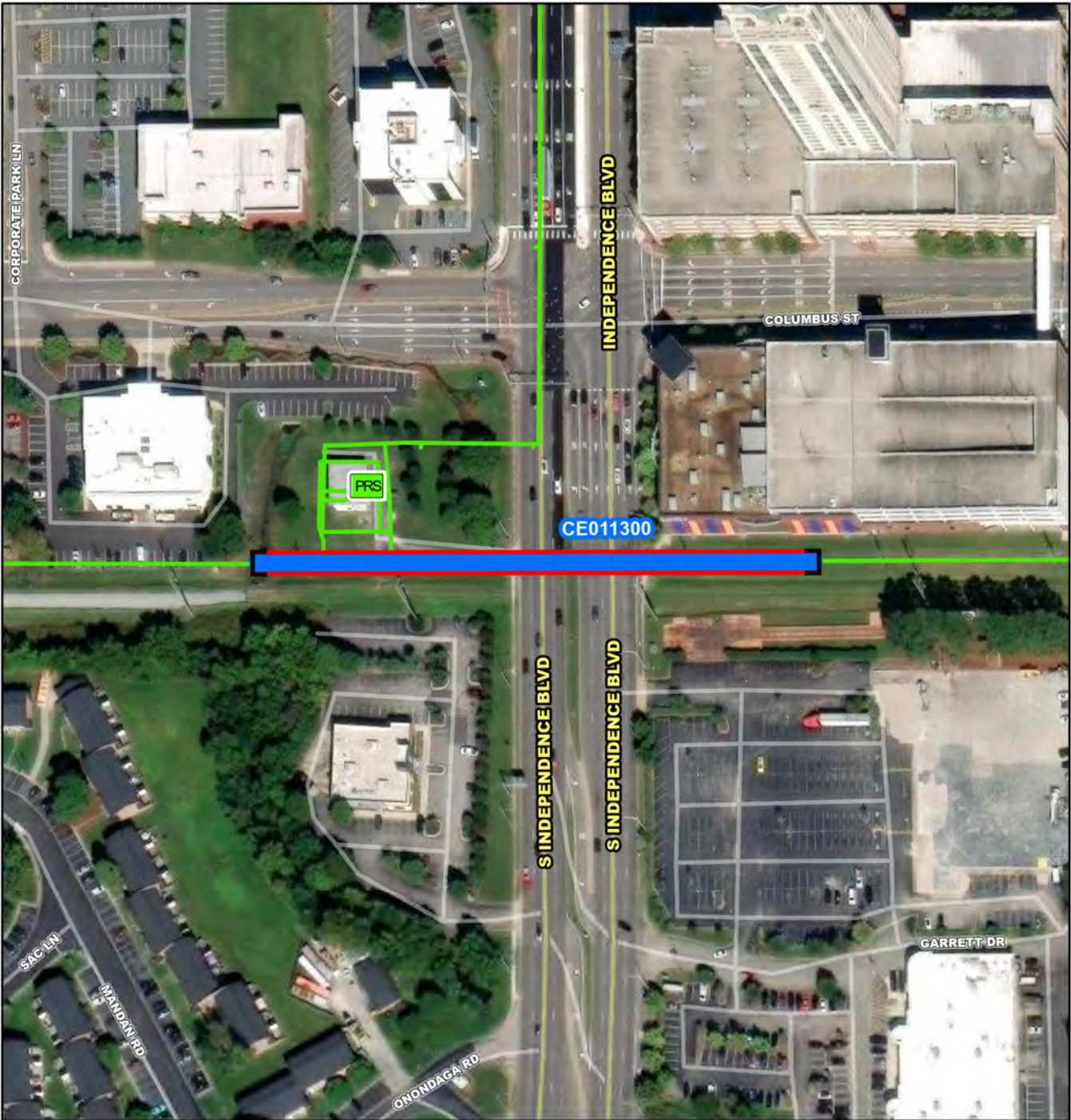


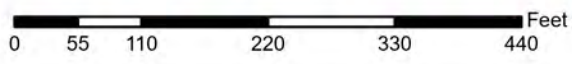
Chesapeake-Elizabeth Treatment Plant



Photo Credit: J Cook



- CE011300**
- Project Interceptor Line
 - Project Interceptor Point
 - Project Location 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



