



December 4, 2024

Ring W. Lardner, P.E. W. Zachary Crouch, P.E. Michael E. Wheedleton, AIA, LEED GA Jason P. Loar, P.E. Jamie L. Sechler, P.E.

DNREC, Division of Water Ground Water Discharge Section 89 Kings Highway Dover, Delaware 19901

Attn: Mr.

Mr. Derrick Caruthers

Environmental Engineer

RE:

The Vines at Sandhill - DNREC Temporary Holding Tank Permit

Temporary Holding Tank Permit

Sussex County, Delaware

DBF #1747B002

Dear Mr. Caruthers:

On behalf of our client, Sand Hill Real Estate Investments, LLC, we are submitting the attached application for an on-site wastewater system utilizing a temporary holding tank. The temporary holding tank relies solely on the volume of storage provided by the manholes and gravity pipes to be installed for a portion of the Phase 4 collection system. The system provides adequate capacity, pumped once every two days, for 20 units.

The project is located in The Vines at Sandhill subdivision located on Harvest Circle in Milton. At full build out, all units of Phase 4 are to flow via gravity sewer to a proposed pump station located within the site. The sewer and water provider for the subdivision is Artesian.

As part of our application we are enclosing the following items and information:

- DNREC application permit
- Site plan showing system with supporting volume calculations
- Artesian Approval Email
- Wastewater Construction Permit
- A copy of the agreement for a licensed operator and hauler
- Specifications for the alarm system
- System storage calculations

Letter: The Vines at Sandhill - Temporary Holding Tank Permit

December 4, 2024

Page 2

The volume of 12,042 gallons has been calculated based on DNREC requirements which include 1.00' of freeboard from the lowest manhole rim. The alarm for the system is to be set at an elevation of 33.01' which alerts to an 80% full system.

The design flows for the temporary holding tank are shown below:

	SEWER DESIGN FLOWS				
20	20 EDUs				
300	gpd	Avg. Daily Flow/EDU			
6,000	gpd	Avg. Daily Flow (Qa)			
2		Population per EDU			
0.040	(Thousands)	Total Population			
3.5		Ratio of Peak Flow to Daily Average Flow			
4.17	gpm	Average Daily Sewer Flow (ADF/1440)			
14.60	gpm	Peak Hourly Flow (Qmax)			

Based on the information we are providing above, we respectfully request an On-site Wastewater Permit for a Temporary Holding Tank for 20 homes.

Should you have any questions or need additional information, please feel free to contact me at 302-424-1441 or wzc@dbfinc.com.

Sincerely,

DAVIS, BOWEN & FRIEDEL, INC.

