General

Interceptor System Valve Improvements Phase I

PR_GN015300

System: General
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
$4,752	$4,154	$597	$1	$0	$0	$0	$0	$0	$0	$0	$0

PROJECT DESCRIPTION

This project will address multiple valves, air vents, and a leak detector assessed to be at material risk of failure during the Condition Assessment Program. These assets are located between North and South Shore Interceptors. All South Shore air vents on this project were addressed through GN013900.

PROJECT JUSTIFICATION

Condition Assessment Activities and/or Preventative Maintenance reviews suggest that these assets are either at material risk of failure, in need of replacement, or in need of repair.

FUNDING TYPE

Funding Type: Revenue Bond

CONTACTS

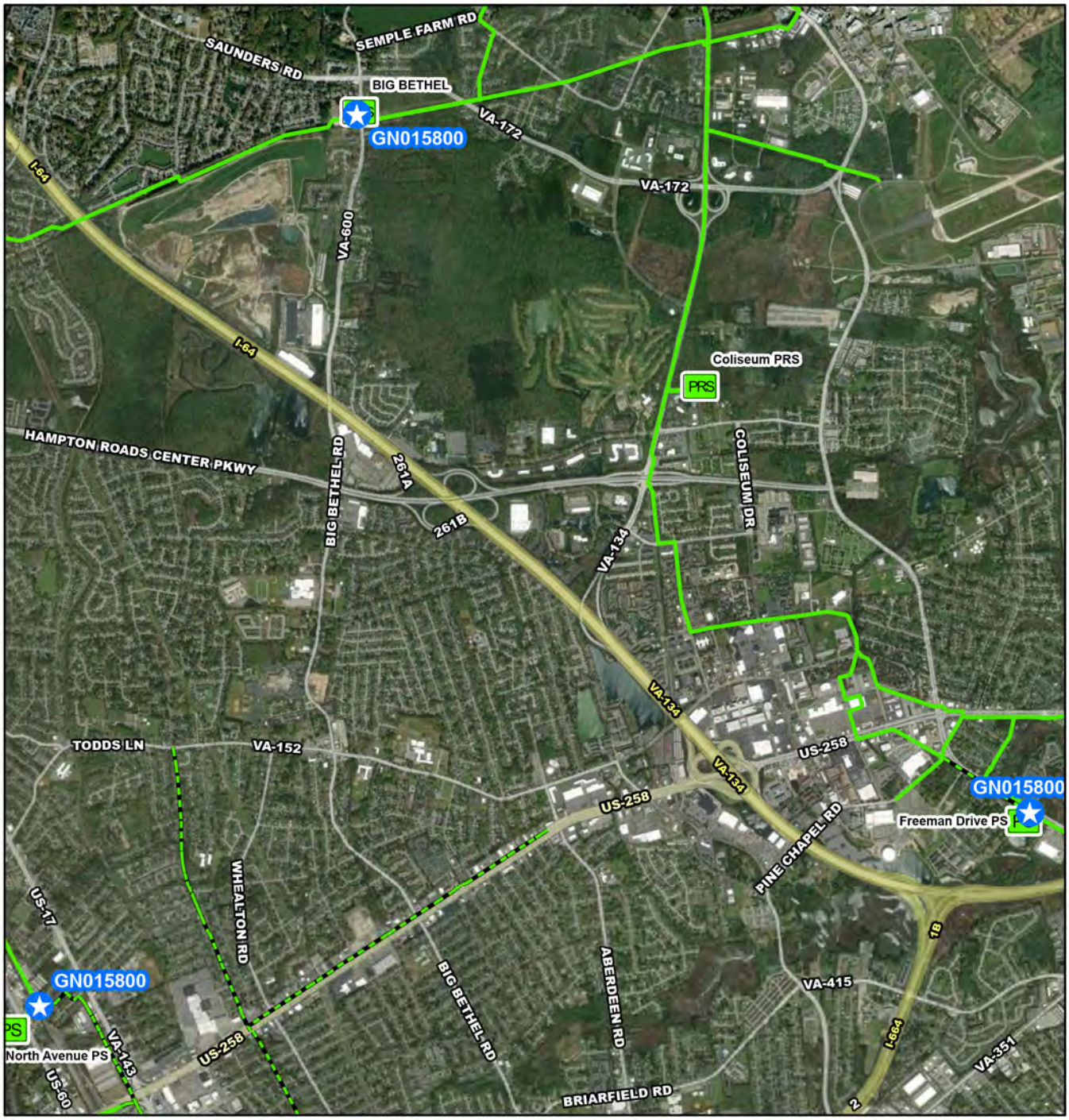
Contacts-Requesting Dept: Operations-Interceptors
Contacts-Dept Contacts: Donald Jennings
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning	02/01/2019
PER	04/30/2021
Design Delay	06/28/2022
Design	06/28/2022
Bid Delay	08/17/2023
PreConstruction	08/17/2023
Construction	10/24/2023
Closeout	08/01/2025

COST ESTIMATE

Cost Estimate Class:	**Class 1 (-3% to +15%)**
PrePlanning	$0
PER	$70,643
Design	$260,788
PreConstruction	$13,242
Construction	$4,402,402
Closeout	$5,000
Est. Program Cost	**$4,752,075**
Contingency Budget	$189,000
Est. Project Costs	**$4,941,075**



GN015800

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

0 1,000 2,000 4,000 6,000 8,000 Feet

GN015800

North Shore Automated Diversion Facilities

HRSD

N
W E
S

CIP Location

North Shore Automated Diversion Facilities

PR_GN015800

System: General
Type: Pump Stations

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

PROGRAM CASH FLOW PROJECTION ($,000)

Prog Cost	Exp to Previous Year	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35
$2,566	$2,563	$3	$0	$0	$0	$0	$0	$0	$0	$0	$0

PROJECT DESCRIPTION

The project will involve installing control valves at three pump station (PS) sites (North Avenue PS, Woodland Road PS, and Big Bethel Pressure Reducing Station (PRS)) to provide greater operational flexibility and system diversion capabilities during localized wet weather events. Immediate needs to reduce the three month average flow at York River Treatment Plant (YRTP) will be addressed. The long term goal of equalizing and coordinating flows at James River Treatment Plant (JRTP) and YRTP will also be achieved.

PROJECT JUSTIFICATION

The YRTP has experienced increased average daily flow during winter months due to elevated groundwater levels. In the winter of 2014, YRTP experienced five consecutive months that exceeded the 95% design criteria threshold. As required by permit, once three consecutive months above 95% are experienced, a short term and long range plan shall be developed. This automated diversion project will serve as the long range solution and will be able to manage the flow through diversions and operational strategies at several locations between the YRTP, JRTP, and Boat Harbor Treatment Plant (BHTP). Meter data, future flow projections, and hydraulic modeling indicate that once implemented these strategies will successfully reduce the flow below the 95% threshold at YRTP and provide the overall North Shore interceptor system with additional diversion capabilities.
This project was also identified in the Smart Sewer Study as possible average daily (non wet-weather) equalization for the YRTP and JRTP. These automated valves, together with off-line storage facilities could be used to equalize treatment plant flows over the entire day. This flow equalization would serve to both improve sewage treatment processes and optimization SWIFT facilities. It is anticipated that these facilities will provide significant operational and capital improvement cost savings.

FUNDING TYPE

Funding Type: Revenue Bond

CONTACTS

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

PROPOSED SCHEDULE START DATE

PrePlanning	04/25/2023
PER	02/14/2020
Design Delay	
Design	02/09/2023
Bid Delay	
PreConstruction	02/09/2023
Construction	11/01/2024
Closeout	07/01/2025

COST ESTIMATE

Cost Estimate Class:	**Class 1 (-3% to +15%)**
PrePlanning	$0
PER	$89,250
Design	$193,314
PreConstruction	$9,061
Construction	$2,271,435
Closeout	$3,039
Est. Program Cost	**$2,566,098**
Contingency Budget	$0
Est. Project Costs	**$2,566,098**

SWIFT Research Center Educational and Outreach Improvements

PR_GN016230

System: General
Type: SWIFT

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

PROGRAM CASH FLOW PROJECTION ($,000)

Prog Cost	Exp to Previous Year	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35
$2,000	$0	$1,043	$957	$0	$0	$0	$0	$0	$0	$0	$0

PROJECT DESCRIPTION

This project will provide for the planning, design, and installation of improvements to the educational and outreach material at the SWIFT Research Center.

PROJECT JUSTIFICATION

The interpretive elements at the SWIFT Research Center have not been substantially updated since they were installed in 2018. Numerous organizational, strategic, technological, and educational advancements have occurred since the facility opened. Updating the information available at the SWIFT Research Center and improving how visitors engage with that information will support HRSD's public outreach efforts related to SWIFT and managed aquifer recharge.

FUNDING TYPE

Funding Type: Revenue Bond

CONTACTS

Contacts-Requesting Dept: Engineering
Contacts-Dept Contacts: Lauren Zuravnsky
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning	07/01/2025
PER	09/01/2025
Design Delay	01/01/2026
Design	01/01/2026
Bid Delay	06/01/2026
PreConstruction	06/01/2026
Construction	09/01/2026
Closeout	05/01/2027

COST ESTIMATE

Cost Estimate Class:	
PrePlanning	$1,000
PER	$110,000
Design	$300,000
PreConstruction	$25,000
Construction	$1,300,000
Closeout	$4,000
Est. Program Cost	**$1,740,000**
Contingency Budget	$260,000
Est. Project Costs	**$2,000,000**

Outfall Dispersion Modeling for Full Scale SWIFT

PR_GN016311

System: General
Type: SWIFT

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

PROGRAM CASH FLOW PROJECTION ($,000)

Prog Cost	Exp to Previous Year	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35
$1,225	$180	$131	$131	$131	$131	$131	$131	$131	$131	$0	$0

PROJECT DESCRIPTION

This project will assist HRSD in development of a regulatory strategy related to dispersion of treated effluent from outfalls associated with the seven facilities that will be impacted by full-scale implementation of SWIFT.

PROJECT JUSTIFICATION

One objective of full scale SWIFT implementation is to substantially reduce surface discharge by maximizing aquifer recharge at each SWIFT facility. This will result in a reduction in daily flow to surface waters from the associated treatment plants. The variability of effluent flow rate for each facility may also significantly increase. These changes may impact the operation of the existing outfall and may require a related outfall modification or new outfall. Dispersion modeling of each outfall will provide an understanding of the related impacts of these changes and will inform conversations with state regulators.

FUNDING TYPE

Funding Type: Cash

CONTACTS

Contacts-Requesting Dept: Water Quality
Contacts-Dept Contacts: Kyle Curtis
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning	05/31/2019
PER	01/31/2023
Design Delay	01/31/2023
Design	01/31/2023
Bid Delay	01/31/2023
PreConstruction	01/31/2023
Construction	01/31/2023
Closeout	01/31/2023

COST ESTIMATE

Cost Estimate Class:	**Class 1 (-3% to +15%)**
PrePlanning	$1,225,000
PER	$0
Design	$0
PreConstruction	$0
Construction	$0
Closeout	$0
Est. Program Cost	**$1,225,000**
Contingency Budget	$0
Est. Project Costs	**$1,225,000**

Program Management of SWIFT Full Scale Implementation

PR_GN016320

System: General
Type: SWIFT

Driver Category: I&I Abatement-IP/RWWMP
Project Phase: Design
Regulatory: Integrated Plan-SWIFT

PROGRAM CASH FLOW PROJECTION ($,000)

Prog Cost	Exp to Previous Year	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35
$80,000	$50,535	$5,236	$5,400	$4,184	$4,184	$4,184	$4,184	$2,092	$0	$0	$0

PROJECT DESCRIPTION

The SWIFT Full Scale Implementation Program management team will manage the delivery of the advanced water treatment facilities to take HRSD's already highly treated wastewater and produce SWIFT water. The Program Management team will also manage the delivery of the managed aquifer recharge wells, monitoring wells, and associated pumping and piping systems. The Program Management team will also manage delivery of the wastewater treatment plant improvements, outfall modifications, conveyance, and other projects needed to ensure successful SWIFT implementation. The Program Management team will implement the processes, procedures, and systems needed to design, procure, construct, permit, manage, and integrate the new SWIFT related assets. The Program Management team will also provide staff augmentation, owner's consultant services, and other support as needed.

PROJECT JUSTIFICATION

The permitting, design, procurement and construction of advanced water treatment facilities, managed aquifer recharge facilities, wastewater treatment upgrades, conveyance, and outfall modifications required to implement the SWIFT Full Scale Implementation Program will require additional resources and expertise to augment HRSDs capabilities and capacity limitations.

