

THREE CHORD C.E.M., LLC

Civil · Environmental · Marine

October 3, 2024

Mr. Derrick Caruthers
Environmental Engineer
DNREC - Ground Water Discharges Section
89 Kings Highway
Dover, Delaware 19901

RE: Riverwood Phase 1 Temporary Holding Tank Permit Application
Associated with State Construction Permit No. WPCC 3001/24

Dear Mr. Caruthers,

Attached for your review is a temporary holding tank permit application associated with the wastewater collection and conveyance system to service phase 1 of the Riverwood subdivision. A check for the application fee and advertisement fee has been mailed to your office.

Phase 1 of the Riverwood subdivision is a fully approved and recorded subdivision that is commencing construction in Sussex County. The application requests the utilization of the wet well and the phase 1 collection system as a temporary holding tank in order to provide wastewater service for up to 20 lots. Permanent wastewater service will be provided via an off-site force main to Artesian Wastewater Management's facilities.

Due to current supply chains issues affecting the availability of electrical transformers, generators, and related equipment, it is probable that the pump station will not be ready to convey wastewater via the force main extension.

Based on the collection system components that will provide storage capacity, the collection system pipes and manholes provide a storage volume of approximately 12,126 gallons including the volume from the wet well. I have attached a chart with my calculations. Upon your request, I would be glad to e-mail the excel spreadsheet to you.

Information included in the application package includes:

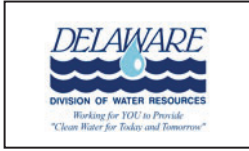
- On-site Wastewater System Permit Application
- Collection System Volume Calculations
- Pump and Haul Contract with Clean Delaware
- Sussex County Engineering Department Agreement No. 1188-1 Letter
- Artesian Wastewater Management Ability to Serve Letter
- DNREC State Permit WPCC 3001/24
- Notated excerpts from the Approved Subdivision Plans highlighting the proposed collection system infrastructure to be utilized as a temporary holding tank

Upon your review, if you should have any questions or need additional information, please feel free to contact me at (302) 740-4442 or e-mail at jkalmbacher@threechordcem.com.

Sincerely,



Jeremy M. Kalmbacher, P.E.



APPLICATION - PERMIT
ON-SITE WASTEWATER SYSTEM



(Please Type or Print Legibly)

OWNER'S NAME: SB Riverwood Development LLC PHONE: 302-226-1994

ADDRESS: 20184 Phillips St Rehoboth Beach, DE 19971

PROJECT LOCATION: Located on Phillips Branch Rd approximately 1700 feet from Hollymount Rd intersection

Sussex County TAX/MAP #: 234-17.00-3.00

APPLICATION PREPARER: Jeremy Kalmbacher, P.E. DNREC LICENSE #: 6093

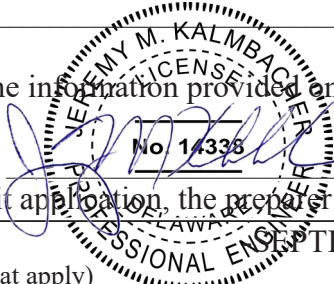
PREPARER'S ADDRESS: P.O. Box 203 Georgetown, DE 19947

PHONE: 302-740-4442

I hereby affirm that the information provided on this document is accurate and complete.

Preparer's Signature: [Signature] No 14335 Date: 10/03/2024

By signing this permit application, the preparer further certifies they were physically present at the site.



PERMIT DESIGN CRITERIA-

(Please check all boxes that apply)

System Type: (CF = Cap & Fill / FD = Full Depth)

- Gravity (FD) Permanent Holding Tank
Gravity (CF) Elevated Sand Mound
Pressure Dose (FD) Wisconsin At-Grade
Pressure Dose (CF) Subsurface Micro Irrigation
Low Pressure Pipe (FD) Peat Bio- Filter
Low Pressure Pipe (CF) Other
Temporary Holding Tank

- Bed or Trench
Gravelless Chamber Stone/Gravel Tire Chips
Sand-lined Yes No

Existing System Malfunctioning Yes No N/A

- Pre-Treatment Units
Septic Tank
Other

Central Water Available Yes No
(If yes, please state Utility Name: Artesian Water Company)

Type of Construction:

