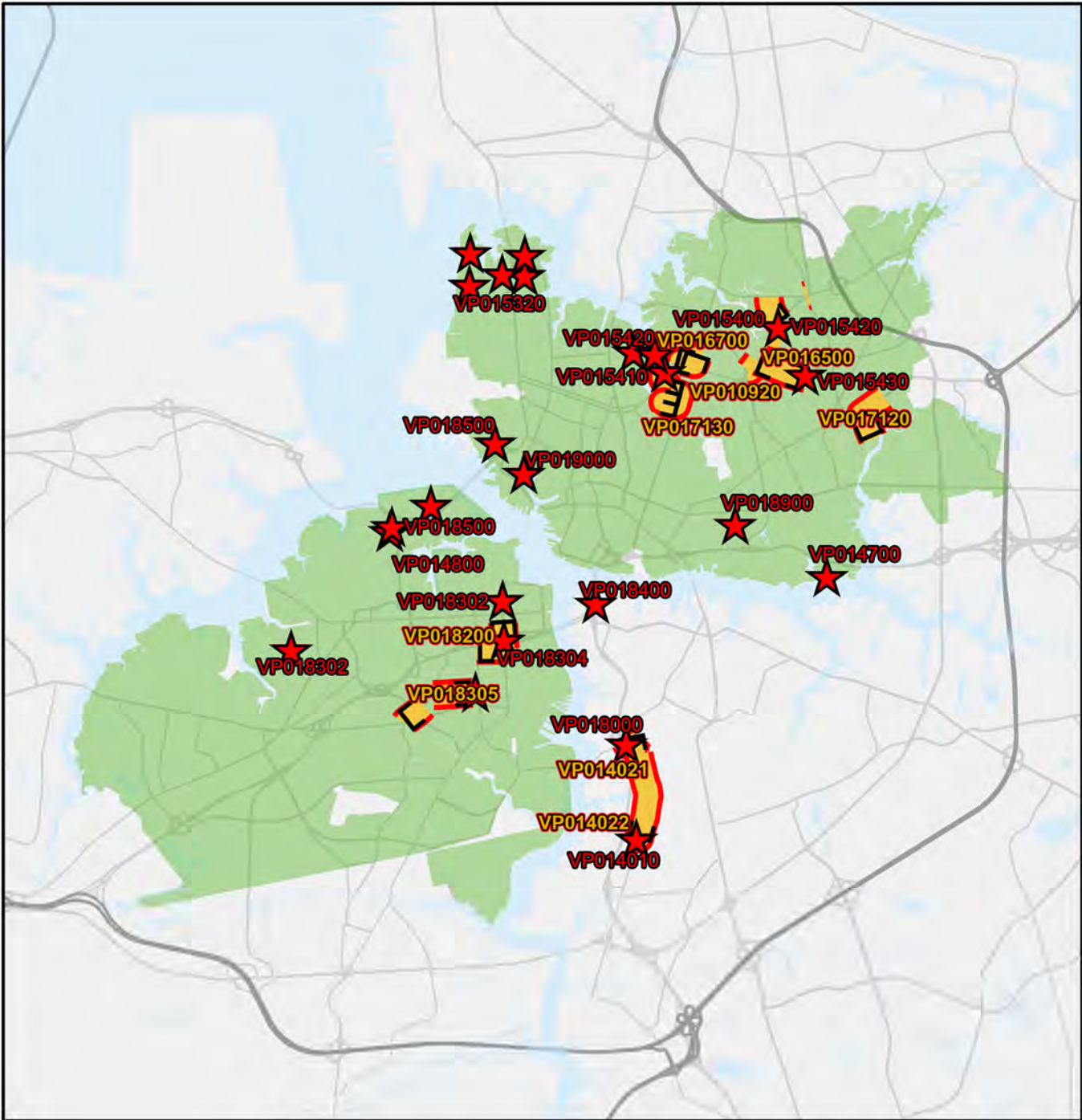


Virginia Initiative Plant

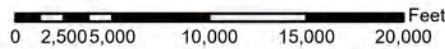




Legend

Virginia Initiative Treatment Plant

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



Virginia Initiative Treatment Plant Service Area CIP Projects

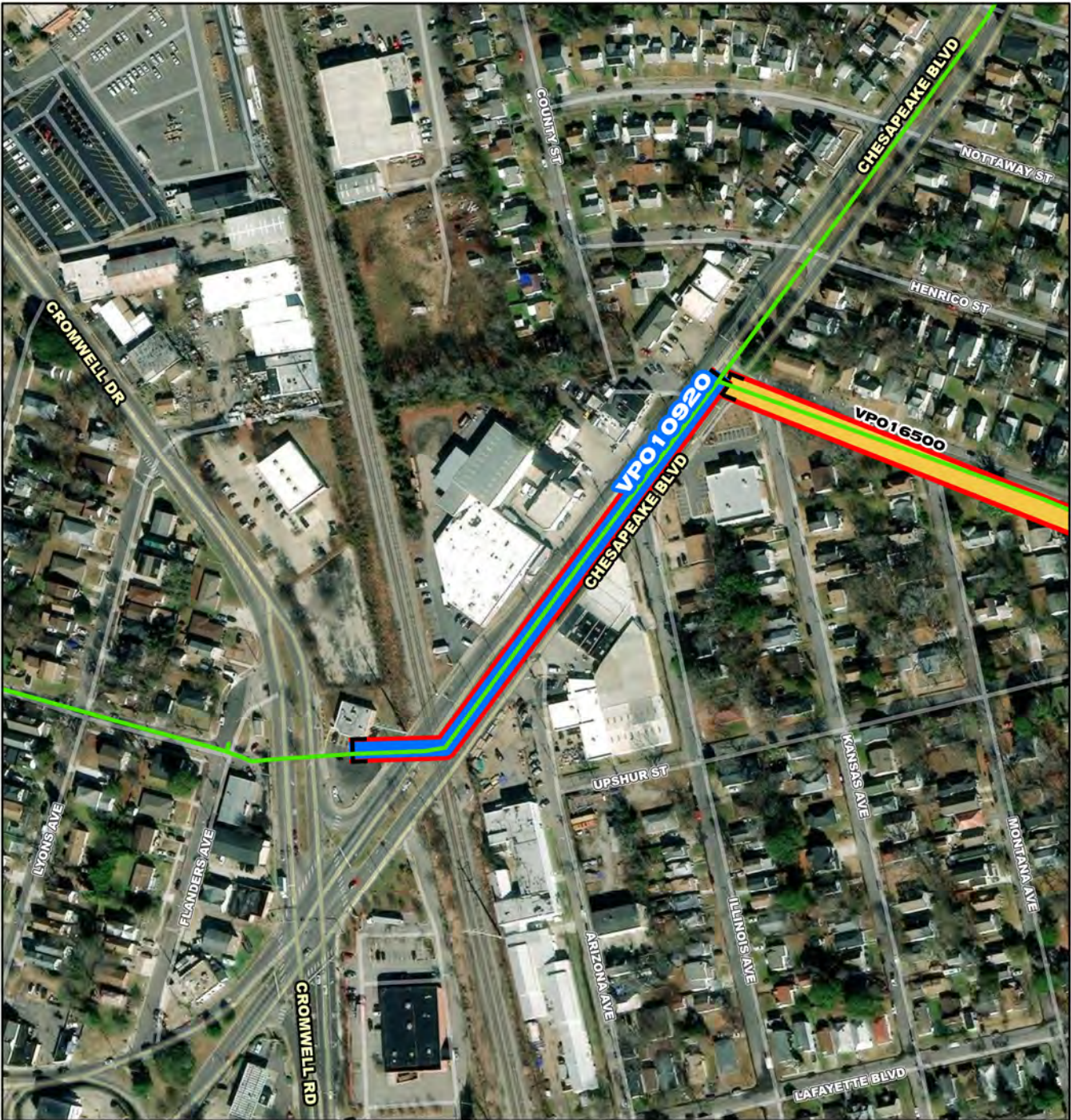
Treatment Plant Projects

GN016390	VP018301	VP019600
GN016391	VP018303	
GN016392	VP018800	
GN017900	VP019100	
VP017130	VP019200	

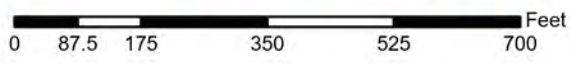


CIP Location

Service Area



- VPO 10920**
- 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



VPO 10920

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





**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: Design
Regulatory: Rehab Plan Phase Two

PROGRAM CASH FLOW PROJECTION (\$,000)

Prog Cost	Exp to Previous Year	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33
\$4,644	\$643	\$1,834	\$2,001	\$167	\$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

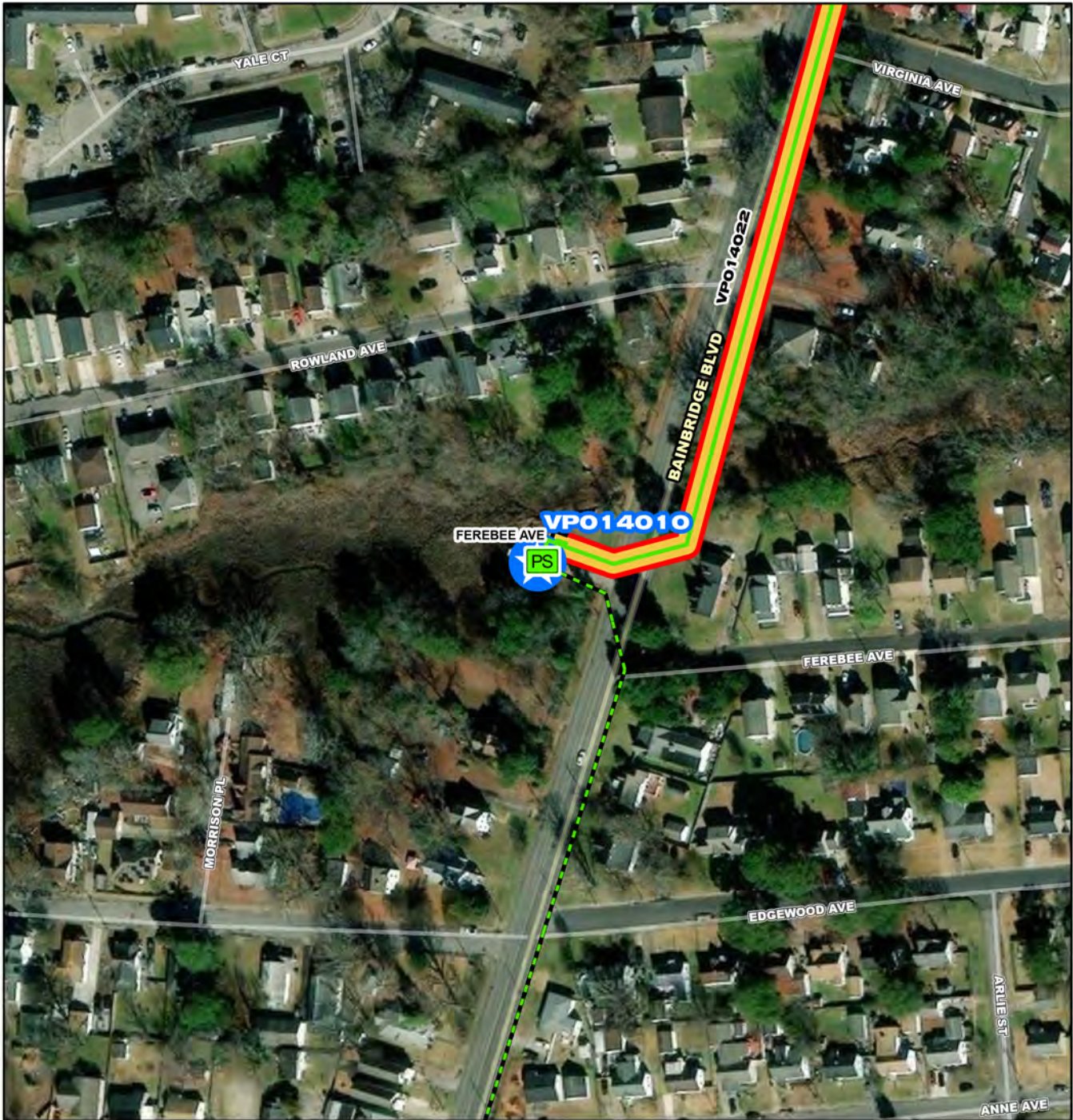
Contacts-Requesting Dept: Operations-Interceptors
Contacts-Dept Contacts: Tim Marsh
Contacts-Managing Dept: Engineering


PROPOSED SCHEDULE START DATE

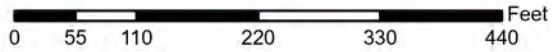
PrePlanning 01/01/2020
PER 10/20/2020
Design Delay 11/26/2021
Design 11/26/2021
Bid Delay 04/27/2023
PreConstruction 04/27/2023
Construction 08/01/2023
Closeout 08/01/2025

COST ESTIMATE

Cost Estimate Class: Class 2
PrePlanning \$0
PER \$86,243
Design \$536,306
PreConstruction \$20,092
Construction \$4,001,186
Closeout \$0
Est. Program Cost \$4,643,827
Contingency Budget \$647,808
Est. Project Costs \$5,291,635



- VPO 14010**
-  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



VPO 14010

Ferebee Avenue 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	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33
\$12,386	\$1,398	\$4,130	\$5,487	\$1,372	\$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