W. Zachary Crouch, P.E.

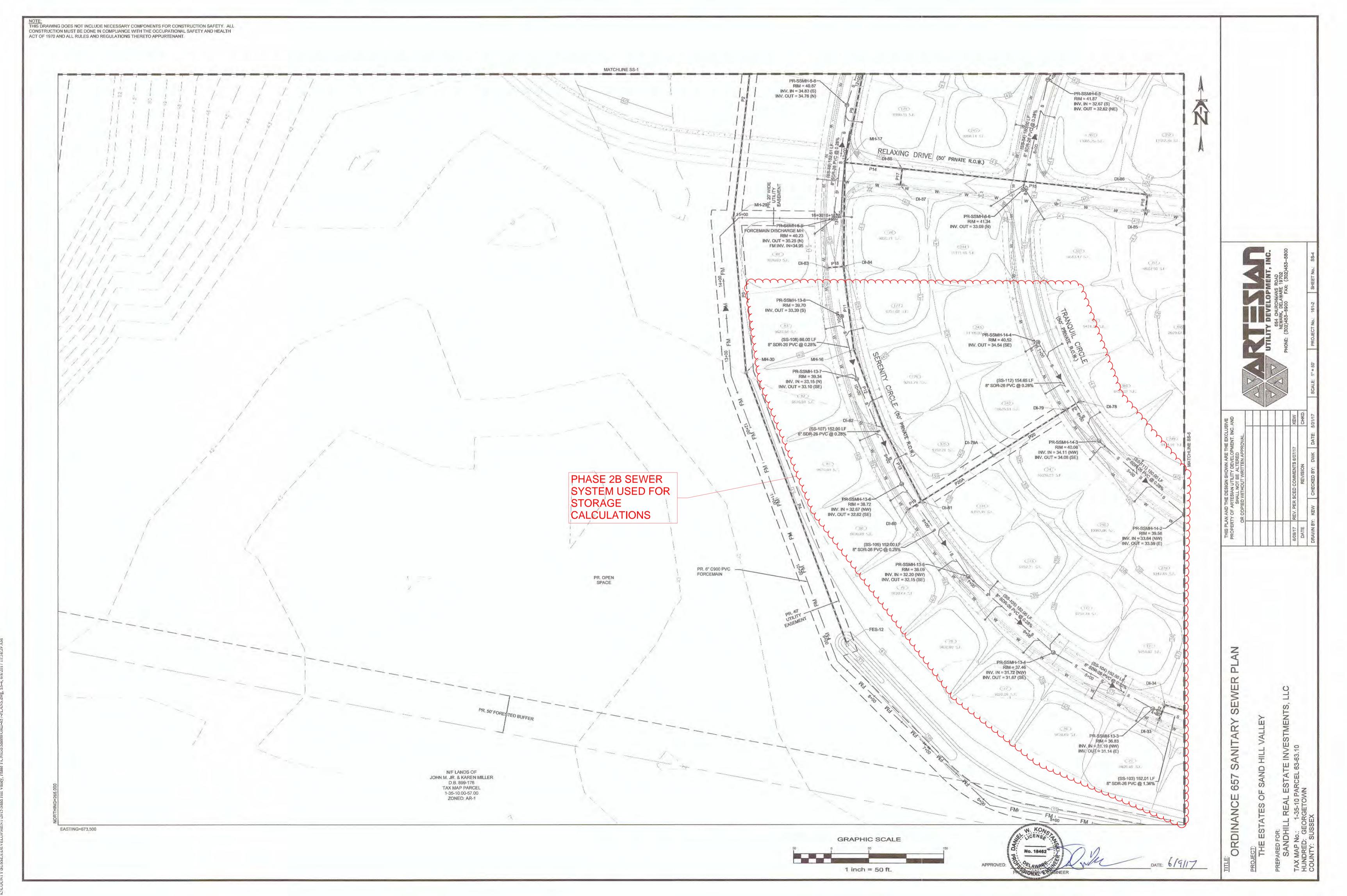
Principal/Sr. Civil Engineer

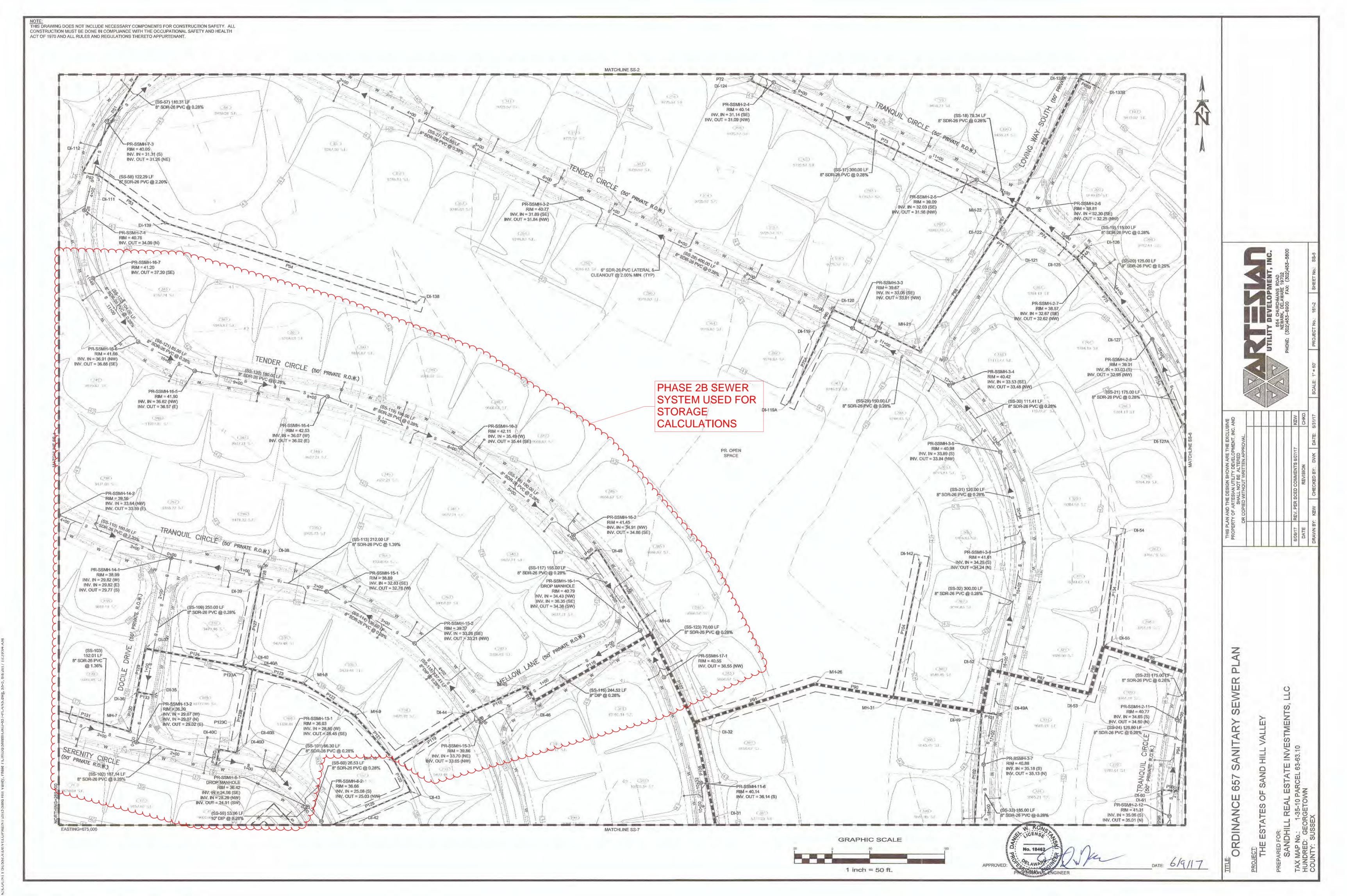


APPLICATION - PERMIT ON-SITE WASTEWATER SYSTEM



(Please Type or Print Legibly)	202 645 5100				
OWNER'S NAME: Sand Hill Real Estate Investments, LLC	PHONE: 302-645-5109				
ADDRESS: 16181 Hudson Rd., Milton, DE 19968					
PROJECT LOCATION: The Vines of Sandhill - Harvest Cir., Milton, DE					
TAX/MAP #:	135-10.00-63.00				
A DDI LCATIONI	DNDEC				
APPLICATION PREPARER:	DNREC LICENSE #:				
PREPARER'S ADDRESS: 1 Park Ave, Milford, DE 19963					
PHONE: (302) 424-1441					
I hereby affirm that the information provided on this document is a	accurate and complete.				
Preparer's Signature: Date:	1.4.2024				
Preparer's Signature: Date: Date: By signing this permit application, the preparer further certifies the	ay were physically present at the site				
-SEPTIC DESIGN CRITE					
(Please check all boxes that apply)	EKIA-				
System Type: (CF = Cap & Fill / FD = Full Depth)	Type of Construction:				
☐ Gravity (FD) ☐ Permanent Holding Tank	Replacement				
☐ Gravity (CF) ☐ Elevated Sand Mound	New Construction				
Pressure Dose (FD) Wisconsin At-Grade	Component Replacement				
☐ Pressure Dose (CF) ☐ Subsurface Micro Irrigation	Component:				
☐ Low Pressure Pipe (FD) ☐ Peat Bio- Filter	Repair to Existing System				
Low Pressure Pipe (CF) Other	Reason:				
✓ Temporary Holding Tank					
<u> </u>	Authorization to Use Existing System				
□Bed or □Trench	Permit #:				
