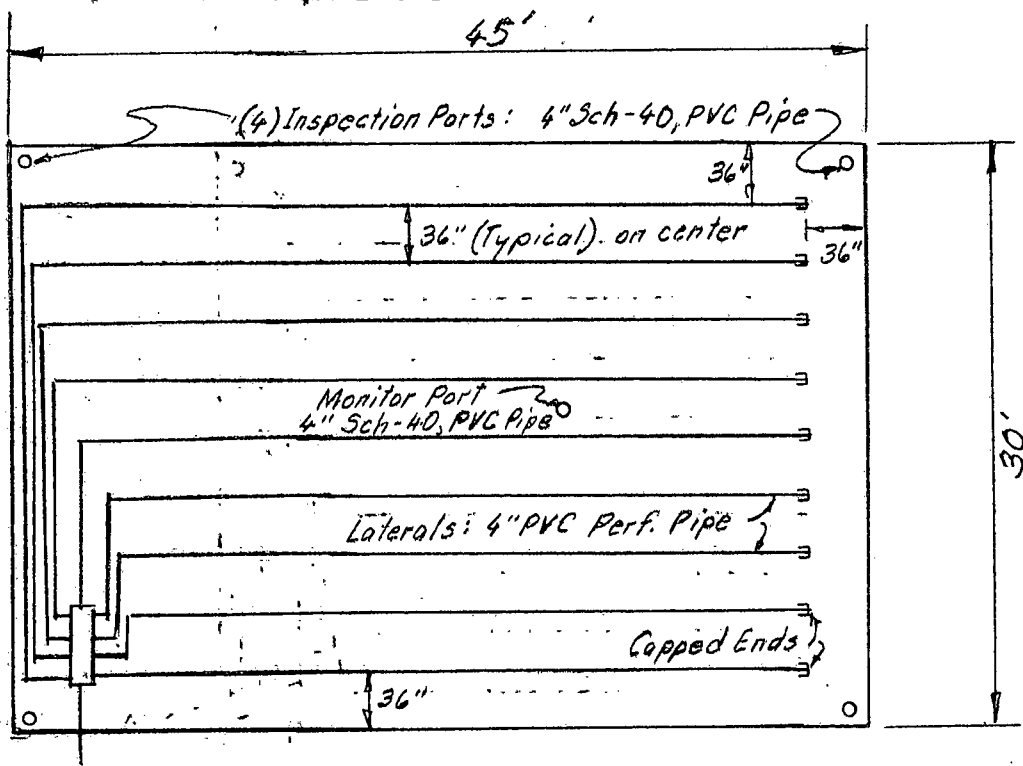
Amalgam

Date

5/19/11

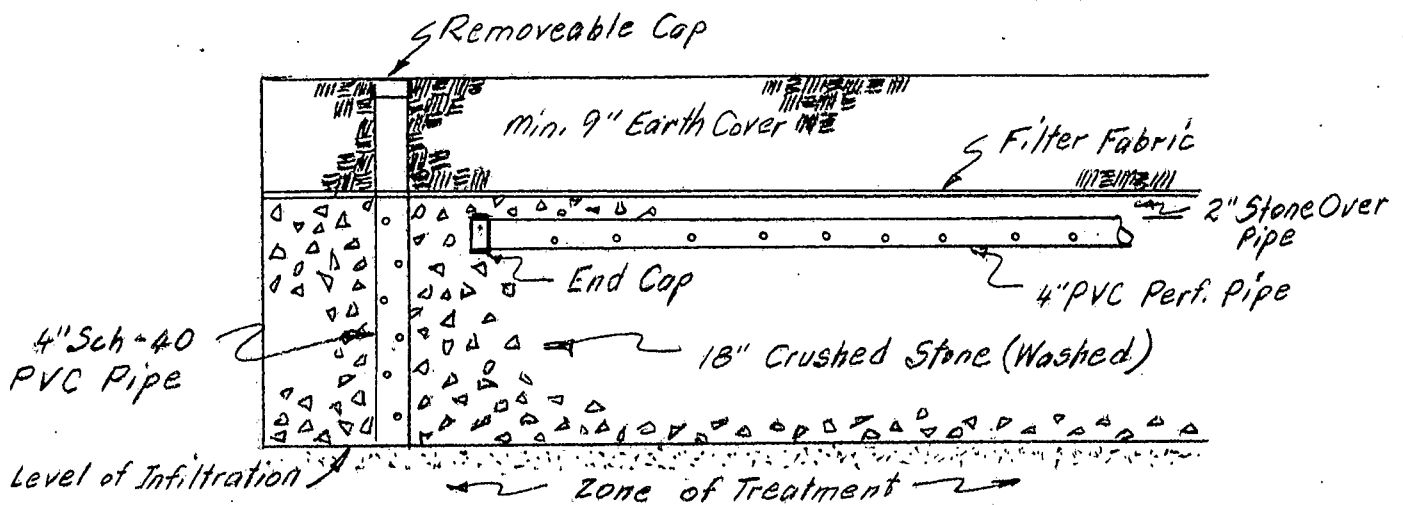


Revision	Date	By	Donald Mauer Jr. Professional Engineer 262 Schoolhouse Road, Jacobstown, NJ 08562 Phone No. 609 758 6945		 5/19/11
Enlarged Disposal Bed	4-15-11	FJM	Client: Nigel Newton 219 Pleasant Valley Rd, Titusville		
			Scale: 1"=30'	Drawn By: FJM	
			Date: June 7, 2010	Checked By: DM	
			Title: Septic System	Block: 61	
			Lot: 42	Municipality: Township of Hopewell	GE02823100 - Sheet // of 5



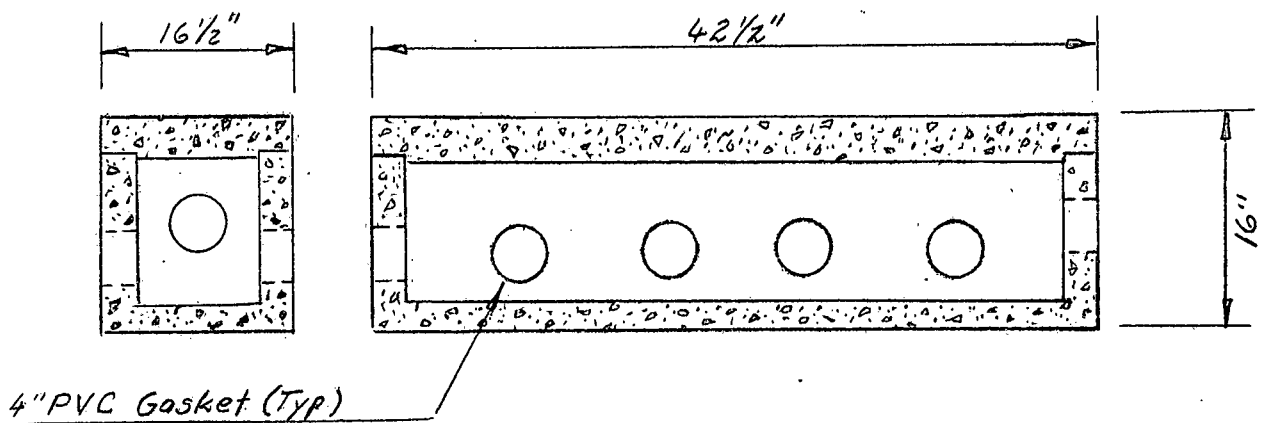
LAY-OUT DISPOSAL BED

Scale: 1" = 10'



DETAIL OF INSPECTION PORT & DISTRIBUTION LATERAL

"No Scale"



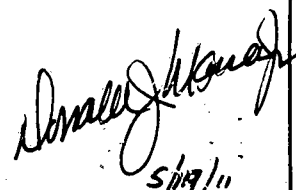
4" PVC Gasket (Typ)

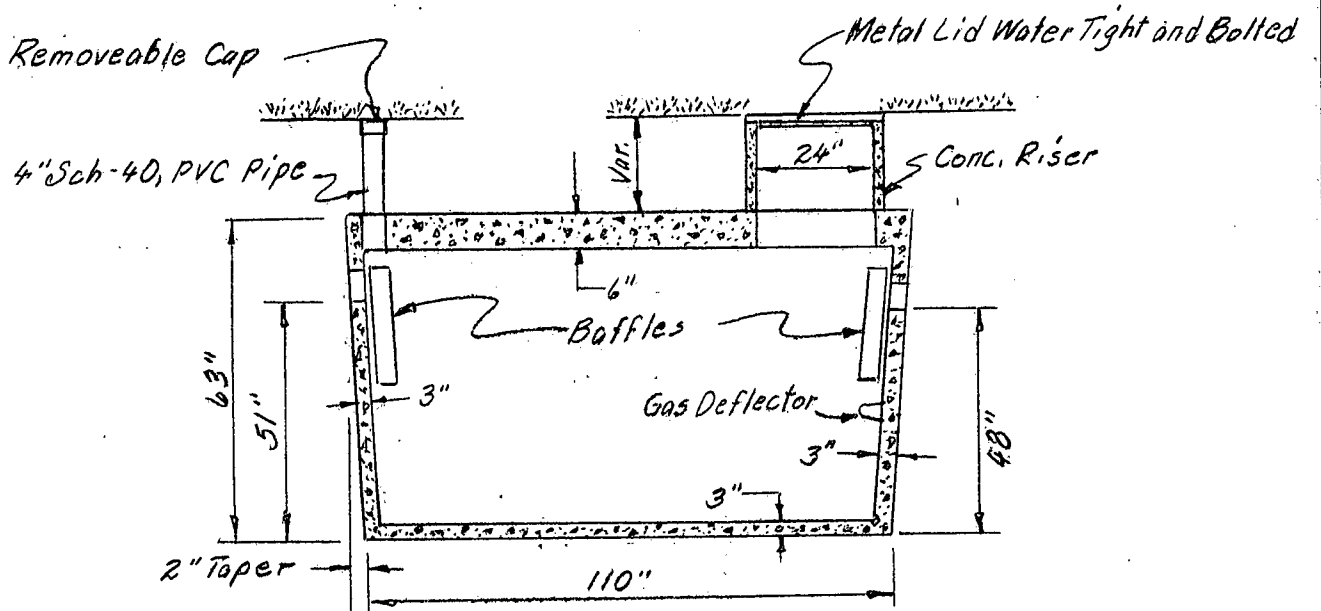
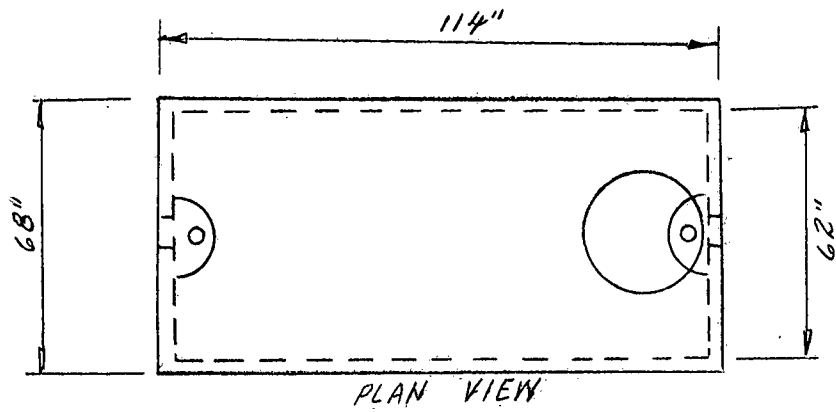
NOTE:

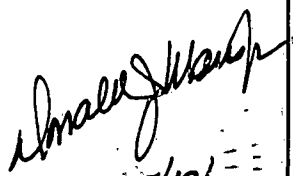
CROSS SECTION DISTRIBUTION BOX

"No Scale"

Monitor Port shall extend down through the zone of treatment and into the zone of disposal by at least two feet (2').

Revision	Date	By	Donald Mauer Jr. Professional Engineer 262 Schoolhouse Road, Jacobstown, NJ 08562 Phone No. 609 758 6945		 5/19/11
Enlarged Disposal Bed	4-15-11	FJM	Client: Nigel Newton 219 Pleasant Valley Rd., Titusville		
			Scale: Noted Date: June 7, 2010	Drawn By: FJM Checked By: DM	
			Title: Septic System Lot: 42 Municipality: Township of Hopewell		
			Block: 61		
					GE02823100 Sheet 2 of 5



Revision	Date	By	Donald Mauer Jr. Professional Engineer 262 Schoolhouse Road, Jacobstown, NJ 08562 Phone No. 609 758 6945		 5/19/11
			Client: Nigel Newton 219 Pleasant Valley Rd, Titusville		
			Scale: No Scale Date: June 7, 2010	Drawn By: FJM Checked By: DM	
			Title: Septic System Lot: 42 Municipality: Township of Hopewell	Block: 61	
					GE02823100 Sheet 3 of 5

Proposed Grade Elev. 397.0

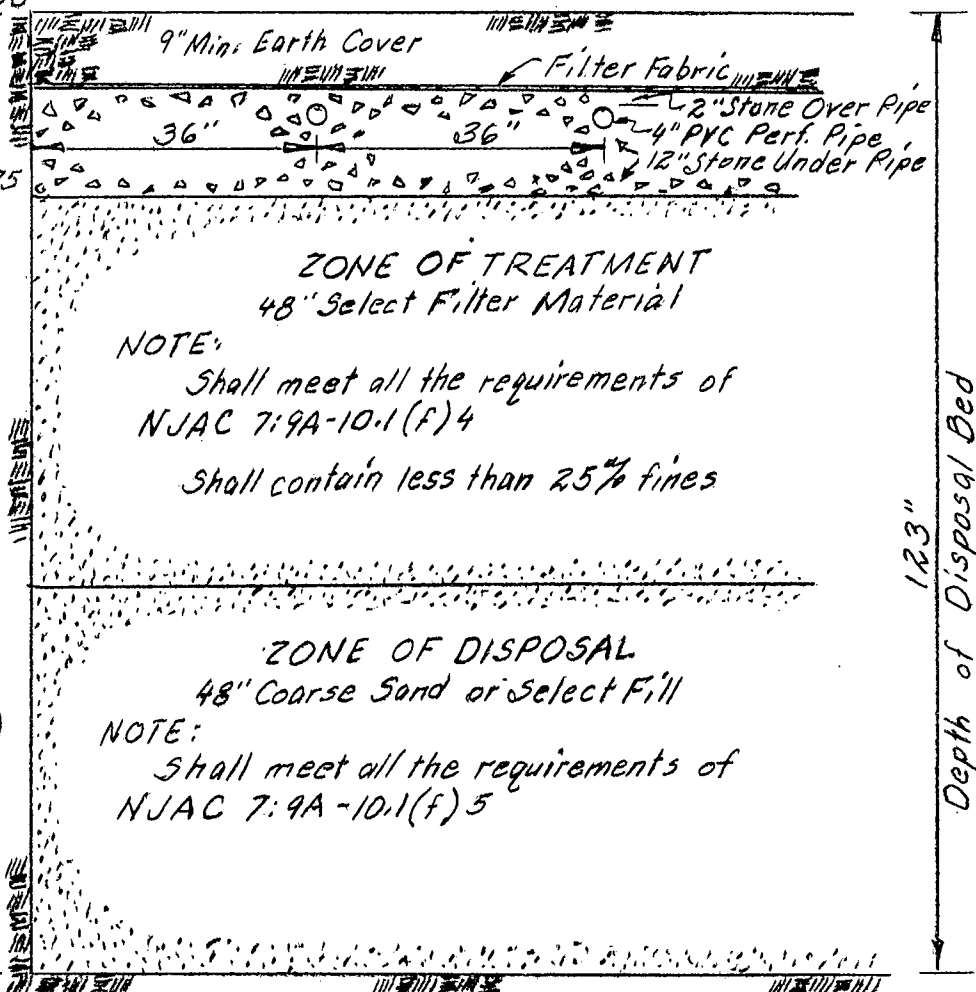
Top Stone Elev. 396.25

Level of Infiltration Elev. 394.75

Bottom Zone of Treatment
Elev. 390.75

(No Water Encountered)

Bottom Disposal Bed
Elev. 386.75



"C"

CROSS SECTION DISPOSAL BED

Scale: 1" = 2'

SEPTIC SYSTEM QUANTITIES

1,250 Gal. - Reinf. Conc. Septic Tank with Metal Lid and Conc. Riser

18 Inch - 1 1/2" Washed Crushed Stone DOT 3, 4 or 24 (140 tons)

305 Cu. Yds. - Select Filter Material (495 tons)

360 Lin. Ft. - 4" PVC Perf. Pipe

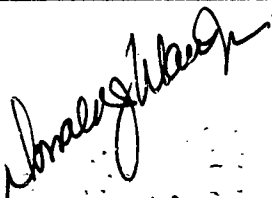
40 Lin. Ft. - 4" Sch-40, PVC Pipe

1,020 Sq. Ft. - Filter Fabric (Terra Tex Fabric 14 mil.) or equivalent

9" Min. - Earth Cover

NOTE:

This septic system was not designed to support
a garbage disposal unit.

