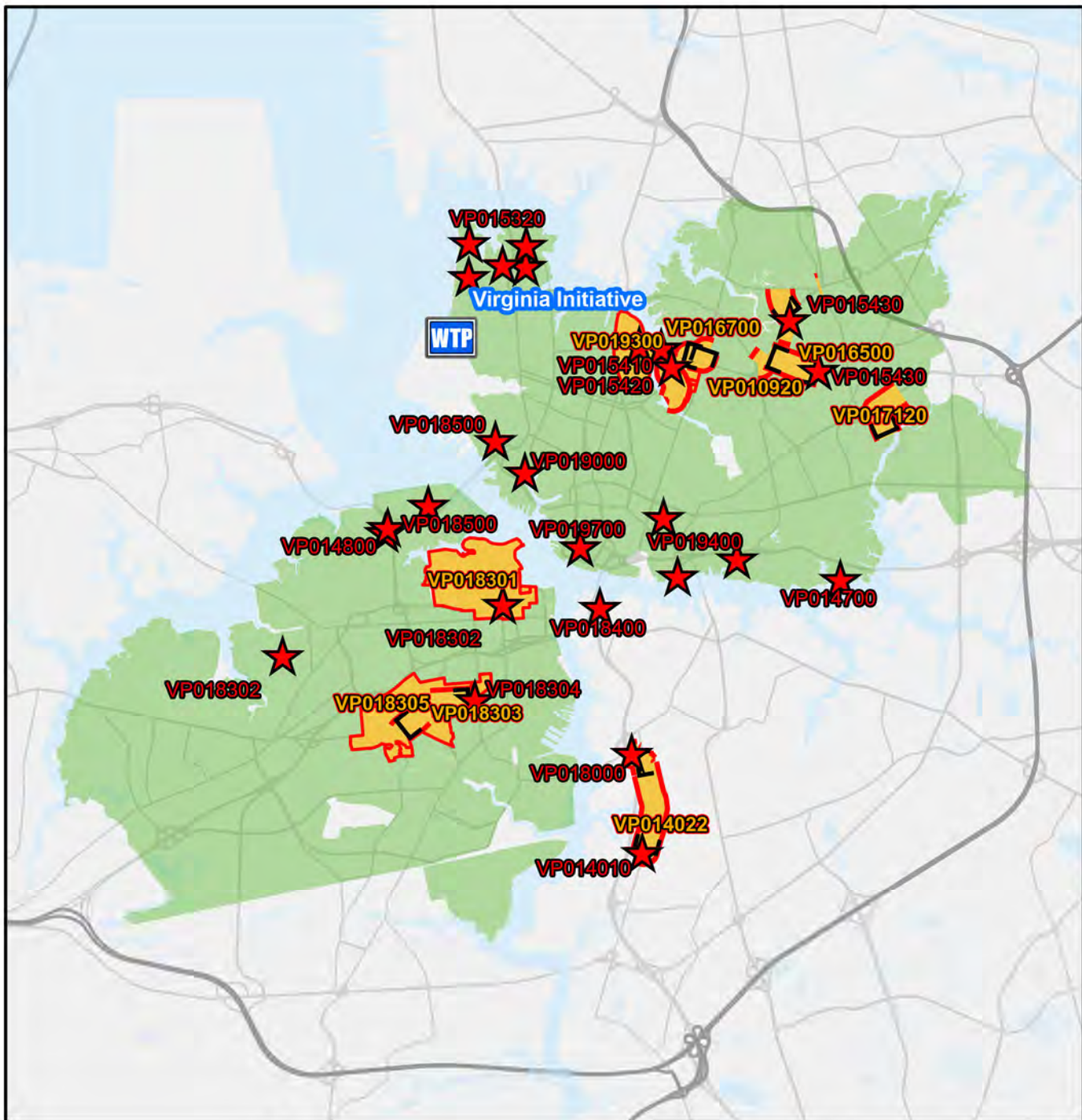


# Virginia Initiative Plant





#### Legend

-  Virginia Initiative Treatment Plant/Point/TP
-  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

0 2,500 5,000 10,000 15,000 20,000 Feet

### Virginia Initiative Treatment Plant Service Area CIP Projects

#### Treatment Plant Projects

GN016390	GN020100
GN016391	VP018800
GN016392	VP019100
GN017900	VP019200
GN019700	

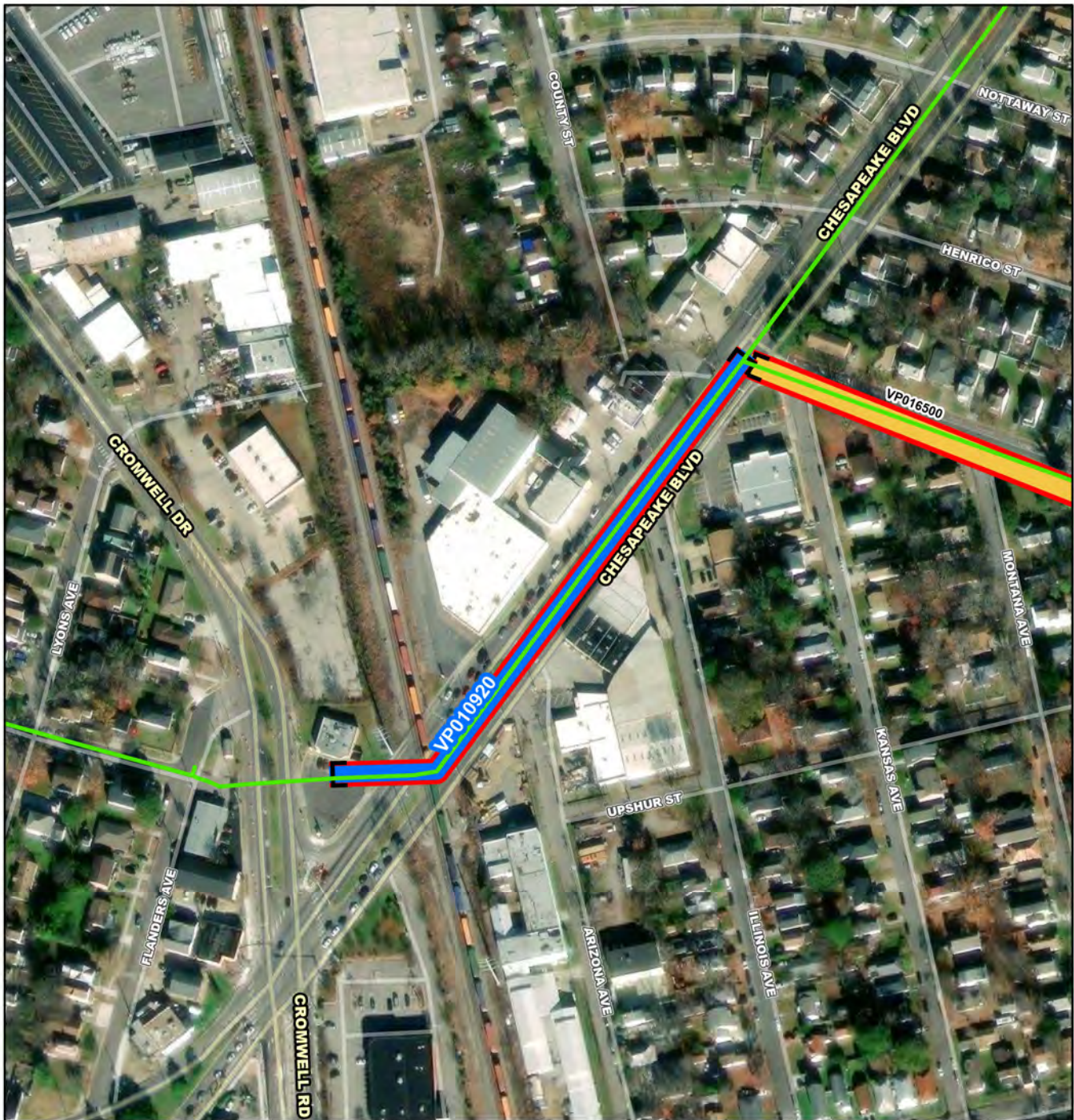


CIP Location



Service Area





VP010920

-  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

0 75 150 300 450 600 Feet

**VP010920**

**Norview Estabrook Division I 18-Inch Force Main Replacement Phase II, Section 2**



CIP Location





**Norview Estabrook Division I 18-Inch Force Main  
Replacement Phase II, Section 2**

**PR\_VP010920**

System: VIP  
Type: Pipelines

Driver Category: I&I Abatement-Rehabilitation Plan  
Project Phase: Construction  
Regulatory: Rehab Plan Phase Two

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

Prog Cost	Exp to Previous Year	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34
\$4,841	\$2,342	\$2,499	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

**PROJECT DESCRIPTION**

This project is to rehabilitate and/or replace a portion of SF-066 Norview-Estabrook Division I 18-Inch Force Main. The project extents are approximately 900 linear feet (LF) of 18-inch force main that stretches between Cromwell Drive and Robin Hood Road along Chesapeake Boulevard. One railroad crossing, under multiple Norfolk Southern tracks, is required.

**PROJECT JUSTIFICATION**

The pipe material and age are similar to other portions of the interceptor system in which HRSD has experienced multiple failures due to the tendency of cast iron to lose integrity with age. Construction activity for the new City lines also presents a significant risk to HRSD pipe lead joints, which are very sensitive to vibration. HART analysis has been completed for this system. This project must be completed before upgrades to the Chesapeake Boulevard Pump Station are completed (VP015400).

**FUNDING TYPE**

Funding Type: Revenue Bond

**CONTACTS**

Contacts-Requesting Dept: Operations-Interceptors  
Contacts-Dept Contacts: Phil Hubbard  
Contacts-Managing Dept: Engineering

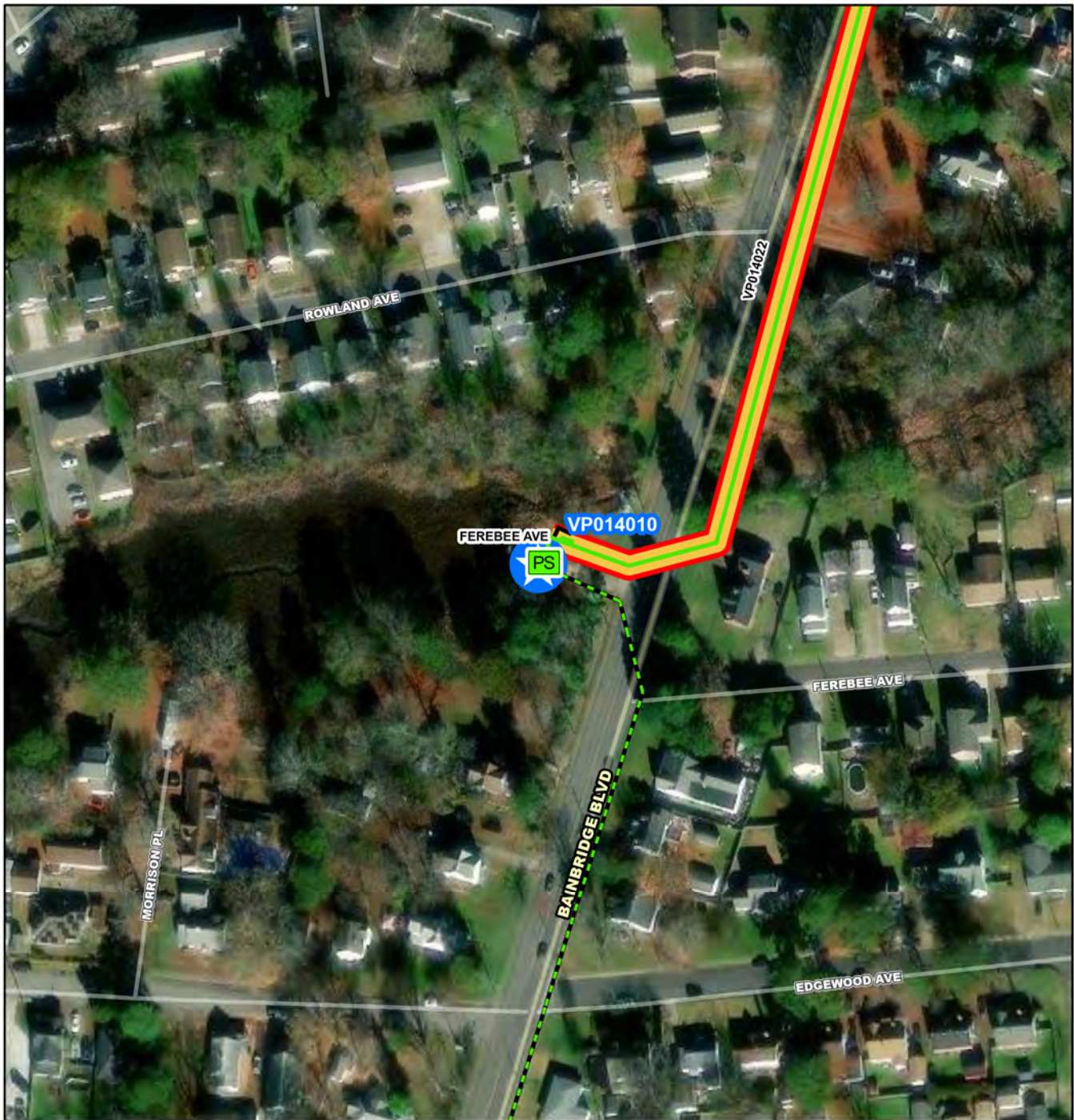
**PROPOSED SCHEDULE START DATE**

PrePlanning	01/01/2020
PER	10/20/2020
Design Delay	11/26/2021
Design	11/26/2021
Bid Delay	03/30/2023
PreConstruction	03/30/2023
Construction	08/15/2023
Closeout	03/01/2025

**COST ESTIMATE**

<b>Cost Estimate Class:</b>	<b>Class 1</b>
PrePlanning	\$0
PER	\$86,243
Design	\$562,434
PreConstruction	\$0
Construction	\$4,191,885
Closeout	\$0
<b>Est. Program Cost</b>	<b>\$4,840,562</b>
Contingency Budget	\$419,118
<b>Est. Project Costs</b>	<b>\$5,259,680</b>



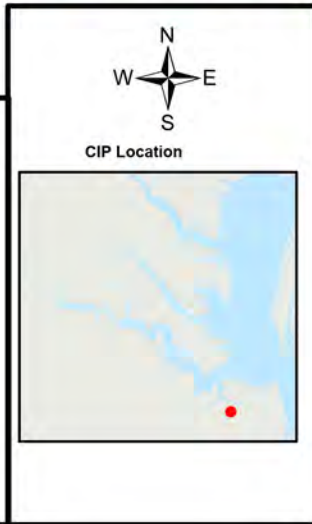


- VP014010**
- Project Interceptor Line
  - Project Interceptor Point
  - Project Pump Station Point
  - Project Area
- Legend**
- CIP Interceptor Point
  - CIP Pump Station Point
  - CIP Interceptor Line
  - CIP Abandonment
  - CIP Project Area
  - HRSD Interceptor Force Main
  - HRSD Interceptor Gravity Main
  - HRSD Treatment Plant
  - HRSD Pressure Reducing Station
  - HRSD Pump Station

0 45 90 180 270 360 Feet

## VP014010

### Ferebee Avenue Pump Station Replacement





System: VIP  
Type: Pump Stations

Driver Category: I&I Abatement-Rehabilitation Plan  
Project Phase: Design  
Regulatory: Rehab Plan Phase Two

PROGRAM CASH FLOW PROJECTION (\$,000)

Prog Cost	Exp to Previous Year	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34
\$14,832	\$1,446	\$5,373	\$8,013	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

PROJECT DESCRIPTION

This project is to design and construct a replacement pump station for the 1951 Ferebee Pump Station.

PROJECT JUSTIFICATION

This project will evaluate and implement the replacement of Ferebee Avenue Pump Station, as it is nearing the end of its useful life. This facility was inspected in 2008, 2011, and August 2013, as part of a Condition Assessment Program administered by Brown and Caldwell. Ferebee Avenue Pump Station was recommended for replacement and/or upgrades under Level 2 in the Rehabilitation program. An in-house hydraulic evaluation in 2014 identified several alternatives for maintaining this station as a lift station or revising its hydraulic capacity and connectivity to function as a terminal station. Final alignment and connectivity (to gravity or to the force main system) will significantly impact the design of both the Ferebee Avenue and Park Avenue pump stations. Preliminary engineering evaluations of these two stations will be conducted jointly.

FUNDING TYPE

Funding Type: Revenue Bond

CONTACTS

Contacts-Requesting Dept: Operations-Interceptors  
Contacts-Dept Contacts: Nick Taschner  
Contacts-Managing Dept: Engineering

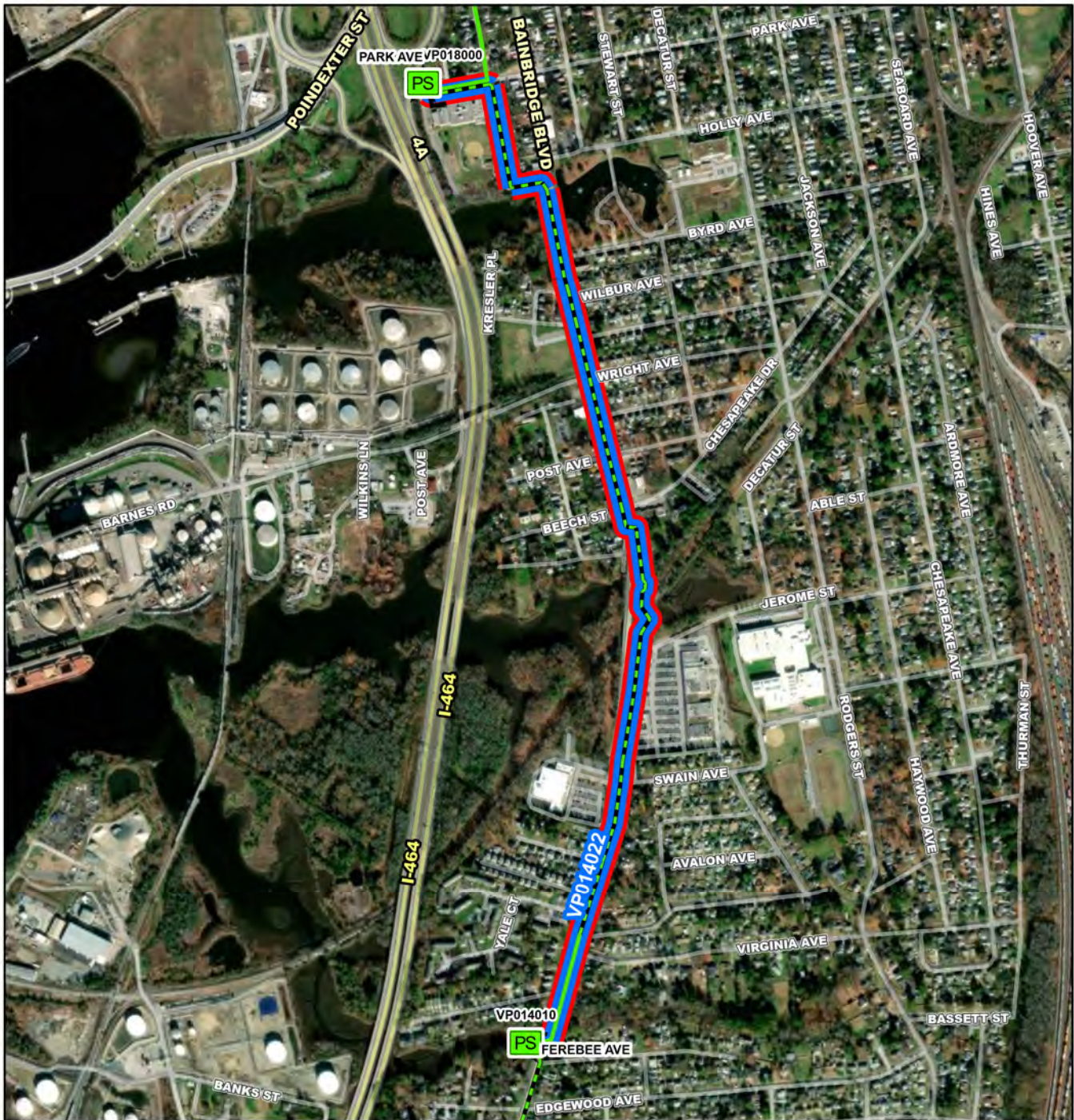
PROPOSED SCHEDULE START DATE

PrePlanning	07/01/2015
PER	04/28/2017
Design Delay	12/15/2019
Design	12/16/2019
Bid Delay	06/17/2023
PreConstruction	06/17/2024
Construction	11/01/2024
Closeout	07/01/2026

COST ESTIMATE

<b>Cost Estimate Class:</b>	<b>Class 3</b>
PrePlanning	\$0
PER	\$242,098
Design	\$1,169,307
PreConstruction	\$40,000
Construction	\$13,381,000
Closeout	\$0
<b>Est. Program Cost</b>	<b>\$14,832,405</b>
Contingency Budget	\$675,000
<b>Est. Project Costs</b>	<b>\$15,507,405</b>





- VP014022**
- 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



**VP014022**

**Sanitary Sewer Replacement 1950 – Part 2**



CIP Location





System: VIP  
Type: Pipelines

Driver Category: I&I Abatement-Rehabilitation Plan  
Project Phase: Construction  
Regulatory: Rehab Plan Phase Two

PROGRAM CASH FLOW PROJECTION (\$,000)

Prog Cost	Exp to Previous Year	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34
\$22,130	\$9,894	\$6,674	\$5,562	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

PROJECT DESCRIPTION

This project is to design and construct a force main to replace the 850 feet cast iron discharge force main SF-155 Sanitary Sewer Project 1950 12-inch Force Main. This project will also replace 2,900 feet 18-inch gravity line 1960 SG-153 and replace 2,700 feet 24-inch 1960 SG-149.