FUNDING TYPE

Funding Type: Revenue Bond

CONTACTS

Contacts-Requesting Dept: General Manager
Contacts-Dept Contacts: Michael Hess
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning	05/01/2020
PER	
Design Delay	
Design	11/01/2018
Bid Delay	
PreConstruction	
Construction	11/01/2018
Closeout	

COST ESTIMATE

Cost Estimate Class:	**Class 1 (-3% to +15%)**
PrePlanning	$695,033
PER	$700
Design	$69,472,279
PreConstruction	$0
Construction	$9,831,988
Closeout	$0
Est. Program Cost	**$80,000,000**
Contingency Budget	$0
Est. Project Costs	**$80,000,000**

SWIFT Managed Aquifer Recharge Services

PR_GN016331

System: General
Type: SWIFT

Driver Category: Nutrient Reduction
Project Phase: Pre Planning
Regulatory: Integrated Plan-SWIFT

PROGRAM CASH FLOW PROJECTION ($,000)

Prog Cost	Exp to Previous Year	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35
$750	$709	$38	$3	$0	$0	$0	$0	$0	$0	$0	$0

PROJECT DESCRIPTION

This project includes engineering services necessary to advance the conceptual design and planning for Managed Aquifer Recharge (MAR) wells at each SWIFT facility. Tasks include evaluating the suitability of locations for well sites, preparing preliminary site layouts with respect to well installation and site planning requirements, supporting real estate acquisition, planning well installation logistics, testing, and aquifer conditioning fluid management, developing the overall MAR well data management structure, and supporting contractor and stakeholder outreach.

PROJECT JUSTIFICATION

This project is necessary to inform the selection of individual MAR sites and provide information critical to planning and subsequently installing successful MAR wells. Information developed during this project will support SWIFT recharge and monitoring well land acquisition efforts and locality site planning requirements.

FUNDING TYPE

Funding Type: Cash

CONTACTS

Contacts-Requesting Dept: Engineering
Contacts-Dept Contacts: Michael Hess
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning	03/26/2019
PER	04/23/2019
Design Delay	06/12/2019
Design	02/19/2020
Bid Delay	05/21/2020
PreConstruction	01/28/2021
Construction	03/10/2021
Closeout	01/05/2022

COST ESTIMATE

Cost Estimate Class:	**Class 1 (-3% to +15%)**
PrePlanning	$456,061
PER	$293,939
Design	$0
PreConstruction	$0
Construction	$0
Closeout	$0
Est. Program Cost	**$750,000**
Contingency Budget	$38,000
Est. Project Costs	**$788,000**

GN016344

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

0 165 330 660 990 1,320 Feet

N
W E
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CIP Location

GN016344

James River Land Improvements - Phase I

HRSD

James River Land Improvements - Phase I

PR_GN016344

System: General
Type: SWIFT

Driver Category: I&I Abatement-IP/RWWMP
Project Phase: Construction
Regulatory: Integrated Plan-SWIFT

PROGRAM CASH FLOW PROJECTION ($,000)

Prog Cost	Exp to Previous Year	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35
$11,731	$11,397	$334	$0	$0	$0	$0	$0	$0	$0	$0	$0

PROJECT DESCRIPTION

This project will provide design and construction of improvements to the land surrounding the James River Treatment Plant (JRTP), including development of a nearly 1 mile of linear park and trail system. The trail consists of elevated timber boardwalk structures and asphalt on grade trails within HRSD's open space easement and in the City Farm section of Riverview Farm Park.

PROJECT JUSTIFICATION

HRSD Commission approved an Agreement with the City of Newport News in 2020 to purchase approximately ten (10) acres of land adjacent to JRTP and receive the required easements for managed aquifer recharge wells, buildings, and related piping. Among the requirements stated in the land purchase Agreement is the commitment by HRSD to design and construct public access trails, which will be operated and maintained by the City of Newport News.

FUNDING TYPE

Funding Type: Cash

CONTACTS

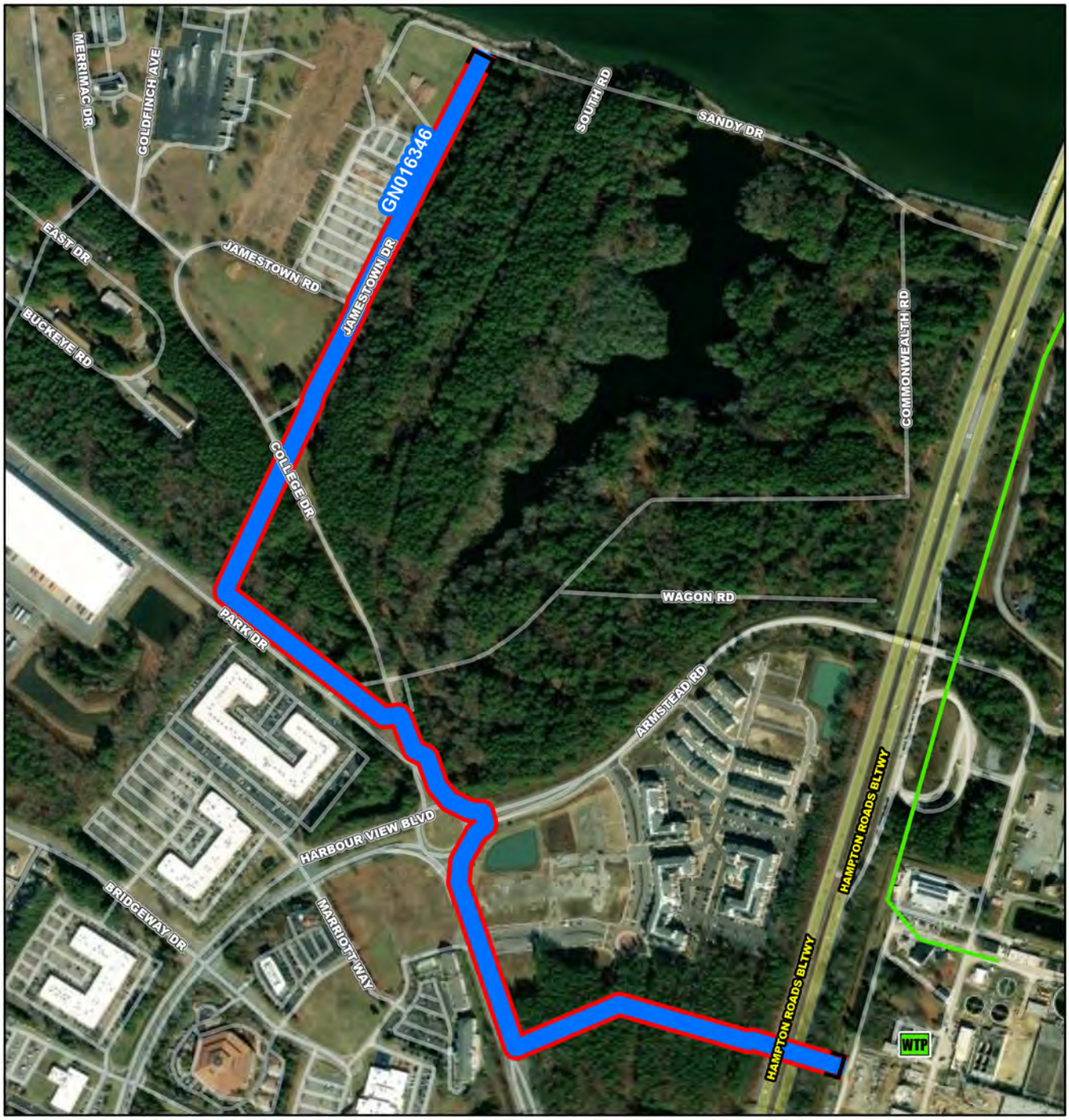
Contacts-Requesting Dept: Engineering
Contacts-Dept Contacts: Jennifer Klages
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning	03/03/2021
PER	02/17/2021
Design Delay	09/29/2022
Design	08/30/2022
Bid Delay	09/29/2022
PreConstruction	08/09/2022
Construction	03/29/2023
Closeout	08/01/2025

COST ESTIMATE

Cost Estimate Class:	**Class 1 (-3% to +15%)**
PrePlanning	$1,197
PER	$199,484
Design	$706,525
PreConstruction	$17,014
Construction	$10,088,824
Closeout	$15,000
Est. Program Cost	**$11,028,044**
Contingency Budget	$0
Est. Project Costs	**$11,028,044**



GN016346

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

0 220 440 880 1,320 1,760 Feet

N
W E
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CIP Location

GN016346

Boat Harbor Transmission Force Main Land Acquisition

HRSD

Boat Harbor Transmission Force Main Land Acquisition

PR_GN016346

System: General
Type: SWIFT

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

PROGRAM CASH FLOW PROJECTION ($,000)

Prog Cost	Exp to Previous Year	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35
$8,442	$5,222	$3,220	$0	$0	$0	$0	$0	$0	$0	$0	$0

PROJECT DESCRIPTION

A transmission force main connecting the new Boat Harbor Pump Station and Nansemond Treatment Plant will be constructed under a separate capital project. Additionally, SWIFT Water piping and recharge well locations will be defined along the transmission force main route. This project will fund the purchase of land and easements that are needed to construct the transmission force main, SWIFT Water piping, well buildings and associated utilities.

PROJECT JUSTIFICATION

An easement across private property is required to install the force main from the south shore of the James River to the Nansemond Treatment Plant, which is required to implement projects BH015700, BH015710, and BH015720. Acquiring property on the west side of I-664 for recharge wells is required because there is insufficient space on the HRSD Nansemond property to accommodate the needed spacing between recharge wells.

FUNDING TYPE

Funding Type: WIFIA

CONTACTS

Contacts-Requesting Dept: Engineering
Contacts-Dept Contacts: David Steele
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning	11/28/2022
PER	06/01/2023
Design Delay	06/01/2023
Design	06/01/2023
Bid Delay	08/27/2024
PreConstruction	08/27/2024
Construction	08/27/2024
Closeout	08/27/2024

COST ESTIMATE

Cost Estimate Class:	**Class 1 (-3% to +15%)**
PrePlanning	$0
PER	$0
Design	$8,442,246
PreConstruction	$0
Construction	$0
Closeout	$0
Est. Program Cost	**$8,442,246**
Contingency Budget	$844,225
Est. Project Costs	**$9,286,471**

GN016347

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

0 110 220 440 660 880 Feet

N
W E
S

CIP Location

GN016347

James River Land Improvements - Phase II

HRSD

James River Land Improvements - Phase II

PR_GN016347

System: General
Type: SWIFT

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

PROGRAM CASH FLOW PROJECTION ($,000)

Prog Cost	Exp to Previous Year	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35
$3,846	$103	$573	$3,042	$128	$0	$0	$0	$0	$0	$0	$0

PROJECT DESCRIPTION

This project includes design and construction of multi-use trails of approximately 3,000 linear feet connecting to existing City of Newport News trails. The project area is located adjacent to HRSDs James River Treatment Plant within the City of Newport News Riverview Farm Park. The project will incorporate multi-use asphalt on grade trail and associated landscaping improvements near the managed aquifer recharge well buildings.

PROJECT JUSTIFICATION

HRSD entered into an Agreement with the City of Newport News to purchase approximately ten (10) acres of land adjacent to the James River Treatment Plant (JRTP) and receive the required easements for managed aquifer recharge wells, buildings, and related piping. Among the requirements stated in the land purchase Agreement is the commitment by HRSD to design and construct public access trails, which will be operated and maintained by the City of Newport News.

