AGENCY NOTE: The Department is not adopting the forms in proposed Appendix B, as explained in the Summary of Comments. In the interest of clarity, proposed Appendix B is not reproduced herein for deletion. The Department is adopting the following Appendix B.

APPENDIX B

STANDARD FORMS FOR SUBMISSION OF SOILS/ENGINEERING DATA

COUNTY/MUNICIPALITY MORRIS CO. / WASHINGTON TWP

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):
   - [X] New Construction
   - [ ] Alteration/No Expansion or Change of Use
   - [ ] Alteration/Expansion or Change in Use
   - [ ] Alteration/Malfunctioning System
   - [ ] Deviation from Standards
   - [ ] Repairs to Existing System
2. Location of Project:
   Municipality WASHINGTON TWP Block No. 59 Lot No. 60.05
   Street Address _____ Zip _____
3. Name of Applicant (print): Stateline Construction
4. Applicant's Present Address: 170 Change Bridge Rd, Box A4-3 Montville, NJ 07045
5. Applicant's Phone Number: _____
6. Type Of Facility:
   - [X] Residential
   - [ ] Commercial/Institutional

   Specify Type of Establishment: _____
7. Type of Wastes to be Discharged:
   - [X] Sanitary Sewage
   - [ ] Industrial Wastes
   - [ ] Other—Specify Type
8. Other Approvals/Certification/Waivers/Exemptions (Attach to Application):
   - [ ] 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 _____ Date _____

FOR AGENCY USE ONLY

- [ ] Application Denied—Reason for Denial/Citation of Rules Violated: _____
- [ ] Application Approved
- [ ] Application Approved Subject to Approval by NJDEP

Date of Action _____ Signature of Authorized Agent _____

Name and Title _____

COUNTY/MUNICIPALITY _____

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

Form 2a—General Site Evaluation Data Lot 60.05 Block 59

1. Name of Site Evaluator (print): Associated Consultants
2. Business Address of Site Evaluator: 530 EAST MAIN
3. Business Phone Number of Site Evaluator: 879-6400
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 hrs) ____
   c) Piezometer B: Depth to Bottom ____ Depth of Water Level (24 hrs) ____
   d) Witnessed by _____ Signature _____ Date _____
8. Attachments (Check items included):
   - [X] Site Plan
   - [X] Key Map Showing Location of Site On U.S.G.S. Quadrangle or Other Accurate Map
   - [X] Key Map Showing Location of Site on U.S.D.A. Soil Survey Map
   - [ ] Other—Specify _____
9. I hereby certify that the information furnished on Form 2a of this application (and the attachments thereto) is true and accurate. I am aware that falsification of data is a violation of the Water Pollution Control Act (N.J.S.A. 58:10A-1 et seq.) and is subject to penalties as prescribed in N.J.A.C. 7:14-8.

Signature of Soil Evaluator Anthony J. Tort Date 5-2-90

Signature of Professional Engineer Anthony J. Tort License # 12672

COUNTY/MUNICIPALITY MORRIS WASHINGTON TWP.

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

Form 2b—Soil Log and Interpretation Lot 60.05 Block 59

1. Log Number 1 Method (Check One): X Profile Pit ___ Boring

2. Soil Log

Depth (inches) Top-Bottom	Munsel 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
0-8"	TopSoil
8"-60"	7.5YR 4/6 STRONG BROWN LOAM 30% cobbles 10% STONE 10% gravel SUB ANGULAR BLOCKY FRIABLE
60"-136"	10YR 4/6 DARK YELLOWISH BROWN LOAMY SAND Spheriodal Loose MOIST 15% gravel 10% cobbles

3. Ground Water Observations:
   X Seepage—Indicate Depth 126"
   ___ 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
   X Regional Zone of Saturation—Depth to Top 126"