☐ Gravelless Chamber ☐ Stone/Gravel ☐ Tire Chips	Present Condition:				
Sand-lined Yes No	Structure to be connected:				
Existing System Malfunctioning Yes No N/A					
Existing System Martaneticining 11 165 1110 11111	# of Bedrooms:				
Pre-Treatment Units	Avg. Percolation Rate:				
☐ Septic Tank	Gallons Per Day Flow:				
Other	Minimum Sq. Ft. Rcq'd:				
	Sq. Ft. Proposed:				
Central Water Available Yes No					
(If yes, please state Utility Name: ARTESIAN WATER COMPANY, INC.)				





Chad S. Warren

W. Zachary Crouch From: Wednesday, December 4, 2024 7:45 AM Sent: Siegfried Stanley To: Katherine Garrison; Chad S. Warren Cc: **Subject:** Re: Sandhill Pump & Haul Thanks guys!! Appreciate it. Zac W. Zachary Crouch, P.E. Davis, Bowen & Friedel, Inc. > On Dec 4, 2024, at 7:39 AM, Stanley Siegfried <SSiegfried@artesianwater.com> wrote: > Kathy, > The pump & haul option for twenty homes at The Vines of Sandhills Valley is approved. > Thank you. > Sent from my iPhone > > > *** This e-mail and any files transmitted with it may contain confidential and/or proprietary information. It is intended solely for the use of the individual or entity who is the intended recipient. Unauthorized use of this information is prohibited. If you have received this in error, please contact the sender by replying to this message and delete this material from any system it may be on. ***

Project: Vines at Sandhill Ord 657 Pump Station #2

State Permit Number: WPCC 3019/23 Effective Date: April 21, 2023

Expiration Date: April 20, 2026 Page 1 of 7 Pages