PROJECT JUSTIFICATION

This project will evaluate and implement the replacement of HRSD force main and gravity sewer between Ferebee Avenue Pump Station and Park Avenue Pump Station.

FUNDING TYPE

Funding Type: Revenue Bond

CONTACTS

Contacts-Requesting Dept: Engineering  
Contacts-Dept Contacts: Nick Taschner  
Contacts-Managing Dept: Engineering

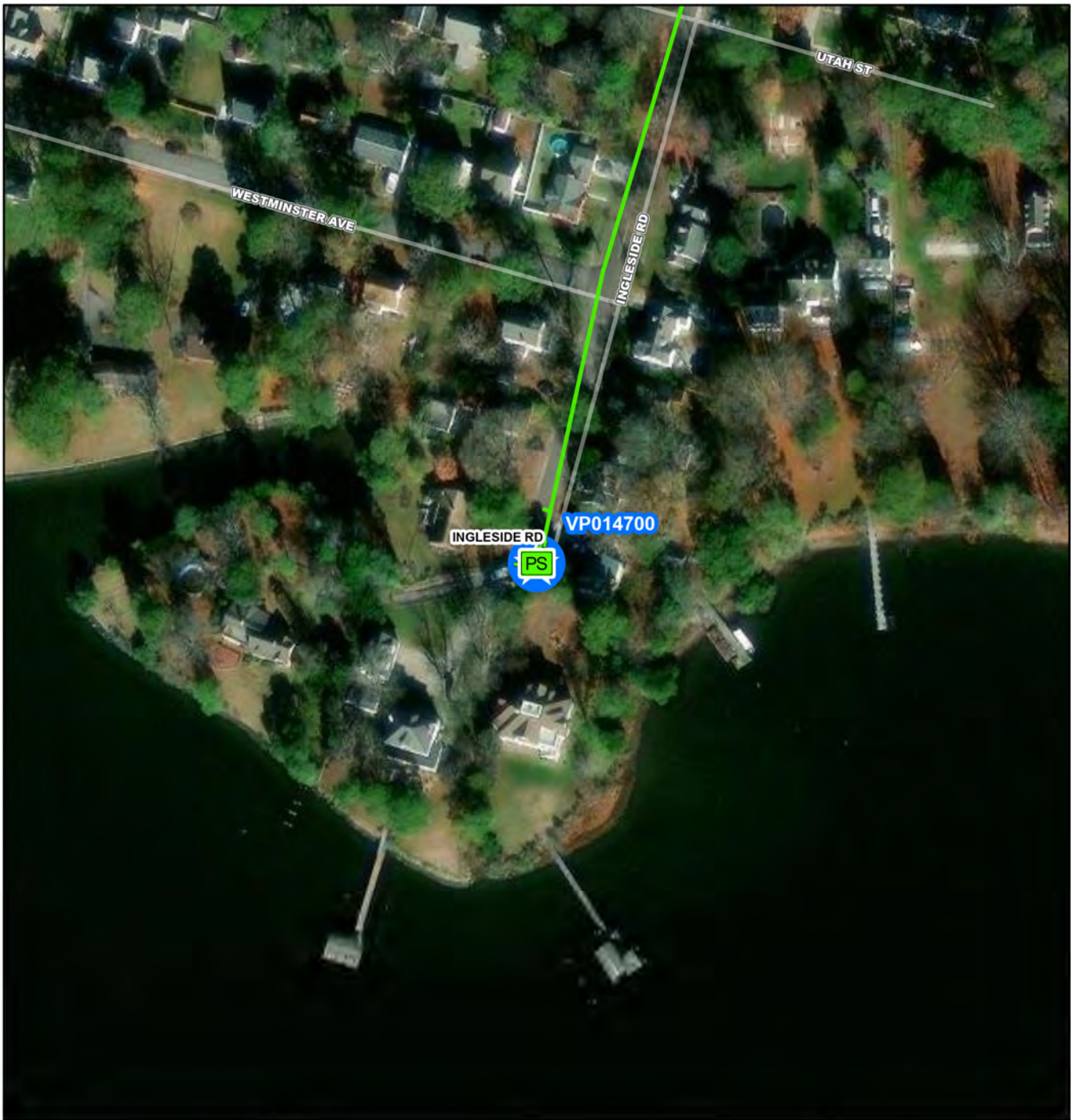
PROPOSED SCHEDULE START DATE

PrePlanning	07/01/2015
PER	05/22/2017
Design Delay	12/03/2019
Design	01/03/2020
Bid Delay	07/01/2022
PreConstruction	09/01/2022
Construction	02/02/2023
Closeout	05/02/2026





COST ESTIMATE

<b>Cost Estimate Class:</b>	<b>Class 1</b>
PrePlanning	\$0
PER	\$0
Design	\$125,680
PreConstruction	\$32,001
Construction	\$21,972,518
Closeout	\$0
<b>Est. Program Cost</b>	<b>\$22,130,199</b>
Contingency Budget	\$1,700,000
<b>Est. Project Costs</b>	<b>\$23,830,199</b>





VP014700

-  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

0 45 90 180 270 360 Feet

**VP014700**

**Ingleside Road Pump Station Replacement**



CIP Location





System: VIP  
Type: Pump Stations

Driver Category: I&I Abatement-Rehabilitation Plan  
Project Phase: Design  
Regulatory: Rehab Plan Phase Two

PROGRAM CASH FLOW PROJECTION (\$,000)

Prog Cost	Exp to Previous Year	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34
\$915	\$451	\$464	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

PROJECT DESCRIPTION

This project is to rehabilitate and/or replace Ingleside Road Pump Station. This project also includes the design and installation of a new emergency generator/pump.

PROJECT JUSTIFICATION

This project will replace the submersible pump station experiencing pump failures, as well as, deteriorating structural and electrical systems.

FUNDING TYPE

Funding Type: Revenue Bond

CONTACTS

Contacts-Requesting Dept: Operations-Interceptors  
Contacts-Dept Contacts: Tim Marsh  
Contacts-Managing Dept: Engineering

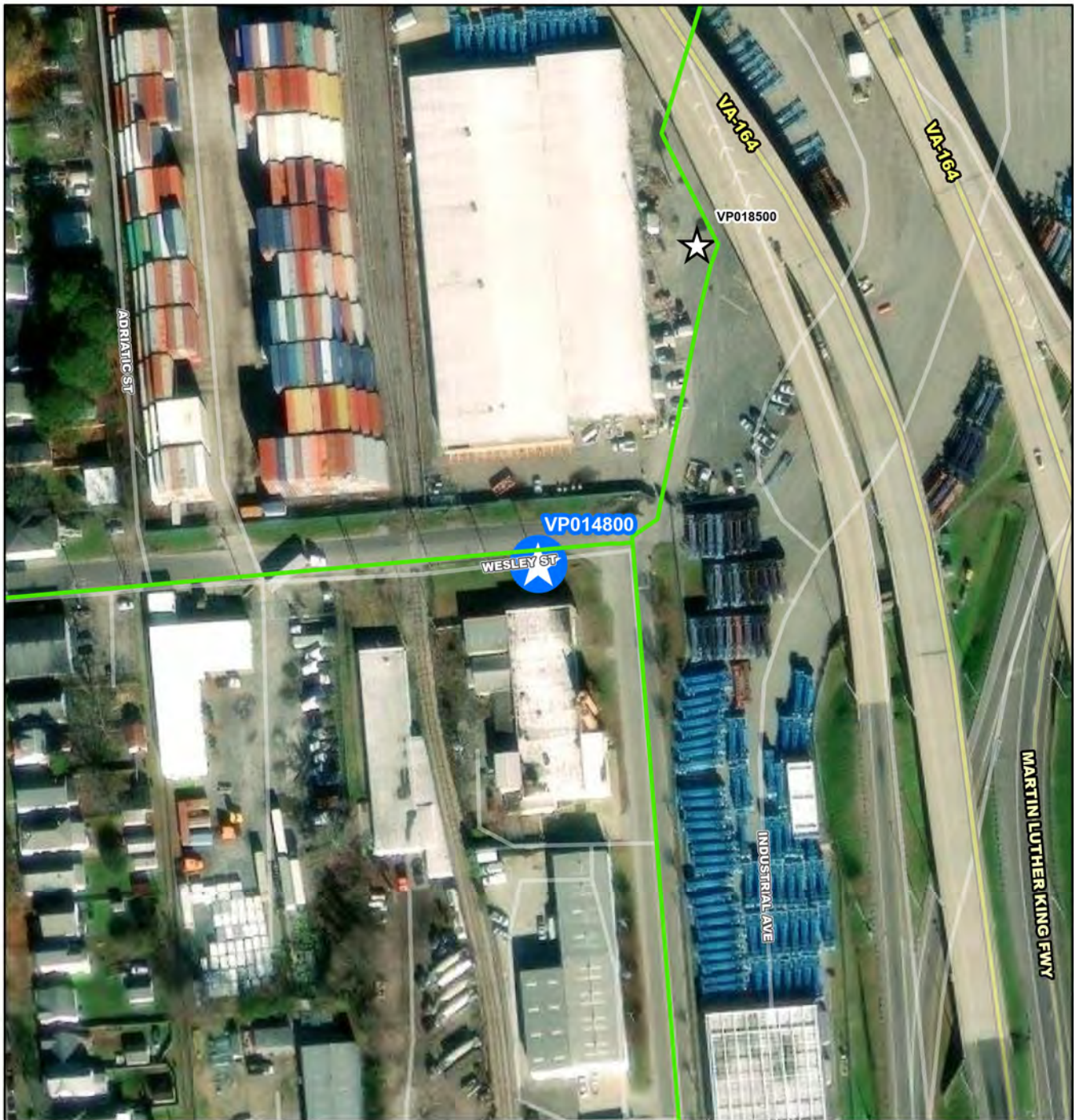
PROPOSED SCHEDULE START DATE

PrePlanning	07/01/2019
PER	04/01/2020
Design Delay	11/02/2020
Design	10/03/2022
Bid Delay	04/01/2024
PreConstruction	06/01/2024
Construction	08/01/2024
Closeout	03/01/2025





COST ESTIMATE

<b>Cost Estimate Class:</b>	<b>Class 3</b>
PrePlanning	\$0
PER	\$92,056
Design	\$352,835
PreConstruction	\$13,088
Construction	\$452,170
Closeout	\$5,000
<b>Est. Program Cost</b>	<b>\$915,149</b>
Contingency Budget	\$185,099
<b>Est. Project Costs</b>	<b>\$1,100,248</b>





VP014800

-  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

0 45 90 180 270 360 Feet

**VP014800**

**Lee Avenue-Wesley Street Horizontal Valve Replacement**



CIP Location





System: VIP

Type: Pipelines

Driver Category: I&I Abatement-Rehabilitation Plan

Project Phase: Design

Regulatory: Rehab Plan Phase Two

PROGRAM CASH FLOW PROJECTION (\$,000)

Prog Cost	Exp to Previous Year	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34
\$3,391	\$260	\$3,131	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

PROJECT DESCRIPTION

This project will replace the inoperable 36-inch horizontal gate valve and install a new 48-inch valve at the intersection of Lee Avenue and Wesley Street in the City of Portsmouth. A Preliminary Engineering Report was completed in November 2007 making these recommendations.

PROJECT JUSTIFICATION

The 36-inch horizontal gate valve is currently stuck in the open position and, due to the configuration of the valve, will not close to allow flow isolation of SF-220 in case of a failure. SF-220 is a 36-inch reinforced concrete pipe (RCP) force main that was constructed in 1946. The installation of a new 48-inch valve on SF-221 where SF-221 intersects with SF-220 will allow flow isolation of SF-221 to the north and south of the intersection. SF-221 is a 48-inch RCP force main approximately 15,000 linear feet (LF) constructed in 1946 with isolation valves only located at each end. The valves will insure proper operation in the event of a failure on these aged force mains.

FUNDING TYPE

Funding Type: Revenue Bond

CONTACTS

Contacts-Requesting Dept: Operations-Interceptors

Contacts-Dept Contacts: Eddie Heady

Contacts-Managing Dept: Operations-Interceptors

PROPOSED SCHEDULE START DATE

PrePlanning	06/01/2010
PER	06/29/2010
Design Delay	08/18/2010
Design	06/01/2022
Bid Delay	04/01/2024
PreConstruction	09/01/2024
Construction	01/01/2025
Closeout	05/01/2025

COST ESTIMATE

<b>Cost Estimate Class:</b>	<b>Class 4</b>
PrePlanning	\$0
PER	\$54,291
Design	\$206,164
PreConstruction	\$15,000
Construction	\$3,115,930
Closeout	\$0
<b>Est. Program Cost</b>	<b>\$3,391,385</b>
<b>Contingency Budget</b>	<b>\$838,359</b>
<b>Est. Project Costs</b>	<b>\$4,229,744</b>







System: VIP  
Type: Pump Stations

Driver Category: I&I Abatement-Rehabilitation Plan  
Project Phase: Design  
Regulatory: Rehab Plan Phase Two

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

Prog Cost	Exp to Previous Year	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34
\$61,360	\$13,166	\$16,595	\$15,684	\$15,684	\$115	\$115	\$0	\$0	\$0	\$0	\$0

**PROJECT DESCRIPTION**

This project involves rehabilitation of three existing pump stations, the design and construction of three new pump stations, and the design and construction of approximately 1,300 feet of 6-inch force mains and approximately 5,000 feet of 8- and 10-inch gravity mains and appurtenances. The three rehabilitated pump stations include Powhatan Avenue PS #122, Richmond Crescent PS #124, and Jamestown Crescent PS #142. The new infrastructure will replace (a) one existing City of Norfolk pump station: Walnut Hill Street PS #113, (b) HRSD Monroe Place PS #114, (c) HRSD Hanover Ave PS #141, and (d) associated gravity and force mains.

**PROJECT JUSTIFICATION**

This project was initially identified by HRSD as part of a condition assessment program to address aging infrastructure concerns related to structural, electrical, and pump performance operation. The project was also identified to mitigate the risks from tidal flooding during wet weather conditions and from sea level rise due to climate change.

HRSD and City of Norfolk (City) jointly funded a comprehensive sanitary sewer master plan for the Larchmont sanitary sewer service area that encompassed pump station facilities and gravity collection systems associated with these pumping facilities. Hazen & Sawyer were commissioned to perform the comprehensive study on behalf of HRSD and City. HRSD and City are entering into a cost sharing agreement with the intent to plan, design, and construct the recommended improvements. Elements of the Project identified under the VIP-R10 in HRSD's EPA Rehabilitation Action Plan Phase 2 will need to reach Substantial Completion by May 5, 2027.