CE011300

Birchwood Trunk 24-Inch and 30-Inch Force Main at Independence Boulevard Replacement Phase II



System: Chesapeake-Elizabeth
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	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35
\$3,843	\$3,841	\$2	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

PROJECT DESCRIPTION

This project will replace approximately 350 linear feet of 24-inch reinforced concrete (RC) force main crossing Independence Boulevard just south of Cleveland Street in the City of Virginia Beach.

PROJECT JUSTIFICATION

In December 2009, a leak was identified on line SF-120 in Independence Boulevard just south of the abandoned railroad tracks south of Cleveland Street. The leak was excavated and repaired under an emergency declaration. As a precaution, in the event the repair fails, URS Corporation was commissioned to develop 60 percent plans to replace the existing force main. This CIP provides for the completion of bid ready plans, specifications and includes the cost of construction to replace the existing force main in its entirety via horizontal directional drill across Independence Boulevard.

FUNDING TYPE

Funding Type: Revenue Bond

CONTACTS

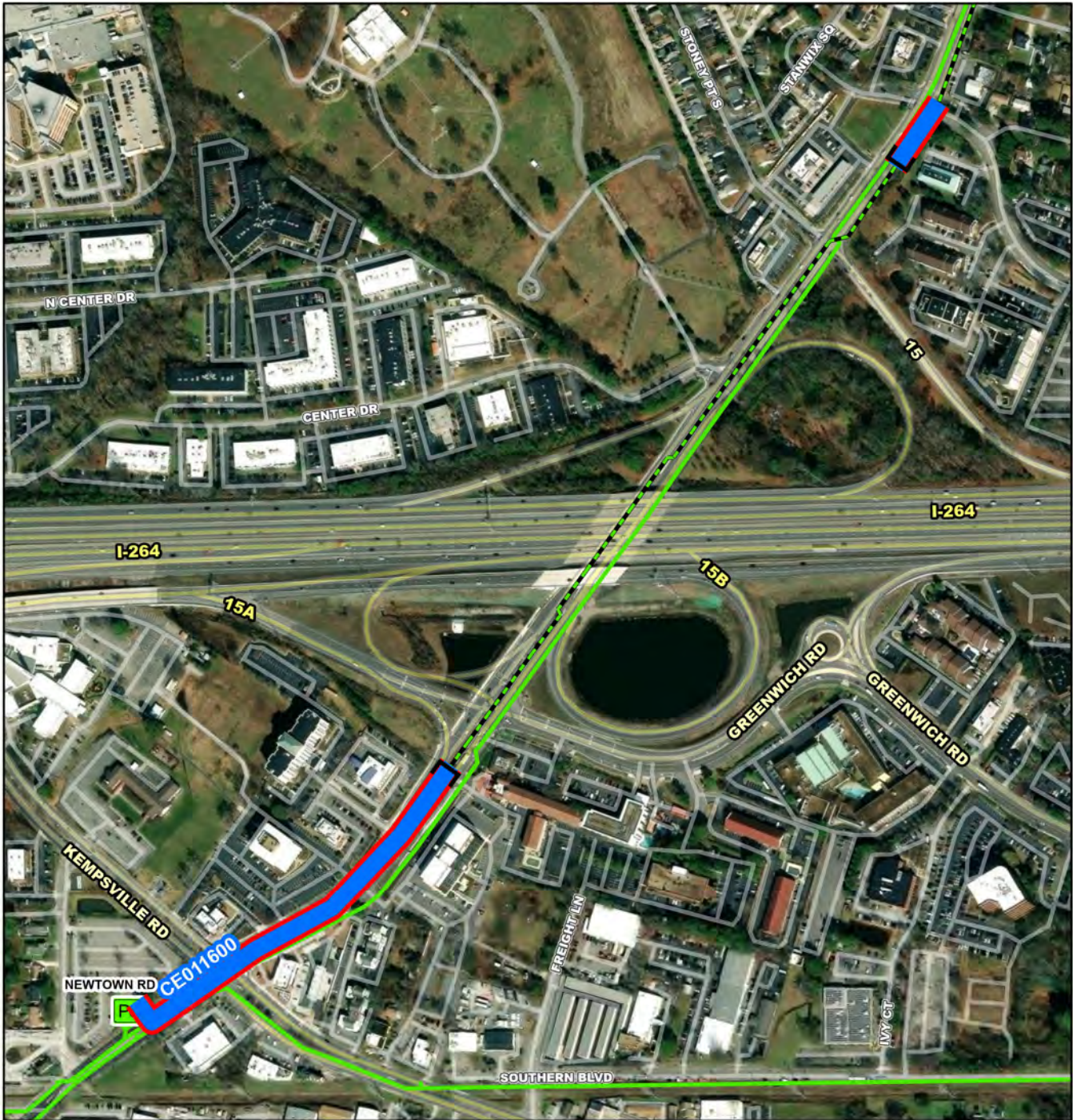
Contacts-Requesting Dept: Engineering
Contacts-Dept Contacts: Tim Marsh
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

