

# Surry Treatment Plant

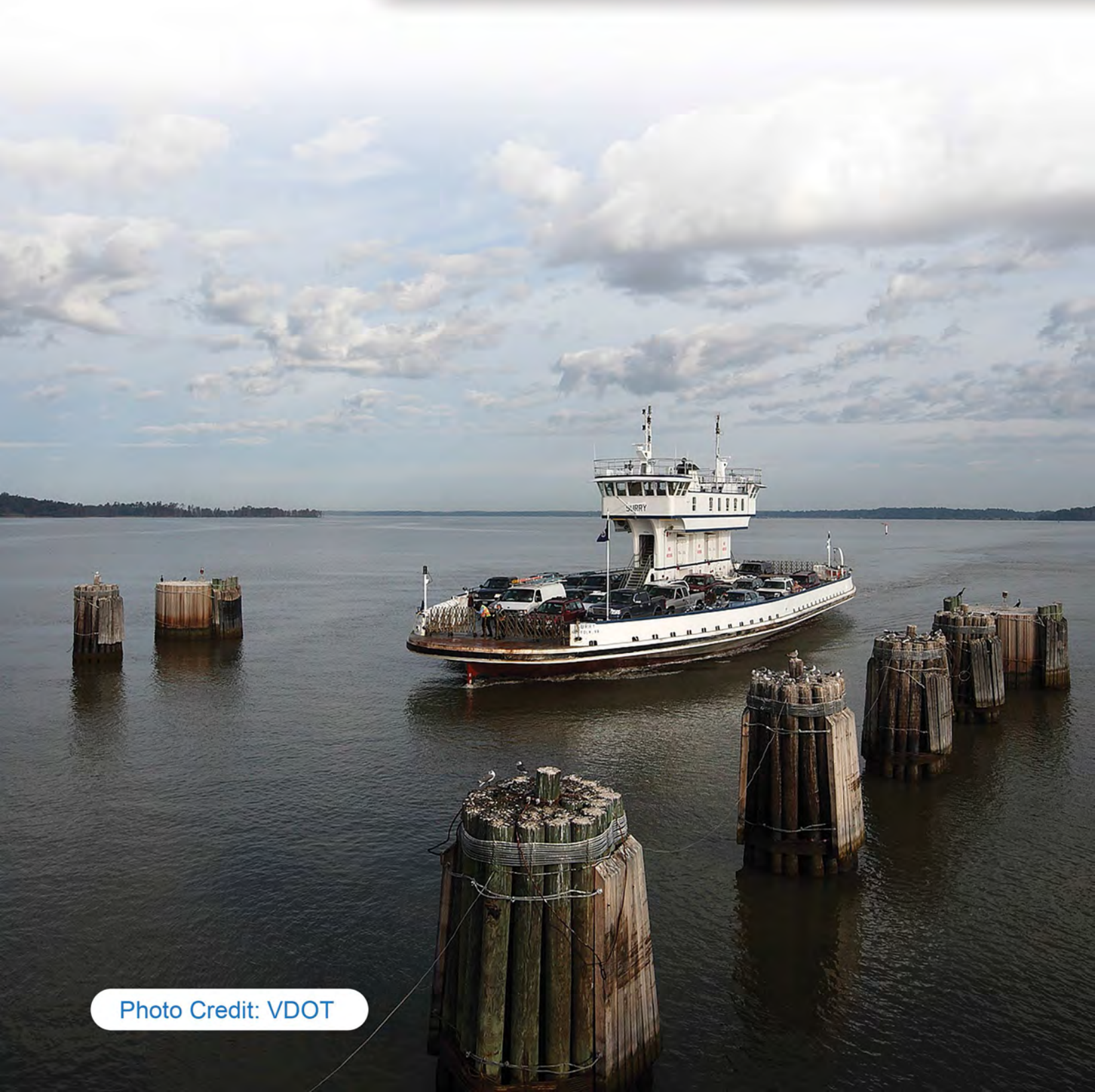