- Replacement
New Construction
Component Replacement
Repair to Existing System

Authorization to Use Existing System
Permit #:
Present Condition:
Structure to be connected:

of Bedrooms:
Avg. Percolation Rate:
Gallons Per Day Flow:
Minimum Sq. Ft. Rcq'd:
Sq. Ft. Proposed:

- SITE PLAN & CROSS SECTION -
(INDICATE DIRECTIONS OF NORTH & SCALE OF SITE PLAN)

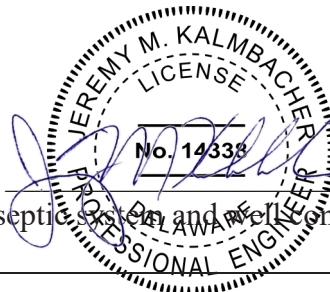
Draw a general location map of project location and give distance to nearest road junction.

FULL SIZE SCALED
APPROVED PLANS
HAVE BEEN
ATTACHED FOR
REFERENCE

OWNER'S/AUTHORIZED AGENT SIGNATURE: _____

DATE: 10/03/2024

- A copy of this page must be submitted with both septic system and well construction report(s)



RIVERWOOD TEMPORARY HOLDING TANK
CALCULATIONS BASED UPON GRAVITY COLLECTION SYSTEM

Wet Well & Manhole Volume

	DIA (ft)	d (ft)	Vol (gal)	Inv (ft)	Rim (ft)
SS-PS-1	8	12.21	4590.79	-1.69	14.43
SS-A1	4	5.74	539.54	4.78	12.52
SS-A2	4	4.69	440.84	5.83	12.60
SS-A3	4	2.67	250.97	7.85	13.27
SS-B1	4	5.57	523.56	4.95	12.76
SS-B2	4	5.18	486.90	5.34	13.20
SS-B3	4	4.86	456.82	5.66	12.94
SS-B4	4	3.70	347.79	6.82	14.95
SS-B5	4	3.38	317.71	7.14	15.45
SS-B6	4	2.73	256.61	7.79	16.44
SS-B7	4	1.48	139.11	9.04	18.62

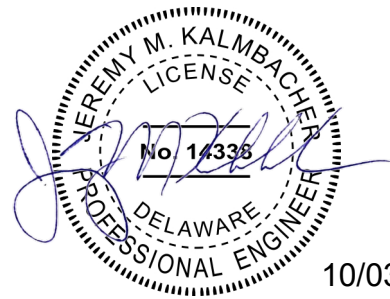
Sub-total 8350.64 gal

Gravity Pipe Volume SDR 26

	ID (in)	L (ft)	Vol (gal)
PA1	9.692	76.19	291.98
PA2	7.754	38.00	93.21
PA3	7.754	80.00	196.23
PB1	7.754	40.00	98.12
PB2	7.754	114.67	281.27
PB3	7.754	89.11	218.58
PB4	7.754	370.00	907.57
PB5	7.754	90.00	220.76
PB6	7.754	198.42	486.71
PB7	7.754	400.00	981.16

Sub-total 3775.59 gal

Total Storage Volume	12126.24 gal
High Water Level	10.52 ft
Free Board	2.00 ft
Flow	300.00 gpd/edu
Storage Time	2.00 days
EDUs	20.21



10/03/2024



Clean Delaware Inc.

P.O. Box 123 · Milton · DE 19968
1.888.637.1517 · 302.684.4221 · Fax: 302.684.1850

www.cleandelaware.com

PUMP AND HAUL SEWAGE MAINTENANCE CONTRACT

PROPERTY OWNER: SB Riverwood Development LLC

20184 Phillips St.

Rehoboth Beach, DE 19971

TELEPHONE: 302-604-3516

TAX MAP NUMBER: 2-34 17.00 3.00

PROPERTY LOCATION: Riverwood

NW / Phillips Branch Rd

Sussex County

Harbeson, DE

HOLDING TANK SIZE: 9,000 gallons

DISPOSAL SITE: Clean Delaware, LLC

Route 30

Milton, DE 19968

CONTRACT EXPIRES: March 31, 2025

TERMS OF CONTRACT:

1. Pumping frequency will be such that the waste level is maintained to prevent overflowing.
2. Pumping will be scheduled to maintain low levels. A high-level alarm will also be installed.
3. Duration of the contract is one year or that part of, until expiration date.
4. A fleet of vacuum trucks ranging from 4000 to 7000 gallons is available for emergency response.

