Department of Natural Resources
and Environmental Control
89 Kings Hwy
Dover, DE 19901
dnrec.delaware.gov

Division of Water
Commercial and Government Services Section

Phone: (302) 739-9946
Fax: (302) 739-8369

INSTRUCTIONS FOR COMPLETING THE PERMIT APPLICATION FOR THE CONSTRUCTION OF WASTEWATER COLLECTION AND CONVEYANCE SYSTEMS

The following items must accompany the application. **Please note that incomplete application packages will be returned in their entirety and not reviewed until such time as all required information is received.**

☒ 1. A narrative summary of the intended purpose and design of the proposed facilities.

☒ 2. One (1) set of final construction plans and specifications, if applicable, signed and sealed by a Delaware-registered Professional Engineer, or a Delaware-registered Professional Land Surveyor for gravity systems only. One (1) electronic copy of final Plans.

☒ 3. One (1) electronic copy of final Plans.

☒ 4. The final plans must be drawn to scale showing slopes, inverts, pipe types and sizes, existing and proposed ground surfaces, tops of manholes, water lines, stormwater and stream crossings, encasements shown in plan and profile, and other information if pertinent or requested.

☒ 5. For pump/lift stations and force mains, include all calculations and pump/performance curves.

☒ 6. A check made payable to the State of Delaware for eight hundred twenty-five dollars ($825.00), the non-refundable permit review fee. This fee covers the initial review and one follow-up review of any corrections or changes made to address the Division's comments. An additional eight hundred twenty- five dollars ($825.00) non-refundable review fee must be submitted for resubmission of the plans if changes are made to the project which trigger a complete review of the permit application.

☒ 7. Your permit will have a public notice requirement if your system includes force mains or pump/lift stations. Include a check made payable to the State of Delaware for three hundred dollars ($300.00) for the reimbursement of legal notices if the system has a force main connection or a pump/lift station.

☒ Please submit the completed application package, as outlined above, to DE DNREC, Division of Water, Commercial and Government Services Section, 89 Kings Highway, Dover, DE 19901. Please note, a new application, including the review fee, must be submitted if the Division's comments are not addressed or if requested supplemental information is not provided within one (1) year of the comment or request date.

☐ The following items must be submitted prior to permit issuance:

☐ 8. Verification from the appropriate county or municipal planning authority that the project has the proper zoning approval.

☐ 9. A letter from the owner/operator of the wastewater facilities to which the proposed collection and conveyance facilities connect. The letter must include confirmation that the owner/operator has approved the project, that the owner/operator will take responsibility for treating and disposing of the wastewater to be conveyed and that the downstream facilities have the capacity to manage the additional flows without causing or contributing to violations of Delaware's Environmental Protection Act (7 Del. C., Chapter 60) and the regulations promulgated thereafter. This includes, but is not limited to, unauthorized discharges such as overflows at manholes and violations of the treatment system's operating permit (for example, the National Pollutant Discharge Elimination System (NPDES) permit).

- Visit us on the web at: https://dnrec.alpha.delaware.gov/water/surface-water/

APPLICATION FOR THE CONSTRUCTION OF
WASTEWATER COLLECTION AND CONVEYANCE SYSTEMS
Application must be complete, typewritten or clearly printed

Date Application Submitted _____

PROJECT INFORMATION		
Project Name and Location/ Address Name: Hoornkill Avenue Water and Sanitary Sewer Improvements Location: Hoornkill Avenue, Lewes, DE		
Tax Parcel Number(s)		
County ☐ Kent ☐ New Castle ☒ Sussex	Watershed (www.dnrec.delaware.gov/swc/wa/Pages/WatershedAssessment.aspx) ☐ Chesapeake Bay ☒ DE Bay/Estuary ☐ Inland Bays/Atl Ocean ☐ Piedmont	
Sewer District or Interceptor City of Lewes	Wastewater Treatment/Disposal Facility Name Howard H Seymour Water Reclamation Plant of the City of Lewes	
Anticipated Construction Start Date 4/01/2026	Treatment/Disposal Facility Owner and Operating Permit Number Lewes Board of Public Works/DE0021512	
Please note, construction permits expire three (3) years from the date of permit issuance.		
Are you requesting plan review and comment on WPCC Construction Permit issuance? (circle one)		
Design Flow (gallons/day) Average 7,250 @ 250 gpd/edu	Peak 20 gpm	Peak Factor 4
Basis of Design SC Ordinance 38 29 Dwellings		
Description Installing new Sanitary Sewer Gravity Mains and Water Mains along Hoornkill Avenue. A new Pump Station along with new Forcemain will also be installed. Additionally, relining of existing gravity sewer main, relining of sanitary sewer manholes, and removal of existing wet well will also take place as part of this project.		