5. Soil Suitability Classification: 1

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 Cynthia Trust Date 5-2-90

Signature of Professional Engineer ___ License # 12672
Cynthia Trust

Form 3a. Soil Permeability Data Lot ___ Block ___

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*
PERCOLATION	1		78"	2

*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 1
   ___ 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
   X Form 3d—Percolation Test Data—Number of Sheets 2
   ___ Form 3e—Pit-Bailing Test Data—Number of Sheets
   ___ Form 3f—Piezometer Test Data—Number of Sheets
   ___ Form 3g—Basin Flooding Test Data—Number of Sheets

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

Signature of Soil Evaluator Cynthia Trust Date 5-2-90

Signature of Professional Engineer ___ License # 12672
Cynthia Trust

COUNTY/MUNICIPALITY MORRIS WASHINGTON TWP

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

Form 2b—Soil Log and Interpretation Lot 60.05 Block 59

1. Log Number 2 Method (Check One): X Profile Pit ___ Boring

2. Soil Log

Depth (inches) Top-Bottom	Munsel 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
0-8"	Top Soil
8"-54"	7.5 YR 4/6 STRONG BROWN SANDY CLAY 30% Cobbles 10% STONE 10% GRAVEL SUB ANGULAR BLOCKY FRIABLE
54"-126"	10 YR 5/6 YELLOWISH BROWN SAND 15% COBBLES 30% GRAVEL 5% STONE Spheriodal Loose Moist

3. Ground Water Observations:
   - X Seepage—Indicate Depth NONE
   - ___ 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
   - X Excessively Coarse Horizon—Depth Top to Bottom 54"-90"
   - ___ 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: 1

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 Cathy Hunt Date 5-2-90

Signature of Professional Engineer ___ License # 12672

Cathy Hunt

Form 3a. Soil Permeability Data Lot 60.05 Block 59

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*
PERCOLATION	2		72	2

*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 1
   - ___ 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
   - X Form 3d—Percolation Test Data—Number of Sheets 2
   - ___ Form 3e—Pit-Balling Test Data—Number of Sheets
   - ___ Form 3f—Piezometer Test Data—Number of Sheets
   - ___ Form 3g—Basin Flooding Test Data—Number of Sheets

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

Signature of Soil Evaluator Cathy Hunt Date 5-2-90

Signature of Professional Engineer ___ License # 12672

Cathy Hunt

9. Calculation of Permeability:

K, (in/hr) = 60 min/hr x r^2/R^2 x L(in)/T(min) x ln (H_1/H_2)

= 60 min/hr x ___ / ___ x ___ / ___

x ln (___ / ___) = ___

10. Defects in the Sample (Check appropriate items):

___ None ___ Cracks ___ Worm Channels

___ Root Channels ___ Soil/Tube Contact

___ Large Gravel ___ Large Roots

___ Dry Soil ___ Smearing ___ Compaction

___ Other—Specify_____

11. I hereby certify that the information furnished on Form 3b 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_____

Signature of Professional Engineer_____ License #_____

Form 3c. Soil Permeability Class Rating Data

1. Test Number_____ Replicate (Letter)_____

2. Sample Depth_____ Soil Pit/Boring Number_____ Date Collected_____

3. Coarse Fragment Content:

Total Weight of Sample, W.T., grams_____

Weight of Material Retained on 2mm sieve, W.C.F., grams_____

Wt. % Coarse Fragment (W.C.F./W.T. x 100):_____

4. Oven Dry Weight (24 hrs, 105°C) of 40 Gram Air Dry Sample, grams, Wt_____

5. Hydrometer Calibration, Rc_____

6. Hydrometer Reading—40 seconds, grams, R1_____

Temperature of Suspension, °F_____

7. Corrected Hydrometer Reading, grams, R1'_____

8. Hydrometer Reading—2 hours, grams, R2_____

Temperature of Suspension, °F_____

9. Corrected Hydrometer Reading, grams, R2'_____

10. % sand = (Wt. - R1')/Wt. x 100 = (___ - ___)/ ___ x 100 = ___

11. % clay = R2'/Wt. x 100 = ___ / ___ x 100 = ___

12. Sieve Analysis:

a. Oven Dry Wt. (2 hrs., 105°C) Total Sand Fraction (Soil Retained in 0.047 mm Sieve), grams_____

b. Wt. of Fine Plus Very Fine Sand Fraction (Sand Passing 0.25 mm Sieve), grams_____

c. % Fine Plus Very Fine Sand (b/a)_____

13. Soil Morphology (Natural Soil Samples Only):

Structure of Soil Horizon Tested_____

Consistence of Soil Horizon Tested: Dry_____ Moist_____

14. Soil Permeability Class Rating (Based upon average textural analysis of this replicate and other replicate samples)_____