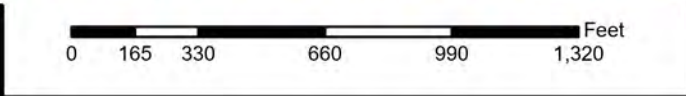
PrePlanning	09/01/2010
PER	10/27/2021
Design Delay	11/28/2022
Design	12/01/2022
Bid Delay	06/20/2024
PreConstruction	06/20/2024
Construction	09/01/2024
Closeout	05/01/2025

COST ESTIMATE

Cost Estimate Class:	Class 1 (-3% to +15%)
PrePlanning	\$0
PER	\$65,450
Design	\$163,759
PreConstruction	\$9,776
Construction	\$3,598,253
Closeout	\$5,760
Est. Program Cost	\$3,842,998
Contingency Budget	\$322,400
Est. Project Costs	\$4,165,398

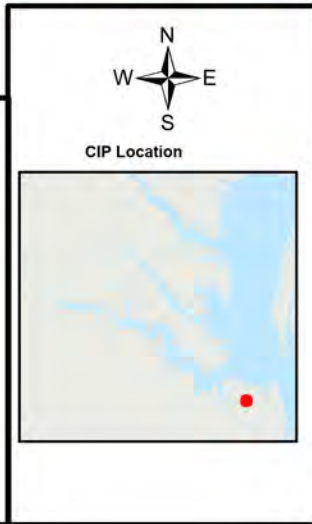


- CE011600**
- Project Interceptor Line
 - Project Interceptor Point
 - Project Location Point
 - Project Area
- Legend**
- CIP Interceptor Point
 - CIP Pump Station Point
 - CIP Interceptor Line
 - CIP Abandonment
 - CIP Project Area
 - HRSD Interceptor Force Main
 - HRSD Interceptor Gravity Main
 - HRSD Treatment Plant
 - HRSD Pressure Reducing Station
 - HRSD Pump Station



CE011600

Poplar Hall Davis Corner Trunk 24-Inch Gravity Sewer Improvements





System: Chesapeake-Elizabeth
 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	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35
\$5,028	\$5,009	\$19	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

PROJECT DESCRIPTION

This project is to rehabilitate and/or replace 1600 linear feet of gravity pipeline with associated manholes. Pipe diameter is 24-inches. Project extents are from: (1) MH-SG-113-1543 to SS-PS-115-1 and (2) MH-SG-113-4219 to MH-SG-113-3961

PROJECT JUSTIFICATION

Condition assessment activities indicate that these assets present a material risk of failure due to physical condition defects.