Revision	Date	By	Donald Mauer Jr. Professional Engineer 262 Schoolhouse Road, Jacobstown, NJ 08562 Phone No. 609 758 6945		 5/19/11
<i>Revised Quantities</i>	<i>4-15-11</i>	<i>FJM</i>	Client: <i>Nigel Newton</i> <i>219 Pleasant Valley Rd, Titusville</i>		
			Scale: <i>Noted</i> Date: <i>June 7, 2010</i>		
			Drawn By: <i>FJM</i> Checked By: <i>DM</i>		
			Title: <i>Septic System</i> Lot: <i>42</i> Municipality: <i>Township of Hopewell</i>		
			Block: <i>61</i>		GE02823100
					Sheet <i>4</i> of <i>5</i>

GENERAL NOTES

- Prior to construction the engineer shall have the septic system staked-out and a bench mark set.
- The design engineer must certify that all sand fill for the zone of treatment and for the zone of disposal has been tested and is in accordance with fill specifications. There shall be no emplacement of fill until the engineer has given his approval after having obtained grab samples from material stockpiled at the site.
- Construction inspections are required by the design engineer. The engineer shall be notified to inspect the following:
 - a) Open Pit
 - b) Disposal and Treatment fill emplacement to conduct compaction tests
 - c) Stone and lateral emplacement
 - d) Back-fill and final grade elevation check
- Changes in this design are not allowed without receiving prior approval from the design engineer and the Hopewell Township Health Department.
- When completed the engineer shall prepare as-built plans signed and sealed.
- The engineer shall be notified at least 24 hours prior to start of construction.
- There are no wells or septic systems within 100' of this proposed disposal bed.
- All trees within 10' of the proposed disposal bed must be removed.
- The existing septic tank must be pumped out by a license hauler and inspected.

BED SIZING CALCULATION

Existing 3-Bedroom Dwelling

1st Bedroom

200 gpd

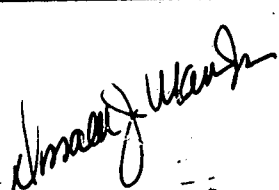
2nd and 3rd Bedrooms

450 gpd

Daily Volume 650 gals

$1.61 \times 650 \text{ gals} = 1,046.5 \text{ sq. ft.} \times 1.25\% = 1,308.125 \text{ sq. ft.}$ Required Disposal Area

Designed Disposal Bed $30' \times 45' = 1,350.0 \text{ sq. ft.}$

Revision	Date	By	Donald Mauer Jr. Professional Engineer 262 Schoolhouse Road, Jacobstown, NJ 08562 Phone No. 609 758 6945		 5/19/11 GE02823100 Sheet 3 of 5
Rev. Calculations	4-15-11	FJM	Client: Nigel Newton 219 Pleasant Valley Rd, Titusville		
			Scale: None Date: June 7, 2010	Drawn By: FJM Checked By: DM	
			Title: Septic System Lot: 42 Municipality: Township of Hopewell		
			Block: 61		

Lawson Excavator
Phoenix Sand

6/21/11 - Bed being dug.

6/22/11 - Bed $\frac{1}{3}$ dug - shot Bottom - depth OK

6/24/11 - Shot Sand - OK.

Elevation of sewer line MUCH lower than anticipated.

System Revised to Pressure Dose w/ Pump Tank added. Per Frank Morzella.

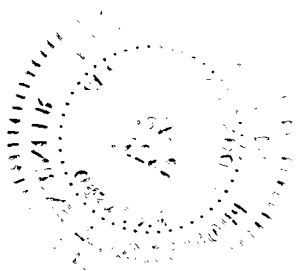
* Tank ~~Size~~ Sized not adequate for 5 Beds.

6/27/2011 - Stone + Pipe - OK. (Installed per engineer's
Tanks Installed). sketch - I don't have a
copy of!!)

6/29/2011 - Pump + Alarm - OK.
Lined to House + Bed - OK.
Rises + Manholes - OK.

Needs Final Grade

Revised Plans reflectly changed made -
As-Built, send cert, + cert of compliance



Permit No: 2010059

Date: 6/14/2010

Rec'd 6/14/10

Hopewell Township Health Department

201 Washington Crossing – Pennington Road

Titusville, New Jersey 08560

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

PERMIT

Applicant: **Nigel Newton**

Block 61.00 , Lot 42.00

For: **INDIVIDUAL SUBSURFACE SEWAGE DISPOSAL SYSTEM ALTERATION**

Location: **219 Pleasant Valley Road**

Fee: **\$200.00**

24 Hour Inspection Notification Required

This permit is NOT transferrable.

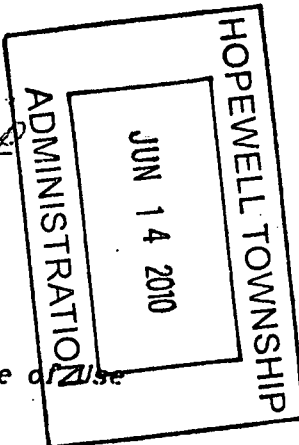
Authorized by:



Hopewell Township Health Department

COUNTY/MUNICIPALITY Mercer County / Hopewell Township

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



Form 1 - General Information

1. Type of Permit Needed (Check applicable categories):
☐ New Construction ☒ Alteration/No Expansion or Change of Use
☐ Alteration/Expansion of Change in Use
☐ Alteration/Malfunctioning System
☐ Deviation from Standards ☐ Repairs to Existing System
2. Location of Project:
Municipality Hopewell Township Block No. 61 Lot No. 42
Street Address 219 Pleasant Valley Rd, Titusville Zip 08560
3. Name of Applicant (print): Nigel Newton
4. Applicant's Present Address: 219 Pleasant Valley Rd, Titusville 08560
5. Applicant's Phone Number: 609-466-7732
6. Type of Facility:
☒ Residential
☐ Commercial/Institutional
Specify Type of Establishment: _____
7. Type of Wastes to be Discharged:
☒ Sanitary Sewage
☐ Industrial Wastes
☐ Other - Specify Type _____
8. Other Approvals/Certification/Waivers/Exemptions (Attach to Applications):
☐ Pinelands Commission
☐ U.S. Army Corps of Engineers
☐ NJDEP - Bureau of Flood Plain Management
☐ Other - Specify: _____
9. I hereby certify that the information furnished on Form 1 of this application is true. I am aware that false swearing is a crime in this State and subject to prosecution.

Signature of Applicant Nigel Newton Date 6/10/10

FOR AGENCY USE ONLY

☐ Application Denied - Reason for Denial/Citation of Rules Violated _____

☒ Application Approved
☐ Application Approved Subject to Approval of NJDEP

Date of Action 6/14/10 Signature of Authorized Agent [Signature]
Name and Title _____

Form 2a - General Site Evaluation Data

Lot 42 Block 61

1. Name of Site Evaluator (print): Frank Mazzella
2. Business Address of Site Evaluator: 215 Pleasant Valley Rd., Titusville, N.J. 088
3. Business Phone Number of Site Evaluator: 609 737 3632

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 ☐ 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 = _____

7. Hydraulic Head Test:

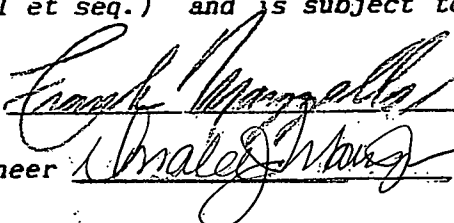
- a) Hydraulically Restrictive Horizon: Depth Top to Bottom _____
b) Piezometer A: Depth to Bottom _____ Depth of Water Level (24 hr) _____
c) Piezometer B: Depth to Bottom _____ Depth of Water Level (24 hr) _____
d) Witnessed by _____ Signature _____ Date _____

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 prescribed in N.J.A.C. 7:14-8.

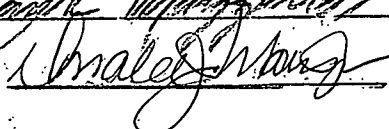
Signature of Soil Evaluator



Date

May 29, 2010

Signature Professional Engineer



Lic. #

N.J. G.E. 002823100

Form 2b - Soil Log and Interpretation

Lot 42 Block 611. Log Number 1 Method (Check One): ☒ Profile Pit ☐ Boring2. Soil Log 5-24-10

Depth (Inches) Munsell Color Name and Symbol; Estimated Textural Class;
Estimated Volume % Coarse Fragment, If Present; Structure;
Top-Bottom Moist or Dry Consistence; Mottling - Abundance, Size and
Contrast, If Present.

Basin Flooding Test Pit

0-11" Brown (10YR 4/3) Loam; Moist; Loose; Common Roots; Structureless Weak Fine;
Clear Wavy Boundary

11-31" Strong Brown (7.5YR 4/6) Silt Loam; Moist; Loose; Few Roots; Weak Fine
Subangular Blocky Structure; Gradual Wavy Boundary

31-94" Strong Brown (7.5YR 5/4) Gritty Loam; Moist; Loose; Massive Weak
Fine; Gradual Wavy Boundary

94-120" Brown (7.5YR 4/4) Silt Loam; Moist; Friable; Moderate Coarse Subangular
Blocky Structure; 10% Coarse Fragments

3. Ground Water Observations:

Seepage - Indicate Depth _____
Pit/Boring Flooded - Depth after _____ Hours _____

4. Soil Limiting Zones (Check appropriate categories):

Fractured Rock Substratum - Depth to Top _____
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 Not Encountered

5. Soil Suitability Classification: I

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 Frank Pignatelli Date March 29, 2010Signature Professional Engineer Donald J. Ward License # NJ-GE 002823100

Form 3a
Soil Permeability Data

Block 61 Lot 42

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 Flooding	1		120"	Passed

* 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 _____

___ Average of Test Replicates

___ Single Replicate

___ Slowest of Replicates

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

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 Frank Marzella Date 5-29-10

Signature of Professional Engineer Donald Weiss License # NJ-6E 002823100

Form 3g Basin Flooding Test Data

1. Test Number 1 Reference Soil Log 1 Date Tested 5-24-10

2. Depth of Pit, ft 10'

3. Area of Pit, ft² 30 sq. ft.

4. Description of Rock Substratum Within Test Zone:

Type of Rock Diabase (10%)

Name of Formation _____

Average Fracture Spacing _____

Type of Fractures (Check Appropriate Category):

☒ Open (Wide), Clean -- Width of Openings, mm _____

☐ Open (Wide), Infilled with Fines -- Width of Openings, mm _____

☐ Tight (Closed)

Orientation of Fractures:

☒ 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

☐ Not Rippable with Hand Tools, Rippable by Machine

☐ Not Rippable by Machines, Explosives Used

5. Time of First Basin Flooding 9:45 am 5-24-10

Volume of Water Added, Gal 400 gals.

6. Result of First Basin Flooding:

☒ Basin Drained within 24 hrs - Indicate Time 3:00 pm 5-24-10

☐ Basin Not Drained within 24 hrs.

7. Time of Second Basin Flooding 9:30 am 5-25-10

Volume of Water Added, Gal 400 gals.

8. Result of Second Basin Flooding:

☒ Basin Drained within 24 hrs. - Indicate Time 3:30 pm 5-24-10

☐ Basin Not Drained within 24 hrs.

9. 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 [Signature] Date 5-29-10

Signature of Professional Engineer [Signature] License # NJ-GE-002823100

Form 4
General Design Data

1. Volume of Sanitary Sewage, gal. 500 gals.
☒ Residential: No. of Dwelling Units 1 Total No. of Bedrooms 3
☐ 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 _____

2. 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: _____

3. System Components:

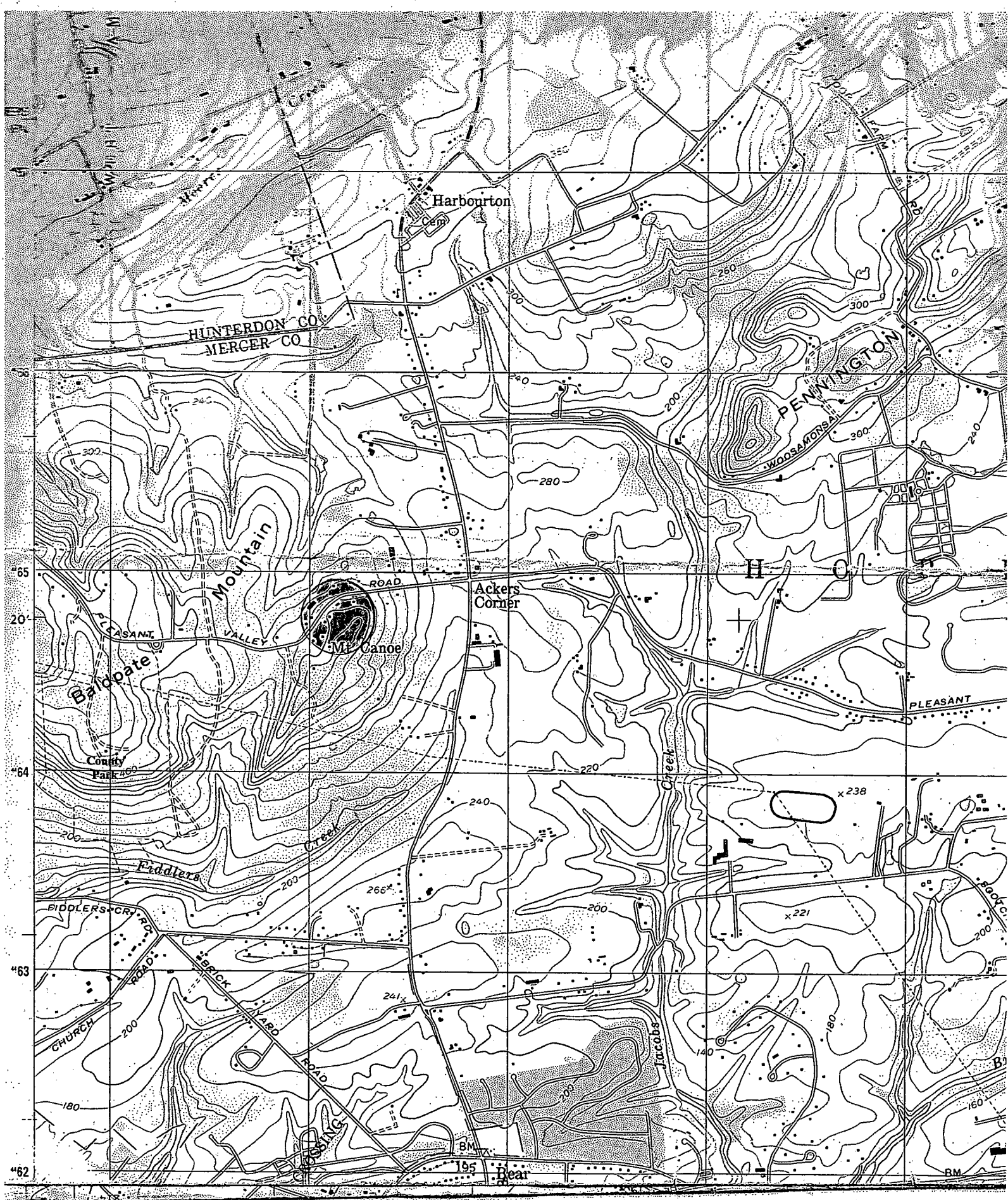
- a) Grease Trap Capacity, gals _____
Show Calculation Used: _____
- b) Septic Tank Capacities, gals: ☒ First (Single) Compartment 1,250 gals.
☐ Second Compartment _____ ☐ Third Compartment _____
- c) Effluent Distribution Method: ☒ Gravity Flow ☐ Gravity Dosing ☐ Pressure Dosing
Dosing Device: ☐ Pump ☐ Siphon
- d) Dosing Tank Capacities, gals:
Total Capacity _____; Dose Volume (Vd) _____; Reserve Capacity _____
- e) Laterals: Number 9; Total Length 270'; Pipe Diameter 4"; Spacing 36"
- f) Connecting Pipe: Diameter 4" Length 15'
- g) Manifold: Diameter _____; Length _____
- h) Disposal Field: Type of Installation C
Design Permeability (Percolation Rate) 3 min to 15 min. per inch
Trenches: Width _____; Total Length _____; Bed Area 1,020 sq. ft.
- i) Seepage Pits: Design Percolation Rate _____
Number of Pits _____ Total Percolating Area Provided _____