**FUNDING TYPE**

Funding Type: Cash

**CONTACTS**

Contacts-Requesting Dept: Operations-Interceptors  
Contacts-Dept Contacts: Tim Marsh  
Contacts-Managing Dept: Engineering

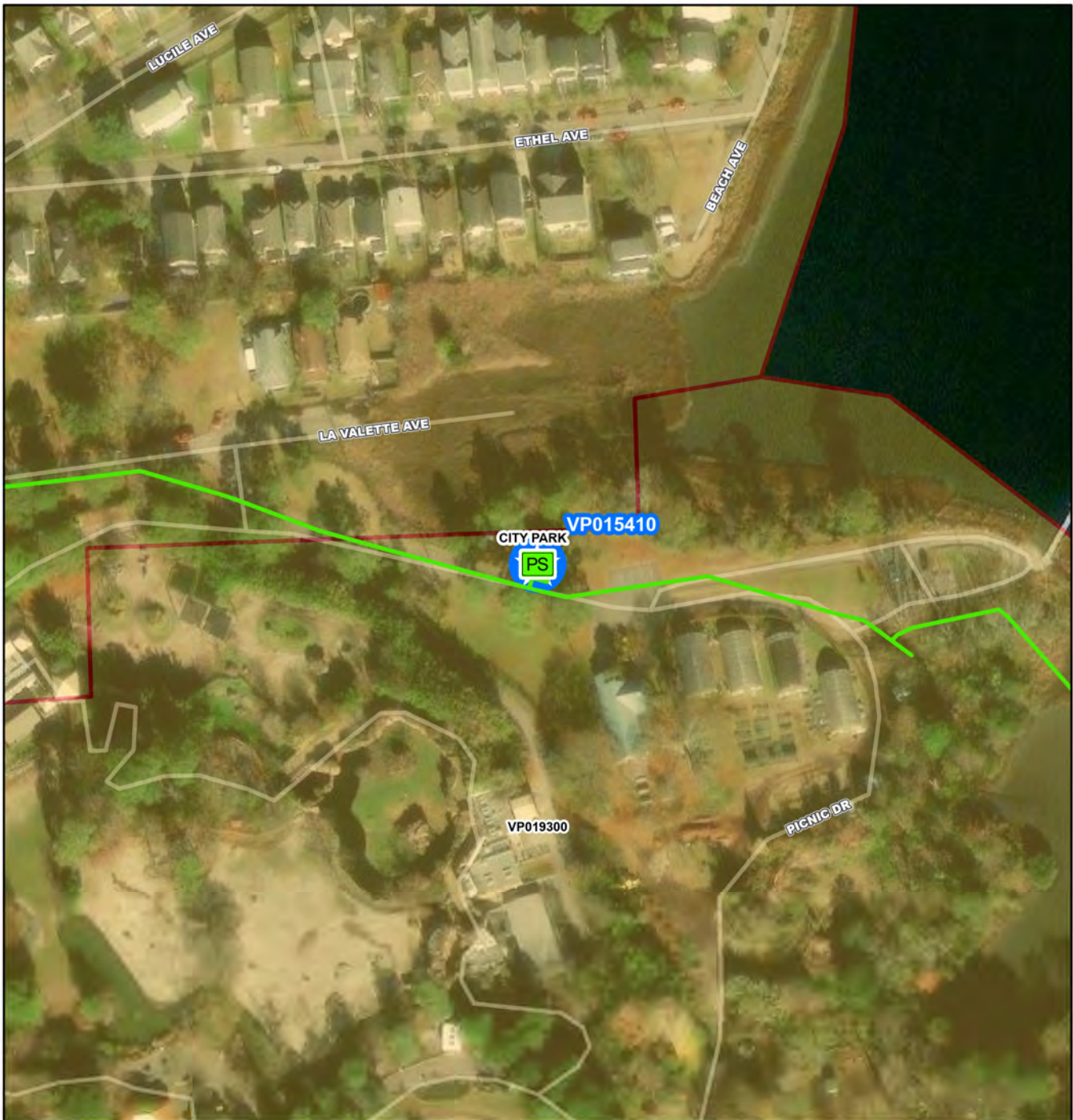
**PROPOSED SCHEDULE START DATE**

PrePlanning	06/03/2019
PER	06/01/2020
Design Delay	06/15/2021
Design	06/15/2021
Bid Delay	10/01/2024
PreConstruction	12/01/2023
Construction	05/01/2024
Closeout	07/01/2027




**COST ESTIMATE**

<b>Cost Estimate Class:</b>	<b>Class 2</b>
PrePlanning	\$0
PER	\$394,343
Design	\$10,309,766
PreConstruction	\$296,000
Construction	\$50,130,000
Closeout	\$230,000
<b>Est. Program Cost</b>	<b>\$61,360,109</b>
<b>Contingency Budget</b>	<b>\$7,598,400</b>
<b>Est. Project Costs</b>	<b>\$68,958,509</b>





VP015410

-  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

0 45 90 180 270 360 Feet

**VP015410**

**City Park Pump Station (PS 106) Replacement**



CIP Location





System: VIP  
Type: Pump Stations

Driver Category: I&I Abatement-Rehabilitation Plan  
Project Phase: Pre Planning  
Regulatory: Rehab Plan Phase Two

PROGRAM CASH FLOW PROJECTION (\$,000)

Prog Cost	Exp to Previous Year	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34
\$11,211	\$1,060	\$4,200	\$4,200	\$1,750	\$0	\$0	\$0	\$0	\$0	\$0	\$0

PROJECT DESCRIPTION

This project will construct a new HRSD City Park Pump Station to replace the old existing pump station.

PROJECT JUSTIFICATION

This project will address aging infrastructure pertaining to the condition of the wet wells, pumps, motors, controls, appurtenances, and emergency generator/pump for the facilities. The pumps, motors, and controls are nearing the end of their useful life and replacement parts are not available.

FUNDING TYPE

Funding Type: Revenue Bond

CONTACTS

Contacts-Requesting Dept: Engineering  
Contacts-Dept Contacts: Rebecca Currall  
Contacts-Managing Dept: Engineering

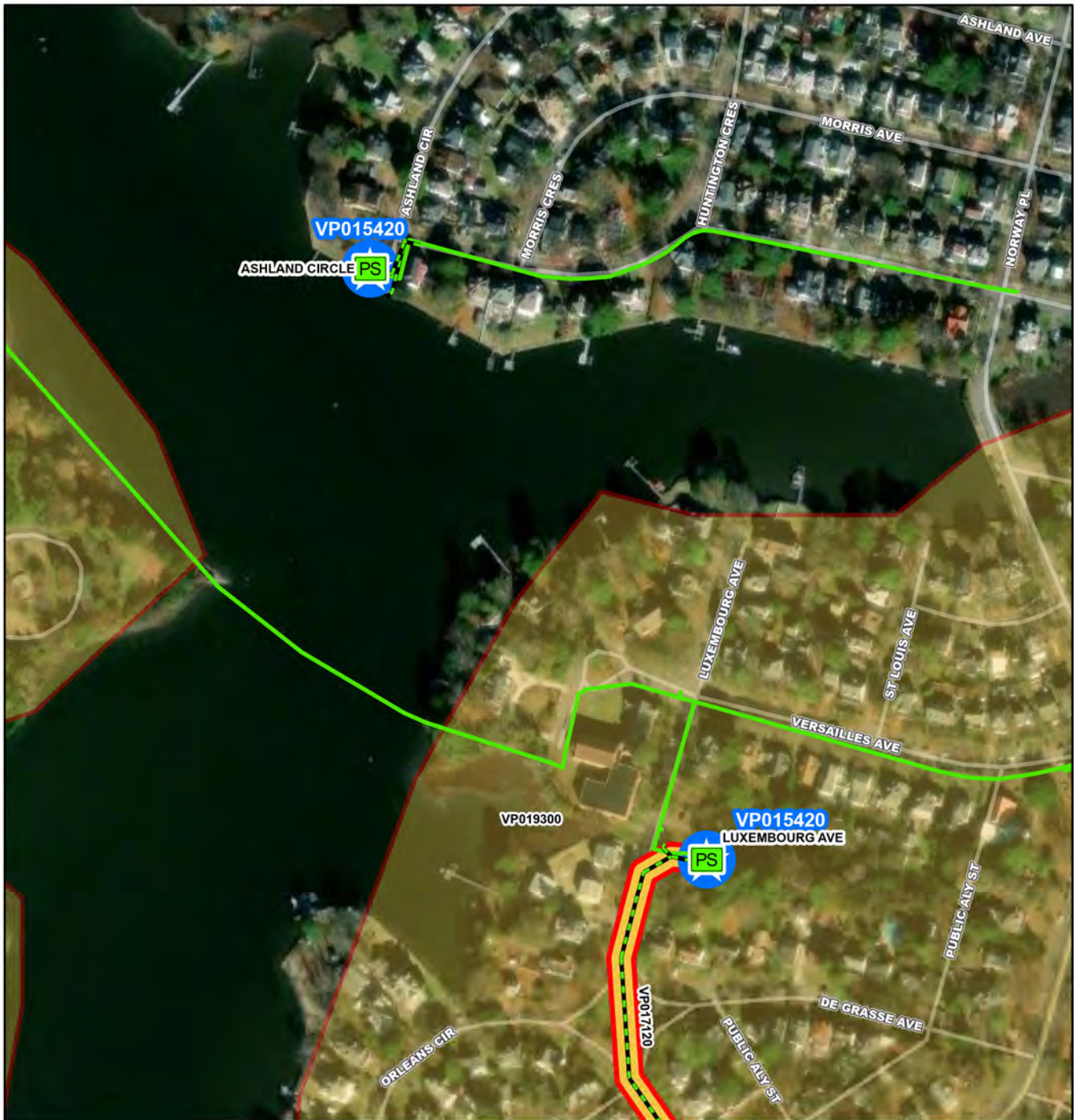
PROPOSED SCHEDULE START DATE

PrePlanning	
PER	07/03/2023
Design Delay	07/03/2023
Design	07/01/2023
Bid Delay	12/31/2023
PreConstruction	01/01/2024
Construction	04/01/2024
Closeout	12/01/2026

COST ESTIMATE

<b>Cost Estimate Class:</b>	<b>Class 5</b>
PrePlanning	\$0
PER	\$0
Design	\$0
PreConstruction	\$10,000
Construction	\$11,201,000
Closeout	\$0
<b>Est. Program Cost</b>	<b>\$11,211,000</b>
Contingency Budget	\$318,000
<b>Est. Project Costs</b>	<b>\$11,529,000</b>





**VP015420**

- 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

0 95 190 380 570 760 Feet

## VP015420

**Luxembourg Pump Station (PS 113) Replacement and  
Ashland Sewer Extension**

N  
W E  
S

CIP Location



System:  
Type:

VIP  
Pump Stations

Driver Category: I&I Abatement-Rehabilitation Plan  
Project Phase: Proposed  
Regulatory: Rehab Plan Phase Two

PROGRAM CASH FLOW PROJECTION (\$,000)

Prog Cost	Exp to Previous Year	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34
\$28,255	\$2,658	\$10,592	\$10,592	\$4,413	\$0	\$0	\$0	\$0	\$0	\$0	\$0

PROJECT DESCRIPTION

This project will construct a new Luxembourg Pump Station (PS) to replace the old existing pump station. Also, the existing HRSD Ashland Circle Pump Station will be demolished and replaced with sanitary sewer. The new sanitary sewer will be installed from the existing Ashland Circle PS to the new Luxembourg PS.

PROJECT JUSTIFICATION

This project will address aging infrastructure pertaining to the condition of the wet wells, pumps, motors, controls, appurtenances, and emergency generator/pump for the facilities. The pumps, motors, and controls are nearing the end of their useful life and replacement parts are not available. The Luxembourg Pump Station building is experiencing differential settlement. Ashland Circle Pump Station is in a low-lying area and condition assessment activities gave evidence that tidal flooding likely occurs during severe wet weather events.

FUNDING TYPECONTACTS

Funding Type:

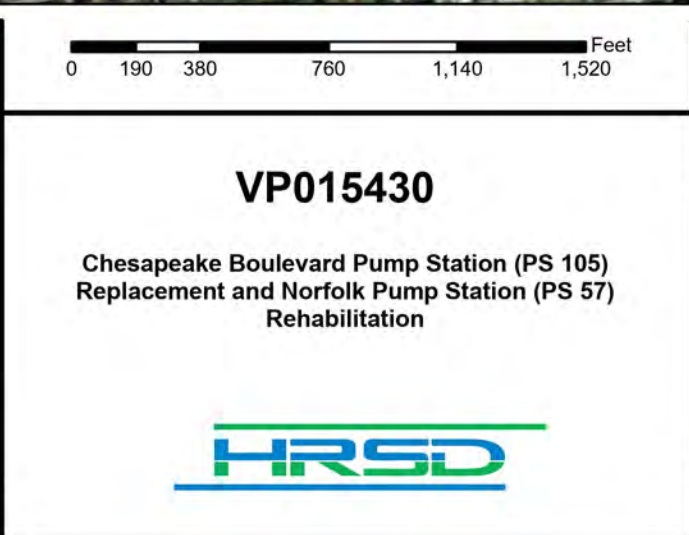
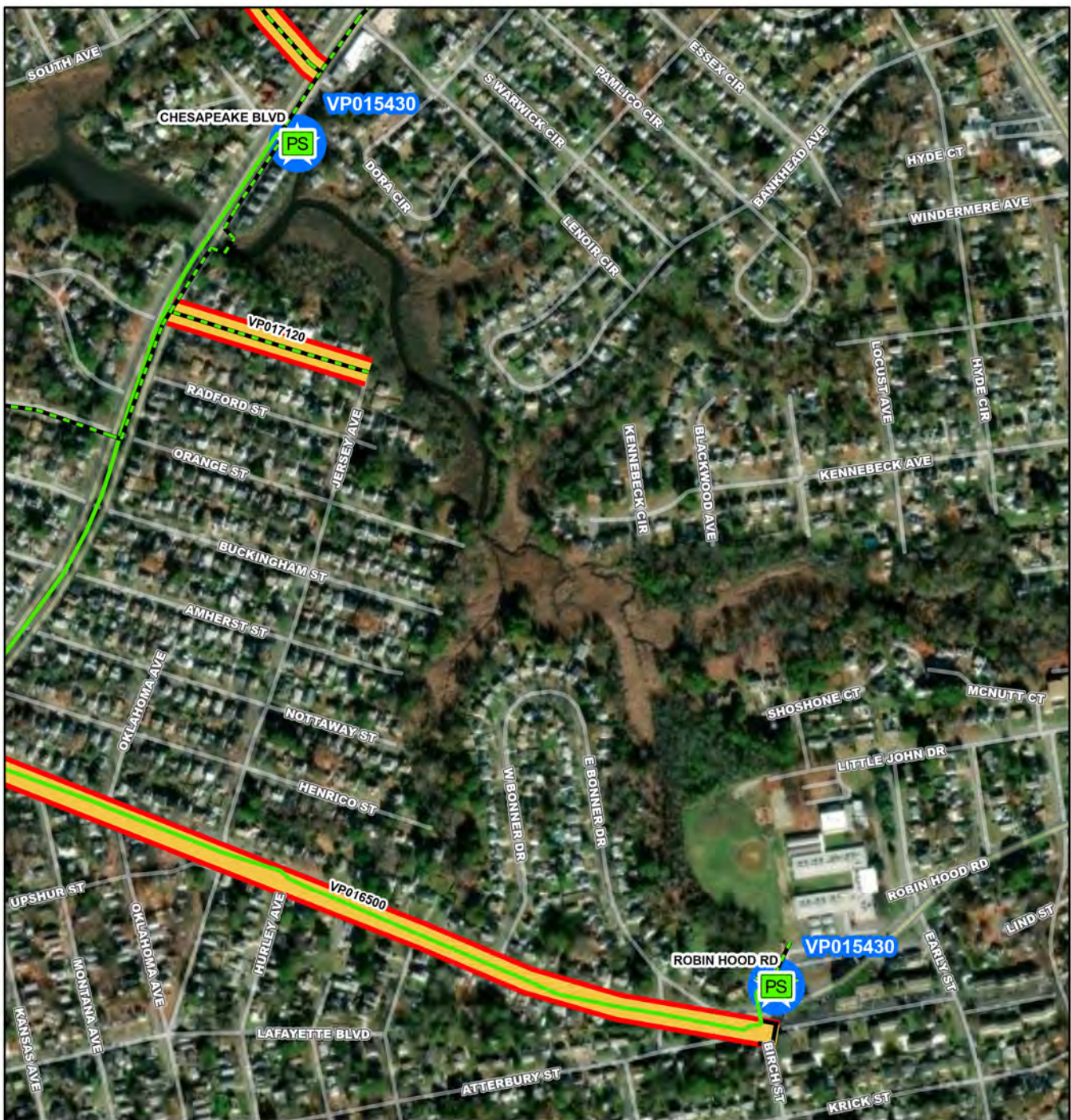
Revenue Bond

Contacts-Requesting Dept: Engineering  
Contacts-Dept Contacts: Rebecca Currall  
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATECOST ESTIMATE

PrePlanning		Cost Estimate Class:	Class 5
PER	09/01/2023	PrePlanning	\$0
Design Delay	09/01/2023	PER	\$0
Design	09/01/2023	Design	\$0
Bid Delay	12/31/2023	PreConstruction	\$10,000
PreConstruction	01/09/2024	Construction	\$28,245,000
Construction	04/01/2024	Closeout	\$0
Closeout	03/01/2027	<b>Est. Program Cost</b>	<b>\$28,255,000</b>
		<b>Contingency Budget</b>	<b>\$778,000</b>
		<b>Est. Project Costs</b>	<b>\$29,033,000</b>







System: VIP  
Type: Pump Stations

Driver Category: I&I Abatement-Rehabilitation Plan  
Project Phase: Proposed  
Regulatory: Rehab Plan Phase Two

PROGRAM CASH FLOW PROJECTION (\$,000)

Prog Cost	Exp to Previous Year	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34
\$19,466	\$383	\$193	\$4	\$4	\$18,883	\$0	\$0	\$0	\$0	\$0	\$0

PROJECT DESCRIPTION

This project will construct a new Chesapeake Boulevard Pump Station (PS) to replace the old existing pump station. Also, HRSD has acquired Norfolk pump station #57, which has been renamed to HRSD PS 167 / Robinhood Road PS . This project will replace all of the existing equipment in PS #57 and the new equipment will be installed in according with HRSD's standards.

PROJECT JUSTIFICATION

This project will address aging infrastructure pertaining to the condition of the wet wells, pumps, motors, controls, appurtenances, and emergency generator/pump for the facilities. The pumps, motors, and controls are nearing the end of their useful life and replacement parts are not available.

FUNDING TYPE

Funding Type: Revenue Bond

CONTACTS

Contacts-Requesting Dept: Engineering  
Contacts-Dept Contacts: Rebecca Currall  
Contacts-Managing Dept: Engineering

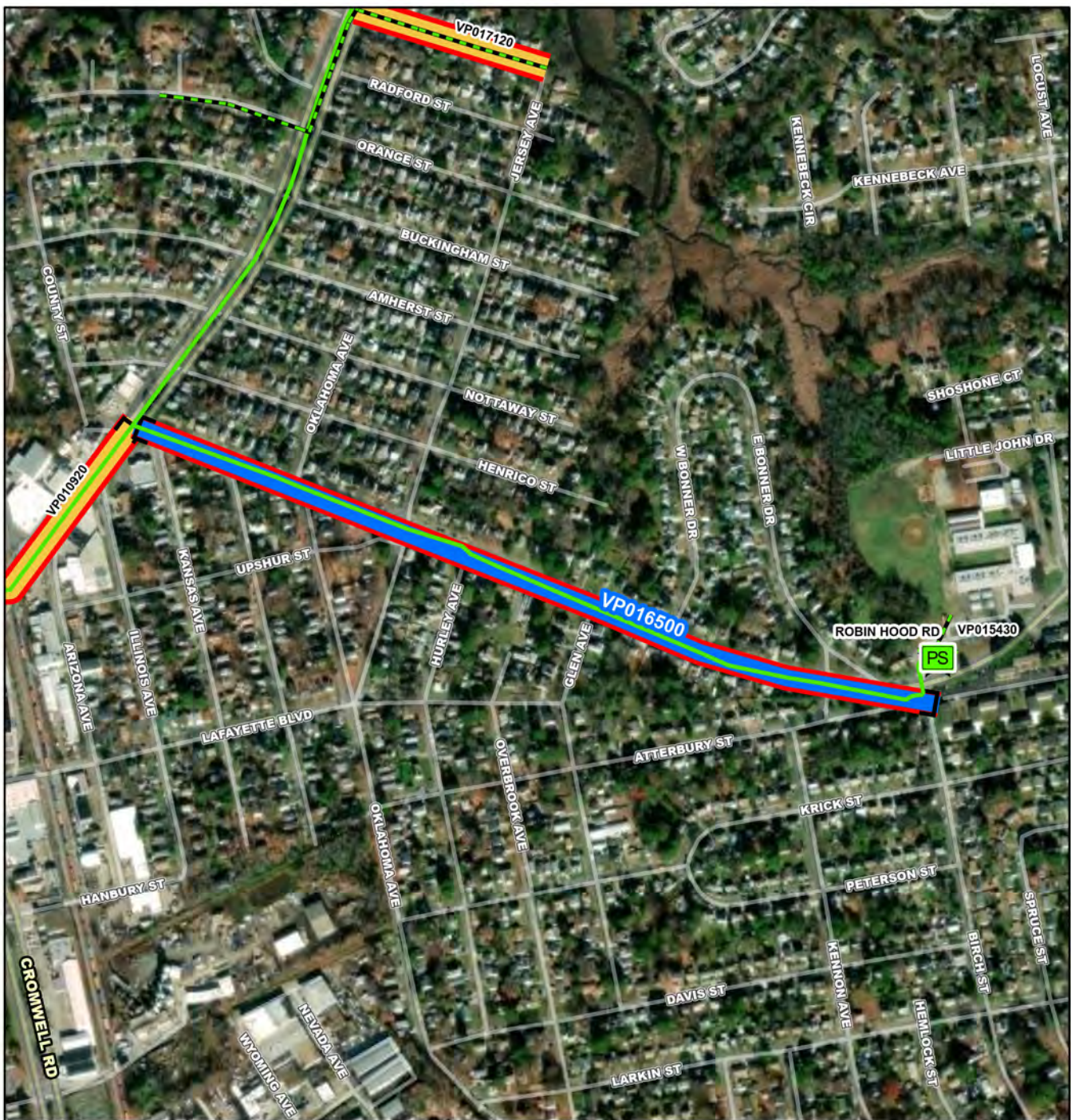
PROPOSED SCHEDULE START DATE

PrePlanning	01/01/2019
PER	01/01/2019
Design Delay	05/01/2020
Design	05/01/2024
Bid Delay	01/01/2025
PreConstruction	01/01/2025
Construction	04/01/2025
Closeout	01/01/2028

COST ESTIMATE

<b>Cost Estimate Class:</b>	<b>Class 5</b>
PrePlanning	\$0
PER	\$0
Design	\$575,000
PreConstruction	\$0
Construction	\$10,000
Closeout	\$18,881,000
<b>Est. Program Cost</b>	<b>\$19,466,000</b>
Contingency Budget	\$1,100,000
<b>Est. Project Costs</b>	<b>\$20,566,000</b>





VP016500

- 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

0 195 390 780 1,170 1,560 Feet

VP016500

Norview-Estabrook Division I 12-Inch Force Main Replacement



CIP Location





Norview-Estabrook Division I 12-Inch Force Main Replacement

PR\_VP016500

System: VIP  
Type: Pipelines

Driver Category: I&I Abatement-Rehabilitation Plan  
Project Phase: Construction  
Regulatory: Rehab Plan Phase Two

PROGRAM CASH FLOW PROJECTION (\$,000)

Prog Cost	Exp to Previous Year	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34
\$4,919	\$3,096	\$1,823	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

PROJECT DESCRIPTION

This project is to rehabilitate and/or replace the SF-069 Norview-Estabrook Division I 12-inch Force Main consisting of approximately 2,800 linear feet (LF) of 12-inch pipe along Robin Hood Road.