PART I

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

> Artesian Wastewater Management, Inc. 664 Churchmans Road **Newark. DE 19702**

and

Sandhill Real Estate Investments, LLC 16181 Hudson Road Milton, DE 19968

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

Approximately, one thousand, six hundred and eighteen linear feet of six inch (1,618 LF 6") PVC C900 forcemain, a submersible duplex pump station and related appurtenances to serve the existing residential subdivision of Vines at Sandhill, located at Harvest Circle, Georgetown, Sussex County, Delaware. The proposed pump station will be located on the west side of residential development. The proposed force main will be installed from the pump station and run northwards along Harvest Circle and discharge into a proposed manhole at the intersection of Harvest Circle and Bodega Drive.

The subject construction shall be 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 and specifications consist of the following:

> Eight (8) drawings* prepared by Artesian Utility Development, Inc. titled, "Ordinance No. 657 Pump Station #2 & Forcemain #2 Plans-Prepared for The Vines of Sandhill situated in Georgetown Hundred, Sussex County, delaware", coversheet dated 10/4/22, revised through N/A, sheet PS-4 dated 5/31/2027, revised 11/08/2022, sheet Nos. PS-5, PS-6, FM-7, FM-8 and FM-10 dated 5/31/2017, revised 11/16/2017, sheet FM-9 dated 5/31/2017, revised N/A, the current Artesian Wastewater Management, Inc Standards.

