



Axiom Engineering, L.L.C.
 18 Chestnut Street
 Georgetown, DE 19947
 (302) 855-0810
 Fax: 855-0812
axiom@axeng.com
www.axeng.com



CONFIDENTIAL LETTER OF TRANSMITTAL

TO: Kevin Bronson, Environ. Engineer III
 COMPANY: DE DNREC, Division of Water, SWDS
 ADDRESS: 89 Kings Highway
 Dover, DE 19901
 RE: 0596-2201 Mulberry Heights Townhomes

FROM: Kenneth R. Christenbury, P.E.

DATE: 6/26/24

CC:

- ☒ For Review
- ☐ For Your Use
- ☐ For Approval
- ☐ As Requested
- ☐ Please Return When Finished

Shipped Via:
☐ Hand Delivery
☐ Overnight
☐ US Postal Service

Quantity	Date	Description
1	6/14/2024	Sanitary Sewer Construction Plans (Sheets SS-1 - SS-6)
1	6/26/2024	Town Engineer Approval - Town Requests Hard Copies for Planning Commission
1	5/23/2024	Approval e-mail from Artesian Wastewater Management
1	6/21/2024	Artesian e-mail RE - modification of existing force main length
1	6/14/2024	Application for the Construction of Wastewater Collection and Conveyance Systems
1	1/5/1989	Pump Station and Force Main Plans - Shipbuilders Village
1	6/26/2024	\$825 check to "State of Delaware" mailed under separate cover
1	6/26/2024	\$300 check to "State of Delaware" for force main revision mailed under separate cover

NOTES / COMMENTS:

Developer will be mailing in review fee under separate cover. If you require anything further, do not hesitate to call me at the telephone number in the letterhead or contact me by e-mail:

ken@axeng.com

Thanks,
 Ken Christenbury

Signature: _____

RE: 0596-2201 Mulberry Heights Townhomes

From: ken@axeng.com (ken@axeng.com)

To: wenjia.fan@delaware.gov; kevin.bronson@delaware.gov

Cc: collierhomesllc@msn.com; rjlhomes@aol.com

Date: Wednesday, June 26, 2024 at 03:09 PM EDT

Wenjia,

I checked with Artesian Wastewater Management, and Artesian indicated that the \$300 fee typically does apply when modifying an existing force main.

I will advise my client to send 2 checks to Kevin's office with a copy of the attached transmittal:

\$825 - payable to STATE OF DELAWARE for DNREC Sewer Review Fee

\$300 - payable to STATE OF DELAWARE for DNREC Sewer Force Main Public notice

Hard copies of the plan will be delivered to Kevin Bronson, I would expect them to arrive by Monday.

The digital copies of the sewer construction plans are still available in the DROPBOX link I sent before:

<https://www.dropbox.com/scl/fo/yxmk9jkw3v3sqzomx2hvr/AJVmWfK0aL9gzButhzqVv5U?rlkey=cl7umkt7mtwt53l1h9naj9fwq&dl=0>

I have added documents to the DROPBOX including e-mails from the Town Engineer indicating that the plans are "Ready for Approval" and an e-mail from Artesian Wastewater Management indicating that the change in force main length is negligible given the overall length of the force main.

Please let me know when the check and plans have arrived.

Thank you,

Ken

Kenneth R. Christenbury, P.E.
President, Axiom Engineering, LLC
18 Chestnut Street
Georgetown, DE 19947
(302) 855-0810
Fax 855-0812

ken@axeng.com
www.axeng.com



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.**

- E-MAIL ☒ 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. HARD COPY SHIPPED FROM PRINT SHOP
- ☒ 3. One (1) electronic copy of final Plans. TRANSMITTED BY DROPBOX LINK
- ☒ 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.
FORCE MAIN RE-ROUTED, NO CHANGES TO PUMP STATION
- ☒ 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.
- DEVELOPER
CHECK MAILED
UNDER SEPARATE
COVER
- N/A ☐ 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.
FORCE MAIN RE-ROUTED, NO CHANGES TO PUMP STATION. IS THIS \$300 FEE REQUIRED?
- ☒ 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. UTILITY APPROVAL RECEIVED FROM ARTESIAN, TOWN OF MILTON ZONING REVIEW IS ON-GOING
- ☒ 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).
- SEE 5/23/2024
E-MAIL FROM
ARTESIAN
WASTEWATER