FUNDING TYPE

Funding Type: Revenue Bond

CONTACTS

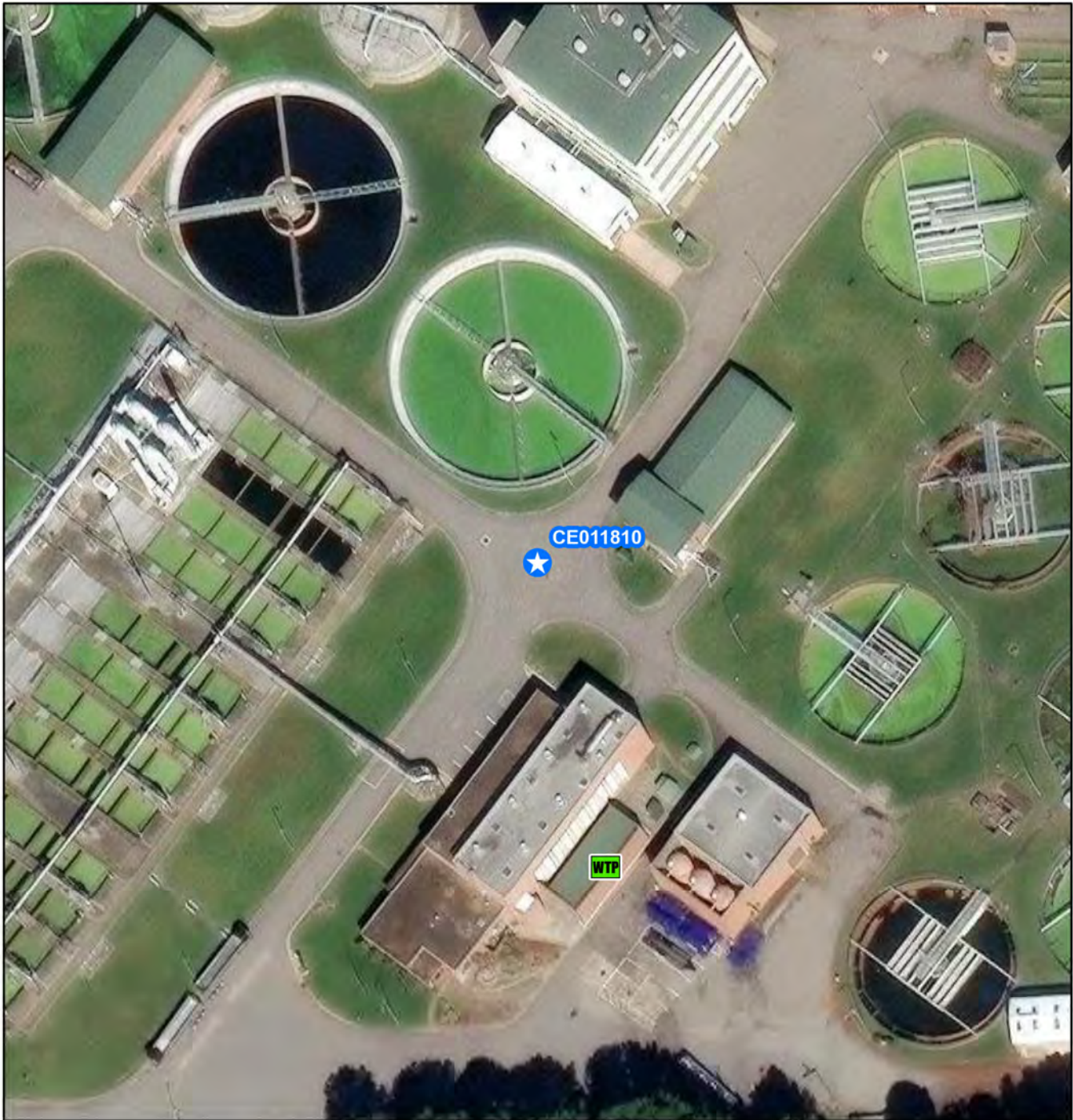
Contacts-Requesting Dept: Operations-Interceptors
 Contacts-Dept Contacts: Tim Marsh
 Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning	03/01/2021
PER	11/26/2021
Design Delay	08/31/2022
Design	08/31/2022
Bid Delay	09/03/2024
PreConstruction	09/01/2024
Construction	03/01/2025
Closeout	06/01/2025