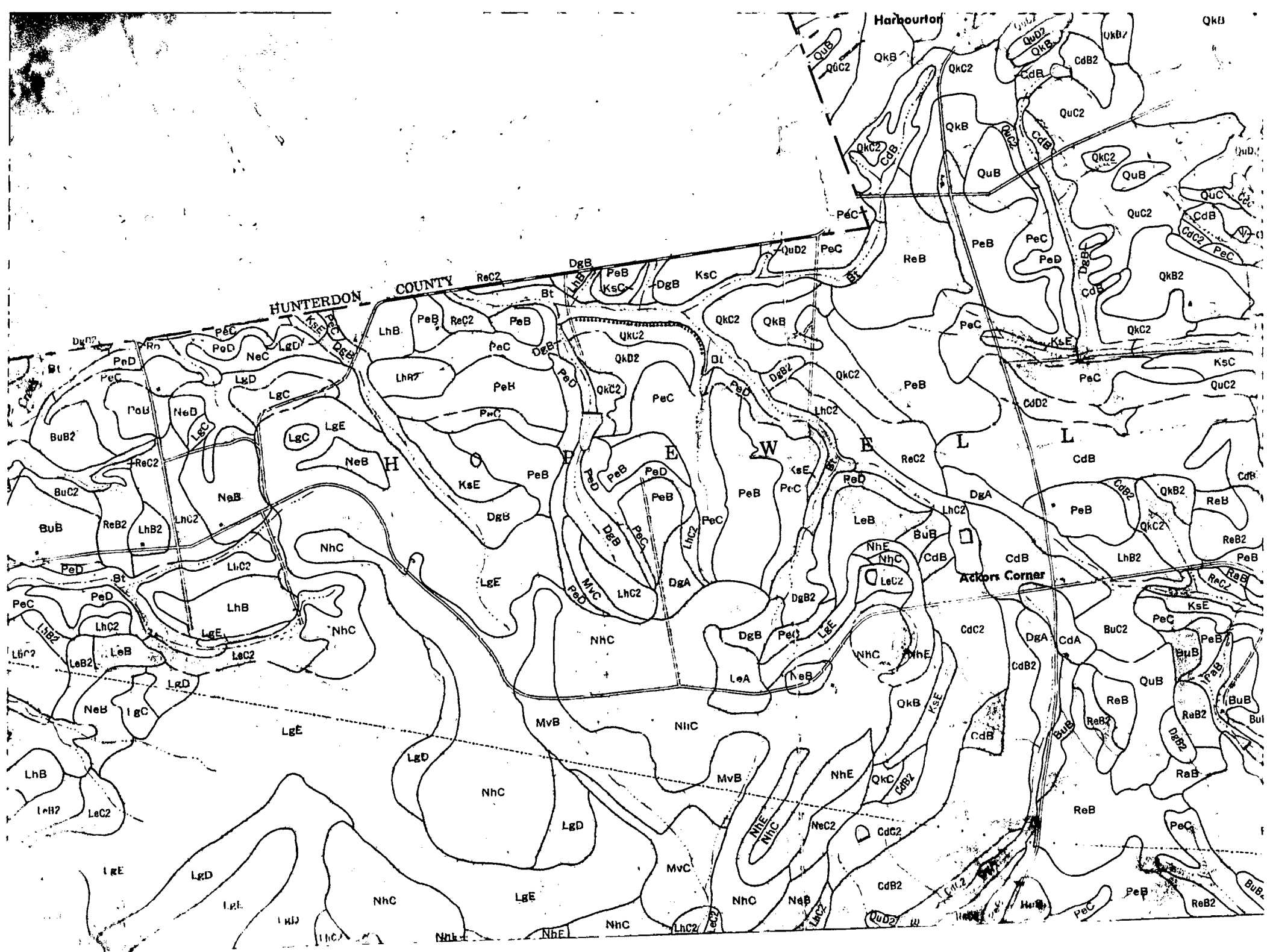
4. Attachments (Check items included):

- ☒ General Plan of System Showing Location of All System Components
☒ 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) _____

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 [Signature] Date 6/7/10







Wooded Area

BLOCK No. 61
LOT No. 42
Containing 1.2[±] ac.

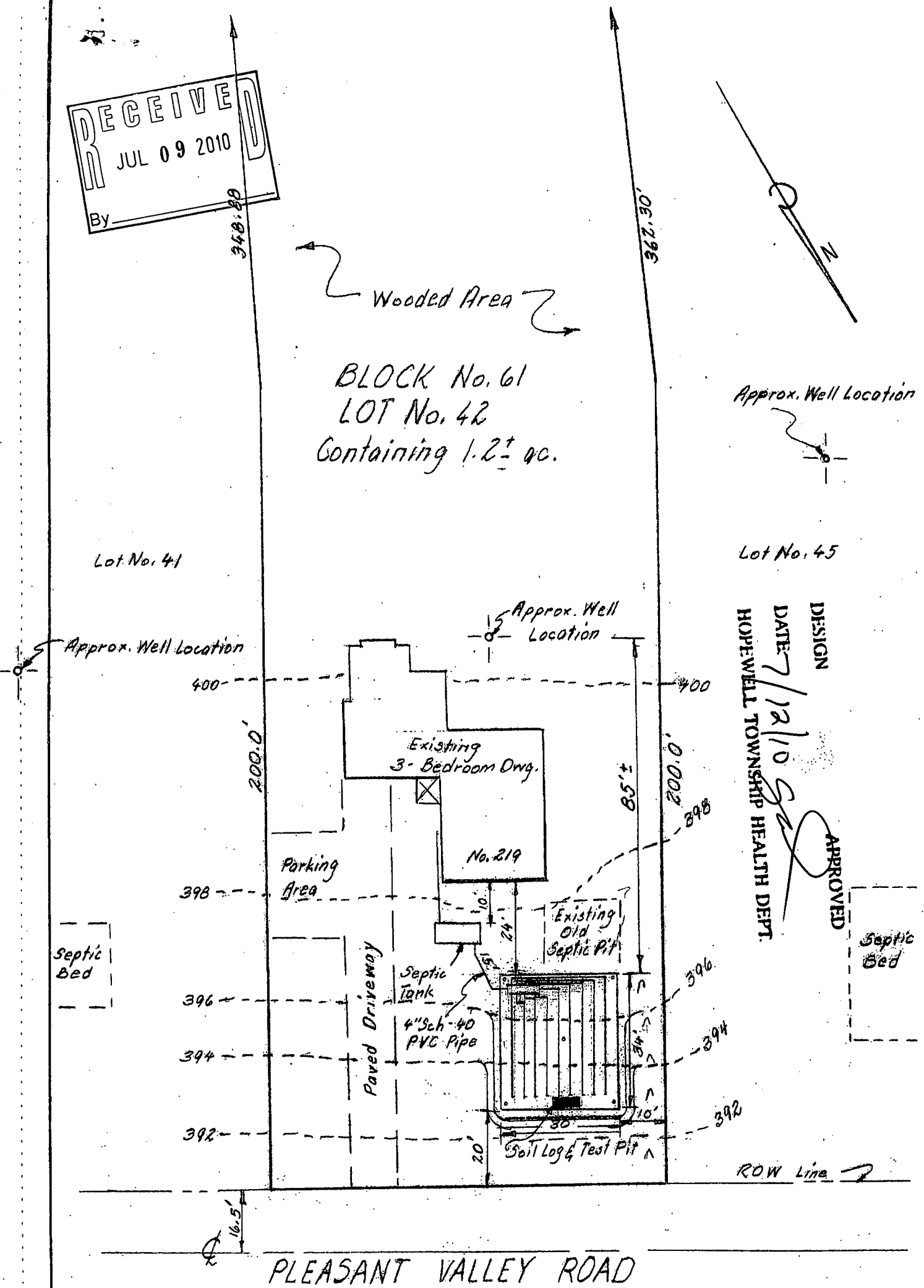
Approx. Well Location

Lot No. 41

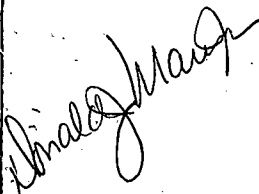
Lot No. 45

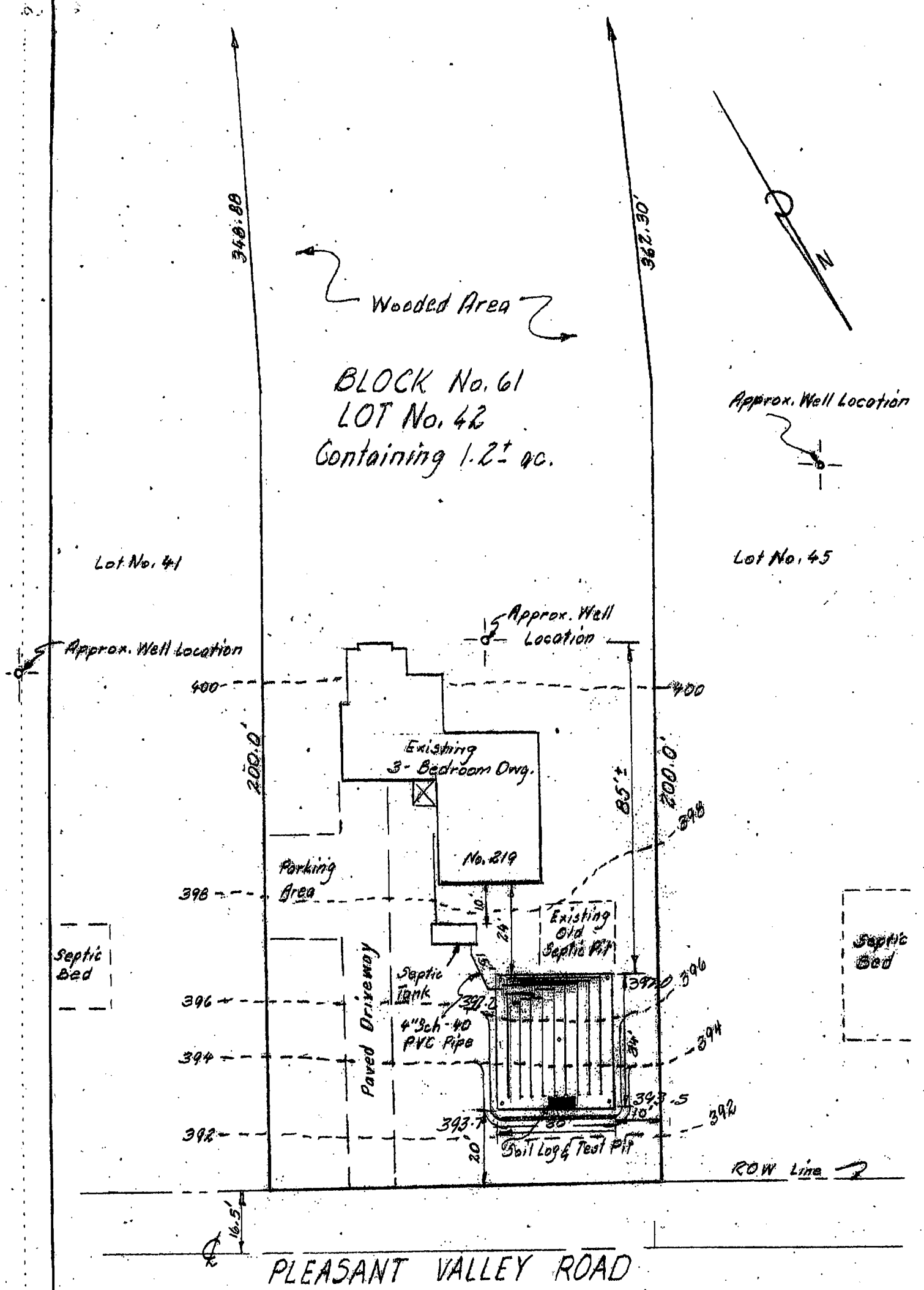
DESIGN
DATE: 7/12/10
HOPEWELL TOWNSHIP HEALTH DEPT.

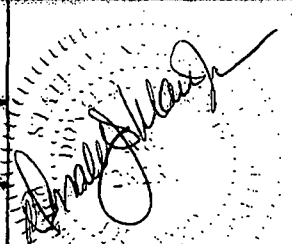
APPROVED

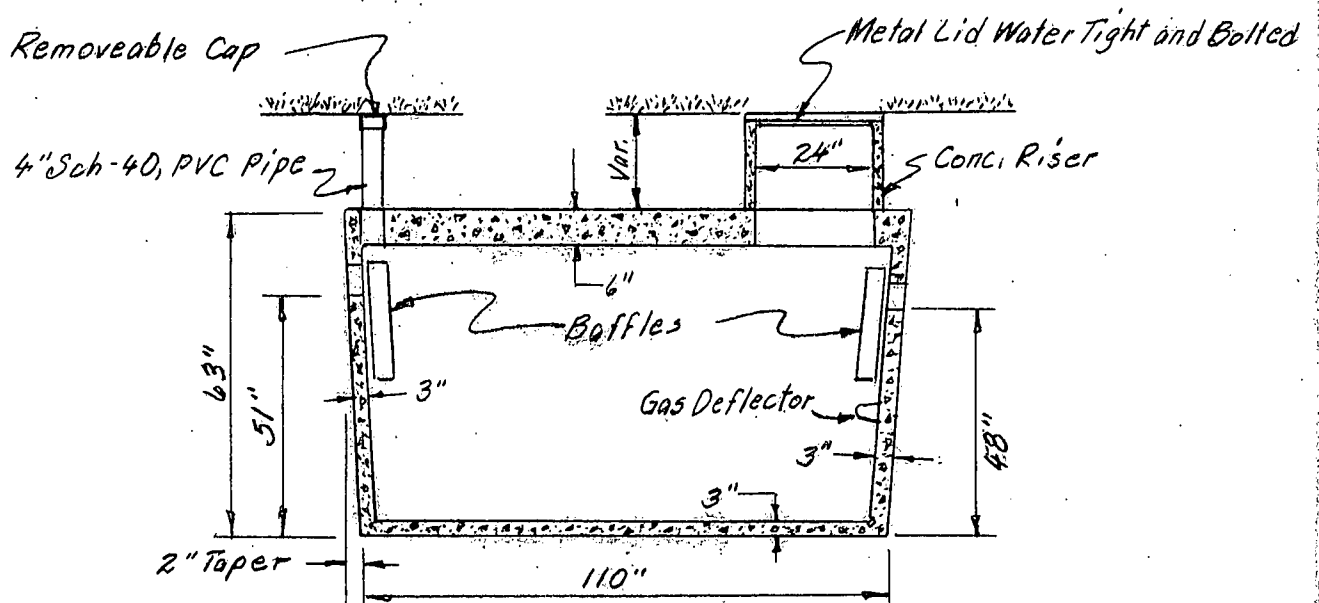
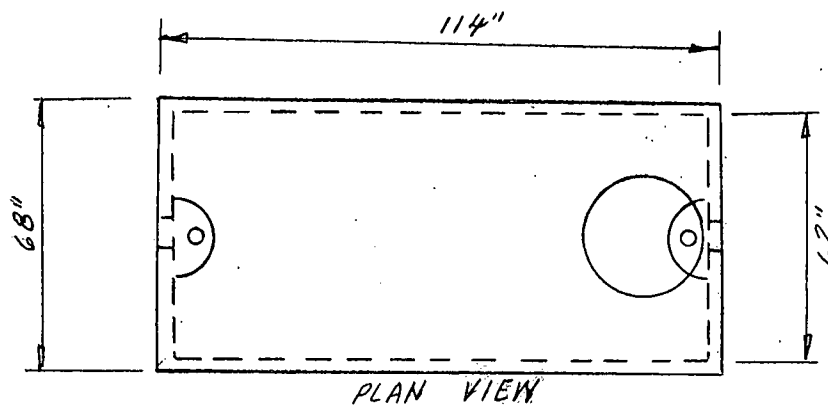


PLEASANT VALLEY ROAD

Revision	Date	By	Donald Mauer Jr. Professional Engineer 262 Schoolhouse Road, Jacobstown, NJ 08562 Phone No. 609 758 6945		
			Client: Nigel Newton 219 Pleasant Valley Rd, Titusville		
			Scale: 1"=30'	Drawn By: FJM	
			Date: June 7, 2010	Checked By: DM	
			Title: Septic System Block: 61		
			Lot: 42 Municipality: Township of Hopewell		GE02823100
					Sheet 11 of 5