15. I hereby certify that the information furnished on Form 3c 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_____

Signature of Professional Engineer_____ License #_____

Form 3d. Percolation Test Data

1. Test Number 2 Replicate (Letter) 2-A Date Tested 4-4-90

2. Depth 72"

3. Pre-soak:_____

9 Sandy Textured Soil Only, Shortened Pre-soak—Indicate Time Required for 12 Inches of Water to Drain After Second Filling, Minutes_____

___ Four Hour Pre-soak Completed—Indicate Result:

___ Test Hole Drained Within 16 to 24 Hours After Pre-soak

___ Test Hole Did Not Drain Within 24 Hours After Pre-soak

4. Rate of Fall Data:

a. Time Interval Selected, Minutes 5

b. Record the Drop in Water Level During Each Time Interval to the Nearest 1/10th-Inch On the Lines Below:

Depth of Water, Start of Interval (Inches)	Depth of Water, End of Interval (Inches)	Drop in Water Level (Inches)
7	3	4
7	3	4
7	3	4

5. Percolation Rate:

a. Time, minutes, Required for a Six-Inch Drop in Water Level 9

b. Percolation Rate = a/6 = 9 /6 = 2 min/in

6. I hereby certify that the information furnished on Form 3d 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.

SOIL EVALUATION Carlton Hunt 4-4-90

ENGINEER Carlton Hunt P.E. 11677

9. Calculation of Permeability:

K, (in/hr) = 60 min/hr x r^2/R^2 x L(in)/T(min) x ln (H_1/H_2)

= 60 min/hr x ___/___ x ___/___

x ln (___/___) = ___

10. Defects in the Sample (Check appropriate items):

___ None ___ Cracks ___ Worm Channels

___ Root Channels ___ Soil/Tube Contact

___ Large Gravel ___ Large Roots

___ Dry Soil ___ Smearing ___ Compaction

___ Other—Specify_____

11. I hereby certify that the information furnished on Form 3b 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_____

Signature of Professional Engineer_____ License #_____

Form 3c. Soil Permeability Class Rating Data

1. Test Number_____ Replicate (Letter)_____

2. Sample Depth_____ Soil Pit/Boring Number_____ Date Collected_____

3. Coarse Fragment Content:

Total Weight of Sample, W.T., grams_____

Weight of Material Retained on 2mm sieve, W.C.F., grams_____

Wt. % Coarse Fragment (W.C.F./W.T. x 100):_____

4. Oven Dry Weight (24 hrs, 105°C) of 40 Gram Air Dry Sample, grams, Wt_____

5. Hydrometer Calibration, Rc_____

6. Hydrometer Reading—40 seconds, grams, R1_____

Temperature of Suspension, °F_____

7. Corrected Hydrometer Reading, grams, R1'_____

8. Hydrometer Reading—2 hours, grams, R2_____

Temperature of Suspension, °F_____

9. Corrected Hydrometer Reading, grams, R2'_____

10. % sand = (Wt. - R1')/Wt. x 100 = (___ - ___)/ ___ x 100 = ___

11. % clay = R2'/Wt. x 100 = ___/___ x 100 = ___

12. Sieve Analysis:

a. Oven Dry Wt. (2 hrs., 105°C) Total Sand Fraction (Soil Retained in 0.047 mm Sieve), grams_____

b. Wt. of Fine Plus Very Fine Sand Fraction (Sand Passing 0.25 mm Sieve), grams_____

c. % Fine Plus Very Fine Sand (b/a)_____

13. Soil Morphology (Natural Soil Samples Only):

Structure of Soil Horizon Tested_____

Consistence of Soil Horizon Tested: Dry_____ Moist_____

14. Soil Permeability Class Rating (Based upon average textural analysis of this replicate and other replicate samples)_____