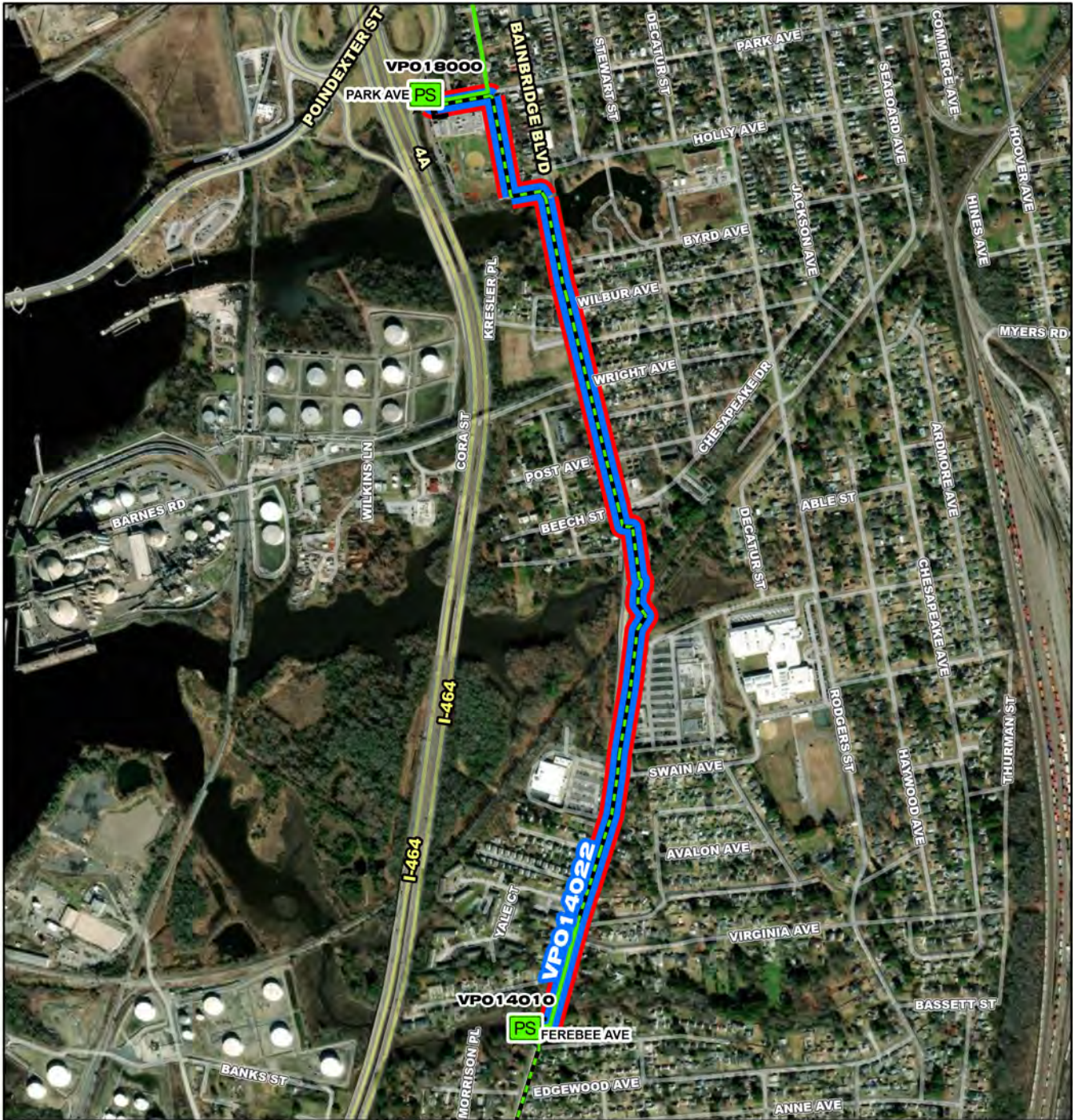
Contacts-Requesting Dept: Operations-Interceptors
Contacts-Dept Contacts: Nick Taschner
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning	07/01/2015
PER	04/28/2017
Design Delay	10/31/2019
Design	11/04/2019
Bid Delay	07/01/2021
PreConstruction	06/01/2023
Construction	10/01/2023
Closeout	10/01/2025

COST ESTIMATE

Cost Estimate Class:	Class 2
PrePlanning	\$0
PER	\$240,158
Design	\$1,106,314
PreConstruction	\$40,000
Construction	\$11,000,000
Closeout	\$0
Est. Program Cost	\$12,386,472
Contingency Budget	\$675,000
Est. Project Costs	\$13,061,472



VPO 14022

- 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

Feet

0 335 670 1,340 2,010 2,680

VPO 14022

Sanitary Sewer Replacement 1950 - Part 2

CIP Location



System: VIP
Type: Pipelines

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	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33
\$18,458	\$2,784	\$7,837	\$7,837	\$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

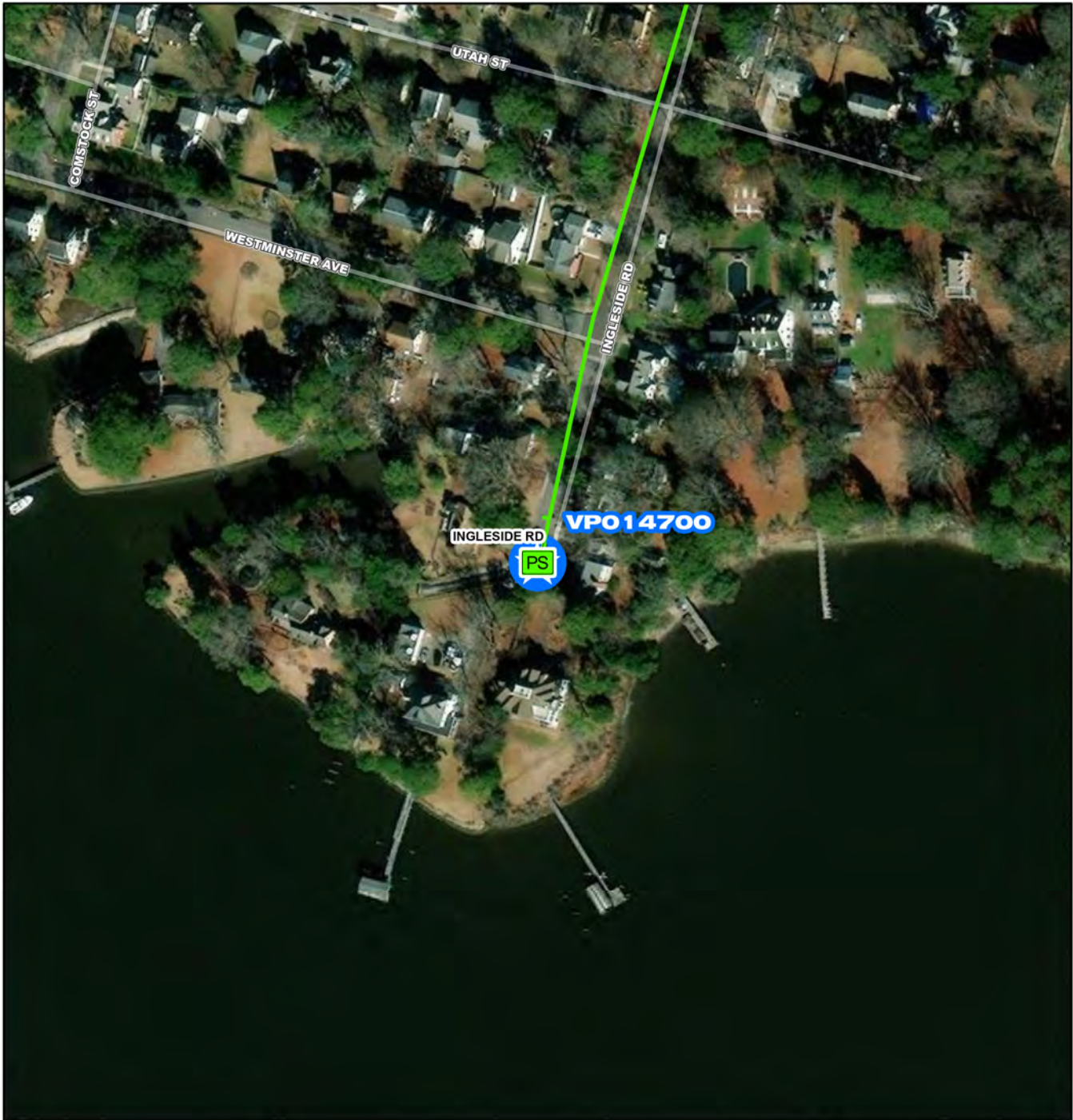
Contacts-Requesting Dept: Engineering
Contacts-Dept Contacts: Nick Taschner
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning	06/01/2017
PER	06/01/2017
Design Delay	10/01/2019
Design	11/01/2019
Bid Delay	07/01/2022
PreConstruction	09/01/2022
Construction	03/01/2023
Closeout	07/01/2025

COST ESTIMATE

Cost Estimate Class:	Class 1
PrePlanning	\$0
PER	\$0
Design	\$125,680
PreConstruction	\$32,001
Construction	\$18,300,000
Closeout	\$0
Est. Program Cost	\$18,457,681
Contingency Budget	\$1,700,000
Est. Project Costs	\$20,157,681

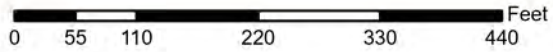


VPO 14700

- 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



VPO 14700

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	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33
\$842	\$423	\$212	\$207	\$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

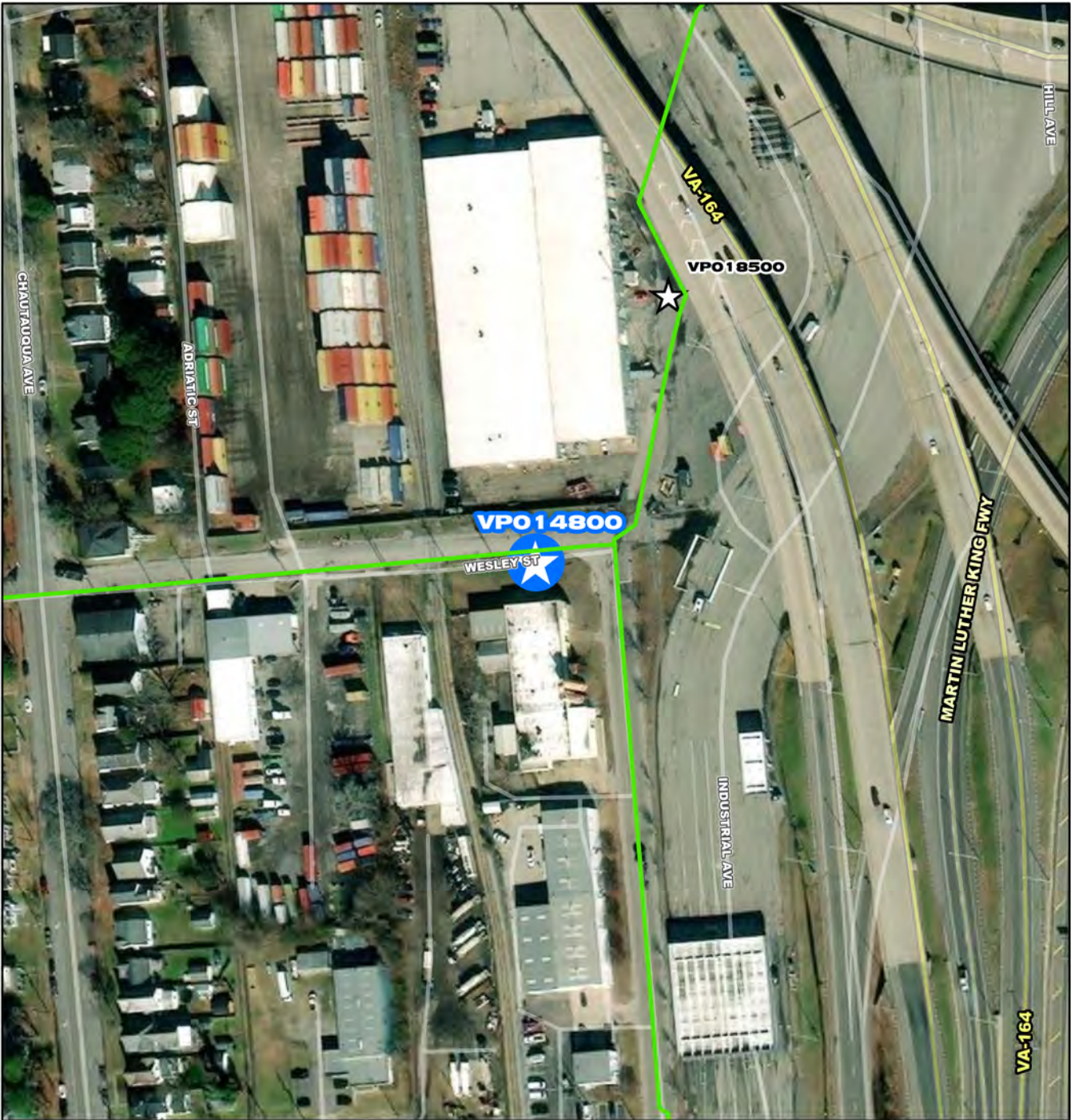
Contacts-Requesting Dept: Operations-Interceptors
Contacts-Dept Contacts: Tim Marsh
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

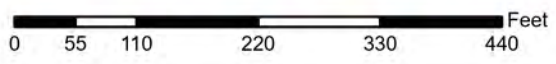
PrePlanning	07/01/2019
PER	04/01/2020
Design Delay	11/26/2021
Design	12/01/2021
Bid Delay	07/28/2023
PreConstruction	07/28/2023
Construction	12/01/2023
Closeout	03/01/2025

COST ESTIMATE

Cost Estimate Class:	Class 3
PrePlanning	\$0
PER	\$92,056
Design	\$352,835
PreConstruction	\$13,088
Construction	\$379,347
Closeout	\$5,000
Est. Program Cost	\$842,326
Contingency Budget	\$170,534
Est. Project Costs	\$1,012,860



- VPO14800**
- 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



VPO 14800

Lee Avenue-Wesley Street Horizontal Valve Replacement





Lee Avenue/Wesley Street Horizontal Valve Replacement

PR_VP014800

System: VIP
Type: Pipelines

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	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33
\$3,353	\$82	\$439	\$2,833	\$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