Gerry Desmond

Clean Delaware, LLC

Property Owner/Agent

April 16, 2024

Date

04/17/2024

Date

Environmental Pumping + Complete Septic Service
Grease Trap Pumping + Portable Toilet Rentals
Residential + Commercial + Industrial

ENGINEERING DEPARTMENT

MIKE HARMER, P.E.
SUSSEX COUNTY ENGINEER

(302) 855-7370 T
(302) 854-5391 F
mike.harmer@sussexcountype.gov



Sussex County

DELAWARE
sussexcountype.gov

August 7, 2024

Mr. Beau Croll
Sussex Land Development, LLC
20184 Phillips St.
Rehoboth Beach, DE 19971

REF: **RIVERWOOD – PHASE 1.1
SUBDIVISION NO. 2021-32
SUSSEX COUNTY TAX MAP NUMBER
234-17.00-PARCELS BELOW – CLASS-3
AGREEMENT NO. 1188-1**

Dear Mr. Croll:

Please let this letter serve as a Notice to Proceed with the work contemplated for the above reference. This is a **No Bond** project for Roads. Building permits are **not** permitted.

Additional permits by other regulatory agencies may be required and will be your responsibility to obtain.

All lot numbers are listed below.

Riverwood – Phase 1.1

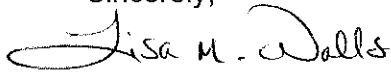
<u>Parcel</u>	<u>Lot</u>
1224	1
1225	2
1226	3
1227	4
1228	5
1229	6
1230	7
1231	8
1232	9
1233	10
1234	11
1235	12
1236	13
1237	14
1238	15
1239	16
1240	17
1297	103
1298	104



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1300	106
1301	107
1302	108
1303	109
1304	110
1305	111
1306	112
1307	113
1308	114
1309	115
1310	116
1311	117

Sincerely,



Lisa M. Walls
Engineering Project Coordinator

cc: Mr. Mike Harmer, P.E.
Mr. Hans Medlarz, P. E.
Mr. Jamie Whitehouse
Mrs. Jessica Watson
Mr. Marvin Roberts
Mr. John Puchala
Mr. Gemez Norwood
Mr. Jack Tucker
Mr. Patrick DiMichele
Mr. Alphonso Cintron
Ms. Tiana Uvarova



OVER 100 YEARS OF SUPERIOR SERVICE

▲ Artesian Wastewater Management ▲ Artesian Utility Development ▲ Artesian Water Pennsylvania
▲ Artesian Water Maryland ▲ Artesian Wastewater Maryland

September 10, 2023

Jason Palkewicz
Solutions IPEM
303 N Bedford Street
Georgetown, DE 19947

RE: Riverwood Ability to Serve Letter, Tax Parcel 234-17.00-3.00

With reference to your request concerning Water and Wastewater Service (collectively, "Service") for the proposed Riverwood Subdivision project consisting of approximately 117 single family homes and an amenities area, located on Phillips Branch Road in Indian River Hundred, Sussex County, Delaware known as Tax Parcel Number 234-17.00-3.00 (the "Property"), please be advised as follows:

Subject to the following conditions, Artesian Water Company, Inc. and Artesian Wastewater Management, Inc. (collectively, "Artesian") is willing and able to provide Service to the Property that meets all applicable State of Delaware, Delaware Department of Natural Resources and Environmental Control, and Sussex County standards. Artesian has existing water and wastewater Certificates of Public Convenience and Necessity ("CPCNs") from the Delaware Public Service Commission.

Based on current conditions and subject to the development entity and Artesian entering Water and Wastewater Service Agreements (collectively, "Agreements") that addresses the financial terms of the provision of Service for the Property, in accordance with Artesian's tariff as approved by the Delaware Public Service Commission, Artesian is willing and able to provide the required Service for this Property.

This letter shall expire if Agreements are not executed within one year of the date of this letter

Yours very truly,

ARTESIAN WATER COMPANY, INC.

A handwritten signature in black ink, appearing to read "Adam Gould".