15. I hereby certify that the information furnished on Form 3c 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_____

Signature of Professional Engineer_____ License #_____

Form 3d. Percolation Test Data

1. Test Number 1 Replicate (Letter) 1-A Date Tested 4-4-90

2. Depth 78"

3. Pre-soak: —

10 Sandy Textured Soil Only, Shortened Pre-soak—Indicate Time Required for 12 Inches of Water to Drain After Second Filling, Minutes_____

___ Four Hour Pre-soak Completed—Indicate Result:

___ Test Hole Drained Within 16 to 24 Hours After Pre-soak

___ Test Hole Did Not Drain Within 24 Hours After Pre-soak

4. Rate of Fall Data:

a. Time Interval Selected, Minutes 5

b. Record the Drop in Water Level During Each Time Interval to the Nearest 1/10th-Inch On the Lines Below:

Depth of Water, Start of Interval (Inches)	Depth of Water, End of Interval (Inches)	Drop in Water Level (Inches)
7"	4"	3
7	4	3
7	4	3

5. Percolation Rate:

a. Time, minutes, Required for a Six-Inch Drop in Water Level 10

b. Percolation Rate = a/6 = 10 /6 = 2 min/in

6. I hereby certify that the information furnished on Form 3d 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.

SOIL EVALUATOR Carlton R. Hunt 5-2-90

ENGINEER Carlton R. Hunt P.E. 12472

ENVIRONMENTAL PROTECTION

Signature of Site Evaluator_____Date_____

Signature of Professional Engineer_____License #_____

Form 3e. Piezometer Test Data

1. Test Number_____Reference Soil Log_____Date Tested_____

2. Diameter of Soil Auger, in_____Depth of Test Hole, in_____
   Inside Radius of Pipe, R, in_____

3. Depth to Apparent Static Water Level, in_____

4. Measure and Record:

Water Depth, Start of Interval inches, d_1	Time at Start of Interval,	Water Depth, End of Interval inches, d_2	Time at End of Interval,	Length of Interval, min, t

5. Depth to Water Level After 24 Hour Stabilization Period, D_{static}, in_____

6. Value of A-parameter_____

7. Calculation of Permeability:

K, in/hr = $[(3.14R^2)/(A \times t)] \times [\ln(d_1-D_{stat}/d_2-D_{stat})] \times 60$ min/hr

= [(3.14 ___)/(___ x ___)] x [ln(___ - ___ / ___ - ___)]

x 60 min/hr = _____

8. I hereby certify that the information furnished on Form 3e 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_____

Signature of Professional Engineer_____License #_____

Form 3f. Pit-Bailing Test Data

1. Test Number_____ Reference Soil Log_____ Date Tested_____

2. Using the reference level established, measure and record the following:

   —Depth to Bottom of Pit, ft, D_{pit}_____

   —Depth to Water Level after 2 hr. Stabilization Period, ft, D_{water}_____

   —Depth to Impermeable Stratum, ft, $D_{stratum}$_____
   (If depth is unknown assume it to be 1.5 times the depth of the pit.)

   —Height of Water Level Above Impermeable Stratum, ft, H_____
   ($H = D_{stratum} - D_{water}$)

   —Length of Time Interval, T, in minutes_____

3. At the interval chosen, record the following data in the table below:

   —Time of Measurement, t_n, minutes

   —Depth of Water Level Below Reference Level, d_n, inches

   —Water Surface Dimensions, ft: l,w

4. Calculate the following values and enter in the table below:

   —Water Surface Area, ft^2, A_n

   —Water level Risem h_{rise} (Subtract current value of d_n from previous value)

   —Ave. Water Surface Area, ft^2, A_{av} (Take average of A_n and previous A_n)

   —Ave. Height of Water Level Above Impermeable Stratum, ft, h (Take ave. of d_n and previous value of d_n, convert to ft., and subtract from $D_{stratum}$)