FUNDING TYPE

Funding Type: Cash

CONTACTS

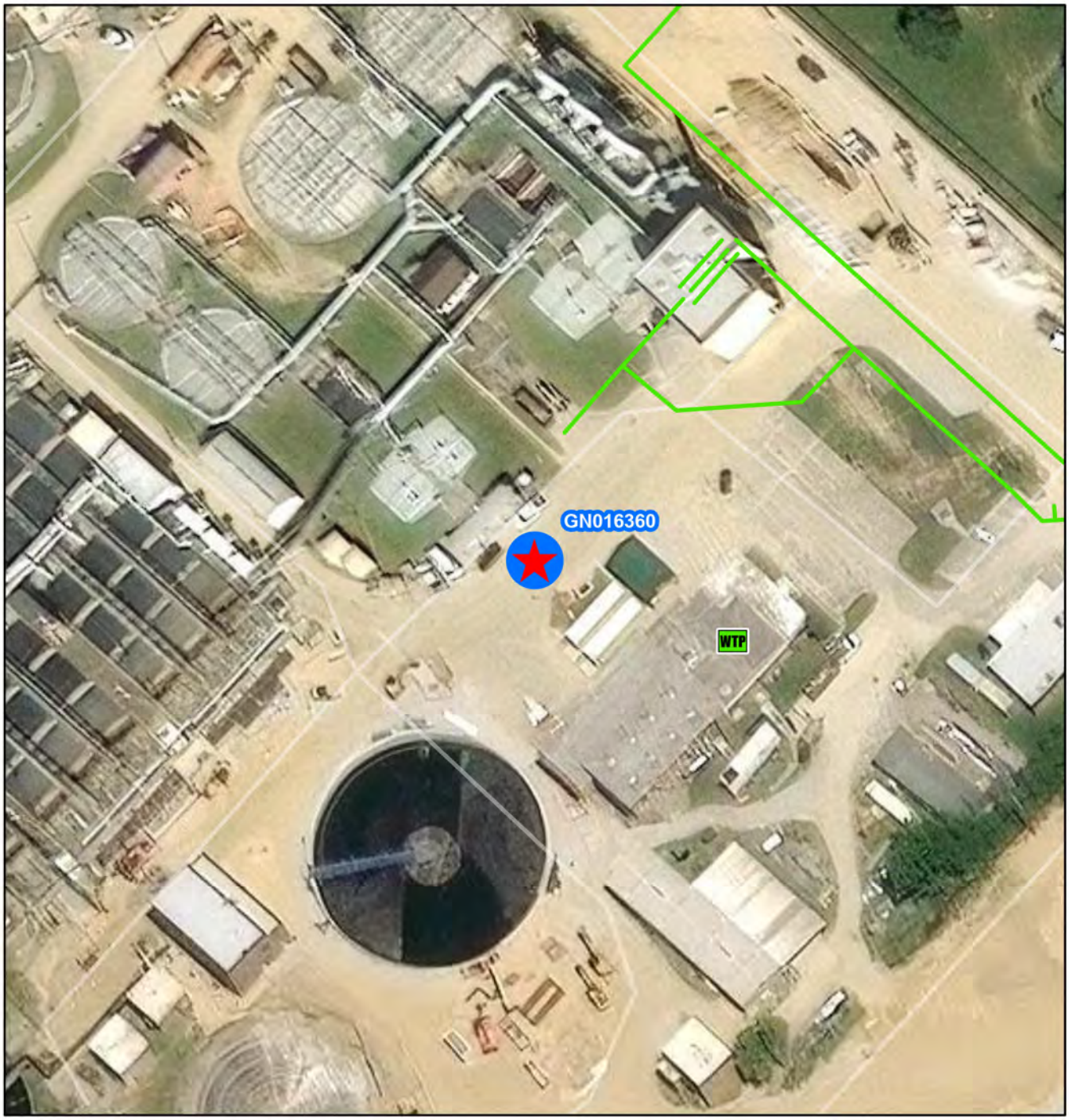
Contacts-Requesting Dept: Engineering
Contacts-Dept Contacts: Jennifer Klages
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning	09/30/2024
PER	09/30/2024
Design Delay	09/30/2024
Design	09/30/2024
Bid Delay	09/02/2025
PreConstruction	01/14/2026
Construction	02/24/2026
Closeout	04/12/2027

COST ESTIMATE

Cost Estimate Class:	**Class 1 (-3% to +15%)**
PrePlanning	$0
PER	$60,416
Design	$300,000
PreConstruction	$15,825
Construction	$3,450,000
Closeout	$20,000
Est. Program Cost	**$3,846,241**
Contingency Budget	$718,759
Est. Project Costs	**$4,565,000**



GN016360

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

0 25 50 100 150 200 Feet

N
W E
S

CIP Location

GN016360

James River SWIFT Facility

HRSD

James River SWIFT Facility

PR_GN016360

System: General
Type: SWIFT

Driver Category: I&I Abatement-IP/RWWMP
Project Phase: Construction
Regulatory: Integrated Plan-SWIFT

PROGRAM CASH FLOW PROJECTION ($,000)

Prog Cost	Exp to Previous Year	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35
$302,207	$252,931	$45,347	$3,929	$0	$0	$0	$0	$0	$0	$0	$0

PROJECT DESCRIPTION

SWIFT James River will include advanced water treatment facilities needed to produce SWIFT water at the James River Treatment Plant. The scope includes advanced water treatment facilities, conveyance of SWIFT water to the recharge wells, and modifications to the non-potable water system. The scope does not include land acquisition, modifications to the existing outfall system or improvements to the existing wastewater treatment process to improve the quality of the secondary effluent, to be compatible with the SWIFT facilities. The scope does not include drilling of the recharge and monitoring wells.

PROJECT JUSTIFICATION

SWIFT James River is needed to reduce nutrients entering the Chesapeake Bay, augment the groundwater supply, reduce the rate of ground subsidence, protect groundwater from saltwater intrusion and support Virginias economy.

FUNDING TYPE

Funding Type: VCWRLF

CONTACTS

Contacts-Requesting Dept: General Manager
Contacts-Dept Contacts: Efram Fuller
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning	08/01/2019
PER	07/01/2019
Design Delay	
Design	04/23/2020
Bid Delay	07/31/2020
PreConstruction	08/02/2019
Construction	02/07/2022
Closeout	11/02/2026

COST ESTIMATE

Cost Estimate Class:	**Class 1 (-3% to +15%)**
PrePlanning	$0
PER	$4,079,276
Design	$19,020,420
PreConstruction	$288,289
Construction	$278,819,000
Closeout	$0
Est. Program Cost	**$302,206,985**
Contingency Budget	$3,492,554
Est. Project Costs	**$305,699,539**

GN016362

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

0 220 440 880 1,320 1,760 Feet

N
W E
S

CIP Location

GN016362

James River Recharge Wells (Off Site)

HRSD

James River Recharge Wells (Off Site)

PR_GN016362

System: General
Type: SWIFT

Driver Category: I&I Abatement-IP/RWWMP
Project Phase: Construction
Regulatory: Integrated Plan-SWIFT

PROGRAM CASH FLOW PROJECTION ($,000)

Prog Cost	Exp to Previous Year	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35
$47,327	$47,001	$326	$0	$0	$0	$0	$0	$0	$0	$0	$0

PROJECT DESCRIPTION

James River Recharge Wells (Off Site) will provide for the construction of recharge wells and monitoring wells off site; services for the development, logging, testing, and conditioning of wells associated with SWIFT at the James River Treatment Plant. The scope does not include well site development or the mechanical equipment associated with the conveyance of SWIFT water up to and into the wells.

PROJECT JUSTIFICATION

James River Recharge Wells are required for managed aquifer recharge using SWIFT Water. The monitoring wells are required by permit.

FUNDING TYPE

Funding Type: WIFIA

CONTACTS

Contacts-Requesting Dept: Engineering
Contacts-Dept Contacts: Jennifer Klages
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning	08/30/2021
PER	08/31/2021
Design Delay	10/31/2021
Design	08/24/2021
Bid Delay	05/27/2021
PreConstruction	03/04/2022
Construction	09/01/2021
Closeout	09/01/2025

COST ESTIMATE

Cost Estimate Class:	**Class 1 (-3% to +15%)**
PrePlanning	$0
PER	$0
Design	$955
PreConstruction	$25,833
Construction	$47,050,000
Closeout	$250,000
Est. Program Cost	**$47,326,788**
Contingency Budget	$7,212
Est. Project Costs	**$47,334,000**

GN016363

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

0 80 160 320 480 640 Feet

GN016363

James River Recharge Well Enhancements

HRSD

N
W E
S

CIP Location

James River Recharge Well Enhancements

PR_GN016363

System: General
Type: SWIFT

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

PROGRAM CASH FLOW PROJECTION ($,000)

Prog Cost	Exp to Previous Year	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35
$305	$105	$195	$5	$0	$0	$0	$0	$0	$0	$0	$0

PROJECT DESCRIPTION

This project includes enhancement of approximately three managed aquifer recharge wells in the City of Newport News Riverview Farm Park. The project area is located within the City's Riverview Farm park and HRSD's easements. The project will incorporate native plants and public access design elements to enhance the area around the managed aquifer recharge well buildings.

PROJECT JUSTIFICATION

HRSD entered into an Agreement with the City of Newport News to purchase approximately ten (10) acres of land adjacent to the James River Treatment Plant (JRTP) and receive the required easements for managed aquifer recharge wells, buildings, and related piping. Among the requirements stated in the land purchase Agreement is the commitment by HRSD to integrate the managed aquifer recharge well buildings into the park through installation of landscaping and public amenities.

FUNDING TYPE

Funding Type: Cash

CONTACTS

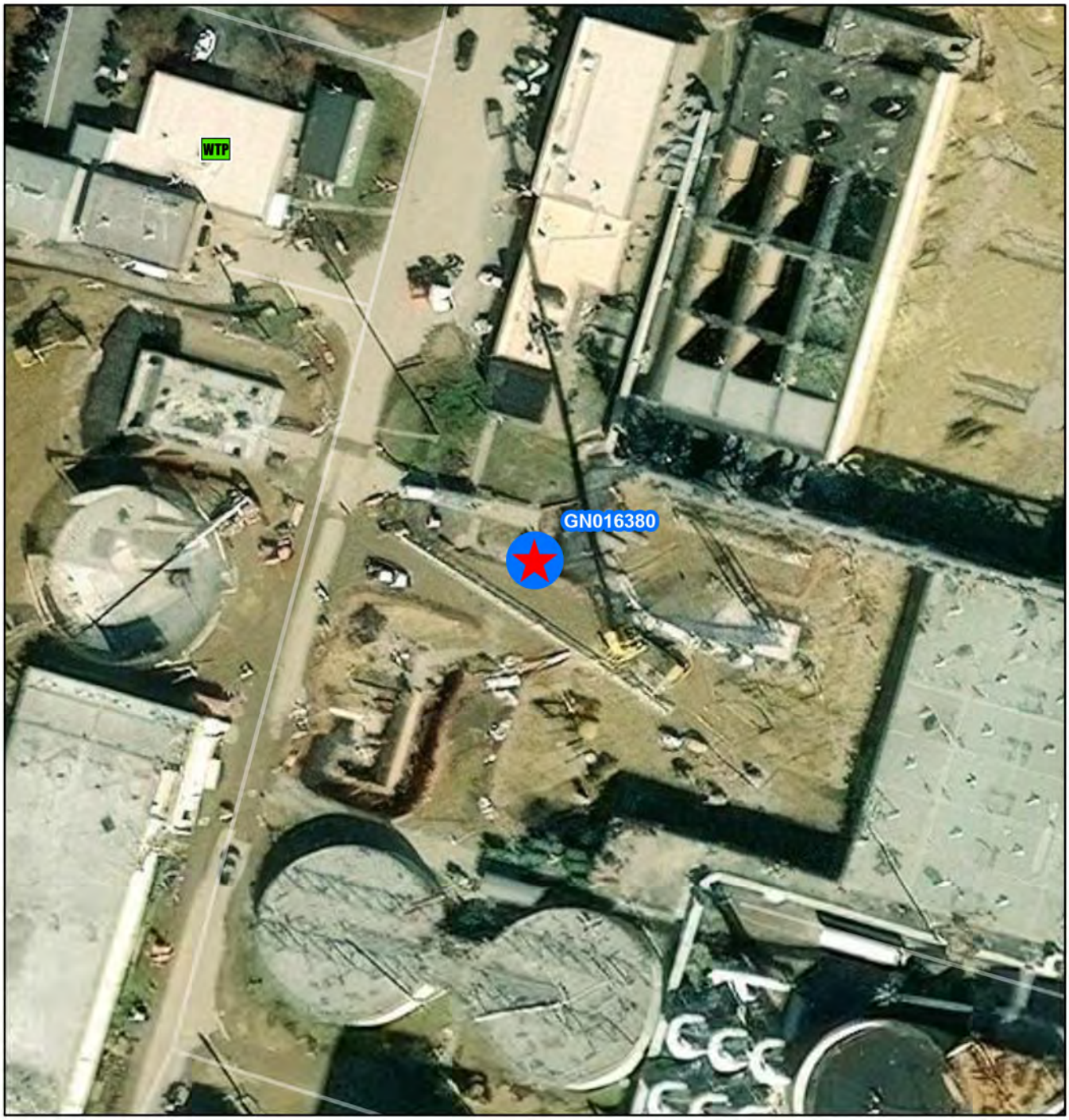
Contacts-Requesting Dept: Engineering
Contacts-Dept Contacts: Jennifer Klages
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning	10/01/2024
PER	10/01/2024
Design Delay	10/01/2024
Design	07/01/2024
Bid Delay	10/02/2024
PreConstruction	06/11/2025
Construction	07/22/2025
Closeout	07/09/2026

COST ESTIMATE

Cost Estimate Class:	**Class 5 (-20% to +100%)**
PrePlanning	$0
PER	$0
Design	$100,000
PreConstruction	$5,000
Construction	$200,000
Closeout	$0
Est. Program Cost	**$305,000**
Contingency Budget	$50,000
Est. Project Costs	**$355,000**



GN016380

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

0 25 50 100 150 200 Feet

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GN016380

Nansemond SWIFT Facility

HRSD

CIP Location

Nansemond SWIFT Facility

PR_GN016380

System: General
Type: SWIFT

Driver Category: I&I Abatement-IP/RWWMP
Project Phase: Design
Regulatory: Integrated Plan-SWIFT

PROGRAM CASH FLOW PROJECTION ($,000)

Prog Cost	Exp to Previous Year	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35
$573,299	$40,442	$150,207	$148,668	$150,000	$81,557	$2,425	$0	$0	$0	$0	$0

PROJECT DESCRIPTION

Nansemond SWIFT will include advanced water treatment facilities needed to produce SWIFT water at the Nansemond Treatment Plant. The scope includes advanced water treatment facilities, conveyance of SWIFT water to the recharge wells, and modifications to the non-potable water system. The scope does not include land acquisition, modifications to the existing outfall system, or improvements to the existing wastewater treatment process to improve the quality of the secondary effluent to meet the influent requirements of the SWIFT treatment facilities. The scope does not include drilling of the recharge and monitoring wells.