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

THE SITE HAS AN EXISTING PUMP STATION CONSTRUCTED
APPROXIMATELY 30 YEARS AGO. THE EXISTING 187 L.F. 6" PVC FORCE
MAIN IS BEING RE-ROUTED TO A LENGTH OF 229 L.F. NO ADDITIONAL
CHANGES TO THE PUMP STATION AND FORCE MAIN ARE PROPOSED.

Document last revised: January 11, 2023

**APPLICATION FOR THE CONSTRUCTION OF
WASTEWATER COLLECTION AND CONVEYANCE SYSTEMS**

Application must be complete, typewritten or clearly printed

Date Application Submitted 6/28/2024

PROJECT INFORMATION			
Project Name and Location/ Address MULBERRY HEIGHTS TOWNHOMES - 17 UNIT TOWNHOME COMMUNITY MULBERRY STREET - TOWN OF MILTON, DE			
Tax Parcel Number(s) SUSSEX COUNTY TM 235-14.00-288.00			
County <input type="checkbox"/> Kent <input type="checkbox"/> New Castle <input checked="" type="checkbox"/> Sussex		Watershed (www.dnrec.delaware.gov/swc/wa/Pages/WatershedAssessment.aspx) <input type="checkbox"/> Chesapeake Bay <input checked="" type="checkbox"/> DE Bay/Estuary <input type="checkbox"/> Inland Bays/Atl Ocean <input type="checkbox"/> Piedmont	
Sewer District or Interceptor TOWN OF MILTON		Wastewater Treatment/Disposal Facility Name MILTON WWTP	
Anticipated Construction Start Date FALL 2024		Treatment/Disposal Facility Owner and Operating Permit Number ARTESIAN WASTEWATER DE0021491	
Please note, construction permits expire three (3) years from the date of permit issuance.			
Are you requesting <u>plan review</u> and comment or WPCC Construction Permit issuance? (circle one)			
Design Flow (gallons/day) Average 5,100 GPD		Peak 17,850 GPD	Peak Factor 3.5
			Basis of Design 300 GPD/EDU
Description 17 UNIT TOWNHOME COMMUNITY			
OWNER/DEVELOPER			
Company Name MULBERRY HEIGHTS, LLC			
Mailing Address 35246 LEESBURG PIKE - SUITE 200			
City ROUND HILL		State VA	Zip 20141
Contact Name CAMPBELL LEWIS			
E-Mail Address COLLIERHOMESLLC@MSN.COM			
Telephone		Cell 540-454-2255	Fax -

ENGINEER					
Company Name AXIOM ENGINEERING, L.L.C.					
Mailing Address 18 CHESTNUT STREET					
City GEORGETOWN			State DE		Zip 19947
Contact Name KEN CHRISTENBURY, P.E.					
E-Mail Address KEN@AXENG.COM					
Telephone (302) 855-0810		Cell (302) 542-8417		Fax	
GRAVITY SEWER INFORMATION					
Ownership <input checked="" type="checkbox"/> Public <input type="checkbox"/> Private		Type of Sewer System <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Commercial <input type="checkbox"/> Industrial <input type="checkbox"/> Other?		If Other, list below	
Type of Pipe PVC		Length (ft) 420±	Diameter (in) 8"	Joint Specification MJ	Min. Slope (ft/ft) 0.0030
					Min. Velocity (ft/sec) 2.0
Minimum Pipe Cover (ft) 3'±		Number of Manholes 5	Drop manholes provided? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Maximum Distance Between Manholes (ft) 171'
Minimum ten foot (10') horizontal & eighteen inch (18") vertical separation from water lines maintained? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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.) THE SITE HAS AN EXISTING PUMP STATION CONSTRUCTED APPROXIMATELY 30 YEARS AGO. THE EXISTING 187 L.F. 6" PVC FORCE MAIN IS BEING RE-ROUTED TO A LENGTH OF 229 L.F. NO ADDITIONAL CHANGES TO THE PUMP STATION AND FORCE MAIN ARE PROPOSED.					
Comments					