   —Permeability, in/hr, K_n (Calculate using formula):
   $K_n = [h_{rise}/T] \times [A_{av}/2.27 (H^2-h^2)] \times 60$ min/hr

t_n	d_n(in.)	l,w (ft.)	A_n(ft^2)	h_{rise}(in.)	A_{av}(ft^2)	h (ft)	K_n
t_0				XXXX	XXXX	XXXX	XXX
t_1							
t_2							
t_3							
t_4							
t_0				XXXX	XXXX	XXXX	XXX
t_1							
t_2							
t_3							
t_4							
t_0				XXXX	XXXX	XXXX	XXX
t_1							
t_2							
t_3							
t_4							

5. Record the Following Data:

   —Final Depth of Pit, D_{pit}, ft_____

   —Depth to Impermeable Stratum, ft, $D_{stratum}$_____
   (If no impermeable stratum is encountered assume $D_{stratum} = D_{pit}$)

   —Height of Standpipe Above Reference Level, ft, h_{pipe}_____

   —Depth to Water Level after 24 hr. Stabilization Period, ft, D_{water}_____
   (Take measurement from top of standpipe. Subtract h_{pipe})

   —Height of Static Water Level Above Impermeable Stratum, ft, H_____
   ($H = D_{stratum} - D_{water}$)

   —Average Height of Water Level Above Impermeable Stratum, ft, h_____
   (Take average of d_n from beginning and end of last time interval recorded in section 4, convert this to ft., subtract from $D_{stratum}$)

6. Re-calculation of K using data from section 5 above and from final time interval of section 4:

   $K = [h_{rise}/t] \times [A_{av}/2.27(H^2-h^2)] \times 60$ min/hr
   = [___ / ___] x [___ /2.27
   (___ - ___)] x 60 min/hr = _____

7. I hereby certify that the information furnished on Form 3f 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_____

Signature of Professional Engineer_____License #_____

3. Manifold Length, ft ___ Manifold Diameter, ins ___

4. System Discharge Rate, gpm ___

5a. Pump Selection:

Diameter of Delivery Pipe ___ Length of Delivery Pipe ___

Friction Loss in Delivery Pipe, H_f, ft ___

Elevation of Dosing Tank Low Water Level ___

Elevation of Lateral Invert ___

Elevation Head, H_e, ft ___

Total Operating Head, H_t ($H_p + H_f + H_e$), ft ___

Pump Model ___ Rated Horsepower ___

Pump Discharge Rate at Total Operating Head, gpm ___

5b. Siphon Elevation:

Diameter of Delivery Pipe ___ Length of Delivery Pipe ___

Friction Loss in Delivery Pipe, H_f, ft ___

Velocity Head, H_v, ft ___

Total Operating Head, H_t ($H_p + H_f + H_v$), ft ___

Elevation of Lateral Invert ___

Elevation of Siphon Invert ___

6. Dose Volume:

Design Volume of Sewage, gal/day ___

Design Permeability, in/hr ___ or Percolation Rate, min/in ___

Internal Volume of Distribution Network ___

Dose Volume ___

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

Signature of Professional Engineer_____ Date_____

APPLICATION FOR LICENSE TO OPERATE AN INDIVIDUAL SUBSURFACE SEWAGE DISPOSAL SYSTEM

Form 1. General Information

1. Municipality WASH TWP Block No. 59 Lot No. 60.05

2. Name of Applicant (print):_____

3. Applicant's Address:_____

4. Applicant's Phone Number:_____

5. Certificate of Compliance: Date of Issuance_____

If no Certificate Was Issued, Indicate Approximate Age of System_____

6. Type of Facility: X Residential—Indicate Number of Occupants 5

___ Commercial/Institutional—Specify Type of Establishment_____

7. Type of Wastes Discharged: X Sanitary Sewage Only

___ Industrial Wastes

___ Other—Specify Type_____

8. Volume of Wastes: Ave. Flow, gal/day ___ Max. Daily Flow, gal ___

___ Based On Water Meter Data

650 Assumed Based On Data Related to Water Usage—Show Data Below:

—Number of Users (Patrons, Guests, Visitors, etc.) per Day___

—Number of Employees ___

Total Employee Hours per Day ___

—Number of Fixtures ___, Specify Type_____

—Size of Building, ft^2 ___

—Other—Specify CHAPTER 5A

9. Indicate System Components, Provide What Information is Available:

___ Grease Trap: Capacity, gals ___

___ Septic Tank: Capacity, gals ___ No. of Compartments ___

___ Dosing Tank: Capacity, gals ___ Dosing Device:

___ Pump ___ Siphon

___ Disposal Bed: Area, ft^2 ___

___ Disposal Trenches: Width, ft ___ Number ___

Total Length, ft ___

___ Seepage Pits: Number ___ Diameter, ft ___ Depth, ft ___

___ Interceptor Drain

___ Other—Specify_____

10. I hereby certify that the information furnished on Form 1 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 Septic System Inspector_____ Date_____

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___ Application Denied—State Reason for Denial_____

___ Application Approved—License Number_____

Date of Action_____ Signature of Authorized Agent_____

Name and Title_____

RENEWAL OF LICENSE TO OPERATE AN INDIVIDUAL SUBSURFACE SEWAGE DISPOSAL SYSTEM

Form 1. Report of Septic System Inspection/Maintenance

1. Municipality_____ Block No._____ Lot No._____

2. Name of Applicant (print):_____

3. Applicant's Address:_____

4. Applicant's Phone Number:_____

5. Expiration Date of Current License_____ License Number_____

6. Maintenance Performed at Time of Inspection: ___ Septic Tank Pumped

___ Other—Specify_____

7. If the Septic Tank Was not Pumped, Provide Following Information:

Date of Last Pump Out_____ Record Vertical Distance in inches:	1st Comp	2nd Comp	3rd Comp
Bottom of Scum Layer to Bottom of Outlet Baffle	___	___	___
Top of Sludge Layer to Bottom of Outlet Baffle	___	___	___

Form 3g. Basin Flooding Test Data

1. Test Number_____ Reference Soil Log_____ Date Tested_____
2. Depth of Pit, ft_____
3. Area of Pit, ft^2_____
4. Description of Rock Substratum Within Test Zone:
   Type of Rock_____
   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 Machine, Explosives Used
5. Time of First Basin Flooding_____
   Volume of Water Added, Gal_____
6. Result of First Basin Flooding:
   ___ Basin Drained within 24 Hrs.—Indicate Time_____
   ___ Basin Not Drained within 24 Hrs.
7. Time of Second Basin Flooding_____
   Volume of Water Added, Gal_____
8. Result of Second Basin Flooding:
   ___ Basin Drained within 24 Hrs.—Indicate Time_____
   ___ 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_____ Date_____

Signature of Professional Engineer_____ License #_____

Form 4. General Design Data

1. Volume of Sanitary Sewage, gal 650
   X 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: 1000 First (Single) Compartment
   ___ Second Compartment ___ Third Compartment
   c) Effluent Distribution
   Method: X Gravity Flow ___ Gravity Dosing
   ___ Pressure Dosing
   Dosing Device: ___ Pump ___ Siphon
   d) Dosing Tank Capacities, gals: Total Capacity___ Dose Volume___
   Reserve Capacity_____
   e) Laterals: Number 4 Total Length 82' Pipe Size 4" Spacing 3'
   f) Connecting Pipe: Size_____ Length_____
   g) Manifold: Size_____ Length_____
   h) Disposal Field: Type of Installation BED
   Design Permeability (Percolation Rate) 15 MIN./INCH
   Trenches: Width_____ Total Length 88' Bed: Area 1320
   i) Seepage Pits: Design Percolation Rate_____
   Number of Pits_____ Total Percolating Area Provided_____
4. Attachments (Check items included):
   X General Plan of System Showing Location of All System Components
   X 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_____
5. I hereby certify that the information furnished on Form 4 of this application (and attachments thereto) is true and accurate. I am aware that falsification of data is a violation of the Water Pollution Control Act (N.J.S.A. 58:10A-1 et seq.) and is subject to penalties as prescribed in N.J.A.C. 7:14-8.