COST ESTIMATE

Cost Estimate Class:	Class 1 (-3% to +15%)
PrePlanning	\$0
PER	\$62,200
Design	\$305,935
PreConstruction	\$13,800
Construction	\$4,617,214
Closeout	\$29,035
Est. Program Cost	\$5,028,184
Contingency Budget	\$427,663
Est. Project Costs	\$5,455,847



CE011810

- Project Interceptor Line
- Project Interceptor Point
- Project Location 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 25 50 100 150 200 Feet

CE011810

**Chesapeake-Elizabeth Treatment Plant
Decommissioning**

N
W —+— E
S

CIP Location

System: Chesapeake-Elizabeth
Type: Strategic Planning

Driver Category: Risk Mitigation
Project Phase: Design
Regulatory: None

PROGRAM CASH FLOW PROJECTION (\$,000)

Prog Cost	Exp to Previous Year	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35
\$13,461	\$1,339	\$633	\$3,323	\$0	\$0	\$0	\$4,261	\$3,906	\$0	\$0	\$0

PROJECT DESCRIPTION

This project will study and demolish or abandon facilities at the Chesapeake-Elizabeth Treatment Plant (CETP) Site. This project will also look at other potential uses for this site after the plant has been decommissioned. Demolishment or abandonment needed at CETP may include, but is not limited to, aeration tanks, clarifiers, preliminary treatment facility, incinerator building, thickeners, chlorine contact tanks, pump stations, yard piping, and outfalls. Refer to HRSD CETP Wet Weather Storage Facility Conversion Technical Memo for additional information.

PROJECT JUSTIFICATION

The Chesapeake-Elizabeth Treatment Plant Feasibility Study completed by HRSD in October 2013 evaluated taking the treatment plant offline and diverting flow to other treatment plants. The study determined that the HRSD interceptor system and remaining treatment plants have the ability to serve the current and projected needs of the South Shore jurisdictions when the Chesapeake-Elizabeth Treatment Plant would be taken offline in 2021. Significant capital and operation and maintenance (O&M) savings from this decision results in a high net present value compared to the former strategy.

FUNDING TYPE

Funding Type: Revenue Bond

CONTACTS

Contacts-Requesting Dept: Operations-Treatment
Contacts-Dept Contacts: Virginia Opp
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning	07/02/2017
PER	10/01/2021
Design Delay	08/01/2022
Design	09/12/2022
Bid Delay	03/01/2026
PreConstruction	03/01/2026
Construction	06/01/2026
Closeout	07/01/2030

COST ESTIMATE

Cost Estimate Class:	Class 3 (-10% to +30%)
PrePlanning	\$672,253
PER	\$222,418
Design	\$724,000
PreConstruction	\$10,000
Construction	\$3,665,730
Closeout	\$8,166,926
Est. Program Cost	\$13,461,327
Contingency Budget	\$3,553,680
Est. Project Costs	\$17,015,007



CE011841

- Project Interceptor Line
- Project Interceptor Point
- Project Location 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 25 50 100 150 200 Feet

CE011841

Oceana Off-line Storage Facility Land Acquisition

N
W E
S

CIP Location

System: Chesapeake-Elizabeth
 Type: Offline Storage

Driver Category: Capacity Improvements
 Project Phase: Pre Planning
 Regulatory: None

PROGRAM CASH FLOW PROJECTION (\$,000)

Prog Cost	Exp to Previous Year	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35
\$754	\$357	\$397	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

PROJECT DESCRIPTION

This project will fund the purchase of land from the City of Virginia Beach for the future Oceana Off-line Storage Facility. The future tank(s) will be located in the northeast corner of the City's property along Potters Road that serves as a construction and storm debris landfill.

PROJECT JUSTIFICATION

In 2019, HRSD Planning & Analysis determined that the Oceana Off-line Storage Facility was not immediately needed to support the diversion from the recently closed Chesapeake-Elizabeth Treatment Plant to the Atlantic Treatment Plant (closure complete in December 2021); Instead, automated valves were installed in the HRSD system to use existing system capacity to manage the impacts of spatially variable rainfall events. There are very limited options to site this storage tank in this heavily developed area and the purchase of this property is necessary to support this future wet weather need.