PROJECT JUSTIFICATION

This project will replace a 1952 cast iron force main with lead joints that is nearing the end of its useful life (SF-69). Replacement of this force main will be needed prior to the completion of the upgrades to the Chesapeake Boulevard Pump Station (VP015400).

FUNDING TYPE

Funding Type: VCWRLF

CONTACTS

Contacts-Requesting Dept: Operations-Interceptors  
Contacts-Dept Contacts: Phil Hubbard  
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning	11/02/2020
PER	11/02/2020
Design Delay	11/26/2021
Design	11/26/2021
Bid Delay	04/27/2023
PreConstruction	04/27/2023
Construction	07/01/2023
Closeout	02/01/2025

COST ESTIMATE

<b>Cost Estimate Class:</b>	<b>Class 1</b>
PrePlanning	\$0
PER	\$76,675
Design	\$178,966
PreConstruction	\$0
Construction	\$4,663,357
Closeout	\$0
<b>Est. Program Cost</b>	<b>\$4,918,998</b>
Contingency Budget	\$466,337
<b>Est. Project Costs</b>	<b>\$5,385,335</b>





**VP016700**

- 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

0 115 230 460 690 920 Feet

## VP016700

Norview-Estabrook Division I 18-Inch Force Main Replacement Phase III

N  
W  
E  
S

CIP Location



System: VIP  
Type: Pipelines

Driver Category: I&I Abatement-Rehabilitation Plan  
Project Phase: Construction  
Regulatory: Rehab Plan Phase Two

PROGRAM CASH FLOW PROJECTION (\$,000)

Prog Cost	Exp to Previous Year	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34
\$3,850	\$1,756	\$2,094	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

PROJECT DESCRIPTION

This project is to rehabilitate and/or replace a portion of the SF-066 Norview-Estabrook Division I 18-inch Force Main for approximately 2,100 linear feet (LF) of 18-inch cast iron pipe starting at the existing force main near the Luxembourg Pump Station starting at Versailles Avenue and Norway Place extending east to the first valve on Pershing Avenue near Tidewater Drive. Project is through the Lafayette Residence Park neighborhood, listed on the National Historic Register.

PROJECT JUSTIFICATION

This project will replace a 1952 cast iron force main with lead joints that is nearing the end of its useful life (SF-66). Replacement of this force main will need to be coordinated with the Lafayette Norview-Estabrook and Norview Pump Station Replacements (VP015400).

FUNDING TYPE

Funding Type: VCWRLF

CONTACTS

Contacts-Requesting Dept: Operations-Interceptors  
Contacts-Dept Contacts: Phil Hubbard  
Contacts-Managing Dept: Engineering

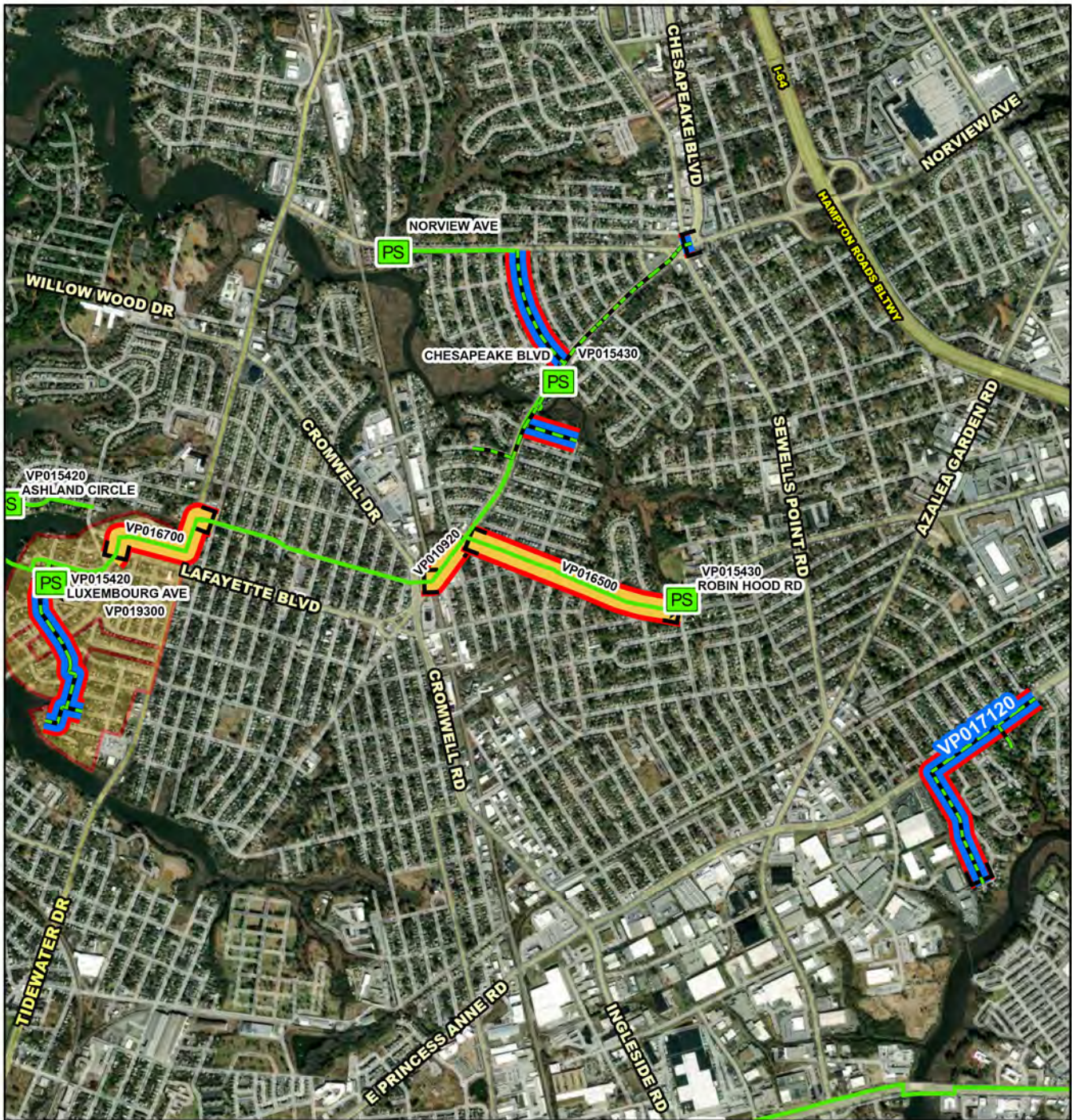
PROPOSED SCHEDULE START DATE

PrePlanning	01/01/2020
PER	11/02/2020
Design Delay	11/26/2021
Design	11/26/2021
Bid Delay	04/27/2023
PreConstruction	04/27/2023
Construction	08/01/2023
Closeout	02/01/2025

COST ESTIMATE

<b>Cost Estimate Class:</b>	<b>Class 1</b>
PrePlanning	\$0
PER	\$76,988
Design	\$153,926
PreConstruction	\$0
Construction	\$3,619,148
Closeout	\$0
<b>Est. Program Cost</b>	<b>\$3,850,062</b>
Contingency Budget	\$361,914
<b>Est. Project Costs</b>	<b>\$4,211,976</b>





VP017120

- 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

0 500 1,000 2,000 3,000 4,000 Feet

**VP017120**

**Central Norfolk Area Gravity Sewer Improvements  
Phase II**



CIP Location







# Central Norfolk Area Gravity Sewer Improvements Phase II

PR\_VP017120

System: VIP  
Type: Pipelines

Driver Category: I&I Abatement-Rehabilitation Plan  
Project Phase: Design  
Regulatory: Rehab Plan Phase Two

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

Prog Cost	Exp to Previous Year	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34
\$6,287	\$2,448	\$3,821	\$18	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

## PROJECT DESCRIPTION

This project consists of 3 sections of improvements to the gravity sewer system within Central Norfolk:

--Fox Hall/Norcova Drive/East Princess Anne Road Gravity Sewer - Rehabilitation of 3,698 linear feet (LF) of gravity sewer (ranging from 10 to 12 inches) and 1 manhole. Includes the 85 LF of 12-inch gravity sewer extending to the City of Norfolk Pump Station (PS) #44.

--Luxembourg Avenue Gravity Sewer - Rehabilitation of 3,044 LF of gravity sewer (ranging from 8 to 12 inches) and 8 manholes. Includes 327 LF of 8-inch City of Norfolk gravity sewer.

--Norview-Estabrook/Chesapeake Boulevard Gravity Sewer - Rehabilitation of gravity sewer not previously rehabilitated or replaced including 2,886 LF of gravity sewer (ranging from 12 to 18 inches) and 9 manholes.

## PROJECT JUSTIFICATION

Condition assessment activities indicate that these assets present a material risk of failure due to I/I and physical condition defects. This project is a portion of the EPA Rehabilitation Action Plan Project VIP-R-1 with a substantial completion requirement of May 5, 2025. For further details, refer to page 3-18, Table 3-2 of the Rehabilitation Action Plan.

## FUNDING TYPE

Funding Type: Revenue Bond

## CONTACTS

Contacts-Requesting Dept: Operations-Interceptors  
Contacts-Dept Contacts: Nick Taschner  
Contacts-Managing Dept: Engineering

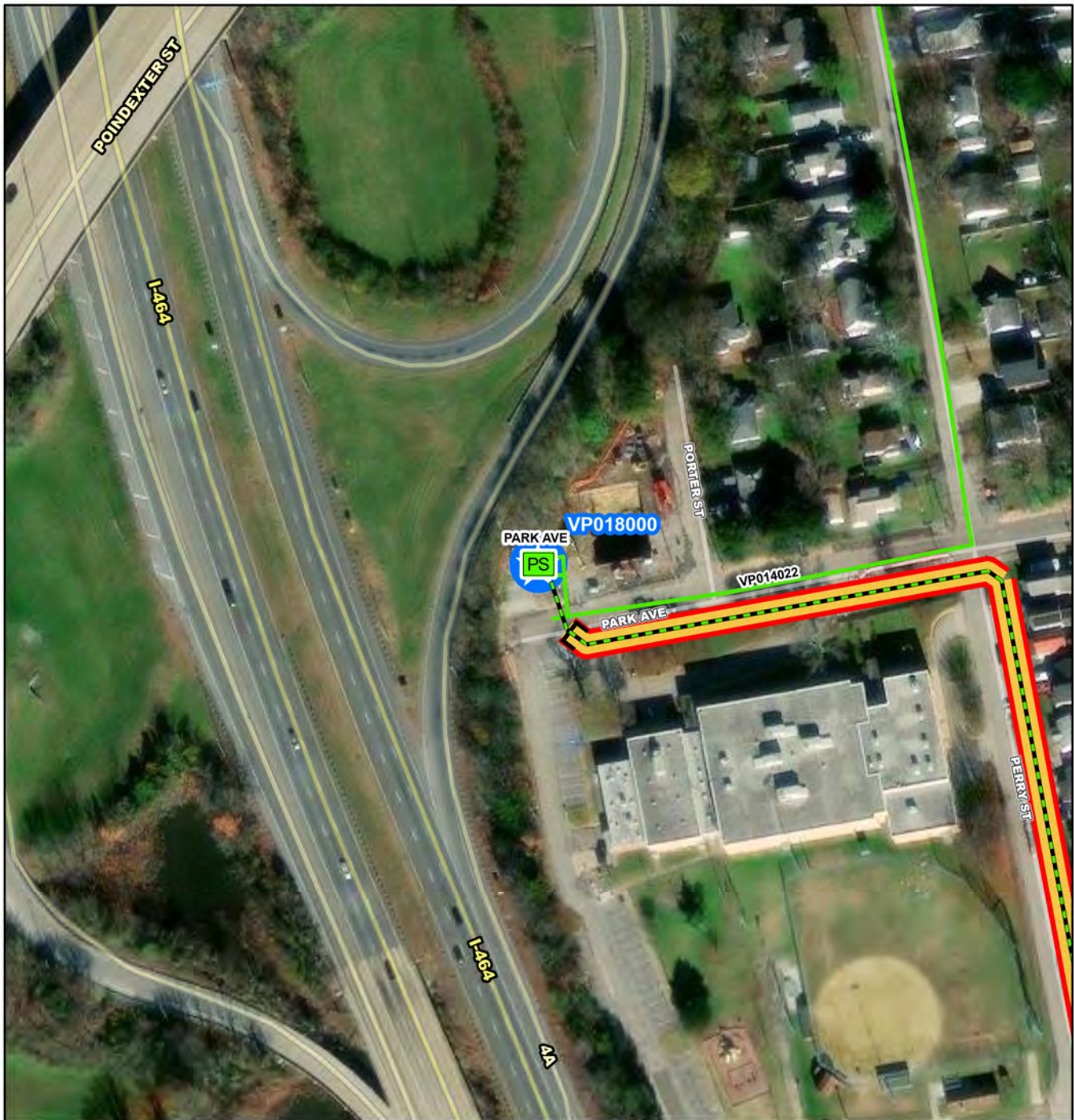
## PROPOSED SCHEDULE START DATE

PrePlanning	02/01/2021
PER	03/30/2021
Design Delay	01/06/2022
Design	01/06/2022
Bid Delay	02/01/2023
PreConstruction	11/01/2023
Construction	03/01/2024
Closeout	03/01/2025

## COST ESTIMATE

<b>Cost Estimate Class:</b>	<b>Class 1</b>
PrePlanning	\$0
PER	\$120,466
Design	\$410,628
PreConstruction	\$11,212
Construction	\$5,717,463
Closeout	\$27,000
<b>Est. Program Cost</b>	<b>\$6,286,769</b>
Contingency Budget	\$547,500
<b>Est. Project Costs</b>	<b>\$6,834,269</b>





VP018000

- 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

0 45 90 180 270 360 Feet

VP018000

Park Avenue Pump Station Replacement



CIP Location





## Park Avenue Pump Station Replacement

PR\_VP018000

System: VIP  
Type: Pump Stations

Driver Category: I&I Abatement-Rehabilitation Plan  
Project Phase: Construction  
Regulatory: Rehab Plan Phase Two

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

Prog Cost	Exp to Previous Year	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34
\$15,611	\$9,800	\$4,981	\$830	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

### PROJECT DESCRIPTION

This project is to design and construct a replacement pump station for the existing 1922 Park Avenue Pump Station (PS), based on the recommendations of the Park Avenue and Ferebee Avenue Pump Station Study (VP011010). This project is to include installation of an emergency generator/pump and address the replacement/rehabilitation of 50 linear feet (LF) of the 24-inch gravity influent line.

### PROJECT JUSTIFICATION

This project will evaluate and implement the replacement of Park Avenue Pump Station. This facility was inspected in August 2013, as part of a Condition Assessment Program administered by Brown and Caldwell. Park Avenue Pump Station was recommended for replacement and/or upgrades under Level 2 in the Rehabilitation program. This facility experiences operational issues related to aging equipment and structure. Park Avenue Pump Station currently receives flows from HRSDs Ferebee Avenue Pump Station in addition to flow from several city pump stations. An in-house hydraulic evaluation in 2014 identified several alternatives for revising the alignment and connectivity (to gravity or to the force main system) of the Ferebee Avenue Pump Station effluent force main, which may significantly impact the future capacity needs and design of the Park Avenue Pump Station. Preliminary engineering evaluations of these two stations will be conducted jointly.