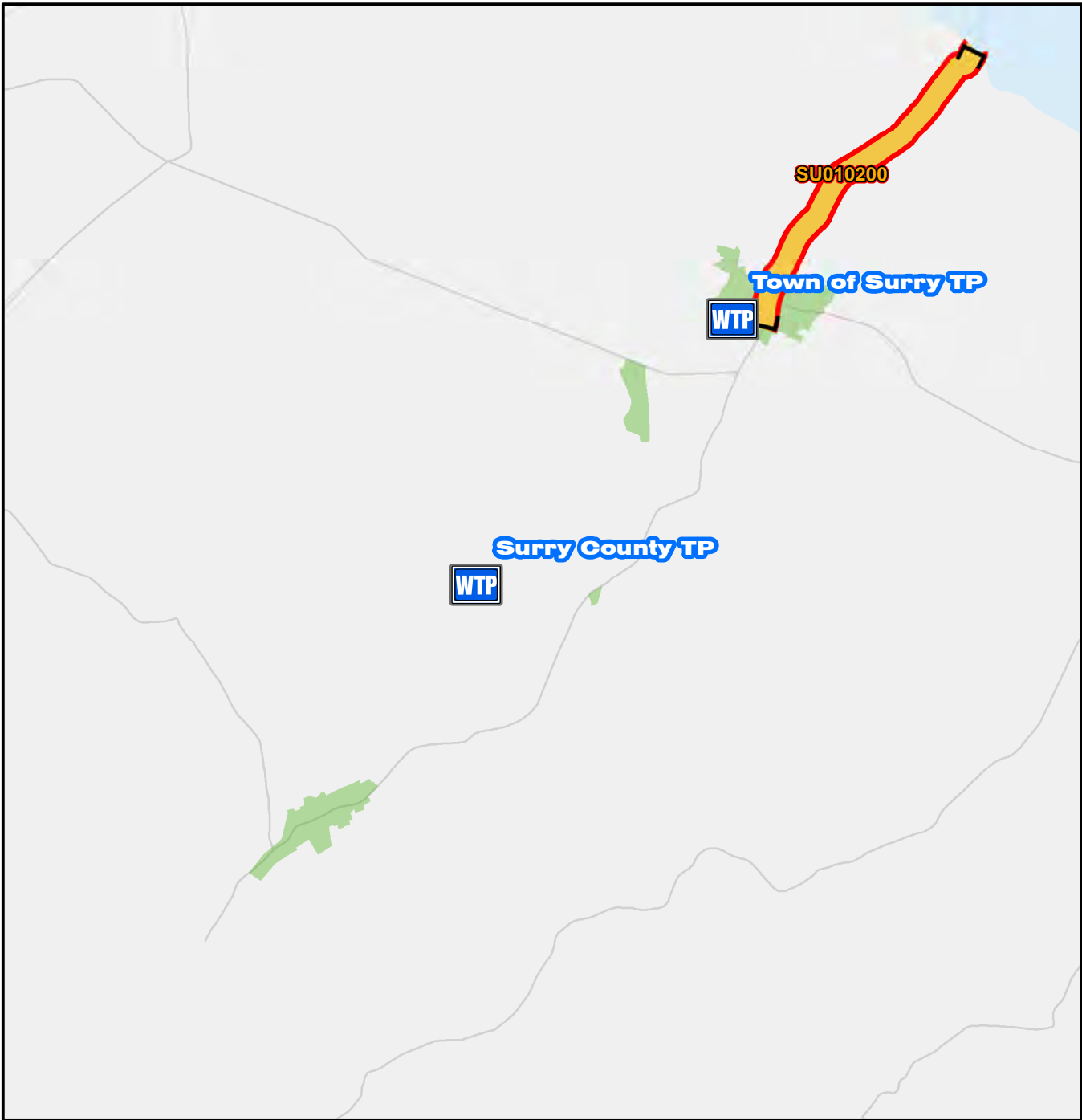