PROJECT JUSTIFICATION

Nansemond SWIFT is needed to reduce nutrients entering the Chesapeake Bay, augment the groundwater supply, reduce the rate of ground subsidence, protect groundwater from saltwater intrusion, and support Virginia's economy. This project will support HRSD's nutrient management strategy for meeting the Lower James River Basin total phosphorus and total nitrogen discharge limits.

FUNDING TYPE

Funding Type: WIFIA

CONTACTS

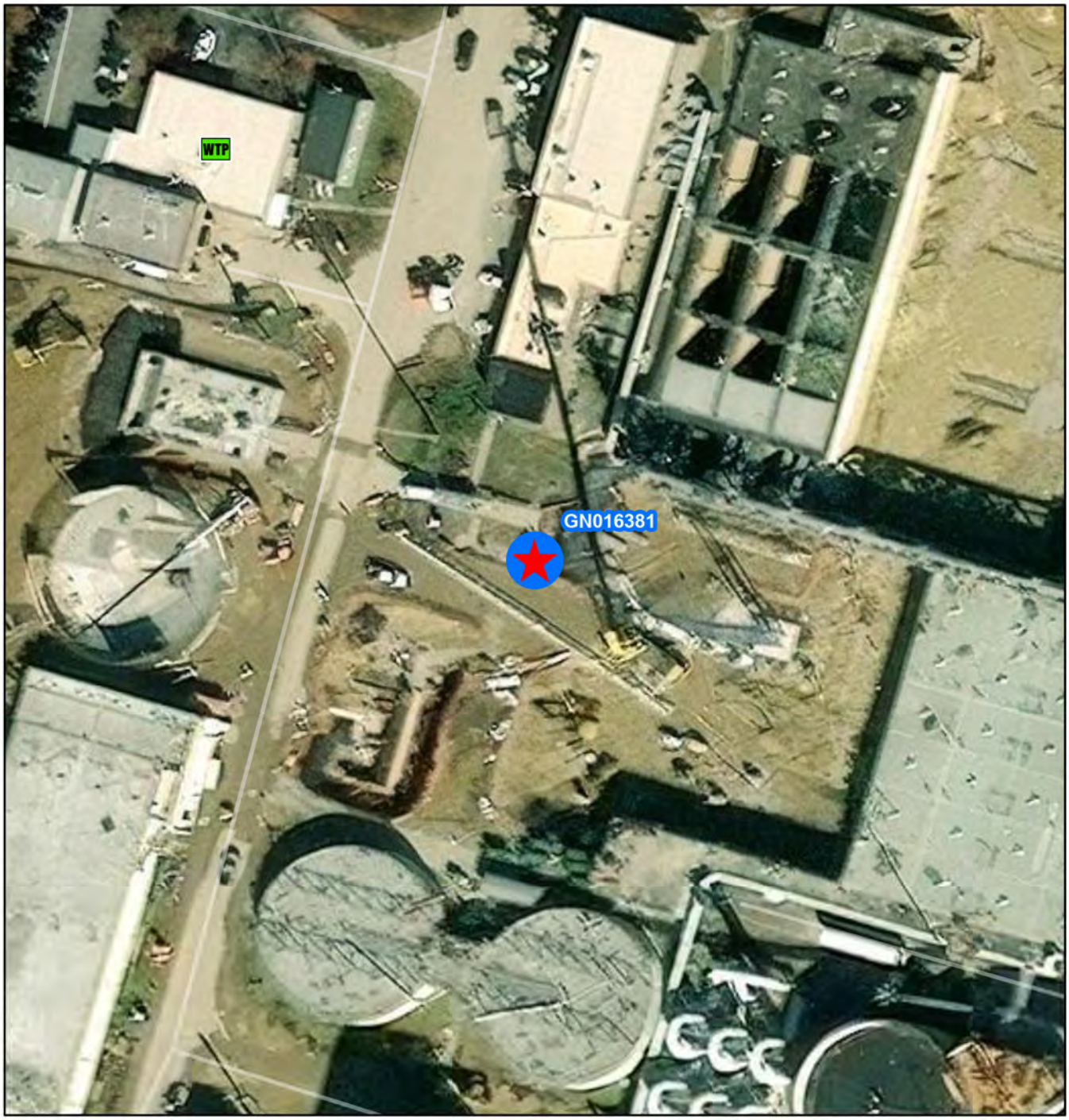
Contacts-Requesting Dept: General Manager
Contacts-Dept Contacts: Adam Werner
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning	11/22/2021
PER	05/02/2022
Design Delay	
Design	05/29/2024
Bid Delay	
PreConstruction	02/07/2023
Construction	11/17/2025
Closeout	09/01/2030

COST ESTIMATE

Cost Estimate Class:	**Class 1 (-3% to +15%)**
PrePlanning	$0
PER	$969,626
Design	$43,086,000
PreConstruction	$843,327
Construction	$528,400,000
Closeout	$0
Est. Program Cost	**$573,298,953**
Contingency Budget	$60,055,233
Est. Project Costs	**$633,354,186**



GN016381

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

0 25 50 100 150 200 Feet

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CIP Location

GN016381

Nansemond Recharge Wells (On Site)

HRSD

Nansemond Recharge Wells (On Site)

PR_GN016381

System: General
Type: SWIFT

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

PROGRAM CASH FLOW PROJECTION ($,000)

Prog Cost	Exp to Previous Year	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35
$82,302	$18,303	$21,281	$27,606	$15,112	$0	$0	$0	$0	$0	$0	$0

PROJECT DESCRIPTION

Nansemond Recharge Wells will provide for the construction of recharge wells and monitoring wells; services for the development, logging, testing, and conditioning of wells associated with SWIFT at the Nansemond Treatment Plant. The scope does not include well site development or the mechanical equipment associated with the conveyance of SWIFT water up to and into the wells.

PROJECT JUSTIFICATION

Nansemond Recharge Wells are required for managed aquifer recharge using SWIFT Water. The monitoring wells are required by permit.

FUNDING TYPE

Funding Type: VCWRLF

CONTACTS

Contacts-Requesting Dept: Engineering
Contacts-Dept Contacts: Adam Werner
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning	01/02/2024
PER	01/09/2024
Design Delay	06/03/2024
Design	06/03/2024
Bid Delay	03/04/2025
PreConstruction	03/04/2025
Construction	08/01/2025
Closeout	07/18/2028

COST ESTIMATE

Cost Estimate Class:	**Class 1 (-3% to +15%)**
PrePlanning	$0
PER	$0
Design	$9,913,000
PreConstruction	$0
Construction	$72,389,000
Closeout	$0
Est. Program Cost	**$82,302,000**
Contingency Budget	$7,351,900
Est. Project Costs	**$89,653,900**

Nansemond Recharge Wells (Off Site)

PR_GN016382

System: General
Type: SWIFT

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

PROGRAM CASH FLOW PROJECTION ($,000)

Prog Cost	Exp to Previous Year	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35
$71,857	$686	$1,546	$15,050	$33,435	$19,997	$920	$225	$0	$0	$0	$0

PROJECT DESCRIPTION

Nansemond Recharge Wells (Off-Site) will provide for the design and construction of recharge wells and monitoring wells and services for the development, logging, testing, and conditioning of wells associated with SWIFT at the Nansemond Treatment Plant. The scope does not include well site development or the mechanical equipment associated with the conveyance of SWIFT water up to and into the wells. The well locations are outside the boundary of Nansemond Plant property.

PROJECT JUSTIFICATION

Nansemond Recharge Wells are required for managed aquifer recharge using SWIFT Water. The monitoring wells are required by permit.

FUNDING TYPE

Funding Type: WIFIA

CONTACTS

Contacts-Requesting Dept: Engineering
Contacts-Dept Contacts: Michael Hess
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning	01/01/2024
PER	01/01/2024
Design Delay	06/03/2024
Design	06/03/2024
Bid Delay	03/03/2025
PreConstruction	03/03/2025
Construction	08/01/2025
Closeout	07/01/2030

COST ESTIMATE

Cost Estimate Class:	**Class 1 (-3% to +15%)**
PrePlanning	$0
PER	$483,197
Design	$1,483,000
PreConstruction	$117,000
Construction	$69,673,000
Closeout	$101,000
Est. Program Cost	**$71,857,197**
Contingency Budget	$14,371,000
Est. Project Costs	**$86,228,197**

Nansemond Recharge Well Integration

PR_GN016383

System: General
Type: SWIFT

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

PROGRAM CASH FLOW PROJECTION ($,000)

Prog Cost	Exp to Previous Year	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35
$78,951	$1,619	$3,720	$556	$33,788	$37,523	$1,311	$434	$0	$0	$0	$0

PROJECT DESCRIPTION

The project will design and construct the process mechanical elements, mechanical, civil/site, structural/architectural, electrical, and instrumentation and control for the infrastructure required to convey SWIFT Water from the Nansemond SWIFT facility to the off-site managed aquifer recharge wells and monitoring wells. A section of the backflush and SWIFT Water piping will be constructed from the Nansemond Plant boundary to the traffic circle at the College Drive/Armstead Road intersection under a separate project, Boat Harbor Treatment Plant Transmission Force Main Section 2 project. The remaining off-site SWIFT Water and backflush piping will fall under this project.

PROJECT JUSTIFICATION

Nansemond Recharge Wells are required for managed aquifer recharge using SWIFT Water. The monitoring wells are required by permit. Separation of this project from the well drilling and advanced water treatment facility projects allows for a focused selection of delivery methods and contract requirements for off-site work.

FUNDING TYPE

Funding Type: WIFIA

CONTACTS

Contacts-Requesting Dept: Engineering
Contacts-Dept Contacts: Michael Hess
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning	02/01/2024
PER	08/01/2024
Design Delay	12/31/2024
Design	02/03/2025
Bid Delay	08/03/2026
PreConstruction	08/03/2026
Construction	01/01/2027
Closeout	06/01/2030

COST ESTIMATE

Cost Estimate Class:	**Class 1 (-3% to +15%)**
PrePlanning	$0
PER	$1,170,565
Design	$4,219,000
PreConstruction	$121,000
Construction	$73,334,000
Closeout	$106,000
Est. Program Cost	**$78,950,565**
Contingency Budget	$19,738,000
Est. Project Costs	**$98,688,565**

GN016390

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

0 195 390 780 1,170 1,560 Feet

GN016390

VIP SWIFT Tertiary Preliminary Engineering

HRSD

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CIP Location

VIP SWIFT Tertiary Preliminary Engineering

PR_GN016390

System: VIP
Type: SWIFT

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

PROGRAM CASH FLOW PROJECTION ($,000)

Prog Cost	Exp to Previous Year	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35
$8,616	$2,901	$5,715	$0	$0	$0	$0	$0	$0	$0	$0	$0

PROJECT DESCRIPTION

This project will include the preliminary engineering of the initial phase of SWIFT implementation, including tertiary treatment comprised of coagulation, flocculation, and sedimentation followed by granular media filters.

PROJECT JUSTIFICATION

This project will support HRSD's nutrient management strategy for meeting the 2032 Lower James River Basin total phosphorus discharge limits.

FUNDING TYPE

Funding Type: Revenue Bond

CONTACTS

Contacts-Requesting Dept: Engineering
Contacts-Dept Contacts: Akshay Kumar
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning	03/10/2023
PER	07/04/2023
Design Delay	04/01/2026
Design	04/01/2026
Bid Delay	04/01/2026
PreConstruction	04/01/2026
Construction	04/01/2026
Closeout	04/01/2026

COST ESTIMATE

Cost Estimate Class:	**Class 1 (-3% to +15%)**
PrePlanning	$2,116,200
PER	$6,500,000
Design	$0
PreConstruction	$0
Construction	$0
Closeout	$0
Est. Program Cost	**$8,616,200**
Contingency Budget	$975,000
Est. Project Costs	**$9,591,200**

GN016391

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

0 195 390 780 1,170 1,560 Feet

GN016391

VIP SWIFT Tertiary Site Work

HRSD

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CIP Location

VIP SWIFT Tertiary Site Work

PR_GN016391

System: General
Type: SWIFT

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

PROGRAM CASH FLOW PROJECTION ($,000)

Prog Cost	Exp to Previous Year	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35
$26,095	$0	$0	$1,241	$4,701	$18,603	$1,550	$0	$0	$0	$0	$0

PROJECT DESCRIPTION

This project will design and construct the necessary site preparation, grading, and debris removal to prepare the former Lambert's Point Golf Course site adjacent to VIP treatment plant for SWIFT tertiary treatment facilities.