### FUNDING TYPE

Funding Type: VCWRLF

### CONTACTS

Contacts-Requesting Dept: Operations-Interceptors  
Contacts-Dept Contacts: Nick Taschner  
Contacts-Managing Dept: Engineering

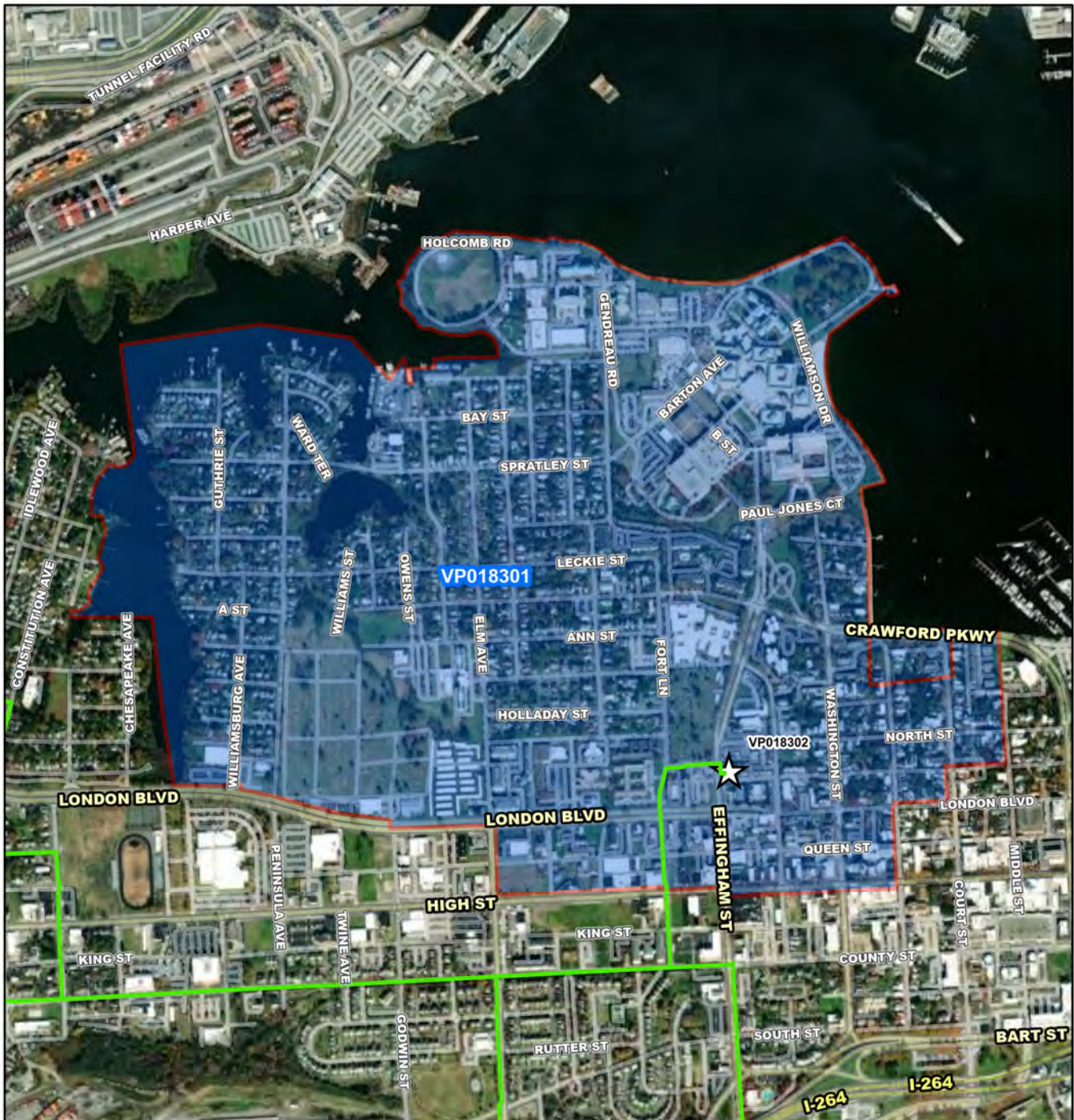
### PROPOSED SCHEDULE START DATE

PrePlanning	07/03/2006
PER	07/03/2006
Design Delay	10/31/2019
Design	11/04/2019
Bid Delay	03/11/2022
PreConstruction	03/14/2022
Construction	06/28/2022
Closeout	09/10/2025

### COST ESTIMATE

<b>Cost Estimate Class:</b>	<b>Class 1</b>
PrePlanning	\$0
PER	\$255,572
Design	\$1,063,707
PreConstruction	\$36,479
Construction	\$14,255,386
Closeout	\$0
<b>Est. Program Cost</b>	<b>\$15,611,144</b>
<b>Contingency Budget</b>	<b>\$1,028,000</b>
<b>Est. Project Costs</b>	<b>\$16,639,144</b>





**VP018301**

- 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

0 385 770 1,540 2,310 3,080 Feet

## VP018301

VIP Service Area I-I Reduction Phase I (PORTS)

N  
W E  
S

CIP Location



System: VIP  
Type: Locality and Private Property

Driver Category: I&I Abatement-IP/RWWMP  
Project Phase: PER  
Regulatory: Integrated Plan-HPP 1

PROGRAM CASH FLOW PROJECTION (\$,000)

Prog Cost	Exp to Previous Year	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34
\$9,447	\$2,133	\$1,384	\$3,360	\$2,533	\$38	\$0	\$0	\$0	\$0	\$0	\$0

PROJECT DESCRIPTION

PORT-01 Comprehensive I/I Reduction Plan; PORT-02 General I/I Reduction Plan.

PROJECT JUSTIFICATION

As part of HRSD's Integrated Plan, a program of High Priority RWWMP Projects (HPP) will be constructed through 2030. These projects were selected based on their ability to provide the greatest environmental and human health benefits. Further, this \$200+ million investment will significantly reduce sanitary sewer overflow (SSO) volume at the 5-year level of service by 47 percent.

FUNDING TYPE

Funding Type: Cash

CONTACTS

Contacts-Requesting Dept: Operations-Interceptors  
Contacts-Dept Contacts: Phil Hubbard  
Contacts-Managing Dept: Engineering

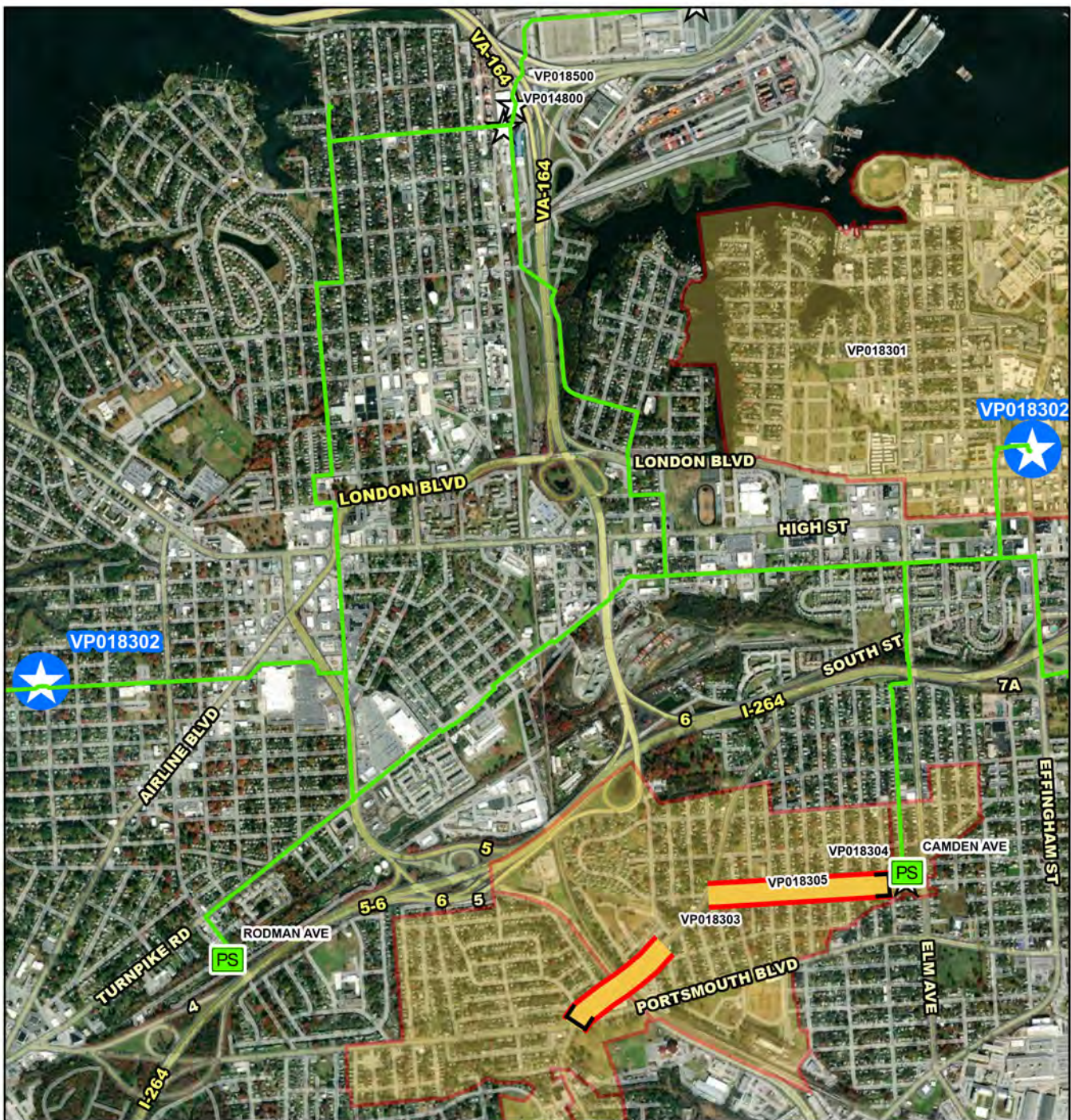
PROPOSED SCHEDULE START DATE

PrePlanning	01/01/2020
PER	05/01/2022
Design Delay	05/01/2024
Design	05/01/2024
Bid Delay	10/01/2024
PreConstruction	10/01/2024
Construction	03/01/2025
Closeout	04/01/2027

COST ESTIMATE

<b>Cost Estimate Class:</b>	<b>Class 5</b>
PrePlanning	\$42,506
PER	\$1,804,673
Design	\$500,000
PreConstruction	\$50,000
Construction	\$7,000,000
Closeout	\$50,000
<b>Est. Program Cost</b>	<b>\$9,447,179</b>
Contingency Budget	\$2,640,080
<b>Est. Project Costs</b>	<b>\$12,087,259</b>





VP018302

- 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

0 500 1,000 2,000 3,000 4,000 Feet

**VP018302**

**Portsmouth Pump Station Upgrades (VIP-HPP-04B)**



CIP Location







System: VIP  
Type: Locality and Private Property

Driver Category: I&I Abatement-IP/RWWMP  
Project Phase: Proposed  
Regulatory: Integrated Plan-HPP 2

PROGRAM CASH FLOW PROJECTION (\$,000)

Prog Cost	Exp to Previous Year	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

PROJECT DESCRIPTION

Portsmouth Pump Station Upgrades PS002 and PS008.

PROJECT JUSTIFICATION

As part of the RWWMP submitted to the DEQ and EPA, HRSD developed an approach to recognize the highest-priority system improvements with the greatest relative environmental benefit. The result being the identification of High-Priority Projects (HPPs). Rounds 1 and 2 of High-Priority Projects were scheduled with consecutive 10-year implementation periods starting with Round 1 being completed between plan approval and 2030. Prior to commencement, HRSD will review the Round 2 projects to confirm that they are still expected to meet the desired result and confirm this in a check in with the EPA/DEQ. To modify the list of specific Round 2 HPP projects, HRSD will show that the revised set of projects will attain a minimum of the same percent reduction, or better.

FUNDING TYPE

Funding Type: Cash

CONTACTS

Contacts-Requesting Dept: Engineering  
Contacts-Dept Contacts: John Dano  
Contacts-Managing Dept: Engineering

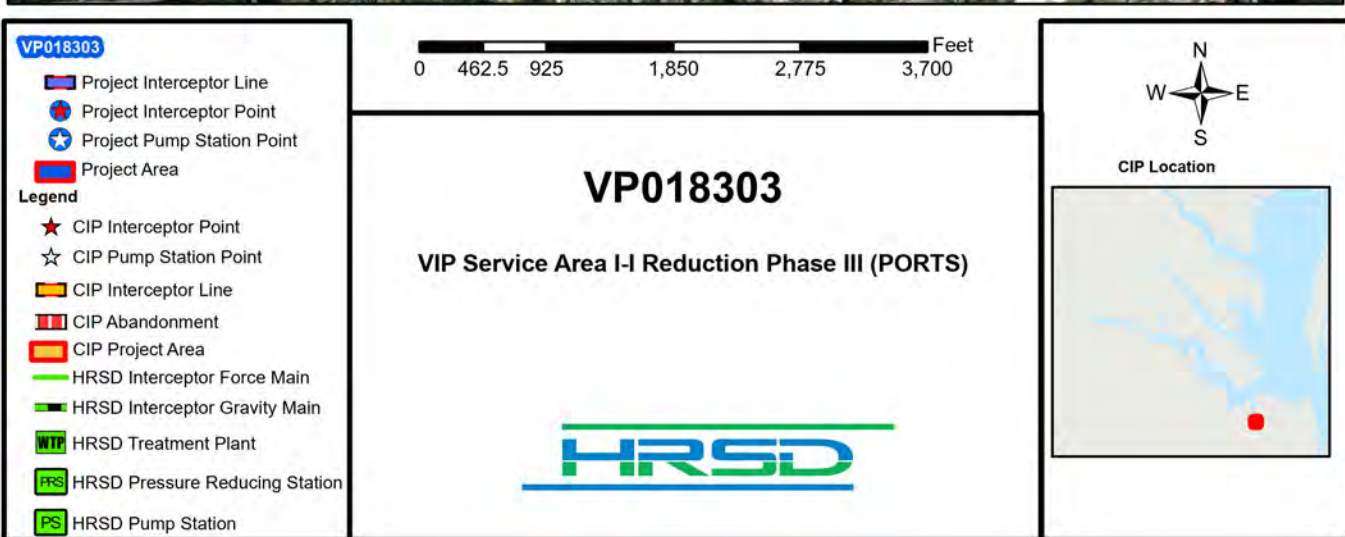
PROPOSED SCHEDULE START DATE

PrePlanning	01/01/2028
PER	10/31/2034
Design Delay	11/01/2035
Design	11/01/2035
Bid Delay	11/01/2037
PreConstruction	11/01/2037
Construction	01/01/2038
Closeout	01/01/2041

COST ESTIMATE

<b>Cost Estimate Class:</b>	<b>Class 5</b>
PrePlanning	\$0
PER	\$481,030
Design	\$769,573
PreConstruction	\$288,543
Construction	\$10,993,839
Closeout	\$0
<b>Est. Program Cost</b>	<b>\$12,532,986</b>
Contingency Budget	\$2,748,461
<b>Est. Project Costs</b>	<b>\$15,281,447</b>









System: VIP  
Type: Locality and Private Property

Driver Category: I&I Abatement-IP/RWWMP  
Project Phase: PER  
Regulatory: Integrated Plan-HPP 1

PROGRAM CASH FLOW PROJECTION (\$,000)

Prog Cost	Exp to Previous Year	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34
\$10,351	\$2,007	\$1,544	\$3,840	\$2,920	\$40	\$0	\$0	\$0	\$0	\$0	\$0

PROJECT DESCRIPTION

PORT-04 General I/I Reduction Plan; PORT-04-LOP65-1 Data-Driven I/I Reduction Plan; PORT-04-LOP65-2 Data-Driven I/I Reduction Plan; PORT-04-LOP65-3 Data-Driven I/I Reduction Plan. Currently, Brown and Caldwell is performing comprehensive flow monitoring within these areas. Once flow monitoring is complete we will transition to I/I reduction.

PROJECT JUSTIFICATION

As part of HRSD's Integrated Plan, a program of High Priority RWWMP Projects (HPP) will be constructed through 2030. These projects were selected based on their ability to provide the greatest environmental and human health benefits. Further, this \$200+ million investment will significantly reduce sanitary sewer overflow (SSO) volume at the 5-year level of service by 47 percent.

FUNDING TYPE

Funding Type: Cash

CONTACTS

Contacts-Requesting Dept: Operations-Interceptors  
Contacts-Dept Contacts: Phil Hubbard  
Contacts-Managing Dept: Engineering

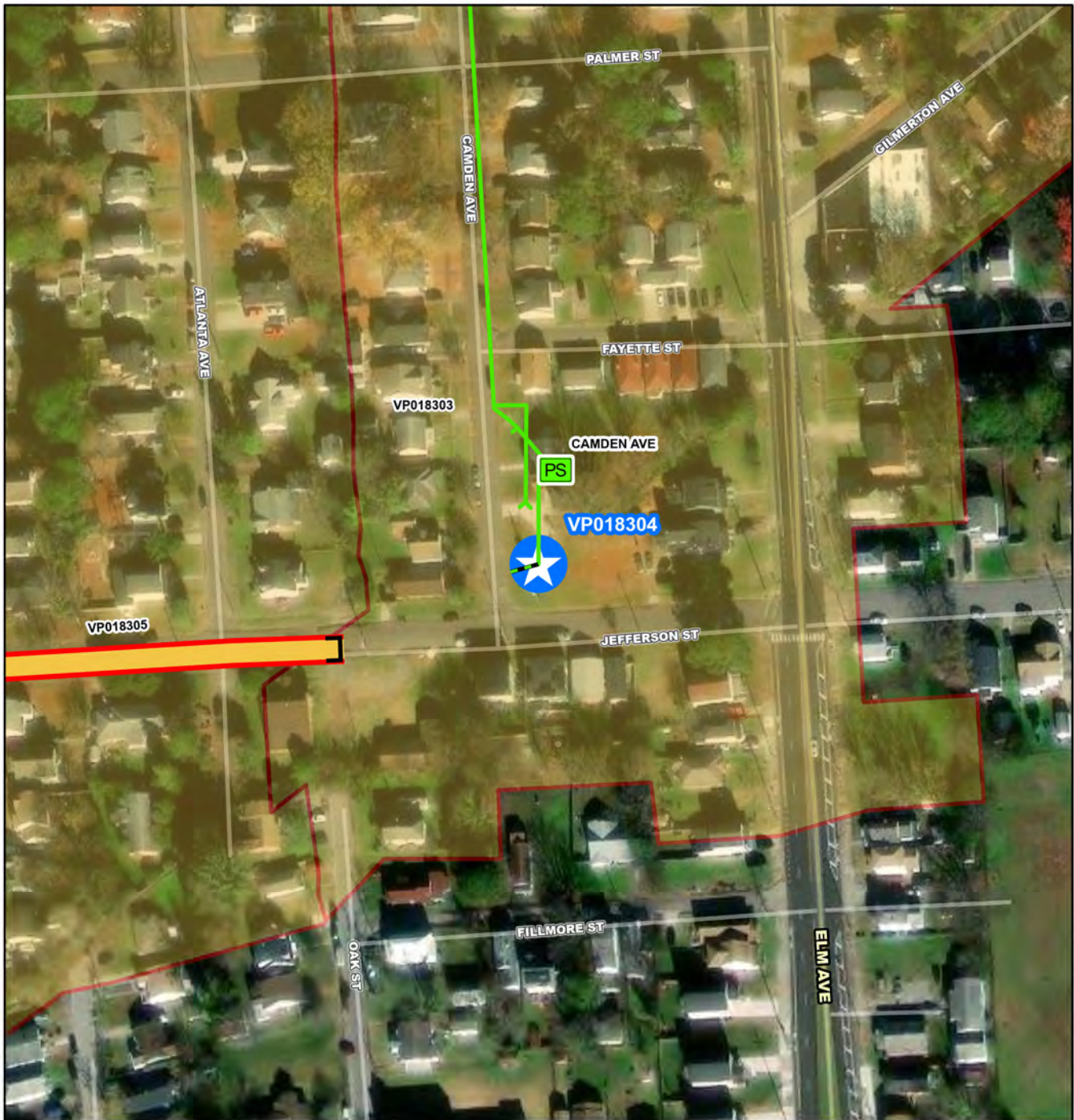
PROPOSED SCHEDULE START DATE

PrePlanning	08/01/2021
PER	05/01/2022
Design Delay	05/01/2024
Design	05/01/2024
Bid Delay	10/01/2024
PreConstruction	10/01/2024
Construction	03/01/2025
Closeout	04/01/2027

COST ESTIMATE

<b>Cost Estimate Class:</b>	<b>Class 5</b>
PrePlanning	\$51,506
PER	\$1,669,616
Design	\$500,000
PreConstruction	\$50,000
Construction	\$8,000,000
Closeout	\$80,000
<b>Est. Program Cost</b>	<b>\$10,351,122</b>
Contingency Budget	\$2,640,080
<b>Est. Project Costs</b>	<b>\$12,991,202</b>





VP018304

- 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

0 45 90 180 270 360 Feet

**VP018304**

**Camden Avenue Pump Station Upgrades (VIP-HPP-04D)**



CIP Location





System: VIP

Type: Pump Stations

Driver Category: I&I Abatement-IP/RWWMP

Project Phase: Proposed

Regulatory: Integrated Plan-HPP 2

PROGRAM CASH FLOW PROJECTION (\$,000)

Prog Cost	Exp to Previous Year	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34
\$5,538	\$0	\$0	\$0	\$0	\$0	\$167	\$201	\$176	\$1,055	\$1,969	\$1,969

PROJECT DESCRIPTION

Camden Avenue Pump Station Upgrade (SS-PS-146).