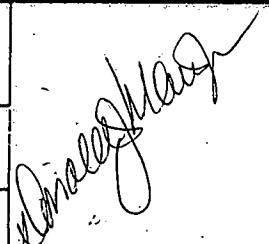


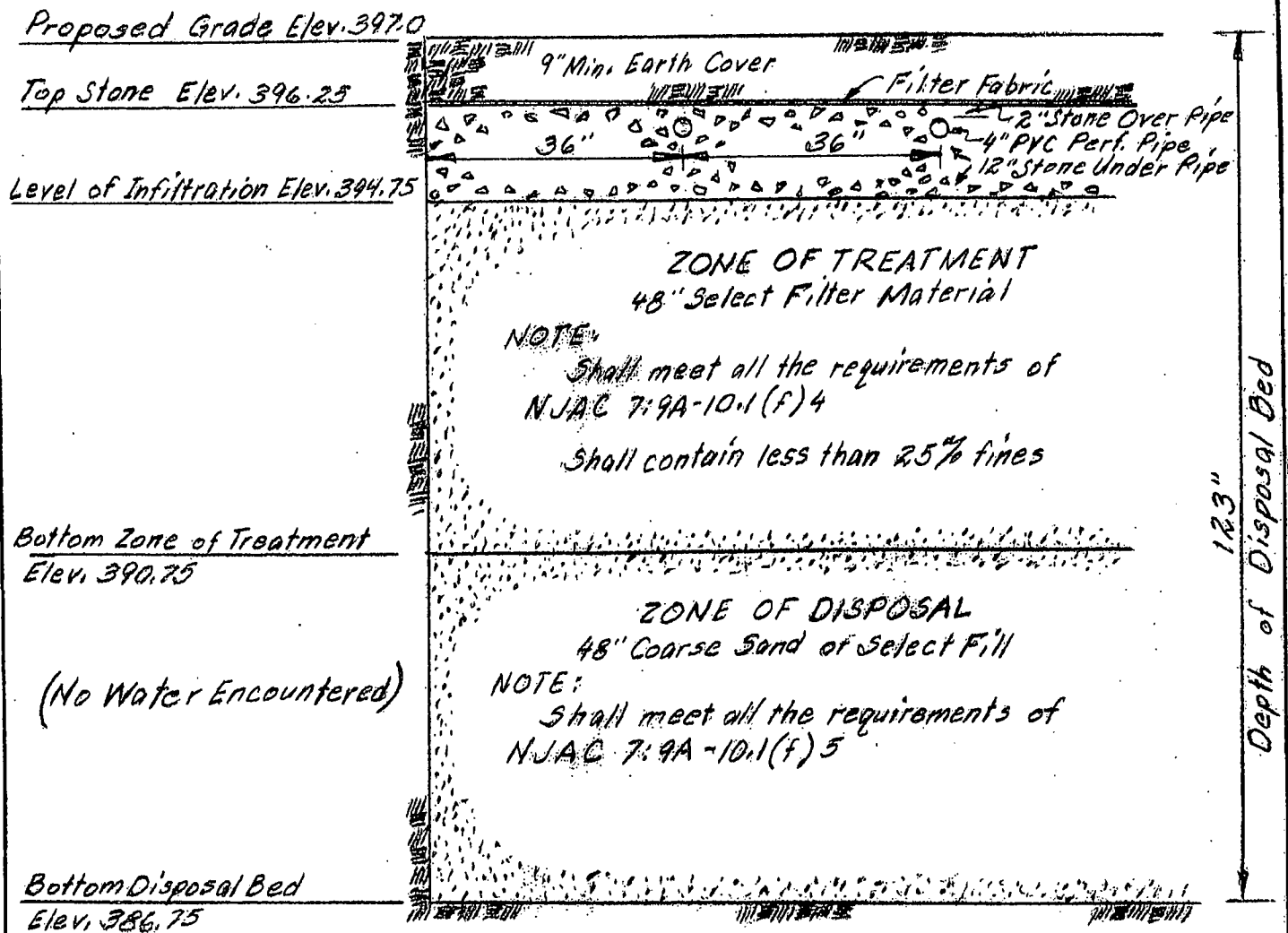
Revision	Date	By	Donald Mauer Jr. Professional Engineer 262 Schoelhouse Road, Jacobstown, NJ 08562 Phone No. 609 758 6945		
			Client: Nigel Newton 219 Pleasant Valley Rd, Titusville		
			Scale: 1"=30'	Drawn By: FJM	
			Date: June 7, 2010	Checked By: DM	
			Title: Septic System		
			Lot: 42 Municipality: Township of Hopewell		Block: 61
					GE02325100
					Sheet 1 of 5



1,250 Gal. SEPTIC TANK

"No Scale"

Revision	Date	By	Donald Mauer Jr. Professional Engineer 262 Schoolhouse Road, Jacobstown, NJ 08562 Phone No. 609 758 6945		
			Client: <i>Nigel Newton</i> <i>219 Pleasant Valley Rd, Titusville</i>		
			Scale: <i>No Scale</i>	Drawn By: <i>FJM</i>	
			Date: <i>June 3, 2010</i>	Checked By: <i>DM</i>	
			Title: <i>Septic System</i>	Block: <i>61</i>	
			Lot: <i>42</i>	Municipality: <i>Township of Hopewell</i>	GE02823100
					Sheet 3 of 5



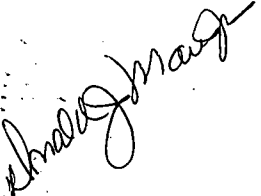
"C" CROSS SECTION DISPOSAL BED
Scale: 1" = 2'

SEPTIC SYSTEM QUANTITIES

- 1,250 Gal. - Reinf. Conc. Septic Tank with Metal Lid and Conc. Riser
- 18 Inch - 1 1/2" Washed Crushed Stone DOT 3, 4 or 24 (110 tons)
- 305 Cu. Yds. - Select Filter Material (495 tons)
- 270 Lin. Ft. - 4" PVC Perf. Pipe
- 50 Lin. Ft. - 4" Sch-40, PVC Pipe
- 1,020 Sq. Ft. - Filter Fabric (Terra Tex Fabric 14 mil.) or equivalent
- 9" Min. - Earth Cover

NOTE:

This septic system was not designed to support a garbage disposal unit.

Revision	Date	By	Donald Mauer Jr. Professional Engineer 262 Schoolhouse Road, Jacobstown, NJ 08562 Phone No. 609 758 6945		
			Client: <i>Nigel Newton</i> <i>219 Pleasant Valley Rd, Titusville</i>		
			Scale: <i>Noted</i> Date: <i>June 7, 2010</i>	Drawn By: <i>FJM</i> Checked By: <i>DM</i>	
			Title: <i>Septic System</i> Lot: <i>42</i> Municipality: <i>Township of Hopewell</i>	Block: <i>61</i>	
					GE02823100 Sheet 4 of 5

GENERAL NOTES

- Prior to construction the engineer shall have the septic system staked-out and a bench mark set.
- The design engineer must certify that all sand fill for the zone of treatment and for the zone of disposal has been tested and is in accordance with fill specifications. There shall be no emplacement of fill until the engineer has given his approval after having obtained grab samples from material stockpiled at the site.
- Construction inspections are required by the design engineer. The engineer shall be notified to inspect the following:
 - a) Open Pit
 - b) Disposal and Treatment fill emplacement to conduct compaction tests
 - c) Stone and lateral emplacement
 - d) Back-fill and final grade elevation check
- Changes in this design are not allowed without receiving prior approval from the design engineer and the Hopewell Township Health Department.
- When completed the engineer shall prepare as-built plans signed and sealed.
- The engineer shall be notified at least 24 hours prior to start of construction.
- There are no wells or septic systems within 100' of this proposed disposal bed.
- All trees within 10' of the proposed disposal bed must be removed.
- The existing septic tank must be pumped out by a license hauler and inspected.

BED SIZING CALCULATION

Existing 3-Bedroom Dwelling

1st Bedroom

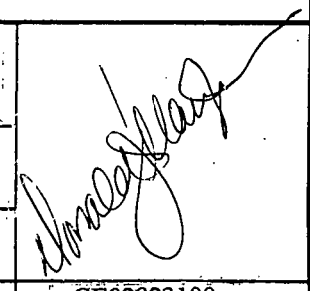
200 gpd

2nd and 3rd Bedrooms

300 gpd

Daily Volume 500 gals

$1.61 \times 500 \text{ gals} = 805 \text{ sq. ft.} \times 1.25\% = 1,006.25 \text{ sq. ft.}$ Required Disposal Area
 Designed Disposal Bed $30' \times 34' = 1,020 \text{ sq. ft.}$

Revision	Date	By	Donald Mauer Jr. Professional Engineer 262 Schoolhouse Road, Jacobstown, NJ 08562 Phone No. 609 758 6945		
			Client: <i>Nigel Newton</i> <i>219 Pleasant Valley Rd, Titusville</i>		
			Scale: <i>None</i> Date: <i>June 7, 2010</i>	Drawn By: <i>FJM</i> Checked By: <i>DM</i>	
			Title: <i>Septic System</i> Lot: <i>42</i> Municipality: <i>Township of Hopewell</i>	Block: <i>G1</i>	
					GE02823100 Sheet 3 of 5

George Kiesel

From: Paul Pogorzelski [paulpogo@hopewelltwp.org]
Sent: Monday, June 14, 2010 5:32 PM
To: 'George Kiesel'
Subject: Septic Design Review Blk 61 Lot 42

Grading along NE property line appears to concentrate runoff onto neighboring lot. Revised grading in this area.

Paul E. Pogorzelski, P.E.
Hopewell Township Administrator/Engineer
201 Washington Crossing-Pennington Road
Titusville, NJ 08560
609-737-0605 ext 664
609-737-6839 (fax)

 Please consider the environment before printing this e-mail

George Kiesel

From: Paul Pogorzelski [paulpogo@hopewelltp.org]
Sent: Monday, July 12, 2010 8:27 AM
To: gkiesel@hopewelltp.org
Subject: Revised Septic Design Review B61 L42

Approved

Paul E. Pogorzelski, P.E.
Hopewell Township Administrator/Engineer
201 Washington Crossing-Pennington Road
Titusville, NJ 08560
609-737-0605 ext 664
609-737-6839 (fax)

 Please consider the environment before printing this e-mail



TOWNSHIP of HOPEWELL

MERCER COUNTY

DEPARTMENT OF HEALTH

Serving Hopewell Borough & Pennington Borough

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

Phone: 609.737.0120 Fax: 609-737-6836

Nigel Newton
219 Pleasant Valley Rd.
Titusville NJ 08560

June 14 2010

RE: Block 61 Lot 42

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 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.
3. An acceptable grading plan has been included and must be constructed accordingly and can only be changed with township and design engineer approval.
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 compliance 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 NJDEP 7: 9A.
12. All sand and clay fill must be stock piled on site and certified by a licensed laboratory or by the design engineer once in place using a perc test.
13. Hopewell Township requires a 50% larger, two compartment septic tank whenever a sewer ejector is utilized in a dwelling.

Effective January 1, 1990 the New Jersey Department of Environmental Protection enacted a law requiring all Existing septic tank must be fitted with concrete risers and cast-iron manhole covers to grade.

Very truly yours,


George K. Kiesel
Environmental Health Coordinator

HOPEWELL TOWNSHIP
JUL 9 2010
ADMINISTRATION

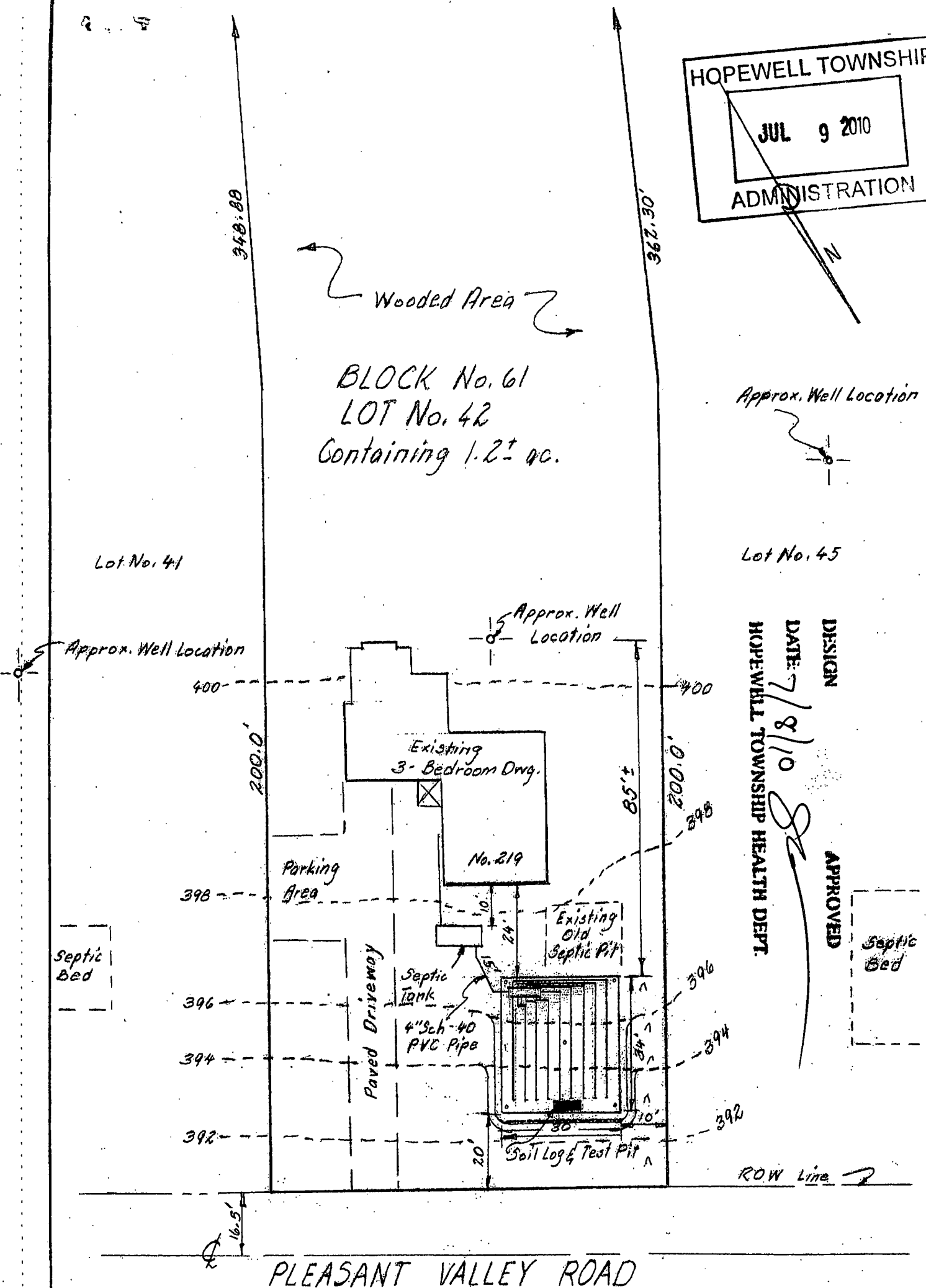
BLOCK No. 61
LOT No. 42
Containing 1.2± ac.

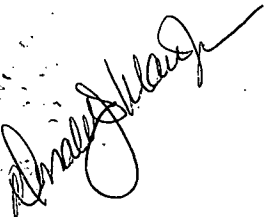
Approx. Well Location

Lot No. 41

Lot No. 45

DESIGN
DATE: 7/8/10
HOPEWELL TOWNSHIP HEALTH DEPT.
APPROVED



Revision	Date	By	Donald Mauer Jr. Professional Engineer 262 Schoolhouse Road, Jacobstown, NJ 08562 Phone No. 609 758 6945		
			Client: Nigel Newton 219 Pleasant Valley Rd, Titusville		
			Scale: 1"=30'	Drawn By: FJM	
			Date: June 7, 2010	Checked By: DM	
			Title: Septic System Lot: 42 Municipality: Township of Hopewell		
			Block: 61		GE02823100
					Sheet 11 of 5

Proposed Grade Elev. 397.0

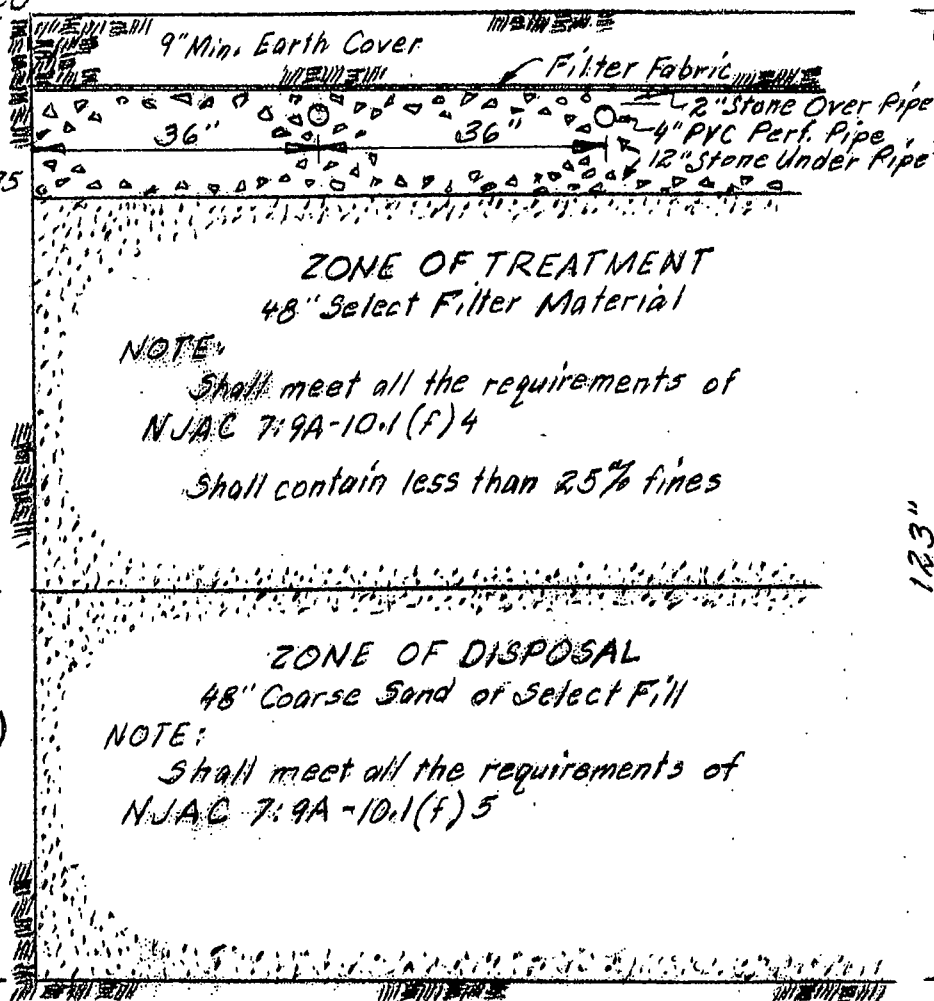
Top Stone Elev. 396.25

Level of Infiltration Elev. 394.75

Bottom Zone of Treatment
Elev. 390.75

(No Water Encountered)

Bottom Disposal Bed
Elev. 386.75



"C"

CROSS SECTION DISPOSAL BED

Scale: 1" = 2'

SEPTIC SYSTEM QUANTITIES

1250 Gal. - Reinf. Conc. Septic Tank with Metal Lid and Conc. Riser

18 Inch - 1 1/2" Washed Crushed Stone DOT 3, 4 or 24 (110 tons)

305 Cu. Yds. - Select Filter Material (495 tons)

270 Lin. Ft. - 4" PVC Perf. Pipe

50 Lin. Ft. - 4" Sch-40, PVC Pipe

1,020 Sq. Ft. - Filter Fabric (Terra Tex Fabric 14 mil.) or equivalent

9" Min. - Earth Cover

NOTE:

This septic system was not designed to support a garbage disposal unit.