*Sheet Nos. SS-C, PS-4, PS-5, PS-6, FM-7, FM-8, FM-9 through FM-10 Sheet No. SS-C, titled "Ord 657 Pump Station #2 Forcemain #2 Cover Sheet"; Sheet No. PS-4 through PS-6, titled "Ord. 657 Pump Station #2 Plans"; Sheet No. FM-7 through FM-8, titled "On Site Forcemain Plan & Profile", Sheet No. FM-9 through, titled "Forcemain Notes & Details".

4/21/2023 Date Signed

Ashley Kunder, Program Manager I

Division of Water

Commercial and Government Services

State of Delaware Department of Natural Resources and Environmental Control

 The liquid waste will be discharged through existing wastewater collection and transmission facilities to the Artesian's Beaver Creek Regional Wastewater Treatment Facility which discharges treated wastewater in accordance with State Permit No. 202902-OP, DEN ID 359014-03

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.

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

C. <u>Monitoring and Reporting (When Required)</u>

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, Surface Water Discharges 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.
- 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. <u>Management Requirements</u>

1. <u>Duty to Comply</u>

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 <u>Del.C.</u>, 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.

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

 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 transfe

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 <u>Del. C.</u>, §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 <u>Del. C.</u> §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
- 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

SEWAGE HOLDING TANK MAINTENANCE CONTRACT

Licensed Class F Waste Hauler:	Jason Guarino E	Excavating L	LC		
Address:	25021 Herman Ln, Millsboro, DE 19966				
Telephone #:	302-684-0631				
License #:	5725F		Expiration Date:	12/31/2024	
empty a <u>4,000</u> ga Sussex	(that the above ng tank locate reel # <u>135-1</u>	licensed waste h	pment Group LLC auler will routinely at Sandhill, Phase 4 ;	
 Pumping frequent additional disconnection of the tank between that the tank between the tank contract of the tank content of tank content	uency will be such charge. Pumping is or will notify waste be pumped within is for a period of available. Mone sponse capability ents will be dispose Waste Treament pout: \$700.00 cmments: urrently built in place currently finishires.	that the wast is to occur: e hauler when 2 calendar da 6 months day - Friday Evenings & ed of at ht Plant, Mills	weekly bi-weekly bi-weekly bi-weekly bi-weekly sys. 7 AM - 5 PM Weekends at \$ 8 Boro, DE	,	
Signed: Jason Guarino (N	Guarino Noviz, 2024 14:36 EST) Red Class F Waste Property Owner VP+CFO on and hill Dec	and a gradual design of the second se	Date: 11/2 Date: 4/	12/2024 D/2024	

20241107_Sewage_Holding_Tank_Maintenance Contract

Final Audit Report

2024-11-12

Created:

2024-11-12

By:

Craig Beebe (cbeebe@sposatolandscape.com)

Status:

Signed

Transaction ID:

CBJCHBCAABAA9zkre3lphLM6CxtVb12dGoJlLgOUiHVx

"20241107_Sewage_Holding_Tank_Maintenance_Contract" Hist ory

- Document created by Craig Beebe (cbeebe@sposatolandscape.com)
 2024-11-12 7:26:42 PM GMT
- Document emailed to guarino302@gmail.com for signature 2024-11-12 7:28:01 PM GMT
- Email viewed by guarino302@gmail.com 2024-11-12 7:28:23 PM GMT
- Signer guarino302@gmail.com entered name at signing as Jason Guarino 2024-11-12 7:36:43 PM GMT
- Jason Guarino (guarino 302@gmail.com) has reviewed and explicitly agreed to the terms of use and to do business electronically with Sposato Landscape Company, Inc.

2024-11-12 - 7:36:45 PM GMT

- Document e-signed by Jason Guarino (guarino302@gmail.com)
 Signature Date: 2024-11-12 7:36:45 PM GMT Time Source: server
- Agreement completed.

2024-11-12 - 7:36:45 PM GMT



TANK ALERT® 4X Alarm System

Easy-to-install liquid level alarm system which has a NEMA 4X enclosure for indoor or outdoor use.