PROJECT JUSTIFICATION

As part of the RWWMP submitted to the DEQ and EPA, HRSD developed an approach to recognize the highest-priority system improvements with the greatest relative environmental benefit. The result being the identification of High-Priority Projects (HPPs). Rounds 1 and 2 of High-Priority Projects were scheduled with consecutive 10-year implementation periods starting with Round 1 being completed between plan approval and 2030. Prior to commencement, HRSD will review the Round 2 projects to confirm that they are still expected to meet the desired result and confirm this in a check in with the EPA/DEQ. To modify the list of specific Round 2 HPP projects, HRSD will show that the revised set of projects will attain a minimum of the same percent reduction, or better.

FUNDING TYPE

Funding Type: Revenue Bond

CONTACTS

Contacts-Requesting Dept: Engineering

Contacts-Dept Contacts: John Dano

Contacts-Managing Dept: Engineering

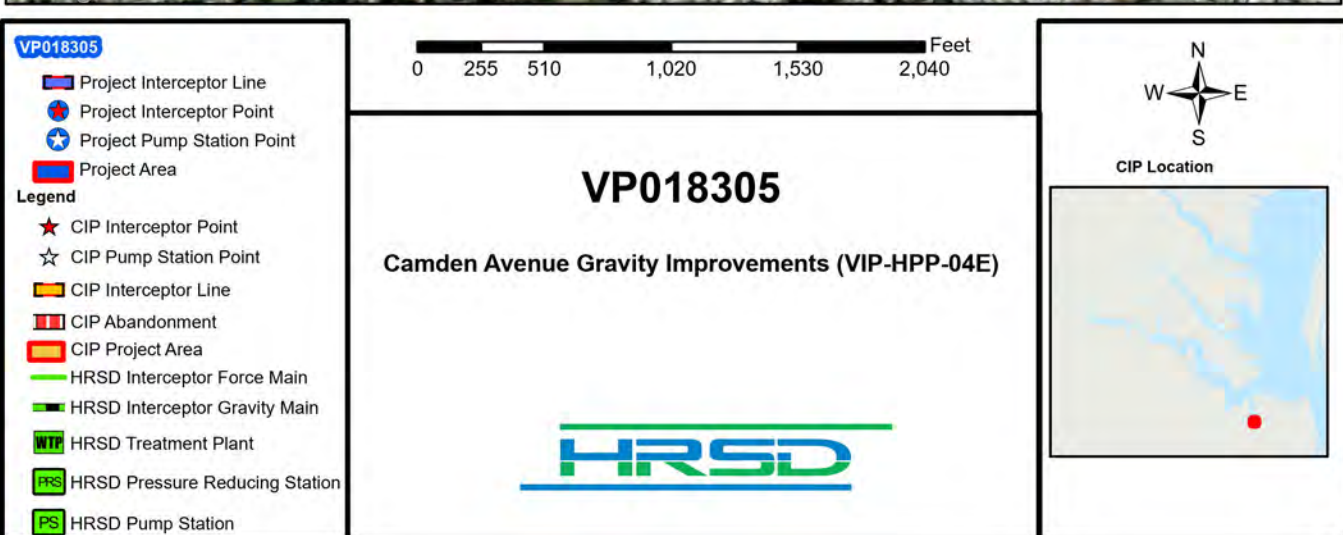
PROPOSED SCHEDULE START DATE

PrePlanning	01/01/2028
PER	11/01/2028
Design Delay	11/01/2029
Design	11/01/2029
Bid Delay	11/01/2031
PreConstruction	11/01/2031
Construction	01/01/2032
Closeout	01/01/2035

COST ESTIMATE

<b>Cost Estimate Class:</b>	<b>Class 5</b>
PrePlanning	\$0
PER	\$250,961
Design	\$352,336
PreConstruction	\$12,144
Construction	\$5,906,865
Closeout	\$0
<b>Est. Program Cost</b>	<b>\$6,522,307</b>
Contingency Budget	\$1,304,505
<b>Est. Project Costs</b>	<b>\$7,826,812</b>







System: VIP  
Type: Locality and Private Property

Driver Category: I&I Abatement-IP/RWWMP  
Project Phase: Proposed  
Regulatory: Integrated Plan-HPP 2

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

Prog Cost	Exp to Previous Year	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34
\$6,398	\$0	\$0	\$0	\$0	\$0	\$125	\$195	\$198	\$1,255	\$2,312	\$2,312

**PROJECT DESCRIPTION**

Camden Avenue gravity main (GM) capacity improvements: Upgrade 1,670 linear feet (LF) of 12-inch GM to 15-inch GM; Upgrade 2,170 LF of 17-inch GM to 21-inch GM and 370 LF of 15-inch GM to 18-inch GM.

**PROJECT JUSTIFICATION**

As part of the RWWMP submitted to the DEQ and EPA, HRSD developed an approach to recognize the highest-priority system improvements with the greatest relative environmental benefit. The result being the identification of High-Priority Projects (HPPs). Rounds 1 and 2 of High-Priority Projects were scheduled with consecutive 10-year implementation periods starting with Round 1 being completed between plan approval and 2030. Prior to commencement, HRSD will review the Round 2 projects to confirm that they are still expected to meet the desired result and confirm this in a check in with the EPA/DEQ. To modify the list of specific Round 2 HPP projects, HRSD will show that the revised set of projects will attain a minimum of the same percent reduction, or better.

**FUNDING TYPE**

Funding Type: Cash

**CONTACTS**

Contacts-Requesting Dept: Engineering  
Contacts-Dept Contacts: John Dano  
Contacts-Managing Dept: Engineering

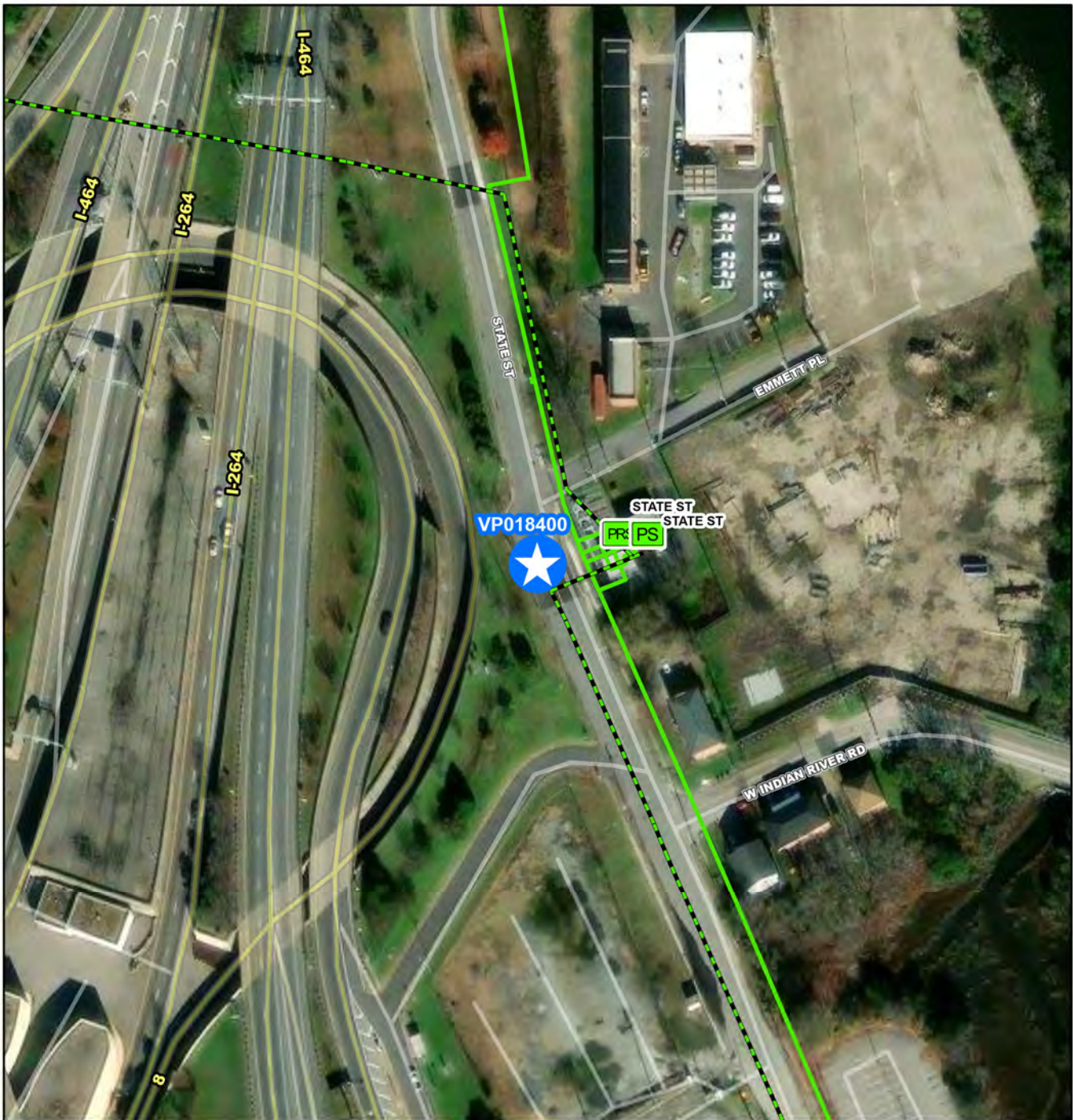
**PROPOSED SCHEDULE START DATE**

PrePlanning	01/01/2028
PER	11/01/2028
Design Delay	11/01/2029
Design	11/01/2029
Bid Delay	11/01/2031
PreConstruction	11/01/2031
Construction	01/01/2032
Closeout	01/01/2035




**COST ESTIMATE**

<b>Cost Estimate Class:</b>	<b>Class 5</b>
PrePlanning	\$0
PER	\$187,408
Design	\$396,864
PreConstruction	\$33,072
Construction	\$6,936,301
Closeout	\$0
<b>Est. Program Cost</b>	<b>\$7,553,645</b>
Contingency Budget	\$1,543,360
<b>Est. Project Costs</b>	<b>\$9,097,005</b>





VP018400

-  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

0 45 90 180 270 360 Feet

**VP018400**

**State Street Pressure Reducing Station and Offline Storage (VIP-HPP-05)**



CIP Location





System: VIP

Type: Offline Storage

Driver Category: I&I Abatement-IP/RWWMP

Project Phase: Proposed

Regulatory: Integrated Plan-HPP 2

PROGRAM CASH FLOW PROJECTION (\$,000)

Prog Cost	Exp to Previous Year	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34
\$1,155	\$0	\$0	\$0	\$0	\$89	\$178	\$178	\$178	\$178	\$178	\$178

PROJECT DESCRIPTION

Install new Pressure Reducing Station (PRS) with 35 feet of assistance - New Location; Install new 2.3 MG storage tank.

PROJECT JUSTIFICATION

As part of the RWWMP submitted to the DEQ and EPA, HRSD developed an approach to recognize the highest-priority system improvements with the greatest relative environmental benefit. The result being the identification of High-Priority Projects (HPPs). Rounds 1 and 2 of High-Priority Projects were scheduled with consecutive 10-year implementation periods starting with Round 1 being completed between plan approval and 2030. Prior to commencement, HRSD will review the Round 2 projects to confirm that they are still expected to meet the desired result and confirm this in a check in with the EPA/DEQ. To modify the list of specific Round 2 HPP projects, HRSD will show that the revised set of projects will attain a minimum of the same percent reduction, or better.

FUNDING TYPE

Funding Type: Revenue Bond

CONTACTS

Contacts-Requesting Dept: Engineering

Contacts-Dept Contacts: John Dano

Contacts-Managing Dept: Engineering

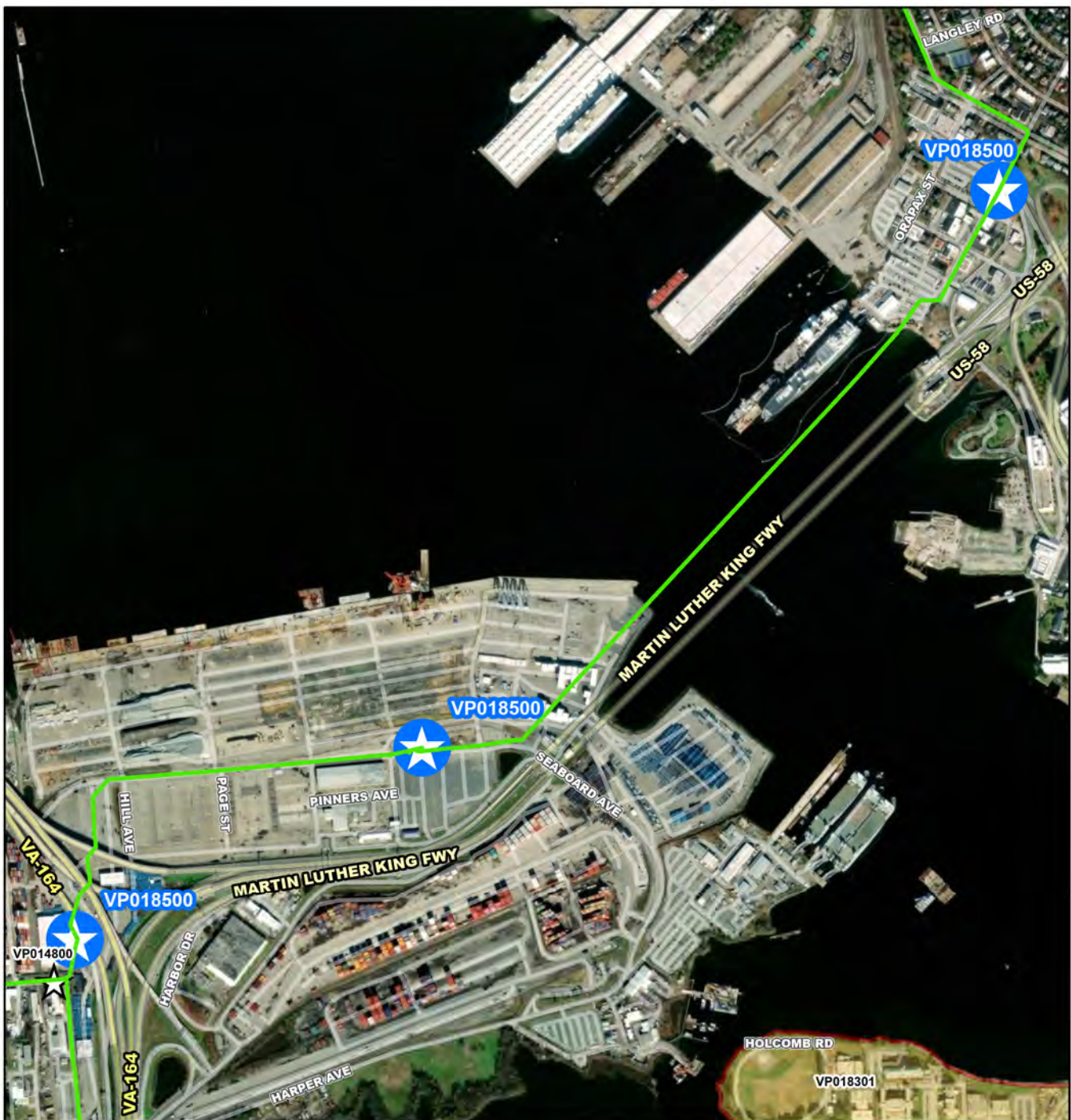
PROPOSED SCHEDULE START DATE

PrePlanning	01/01/2028
PER	11/01/2034
Design Delay	11/01/2035
Design	11/01/2035
Bid Delay	11/01/2037
PreConstruction	11/01/2037
Construction	01/01/2038
Closeout	01/01/2041

COST ESTIMATE

<b>Cost Estimate Class:</b>	<b>Class 5</b>
PrePlanning	\$1,214,404
PER	\$289,028
Design	\$1,422,067
PreConstruction	\$26,717
Construction	\$19,550,687
Closeout	\$30,360
<b>Est. Program Cost</b>	<b>\$22,533,263</b>
Contingency Budget	\$4,610,582
<b>Est. Project Costs</b>	<b>\$27,143,845</b>





VP018500

- 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

0 365 730 1,460 2,190 2,920 Feet

**VP018500**

**Elizabeth River Crossing Reliability Improvements**

**HRSD**



CIP Location





System: VIP  
Type: Pipelines

Driver Category: Aging Infrastructure/Rehabilitation  
Project Phase: Construction  
Regulatory: None

PROGRAM CASH FLOW PROJECTION (\$,000)

Prog Cost	Exp to Previous Year	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34
\$3,215	\$3,103	\$111	\$1	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

PROJECT DESCRIPTION

This project will install two metering vaults and a bypass pump connection. One metering vault will replace the failed direct bury meter at Pinners Point. The other metering vault will be located in Norfolk to provide information about the condition of the river crossing. An emergency pump connection will be installed at the Pinners Point diversion structure, and that structure will be demolished.

PROJECT JUSTIFICATION

The existing meter at Pinners Point is a direct bury style meter, making it inaccessible for maintenance. The meter is at the end of its useful life and has failed. This metering location is necessary to capture flow information from the south side of the Elizabeth River in Portsmouth, including flows from Camden, Rodman, and Elmhurst Pump Stations. The new meter location in Norfolk will provide critical, missing information on the condition of the river crossing, as currently there is not a means to identify failure of that crossing. The new emergency pump connection at the abandoned diversion structure at Pinners Point will provide a means for conveying flow in the event of a failure of the Elizabeth River crossing. At present, if the crossing fails, overflows will occur in downtown Portsmouth. This new connection provides a single point of collection for the overflow, and removes the risk to the downtown area. The abandoned diversion structure at Pinners Point will be demolished, as it is currently a safety risk.