PROJECT JUSTIFICATION

VIP treatment plant is land constrained. A portion of the former Lambert's Point Golf Course, adjacent to the treatment plant, was purchased for treatment expansion including SWIFT facilities. Prior to redevelopment as a golf course, the parcel was used as a landfill from prior to 1965 until its closure around 1980. Separate planning, design, and construction will allow this project to proceed prior to the construction of treatment facilities.

FUNDING TYPE

Funding Type: WIFIA

CONTACTS

Contacts-Requesting Dept: Engineering
Contacts-Dept Contacts: Lauren Zuravnsky
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning	
PER	07/04/2023
Design Delay	10/01/2024
Design	07/01/2026
Bid Delay	10/01/2024
PreConstruction	04/21/2027
Construction	06/16/2027
Closeout	08/01/2029

COST ESTIMATE

Cost Estimate Class:	**Class 5 (-20% to +100%)**
PrePlanning	$0
PER	$0
Design	$1,241,000
PreConstruction	$50,000
Construction	$24,804,000
Closeout	$0
Est. Program Cost	**$26,095,000**
Contingency Budget	$5,219,000
Est. Project Costs	**$31,314,000**

GN016392

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

0 195 390 780 1,170 1,560 Feet

GN016392

VIP SWIFT Tertiary Facility

HRSD

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CIP Location

VIP SWIFT Tertiary Facility

PR_GN016392

System: VIP
Type: SWIFT

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

PROGRAM CASH FLOW PROJECTION ($,000)

Prog Cost	Exp to Previous Year	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35
$263,839	$0	$0	$6,840	$6,202	$50,239	$75,239	$75,239	$50,080	$0	$0	$0

PROJECT DESCRIPTION

This project will include the design, construction, and commissioning of the initial phase of SWIFT implementation, including tertiary treatment comprised of coagulation, flocculation, and sedimentation followed by granular media filters.

PROJECT JUSTIFICATION

This project will support HRSD's nutrient management strategy for meeting the 2032 Lower James River Basin total phosphorus discharge limits.

FUNDING TYPE

Funding Type: Revenue Bond

CONTACTS

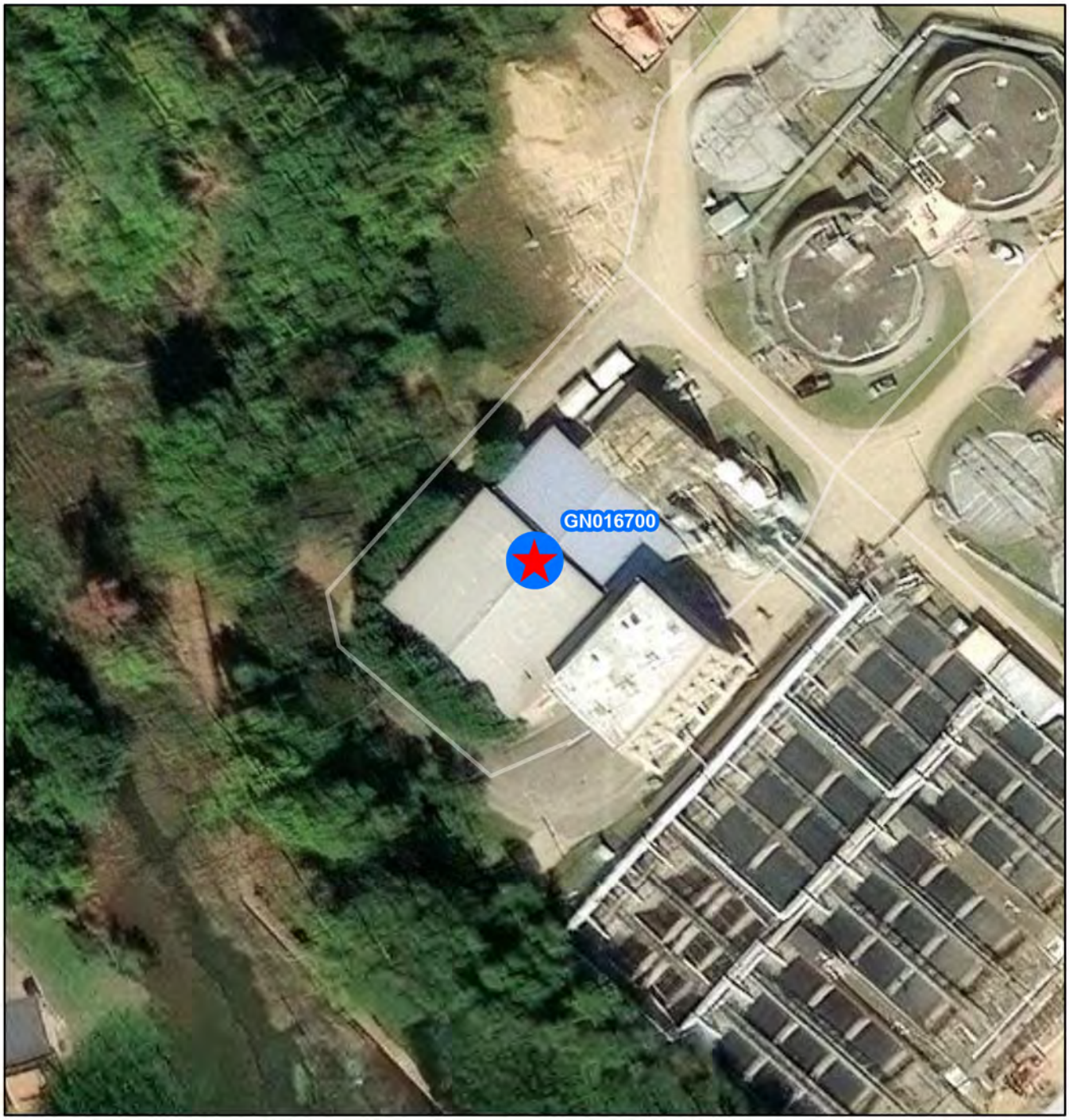
Contacts-Requesting Dept: Engineering
Contacts-Dept Contacts: Akshay Kumar
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning	
PER	07/04/2023
Design Delay	10/01/2024
Design	07/01/2026
Bid Delay	11/04/2027
PreConstruction	09/01/2027
Construction	03/06/2028
Closeout	10/01/2031

COST ESTIMATE

Cost Estimate Class:	**Class 5 (-20% to +100%)**
PrePlanning	$0
PER	$0
Design	$12,540,000
PreConstruction	$502,000
Construction	$250,797,000
Closeout	$0
Est. Program Cost	**$263,839,000**
Contingency Budget	$52,767,800
Est. Project Costs	**$316,606,800**



GN016700

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

0 25 50 100 150 200 Feet

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CIP Location

GN016700

Treatment Plant Solids Handling Replacement Phase II

HRSD

Treatment Plant Solids Handling Replacement Phase II

PR_GN016700

System: General
Type: Biosolids

Driver Category: Capacity Improvements
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
$9,680	$1,966	$2,963	$3,793	$958	$0	$0	$0	$0	$0	$0	$0

PROJECT DESCRIPTION

This project will replace two and refurbish one Dewatering Centrifuges at the James River Treatment Plant (JRTP). The one existing Sharples DS706 Centrifuges and required accessory equipment will be uninstalled, refurbished, and reinstalled at the JRTP. Additionally, two DS-706 centrifuges acquired from Denver Metro will be rehabilitated and installed at the JRTP, for a total of three Sharples DS-706 machines in the facility. In addition to the dewatering equipment replacement, this project will replace ancillary equipment to the dewatering process, include centrate piping and NPW pumps and piping. This project will also include the construction of a new control room for a RIO cabinet on the third floor of the Dewatering Building.

PROJECT JUSTIFICATION

Rehabilitating and replacing the existing dewatering centrifuges at JRTP with like dewatering equipment, instrumentation/controls, and operations across all dewatering systems will provide the plant with reliable dewatering processes as SWIFT comes online. This project will allow for leveraging of existing assets for established needs, renewing dewatering at JRTP with equipment that improves resource and operational efficiencies.

FUNDING TYPE

Funding Type: Revenue Bond

CONTACTS

Contacts-Requesting Dept: Operations-Treatment
Contacts-Dept Contacts: Angela Weatherhead
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning	07/02/2018
PER	01/01/2020
Design Delay	03/22/2021
Design	08/01/2024
Bid Delay	08/01/2025
PreConstruction	08/01/2025
Construction	10/01/2025
Closeout	10/01/2027

COST ESTIMATE

Cost Estimate Class:	**Class 2 (-5% to +20%)**
PrePlanning	$0
PER	$0
Design	$1,328,508
PreConstruction	$15,000
Construction	$8,326,961
Closeout	$10,000
Est. Program Cost	**$9,680,469**
Contingency Budget	$1,486,957
Est. Project Costs	**$11,167,426**

Interceptor Systems PS Control and SCADA Upgrades and Enhancements Phase II

PR_GN017200

System: General
Type: Software and Technology

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

PROGRAM CASH FLOW PROJECTION ($,000)

Prog Cost	Exp to Previous Year	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35
$10,505	$8,935	$819	$751	$0	$0	$0	$0	$0	$0	$0	$0

PROJECT DESCRIPTION

This project provides for implementation of Phase II of the Interceptor System Supervisory Control and Data Acquisition System (SCADA). This project will replace approximately 130 control panels at remote HRSD facilities. The project will also provide replacement of the current top-end SCADA software and hardware.

PROJECT JUSTIFICATION

The existing remote facilities require replacement of the control panels and SCADA system to provide operational improvements and replace aging equipment that was installed in the 1990s. The current design of the control panels at the remote facilities does not promote adequate data acquisition, supervisory control, or emerging control technologies.

FUNDING TYPE

Funding Type: Cash

CONTACTS

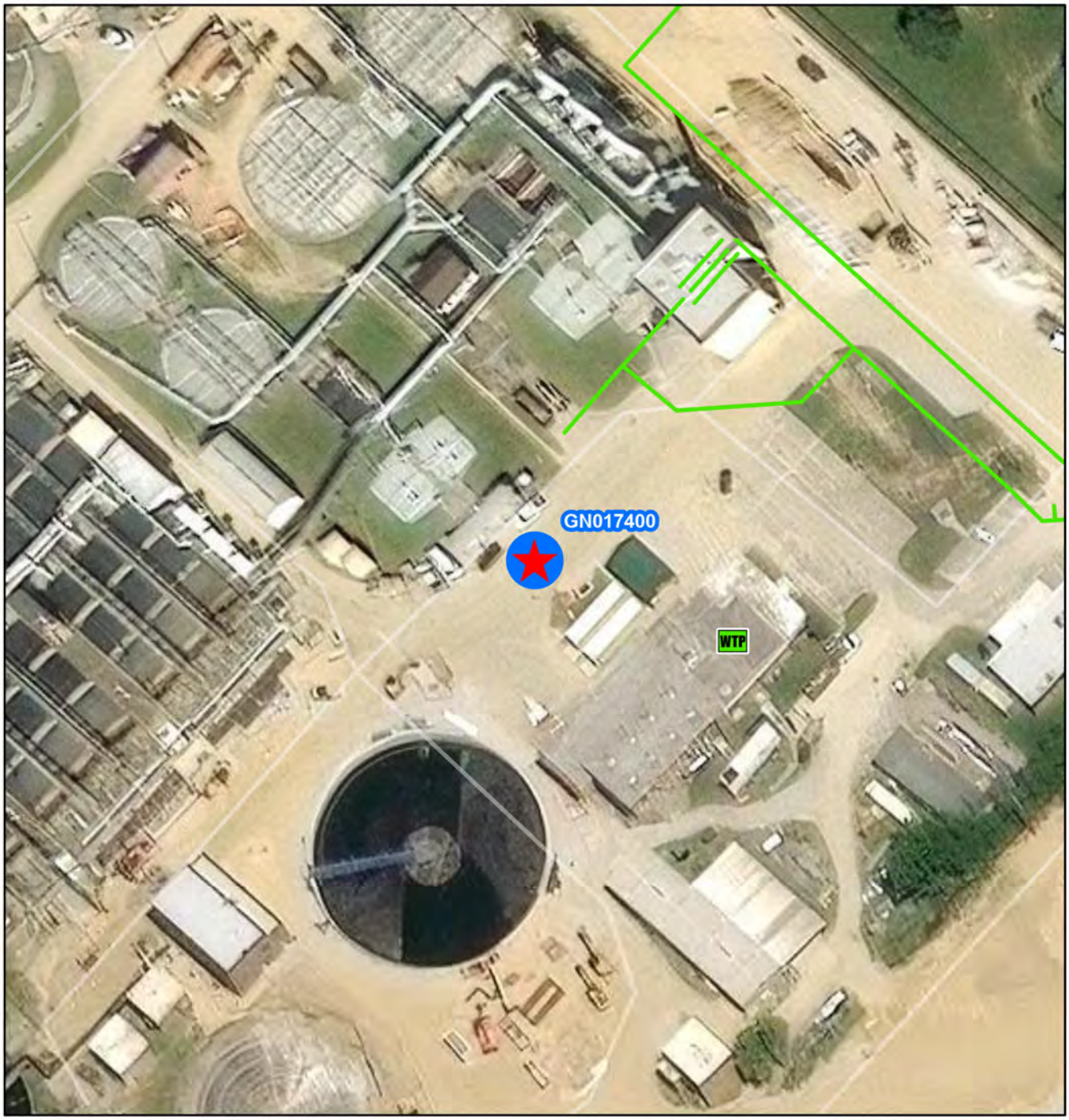
Contacts-Requesting Dept: Operations-Interceptors
Contacts-Dept Contacts: Chris Stephan
Contacts-Managing Dept: Operations-Interceptors