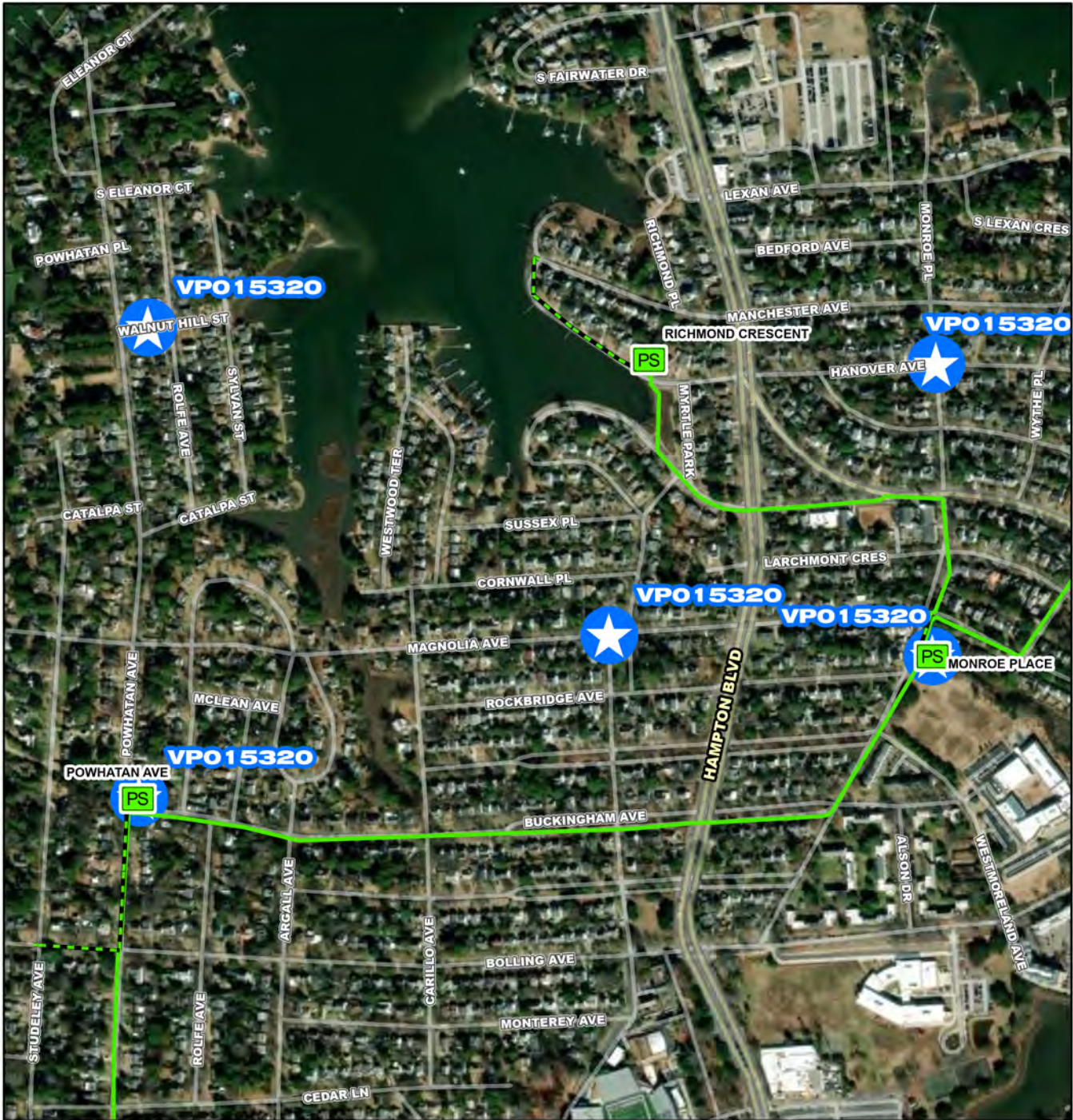
Contacts-Requesting Dept: Operations-Interceptors
Contacts-Dept Contacts: Eddie Heady
Contacts-Managing Dept: Operations-Interceptors

PROPOSED SCHEDULE START DATE

PrePlanning 01/01/2022
PER 12/01/2022
Design Delay 06/01/2023
Design 06/01/2023
Bid Delay 03/01/2024
PreConstruction 03/01/2024
Construction 06/01/2024
Closeout 05/01/2025

COST ESTIMATE

Cost Estimate Class: Class 4
PrePlanning \$0
PER \$64,291
Design \$158,213
PreConstruction \$15,000
Construction \$3,115,930
Closeout \$0
Est. Program Cost \$3,353,434
Contingency Budget \$838,359
Est. Project Costs \$4,191,793

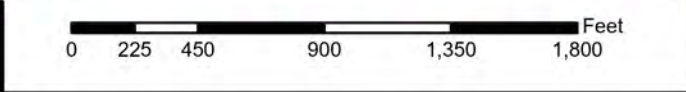


VPO 15320

- 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



VPO 15320

Larchmont Area Sanitary Sewer Improvements

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	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33
\$44,065	\$8,833	\$8,165	\$13,459	\$13,459	\$148	\$0	\$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, 2025.

FUNDING TYPE

Funding Type: Cash

CONTACTS

Contacts-Requesting Dept: Operations-Interceptors
Contacts-Dept Contacts: Holly Anne Matel
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

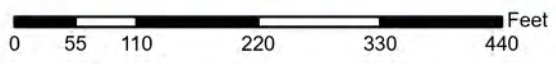
PrePlanning	06/03/2019
PER	06/01/2020
Design Delay	06/15/2021
Design	06/15/2021
Bid Delay	09/15/2023
PreConstruction	10/16/2023
Construction	01/15/2024
Closeout	07/01/2026

COST ESTIMATE

Cost Estimate Class:	Class 3
PrePlanning	\$0
PER	\$391,257
Design	\$9,349,645
PreConstruction	\$296,000
Construction	\$33,880,035
Closeout	\$148,000
Est. Program Cost	\$44,064,937
Contingency Budget	\$6,125,000
Est. Project Costs	\$50,189,937



- VPO15410**
- 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



VPO15410

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





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	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33
\$6,511	\$0	\$2,374	\$3,545	\$591	\$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

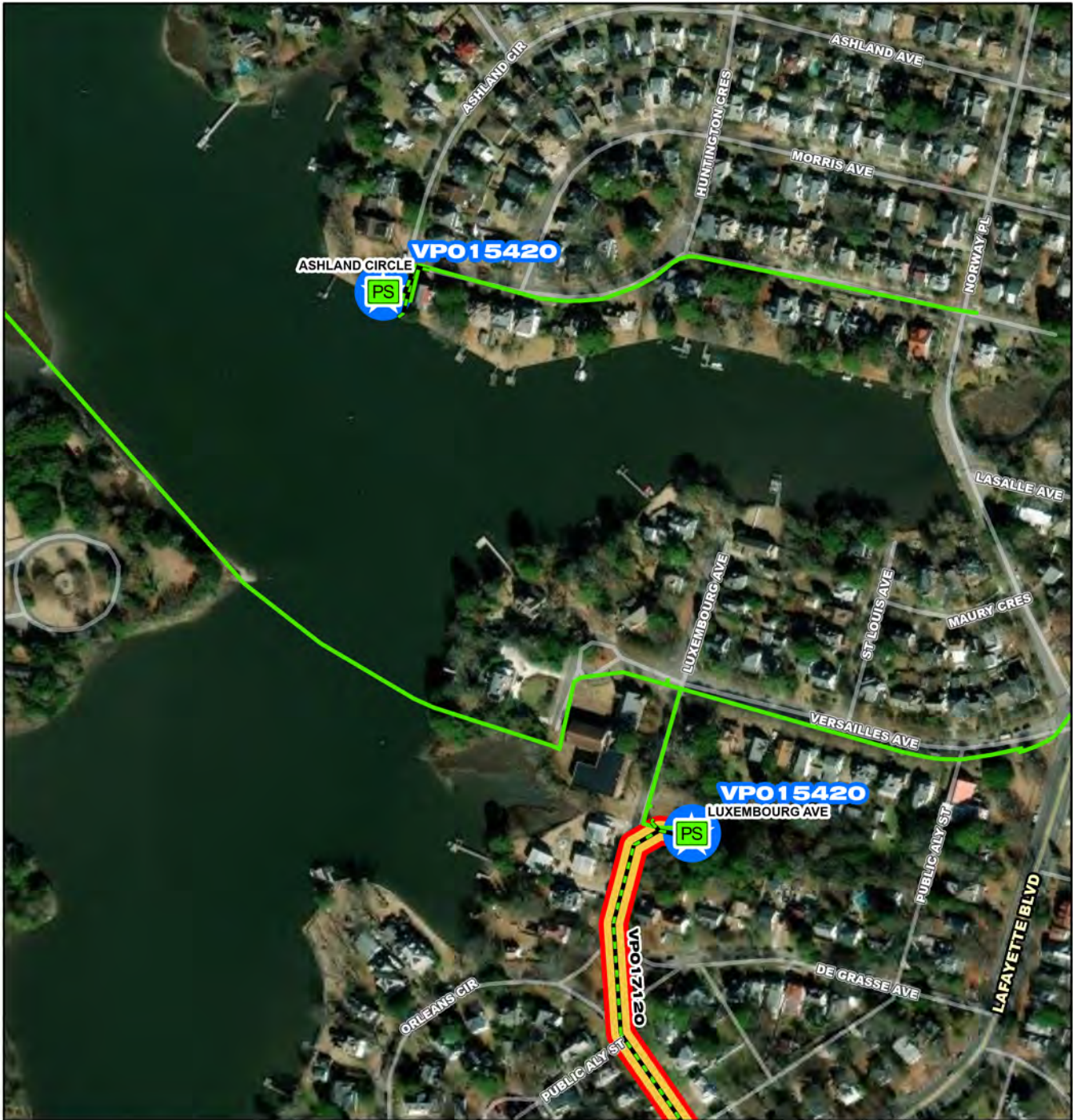
Contacts-Requesting Dept: Engineering
Contacts-Dept Contacts: Rebecca Currall
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning	
PER	
Design Delay	
Design	
Bid Delay	
PreConstruction	07/01/2023
Construction	11/01/2023
Closeout	09/01/2025

COST ESTIMATE

Cost Estimate Class:	Class 2
PrePlanning	\$0
PER	\$0
Design	\$0
PreConstruction	\$10,600
Construction	\$6,500,000
Closeout	\$0
Est. Program Cost	\$6,510,600
Contingency Budget	\$890,000
Est. Project Costs	\$7,400,600

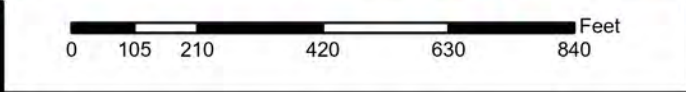


VPO 15420

- 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



VPO 15420

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

CIP Location



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

PR_VP015420

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	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33
\$9,886	\$0	\$2,289	\$4,558	\$3,038	\$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 TYPE

Funding Type: Revenue Bond

CONTACTS

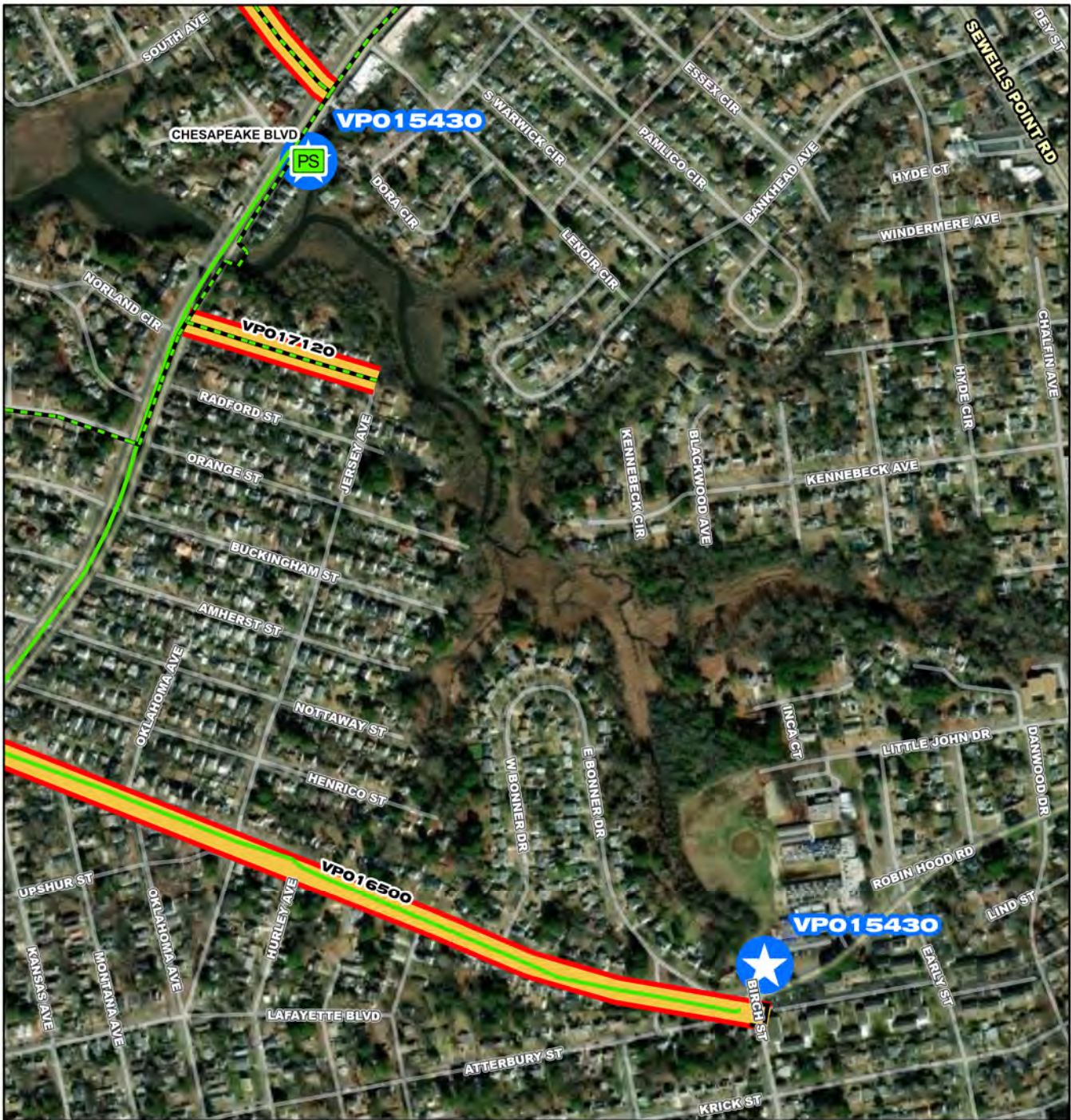
Contacts-Requesting Dept: Engineering
Contacts-Dept Contacts: Rebecca Currall
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning
PER
Design Delay
Design
Bid Delay
PreConstruction 09/01/2023
Construction 01/01/2024
Closeout 03/01/2026

COST ESTIMATE

Cost Estimate Class: Class 2
PrePlanning \$0
PER \$0
Design \$0
PreConstruction \$10,600
Construction \$9,875,000
Closeout \$0
Est. Program Cost \$9,885,600
Contingency Budget \$1,350,000
Est. Project Costs \$11,235,600

