

3050/24



LETTER OF TRANSMITTAL	
DATE:	June 20, 2024
ATTENTION:	Kevin Bronson
FROM:	Ryan Conway
JOB NAME:	King Cole Farms
JOB NUMBER:	D2210021
RE:	DRNEC

TO: Kevin Bronson
 DNREC
 Division of Water
 89 Kings Highway
 Dover, DE 19901



<input checked="" type="checkbox"/> U.S. Mail	<input type="checkbox"/> Hand Carried	<input type="checkbox"/> DHL
<input type="checkbox"/> UPS	<input checked="" type="checkbox"/> Electronically	
<input type="checkbox"/> Fed Ex	<input type="checkbox"/> To Be Picked Up	

PHONE:

COPIES	DATE	DESCRIPTION
1	1/17/2024	Site Plan (14 sheets)
1		WPCC Application
1		Cover Letter
1		Pump Calculations
1		Check in the amount of \$825.00
1		Check in the amount of \$300.00

IF THE ENCLOSED IS NOT AS NOTED, PLEASE CONTACT US AT ONCE.

The above are transmitted as checked below:

- | | | |
|---|--|--------------------------------|
| <input type="checkbox"/> As Requested | <input checked="" type="checkbox"/> Submittal for approval | <input type="checkbox"/> Other |
| <input type="checkbox"/> For your use | <input type="checkbox"/> Submittal for signatures | |
| <input type="checkbox"/> For your file | <input type="checkbox"/> Re-submittal for approval | |
| <input type="checkbox"/> For review and comment | <input type="checkbox"/> Returned | |

REMARKS:

COPIES TO:

McCRONE

ENGINEERS ■ SURVEYORS ■ PLANNERS

June 19, 2024

Mr. Kevin Bronson, Administrative Specialist III
Department of Natural Resources & Environmental Control
Division of Water
89 Kings Highway
Dover, DE 19901

RE: King Cole Farms Campground
WPCC Permit Application
Tax Map #2-00-08800-01-1100-0001
McCrone Job No.: D2210021



Dear Mr. Bronson,

On behalf of the Developer/Owner Sally A. Dickerson, Trustee, we are pleased to submit an application for the construction of a gravity sewer system connected to an E1 grinder pump. This plan is for the construction of 18 campsites, 6 pull thru sites and 12 back-in sites. The property is located westbound along Pickering Beach Road (KC-00349-F) in Kent County. The sewer infrastructure is to be privately owned and maintained by the owner. The proposed booster grinder pump will be submitted under a separate cover by Kent County and owned and maintained by Kent County. The sewage will flow from the site to an existing forcemain located along Pickering Beach Road.

Sincerely,

McCrone

Ryan Conway, P.E.
Project Manager



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 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 King Cole Farms Campground			
Tax Parcel Number(s) 2-00-08800-01-1100-00001			
County <input checked="" type="checkbox"/> Kent <input type="checkbox"/> New Castle <input 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 PKB	Wastewater Treatment/Disposal Facility Name Kent County Regional WWTP		
Anticipated Construction Start Date 8/2024	Treatment/Disposal Facility Owner and Operating Permit Number State of Delaware		
Please note, construction permits expire three (3) years from the date of permit issuance.			
Are you requesting plan review and comment of WPCC Construction Permit issuance? (Circle one)			
Design Flow (gallons/day) Average 3,208	Peak 12,830	Peak Factor 4	Basis of Design 12.68 EDUs x 250 gpd/ EDU
Description 18 campsites @ 1 EDU + 1 EDU per 2 spaces = 10 EDUs Public gathering space w/ 5 fixtures @ 1 EDU + # fixtures/6 = 1.83 EDUs Existing garage = 1 EDU			
OWNER/DEVELOPER			
Company Name Sally A. Dickerson, Trustee			
Mailing Address 1730 Bayside Drive			
City Dover	State DE	Zip 19901	
Contact Name Jim Dickerson			
E-Mail Address jdicker192@aol.com			
Telephone	Cell 410-726-7571	Fax	