PROPOSED SCHEDULE START DATE

PrePlanning	05/01/2020
PER	05/01/2020
Design Delay	05/01/2020
Design	05/01/2020
Bid Delay	05/01/2020
PreConstruction	05/01/2020
Construction	07/01/2020
Closeout	08/01/2022

COST ESTIMATE

Cost Estimate Class:	**Class 1 (-3% to +15%)**
PrePlanning	$0
PER	$0
Design	$0
PreConstruction	$0
Construction	$10,505,000
Closeout	$0
Est. Program Cost	**$10,505,000**
Contingency Budget	$0
Est. Project Costs	**$10,505,000**



GN017400

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

0 25 50 100 150 200 Feet

GN017400

Treatment Plant Dewatering Replacement Phase III

HRSD

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CIP Location

Treatment Plant Dewatering Replacement Phase III

PR_GN017400

System: General
Type: Biosolids

Driver Category: Capacity Improvements
Project Phase: Design
Regulatory: Nutrient Reduction

PROGRAM CASH FLOW PROJECTION ($,000)

Prog Cost	Exp to Previous Year	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35
$12,743	$2,073	$5,815	$4,848	$8	$0	$0	$0	$0	$0	$0	$0

PROJECT DESCRIPTION

This project includes evaluation, design, and construction relating to the modification of the solids handling building for the installation of two HRSD-owned final dewatering centrifuges. Additionally, the project will include rehabilitation as needed of HRSD-owned centrifuges currently installed and in operation at the James River Treatment Plant (JRTP) (DS706) and Chesapeake-Elizabeth Treatment Plant (CETP) (PM76000). These centrifuges will be installed in locations with no currently installed centrifuges at Virginia Initiative Plant (VIP), requiring addition of cake conveyors and other appurtenance to feed solids and polymer to the centrifuges, to convey dewatered solids cake to the multiple hearth furnace, and to connect to the centrate drain.

PROJECT JUSTIFICATION

This project will increase capacity of solids handling systems at the VIP by increasing hydraulic throughput of solids dewatering by the installation of larger centrifuges. Currently, primary sludge pumping and activated solids wastage is intermittently limited by hydraulic throughput limitations of existing dewatering centrifuges. Limitations to solids pumping and wastage due to existing centrifuge hydraulic capacity have caused upset to nutrient removal performance at VIP.

FUNDING TYPE

Funding Type: Revenue Bond

CONTACTS

Contacts-Requesting Dept: Operations-Treatment
Contacts-Dept Contacts: Angela Weatherhead
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning	10/01/2021
PER	10/31/2021
Design Delay	07/05/2023
Design	08/01/2023
Bid Delay	04/01/2025
PreConstruction	04/01/2025
Construction	05/01/2025
Closeout	04/01/2027

COST ESTIMATE

Cost Estimate Class:	**Class 2 (-5% to +20%)**
PrePlanning	$0
PER	$290,408
Design	$747,174
PreConstruction	$13,484
Construction	$11,682,026
Closeout	$10,000
Est. Program Cost	**$12,743,092**
Contingency Budget	$2,108,742
Est. Project Costs	**$14,851,834**

Fleet Management Program

PR_GN017500

System: General
Type: Facilities, Buildings and Capital Equipment

Driver Category: Aging Infrastructure/Rehabilitation
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
$19,232	$625	$1,876	$1,876	$1,876	$1,876	$1,876	$1,876	$1,876	$1,876	$1,876	$1,720

PROJECT DESCRIPTION

This project will provide funding for the scheduled replacement of fleet assets.

PROJECT JUSTIFICATION

Fleet assets are on a scheduled replacement plan. This program will ensure there is funding in each fiscal year to meet the replacement schedule.

FUNDING TYPE

Funding Type: Cash

CONTACTS

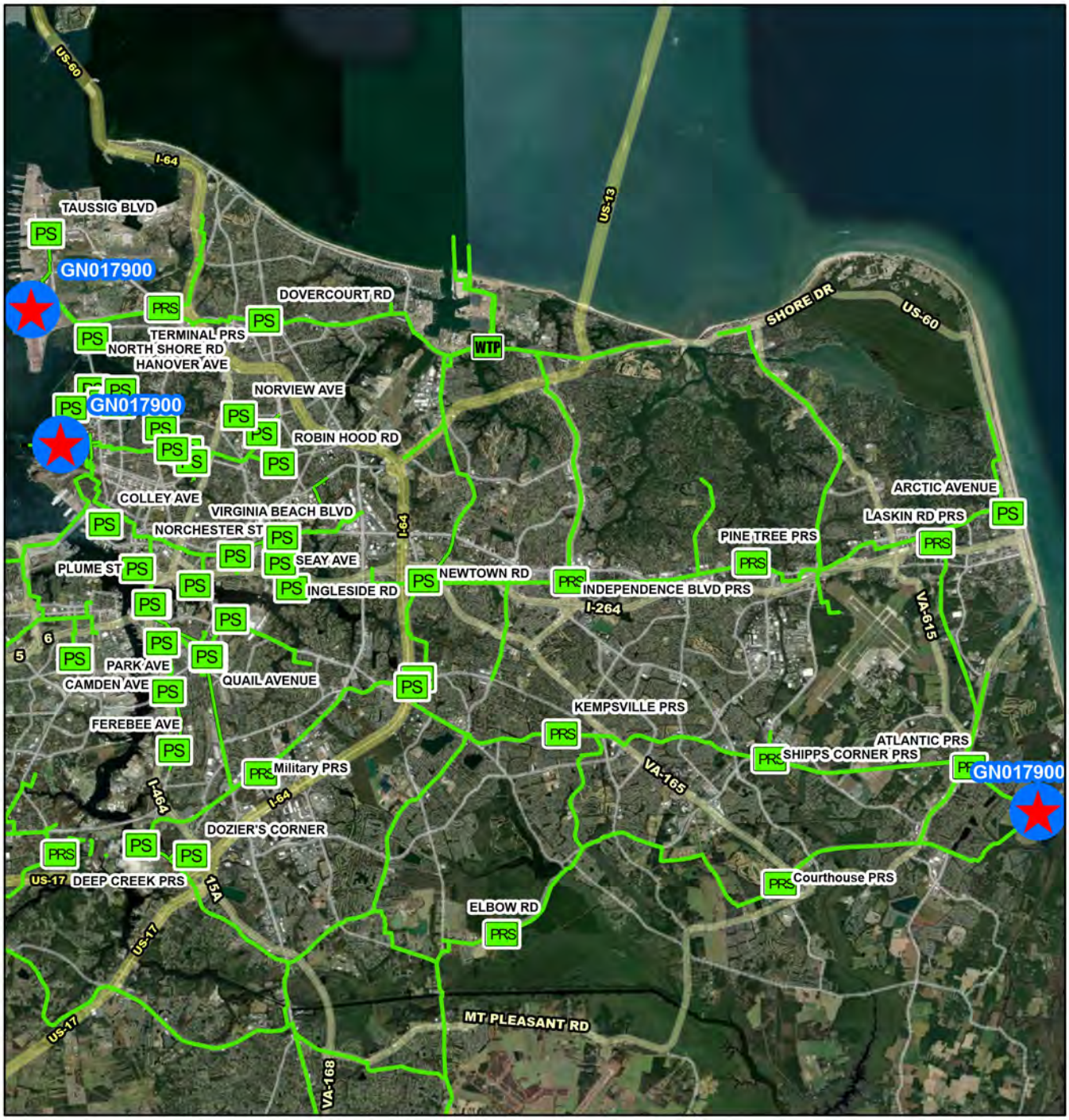
Contacts-Requesting Dept: Operations-Support Systems
Contacts-Dept Contacts: Lee Heath
Contacts-Managing Dept: Operations-Support Systems

PROPOSED SCHEDULE START DATE

PrePlanning	07/01/2020
PER	07/01/2020
Design Delay	07/01/2020
Design	07/01/2020
Bid Delay	07/01/2020
PreConstruction	07/01/2020
Construction	07/01/2026
Closeout	06/01/2035

COST ESTIMATE

Cost Estimate Class:	**Class 5 (-20% to +100%)**
PrePlanning	$0
PER	$0
Design	$0
PreConstruction	$0
Construction	$19,231,506
Closeout	$0
Est. Program Cost	**$19,231,506**
Contingency Budget	$0
Est. Project Costs	**$19,231,506**



GN017900

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

0 5,000 10,000 20,000 30,000 40,000 Feet

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CIP Location

GN017900

Solids System Improvements for Army Base MHI Offline

HRSD

Solids System Improvements for Army Base MHI Offline

PR_GN017900

System: General
Type: Biosolids

Driver Category: Clean Air Act
Project Phase: Construction
Regulatory: Clean Air Act

PROGRAM CASH FLOW PROJECTION ($,000)

Prog Cost	Exp to Previous Year	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35
$7,211	$6,210	$800	$200	$0	$0	$0	$0	$0	$0	$0	$0

PROJECT DESCRIPTION

Design and installation of thickened liquid solids load out facilities at Army Base Treatment Plant (ABTP) and thickened liquid solids load in facilities at Atlantic Treatment Plant (ATP) and Virginia Initiative Plant (VIP). Completed facilities will leverage existing solids handling capacity at receiving plants to remove solids handling facilities at ABTP from operation (including dewatering and multiple hearth incinerator (MHI) operations). Utilizing improvements will require contracting of thickened liquid solids hauling from ABTP to ATP and VIP.

PROJECT JUSTIFICATION

Project is projected to reduce net annual operating expenses for ABTP solids management by approximately $100,000/year. Removing ABTP solids handling systems from operation will reduce baseline operational staffing requirements at ABTP by four (4) Plant Operators, one (1) Maintenance Operator, one (1) Maintenance Operator Assistant; reduce electrical energy requirements at ABTP by 27 percent; and reduce net carbon emissions associated with ABTP solids management (inclusive of contract hauling of thickened liquid sludge) by 2,880 tons CO2e/year (35% of current ABTP net annual emissions). Removing ABTP MHI from operation mitigates regulatory risk of CAA129 MACT standards non-compliance.

FUNDING TYPE

Funding Type: VCWRLF

CONTACTS

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

PROPOSED SCHEDULE START DATE

PrePlanning	07/01/2020
PER	10/14/2020
Design Delay	05/17/2021
Design	05/19/2021
Bid Delay	02/11/2022
PreConstruction	05/02/2022
Construction	08/10/2022
Closeout	10/01/2024

COST ESTIMATE

Cost Estimate Class:	**Class 1 (-3% to +15%)**
PrePlanning	$0
PER	$44,864
Design	$573,028
PreConstruction	$17,938
Construction	$4,974,309
Closeout	$1,600,587
Est. Program Cost	**$7,210,726**
Contingency Budget	$280,000
Est. Project Costs	**$7,490,726**

North Shore Galvanic Cathodic Protection Rehabilitation

PR_GN018600

System: General
Type: Pipelines

Driver Category: Aging Infrastructure/Rehabilitation
Project Phase: Pre Planning
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
$2,014	$750	$1,214	$50	$0	$0	$0	$0	$0	$0	$0	$0

PROJECT DESCRIPTION

This project will renew eleven (11) Cathodic Protection(CP) systems in the Interceptor system currently protecting force mains with a high consequence of failure. The Interceptor force main CP systems requiring renewal consists of NF-015, NF-170, NF-172, NF-197, NF-204, NF-205, NF-215, NF-216, NF-217, NF-223, NF-961.