Revision	Date	By	Donald Mauer Jr. Professional Engineer 262 Schoolhouse Road, Jacobstown, NJ 08562 Phone No. 609 758 6945	
			Client: Nigel Newton 219 Pleasant Valley Rd, Titusville	
			Scale: Noted Date: June 7, 2010	
			Drawn By: FJM Checked By: DM	
			Title: Septic System Lot: 42 Municipality: Township of Hopewell	
				Block: 61 GE02823100 Sheet 4 of 5

COUNTY/MUNICIPALITY Mercer County / Hopewell Township

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

Form 1 - General Information

1. Type of Permit Needed (Check applicable categories):
☐ New Construction ☒ Alteration/No Expansion or Change of Use
☐ Alteration/Expansion of Change in Use
☐ Alteration/Malfunctioning System
☐ Deviation from Standards ☐ Repairs to Existing System
2. Location of Project:
Municipality Hopewell Township Block No. 61 Lot No. 42
Street Address 219 Pleasant Valley Rd, Titusville Zip 08560
3. Name of Applicant (print): Nigel Newton
4. Applicant's Present Address: 219 Pleasant Valley Rd, Titusville 08560
5. Applicant's Phone Number: 609-466-7732
6. Type of Facility:
☒ Residential
☐ Commercial/Institutional
Specify Type of Establishment: _____
7. Type of Wastes to be Discharged:
☒ Sanitary Sewage
☐ Industrial Wastes
☐ Other - Specify Type _____
8. Other Approvals/Certification/Waivers/Exemptions (Attach to Applications):
☐ Pinelands Commission
☐ U.S. Army Corps of Engineers
☐ NJDEP - Bureau of Flood Plain Management
☐ Other - Specify: _____
9. I hereby certify that the information furnished on Form 1 of this application is true. I am aware that false swearing is a crime in this State and subject to prosecution.

Signature of Applicant Nigel Newton Date 6/10/10

FOR AGENCY USE ONLY

- ☐ Application Denied - Reason for Denial/Citation of Rules Violated _____
- ☒ Application Approved
- ☐ Application Approved Subject to Approval of NJDEP

Date of Action 7/12/10 Signature of Authorized Agent [Signature]
Name and Title _____

Form 2a - General Site Evaluation Data

Lot 42 Block 61

1. Name of Site Evaluator (print): Frank Mazzella
2. Business Address of Site Evaluator: 215 Pleasant Valley Rd., Titusville, N.J. 086
3. Business Phone Number of Site Evaluator: 609 737 3632

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 ☐ 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 = _____

7. Hydraulic Head Test:

- a) Hydraulically Restrictive Horizon: Depth Top to Bottom _____
b) Piezometer A: Depth to Bottom _____ Depth of Water Level (24 hr) _____
c) Piezometer B: Depth to Bottom _____ Depth of Water Level (24 hr) _____
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 prescribed in N.J.A.C. 7:14-8.

Signature of Soil Evaluator

Frank Mazzella

Date

May 29, 2010

Signature Professional Engineer

Michael J. Mag...Lic. # N.J. GE.02823100

Form 2b - Soil Log and Interpretation

Lot 42 Block 611. Log Number 1 Method (Check One): ☒ Profile Pit ☐ Boring2. Soil Log 5-24-10

Depth (Inches) Munsell Color Name and Symbol; Estimated Textural Class;
Top-Bottom Estimated Volume % Coarse Fragment, If Present; Structure;
Moist or Dry Consistence; Mottling - Abundance, Size and Contrast, If Present.

Basin Flooding Test Pit

0-11" Brown (10YR 4/3) Loam; Moist; Loose; Common Roots; Structureless Weak Fine;
Clear Wavy Boundary

11"-31" Strong Brown (7.5YR 4/6) Silt Loam; Moist; Loose; Few Roots; Weak Fine
Subangular Blocky Structure; Gradual Wavy Boundary

31"-94" Strong Brown (7.5YR 5/4) Gritty Loam; Moist; Loose; Massive Weak
Fine; Gradual Wavy Boundary

94"-120" Brown (7.5YR 4/4) Silt Loam; Moist; Friable; Moderate Coarse Subangular
Blocky Structure; 10% Coarse Fragments

3. Ground Water Observations:

Seepage - Indicate Depth _____
Pit/Boring Flooded - Depth after _____ Hours _____

4. Soil Limiting Zones (Check appropriate categories):

Fractured Rock Substratum - Depth to Top _____
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 Not Encountered

5. Soil Suitability Classification: I

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.

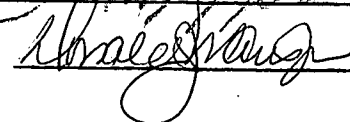
Signature of Site Evaluator



Date

March 29, 2010

Signature Professional Engineer

License # NO-GE02823100

Form 3a
Soil Permeability Data

Block 61 Lot 42

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 Flooding	1		120"	Passed

* 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 _____

___ Average of Test Replicates

___ Single Replicate

___ Slowest of Replicates

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

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 Frank Marshall Date 5-29-10

Signature of Professional Engineer Michael V. [Signature] License # NJ-GE 02823100

Form 3g Basin Flooding Test Data

1. Test Number 1 Reference Soil Log 1 Date Tested 5-24-10
2. Depth of Pit, ft 10'
3. Area of Pit, ft² 30 sq. ft.
4. Description of Rock Substratum Within Test Zone:
Type of Rock Diabase (10%)
Name of Formation _____
Average Fracture Spacing _____
Type of Fractures (Check Appropriate Category):
☒ Open (Wide), Clean -- Width of Openings, mm _____
☐ Open (Wide), Infilled with Fines -- Width of Openings, mm _____
☐ Tight (Closed)
- Orientation of Fractures:
☒ 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
☐ Not Rippable with Hand Tools, Rippable by Machine
☐ Not Rippable by Machines, Explosives Used
5. Time of First Basin Flooding 9:45 am 5-24-10
Volume of Water Added, Gal 400 gals.
6. Result of First Basin Flooding:
☒ Basin Drained within 24 hrs - Indicate Time 3:00 pm 5-24-10
☐ Basin Not Drained within 24 hrs.
7. Time of Second Basin Flooding 9:30 am 5-25-10
Volume of Water Added, Gal 400 gals.
8. Result of Second Basin Flooding:
☒ Basin Drained within 24 hrs. - Indicate Time 3:30 pm 5-24-10
☐ Basin Not Drained within 24 hrs.
9. 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 Frank Marzella Date 5-29-10
- Signature of Professional Engineer Wm. J. [Signature] License # NJ-GE 02823100

Form 4
General Design Data

1. Volume of Sanitary Sewage, gal. 500 gals.
☒ Residential: No. of Dwelling Units 1 Total No. of Bedrooms 3
☐ 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 _____

2. **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: _____

3. **System Components:**

- a) Grease Trap Capacity, gals _____
Show Calculation Used: _____
- b) Septic Tank Capacities, gals: ☒ First (Single) Compartment 1,250 gals.
☐ Second Compartment _____ ☐ Third Compartment _____
- c) Effluent Distribution Method: ☒ Gravity Flow ☐ Gravity Dosing ☐ Pressure Dosing
Dosing Device: ☐ Pump ☐ Siphon
- d) Dosing Tank Capacities, gals:
Total Capacity _____; Dose Volume (Vd) _____; Reserve Capacity _____
- e) Laterals: Number 9; Total Length 270'; Pipe Diameter 4"; Spacing 36"
- f) Connecting Pipe: Diameter 4" Length 15'
- g) Manifold: Diameter _____; Length _____
- h) Disposal Field: Type of Installation C
Design Permeability (Percolation Rate) 3 min to 15 min. per inch
Trenches: Width _____; Total Length _____; Bed Area 1,020 sq. ft.
- i) Seepage Pits: Design Percolation Rate _____
Number of Pits _____ Total Percolating Area Provided _____

4. **Attachments (Check items included):**

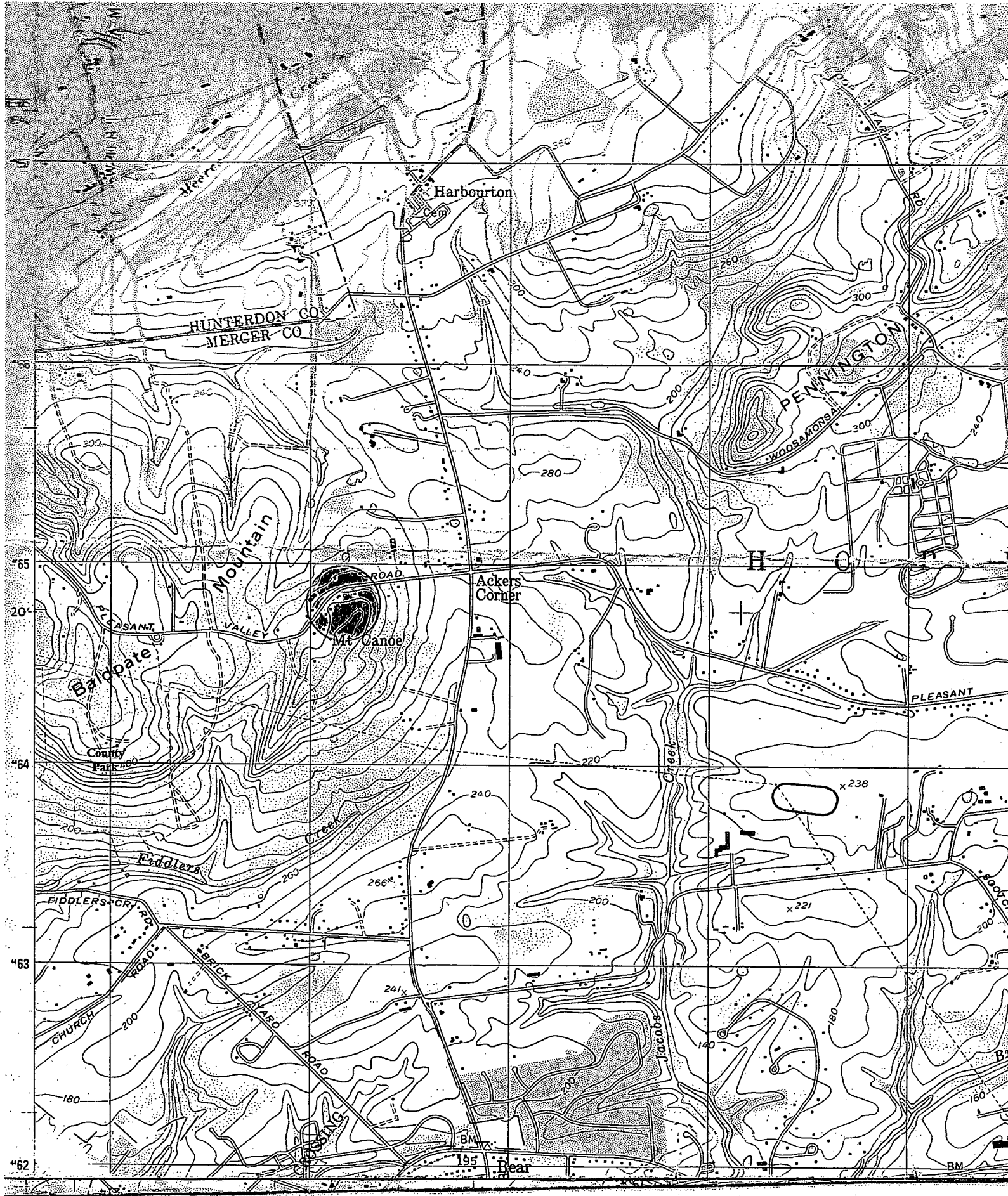
- ☒ General Plan of System Showing Location of All System Components
☒ X-Sections of Each System Component Including Grease Trap, Septic Tank, Dosing Tank,
Disposal Field, Seepage Pits and Interceptor Drains
☐ Pump Performance Curve
☐ Other (Specify) _____

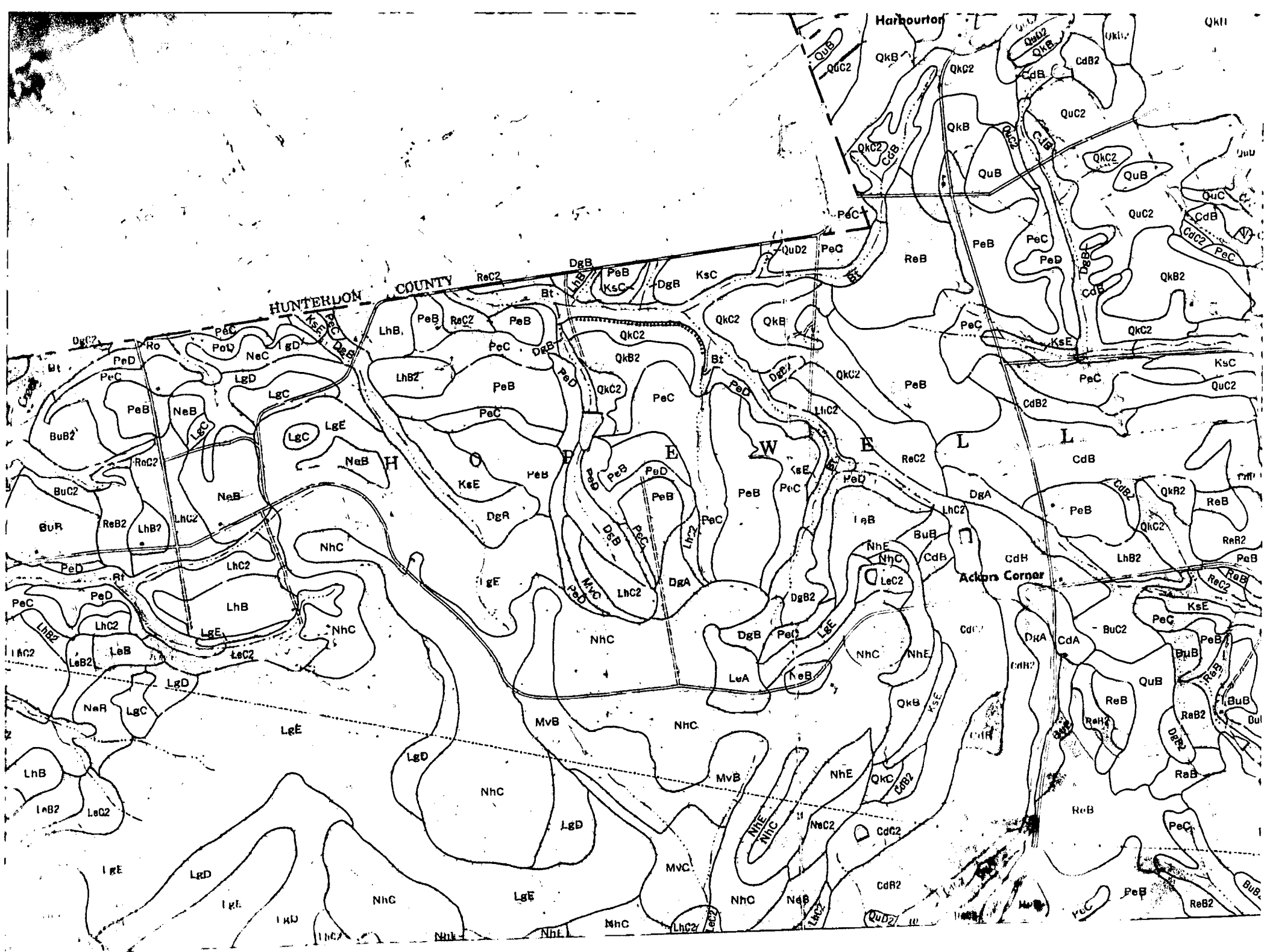
I hereby certify that the information furnished on Form 4 of this application (and attachments thereto) is true and accurate. I am aware that falsification of data is a violation of the Water Pollution Control Act (N.J.S.A. 58:10A-1 et seq.) and is subject to penalties as prescribed in N.J.A.C. 7:14-8.