Signature of Professional Engineer_____ Date_____

Form 5. Design of Pressure Dosing System

1. Configuration of Distribution Network:
   Type of Manifold: ___ End ___ Central
   Distribution Laterals: Number ___ Length, ft ___ Spacing, ft ___
   Hole Diameter, ins ___ Hole Spacing, ins ___
   Diameter of Laterals, ins ___
2. Lateral Discharge Rate:
   Design Pressure Head at Supply End of Laterals, H_p, ft ___
   Hole Discharge Rate, Q, gpm ___
   Number of Holes per Lateral, n ___
   Lateral Discharge Rate, (Q x n) gpm ___

8. Indicate Problems Identified During Inspection:

___ Septic Tank Not Accessible
___ Inlet Baffle Needs Repair
___ Outlet Baffle Needs Repair
___ Effluent Backs-Up into Septic Tank
___ Septic Tank Leaks
___ Dosing Tank Not Accessible
___ Dosing Tank Leaks
___ Solids in Dosing Tank
___ Operation/Condition of Pump, Switches, Alarm, Siphon, etc.
___ Solids in D-Box
___ D-Box Not Level
___ Hydraulic Failure of Disposal Field or Seepage Pit
___ Settlement or Improper Grading
___ Encroachments in Disposal Area
___ Improperly Directed Drainage
___ Physical Condition of Seepage Pit
___ Other—Specify_____

9. Observed Malfunctions:

___ Back-up into Plumbing
___ Surface Break-out or Ponding
___ Odors
___ Seepage of Sewage/Effluent into Bldg.
___ Contamination of Well Water
___ Other—Specify_____

10. I hereby certify that the information furnished on Form 1 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 Septic System Inspector_____ Date_____

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___ Renewal of License Denied—Reason for Denial_____

___ Approval Pending Completion of Repairs—Description of Repairs Required:_____

___ License Renewed—Expiration Date of New License_____

STANDARD FORMS FOR CERTIFICATE OF COMPLIANCE

County/Municipality of_____

INSTRUCTIONS: Part A is to be completely filled in for all Certifications. Only Part B or Part C will be completed. Part B will be completed if the administrative authority relies upon the certification signed and sealed by a New Jersey licensed professional engineer that the system has been located, constructed, installed or altered in compliance with the requirements of N.J.A.C. 7:9A-1 and the Application to Construct/Alter/Repair and Individual Subsurface Sewage Disposal System which was approved by the administrative authority. Part C will be completed if the administrative authority performs the certification.

Part A—General Information

1. Permitted Activities (Check applicable categories):

Permit Number_____

___ New Construction
___ Alteration/No Expansion or Change of Use
___ Alteration/Expansion or Change in Use
___ Alteration/Malfunctioning System
___ Deviation from Standards
___ Repairs to Existing System

2. Location of Project:

Municipality_____ Lot_____ Block_____

Street Address_____

3. Name and Present Address of Applicant:

Applicant's Phone Number_____

Part B—Professional Engineers Certification

I certify under penalty of law that the subsurface sewage disposal system identified in Part A has been located, constructed, installed or altered in compliance with the requirements of N.J.A.C. 7:9A-1 and the Application to Construct/Alter/Repair an Individual Subsurface Sewage Disposal System which was approved by the administrative authority. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

_____
(Signature)

SEAL

_____
Name (Type or Print), License #

Date:_____

Part C—Certification by Administrative Authority

I certify under penalty of law that the subsurface sewage disposal system identified in Part A has been located, constructed, installed or altered in compliance with the requirements of N.J.A.C. 7:9A-1 and the Application to Construct/Alter/Repair an Individual Subsurface Sewage Disposal System which was approved by the administrative authority. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

_____	_____
Authorized Signature	Type of License Held
_____	_____
Name (Typed or Printed)	License Number

Date:_____

For Agency Use Only

Date Received:_____
Form Determined To Be: ___ Complete ___ Incomplete
Date Returned ___
Date Received ___

Date Certification Approved:_____

Authorized Signature:_____

APPENDIX C
UNIFORM PLACEMENT OF PERCOLATION TESTS

Uniform Placement of Percolation Tests

N.J.A.C. 7:9A-6.1(e)7 of these standards requires that percolation tests be spaced uniformly within the area of the disposal field. Acceptable patterns or arrangements for percolation test placement depend upon the size and shape of the disposal field as outlined below. Patterns other than those provided below may be approved provided that it is determined by the Administrative Authority that the test results submitted are representative of the soil conditions throughout the entire area of the disposal field.