PROJECT JUSTIFICATION

The identified cathodic protection systems are no longer providing an adequate level of protection for force mains located in highly corrosive soils, which increases the potential for future failures due to external corrosion. The CP system renewals associated with NF-172, NF-204, and NF-205 are part of the Rehab Action Plan Phase 2 projects.

FUNDING TYPE

Funding Type: Revenue Bond

CONTACTS

Contacts-Requesting Dept: Engineering
Contacts-Dept Contacts: Phil Hughes
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning	12/01/2022
PER	02/02/2023
Design Delay	07/03/2023
Design	02/01/2024
Bid Delay	02/01/2025
PreConstruction	02/01/2025
Construction	02/01/2025
Closeout	04/01/2026

COST ESTIMATE

Cost Estimate Class:	**Class 1 (-3% to +15%)**
PrePlanning	$0
PER	$0
Design	$219,113
PreConstruction	$21,911
Construction	$1,705,892
Closeout	$67,000
Est. Program Cost	**$2,013,916**
Contingency Budget	$335,973
Est. Project Costs	**$2,349,889**

South Shore Galvanic Cathodic Protection Rehabilitation Phase I

PR_GN018700

System: General
Type: Pipelines

Driver Category: Aging Infrastructure/Rehabilitation
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
$2,911	$196	$662	$2,018	$34	$0	$0	$0	$0	$0	$0	$0

PROJECT DESCRIPTION

This project will renew twelve (12) Cathodic Protection(CP) systems in the Interceptor system currently protecting force mains with a high consequence of failure. The Interceptor force main CP systems requiring renewal consists of SF-024, SF-081, SF-082, SF-083, SF-283, SF-084, SF-126, SF-172, SF 225,- SF-260, SF-268, and SF-281.

PROJECT JUSTIFICATION

The identified cathodic protection systems are no longer providing an adequate level of protection for force mains located in highly corrosive soils, which increases the potential for future failures due to external corrosion.

FUNDING TYPE

Funding Type: Revenue Bond

CONTACTS

Contacts-Requesting Dept: Engineering
Contacts-Dept Contacts: Phil Hughes
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning	03/01/2024
PER	05/02/2024
Design Delay	07/01/2025
Design	07/01/2025
Bid Delay	04/01/2026
PreConstruction	04/01/2026
Construction	06/01/2026
Closeout	01/01/2027

COST ESTIMATE

Cost Estimate Class:	**Class 1 (-3% to +15%)**
PrePlanning	$0
PER	$196,450
Design	$302,042
PreConstruction	$29,468
Construction	$2,315,655
Closeout	$67,000
Est. Program Cost	**$2,910,615**
Contingency Budget	$463,131
Est. Project Costs	**$3,373,746**

South Shore Galvanic Cathodic Protection Rehabilitation Phase II

PR_GN018800

System: General
Type: Pipelines

Driver Category: Aging Infrastructure/Rehabilitation
Project Phase: Pre Planning
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
$2,707	$1,021	$1,635	$50	$0	$0	$0	$0	$0	$0	$0	$0

PROJECT DESCRIPTION

This project will renew eleven (11) Cathodic Protection(CP) systems in the Interceptor system currently protecting force mains with a high consequence of failure. The interceptor force main CP systems requiring renewal will consist of SF-216, SF-223, SF-235, SF-261, SF-262, SF-263, SF-265, SF 270, SF-274, SF-275, and SF-284.

PROJECT JUSTIFICATION

The identified cathodic protection systems are no longer providing an adequate level of protection for force mains located in highly corrosive soils, which increases the potential for future failures due to external corrosion. The CP system renewal associated with SF-262 is part of the Rehab Action Plan Phase 2 projects.

FUNDING TYPE

Funding Type: Revenue Bond

CONTACTS

Contacts-Requesting Dept: Engineering
Contacts-Dept Contacts: Phil Hughes
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning	07/03/2023
PER	09/04/2023
Design Delay	02/02/2024
Design	02/01/2024
Bid Delay	02/01/2025
PreConstruction	02/01/2025
Construction	02/01/2025
Closeout	04/01/2026

COST ESTIMATE

Cost Estimate Class:	**Class 1 (-3% to +15%)**
PrePlanning	$0
PER	$0
Design	$294,683
PreConstruction	$29,468
Construction	$2,315,718
Closeout	$67,000
Est. Program Cost	**$2,706,869**
Contingency Budget	$451,847
Est. Project Costs	**$3,158,716**

Pump Station Motor Control Center Replacements - Phase I

PR_GN018900

System: General
Type: Electrical

Driver Category: Aging Infrastructure/Rehabilitation
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
$2,864	$438	$766	$766	$766	$128	$0	$0	$0	$0	$0	$0

PROJECT DESCRIPTION

This project is to replace Motor Control Centers (MCCs) at various pump stations located within HRSD service area that have exhibited signs of copper bus bar deterioration. The bus bar condition was identified while performing annual maintenance inspections.

PROJECT JUSTIFICATION

This project will improve the overall reliability of HRSD's collection systems to prevent disruptions to the electrical distribution system, and safeguard HRSD employees from potential exposure to an arc flash event. This project will include the replacement of variable frequency drives (VFD's), motor control center (MCC), and associated electrical equipment. Lastly, the project will involve the installation of an air purification system to help mitigate hydrogen sulfide (H2S) gases which is the leading cause of copper bus bar deterioration.

FUNDING TYPE

Funding Type: Revenue Bond

CONTACTS

Contacts-Requesting Dept: Operations-E&I
Contacts-Dept Contacts: Sherman Pressey
Contacts-Managing Dept: Operations-E&I

PROPOSED SCHEDULE START DATE

PrePlanning	05/19/2023
PER	05/19/2023
Design Delay	05/19/2023
Design	05/19/2023
Bid Delay	05/19/2023
PreConstruction	05/19/2023
Construction	09/01/2023
Closeout	09/01/2025

COST ESTIMATE

Cost Estimate Class:	**Class 5 (-20% to +100%)**
PrePlanning	$0
PER	$0
Design	$0
PreConstruction	$0
Construction	$2,863,500
Closeout	$0
Est. Program Cost	**$2,863,500**
Contingency Budget	$572,700
Est. Project Costs	**$3,436,200**

Water Quality Department Instrumentation Equipment Program

PR_GN019400

System: General
Type: Facilities, Buildings and Capital Equipment

Driver Category: Performance Upgrades
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
$4,466	$0	$646	$646	$646	$646	$646	$646	$592	$0	$0	$0

PROJECT DESCRIPTION

This project will provide funding for analytical equipment for the Water Quality Department.

PROJECT JUSTIFICATION

The sampling and analytical equipment will support various projects and programs led by the Water Quality Department. This program will ensure there is funding in each fiscal year to meet the Department's needs.

FUNDING TYPE

Funding Type: Cash

CONTACTS

Contacts-Requesting Dept: Water Quality
Contacts-Dept Contacts: Jamie Mitchell
Contacts-Managing Dept: Water Quality

PROPOSED SCHEDULE START DATE

PrePlanning	07/01/2024
PER	07/01/2024
Design Delay	07/01/2024
Design	07/01/2024
Bid Delay	07/01/2024
PreConstruction	07/01/2024
Construction	07/01/2025
Closeout	06/02/2032

COST ESTIMATE

Cost Estimate Class:	**Class 5 (-20% to +100%)**
PrePlanning	$0
PER	$0
Design	$0
PreConstruction	$0
Construction	$4,466,157
Closeout	$0
Est. Program Cost	**$4,466,157**
Contingency Budget	$0
Est. Project Costs	**$4,466,157**

Interceptor Systems PS Control and SCADA Upgrades and Enhancements Phase III

PR_GN019600

System: General
Type: Pump Stations

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

PROGRAM CASH FLOW PROJECTION ($,000)

Prog Cost	Exp to Previous Year	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35
$10,457	$1,087	$2,272	$3,701	$3,398	$0	$0	$0	$0	$0	$0	$0

PROJECT DESCRIPTION

This project includes a comprehensive review of the SCADA system to ensure the long-term viability of the system to extend into machine learning and SmartSewer applications. The project also includes the upgrades necessary to provide additional, necessary functionality. Additional functionality will include VeeterRoot (Emergency Generator - Diesel UST) levels, leak detection, and total fuel quantities; Emergency Generator and ATS Power Management connectivity and graphics; as well as individual VFD network cards and ethernet modbus communication to pump station variable frequency drives.

PROJECT JUSTIFICATION

The original SCADA system requirements were developed over fifteen years ago and technology has progressed and may have outpaced the original design. A comprehensive review of the network architecture, communications, database architecture, and system requirements is necessary to ensure the viability of the system to maximize security, minimize life-cycle costs, and ensure a viable platform to extend into machine learning and SmartSewer applications. Additional functionality will be extended and include upgrades to and inclusion of HRSD's VeeterRoot UST Leak detection systems, which include a wide range of mostly outdated models and alarms. This project will update all systems to the latest technology and provide network cards to communicate this data to the top-end SCADA system. Leak detection, inner wall annular floats, sump floats, belly tanks, and fuel transfer pump conditions are a necessity for proper management, alarming, and upkeep for each pump station. USTs are regulated by DEQ and these project improvements will provide a means for required leak detection and alarming, and ultimately better fuel management. Emergency Generator, ATS, VFD, and Power Management connectivity are also included upgrades with this project for total visibility into each pump station's operation and power consumption. Availability of this data through the SCADA system will provide for complete awareness and better overall operations at each pump station.

FUNDING TYPE

Funding Type: Cash

CONTACTS

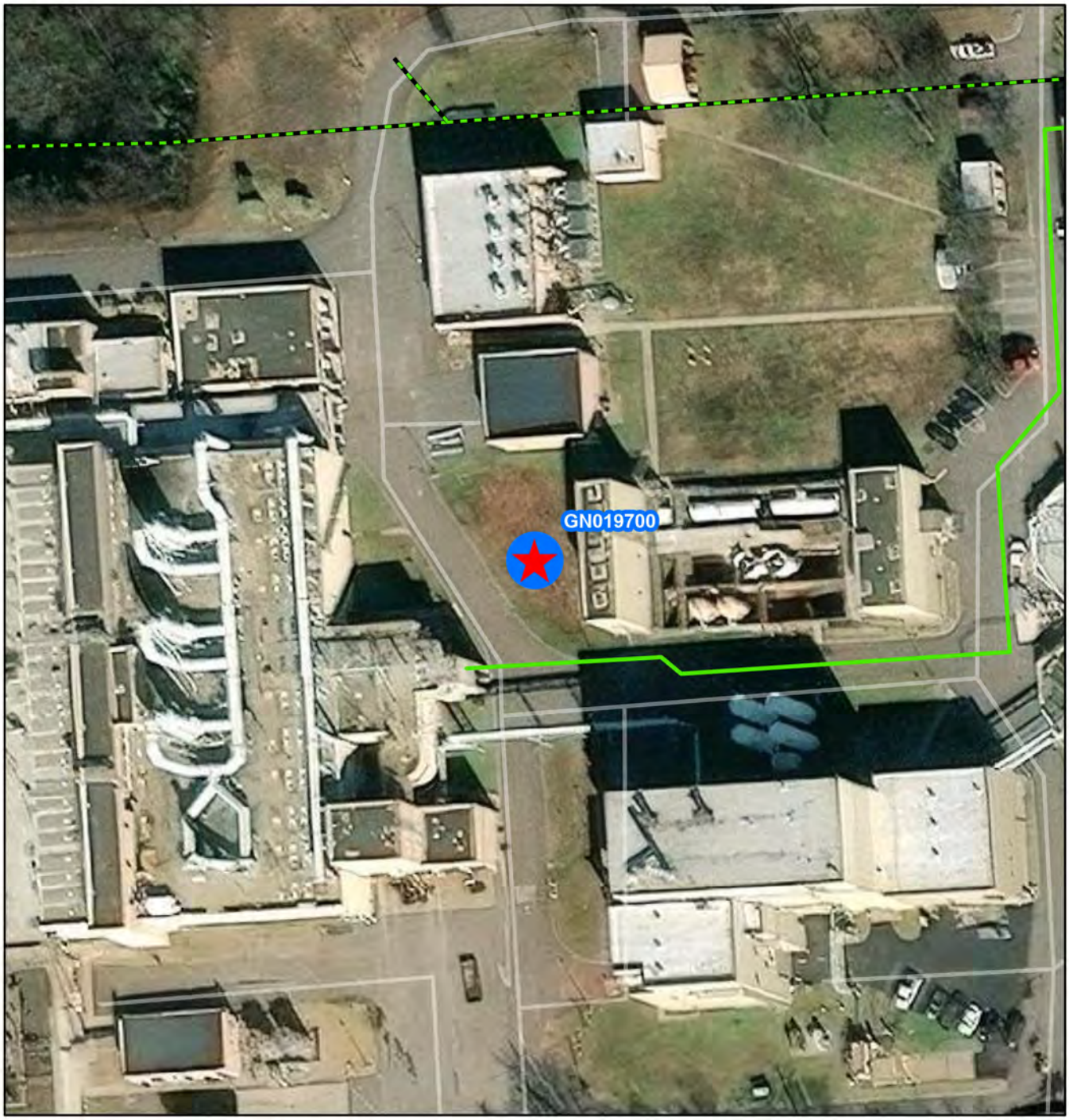
Contacts-Requesting Dept: Operations-Interceptors
Contacts-Dept Contacts: Ted Denny
Contacts-Managing Dept: Operations-Interceptors