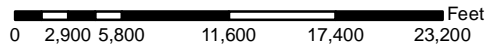


Photo Credit: VDOT



**Legend**

-  **Surry**
-  **CIP Interceptor Point**
-  **CIP Pump Station Point**
-  **CIP Interceptor Line**
-  **CIP Abandonment**
-  **Treatment Plant Service Area**
-  **HRSD Interceptor Force Main**
-  **HRSD Interceptor Gravity Main**
-  **HRSD Treatment Plant**
-  **HRSD Pressure Reducing Station**
-  **HRSD Pump Station**



**Surry Service Area CIP Projects**

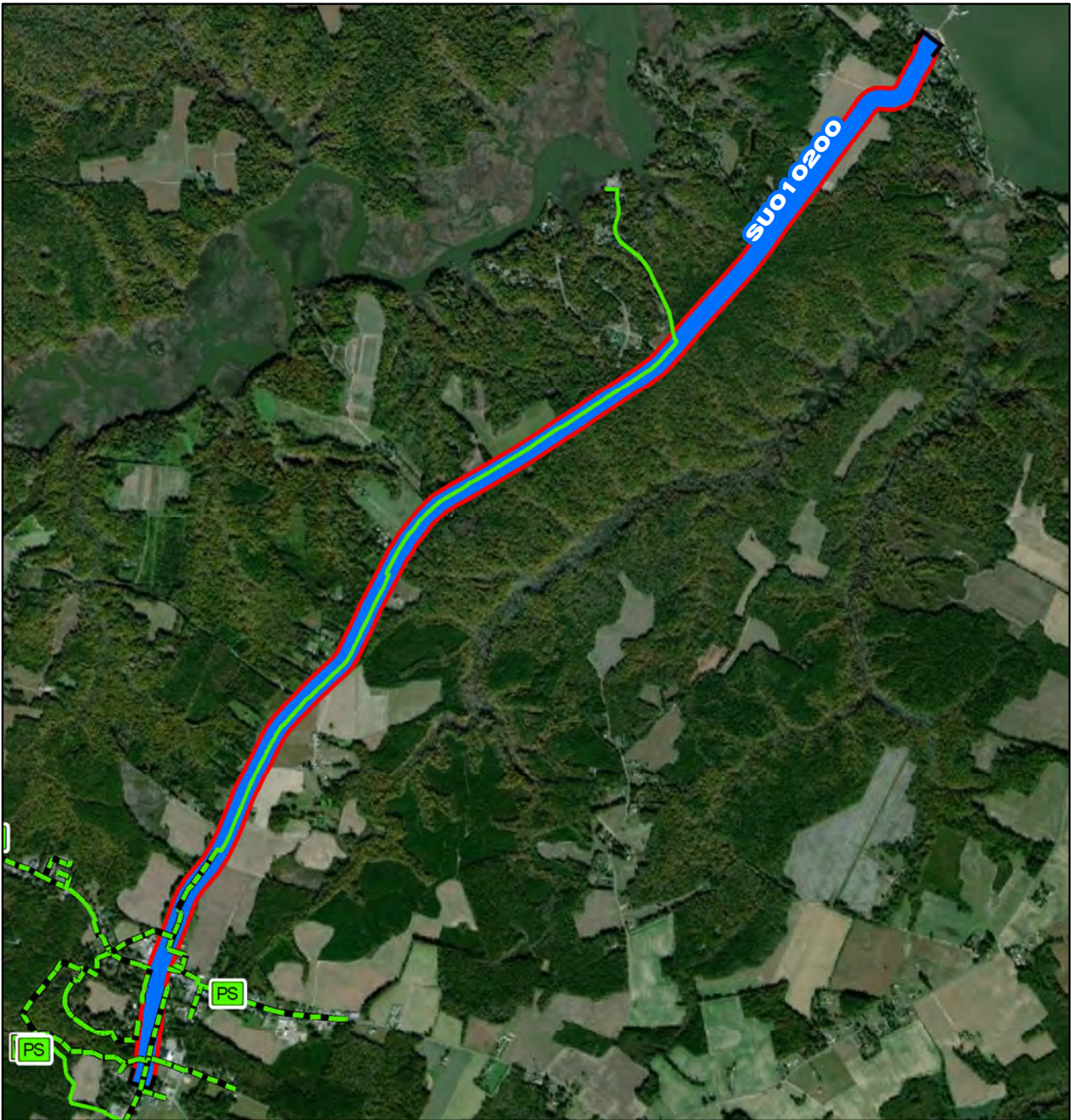
**Treatment Plant Projects**



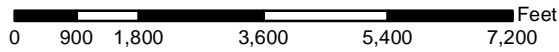
**CIP Location**



Service Area



- SUO10200**
- Project Interceptor Line
  - Project Interceptor Point
  - Project Pump Station Point
  - Project Area
- Legend**
- CIP Interceptor Point
  - CIP Pump Station Point
  - CIP Interceptor Line
  - CIP Abandonment
  - CIP Project Area
  - HRSD Interceptor Force Main
  - HRSD Interceptor Gravity Main
  - HRSD Treatment Plant
  - HRSD Pressure Reducing Station
  - HRSD Pump Station



# SUO 10200

## Surry Hydraulic Improvements and Interceptor Force Main



**CIP Location**



Surry



System: Surry  
Type: Pipelines

Driver Category: Aging Infrastructure/Rehabilitation  
Project Phase: Design  
Regulatory: Consent Decree - Surry

**PROGRAM CASH FLOW PROJECTION (\$,000)**

Prog Cost	Exp to Previous Year	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31
\$43,074	\$21,725	\$14,232	\$7,116	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

**PROJECT DESCRIPTION**

The project will include three new pump stations, two existing pump station upgrades, electrical, instrumentation and controls, generator at each pump station, an equalization tank, approximately 131,200 LF of force main ranging from 4-inch diameter to 10-inch diameter, and the closure of both the County of Surry Wastewater Treatment Plant (WWTP) and the Town of Surry WWTP. Flow will be conveyed to existing HRSD infrastructure in the Town of Smithfield, and will ultimately be treated at Nansemond Treatment Plant.