FUNDING TYPE

Funding Type: Revenue Bond

CONTACTS

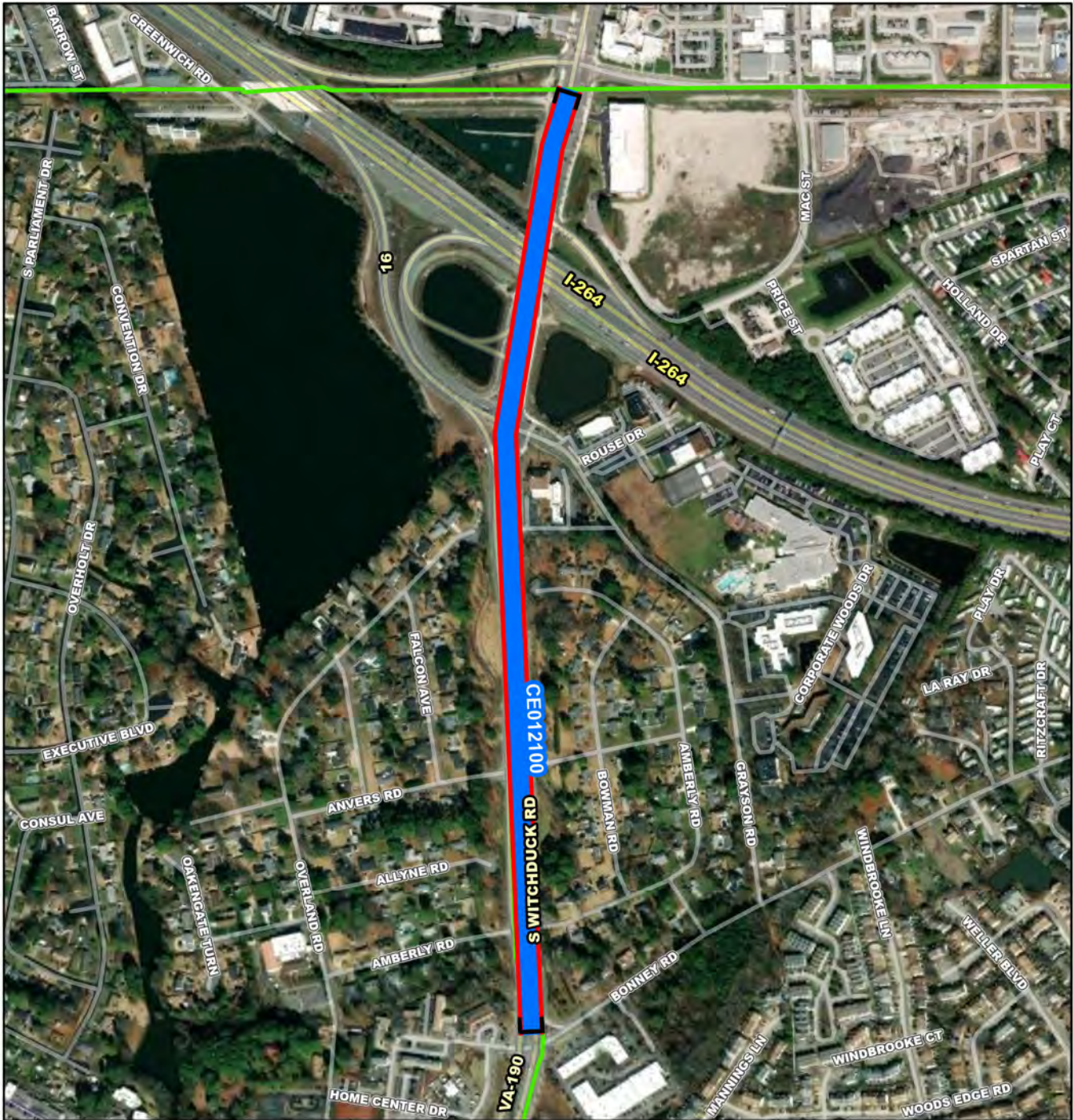
Contacts-Requesting Dept: Engineering
 Contacts-Dept Contacts: Laura Kirkwood
 Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