Definitions

The following words and terms shall have the following meanings when used within Appendix B of this chapter:

"Center" means the intersection of the two disposal field diagonals.

"Diagonal" means a line connecting opposite corners of the disposal field.

"Elongated disposal field" means a disposal field with a length/width ratio of 3.0-5.0.

"End" means one of the two shorter sides in a disposal field which has a length/width ratio not equal to 1.0.

"Length" means the longest dimension of the disposal field, or the distance between the ends of the disposal field.

"Long axis" means a line connecting the midpoints of the disposal field ends.

"Rectangular disposal field" means a disposal field with a length/width ratio of 1.5-3.0.

"Side" means one of the two longer sides of a disposal field which has a length/width ratio not equal to 1.0.

"Square disposal field" means a disposal field with a length/width ratio of 1.0-1.5.

"Very elongated disposal field" means a disposal field with a length/width ratio greater than 5.0.

"Width" means the shortest dimension of the disposal field, or the distance between the sides of the disposal field.

A. When the disposal field is less than 1500 square feet, a minimum of two percolation tests are required and the following arrangements are acceptable:

All Disposal Field Shapes

1. Both tests spaced along the long axis of the field, the minimum distance between tests one third of the length of the field.

2. Both tests spaced along the diagonal of the field, the minimum distance between tests one third the length of the diagonal.

B. When the disposal field size is 1500 to 3000 square feet, a minimum of three percolation tests are required and the following arrangements are acceptable:

All Disposal Field Shapes

1. All tests spaced evenly along the diagonal of the field, the minimum distance between tests one quarter the length of the diagonal.

2. One test near the midpoint of a side, one test near each of the two opposite corners.

Field Shape Rectangular to Very Elongated (L/W >1.5)

3. All three tests spaced evenly along the long axis; minimum distance between tests one quarter the length of the disposal field.

C. When the disposal field size is 3000 to 4500 square feet, a minimum of four percolation tests are required and the following arrangements are acceptable:

Field Shape Square to Rectangular (L/W = 1.0 - 3.0)

1. One test near the midpoint of each of the sides and ends.

2. One test near each of the four corners.

All Field Shapes

3. A zig-zag pattern with tests placed at points along one side which are approximately zero thirds and two thirds the distance from end to end, and along the opposite side at points which are approximately one third and three thirds the distance from end to end.

Field Shape Elongated to Very Elongated (L/W > 3.0)

4. All tests spaced evenly along the long axis of the field, the minimum distance between tests one fifth the length of the field.

5. All tests spaced evenly along the diagonal of the field, the minimum distance between tests one fifth the length of the diagonals.

D. When the disposal field size exceeds 4500 square feet, a minimum of five percolation tests are required and the following arrangements are acceptable:

Square Fields

1. One test near the midpoints of each of the sides and ends, one test near the center of the field.

Field Shape Square to Rectangular (L/W = 1.0 - 3.0)

2. One test near each corner of the field, one test near the center of the field.

All Field Shapes

3. A zig-zag pattern with tests placed at points along one side which are approximately zero fourths, two fourths and four fourths the distance from end to end, and along the opposite side at points which are approximately one fourth and three fourths the distance from end to end.

Field Shape Elongated to Very Elongated (L/W > 3.0)

4. All tests spaced evenly along the long axis of the field, the minimum distance between tests one sixth the length of the field.

5. All tests spaced evenly along the diagonal of the field, the minimum distance between tests one sixth the length of the diagonal.