ENGINEER					
Company Name McCrone					
Mailing Address 119 Naylor Mill Road, Suite 3					
City Salisbury		State MD		Zip 21813	
Contact Name Ryan Conway					
E-Mail Address rconway@mccrone-engineering.com					
Telephone 410-548-1492		Cell		Fax	
GRAVITY SEWER INFORMATION					
Ownership <input type="checkbox"/> Public <input checked="" type="checkbox"/> Private	Type of Sewer System <input type="checkbox"/> Residential <input checked="" type="checkbox"/> Commercial <input type="checkbox"/> Industrial <input type="checkbox"/> Other?			If Other, list below	
Type of Pipe SDR-35 PVC	Length (ft) 393.43	Diameter (in) 8"	Joint Specification Push-On	Min. Slope (ft/ft) 1.00%	Min. Velocity (ft/sec) 5.01
Minimum Pipe Cover (ft) 4	Number of Manholes 4	Drop manholes provided? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Maximum Distance Between Manholes (ft) 231.77	
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.)					
Comments					

PUMP/LIFT STATION INFORMATION				
Ownership <input type="checkbox"/> Public <input checked="" type="checkbox"/> Private		Type of Wastewater <input type="checkbox"/> Residential <input checked="" type="checkbox"/> Commercial <input type="checkbox"/> Industrial <input type="checkbox"/> Other?		If Other, list below
Pump Station Flows (gallons/day) Design 12,830		Average 3,208	Peak 12,830	Peak Factor 4
Basis of Design Duplex Grinder Pump Station			Pump Type E/One Semi-Positive Displacement Type	
Will peak flows be accommodated if largest unit fails? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Pump calc's and pump curves attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Cycle Time (minutes)	Wet Well Detention Time (minutes)
Check valves provided on discharge line? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			Gate valves provided on discharge line? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
If not, explain alternate procedure:				
Ventilation provided in wet well? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Dry Well? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is an alarm system included? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Alternate source of power? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
What other provisions for emergency operations?				
Height of Influent Above Pump (suction head) (ft) 1.41		Height of Effluent Above Pump (discharge head) (ft) Varies *		Friction Loss (ft) Varies *
Pump Design Point 9 gpm	Pump Operating Point 11 gpm	Static Head (ft) Varies *	Total Head (ft) Varies *	Required Motor Horsepower (hp) 1 HP
FORCE MAIN INFORMATION				
Type of Pipe SDR-11 HDPE to SDR-21 PVC *		Length (ft) 21*		Diameter (in) 1.5" to 3" *
Hazen-Williams "C" Design Factor 0.009	Type of Joints Push-On	Velocity Under Design Conditions (ft/sec) 2.00 in 1.5" lateral *	Minimum Pipe Cover (ft) 3	
Air relief valves specified? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Clean-outs provided? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Maximum distance between clean-outs (ft) N/A (force main too short)		
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 * This pump discharges to a common forcemain and when pumping alone, it does not meet minimum velocity requirement. To achieve the required flushing velocity, Kent County Department of Public Works will be installing and operating a booster pump station that will discharge into this forcemain at a rate that will achieve a velocity of at least 2 fps. See notes on sewer plan on Sheet C7.				

Pump Station Calculations

Design Flow Calculations

18 Campsites @ 250 gpd + 125 gpd/site	2,500	gpd
Existing Garage	250	gpd
Public Gathering Space (5 fixtures)	458	gpd
Average Daily Flow	3,208	gpd
Peak Flow Factor for PS Design	4	
Peak Flow	12,830	gpd
Required Flowrate	9	gpm
Design Flowrate	11	gpm