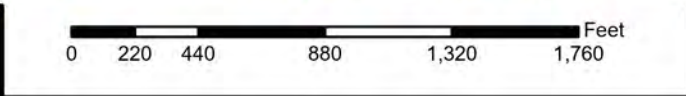
PrePlanning	01/02/2023
PER	01/02/2023
Design Delay	01/02/2023
Design	01/02/2023
Bid Delay	06/03/2024
PreConstruction	06/03/2024
Construction	06/03/2024
Closeout	06/03/2024

COST ESTIMATE

Cost Estimate Class:	Class 1 (-3% to +15%)
PrePlanning	\$0
PER	\$0
Design	\$754,000
PreConstruction	\$0
Construction	\$0
Closeout	\$0
Est. Program Cost	\$754,000
Contingency Budget	\$0
Est. Project Costs	\$754,000

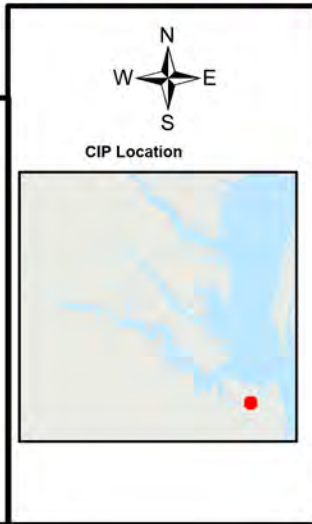


- CE012100**
- Project Interceptor Line
 - Project Interceptor Point
 - Project Location Point
 - Project Area
- Legend**
- CIP Interceptor Point
 - CIP Pump Station Point
 - CIP Interceptor Line
 - CIP Abandonment
 - CIP Project Area
 - HRSD Interceptor Force Main
 - HRSD Interceptor Gravity Main
 - HRSD Treatment Plant
 - HRSD Pressure Reducing Station
 - HRSD Pump Station



CE012100

Witchduck Road Interceptor Force Main Improvements



System: Chesapeake-Elizabeth
 Type: Pipelines

Driver Category: Risk Mitigation
 Project Phase: Proposed
 Regulatory: None

PROGRAM CASH FLOW PROJECTION (\$,000)

Prog Cost	Exp to Previous Year	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35
\$8,045	\$0	\$0	\$0	\$189	\$427	\$2,217	\$3,679	\$1,533	\$0	\$0	\$0

PROJECT DESCRIPTION

This project will rehabilitate or replace 4,300 linear feet (LF) of 24-inch cast iron interceptor force main (IFM) (SF-121) along Witchduck Road between the Witchduck Road-Southern Boulevard and Bonnie Road intersections.

PROJECT JUSTIFICATION

After the closure of the Chesapeake-Elizabeth Treatment Plant (CETP), the 1968-vintage cast iron force main along Witchduck Road will see additional service area and will need to stay in service for the foreseeable future to send flow to the Providence Tank and Pressure Reducing Station (PRS). In addition, the Witchduck corridor is seeing significant re-development by the City of Virginia Beach, therefore reliability of this line is essential. Based on a risk assessment performed by the Condition Assessment Department, this pipeline had the second highest criticality score of all force mains within the CETP closure area. Historically, cast iron pipelines have the highest likelihood of failing; at over 50 years old this pipeline is nearing the end of its useful life.

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	07/01/2026
PER	08/01/2027
Design Delay	08/01/2027
Design	08/01/2028
Bid Delay	08/01/2028
PreConstruction	08/01/2029
Construction	12/01/2029
Closeout	12/01/2031

COST ESTIMATE

Cost Estimate Class:	Class 10
PrePlanning	\$0
PER	\$206,369
Design	\$447,133
PreConstruction	\$34,395
Construction	\$7,357,065
Closeout	\$0
Est. Program Cost	\$8,044,962
Contingency Budget	\$1,605,094
Est. Project Costs	\$9,650,057