FUNDING TYPE

Funding Type: Revenue Bond

CONTACTS

Contacts-Requesting Dept: Operations-E&I  
Contacts-Dept Contacts: Phil Hubbard  
Contacts-Managing Dept: Engineering

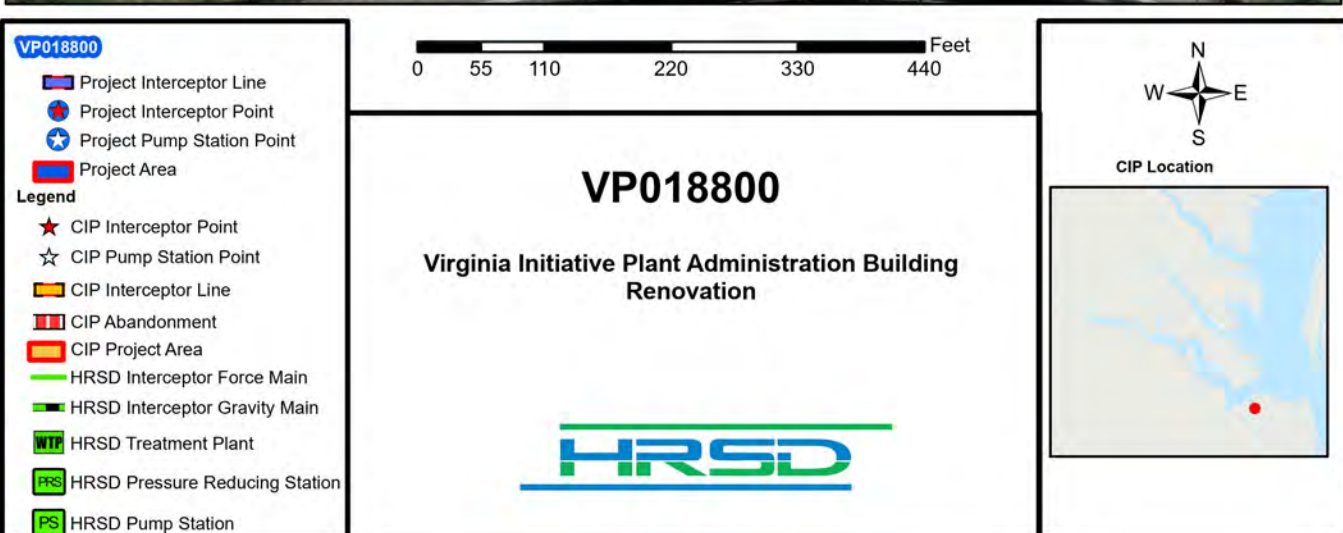
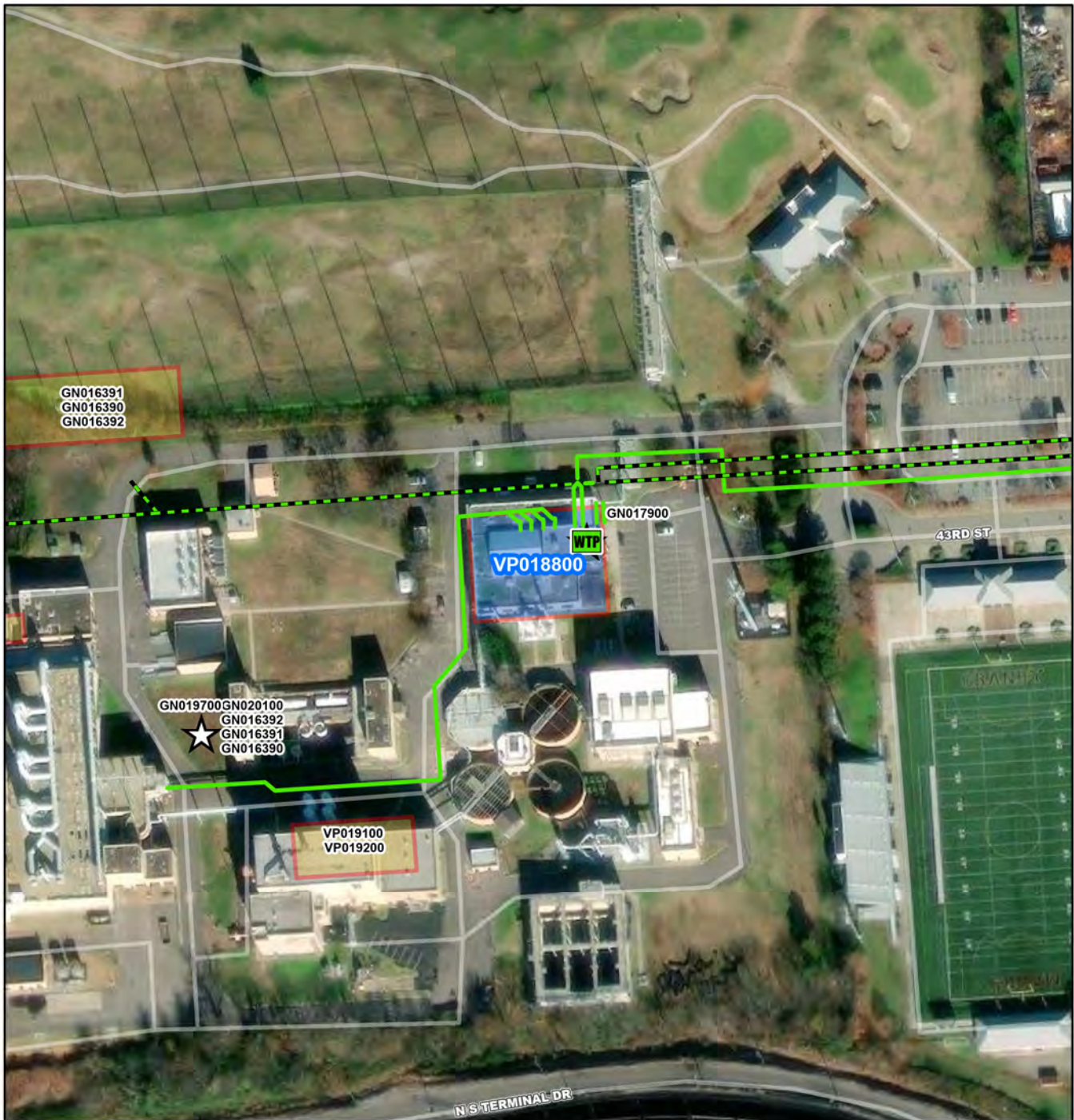
PROPOSED SCHEDULE START DATE

PrePlanning	04/01/2019
PER	06/25/2019
Design Delay	01/01/2020
Design	01/01/2020
Bid Delay	10/07/2021
PreConstruction	10/07/2021
Construction	01/07/2022
Closeout	10/01/2024

COST ESTIMATE

<b>Cost Estimate Class:</b>	<b>Class 1</b>
PrePlanning	\$0
PER	\$99,183
Design	\$199,123
PreConstruction	\$7,490
Construction	\$2,903,303
Closeout	\$5,740
<b>Est. Program Cost</b>	<b>\$3,214,839</b>
Contingency Budget	\$385,000
<b>Est. Project Costs</b>	<b>\$3,599,839</b>







System: VIP

Type: Facilities, Buildings and Capital Equipment

Driver Category: Aging Infrastructure/Rehabilitation

Project Phase: Design

Regulatory: None

PROGRAM CASH FLOW PROJECTION (\$,000)

Prog Cost	Exp to Previous Year	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34
\$10,195	\$607	\$3,479	\$3,479	\$2,629	\$0	\$0	\$0	\$0	\$0	\$0	\$0

PROJECT DESCRIPTION

This project is to renovate the existing 1990 and 1974 administration areas.

PROJECT JUSTIFICATION

This project will provide additional administration offices, lunch room, conference room, bathrooms and unisex bathrooms for Solids Treatment and Solids Handling.

FUNDING TYPE

Funding Type: Revenue Bond

CONTACTS

Contacts-Requesting Dept: Operations-Treatment

Contacts-Dept Contacts: Tim Marsh

Contacts-Managing Dept: Engineering

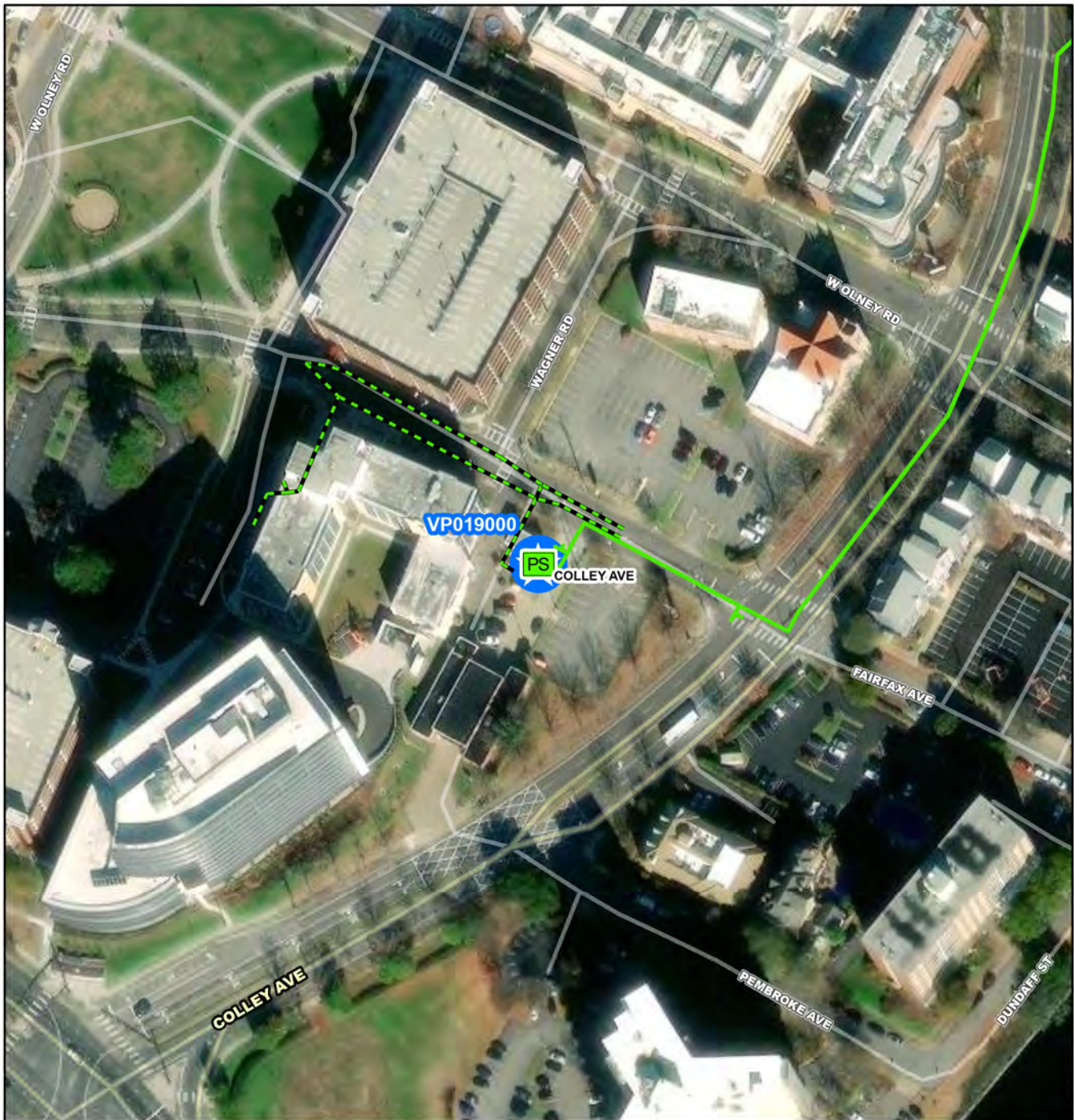
PROPOSED SCHEDULE START DATE

PrePlanning	07/01/2020
PER	02/01/2021
Design Delay	07/15/2022
Design	08/31/2022
Bid Delay	04/01/2024
PreConstruction	04/01/2024
Construction	07/01/2024
Closeout	04/01/2027

COST ESTIMATE

<b>Cost Estimate Class:</b>	<b>Class 2</b>
PrePlanning	\$0
PER	\$127,273
Design	\$475,046
PreConstruction	\$5,000
Construction	\$9,567,891
Closeout	\$20,000
<b>Est. Program Cost</b>	<b>\$10,195,210</b>
Contingency Budget	\$956,789
<b>Est. Project Costs</b>	<b>\$11,151,999</b>





VP019000

- 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

0 45 90 180 270 360 Feet

**VP019000**

**Colley Ave Pump Station Pump Replacement**



CIP Location





System: VIP  
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	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34
\$1,934	\$358	\$788	\$788	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

PROJECT DESCRIPTION

This project will replace the existing extended shaft pumps at Colley Avenue Pump Station with new constant speed dry pit submersible pumps. Architectural updates will also be made to help the station blend with the surrounding area.

PROJECT JUSTIFICATION

The existing pumps at the Colley Avenue Pump Station were installed circa 1970. Two of the three pumps are Allis-Chalmers pumps, which are no longer manufactured, making spare parts very difficult to find. A recent drawdown test performed in June 2020 showed that the two smaller pumps are operating at 70% of their original hydraulic capacity, and the large pump is operating at approximately 45% of its capacity. In addition, the smaller pumps are undersized for wet weather head conditions, forcing the third pump to be used as both the lead and wet weather pump. As a result, a 6-inch emergency bypass pump has been installed at the station to provide additional wet weather pumping capacity. Due to the loss of hydraulic efficiency and their age, these pumps cost approximately \$10,000 per year more in power, labor and maintenance costs than properly sized new pumps. In addition, replacing the pumps would allow the Godwin pump to be removed, improving the aesthetics of the station, and allowing this pump to be used elsewhere in the system.

FUNDING TYPE

Funding Type: Revenue Bond

CONTACTS

Contacts-Requesting Dept: Operations-Interceptors  
Contacts-Dept Contacts: Eddie Heady  
Contacts-Managing Dept: Operations-Interceptors

PROPOSED SCHEDULE START DATE

PrePlanning	04/01/2021
PER	06/28/2021
Design Delay	12/04/2023
Design	12/05/2023
Bid Delay	07/01/2024
PreConstruction	10/01/2024
Construction	01/01/2025
Closeout	01/01/2026

COST ESTIMATE

<b>Cost Estimate Class:</b>	<b>Class 4</b>
PrePlanning	\$0
PER	\$39,588
Design	\$318,801
PreConstruction	\$10,000
Construction	\$1,555,000
Closeout	\$10,800
<b>Est. Program Cost</b>	<b>\$1,934,189</b>
Contingency Budget	\$258,000
<b>Est. Project Costs</b>	<b>\$2,192,189</b>





**VP019100**

- 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
- WTP HRSD Treatment Plant
- PRS HRSD Pressure Reducing Station
- PS HRSD Pump Station

0 55 110 220 330 440 Feet

## VP019100

### Virginia Initiative Plant Incinerator Burner Replacement

N  
W E  
S

CIP Location



System: VIP  
Type: Biosolids

Driver Category: Aging Infrastructure/Rehabilitation  
Project Phase: Construction  
Regulatory: None

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

Prog Cost	Exp to Previous Year	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34
\$4,587	\$4,219	\$368	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

**PROJECT DESCRIPTION**

VIPs two incinerators contain 46 burners total (23 each). This project will replace 42 old burners with new low NOx North American burners to maintain NOx levels below permit requirements, to meet modern safety standards and improve fuel efficiency. New local control panels at each individual burner and two central control panels on the mezzanine level, conduits, wiring and other ancillary electrical components will bring the system up to current electrical safety standards and will allow control of the burners through the plants Distributed Control System (DCS).

**PROJECT JUSTIFICATION**

The existing Hauck burners and controls are obsolete making it difficult to find replacement parts. The burners are 40 years old and, in some instances, the burner pilots have been unsafe to light-up. The proposed American Burners are reliable with a proven record at HRSD. The specified proposed burners are low-NOx and are necessary for future incinerator compliance. The new burners and controls will increase VIP incinerator capacity from 30 to 36 dry tons per day which is a requirement when the Army Base Treatment Plant incinerator goes off-line.

**FUNDING TYPE**

Funding Type: Revenue Bond

**CONTACTS**

Contacts-Requesting Dept: Operations-Treatment  
Contacts-Dept Contacts: Matt Poe  
Contacts-Managing Dept: Engineering

**PROPOSED SCHEDULE START DATE**

PrePlanning  
PER 07/01/2021  
Design Delay 07/01/2021  
Design 07/01/2021  
Bid Delay 07/01/2021  
PreConstruction 07/01/2021  
Construction 11/01/2021  
Closeout 09/01/2024

**COST ESTIMATE**

<b>Cost Estimate Class:</b>	<b>Class 1</b>
PrePlanning	\$0
PER	\$0
Design	\$0
PreConstruction	\$87,271
Construction	\$4,500,000
Closeout	\$0
<b>Est. Program Cost</b>	<b>\$4,587,271</b>
Contingency Budget	\$597,000
<b>Est. Project Costs</b>	<b>\$5,184,271</b>





#### VP019200

- 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

0 75 150 300 450 600 Feet

## VP019200

Virginia Initiative Plant Motor Control Center  
Replacements



CIP Location





System: VIP  
Type: Electrical

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

PROGRAM CASH FLOW PROJECTION (\$,000)

Prog Cost	Exp to Previous Year	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34
\$9,411	\$803	\$4,491	\$4,117	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

PROJECT DESCRIPTION

This project is to design and replace five (5) Motor Control Centers (MCC) and a Main Distribution Panel, and variable frequency drives located in the Incinerator Building at Virginia Initiative Plant (VIP) installed in the 1970's. This project will also replace a four (4) 1980's vintage MCC and Switchgear located in the Blower Building. The electrical distribution equipment has reached the end of their useful life. Two new 2000 kVA transformers will be installed to accomodate future blowers loads.

PROJECT JUSTIFICATION

During an annual thermographic inspection signs of bus deterioration and heat anomalies were discovered. The MCC's are critical to plant operations. The five MCC's in the incinerator building supply power to the furnace, ID fan, Centrifuges, and Building Services. The MCC located in the Blower Building supplies power to the Blowers, Primary Clarifiers, Grit Tanks, and Chemical Building. This project will increase plant process reliability and improve employee safety by reducing the likelihood of an arc flash event.