PUMP/LIFT STATION INFORMATION				
Ownership <input checked="" type="checkbox"/> Public <input type="checkbox"/> Private		Type of Wastewater <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Commercial <input type="checkbox"/> Industrial <input type="checkbox"/> Other?		If Other, list below
Pump Station Flows (gallons/day) Design		Average	Peak	Peak Factor
Basis of Design			Pump Type	
Will peak flows be accommodated if largest unit fails? <input type="checkbox"/> Yes <input type="checkbox"/> No		Pump calc's and pump curves attached? <input type="checkbox"/> Yes <input type="checkbox"/> No		Cycle Time (minutes) _____ Retention Time _____
Check valves provided on discharge line? <input type="checkbox"/> Yes <input type="checkbox"/> No				
If not, explain alternate procedure: _____				
Ventilation provided? <input type="checkbox"/> Yes <input type="checkbox"/> No		Alternate source of power? <input type="checkbox"/> Yes <input type="checkbox"/> No		
<div style="transform: rotate(-30deg); opacity: 0.5; font-weight: bold; font-size: 1.2em;"> NO CHANGES TO THE PUMP STATION ARE PROPOSED. PUMP STATION PLANS ARE DATED 1989. STATION HAS BEEN OPERATED BY THE TOWN OF MILTON FROM THAT TIME TILL ARTESIAN WASTEWATER MANAGEMENT TOOK OVER OPERATIONS. </div>				
Height (suction)	Height of Effluent Above Pump (discharge head) (ft)		Friction Loss (ft)	
Pump Design	Pump Operating Point	Static Head (ft)	Total Head (ft)	Required Motor Horsepower (hp)
FORCE MAIN INFORMATION				
Type of Pipe C 900 PVC		Length (ft) 229 L.F.	Diameter (in) 6"	
Hazen-Williams "C" Design Factor	Type of Joints	Velocity Under Design Conditions (ft/sec)	Minimum Pipe Cover (ft)	
Air relief valves specified? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Clean-outs provided? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Maximum distance between clean-outs (ft) 229 L.F. FROM WET WELL TO DISCHARGE MH		
Minimum ten foot (10') horizontal & eighteen inch (18") vertical separation from water lines maintained? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		If not, explain provisions to prevent cross-contamination:		
Comments THE EXISTING FORCE MAIN IS ONLY 187 L.F. TO A GRAVITY MANHOLE IN MULBERRY STREET. THE FORCE MAIN IS BEING RE-ROUTED THROUGH THE DEVELOPMENT OF THE SITE TO A NEW LENGTH OF 229 L.F. ARTESIAN WASTEWATER MANAGEMENT HAS INDICATED THIS CHANGE IN FORCE MAIN LENGTH IS NEGLIGIBLE IN RELATION TO THE PUMP STATION PERFORMANCE.				

RECEIPT

	July 2nd, 2024		73
RCVD FROM	Mulberry Heights Townhomes		\$825.00
	Eight Hundred twenty-five dollars and 00/100		DOLLARS
FOR	Plan review fee WPCC 305/24 Mulberry Heights Townhomes		
ACCT	\$ 825.00	x	CHECK # 10206
PAYMENT	\$ 825.00		CASH
	\$ -		OTHER BY Kevin Bronson
DNREC, Commercial & Government Services Section, 89 Kings Hwy, Dover, DE 19901			

RECEIPT

	July 2nd, 2024		74
RCVD FROM	Mulberry Heights Townhomes		\$300.00
	Three Hundred Dollars and 00/100		DOLLARS
FOR	WPCC Legal Notice Reimbursement 3053/24		
ACCT	\$ 300.00	x	CHECK # 10207
PAYMENT	\$ 300.00		CASH
	\$ -		OTHER BY Kevin Bronson
DNREC, Commercial & Government Services Section, 89 Kings Hwy, Dover, DE 19901			