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) 739-2296

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 (paper copy), if applicable, signed and sealed by a Delaware-registered Professional Engineer, or a Delaware-registered Professional Land Surveyor for gravity systems only.

☒ 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

APPLICATION FOR THE CONSTRUCTION OF WASTEWATER COLLECTION AND CONVEYANCE SYSTEMS

Application must be complete, typewritten or clearly printed

Date Application Submitted 7-30-25

PROJECT INFORMATION			
Project Name and Location/ Address Canal Overlook – 762 Cox Neck Road			
Tax Parcel Number(s) 12-028.00-010			
County ☐ Kent X New Castle ☐ Sussex	Watershed (www.dnrec.delaware.gov/swc/wa/Pages/WatershedAssessment.aspx) ☐ Chesapeake Bay X DE Bay/Estuary ☐ Inland Bays/Atl Ocean ☐ Piedmont		
Sewer District or Interceptor Delaware City Sewer Basin	Wastewater Treatment/Disposal Facility Name Delaware City Treatment Plant		
Anticipated Construction Start Date September, 2025	Treatment/Disposal Facility Owner and Operating Permit Number		
Please note, construction permits	expires three (3) years from the date of permit issuance.		
Are you requesting plan review and	co	mment or WPCC Construction Permit issuance? (circle one)	
Design Flow (gallons/day) Average 32,400	Peak 139,600	Peak Factor 4	Basis of Design Gravity
Description	This project proposes to construct 6,083 linear feet of 8" diameter gravity sewer, 32 manholes, 1,833 lf of 6" force main and a pump station. Water service will be provided by the Veolia Water Company.		

OWNER/DEVELOPER		
Company Name Diamond Materials, LLC		
Mailing Address 242 North James Street		
City Newport	State DE	Zip 19804
Contact Name Paul Lester		
E-Mail Address plester@diamondmaterials.com		
Telephone 302-658-6524	Cell	Fax

ENGINEER					
Company Name McBride & Ziegler, Inc.					
Mailing Address 2607 Eastburn Center					
City Newark		State DE		Zip 19711	
Contact Name Mark Ziegler					
E-Mail Address mziegler@mcbrideziegler.com					
Telephone 302-737-9138		Cell 302-218-2483		Fax	

GRAVITY SEWER INFORMATION					
Ownership ☒ Public ☐ Private	Type of Sewer System ☒ Residential ☐ Commercial ☐ Industrial ☐ Other?			If Other, list below	
Type of Pipe PVC_SDR-26	Length (ft) 6,013'	Diameter (in) 8"	Joint Specification Mechanical	Min. Slope (ft/ft) 0.005ft/ft	Min. Velocity (ft/sec) 2 ft/sec

Minimum Pipe Cover (ft)	Number of Manholes	Drop manholes provided?	Maximum Distance Between Manholes (ft)
5.5'	30	☒ Yes ☐ No	300'

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
129,600	32,400	129,600	4

Basis of Design	Pump Type
Gorman-Rupp SFV3B-X	Submersible

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	22.82	11.41

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?
None, just generator

Height of Influent Above Pump (suction head) (ft)	Height of Effluent Above Pump (discharge head) (ft)	Friction Loss (ft)
5.09	13.06	3.69 (Basin) 42.89 (Total)

Pump Design Point	Pump Operating Point	Static Head (ft)	Total Head (ft)	Required Motor Horsepower (hp)
155 GPM @ 43'thd	162 GPM @ 44.2'thd	35.50	42.89	7

FORCE MAIN INFORMATION

Type of Pipe	Length (ft)	Diameter (in)
HDPE DR-11	1833	6

Hazen-Williams "C" Design Factor	Type of Joints	Velocity Under Design Conditions (ft/sec)	Minimum Pipe Cover (ft)
120	Solvent/Glue	2.04	3.5

Air relief valves specified?	Clean-outs provided?	Maximum distance between clean-outs (ft)
☐ Yes ☒ No	☒ Yes ☐ No	400

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