**PROJECT JUSTIFICATION**

HRSD is under a consent order with the state to decommission the Town of Surry Treatment Plant and Surry County Treatment Plant. This work must be completed by September 2022.

**FUNDING TYPE**

Funding Type: Revenue Bond

**CONTACTS**

Contacts-Requesting Dept: General Manager  
Contacts-Dept Contacts: Ann Copeland  
Contacts-Managing Dept: Engineering

**PROPOSED SCHEDULE START DATE**

PrePlanning 07/01/2018  
PER 03/01/2019  
Design Delay 03/01/2019  
Design 07/02/2018  
Bid Delay 07/01/2018  
PreConstruction 07/03/2018  
Construction 07/02/2018  
Closeout 01/01/2023

**COST ESTIMATE**

**Cost Estimate Class: Class 1**  
PrePlanning \$0  
PER \$0  
Design \$43,072,589  
PreConstruction \$0  
Construction \$995  
Closeout \$0  
**Est. Program Cost \$43,073,584**  
Contingency Budget \$885,119  
**Est. Project Costs \$43,958,703**



**Surry Water and Sewer Infrastructure Improvements-  
Phase 1**

**PR\_SU010300**

System: Surry  
Type: Pump Stations

Driver Category: Aging Infrastructure/Rehabilitation  
Project Phase: Pre Planning  
Regulatory: None

**PROGRAM CASH FLOW PROJECTION (\$,000)**

Prog Cost	Exp to Previous Year	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31
\$2,031	\$605	\$1,426	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

**PROJECT DESCRIPTION**

This project will rehabilitate Surry Pump Stations and replace and/or rehabilitate infrastructure within the Surry collection system. The project will also replace approximately 211 water meters in the Town of Surry and 151 water meters in the Town of Dendron.