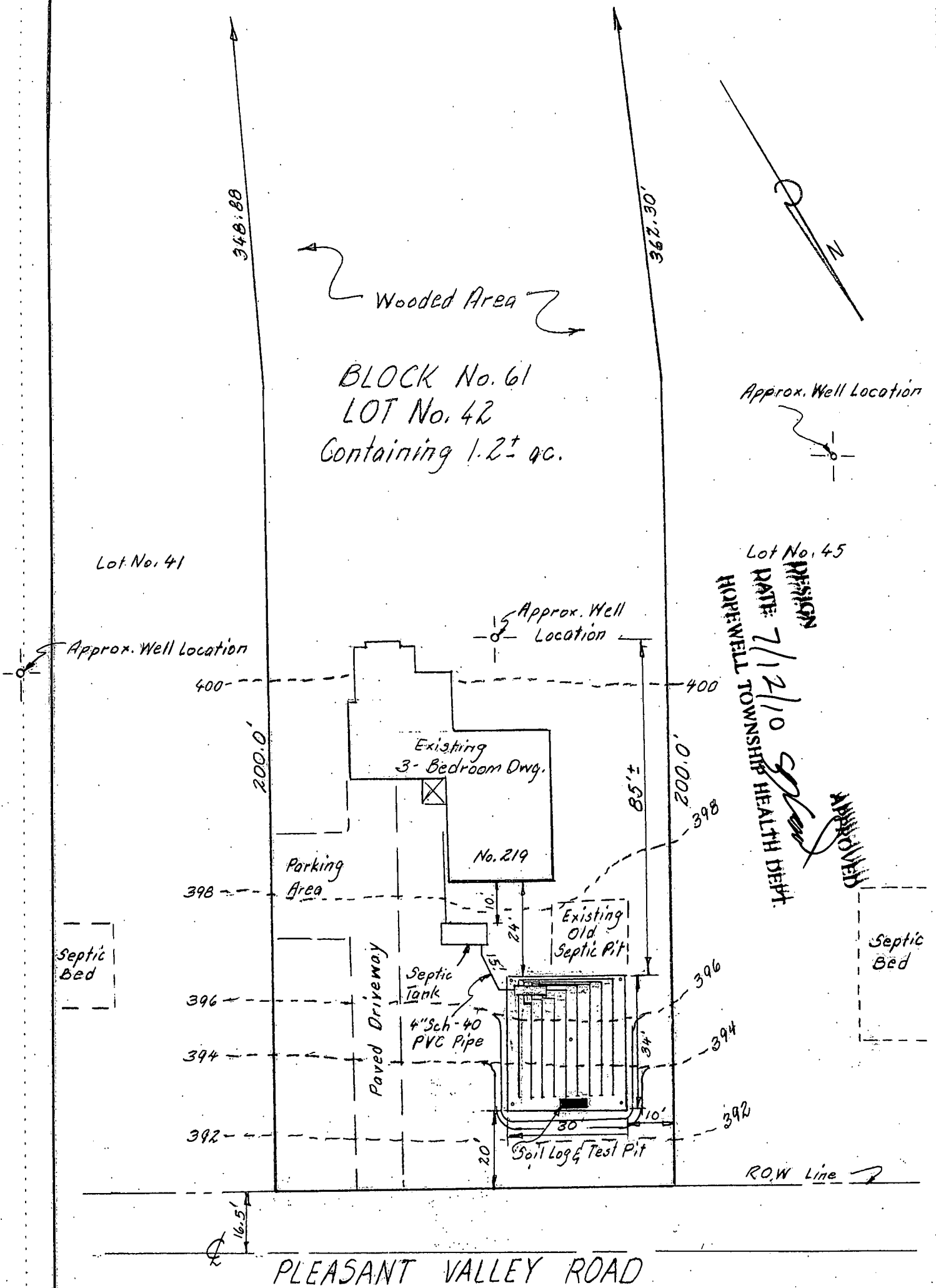
Signature of Professional Engineer

Braedman

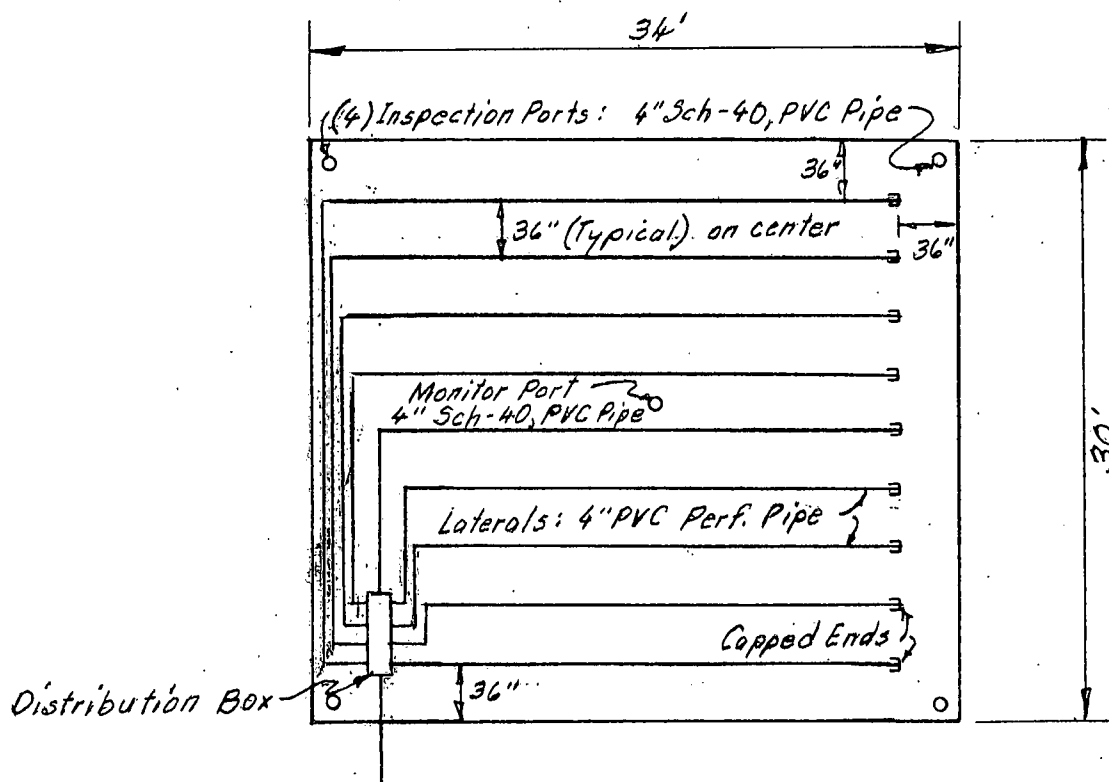
Date 6/7/10





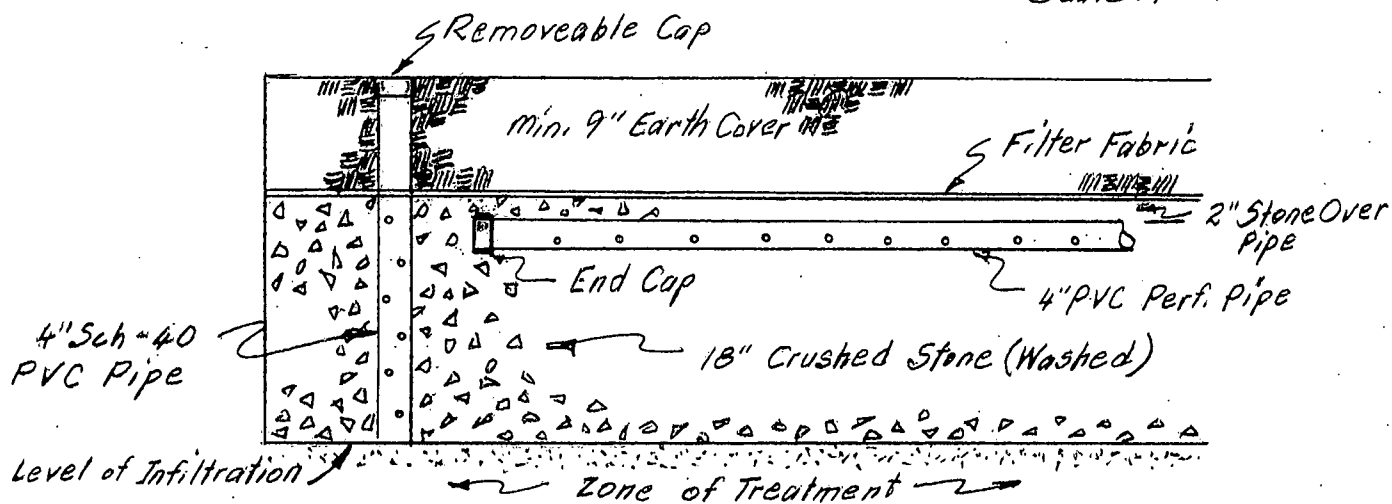


Revision	Date	By	Donald Mauer Jr. Professional Engineer 262 Schoolhouse Road, Jacobstown, NJ 08562 Phone No. 609 758 6945		
			Client: Nigel Newton 219 Pleasant Valley Rd, Titusville		
			Scale: 1"=30'	Drawn By: FJM	
			Date: June 7, 2010	Checked By: DM	
			Title: Septic System	Block: 61	
			Lot: 42 Municipality: Township of Hopewell		GE02823100 Sheet // of 5



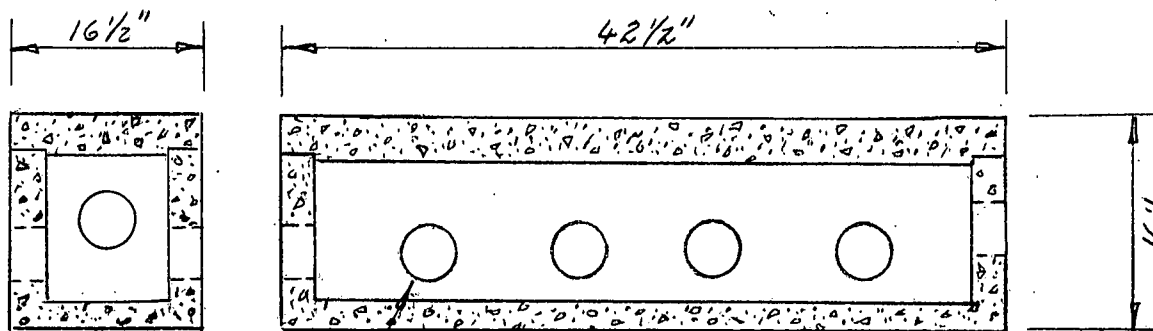
LAY-OUT DISPOSAL BED

Scale: 1" = 10'



DETAIL OF INSPECTION PORT & DISTRIBUTION LATERAL

"No Scale"



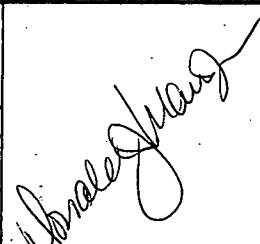
4" PVC Gasket (Typ.)

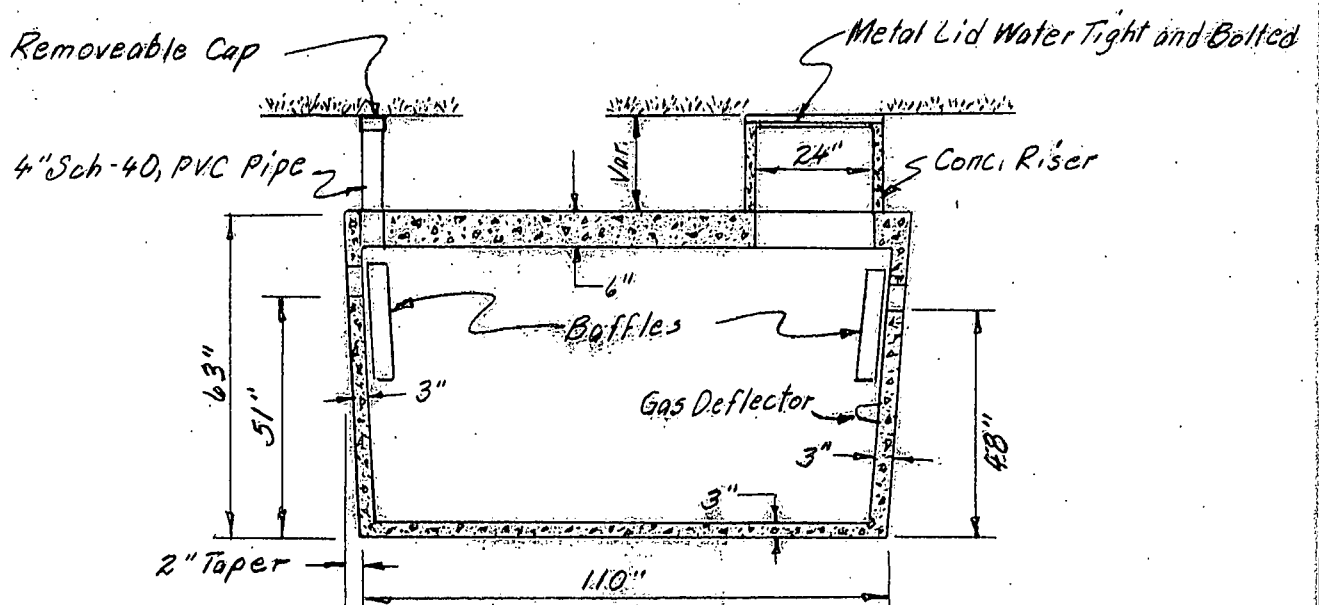
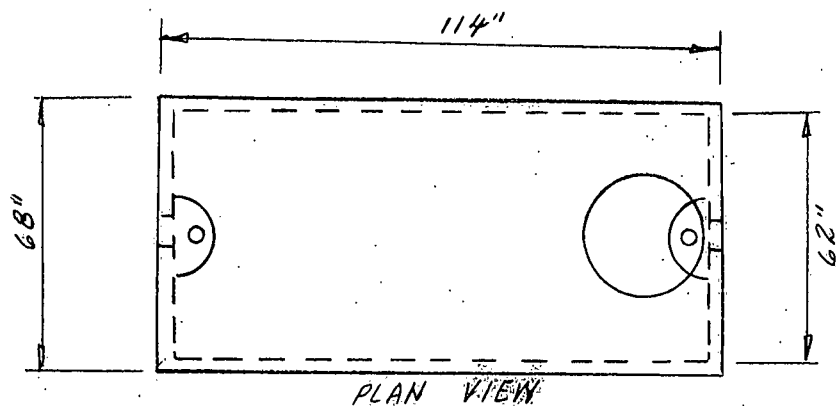
NOTE:

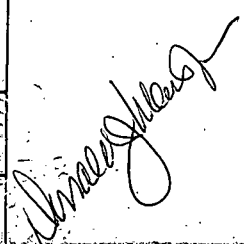
CROSS SECTION DISTRIBUTION BOX

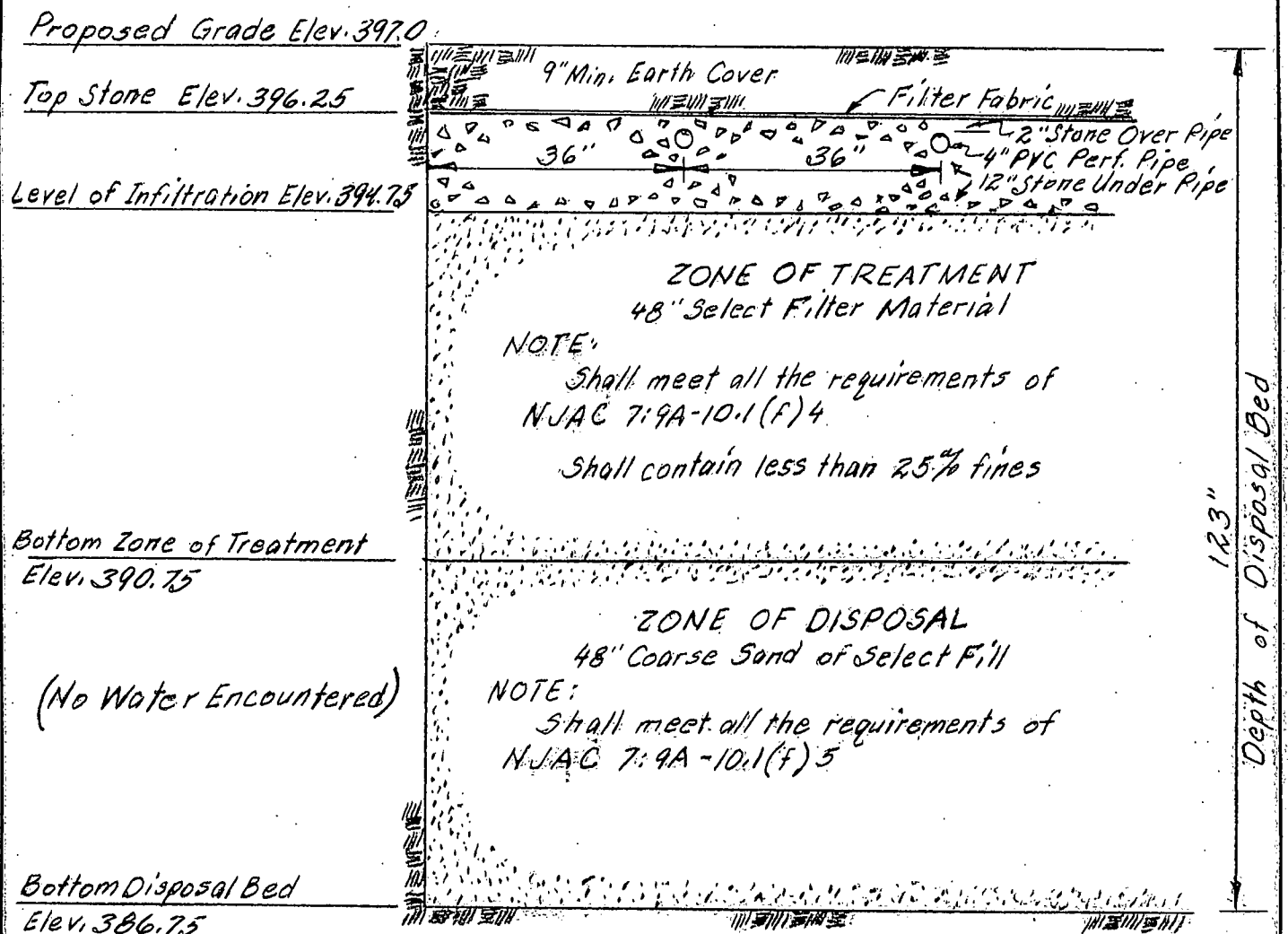
"No Scale"

Monitor Port shall extend down through the zone of treatment and into the zone of disposal by at least two feet (2').

Revision	Date	By	Donald Mauer Jr. Professional Engineer 262 Schoolhouse Road, Jacobstown, NJ 08562 Phone No. 609 758 6945		
			Client: <i>Nigel Newton</i> <i>219 Pleasant Valley Rd, Titusville</i>		
			Scale: <i>Noted</i> Date: <i>June 7, 2010</i>	Drawn By: <i>FJM</i> Checked By: <i>DM</i>	
			Title: <i>Septic System</i> Block: <i>61</i> Lot: <i>42</i> Municipality: <i>Township of Hopewell</i>		
GE02823100 Sheet 2 of 5					



Revision	Date	By	Donald Mauer Jr. Professional Engineer 262 Schoolhouse Road, Jacobstown, NJ 08562 Phone No. 609 758 6945		
			Client: Nigel Newton 219 Pleasant Valley Rd, Titusville		
			Scale: No Scale	Drawn By: FJM	
			Date: June 7, 2010	Checked By: DM	
			Title: Septic System	Block: 61	
			Lot: 42 Municipality Township of Hopewell		GE02823100 Sheet 3 of 5



"C"

CROSS SECTION DISPOSAL BED

Scale: 1"=2'

SEPTIC SYSTEM QUANTITIES

1,250 Gal. - Reinf. Conc. Septic Tank with Metal Lid and Conc. Riser

18 Inch - 1 1/2" Washed Crushed Stone DOT 3, 4 or 24 (110 tons)

305 Cu. Yds. - Select Filter Material (495 tons)

270 Lin. Ft. - 4" PVC Perf. Pipe

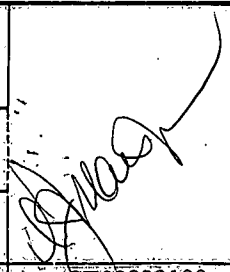
50 Lin. Ft. - 4" Sch-40, PVC Pipe

1,020 Sq. Ft. - Filter Fabric (Terra Tex Fabric 14 mil.) or equivalent

9" Min. - Earth Cover

NOTE:

This septic system was not designed to support a garbage disposal unit.

Revision	Date	By	Donald Mauer Jr. Professional Engineer 262 Schoolhouse Road, Jacobstown, NJ 08562 Phone No. 609 758 6945		
			Client: <i>Nigel Newton</i> <i>219 Pleasant Valley Rd, Titusville</i>		
			Scale: <i>Noted</i> Date: <i>June 7, 2010</i>	Drawn By: <i>FJM</i> Checked By: <i>DM</i>	
			Title: <i>Septic System</i> Block: <i>61</i> Lot: <i>42</i> Municipality: <i>Township of Hopewell</i>		
					GE02823100 Sheet 4 of 5

GENERAL NOTES

- Prior to construction the engineer shall have the septic system staked-out and a bench mark set.
- The design engineer must certify that all sand fill for the zone of treatment and for the zone of disposal has been tested and is in accordance with fill specifications. There shall be no emplacement of fill until the engineer has given his approval after having obtained grab samples from material stockpiled at the site.
- Construction inspections are required by the design engineer. The engineer shall be notified to inspect the following:
 - a) Open Pit
 - b) Disposal and Treatment fill emplacement to conduct compaction tests
 - c) Stone and lateral emplacement
 - d) Back-fill and final grade elevation check
- Changes in this design are not allowed without receiving prior approval from the design engineer and the Hopewell Township Health Department.
- When completed the engineer shall prepare as-built plans signed and sealed.
- The engineer shall be notified at least 24 hours prior to start of construction.
- There are no wells or septic systems within 100' of this proposed disposal bed.
- All trees within 10' of the proposed disposal bed must be removed.
- The existing septic tank must be pumped out by a license hauler and inspected.

BED SIZING CALCULATION

Existing 3-Bedroom Dwelling

1st Bedroom

200 gpd

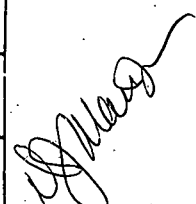
2nd and 3rd Bedrooms

300 gpd

Daily Volume 500 gals

$1.61 \times 500 \text{ gals} = 805 \text{ sq. ft.} \times 1.25\% = 1,006.25 \text{ sq. ft.}$ Required Disposal Area

Designed Disposal Bed $30' \times 34' = 1,020 \text{ sq. ft.}$

Revision	Date	By	Donald Mauer Jr. Professional Engineer 262 Schoolhouse Road, Jacobstown, NJ 08562 Phone No. 609 758 6945		
			Client: <i>Nigel Newton</i> <i>219 Pleasant Valley Rd, Titusville</i>		
			Scale: <i>None</i> Date: <i>June 7, 2010</i>	Drawn By: <i>FJM</i> Checked By: <i>DM</i>	
			Title: <i>Septic System</i> Block: <i>61</i>		
			Lot: <i>42</i> Municipality: <i>Township of Hopewell</i>		
					GE02823100 Sheet 3 of 5

219 Pleasant Valley Rd
Marzella

61/42
5/25/10
GX

SL1/BF1 TD=120

0-11 TS

11-31 7.5 $\frac{4}{6}$ Silt loam

31-94 7.5 $\frac{5}{6}$ Sandy loam/loam

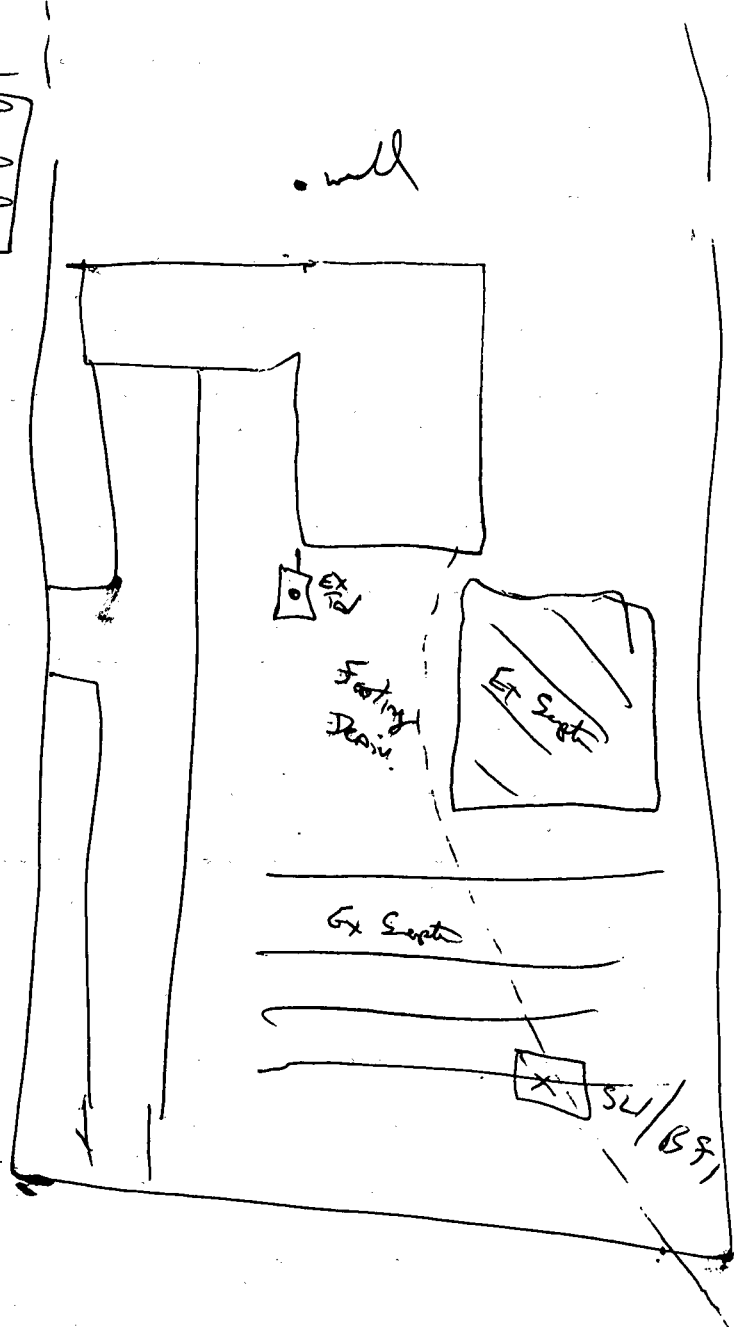
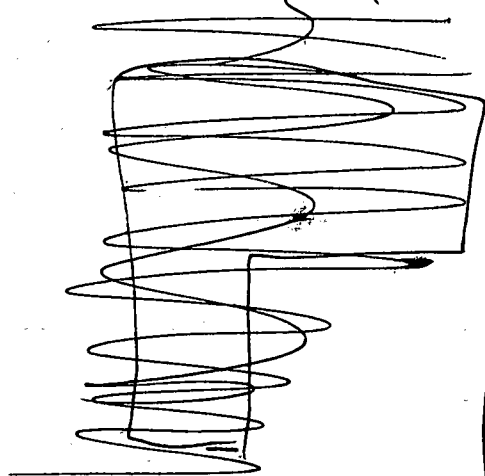
94-120 - Sandy loam w/ Rotted sand stone - Loose

No Mottles no saproge

BS1 - TD=120

F-12"-10am - Dry 3pm

F-12"-10am 5/25 Dry 4pm per Eng
~~with~~



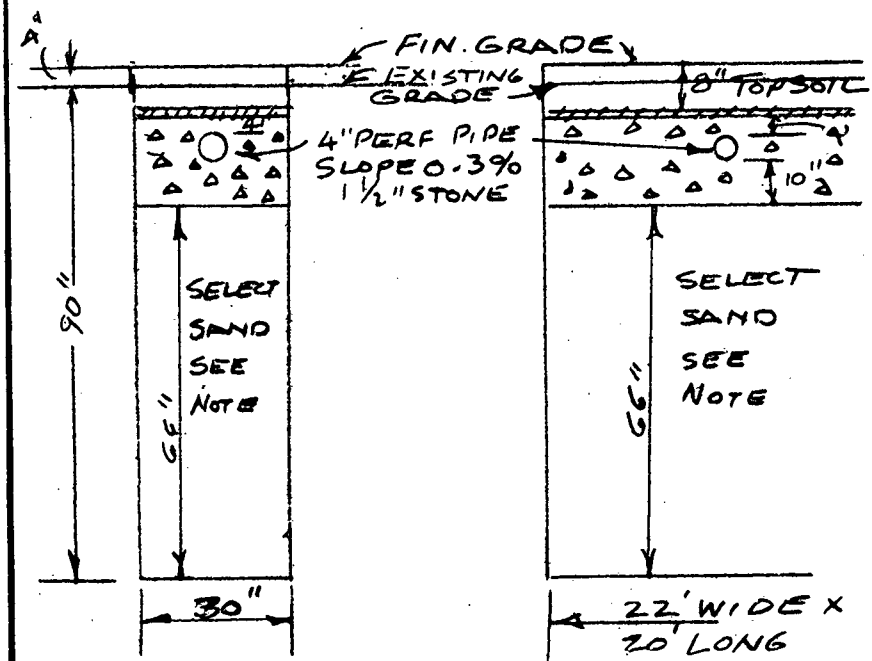
George Kiesel

From: Paul Pogorzelski [paulpogo@hopewelltp.org]
Sent: Monday, July 12, 2010 8:27 AM
To: gkiesel@hopewelltp.org
Subject: Revised Septic Design Review B61 L42

Approved

Paul E. Pogorzelski, P.E.
Hopewell Township Administrator/Engineer
201 Washington Crossing-Pennington Road
Titusville, NJ 08560
609-737-0605 ext 664
609-737-6839 (fax)

 Please consider the environment before printing this e-mail



NOTE: SAND SHALL HAVE A CLAY CONTENT (FINER THAN .0075MM) WHICH SHALL NOT BE LESS THAN 12 PERCENT BY WEIGHT OF THE PORTION OF FINES THAN 2.0 M.M. COARSE FRAGMENTS LARGER THAN 1/4\"