This alarm system monitors liquid levels in lift pump chambers, sump pump basins, holding tanks, sewage, agricultural, and other water applications.

The Tank Alert® 4X alarm system can serve as a high or low level alarm depending on the float switch model used.

The stainless steel alarm horn sounds and red beacon illuminates when a potentially threatening liquid level condition occurs. The horn can be silenced, but the alarm beacon remains on until the condition is remedied. Once the condition is cleared the alarm will automatically reset.



FEATURES

- NEMA 4X enclosure rated for indoor or outdoor use.
- Automatic alarm reset and alarm test/normal/silence switch.
- Alarm horn sounds at 88 decibels at 10feet (3 meters)
- Alarm system (when installed on separate circuit) operates even if the pump circuit fails.
- Complete package includes standard SJE SignalMaster® control switch with 15 feet (4.57 meters) of cable (other lengths available) and mounting clamp.
- Dual safety certification for the United Sates and Canada



Five-year limited warranty.



OPTIONS

When ordered with the alarm, this system is available with:

- alternate float switch models for high or low level warning.
- auxiliary dry contacts (normally open and normally closed) for easy attachment of remote devices.

SPECIFICATIONS

VOLTAG:

120 VAC, 50/60 Hz

ALARM ENCLOSURE: 6.4 x 5.3 x 5 inch (16.2 x 13.5 x 13.34 cm), NEMA 4X, indoor-outdoor, weatherproof, UV stabilized thermoplastic

ALARM HORN: 88 decibels at 10 feet (3 meters)

ALARM BEACON: UL Listed, Type 4X beacon assembly

AUXILIARY ALARM CONTACTS (OPTIONAL): 120 VAC, 5 amps max., 50/60 Hz

FLOAT SWITCH: SJE SignalMaster® control switch with mounting clamp Cable: 15 feet (4.57 meters), flexible 18 gauge, 2 conductor (UL) SJOW, waterresistant (CPE)

Float: 2.74 inch diameter x 4.83 inch long (7 cm x 12.3 cm), high impact, corrosion resistant polypropylene housing for use in sewage and nonpotable water up to 140°F (60°C)



PO Box 1708, Detroit Lakes, MN 56502 1-888-DIAL-SJE • 1-218-847-1317 1-218-847-4617 Fax

email: customer.service@sjerhombus.com

TANK ALERT® 4X Alarm System

Easy-to-install liquid level alarm system which has a NEMA 4X enclosure for indoor or outdoor use.

ORDERING INFORMATION

120 VAC		List	Shipping
Part#	Description	Price	Weight
1008024	4X-01HSGM (120 VAC w/15' SJE SignalMaster® High Level)	\$317.85	3.40 lbs.
1008026	4X-01LSGM (120 VAC w/15' SJE SignalMaster® Low Level)	\$317.85	3.40 lbs.
1008023	4X-01H (120 VAC w/15' SJE Sensor Float® High Level)	\$320.61	3.65 lbs.
1008025	4X-01L (120 VAC w/15' SJE Sensor Float® Low Level)	\$320.61	3.65 lbs.
1008027	4X-01X (120 VAC no float)	\$283.29	2.10 lbs.

H = High Level L = Low Level X = No Float

MASTER CARTON holds 5 boxed units.

OPTIONS

CONTROL SWITCH OPTIONS

The Tank Alert® 4X alarm system comes standard with a 15 foot SJE SignalMaster® control switch with mounting clamp. Other float switches are available. See control switch section of the catalog.

To determine the price of alarm with an alternate float, add the price of the part number with "no float" to the price of the float switch.