Adam Gould
Manager of Systems Planning and Design



DELAWARE DEPARTMENT OF
**NATURAL RESOURCES AND
ENVIRONMENTAL CONTROL**

89 Kings Highway
Dover, DE 19901
(302) 739-9000
dnrec.delaware.gov

February 8, 2024

Jamie King
Riverwood Development, LLC
30 East Pine Street
Georgetown, DE 19947

Ref: Riverwood
State Wastewater Construction Permit No. WPCC 3001/24

To Jamie:

Please find enclosed a copy of the construction permit that was issued for the referenced project.

We expect the permitted construction to be completed within the permit term. If the construction cannot be completed by the permit expiration date, a one-time, no-cost two-year permit extension is available, as long as the request is received in writing prior to the expiration date and as long as the scope of the project has not changed significantly, as determined by the Department.

Per Part II.A.2.a of the enclosed permit, notify the Department of any changes to the construction authorized therein. Per Part II.B.1, submit a set of "as-built" plans of the constructed wastewater facilities within ninety (90) days of construction completion. The as-built plans must be signed and sealed by a Professional Engineer licensed in Delaware.

If you have any questions, please contact me at (302) 739-9337 or via email at julia.lau@delaware.gov.

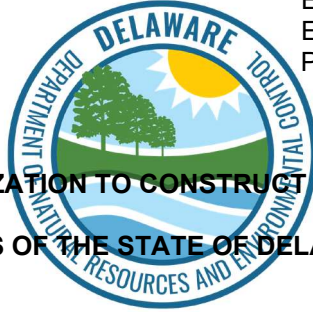
From,

Julia Lau

Julia Lau
Environmental Engineer
DNREC Division of Water

Email Enclosure:

1. Jim Eriksen – Solutions IPEM (jeriksen@solutionsipem.com)
2. Christin Scott – Sussex County Planner (Christin.Scott@sussexcountyde.gov)
3. Scott Thornton – Sussex County Engineering (scott.thornton@sussexcountyde.gov)
4. Susan Isaacs – Sussex Co. Engineering Project Coordination (SIsaacs@sussexcountyde.gov)
5. Keith Bryan – Sussex County Utility Construction (KBryan@sussexcountyde.gov)



**AUTHORIZATION TO CONSTRUCT UNDER THE
LAWS OF THE STATE OF DELAWARE**

PART I

1. In compliance with the provisions of 7 Del. C., §6003,

**Sussex County Council
P.O. Box 589
Georgetown, DE 19947**

and

**Riverwood Development, LLC
30 East Pine Street
Georgetown, DE 19947**

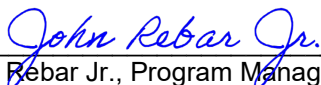
are authorized, jointly and individually, to construct facilities consisting of the following:

Approximately four hundred and fourteen linear feet (414 LF) of six (6) inch diameter sanitary sewer force main, four thousand seven hundred and forty-eight linear feet (4748 LF) of eight (8) inch diameter gravity sewer main, seventy-seven linear feet (77 LF) of ten (10) inch diameter gravity sewer main, twenty-three (23) gravity manholes, one (1) adaptive non-clog pump station and related appurtenances to serve a 117 lot residential community and an on-site pool house. The proposed pump station will receive discharge from the proposed gravity sewer collection system, pump through the proposed 6" force main, and tie into an existing 20" force main along Phillips Branch Road. The project is located in the proposed Riverwood residential subdivision at 31000 Block Phillips Branch Road in Harbeson, Sussex County, Delaware.

The subject project will be constructed in accordance with plans and specifications as described below and limitations, requirements and other conditions set forth in Parts I, II and III hereof.

2. The plans, specifications, municipality standards and other documents submitted with the construction permit application consist of the following, which are incorporated by reference and made part of this authorization:

Fourteen (14) drawings** prepared by Solutions Integrated Planning, Engineering & Management, LLC, titled "Riverwood", dated 1-10-24, signed and stamped by James R. Eriksen, P.E. and the current Sussex County Engineering Standards, Specifications and Details.