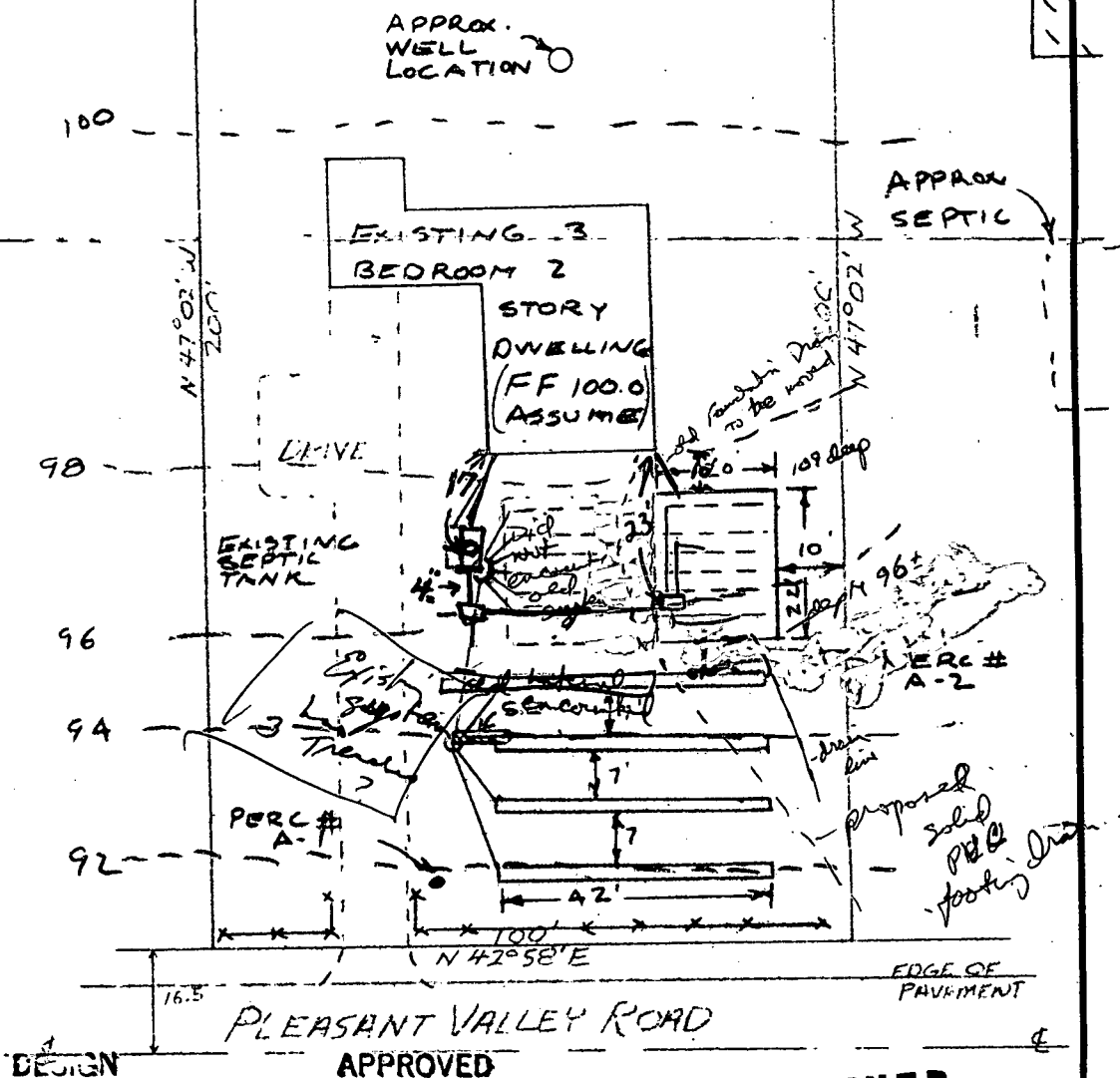
*MERCER COUNTY SOIL SURVEY - SOIL NHC NESHAMINY SILT LOAM SEASONAL HIGH WATER 5'4\"

SOIL LOG

0"	TOP SOIL
9"	BROWN & ORANGE CLAY
60"	ORANGE LOAMY CLAY WITH GRIT
108"	ORANGE CLAY WITH STONE
144"	NO WATER*

PERCOLATION TEST TAKEN 6/11/82
INSPECTOR G. GARINO
TEST RESULTS

HOLE	RESULTS	DEPTH
A-1	21 MIN.	90"
A-2	37 MIN.	104"



DESIGN APPROVED

DATE: 7-29-82

RECEIVED
JUL 28 1982

FRANK L. QUINBY	PROFESSIONAL ENGINEER	HOPEWELL TOWNSHIP HEALTH DEPT.	SECTION 61	LOT 42
LANDSURVEYOR No 11087				



PRINCETON JCT. ENGINEERING CO.
PROFESSIONAL ENGINEERS & LAND SURVEYORS

P.O. BOX 223 NORTH POST RD.
PRINCETON JUNCTION, NEW JERSEY 08550
(609) 799 1906 (609) 799 1963

DISPOSAL SYSTEM REPAIR
FOR

MR. & MRS. JAMES D'ARCY
HOPEWELL TWP N.J.
MERCER COUNTY

FRANK L. QUINBY
BRYCE M. RITTENHOUSE
ARNOLD RYDEN, JR.
D. GEOFFREY BROWN
JOSEPH P. FEDERICI, JR.

P.E. L.S. NO. 11087
P.E. L.S. NO. 13453
L.S. NO. 21223
P.E. NO. 24327
P.E. NO. 27055

DRAWN
R R
CHECK
FQ
REV.

DATE
7/26/82
SCALE
1" = 30'

CERTIFIED AS CORRECT TO:

7-26-82
DATE

6-2-83

Received call from Richard Thayer RealEstate agent. Looking for ways to cut back costs. suggested installing bed at this time with trenches held for later installation. later. Depth of H₂O questionable. may be able to reduce or eliminate sand. Gary

7-18-83

Tank filled to very top + seeping out
Bed started. 109 at deep end on up hill side

Suggested pumping tank to owner + Mr Thayer. J

7-19-83

Bed 20x22 did not encounter old system.
original footing drain to be changed to solid PVC
and moved around bed. J

7-20-83

Started to dump sand. J

Bed 20x22 ok.

depth OK

7-21-83

Connecting tank to existing D box

Cast iron pipe was filled with solids + rust

could very well have been source

of failure + backup out of tank lid.

Location of new footing drain to be checked. J

7-22-83

Footing drain installation.

Ran into ^{end of} old lateral. used sealed plastic pipe.

HOPEWELL TOWNSHIP HEALTH DEPARTMENT
Route 546 and Scotch Road, Titusville, New Jersey 08560
(609) 737-0120

APPLICATION FOR SEWAGE DISPOSAL SYSTEMS

Applicant James D'Arcy Block 61 Lot 42
Mailing Address 66 Malcolm Road Location Pleasant Valley Road
Mahwah, N.J. 07430 Size of Lot _____ Square Feet
Phone # (Home) 201-529-5689 (Work) _____ Zoning Designation _____
Builder if different than above _____ Phone # _____
Mailing Address _____
Signature of Applicant Catherine P. D'Arcy Date 9/28/82
Fee \$ 25.00 Date Received 9/28/82 - Helen Cooper
Type of Construction or Usage _____ Permit No. 336
Number of Bedrooms _____ Gal/Day if Commercial _____
Water Source _____ Square Footage of Bldg. _____

SOIL TEST RESULTS

Hole No.	Perc Test Results Depth	Rate Min/In	Depths	Soil Log Description of Soil Encountered
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

Date of Perc Tests _____
Date of Soil Logs _____
Professional Firm _____
Test Conducted by Repair
Witnessed By _____
Design Certified By: see attached
(Signature of Professional Engineer) _____
License # _____
Date _____

Depth to Bedrock _____
Depth to Seasonal High Water Table _____
Determined by (check one):
a) Physical Measurement _____ Jan 1 - May 15
b) Soil Maps _____ List Below
c) Soil Detail _____ Describe Below

SYSTEM DESIGN SHALL COMPLY WITH N.J.D.E.P. STANDARDS FOR THE CONSTRUCTION OF INDIVIDUAL SUBSURFACE SEWAGE DISPOSAL SYSTEM AND HOPEWELL TOWNSHIP SEWAGE DISPOSAL ORDINANCE.

No. of Bedrooms _____ X _____ Square Footage/Bedroom = _____ Square Feet
Tank(s) Size _____ Square Footage Designed _____
Installer Vic Consoli Phone # _____
Address Wentworth Rd Hopewell

Three copies of Design to be submitted on 8 1/2" x 14" sheets.
Minimum Distance to all Water Courses, Flood Plains and Wells, 100 feet unless approved by Administrative Authority.
Distance to other disposal systems on adjacent lots - 50 feet minimum.
Expansion attics require additional design area square footage.
Garbage disposals require 25% over design and an additional tank in series.
Distance to foundations and foundation drains, etc. 25 feet minimum.
Pump design to include pitless adapter, pump size and model, and minimum wet well size.

Application Approved Harry A. Swann Date 7-29-82
(Partial) Installation Approved Harry A. Swann Date 7-21-83
As Built: Approved _____ Date _____

PRINCETON JUNCTION ENGINEERING CO.

PROFESSIONAL ENGINEERS AND LAND SURVEYORS

NORTH POST ROAD, PRINCETON JUNCTION, N. J. 08550

799-1906

799-1963

"PERCOLATION TEST RESULTS"

ORDERED BY JAMES D'ARCY

FOR JAMES D'ARCY

PLEASANT VALLEY RD

HOPEWELL Twp.

MUNICIPALITY HOPEWELL Twp.

DATE 6/11/82

WEATHER 75° CLOUDY

SHEET 13

BLOCK 61

LOT 42

NO. OF TEST HOLES 2

NO. OF TESTS TO DETERMINE SATURATION RESULTS IN MINUTES PER INCH 6



RECEIVED

JUN 30 1982

Hopewell Township Health Dept.

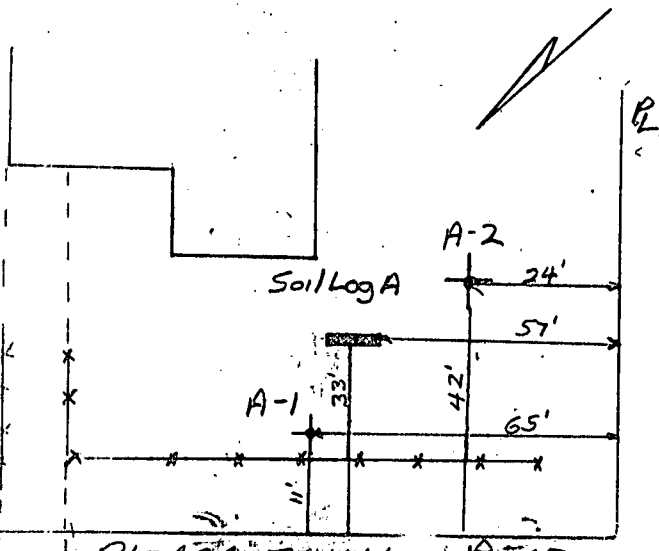
COMMENTS

A-1	90"	1" IN 21 MIN
A-2	104"	1" IN 37 MIN

NOTE: SOIL IS NESHAMINY SILT LOAM
SEASONAL HIGH WATER IS 5'4"

Frank P. Quinly 6/18/82
P.E. & L.S. LIC. NO. 4087 DATE

SKETCH OF TEST HOLE LOCATIONS



SOIL LOG

0"-9" Top Soil

9"-60" BROWN & ORANGE CLAY

60"-108" ORANGE LOAMY CLAY-W-GRIT

108"-144" ORANGE CLAY LOAM-W-SOME STONE
NO WATER

PRINCETON JUNCTION ENGINEERING CO.

PROFESSIONAL ENGINEERS AND LAND SURVEYORS

FRANK L. QUINBY, P.E. & L.S.
BRYCE M. RITTENHOUSE, P.E. & L.S.
ARNOLD RYDEN JR., L.S.
D. GEOFFREY BROWN, P.E.
JOSEPH P. FEDERICI JR., P.E.

NORTH POST ROAD

P. O. BOX 223

PRINCETON JUNCTION, N. J. 08550

609-799-1906

July 27, 1982

RECEIVED

JUL 28 1982

Hopewell Township Health Dept.

Gary Guarino
Hopewell Township Health Dept.
Route #546 & Scotch Rd.
Titusville, NJ 08560

Re: Lot 42, Section 61
Pleasant Valley Road
Hopewell Township

Dear Gary:

Enclosed are two prints of the proposed addition to the existing disposal system for the above property. Please review this plan and phone me with your comments.

Very truly yours,

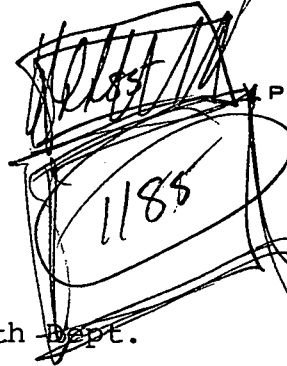
Frank L. Quinby

Frank L. Quinby, PE & LS

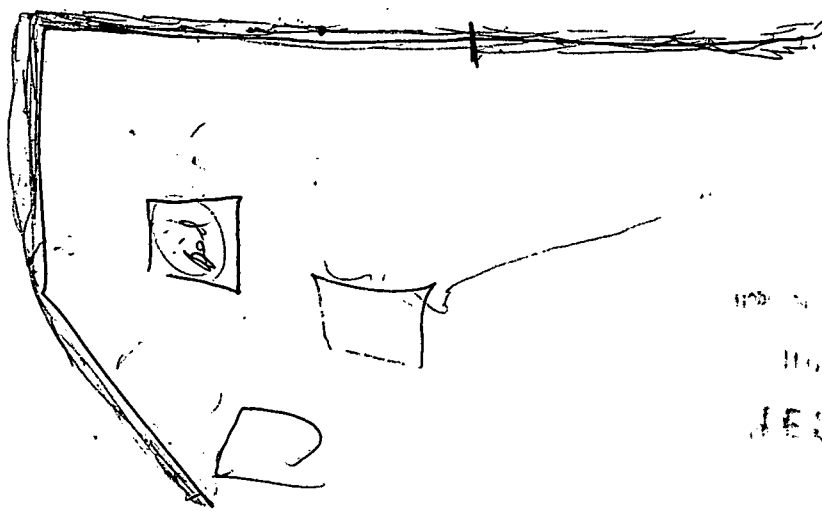
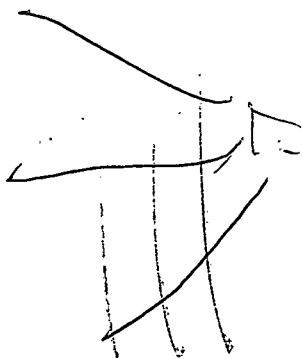
cc: D'Arcy

2.5 x 42 x 4
20 x 22

420 ft.
440
360 feet.



430 / Bed x 3 = 1290
360 / Branch x 3 = 1080



100-100-100-100

100-100-100-100

100-100-100-100

100-100-100-100
100-100-100-100
100-100-100-100
100-100-100-100

100-100-100-100
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100-100-100-100

No. 321

CALL BEFORE YOU DIG
(800) 272-1000
FOR UTILITY LOCATIONS.

June 11

19 82

HOPEWELL TOWNSHIP HEALTH DEPARTMENT

PERMIT

PERMISSION IS HEREBY GRANTED TO James M. D'Arcy

To have soil logs performed

AT Block 61 - Lot 42 Pleasant Valley Road

NATURE OF PROPOSED WORK soil log

FEE \$75.00

HOPEWELL TOWNSHIP HEALTH DEPARTMENT

BY

Barry A. [Signature]

SOIL LOG AND PERCOLATION TESTS

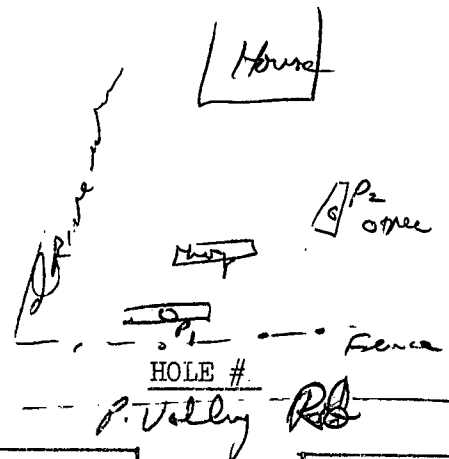
OWNER/DEVELOPER D'Arcy
 LOCATION Pleasant Valley Road
 ENGINEER Rog Rittenhouse - Princeton Junction
 DATE OF LOG 6/11/82 DATE OF PERC 6/11/82 DEPTH OF GROUND WATER _____

BLOCK 61
 LOT 42
 INSPECTOR Brown

SOIL LOG

LOCATION: SOIL LOG & PERC TESTS

0-9 Top Soil
 9-60 Brown + Orange Clay
 60-108 Orange loam clay w/grit
 108-144 Orange Clayey loam with some
 stone (sandy)
 NO water



HOLE # A

HOLE # _____

STABILIZATION		
DEPTH: <u>90</u>		
TIME	INCHES	
12:45	0	
12:55	3/4	3/4
12:55	0	
1:05	1/2	1/2
1:05	0	
1:15	1/2	1/2
1:15	0	
1:25	3/8	3/8
1:25	0	
1:35	3/8	3/8
1:35	0	
1:45	3/4	

TEST		
DEPTH: _____		
TIME	INCHES	
1:45	0	
2:55	3 3/4	
3:27	5	
3:53	6	
	1/2	1

RATE:

$$\begin{array}{r} 21 \\ 6 \overline{) 128} \\ \underline{12} \\ 8 \\ \underline{6} \\ 20 \end{array}$$

STABILIZATION		
DEPTH: <u>104</u>		
TIME	INCHES	
1:20	0	
1:40	1/2	1/2
1:40	0	
2:00	1/2	1/2
2:00	0	
2:20	1/2	1/2
2:20	0	
2:40	3/8	3/8
2:40	0	
3:00	3/8	3/8

RATE: _____

TEST		
DEPTH: _____		
TIME	INCHES	
3:00	0	
3:20	3/8	
4:00	2	