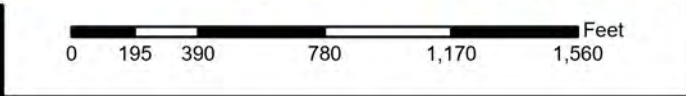


VPO15430

- 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



VPO 15430

Chesapeake Boulevard Pump Station (PS 105) Replacement and Norfolk Pump Station (PS 57) Rehabilitation

CIP Location



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	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33
\$8,011	\$0	\$626	\$3,692	\$3,692	\$0	\$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 will acquire the Norfolk pump station #57. 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

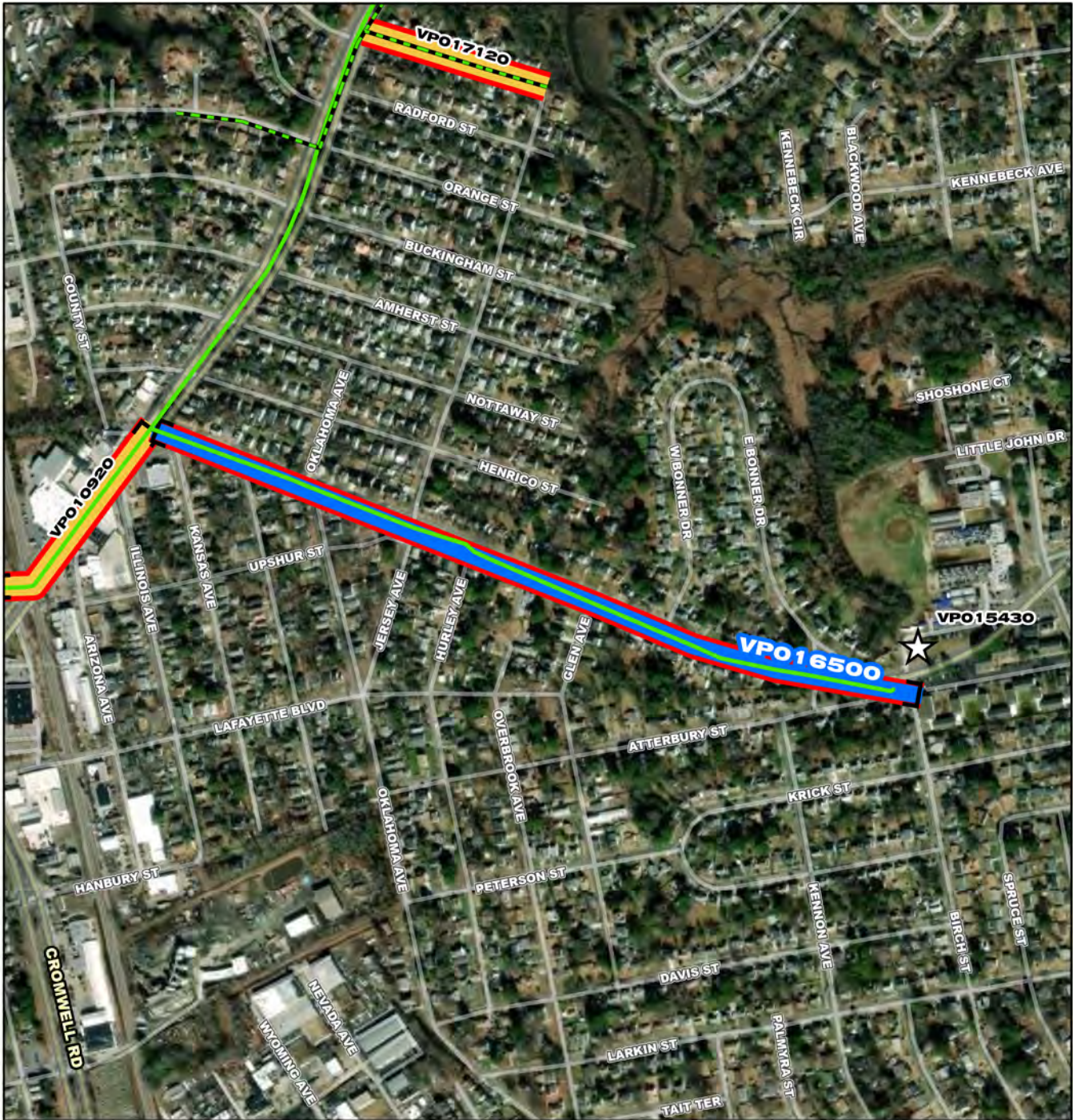
Contacts-Requesting Dept: Engineering
Contacts-Dept Contacts: Rebecca Currall
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning
PER
Design Delay
Design
Bid Delay
PreConstruction 01/01/2024
Construction 05/01/2024
Closeout 07/01/2026

COST ESTIMATE

Cost Estimate Class: Class 2
PrePlanning \$0
PER \$0
Design \$0
PreConstruction \$10,600
Construction \$8,000,000
Closeout \$0
Est. Program Cost \$8,010,600
Contingency Budget \$1,100,000
Est. Project Costs \$9,110,600



VPO 16500

- 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

Feet

0 205 410 820 1,230 1,640

VPO 16500

Norview-Estabrook Division I 12-Inch Force Main Replacement

N
W E
S

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	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33
\$4,632	\$267	\$1,984	\$2,381	\$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

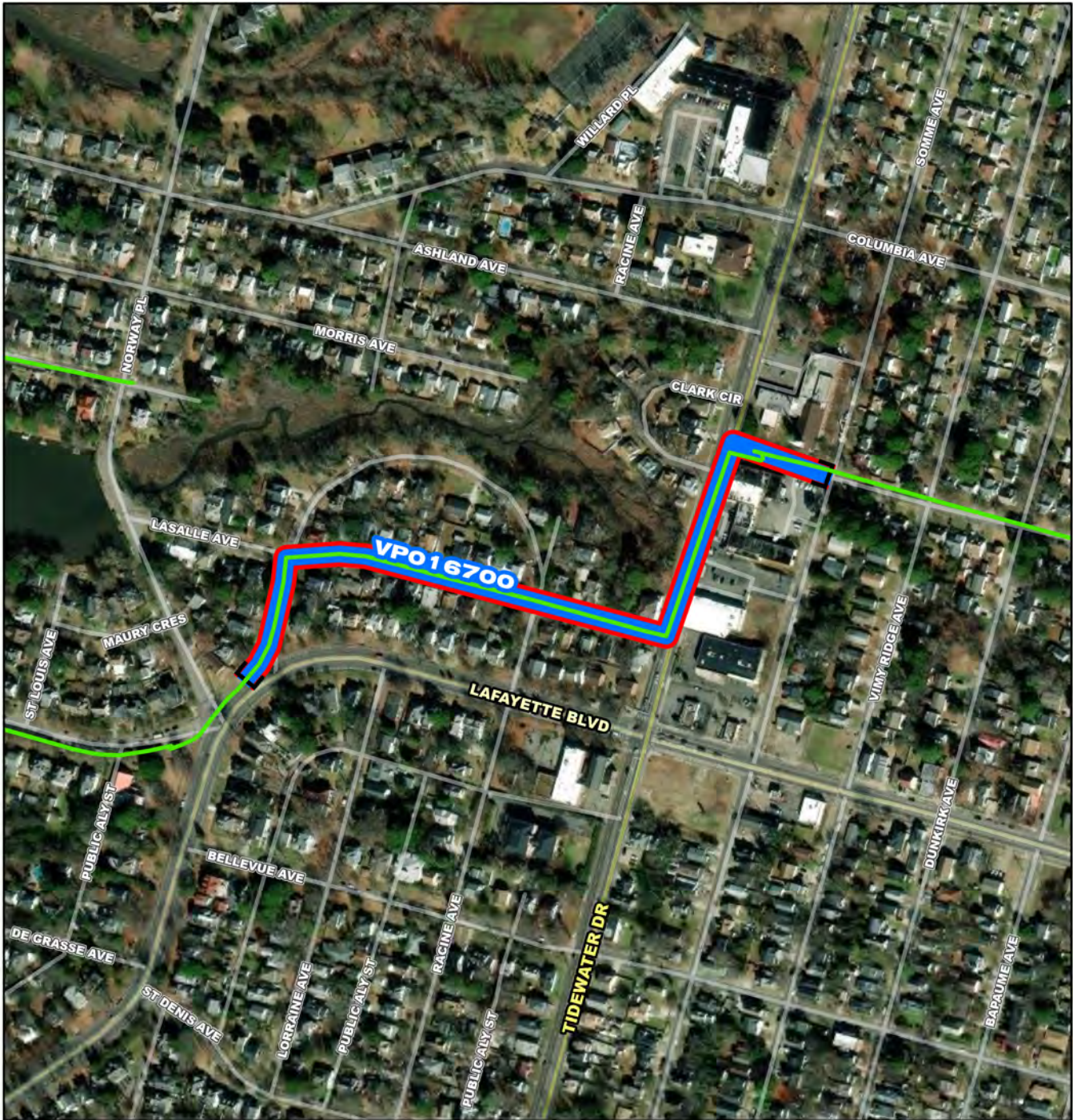
Contacts-Requesting Dept: Operations-Interceptors
Contacts-Dept Contacts: Tim Marsh
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning 11/02/2020
PER 11/02/2020
Design Delay 11/26/2021
Design 12/01/2021
Bid Delay 04/27/2023
PreConstruction 06/01/2023
Construction 09/01/2023
Closeout 07/01/2025

COST ESTIMATE

Cost Estimate Class: Class 2
PrePlanning \$0
PER \$76,675
Design \$190,181
PreConstruction \$0
Construction \$4,364,828
Closeout \$0
Est. Program Cost \$4,631,684
Contingency Budget \$695,455
Est. Project Costs \$5,327,139

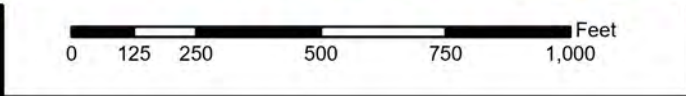


VPO16700

- 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



VPO 16700

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: Design
Regulatory: Rehab Plan Phase Two

PROGRAM CASH FLOW PROJECTION (\$,000)

Prog Cost	Exp to Previous Year	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33
\$6,456	\$237	\$2,830	\$3,389	\$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

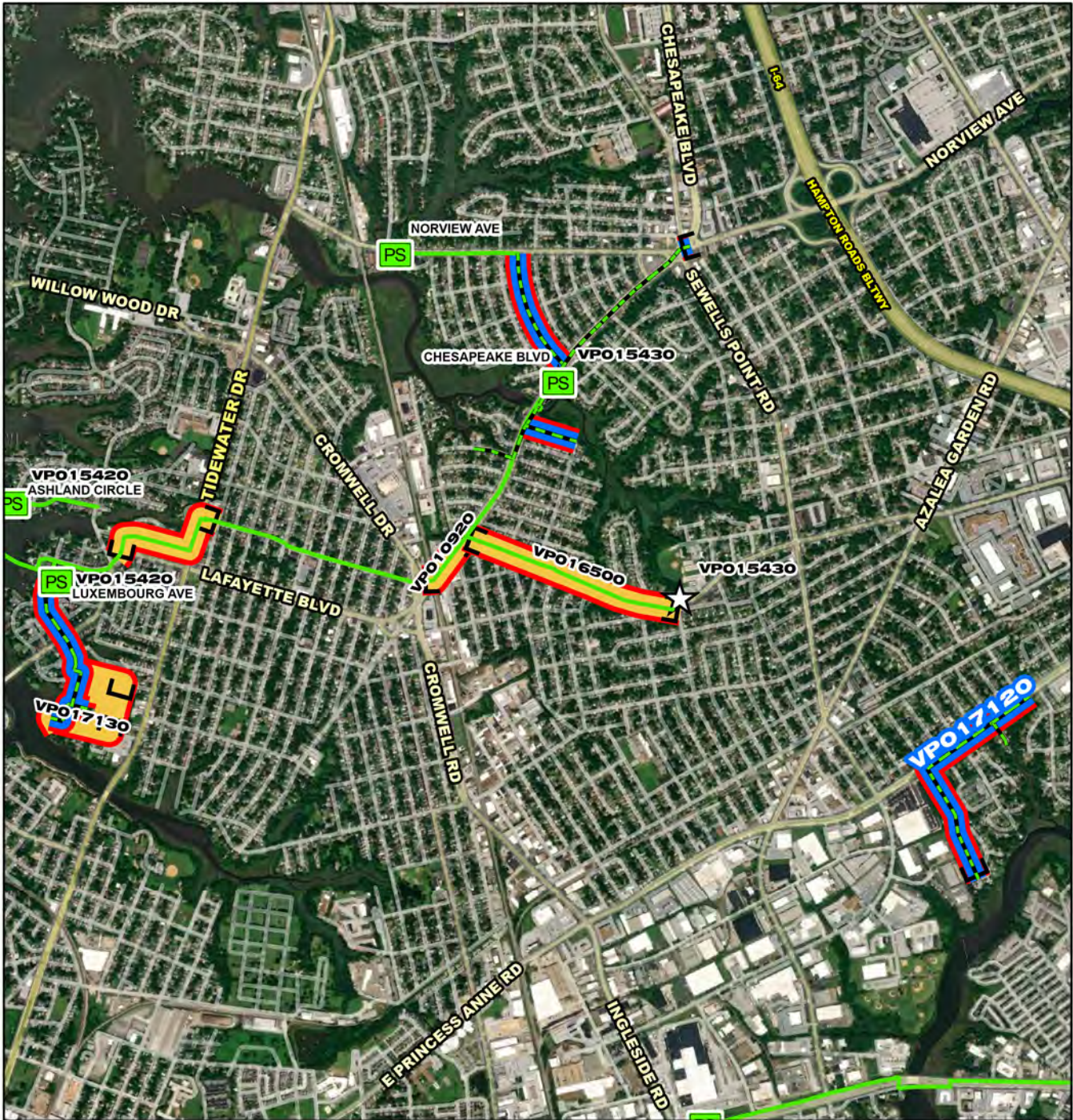
Contacts-Requesting Dept: Operations-Interceptors
Contacts-Dept Contacts: Tim Marsh
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning 01/01/2020
PER 11/02/2020
Design Delay 11/26/2021
Design 12/01/2021
Bid Delay 04/27/2023
PreConstruction 06/01/2023
Construction 09/01/2023
Closeout 07/01/2025

COST ESTIMATE

Cost Estimate Class: Class 2
PrePlanning \$0
PER \$76,988
Design \$157,095
PreConstruction \$10,046
Construction \$6,212,329
Closeout \$0
Est. Program Cost \$6,456,458
Contingency Budget \$969,609
Est. Project Costs \$7,426,067