UL Listed for Water & Sewage



SPECIFICATIONS

VOLTAGE FOR 120 VAC MODEL: 120 VAC, 50/60 Hz

ALARM ENCLOSURE: 6.4 x 5.3 x 5 inches (16.2 x 13.5 x 13.34 cm), NEMA 4X, indoor-outdoor, weatherproof, UV stabilized thermoplastic

ALARM HORN: 88 decibles at 10 feet (3 meters)

ALARM BEACON: UL Listed, Type 4X beacon assembly

AUXILIARY ALARM CONTACTS (OPTIONAL): 120 VAC, 5 amps max.,

50/60 HZ

FLOAT SWITCH: SJE SignalMaster® control switch with mounting clamp

CABLE: 15 feet (4.57 meters), flexible 18 gauge, 2 conductor (UL) SJOW, water-resistant (CPE)

FLOAT: 2.74 inch diameter x 4.83 inch long (7 cm x 12.3 cm), high impact, corrosion resistant polypropylene housing for use in sewage and non-potable water up to 140°F (60°C)

MAXIMUM WATER DEPTH: 30 feet (9 meters), 13 psi

ELECTRICAL: 5 amps, 125 VAC/250 VAC, 50/60 Hz

OTHER INFORMATION

Option	Description	Price	
AUX	Auxiliary Alarm Contacts	\$18.00	

Call or fax your order! 1-888-DIAL-SJE (1-888-342-5753) **F** Fax 218-847-4617



www.sjerhombus.com customer.service@sjerhombus.com

The Vines at Sandhill Temporary Holding Tank Calculations

Pipe storage				
pipe#	length (ft)	dia. (in)	storage (gal)	
SS-101	66	8	173.02	
SS-102	187	8	488.01	
SS-103	152	8	396.67	
SS-104	152	8	396.67	
SS-105	152	8	396.67	
SS-106	152	8	396.67	
SS-107	152	8	396.67	
SS-108	86	8	224.43	
SS-109	250	8	652.42	
SS-110	160	8	417.55	
SS-111	150	8	391.45	
SS-112	155	8	404.50	
SS-113	212	8	553.25	
SS-114	136	8	354.92	
SS-115	137	8	357.53	
SS-116	245	8	639.37	
SS-117	155	8	404.50	
SS-118	190	8	0.00	
SS-119	190	8	0.00	
SS-120	180	8	0.00	
SS-121	85	8	0.00	
SS-122	104	8	0.00	
SS-123	70	8	0.00	
-	7044.33			

Manhole storage					
manhole #	dia. (ft)	rim	sump	storage height	storage (gal)
8-1	4	36.42	24.91	10.12	950.76
13-1	4	36.03	28.45	6.58	618.18
13-2	4	36.20	29.02	6.01	564.63
13-3	4	36.83	31.14	3.89	365.46
13-4	4	37.46	31.67	3.36	315.67
13-5	4	38.09	32.15	2.88	270.57
13-6	4	38.72	32.62	2.41	226.42
13-7	4	39.34	33.10	1.93	181.32
13-8	4	39.70	33.39	1.64	154.08
14-1	4	38.99	29.77	5.26	494.17
14-2	4	39.56	33.59	1.44	135.29
14-3	4	40.08	34.06	0.97	91.13
14-4	4	40.52	34.54	0.49	46.03
15-1	4	38.89	32.78	2.25	211.38
15-2	4	39.37	33.21	1.82	170.99
15-3	4	39.86	33.65	1.38	129.65
16-1	4	40.79	34.38	0.65	61.07
16-2	4	41.45	34.91	0.12	11.27
16-3	4	42.11	35.44	0	0.00
16-4	4	42.53	36.02	0	0.00
16-5	4	41.90	36.57	0	0.00
16-6	4	41.60	36.86	0	0.00
16-7	4	41.20	37.20	0	0.00
17-1	4	40.55	36.55	0	0.00
Total manhole storage (gal)					4998.08

total manhole & pipe (gal)
total storage (edu)
40.14
allowable # of units at the above pump out frequency
20

lowest manhole rim

days between pump outs

80% full alarm elevation

freeboard (ft) gallons/edu 36.03

300

33.01