FUNDING TYPE

Funding Type: Revenue Bond

CONTACTS

Contacts-Requesting Dept: Operations-Treatment  
Contacts-Dept Contacts: Keith Britt  
Contacts-Managing Dept: Operations-E&I

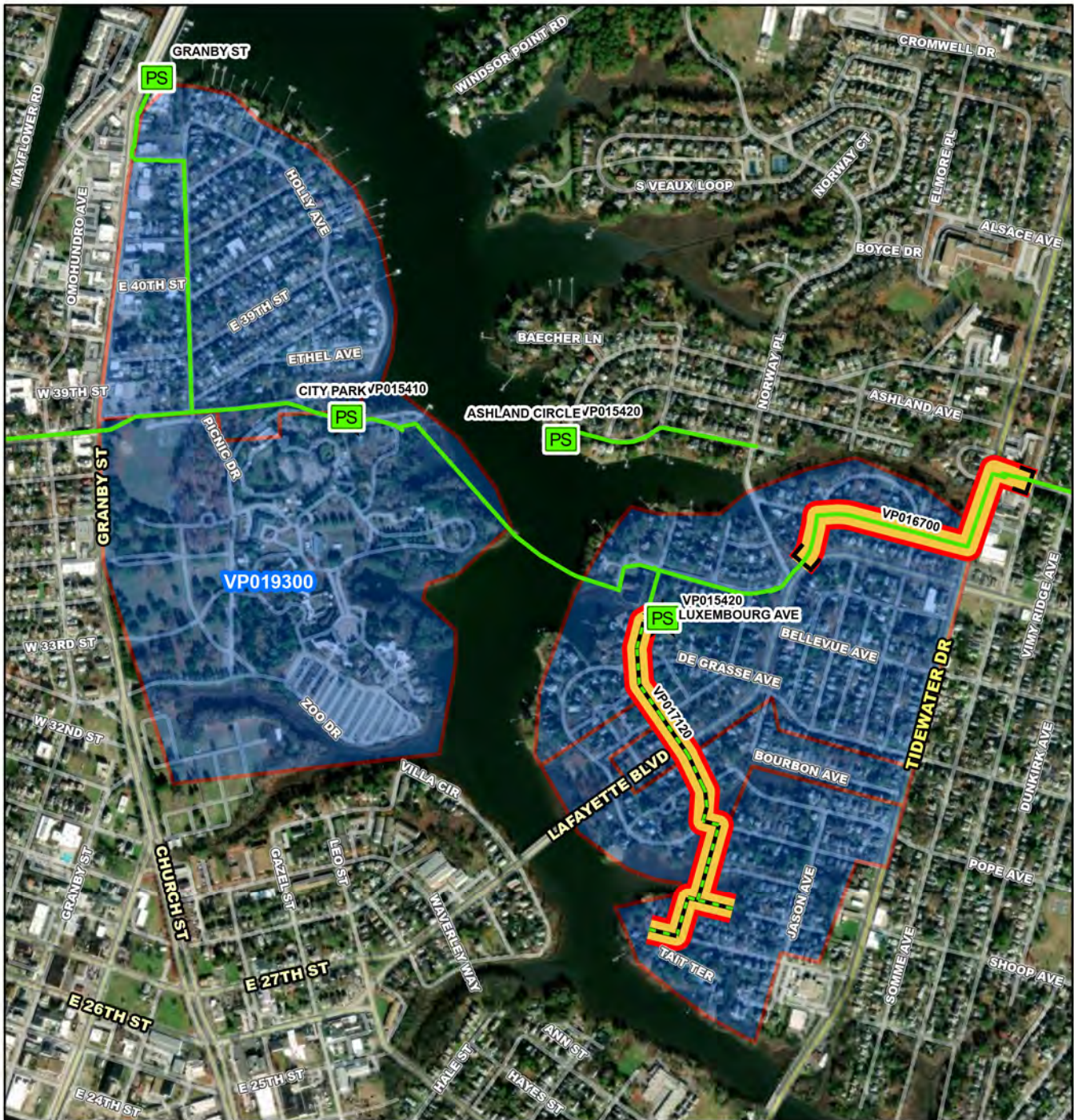
PROPOSED SCHEDULE START DATE

PrePlanning	
PER	07/01/2021
Design Delay	07/01/2021
Design	07/01/2021
Bid Delay	05/02/2022
PreConstruction	05/02/2022
Construction	06/01/2024
Closeout	06/01/2026

COST ESTIMATE

<b>Cost Estimate Class:</b>	<b>Class 3</b>
PrePlanning	\$0
PER	\$0
Design	\$410,894
PreConstruction	\$0
Construction	\$9,000,000
Closeout	\$0
<b>Est. Program Cost</b>	<b>\$9,410,894</b>
Contingency Budget	\$838,900
<b>Est. Project Costs</b>	<b>\$10,249,794</b>





**VP019300**

- Project Interceptor Line
- Project Interceptor Point
- Project Pump Station Point
- Project Area

**Legend**

- ★ CIP Interceptor Point
- ☆ CIP Pump Station Point
- Project 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

0 325 650 1,300 1,950 2,600 Feet

**VP019300**

Norfolk I-I Reduction

**HRSD**

N  
W E  
S

CIP Location



System: VIP  
Type: Locality and Private Property

Driver Category: I&I Abatement-IP/RWWMP  
Project Phase: Proposed  
Regulatory: Integrated Plan-HPP 1

PROGRAM CASH FLOW PROJECTION (\$,000)

Prog Cost	Exp to Previous Year	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34
\$11,625	\$0	\$653	\$2,543	\$3,372	\$3,372	\$1,686	\$0	\$0	\$0	\$0	\$0

PROJECT DESCRIPTION

NORF-H-106 General I/I Reduction Plan; NORF-H-106-G1 General I/I Reduction Plan; NORF-H-113 General I/I Reduction Plan; NORF-H-113-G1 Comprehensive I/I Reduction Plan; NORF-H-113-G2 General I/I Reduction Plan

PROJECT JUSTIFICATION

As part of HRSD's Integrated Plan, a program of High Priority RWWMP Projects (HPP) will be constructed through 2030. These projects were selected based on their ability to provide the greatest environmental and human health benefits. Further, this \$200+ million investment will significantly reduce sanitary sewer overflow (SSO) volume at the 5-year level of service by 47 percent.

FUNDING TYPE

Funding Type: Cash

CONTACTS

Contacts-Requesting Dept: Engineering  
Contacts-Dept Contacts: Jeff Scarano  
Contacts-Managing Dept: Engineering

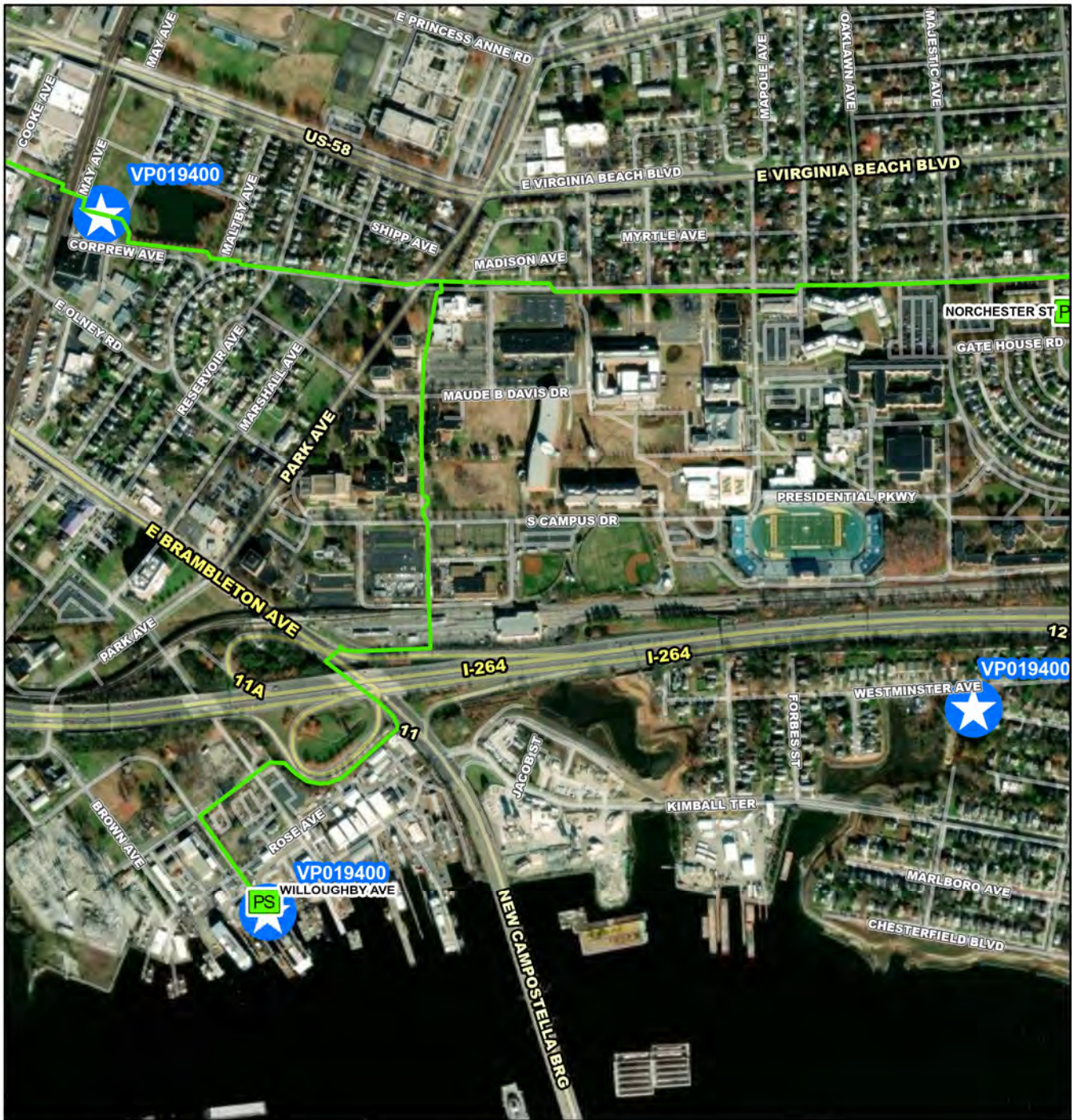
PROPOSED SCHEDULE START DATE

PrePlanning	07/01/2024
PER	09/01/2024
Design Delay	06/01/2025
Design	06/01/2025
Bid Delay	01/01/2026
PreConstruction	01/01/2026
Construction	01/01/2026
Closeout	01/01/2029

COST ESTIMATE

<b>Cost Estimate Class:</b>	<b>Class 5</b>
PrePlanning	\$10,000
PER	\$500,000
Design	\$1,000,000
PreConstruction	\$0
Construction	\$10,114,800
Closeout	\$0
<b>Est. Program Cost</b>	<b>\$11,624,800</b>
Contingency Budget	\$2,971,200
<b>Est. Project Costs</b>	<b>\$14,596,000</b>





**VP019400**

- Project Interceptor Line
- Project Interceptor Point
- Project Pump Station Point
- Project Area

**Legend**

- ★ CIP Interceptor Point
- ☆ CIP Pump Station Point
- Project 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

0 265 530 1,060 1,590 2,120 Feet

## VP019400

### High Priority Projects Round 2 Project 5

N  
W E  
S  
CIP Location



System: VIP  
Type: Pipelines

Driver Category: I&I Abatement-IP/RWWMP  
Project Phase: Proposed  
Regulatory: Integrated Plan-HPP 2

PROGRAM CASH FLOW PROJECTION (\$,000)

Prog Cost	Exp to Previous Year	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34
\$1,601	\$0	\$0	\$0	\$0	\$37	\$74	\$74	\$74	\$74	\$617	\$652

PROJECT DESCRIPTION

High Priority Project (HPP) Round 2 Project 5 consists of the following Regional Wet Weather Management Plan (RWWMP) Project IDs and general descriptions:  
VIP-RWWMP-12 May Avenue Storage Tank  
VIP-RWWMP-14 Norfolk City System Improvements  
VIP-RWWMP-13 Willoughby Avenue Pump Station Upgrade

PROJECT JUSTIFICATION

As part of the RWWMP submitted to the DEQ and EPA, HRSD developed an approach to recognize the highest-priority system improvements with the greatest relative environmental benefit. The result being the identification of High-Priority Projects (HPPs).  
Rounds 1 and 2 of High-Priority Projects were scheduled with consecutive 10-year implementation periods starting with Round 1 being completed between plan approval and 2030. Prior to commencement, HRSD will review the Round 2 projects to confirm that they are still expected to meet the desired result and confirm this in a check in with the EPA/DEQ. To modify the list of specific Round 2 HPP projects, HRSD will show that the revised set of projects will attain a minimum of the same percent reduction, or better.

FUNDING TYPE

Funding Type: Revenue Bond

CONTACTS

Contacts-Requesting Dept: Engineering  
Contacts-Dept Contacts: John Dano  
Contacts-Managing Dept: Engineering

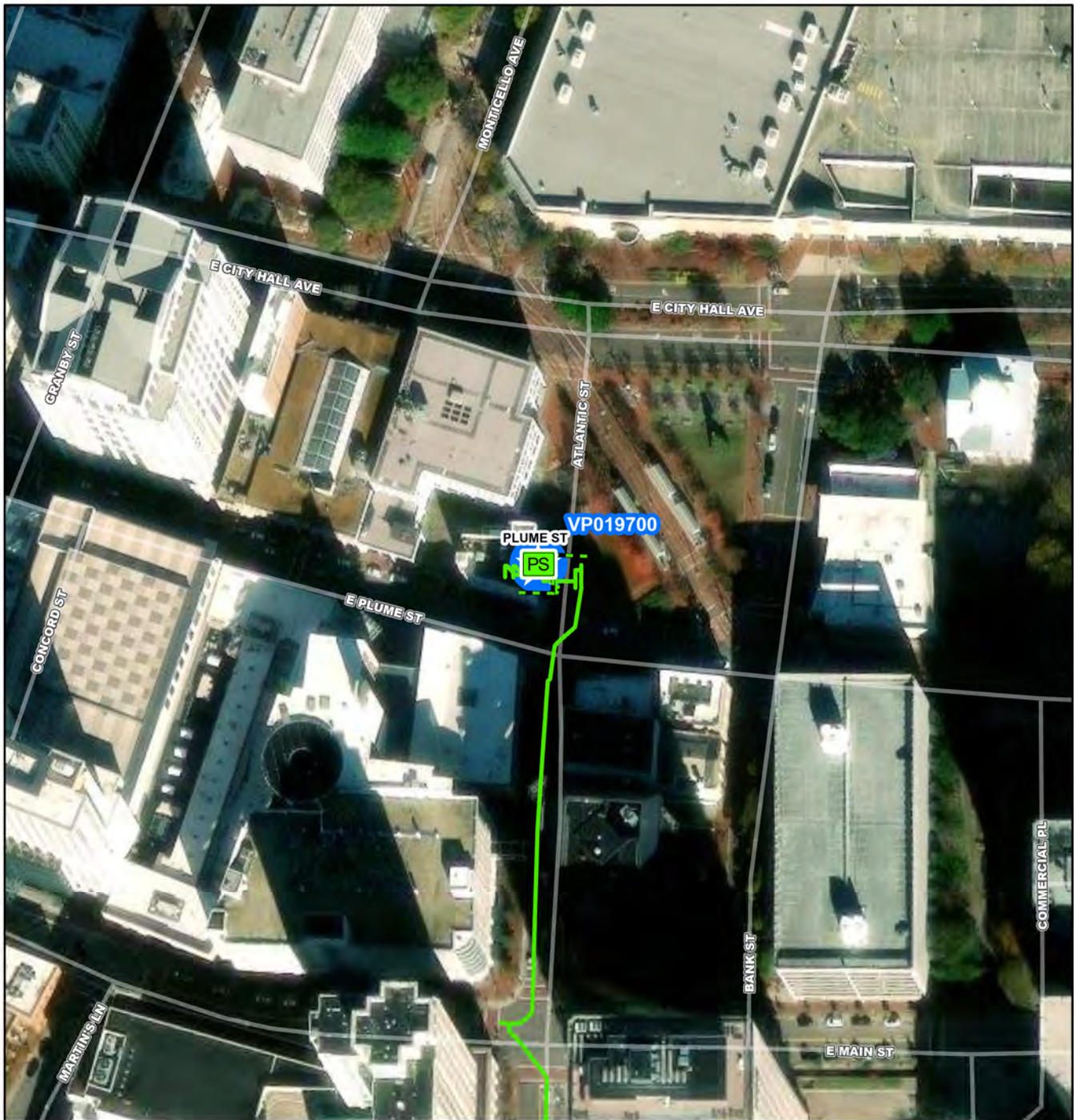
PROPOSED SCHEDULE START DATE

PrePlanning	01/01/2028
PER	11/01/2032
Design Delay	11/01/2033
Design	11/01/2033
Bid Delay	11/01/2035
PreConstruction	11/01/2035
Construction	01/01/2036
Closeout	01/01/2039



COST ESTIMATE

<b>Cost Estimate Class:</b>	<b>Class 5</b>
PrePlanning	\$355,749
PER	\$889,372
Design	\$1,067,247
PreConstruction	\$177,874
Construction	\$15,119,328
Closeout	\$177,874
<b>Est. Program Cost</b>	<b>\$17,787,444</b>
Contingency Budget	\$0
<b>Est. Project Costs</b>	<b>\$17,787,444</b>





VP019700

-  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

0 45 90 180 270 360 Feet

**VP019700**

**Plume Street Pump Station Replacement (SS-PS-121)**



CIP Location





System: VIP  
Type: Pump Stations

Driver Category: Aging Infrastructure/Rehabilitation  
Project Phase: Proposed  
Regulatory: None

PROGRAM CASH FLOW PROJECTION (\$,000)

Prog Cost	Exp to Previous Year	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34
\$6,181	\$0	\$250	\$0	\$551	\$1,210	\$3,337	\$834	\$0	\$0	\$0	\$0

PROJECT DESCRIPTION

This project will address the replacement of a Plume Street Pump Station on a parcel adject to current location.

PROJECT JUSTIFICATION

This station is currently located inside the basement of the Virginia Maritime Association (VMA) at 236 E. Plume Street. This site was identified for a potential CIP project due to the joint ownership of the building, site access, maintenance challenges and safety concerns within the existing station from corrosion and inoperable functions.

FUNDING TYPE

Funding Type: Revenue Bond

CONTACTS

Contacts-Requesting Dept: Operations-Interceptors  
Contacts-Dept Contacts: Gene Rutledge  
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning	07/01/2024
PER	07/01/2026
Design Delay	01/01/2027
Design	01/01/2027
Bid Delay	01/01/2028
PreConstruction	01/01/2028
Construction	04/01/2028
Closeout	10/01/2029

COST ESTIMATE

<b>Cost Estimate Class:</b>	<b>Class 5</b>
PrePlanning	\$250,000
PER	\$250,250
Design	\$600,600
PreConstruction	\$75,075
Construction	\$5,005,000
Closeout	\$0
<b>Est. Program Cost</b>	<b>\$6,180,925</b>
Contingency Budget	\$1,251,250
<b>Est. Project Costs</b>	<b>\$7,432,175</b>





System: VIP

Type: Wastewater Treatment

Driver Category: Aging Infrastructure/Rehabilitation

Project Phase: Proposed

Regulatory: None

PROGRAM CASH FLOW PROJECTION (\$,000)

Prog Cost	Exp to Previous Year	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34
\$15,312	\$0	\$788	\$788	\$788	\$3,520	\$3,520	\$3,520	\$2,388	\$0	\$0	\$0

PROJECT DESCRIPTION

This project will involve replacement of 16 aeration tank slide gates and 18 primary clarifier slide gates with new motorized stainless steel slide gates.

PROJECT JUSTIFICATION

The gates are over 34 years old and at the end of their design life. The fiberglass wrap and gate core has been found to be damaged or showing signs of damage at many locations, and they are becoming difficult to operate. Motorizing the gates will allow for more efficient operation and the ability to exercise the gates more frequently, as well as, provide flexibility for control of aerobic volume.

FUNDING TYPE

Funding Type: Cash

CONTACTS

Contacts-Requesting Dept: Operations-Treatment

Contacts-Dept Contacts: Matt Poe

Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning	07/01/2024
PER	07/01/2024
Design Delay	07/01/2024
Design	04/01/2025
Bid Delay	04/01/2025
PreConstruction	04/01/2025
Construction	04/01/2025
Closeout	06/01/2030

COST ESTIMATE

<b>Cost Estimate Class:</b>	<b>Class 5</b>
PrePlanning	\$0
PER	\$0
Design	\$1,506,120
PreConstruction	\$0
Construction	\$13,806,100
Closeout	\$0
<b>Est. Program Cost</b>	<b>\$15,312,220</b>
Contingency Budget	\$690,305
<b>Est. Project Costs</b>	<b>\$16,002,525</b>