**PROJECT JUSTIFICATION**

The current collection and conveyance system is aging and recent flow monitoring activities have shown high amounts of inflow and infiltration coming into the system. This project will initiate the process of upgrading the existing collection and conveyance system to current HRSD standards. The existing water meters are outdated and in questionable condition. To ensure accurate billing moving forward, HRSD has agreed to replace the water meters with new meters with new automated reading features.

**FUNDING TYPE**

Funding Type: Revenue Bond

**CONTACTS**

Contacts-Requesting Dept: Operations-Interceptors  
Contacts-Dept Contacts: Sam McAdoo  
Contacts-Managing Dept: Operations-Interceptors

**PROPOSED SCHEDULE START DATE**

PrePlanning 01/01/2020  
PER 03/01/2020  
Design Delay 09/01/2020  
Design 09/01/2020  
Bid Delay 03/01/2021  
PreConstruction 03/01/2021  
Construction 05/01/2021  
Closeout 03/01/2022

**COST ESTIMATE**

**Cost Estimate Class: Class 5**  
PrePlanning \$0  
PER \$0  
Design \$249,500  
PreConstruction \$10,000  
Construction \$1,726,856  
Closeout \$45,000  
**Est. Program Cost \$2,031,356**  
Contingency Budget \$381,566  
**Est. Project Costs \$2,412,922**



# Surry Force Main and Pump Station-Dominion Power Extension

PR\_SU010400

System: Surry  
Type: Pipelines

Driver Category: Capacity Improvements  
Project Phase: Proposed  
Regulatory: None

## PROGRAM CASH FLOW PROJECTION (\$,000)

Prog Cost	Exp to Previous Year	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31
\$6,667	\$0	\$300	\$450	\$2,343	\$3,541	\$33	\$0	\$0	\$0	\$0	\$0

## PROJECT DESCRIPTION

This project will provide a new 6.5 mile force main and pump station extending from the Surry Nuclear Power Plant to HRSD's Mt. Ray Pump Station which is currently under construction. The project will be funded through a cost sharing agreement with Dominion Virginia Power.

## PROJECT JUSTIFICATION

Dominion has contacted HRSD about the possibility of abandoning their existing wastewater treatment plant and connecting to HRSD's Surry Interceptor Force Main at the Mt. Ray Pump Station. This proposed 6-inch force main will be located along both public and private property along the suggested route. A pump station will be constructed at the Surry Nuclear Power Facility and will be ultimately owned and operated by HRSD. A multi-step cost sharing agreement process will be used to consider the feasibility of this project. Most of the project costs will be borne by Dominion.

## FUNDING TYPE

Funding Type: Cash

## CONTACTS

Contacts-Requesting Dept: Operations-Interceptors  
Contacts-Dept Contacts: Sam McAdoo  
Contacts-Managing Dept: Engineering

## PROPOSED SCHEDULE START DATE

PrePlanning	05/01/2021
PER	07/01/2021
Design Delay	01/01/2022
Design	01/01/2022
Bid Delay	09/01/2023
PreConstruction	09/01/2023
Construction	12/01/2023
Closeout	06/01/2025

## COST ESTIMATE

<b>Cost Estimate Class:</b>	<b>Class 5</b>
PrePlanning	\$0
PER	\$75,000
Design	\$750,000
PreConstruction	\$25,000
Construction	\$5,766,667
Closeout	\$50,000
<b>Est. Program Cost</b>	<b>\$6,666,667</b>
Contingency Budget	\$1,333,333
<b>Est. Project Costs</b>	<b>\$8,000,000</b>