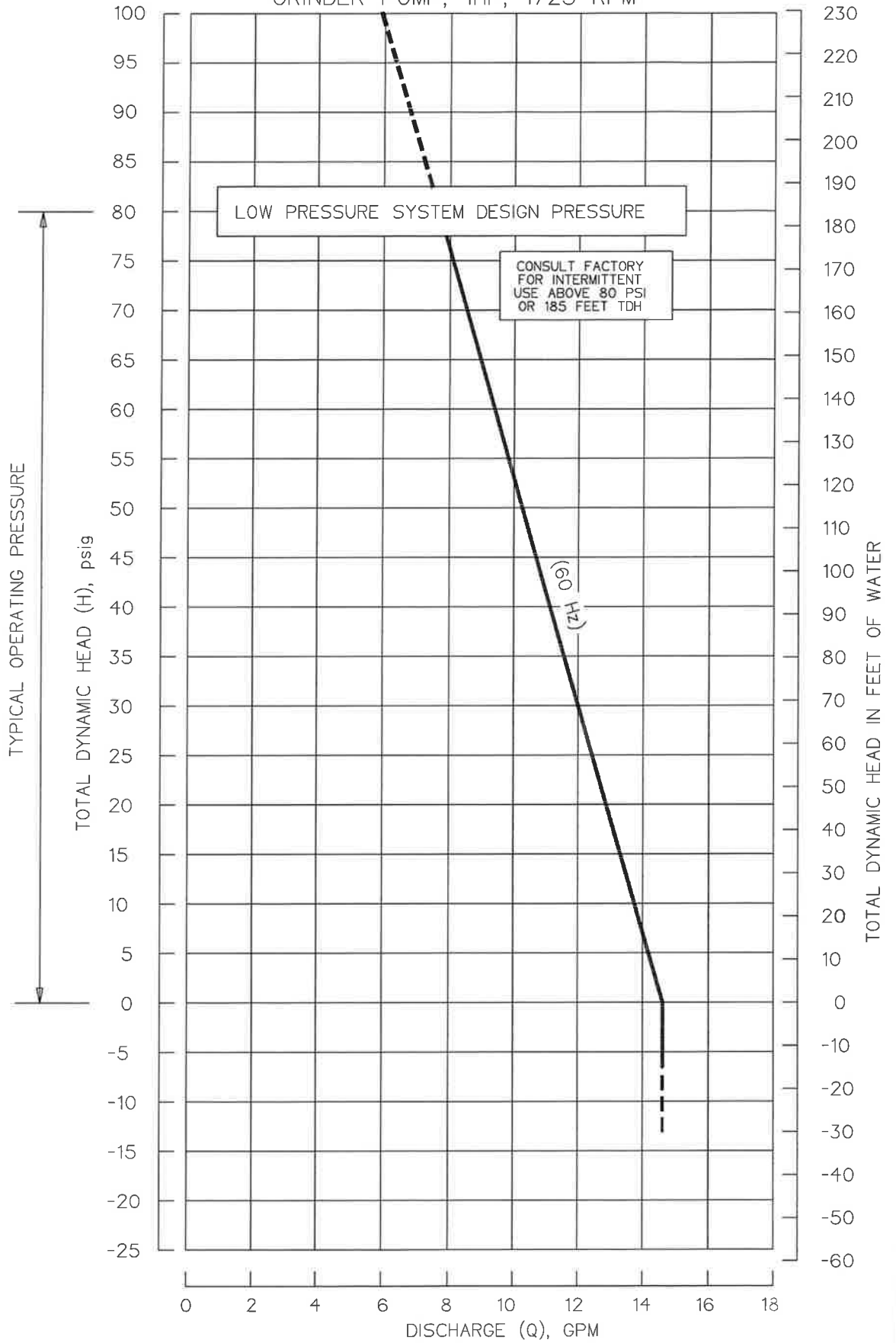
Force Main

Existing Force Main Size	3	in
Velocity in Existing Force Main	1	fps
Minimum velocity in FM	2	fps *

* This pump discharges to a common forcemain and when pumping alone, it does not meet minimum velocity requirement. To achieve the required flushing velocity, Kent County Department of Public Works will be installing and operating a booster pump station that will discharge into this forcemain at a rate that will achieve a velocity of at least 2 fps. See notes on sewer plan on Sheet C7.

E|ONE SPD PUMP PERFORMANCE CURVE

GRINDER PUMP, 1HP, 1725 RPM



RECEIPT

	June 25th, 2024		69
<i>RCVD FROM</i>	Design Teams Inc.		\$825.00
	Eight Hundred twenty-five dollars and 00/100		<i>DOLLARS</i>
<i>FOR</i>	Plan review fee WPC 3050/24 King Cole Farms Campground		
<i>ACCT</i>	\$ 825.00	x	<i>CHECK #</i> 1042
<i>PAYMENT</i>	\$ 825.00		<i>CASH</i>
	\$ -		<i>OTHER</i> BY <i>Kevin Bronson</i>

DNREC, Commercial & Government Services Section, 89 Kings Hwy, Dover, DE 19901

RECEIPT

	June 25th, 2024		70
<i>RCVD FROM</i>	Design Teams Inc.		\$300.00
	Three Hundred Dollars and 00/100		<i>DOLLARS</i>
<i>FOR</i>	WPC Legal Notice Reimbursement 3050/24		
<i>ACCT</i>	\$ 300.00	x	<i>CHECK #</i> 1043
<i>PAYMENT</i>	\$ 300.00		<i>CASH</i>
	\$ -		<i>OTHER</i> BY <i>Kevin Bronson</i>

DNREC, Commercial & Government Services Section, 89 Kings Hwy, Dover, DE 19901