VPO17120

- 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

VPO17120

Central Norfolk Area Gravity Sewer Improvements Phase II

N
W E
S

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	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33
\$4,070	\$540	\$2,330	\$1,200	\$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 3,697 linear feet (LF) of gravity sewer (ranging from 8 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 7 manholes. Includes 326 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 2,887 LF of gravity sewer (ranging from 12 to 18 inches) and 7 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

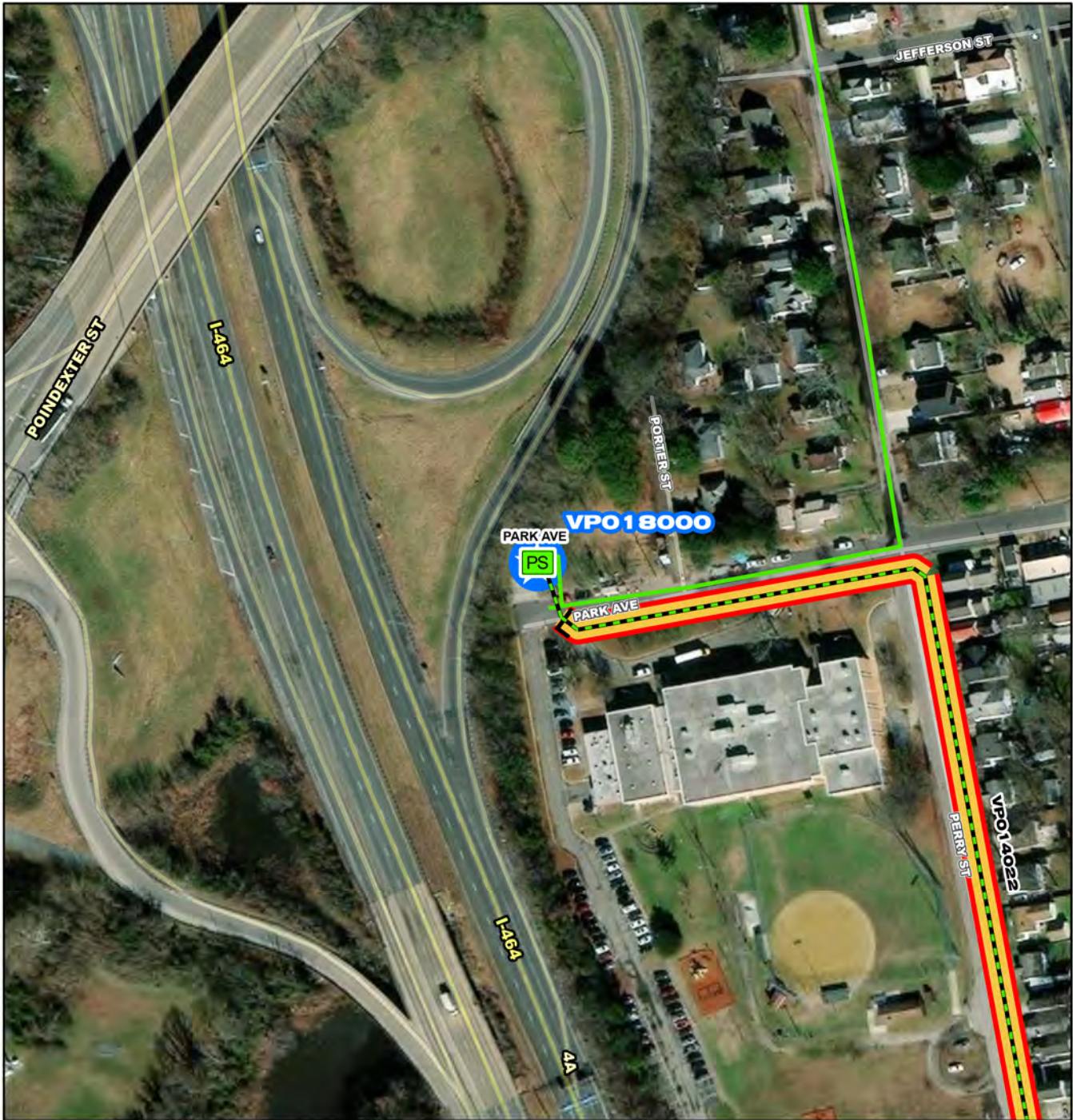
Contacts-Requesting Dept: Operations-Interceptors
 Contacts-Dept Contacts: Holly Anne Matel
 Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning	02/01/2021
PER	03/30/2021
Design Delay	01/06/2022
Design	01/01/2022
Bid Delay	02/15/2023
PreConstruction	04/01/2023
Construction	07/01/2023
Closeout	01/01/2025

COST ESTIMATE

Cost Estimate Class:	Class 2
PrePlanning	\$0
PER	\$120,466
Design	\$408,183
PreConstruction	\$11,212
Construction	\$3,495,000
Closeout	\$35,000
Est. Program Cost	\$4,069,861
Contingency Budget	\$635,000
Est. Project Costs	\$4,704,861

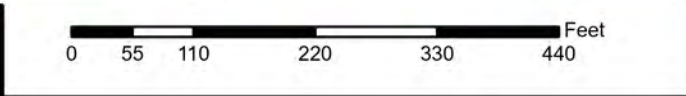


VPO 18000

- 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



VPO 18000

Park Avenue Pump Station Replacement

N
W E
S

CIP Location



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	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33
\$12,786	\$6,501	\$3,970	\$2,316	\$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	05/30/2022
PreConstruction	08/19/2022
Construction	06/28/2022
Closeout	02/01/2025

COST ESTIMATE

Cost Estimate Class:	Class 1
PrePlanning	\$0
PER	\$255,572
Design	\$1,063,707
PreConstruction	\$36,479
Construction	\$11,430,000
Closeout	\$0
Est. Program Cost	\$12,785,759
Contingency Budget	\$1,028,000
Est. Project Costs	\$13,813,759



VPO 18200

- 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

Feet

0 155 310 620 930 1,240

VPO 18200

Effingham Interceptor Vault Removal

N
W E
S

CIP Location



System: VIP
Type: Pipelines

Driver Category: Risk Mitigation
Project Phase: Pre Planning
Regulatory: None

PROGRAM CASH FLOW PROJECTION (\$,000)

Prog Cost	Exp to Previous Year	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33
\$5,236	\$3,588	\$1,648	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

PROJECT DESCRIPTION

This project takes approximately 1,815 linear feet of 36-inch pre-stressed concrete cylinder pipe (PCCP) Interceptor Force Main out of service via linestop/bypass for inspection and provides funding for repairs that are to be decided. Repairs will be completed in a separate project.

PROJECT JUSTIFICATION

This project will address an air vent originally included in GN013900, a Consent Decree required project that addressed air vents with galvanized riser pipes that are vulnerable to catastrophic failure due to severe corrosion. During field investigations, this air vent was discovered to be directly tapped into a reinforced concrete vault located under both north-bound lanes of Effingham Street. Both the air vent and vault appear to have been installed as part of a Virginia Department of Transportation (VDOT) relocation project in 1956. The condition of the vault is unknown, but suspected to be compromised due to exposure to hydrogen sulfide (H2S) gas for over 60 years. Due to the location, unknown condition, and Consent Decree requirement to address the air vent, both assets will be removed from the force main system.

FUNDING TYPE

Funding Type: Cash

CONTACTS

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

PROPOSED SCHEDULE START DATE

PrePlanning	07/02/2018
PER	07/02/2018
Design Delay	07/02/2018
Design	05/01/2019
Bid Delay	09/15/2021
PreConstruction	09/15/2021
Construction	01/07/2022
Closeout	12/01/2023

COST ESTIMATE

Cost Estimate Class:	Class 1
PrePlanning	\$0
PER	\$0
Design	\$324,743
PreConstruction	\$10,875
Construction	\$4,900,000
Closeout	\$0
Est. Program Cost	\$5,235,618
Contingency Budget	\$250,000
Est. Project Costs	\$5,485,618



VPO 18301

- 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

0 395 790 1,580 2,370 3,160 Feet

VPO 18301

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: Pre Planning
Regulatory: Integrated Plan-HPP 1

PROGRAM CASH FLOW PROJECTION (\$,000)

Prog Cost	Exp to Previous Year	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33
\$9,197	\$147	\$409	\$3,591	\$4,000	\$1,050	\$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: VCWRLF

CONTACTS

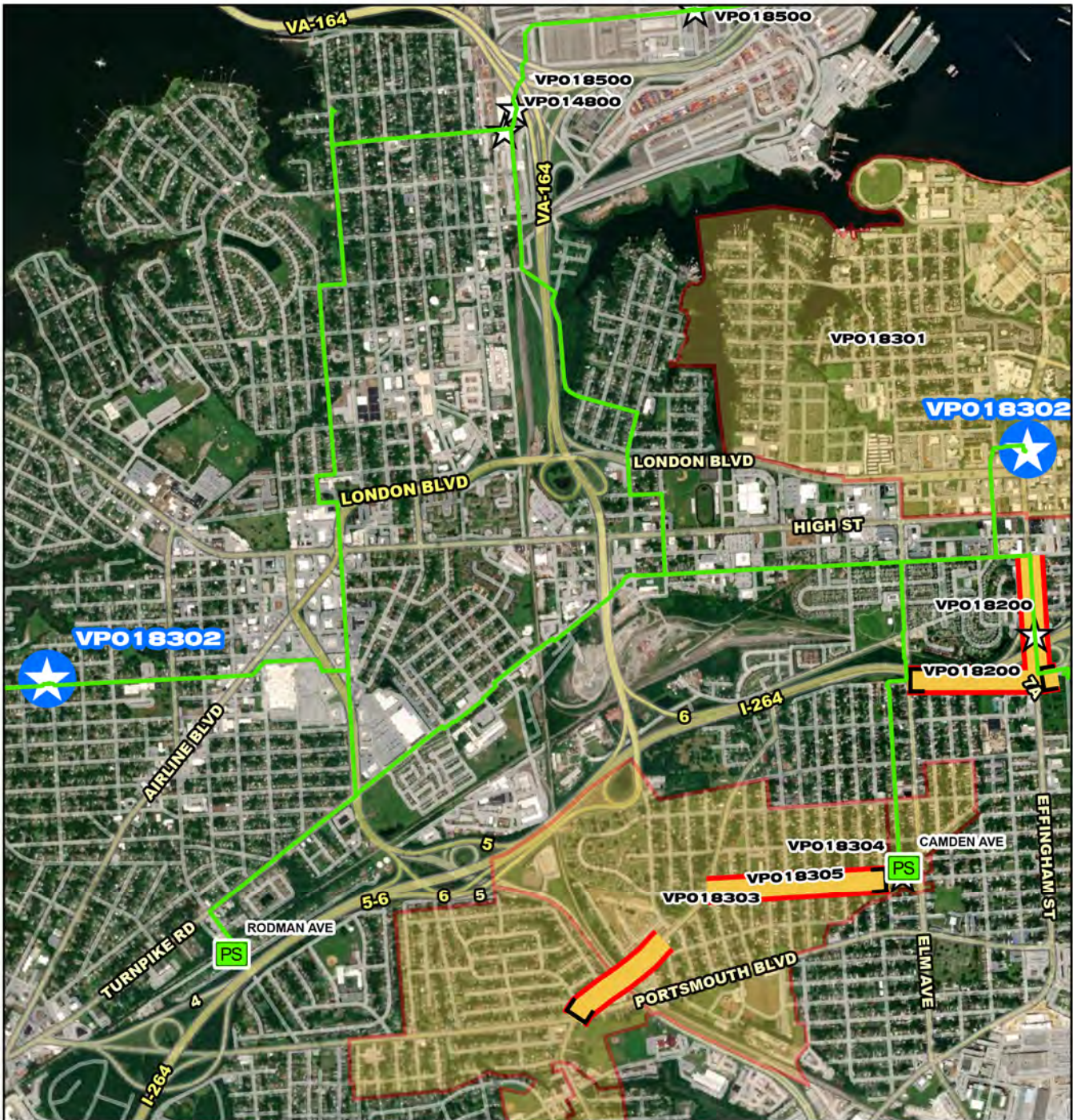
Contacts-Requesting Dept: Operations-Interceptors
Contacts-Dept Contacts: Phil Hubbard
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning	01/01/2020
PER	06/01/2022
Design Delay	10/01/2023
Design	10/01/2023
Bid Delay	09/01/2024
PreConstruction	09/01/2024
Construction	01/01/2025
Closeout	10/01/2026

COST ESTIMATE

Cost Estimate Class:	Class 5
PrePlanning	\$42,506
PER	\$104,092
Design	\$500,000
PreConstruction	\$1,500,000
Construction	\$7,000,000
Closeout	\$50,000
Est. Program Cost	\$9,196,598
Contingency Budget	\$2,640,080
Est. Project Costs	\$11,836,678



VPO 18302

- 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

VPO 18302

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

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	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33
\$12,051	\$0	\$0	\$0	\$330	\$872	\$7,073	\$3,775	\$0	\$0	\$0	\$0

PROJECT DESCRIPTION

Portsmouth Pump Station Upgrades PS002 and PS008.