John J. Rebar Jr., Program Manager II
Commercial and Government Services Section
State of Delaware Department of Natural Resources
and Environmental Control

02/08/24

Date Signed

**Drawings include:

Sheet 1 – Cover Sheet
Sheet 24 – Sanitary Sewer Index
Sheets 25-28 – Sanitary Sewer Plans
Sheets 29-31 – Sanitary Sewer Profiles
Sheets 32-33 – Sanitary Sewer Details
Sheets 34-36 – Pump Station Plan & Details

3. The liquid waste will be discharged through an existing wastewater collection and transmission system to the Inland Bays Wastewater Treatment Facility, which discharges treated wastewater via spray irrigation, in accordance with DNREC Groundwater Discharges Section Permit No. LTS-5004-90-12.

A. Effluent Limitations on Pollutants Attributable to Industrial Users

The use of the constructed facility is conditioned on meeting all applicable pretreatment standards under 40 CFR, Part 403, or toxic pollutant discharge limitations under Section 307(a) of the Clean Water Act of 1977, PL 95-217.

B. Flow and Usage Limitations

This permit authorizes a daily average discharge of N/A gallons*. The flow in the system shall be measured at least every N/A.

The estimated average daily discharge for the subject project is 75,600 GPD, which is based on approximately 117 available residential lots and 1 on-site pool house to interconnect at 240 GPD/EDU.

* This permit authorizes only the construction of the wastewater collection and conveyance facilities referenced herein.

C. Monitoring and Reporting (When Required)

1. Representative sampling of the volume and nature of the monitored discharge shall be conducted at the request of the Division of Water.

2. Reporting

Monitoring results shall be reported to the:
Delaware Department of Natural Resources and Environmental Control
Division of Water, Commercial and Government Services Section
89 Kings Highway
Dover, DE 19901
302-739-9946

3. Definitions

- a. "Daily average flow" means the total flow during a calendar month divided by the number of days in the month that the facility was operating.

John J Rebar Jr., Program Manager II
Commercial and Government Services Section
State of Delaware Department of Natural Resources
and Environmental Control

Date Signed

- b. "Daily maximum flow" means the highest total flow during any calendar day.
- c. "Daily Peak Flow" means the flow which can be safely transported within the sewage system without causing an overflow or a backup into the building(s) or residence(s).
- d. "Bypass" means the intentional diversion of wastes from any portion of a treatment facility.
- e. "Measured flow" means any method of liquid volume measurement, the accuracy of which has been previously demonstrated in engineering practice, or for which a relationship to absolute volume has been obtained.
- f. "Estimate" means a value to be based on a technical evaluation of the sources contributing to the discharge including, but not limited to, pump capabilities, water meters and batch discharge volumes.

4. Recording of Results

For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information:

- a. The date, exact place and time of sampling or measurement;
- b. The person(s) who performed the sampling and/or measurement;
- c. The date(s) and time(s) analysis was performed;
- d. The individual(s) who performed each analysis;
- e. The analytical technique(s) or method(s) used;
- f. The results of each analysis; and
- g. Appropriate quality assurance information.

5. Records Retention

All records and information resulting from the monitoring activities required by this permit, including all records of analyses performed, all records of instrument calibration and maintenance and all charts from continuous monitoring instruments, shall be retained for three (3) years. This period of retention shall be extended automatically during the course of any unresolved litigation regarding the regulated activity or regarding control standards applicable to the permittee, or as requested by the Department.

6. Test Procedures

Test procedures for the analysis of pollutants shall conform to the applicable test procedures identified in 40 CFR, Part 136, unless otherwise specified in this permit.

END OF PART I

PART II

A. Management Requirements

1. Duty to Comply

The permittee must comply with the terms and conditions of this permit. Failure to do so constitutes a violation of this permit, which is grounds for enforcement and the imposition of penalties as provided in 7 Del.C., Chapter 60, grounds for permit termination or loss of authorization to discharge or operate pursuant to this permit, grounds for permit revocation and reissuance or permit modification, or denial of a permit renewal application.

2. Notification

a. Changes in Authorized Activities

The permittee shall notify the Department of any proposed change in the activity authorized herein, of any proposed substantive change in the operation of the facility or facilities authorized herein, or of any anticipated facility expansions, production increases, or process modifications. Notification is required only when such alteration, addition or change may justify the inclusion of conditions that are absent or different from those specified in this permit. This includes, for example, the construction of additional wastewater collection, transmission or treatment facilities and changes which will result in new, different, or increased discharges of pollutants. Following such notice, the Department may require the submission of a new permit application and this permit may be reopened and modified to address the proposed changes.

b. Noncompliance

If, for any reason, the permittee does not comply with or will be unable to comply with any limitation specified in this permit, the permittee shall provide the Department with the following information, in writing, within five (5) days of becoming aware of such condition:

A description of the discharge and cause of noncompliance; and

The period of noncompliance, including exact dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate and prevent recurrence of the noncomplying discharge.