OWNER/DEVELOPER		
Company Name Lewes Board of Public Works		
Mailing Address 107 Franklin Avenue		
City Lewes	State DE	Zip 19958
Contact Name Robin Davis		
E-Mail Address rdavis@lewesbpwde.gov		
Telephone 302-645-6228	Cell	Fax 302-645-6358

ENGINEER					
Company Name: George, Miles & Buhr, LLC					
Mailing Address: 110 Anglers Road					
City: Lewes		State: DE		Zip: 19958	
Contact Name: Benjamin Hearn, PE					
E-Mail Address: bhearn@gmbnet.com					
Telephone: 302-628-1421 ext 3107		Cell:		Fax: 302-628-8650	

GRAVITY SEWER INFORMATION					
Ownership: ☒ Public ☐ Private	Type of Sewer System: ☒ Residential ☐ Commercial ☐ Industrial ☐ Other?			If Other, list below	
Type of Pipe	Length (ft)	Diameter (in)	Joint Specification	Min. Slope (ft/ft)	Min. Velocity (ft/sec)
SDR-35 PVC	763 ft	8	Push-on	0.003	2.67 ft/sec

Minimum Pipe Cover (ft)	Number of Manholes	Drop manholes provided?	Maximum Distance Between Manholes (ft)
4'	3	☐ Yes ☐ No	400 feet

Minimum ten foot (10') horizontal & eighteen inch (18") vertical separation from water lines maintained?	If not, explain provisions to prevent cross-contamination:
☒ Yes ☐ No	

Explain any special challenges (for example, stream, highway and/or railroad crossings, directional drilling, elevated sewers, etc.)

Comments

PUMP/LIFT STATION INFORMATION

Ownership	Type of Wastewater	If Other, list below
☒ Public ☐ Private	☒ Residential ☐ Commercial ☐ Industrial ☐ Other?	

Pump Station Flows (gallons/day) Design	Average	Peak	Peak Factor
15 gpm	5,250 gpd @ 250 gpd/edu for 21 edu's	15 gpm	4

Basis of Design	Pump Type
Raw sewage, matching peak inflow rate	Semi-Positive Displacement

Will peak flows be accommodated if largest unit fails?	Pump calc's and pump curves attached?	Cycle Time (minutes)	Wet Well Detention Time (minutes)
☒ Yes ☐ No	☒ Yes ☐ No	13.6 minutes	3.5 minutes

Check valves provided on discharge line?	Gate valves provided on discharge line?
☒ Yes ☐ No	☒ Yes ☐ No

If not, explain alternate procedure:

Ventilation provided in wet well?	Dry Well?	Is an alarm system included?	Alternate source of power?
☒ Yes ☐ No	☐ Yes ☒ No	☒ Yes ☐ No	☐ Yes ☒ No

What other provisions for emergency operations?

Height of Influent Above Pump (suction head) (ft)	Height of Effluent Above Pump (discharge head) (ft)	Friction Loss (ft)
N/A	13.84 feet	30.12 feet

Pump Design Point	Pump Operating Point	Static Head (ft)	Total Head (ft)	Required Motor Horsepower (hp)
15 gpm	12 gpm	13.84 feet	43.97 feet TDH	1 HP

FORCE MAIN INFORMATION

Type of Pipe	Length (ft)	Diameter (in)
HDPE SDR-11	1167 feet	1.5"

Hazen-Williams "C" Design Factor	Type of Joints	Velocity Under Design Conditions (ft/sec)	Minimum Pipe Cover (ft)
C=140	Butt fused	2.64 ft/sec	3.5'

Air relief valves specified?	Clean-outs provided?	Maximum distance between clean-outs (ft)
☐ Yes ☒ No	☐ Yes ☒ No	N/A

Minimum ten foot (10') horizontal & eighteen inch (18") vertical separation from water lines maintained?	If not, explain provisions to prevent cross-contamination:
☒ Yes ☐ No	

Comments

This is a triplex station. A single pump will operate at 12 GPM, but two (2) pumps operating at the same time will operate at 18 GPM, handling peak flows.