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

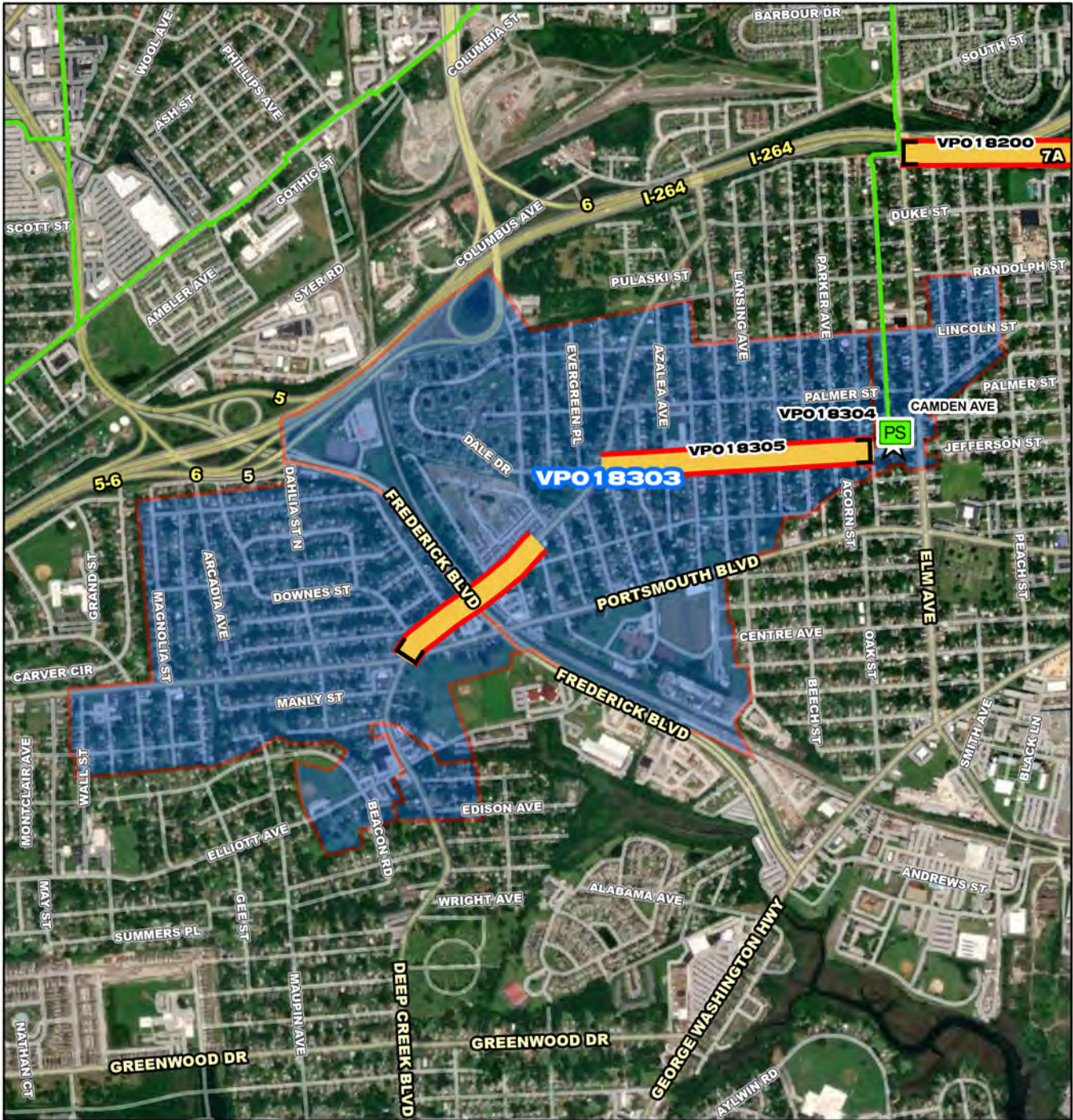
Contacts-Requesting Dept: Operations-Interceptors
Contacts-Dept Contacts: Gene Rutledge
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning	08/01/2025
PER	02/02/2026
Design Delay	09/01/2026
Design	09/08/2026
Bid Delay	07/01/2027
PreConstruction	07/08/2027
Construction	10/01/2027
Closeout	12/01/2028

COST ESTIMATE

Cost Estimate Class:	Class 5
PrePlanning	\$0
PER	\$462,529
Design	\$739,974
PreConstruction	\$277,445
Construction	\$10,570,999
Closeout	\$0
Est. Program Cost	\$12,050,948
Contingency Budget	\$2,642,751
Est. Project Costs	\$14,693,699



VPO 18303

- 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

Feet

0 475 950 1,900 2,850 3,800

VPO 18303

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

N
W E
S

CIP Location



System: VIP
Type: Locality and Private Property

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

PROGRAM CASH FLOW PROJECTION (\$,000)

Prog Cost	Exp to Previous Year	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33
\$12,131	\$2,268	\$1,658	\$2,411	\$4,571	\$1,223	\$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 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: VCWRLF

CONTACTS

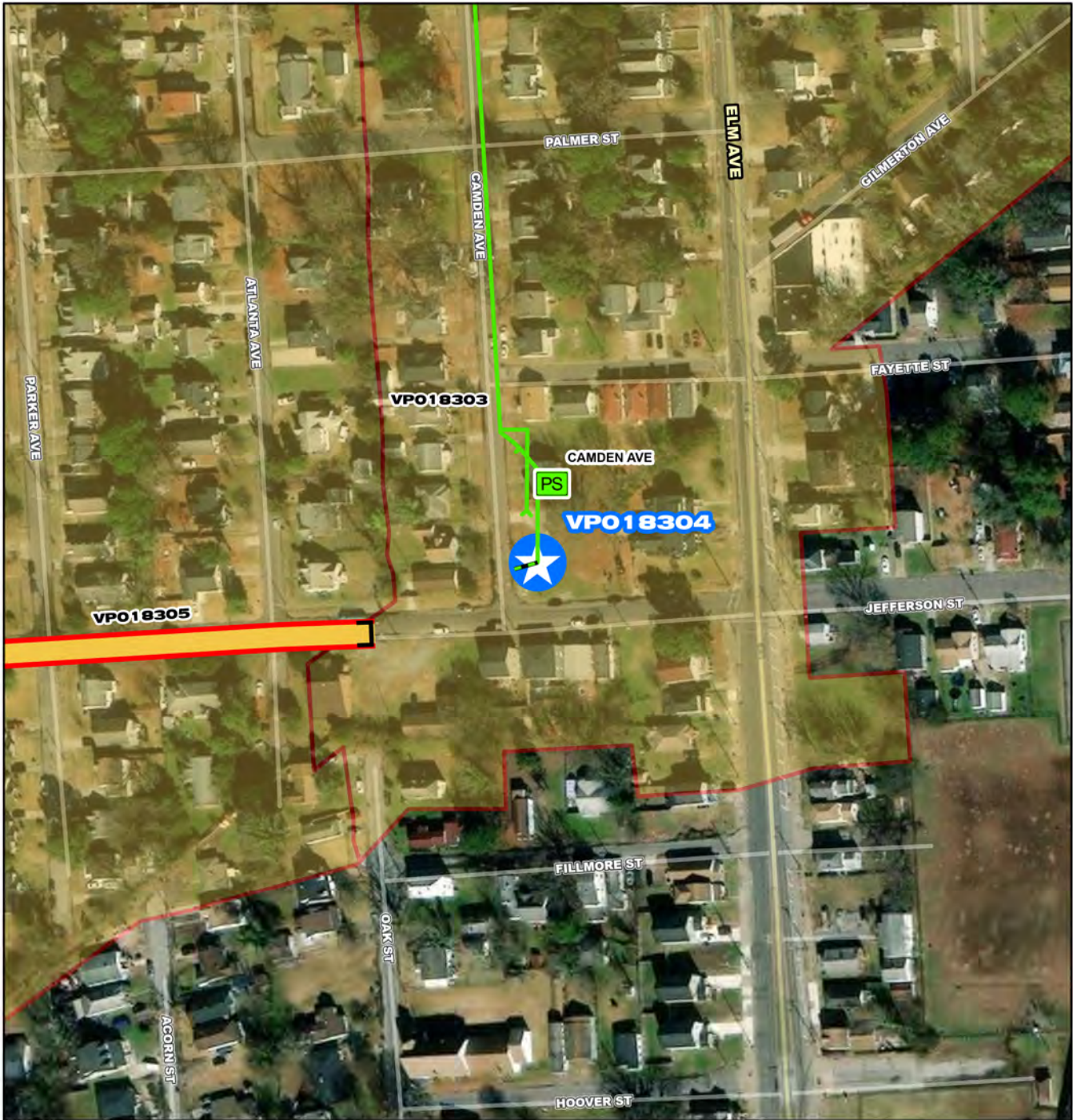
Contacts-Requesting Dept: Operations-Interceptors
Contacts-Dept Contacts: Phil Hubbard
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning 03/07/2022
PER 05/24/2022
Design Delay 10/01/2023
Design 11/01/2023
Bid Delay 09/01/2024
PreConstruction 10/01/2024
Construction 01/01/2025
Closeout 10/01/2026

COST ESTIMATE

Cost Estimate Class:	Class 5
PrePlanning	\$51,506
PER	\$3,474,335
Design	\$500,000
PreConstruction	\$25,000
Construction	\$8,000,000
Closeout	\$80,000
Est. Program Cost	\$12,130,841
Contingency Budget	\$2,640,080
Est. Project Costs	\$14,770,921

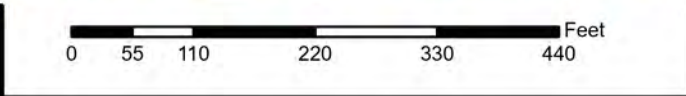


VPO18304

- 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



VPO 18304

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 1

PROGRAM CASH FLOW PROJECTION (\$,000)

Prog Cost	Exp to Previous Year	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33
\$6,271	\$0	\$0	\$0	\$193	\$314	\$1,977	\$3,786	\$0	\$0	\$0	\$0

PROJECT DESCRIPTION

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

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: Revenue Bond

CONTACTS

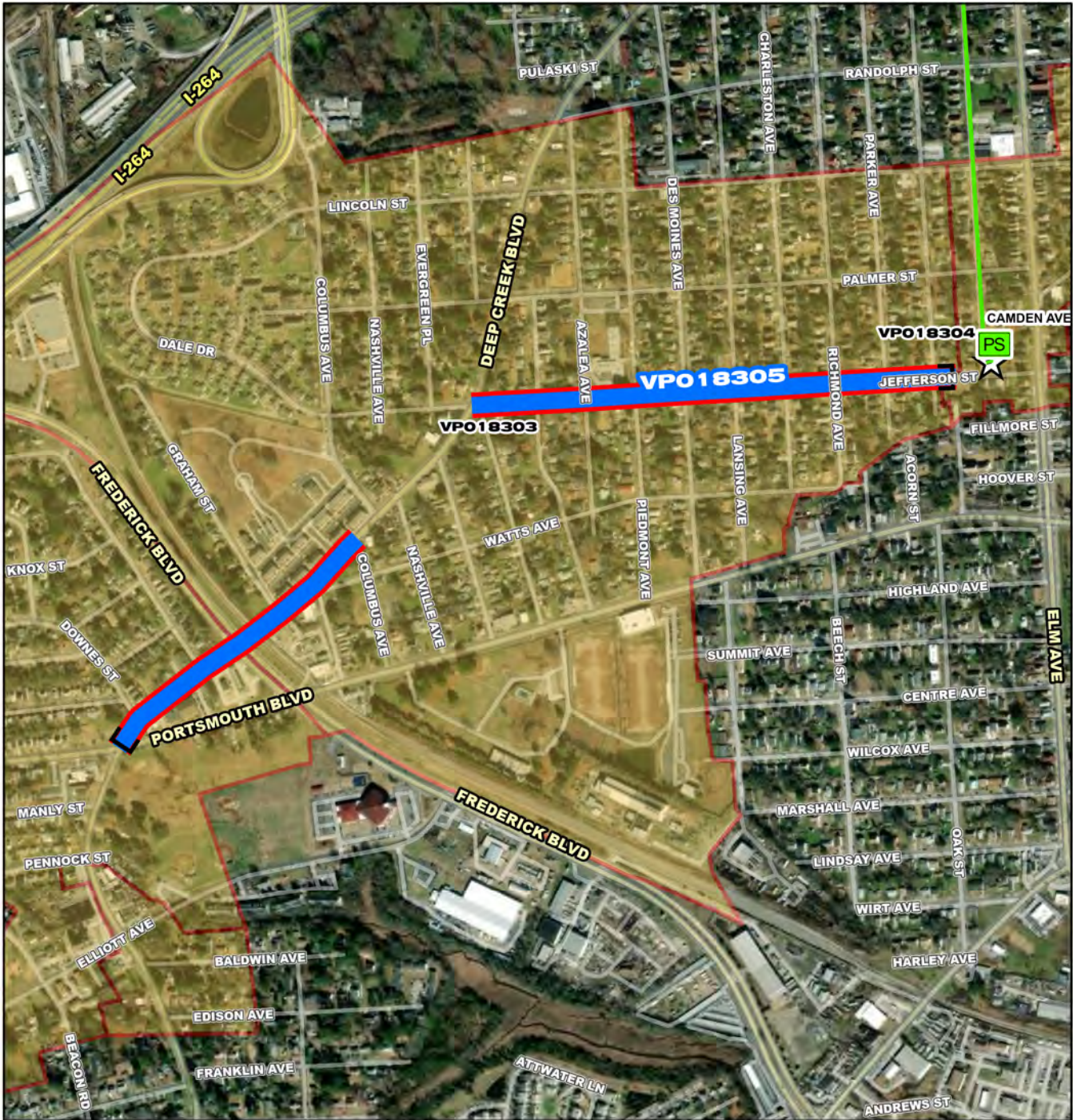
Contacts-Requesting Dept: Operations-Interceptors
Contacts-Dept Contacts: Gene Rutledge
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning	09/01/2025
PER	03/03/2026
Design Delay	08/03/2026
Design	08/03/2026
Bid Delay	10/04/2027
PreConstruction	10/05/2027
Construction	01/03/2028
Closeout	07/03/2029

COST ESTIMATE

Cost Estimate Class:	Class 5
PrePlanning	\$0
PER	\$241,309
Design	\$338,784
PreConstruction	\$11,677
Construction	\$5,679,678
Closeout	\$0
Est. Program Cost	\$6,271,449
Contingency Budget	\$1,254,332
Est. Project Costs	\$7,525,781



VPO 18305

- 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

Feet

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

VPO 18305

Camden Avenue Gravity Improvements (VIP-HPP-04E)

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	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33
\$7,263	\$0	\$0	\$0	\$144	\$336	\$3,448	\$3,335	\$0	\$0	\$0	\$0

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 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