3. Facilities Operation

The permittee shall, at all times, maintain in good working order and operate as efficiently as possible all collection and treatment facilities and systems (and related appurtenances) installed or used by the permittee to achieve compliance with the terms and conditions of this permit. Proper operation and maintenance includes, but is not limited to, effective management, adequate operator staffing and training and adequate laboratory process controls, including appropriate quality assurance procedures.

4. Adverse Impact

The permittee shall take all reasonable steps to minimize any adverse impact to waters of the State resulting from noncompliance with this permit, including such accelerated or

additional monitoring as necessary to determine the nature and extent of the noncomplying discharge.

5. Bypassing

Any bypass or intentional diversion of waste streams from the facilities authorized by this permit, or any portion thereof, is prohibited, except (i) where unavoidable to prevent loss of human life, personal injury or severe property damage, or (ii) where excessive storm drainage or run-off would damage any facilities necessary for compliance with the effluent limitations and prohibitions of this permit. The permittee shall promptly notify the Department, in writing, of each such diversion or bypass.

6. Removed Substances

Solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of wastewater shall be disposed of in a manner such as to prevent any pollutant from such materials from entering the surface water or groundwater.

B. Responsibilities

1. Within 90 days following the completion of construction, the permittee shall submit to the Department an "as-built" set of plans of the facility or facilities constructed, bearing the seal and signature of a licensed Professional Engineer registered in the State of Delaware.

2. Right of Entry

The permittee shall allow the Secretary of the Department of Natural Resources and Environmental Control, or his authorized representative(s), upon the presentation of credentials:

- a. To enter upon the permittee's premises for inspection of any records, flow measurements, construction or other activity authorized by this permit or any condition required under the terms of this permit; and
- b. At reasonable times, to have access to and to copy any records required to be kept under the terms and conditions of this permit; to inspect any monitoring equipment or monitoring method required in this permit; and
- c. To sample any discharge.

3. Transferability

This permit is transferable with the Department's consent, provided that an intention to transfer accompanied by a copy of the permit is provided to the Department, signed by both the transferor and the transferee at least ten (10) days prior to the actual transfer.

4. Availability of Reports

All reports submitted with the application and those reports required under the terms of this permit shall be available for public inspection at the offices of the Department of Natural Resources and Environmental Control. Knowingly making any false statement on any such report may result in the imposition of criminal penalties as provided for in 7 Del. C., §6013. Any person who causes or contributes to the discharge of a pollutant into State waters either in excess of any conditions specified in this permit or in absence of a specific permit condition shall report such an incident to the Department required

under 7 Del. C. §6028.

5. Permit Modification

This permit may be modified, suspended or revoked in whole or in part during its term for cause including, but not limited to, the following:

- a. Violation of any term or condition of this permit;
- b. Obtaining this permit by misrepresentation or failure to fully disclose all relevant facts;
- c. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized activity; or
- d. Information that the permitted activity poses a threat to human health or welfare, or to the environment.

6. Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject to under 7 Del. C., Chapter 60.

7. State Laws

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable State law or regulation.

8. Property Rights

The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.

9. Severability

The provisions of this permit are severable. If any provision of this permit is held invalid, or if the application of any provision of this permit to any circumstances is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

END OF PART II

PART III

A. Special Conditions

1. This permit authorizes only the construction of the wastewater facilities and related work referenced herein.
2. If well pointing is required during construction, the wells must be installed by a licensed well driller, and a permit to construct such wells must first be obtained from the Well Permits Branch of the Water Supply Section.
3. All construction shall be in agreement with plans and specifications submitted under this project and approved by the Department of Natural Resources and Environmental Control.
4. All construction shall be in accordance with Ten States Standards and other applicable local utility construction specifications and standards.
5. Connections or additions to the proposed system, other than those proposed on the plans, will not be allowed without prior approval from the Department.

END OF PART III