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) 739-9948

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 two thousand and five hundred dollars ($2500.00), 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 two thousand and five hundred dollars ($2500.00) 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.delaware.gov/water/commercial-government/

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 Cattail Creek Barratts Chapel Road and Buffalo Road Federica, DE 19946			
Tax Parcel Number(s) SM-00-131.00-01-01.00-000			
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 Double Run	Wastewater Treatment/Disposal Facility Name Kent County Regional Resource Recovery Facility		
Anticipated Construction Start Date June 1, 2020	Treatment/Disposal Facility Owner and Operating Permit Number		
Please note, construction permits expire three (3) years from the date of permit issuance.			
Are you requesting plan review and comment or WPCC Construction Permit issuance? (circle one)			
Design Flow (gallons/day) Average: 43,750 GPD Peak: 175,000 GPD		Peak Factor 4.0	Basis of Design 175 SF = 250 GPD
Description Design flow accounts for 175 single family lots.			

OWNER/DEVELOPER		
Company Name Strahly Holdings, LLC		
Mailing Address 16255 Sussex Highway		
City Bridgeville	State DE	Zip 19933
Contact Name Rob Lisle		
E-Mail Address Rob@insightde.com		
Telephone 302-337-0400	Cell	Fax

ENGINEER					
Company Name Morris & Ritchie Associates, Inc.					
Mailing Address 111 Ruthar Drive					
City Newark		State DE		Zip 19711	
Contact Name Charles Barnett					
E-Mail Address CBarnett@mragta.com					
Telephone 302-326-2200		Cell		Fax	

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)
PVC SDR - 35	10,057	8"	PVC elastometric O-ring gasketed assembly	0.003 ft/ft	2.0 ft/sec
PVC SDR - 26	73	12"	PVC elastomeric O-ring gasketed assembly	0.003 ft/ft	2.0 ft/sec

Minimum Pipe Cover (ft)	Number of Manholes	Drop manholes provided?	Maximum Distance Between Manholes (ft)
5.33 ft	57	☐ Yes ☒ No	400 ft

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

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

Comments

PUMP/LIFT STATION INFORMATION				
Ownership ■ Public ☐ Private	Type of Wastewater ■ Residential ☐ Commercial ☐ Industrial ☐ Other?		If Other, list below	
Pump Station Flows (gallons/day) Design 270 GPM	Average 236,000 GPD	Peak 377,600 GPD	Peak Factor 4.0	
Basis of Design Kent County Standards (10 State Standards, revised)	Pump Type Gorman Rupp, suction lift			
Will peak flows be accommodated if largest unit fails? ■ Yes ☐ No	Pump calc's and pump curves attached? ■ Yes ☐ No	Cycle Time (minutes) 10 min	Wet Well Detention Time (minutes) 10 min	
Check valves provided on discharge line? ■ Yes ☐ No		Gate valves provided on discharge line? ■ Yes ☐ No		
If not, explain alternate procedure:				
Ventilation provided in wet well? ■ Yes ☐ No	Dry Well? ☐ Yes ■ No	Is an alarm system included? ■ Yes ☐ No	Alternate source of power? ☐ Yes ■ No	
What other provisions for emergency operations? Standby Emergency Diesel Driven Pump; Bypass pump-around; SCADA System, Redundant float/control system				
Height of Influent Above Pump (suction head) (ft) 45.50-64.92=-19.42 FT.	Height of Effluent Above Pump (discharge head) (ft) 78.60-45.50=33.1 FT.	Friction Loss (ft) 22 ft. at 200 GPM		
Pump Design Point 270 GPM@124FT	Pump Operating Point 225 GPM @ 60 FT.	Static Head (ft) 33.1 FT.	Total Head (ft) 124 FT.	Required Motor Horsepower (hp) 25 HP

FORCE MAIN INFORMATION				
Type of Pipe SDR21 PVC		Length (ft) 6,156 FT.	Diameter (in) 6 IN.	
Hazen-Williams "C" Design Factor 120 DIP/130 PVC	Type of Joints Push-On & Restrained	Velocity Under Design Conditions (ft/sec) 2.17 FPS	Minimum Pipe Cover (ft) 3 FT.	
Air relief valves specified? ☐ Yes ■ No	Clean-outs provided? ■ Yes ☐ No	Maximum distance between clean-outs (ft) 487 FT.		
Minimum ten foot (10') horizontal & eighteen inch (18") vertical separation from water lines maintained? ■ Yes ☐ No	If not, explain provisions to prevent cross-contamination:			
Comments				