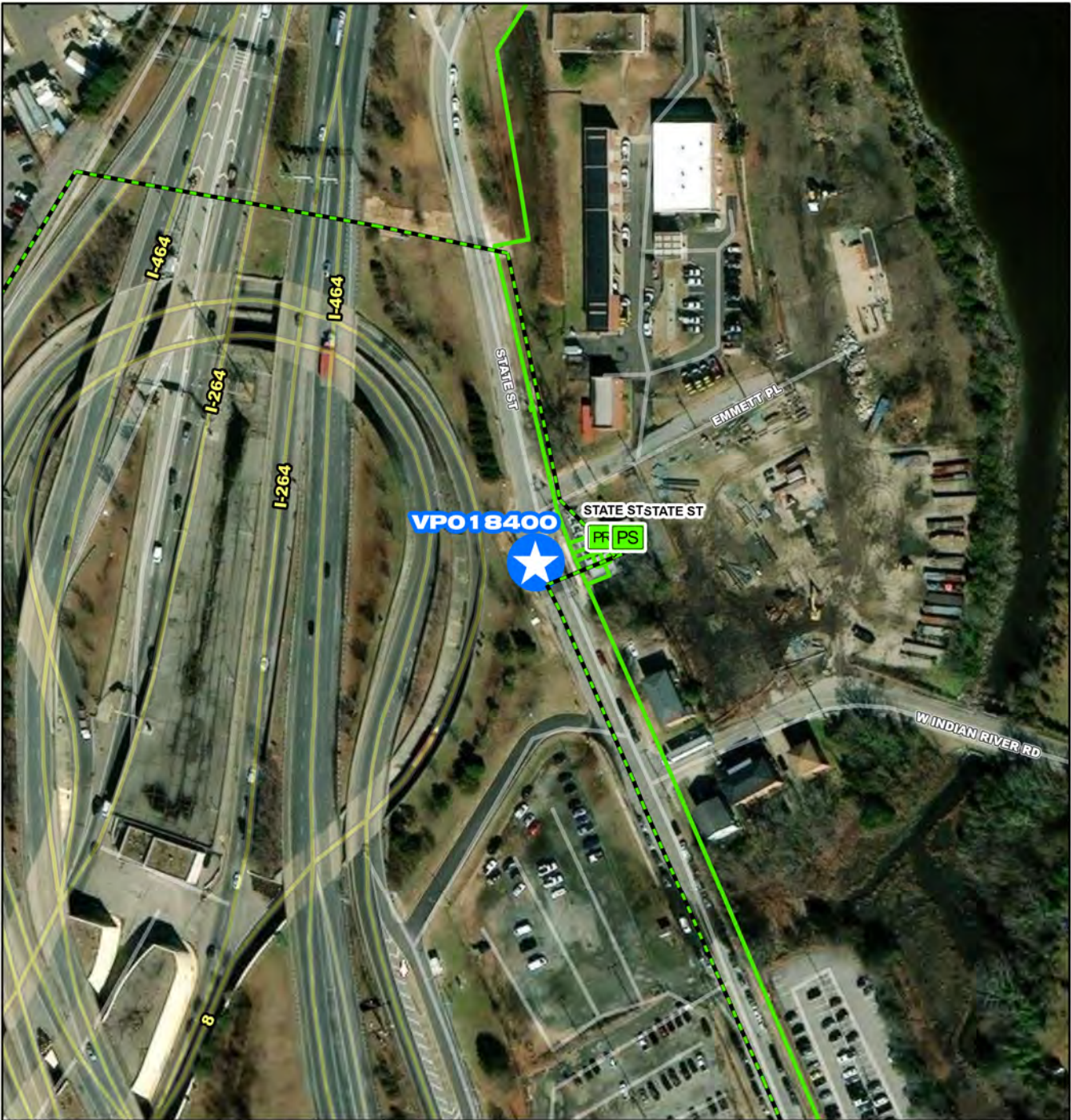
Contacts-Requesting Dept: Operations-Interceptors
Contacts-Dept Contacts: Gene Rutledge
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

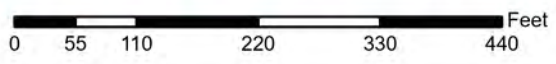
PrePlanning	09/01/2025
PER	03/01/2026
Design Delay	08/01/2026
Design	08/01/2026
Bid Delay	10/01/2027
PreConstruction	10/01/2027
Construction	01/01/2028
Closeout	01/01/2029

COST ESTIMATE

Cost Estimate Class:	Class 5
PrePlanning	\$0
PER	\$180,200
Design	\$381,600
PreConstruction	\$31,800
Construction	\$6,669,520
Closeout	\$0
Est. Program Cost	\$7,263,120
Contingency Budget	\$1,484,000
Est. Project Costs	\$8,747,120



- VPO 18400**
- 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



VPO 18400

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





System: VIP
Type: Offline Storage

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	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33
\$21,667	\$142	\$342	\$342	\$342	\$651	\$746	\$4,750	\$10,742	\$3,600	\$10	\$0

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 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: Revenue Bond

CONTACTS

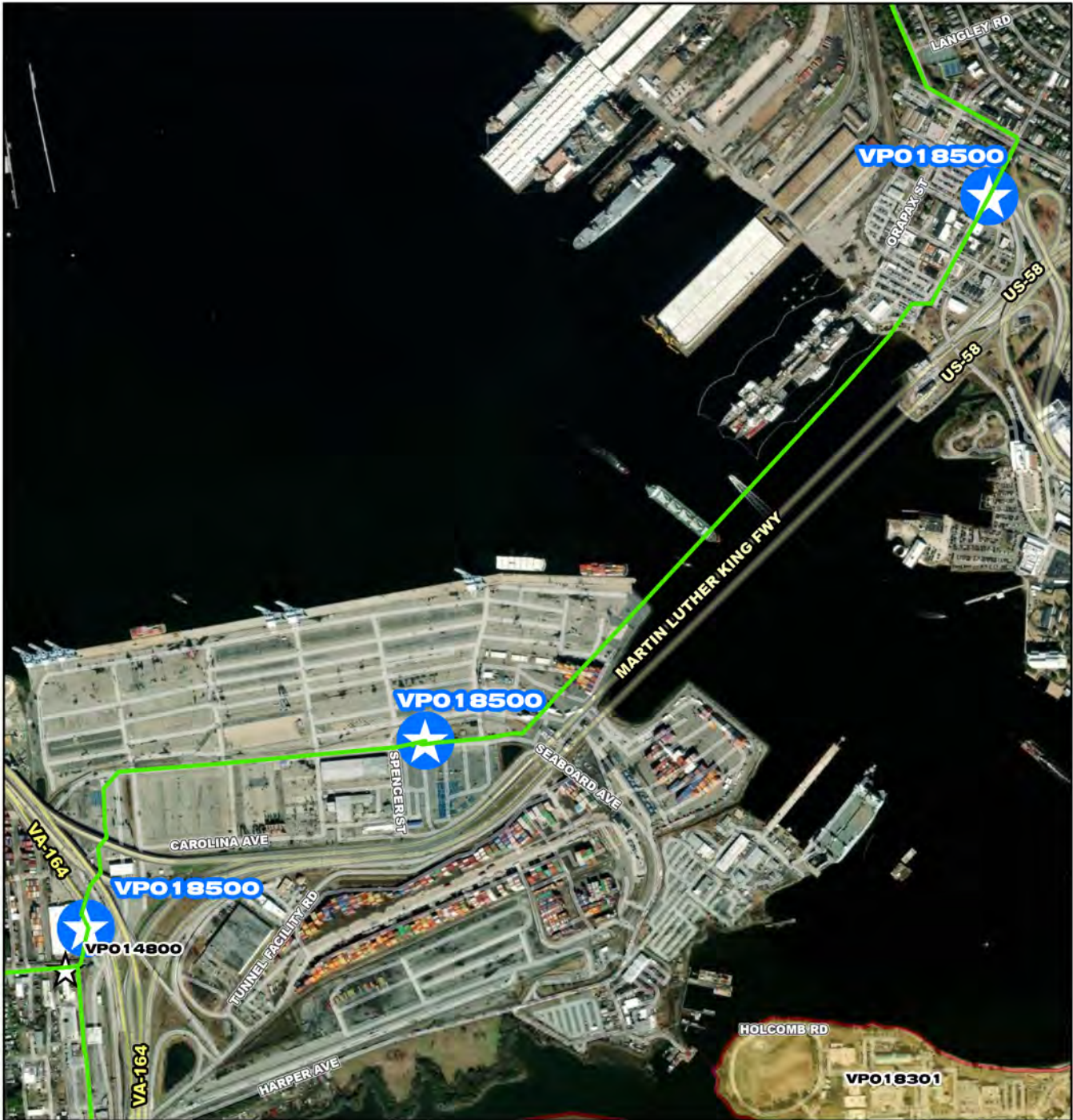
Contacts-Requesting Dept: Operations-Interceptors
Contacts-Dept Contacts: Gene Rutledge
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning	07/01/2023
PER	07/01/2026
Design Delay	01/01/2027
Design	01/01/2027
Bid Delay	11/01/2028
PreConstruction	11/01/2028
Construction	02/01/2029
Closeout	11/01/2030

COST ESTIMATE

Cost Estimate Class:	Class 5
PrePlanning	\$1,167,696
PER	\$277,912
Design	\$1,367,372
PreConstruction	\$25,689
Construction	\$18,798,737
Closeout	\$29,192
Est. Program Cost	\$21,666,599
Contingency Budget	\$4,433,252
Est. Project Costs	\$26,099,851



VPO 18500

- 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

0 375 750 1,500 2,250 3,000 Feet

VPO 18500

Elizabeth River Crossing Reliability Improvements

N
W E
S

CIP Location



System: VIP
Type: Pipelines

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

PROGRAM CASH FLOW PROJECTION (\$,000)

Prog Cost	Exp to Previous Year	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33
\$3,119	\$1,808	\$1,218	\$93	\$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

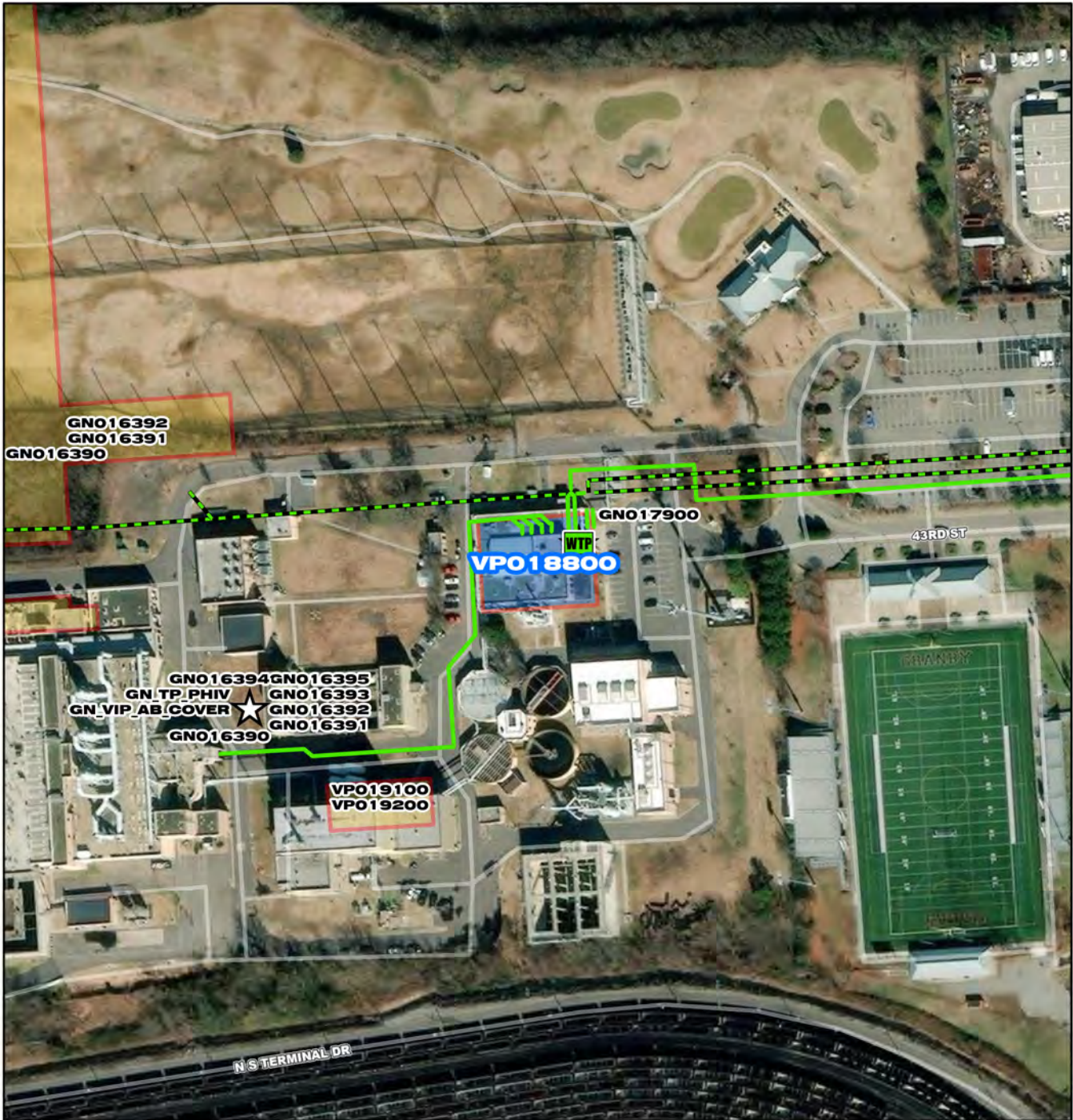
Contacts-Requesting Dept: Operations-EEM
Contacts-Dept Contacts: Phil Hubbard
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning	10/07/2021
PER	10/07/2021
Design Delay	10/07/2021
Design	10/01/2021
Bid Delay	05/06/2022
PreConstruction	06/02/2022
Construction	08/05/2022
Closeout	01/01/2024

COST ESTIMATE

Cost Estimate Class:	Class 1
PrePlanning	\$0
PER	\$99,183
Design	\$196,004
PreConstruction	\$7,490
Construction	\$2,566,070
Closeout	\$250,000
Est. Program Cost	\$3,118,747
Contingency Budget	\$385,000
Est. Project Costs	\$3,503,747



VPO1880

- 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

Feet

0 65 130 260 390 520

VPO 1880

Virginia Initiative Plant Administration Building Renovation

N
W E
S

CIP Location



System: VIP
Type: Facilities, Buildings and Capital Equipment

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

PROGRAM CASH FLOW PROJECTION (\$,000)

Prog Cost	Exp to Previous Year	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33
\$5,666	\$502	\$2,329	\$2,809	\$27	\$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

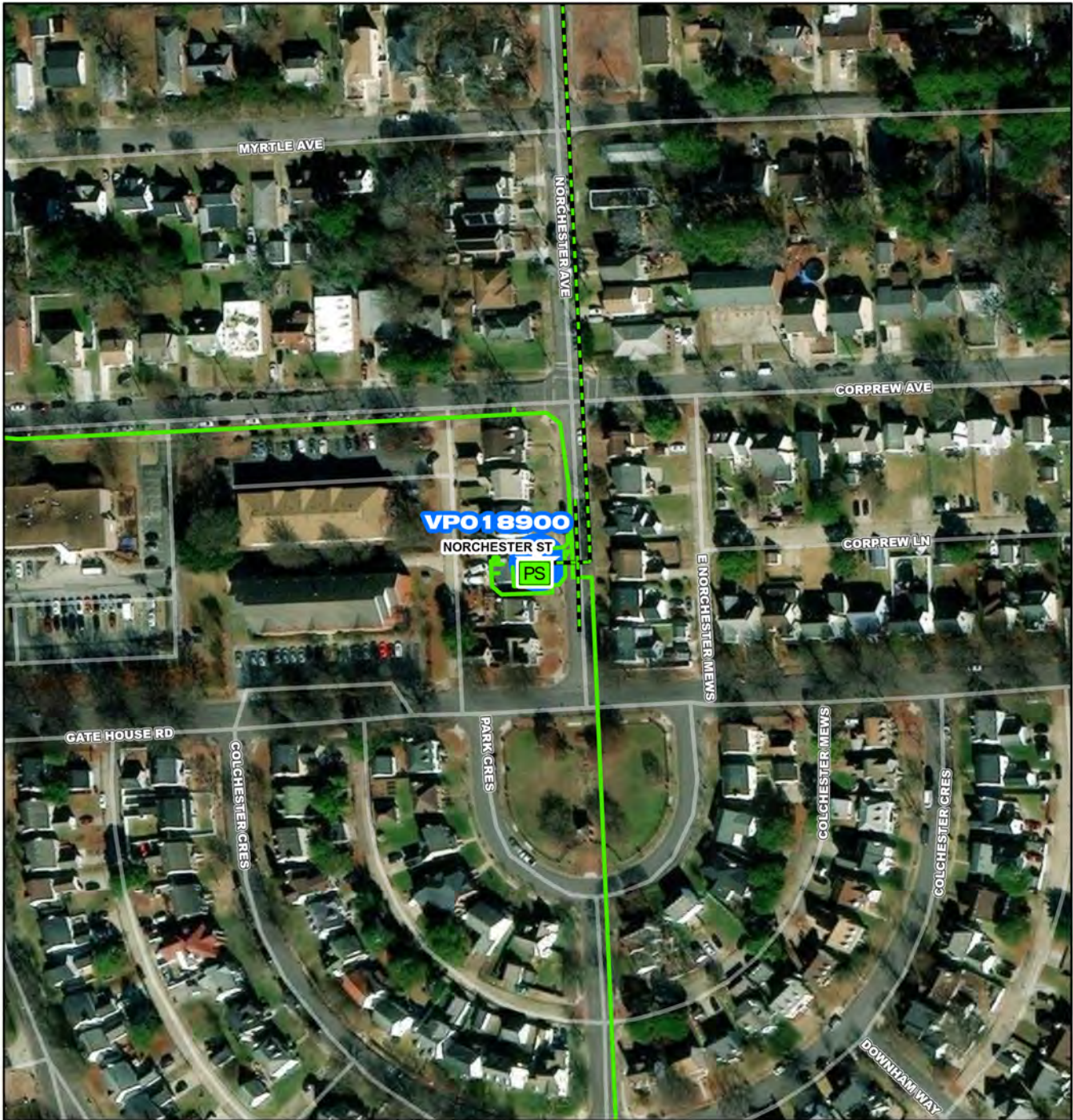
Contacts-Requesting Dept: Operations-Treatment
Contacts-Dept Contacts: Tim Marsh
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning 07/01/2020
PER 02/01/2021
Design Delay 08/31/2022
Design 08/31/2022
Bid Delay 08/01/2023
PreConstruction 08/01/2023
Construction 11/01/2023
Closeout 05/01/2025

COST ESTIMATE

Cost Estimate Class: Class 3
PrePlanning \$0
PER \$127,273
Design \$447,356
PreConstruction \$20,000
Construction \$5,031,869
Closeout \$40,000
Est. Program Cost \$5,666,498
Contingency Budget \$1,133,294
Est. Project Costs \$6,799,792



VPO 18900

- 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 55 110 220 330 440 Feet

VPO 18900

Norchester Pump Station Screening Improvements

N
W E
S

CIP Location



System: VIP
Type: Pump Stations

Driver Category: Performance Upgrades
Project Phase: Proposed
Regulatory: None

PROGRAM CASH FLOW PROJECTION (\$,000)

Prog Cost	Exp to Previous Year	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33
\$507	\$64	\$206	\$234	\$3	\$0	\$0	\$0	\$0	\$0	\$0	\$0

PROJECT DESCRIPTION

This project will upgrade the screening equipment at the Norchester Pump Station.

PROJECT JUSTIFICATION

The existing Norchester Pump Station has an inline grinder that failed after only 3 years of service. Failure of the grinder appeared to be due to a heavy sand load in the influent stream that wore down the teeth and the bearings of the grinder cassette. However, the body of the grinder also showed very heavy metal corrosion due to high levels of hydrogen sulfide in the wet well. As a result, an evaluation of all screening technologies was performed to ensure a longer life expectancy and more reliable operation of the upgraded equipment. This project will design and construct the screening upgrades at this station.

FUNDING TYPE

Funding Type: Revenue Bond

CONTACTS

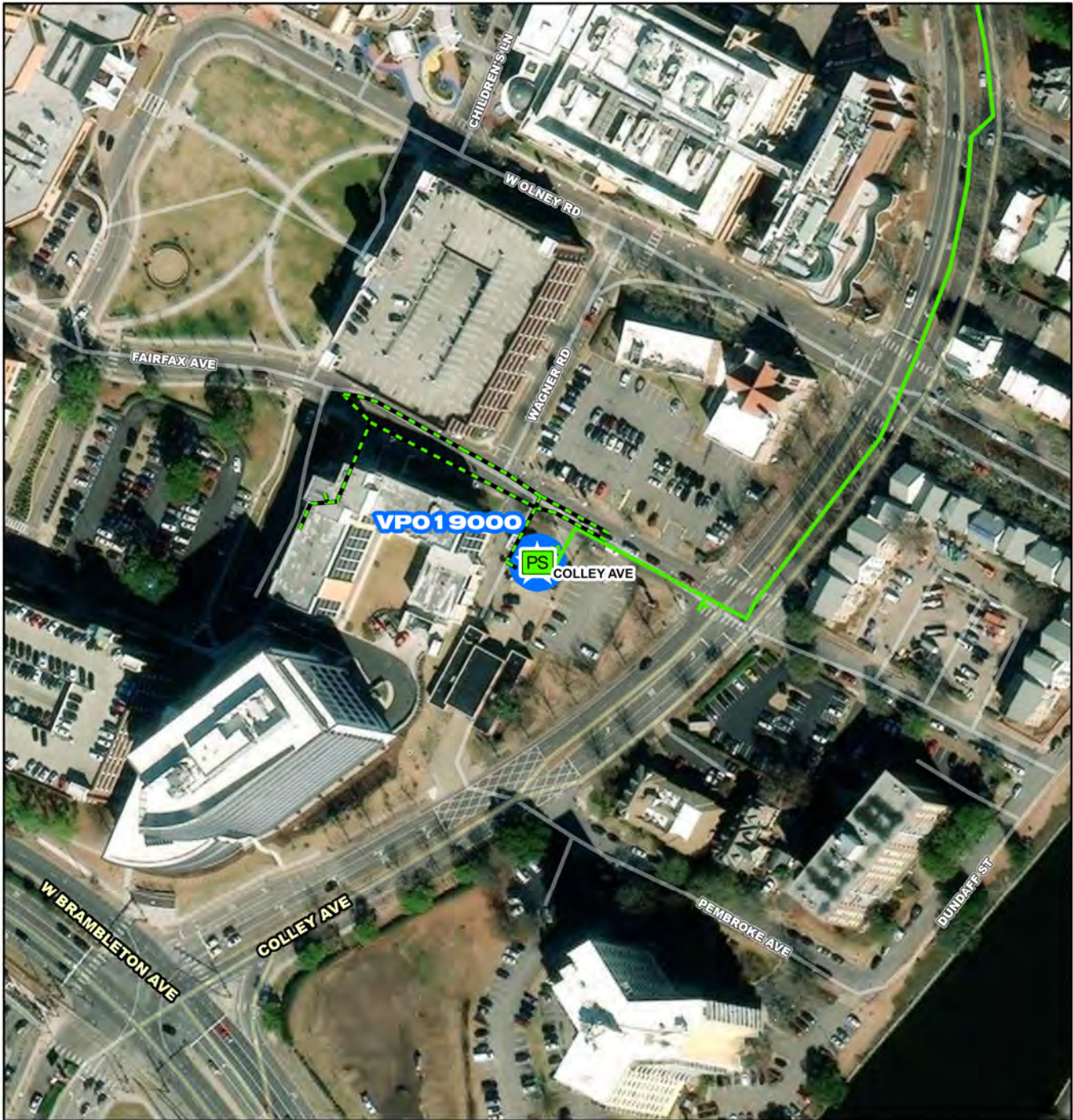
Contacts-Requesting Dept: Operations-Interceptors
Contacts-Dept Contacts: Eddie Heady
Contacts-Managing Dept: Operations-Interceptors

PROPOSED SCHEDULE START DATE

PrePlanning	04/01/2021
PER	07/01/2021
Design Delay	03/01/2023
Design	03/01/2023
Bid Delay	12/01/2023
PreConstruction	12/01/2023
Construction	03/01/2024
Closeout	01/01/2025

COST ESTIMATE

Cost Estimate Class:	
PrePlanning	\$0
PER	\$27,540
Design	\$82,620
PreConstruction	\$5,508
Construction	\$385,560
Closeout	\$5,508
Est. Program Cost	\$506,736
Contingency Budget	\$110,160
Est. Project Costs	\$616,896

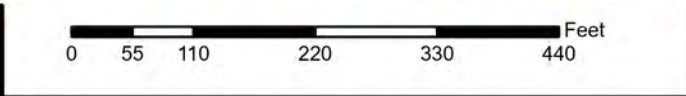


VPO 19000

- 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



VPO 19000

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	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33
\$1,798	\$226	\$1,562	\$11	\$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	03/04/2023
Design	03/05/2023
Bid Delay	06/06/2023
PreConstruction	06/07/2023
Construction	09/01/2023
Closeout	07/01/2024

COST ESTIMATE

Cost Estimate Class:	Class 4
PrePlanning	\$0
PER	\$39,192
Design	\$183,000
PreConstruction	\$10,000
Construction	\$1,555,000
Closeout	\$10,800
Est. Program Cost	\$1,797,992
Contingency Budget	\$258,000
Est. Project Costs	\$2,055,992

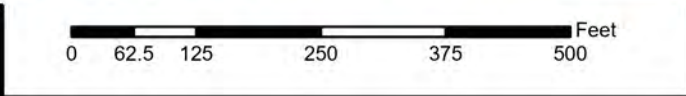


VPO19100

- 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



VPO19100

**Virginia Initiative Plant Incinerator
Burner Replacement**

N
W E
S

CIP Location



System: VIP
Type: Biosolids

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

PROGRAM CASH FLOW PROJECTION (\$,000)

Prog Cost	Exp to Previous Year	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33
\$4,041	\$1,375	\$2,666	\$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 Design 07/01/2021
Bid Delay 07/01/2021
PreConstruction 04/01/2022
Construction 11/01/2022
Closeout 07/01/2024

COST ESTIMATE

Cost Estimate Class:	Class 1
PrePlanning	\$0
PER	\$0
Design	\$0
PreConstruction	\$40,829
Construction	\$4,000,000
Closeout	\$0
Est. Program Cost	\$4,040,829
Contingency Budget	\$597,000
Est. Project Costs	\$4,637,829

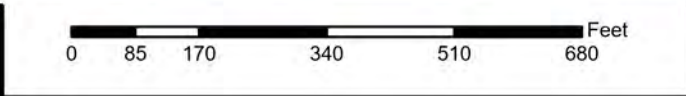


VPO19200

- 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



VPO 19200

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	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33
\$9,400	\$400	\$4,500	\$4,500	\$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: Sherman Pressey
Contacts-Managing Dept: Operations-EEM

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 07/01/2023
Closeout 06/25/2025

COST ESTIMATE

Cost Estimate Class:
PrePlanning \$0
PER \$0
Design \$400,000
PreConstruction \$0
Construction \$9,000,000
Closeout \$0
Est. Program Cost \$9,400,000
Contingency Budget \$838,900
Est. Project Costs \$10,238,900



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	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33
\$3,189	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,559	\$1,630

PROJECT DESCRIPTION

High Priority Project (HPP) Round 2 Project 4 consists of the following Regional Wet Weather Management Plan (RWWMP) Project ID and general description:
VIP-RWWMP-41 Norfolk I/I Reduction

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). The initial HPPs (Round 1) were identified in the RWWMP, submitted to EPA in September of 2017, and are scheduled to be constructed between plan approval and 2030. Further review of RWWMP projects was conducted in 2019 to find beneficial solutions to implement as a second set of HPPs (identified as Round 2). A prioritization methodology was used to identify improvements to minimize sanitary sewer overflow (SSO) volume.

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 07/01/2031
PER 07/29/2031
Design Delay 09/17/2031
Design 05/26/2032
Bid Delay 08/27/2032
PreConstruction 05/06/2033
Construction 06/16/2033
Closeout 04/13/2034

COST ESTIMATE

Cost Estimate Class:

PrePlanning	\$283,452
PER	\$708,631
Design	\$850,357
PreConstruction	\$141,726
Construction	\$12,046,730
Closeout	\$141,726
Est. Program Cost	\$14,172,624
Contingency Budget	\$0
Est. Project Costs	\$14,172,624



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	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

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). The initial HPPs (Round 1) were identified in the RWWMP, submitted to EPA in September of 2017, and are scheduled to be constructed between plan approval and 2030. Further review of RWWMP projects was conducted in 2019 to find beneficial solutions to implement as a second set of HPPs (identified as Round 2). A prioritization methodology was used to identify improvements to minimize sanitary sewer overflow (SSO) volume.

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 07/01/2033
PER 07/29/2033
Design Delay 09/19/2033
Design 05/29/2034
Bid Delay 08/30/2034
PreConstruction 05/09/2035
Construction 06/19/2035
Closeout 04/15/2036

COST ESTIMATE

Cost Estimate Class:

PrePlanning	\$342,066
PER	\$855,166
Design	\$1,026,199
PreConstruction	\$171,033
Construction	\$14,537,815
Closeout	\$171,033
Est. Program Cost	\$17,103,312
Contingency Budget	\$0
Est. Project Costs	\$17,103,312