PROPOSED SCHEDULE START DATE

PrePlanning	09/02/2024
PER	09/02/2024
Design Delay	04/01/2025
Design	04/01/2025
Bid Delay	09/03/2025
PreConstruction	09/03/2025
Construction	01/02/2026
Closeout	06/01/2028

COST ESTIMATE

Cost Estimate Class:	**Class 5 (-20% to +100%)**
PrePlanning	$0
PER	$462,760
Design	$1,040,000
PreConstruction	$5,200
Construction	$8,944,000
Closeout	$5,200
Est. Program Cost	**$10,457,160**
Contingency Budget	$1,778,400
Est. Project Costs	**$12,235,560**



GN019700

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

0 25 50 100 150 200 Feet

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CIP Location

GN019700

Treatment Plant Dewatering Improvement Phase IV

HRSD

Treatment Plant Dewatering Improvement Phase IV

PR_GN019700

System: General
Type: Biosolids

Driver Category: Performance Upgrades
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
$10,502	$1,502	$4,903	$4,089	$8	$0	$0	$0	$0	$0	$0	$0

PROJECT DESCRIPTION

This project will design and install improvements at the Virginia Initiative Plant to include the addition of two gravity belt thickeners for waste-activated sludge thickening and provide necessary electrical, control, and mechanical improvements to make the system operable.

PROJECT JUSTIFICATION

Wastage of Activated Sludge from the VIP Biological Nutrient Removal (BNR) process is intermittently hydraulically limited by the capacity of dewatering centrifuges and centrate management systems. This project will un-bottleneck the treatment process and allow on-demand wastage of solids from the BNR process, which will improve treatment performance at VIP and stabilize solids handling operations, including centrifuge dewatering and incineration. This improvement will also help VIP to better accommodate hauled liquid primary solids from Army Base Treatment Plant (ABTP) by reducing the overall hydraulic load on the VIP dewatering centrifuges. Feasibility of the proposed improvements has been previously investigated under GN017400 in support of the budget and schedule estimates shown.

FUNDING TYPE

Funding Type: Revenue Bond

CONTACTS

Contacts-Requesting Dept: Operations
Contacts-Dept Contacts: Angela Weatherhead
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning	01/02/2023
PER	07/31/2023
Design Delay	12/04/2023
Design	08/01/2023
Bid Delay	04/01/2025
PreConstruction	04/01/2025
Construction	05/01/2025
Closeout	04/01/2027

COST ESTIMATE

Cost Estimate Class:	**Class 2 (-5% to +20%)**
PrePlanning	$0
PER	$0
Design	$673,839
PreConstruction	$10,817
Construction	$9,806,899
Closeout	$10,000
Est. Program Cost	**$10,501,555**
Contingency Budget	$1,751,232
Est. Project Costs	**$12,252,787**

GN020000

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

0 25 50 100 150 200 Feet

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W E
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CIP Location

GN020000

Solar Panel Installation Phase I

HRSD

Solar Panel Installation Phase I

PR_GN020000

System: General
Type: Facilities, Buildings and Capital Equipment

Driver Category: Cost Recovery
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
$1,131	$0	$0	$0	$0	$0	$754	$377	$0	$0	$0	$0

PROJECT DESCRIPTION

This project is to install solar panels on the roofs of two buildings of the South Shore Operation complex: buildings 1434 and 1436.

PROJECT JUSTIFICATION

As part of HRSD's Resource Recovery initiatives, solar-powered systems provide a sustainable, renewable source of power at a reduced operating cost. The payback is 8 years and the cost includes a 20-year labor and maintenance warranty.

FUNDING TYPE

Funding Type: Cash

CONTACTS

Contacts-Requesting Dept: Operations-Treatment
Contacts-Dept Contacts: Charles Wright
Contacts-Managing Dept: Operations

PROPOSED SCHEDULE START DATE

PrePlanning	07/01/2025
PER	07/03/2029
Design Delay	07/03/2029
Design	07/03/2029
Bid Delay	07/03/2029
PreConstruction	07/03/2029
Construction	07/03/2029
Closeout	01/02/2031

COST ESTIMATE

Cost Estimate Class:	**Class 10**
PrePlanning	$0
PER	$0
Design	$0
PreConstruction	$0
Construction	$1,131,477
Closeout	$0
Est. Program Cost	**$1,131,477**
Contingency Budget	$0
Est. Project Costs	**$1,131,477**

Treatment Plant Fire Suppression System Upgrades

PR_GN020200

System: General
Type: Facilities, Buildings and Capital Equipment

Driver Category: Safety Compliance
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
$1,125	$437	$688	$0	$0	$0	$0	$0	$0	$0	$0	$0

PROJECT DESCRIPTION

This project will develop conceptual designs and Class 5 estimates to address the existing fire suppression systems at the York River Treatment Plant, Army Base Treatment Plant, Nansemond Treatment Plant and Virginia Initiative Treatment Plant. Currently the fire suppression system at these plant methanol facilities utilize an Alcohol Resistant Aqueous Film Forming Foam (AR-AFFF) that contains Perfluoroalkyl and Polyfluoroalkyl (PFAS). Refilling the existing extinguishers with AR-AFFF will no longer be permitted due to the environmental and health concerns associated with PFAS. The new or upgraded systems will utilize a non-PFAS flourine free foam to extinguish fires

PROJECT JUSTIFICATION

The current methanol fire suppression systems use AR-AFFF which contains PFAS. AR-AFFF foam is being phased out due to the Federal Forever Chemical Regulation Accountability Act of 2024. If any of these fire suppression systems are discharged the existing system cannot be re-charged.
In the past, some of these fire suppression systems have experienced false alarms and equipment malfunction causing activation of the AR-AFFF. This item was brough to the 9/11/23 HRSD QST and agreed to be an out of cycle CIP.

FUNDING TYPE

Funding Type: Revenue Bond

CONTACTS

Contacts-Requesting Dept: Operations-Support Systems
Contacts-Dept Contacts: Delane Carty
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning	11/01/2024
PER	06/01/2025
Design Delay	06/01/2025
Design	04/01/2025
Bid Delay	06/01/2025
PreConstruction	06/01/2025
Construction	06/01/2025
Closeout	06/01/2025

COST ESTIMATE

Cost Estimate Class:	**Class 1 (-3% to +15%)**
PrePlanning	$92,986
PER	$0
Design	$1,032,434
PreConstruction	$0
Construction	$0
Closeout	$0
Est. Program Cost	**$1,125,420**
Contingency Budget	$674,580
Est. Project Costs	**$1,800,000**

High Priority Inflow and Infiltration Reduction Program

PR_GN020300

System: General
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	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35
$11,500	$9,491	$2,009	$0	$0	$0	$0	$0	$0	$0	$0	$0

PROJECT DESCRIPTION

Pre-planning, negotiation, as well as the initial data collection, analysis, and planning phases of the larger Inflow and Infiltration (II) Program, which will include the following CIP Projects: AT014301; JR013700; NP013901; NP014801; VP019300; and WB013200. These projects and the overall Program will be delivered via the PPEA project delivery method.

PROJECT JUSTIFICATION

Inflow and infiltration projects require extensive field investigation due to the unknown location and severity of defects that allow the extraneous stormwater and groundwater into the sanitary sewer system. They also tend to be long-duration and iterative in nature, as predicting the success of any rehabilitation activities is not possible due to the rather "fluid" nature of surface and groundwater in that they can migrate within a basin to find unfixed defects. Thus, these projects also typically involve multiple investigation cycles, rehabilitation, and verification. Given the relatively short period over which this $130 million in inflow and infiltration work must be completed and the iterative nature of these projects, staff believes that combining the remaining projects into a single alternative delivery contract is the best path forward. However, the inability to properly define the scope of the work ahead of releasing the request for qualifications makes traditional design-build unrealistic. Therefore, utilizing the Public-Private Education Facilities and Infrastructure Act of 2002 (PPEA) provides the flexibility to hire a firm (or firms) qualified in this type of work, and allows the collaborative development of the scope of work through multiple task orders. In addition, since the type, location, and amount of construction activities cannot be predicted at this time, the alternative delivery team should be led by an engineering firm that can directly contract with construction firms, as necessary, to complete these projects. In this way, the single engineering firm will also have complete control over the relatively limited pool of contractors equipped to do the type of rehabilitation activities likely to be heavily utilized on these projects.

FUNDING TYPE

Funding Type: Cash

CONTACTS

Contacts-Requesting Dept: Engineering
Contacts-Dept Contacts: Beatriz Patino
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning	11/01/2023
PER	08/01/2025
Design Delay	08/01/2025
Design	08/01/2025
Bid Delay	08/01/2025
PreConstruction	08/01/2025
Construction	08/01/2025
Closeout	08/01/2025

COST ESTIMATE

Cost Estimate Class:	**Class 1 (-3% to +15%)**
PrePlanning	$11,500,000
PER	$0
Design	$0
PreConstruction	$0
Construction	$0
Closeout	$0
Est. Program Cost	**$11,500,000**
Contingency Budget	$260,000
Est. Project Costs	**$11,760,000**

High Priority Inflow and Infiltration Reduction Program Implementation

PR_GN020310

System: General
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	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35
$113,716	$0	$26,314	$46,962	$36,987	$3,452	$0	$0	$0	$0	$0	$0

PROJECT DESCRIPTION

This project encompasses the program management, design, construction, and post construction activities identified in the High Priority Inflow and Infiltration Reduction Program (HPIIRP) and combines the associated CIP projects: AT014301; JR013700; NP013901; NP014801; VP019300; and WB013200. These activities include, but are not limited to: program management and controls, design, construction, public outreach and stakeholder engagement, flow monitoring, Sanitary Sewer Evaluation Surveys (SSES), cost effective analysis, hydraulic modeling, private I&I investigations, post construction modeling as well as development of the Adaptative Management Plan. This project and the overall Program are being delivered via the PPEA project delivery method.

PROJECT JUSTIFICATION

The existing GN020300 Project, covers the pre-planning, negotiation and initial data collection analysis of the overall HPIIRP program as part of the interim agreement with the Design-Build (D-B) firm. This agreement is scheduled to be finalized by late Summer 2025, once the concept plan and comprehensive agreement are in place. As part of the comprehensive agreement, the D-B Firm will execute the design, construction and post-construction activities associated to the following individual CIP projects: AT014301; JR013700; NP013901; NP014801; VP019300; and WB013200; however, due to the iterative nature of the program, certain programmatic activities, as well as design, construction and post-construction activities are not not specifically associated to one single project but a combination of them. Staff believes that a new CIP combining these activities would allow for the flexibility of executing them as the program progresses during the phases of of the program at the different project locations.

FUNDING TYPE

Funding Type: Cash

CONTACTS

Contacts-Requesting Dept: Engineering
Contacts-Dept Contacts: Beatriz Patino
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning	09/01/2025
PER	09/01/2025
Design Delay	09/01/2025
Design	09/01/2025
Bid Delay	09/01/2025
PreConstruction	01/01/2026
Construction	01/01/2026
Closeout	06/01/2028

COST ESTIMATE

Cost Estimate Class:	**Class 5 (-20% to +100%)**
PrePlanning	$0
PER	$0
Design	$17,000,000
PreConstruction	$0
Construction	$92,950,000
Closeout	$3,765,840
Est. Program Cost	**$113,715,840**
Contingency Budget	$30,000,000
Est. Project Costs	**$143,715,840**

Fleet Management (FY25)

PR_GN020400

System: General
Type: Facilities, Buildings and Capital Equipment

Driver Category: Aging Infrastructure/Rehabilitation
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
$4,433	$2,917	$1,516	$0	$0	$0	$0	$0	$0	$0	$0	$0

PROJECT DESCRIPTION

This project will provide for replacement of aging fleet vehicles and purchase of additional vehicles to meet the needs of the organization. An itemized list of vehicles to be replaced or added is maintained by the Support Systems Division.

PROJECT JUSTIFICATION

Replacement of aging vehicles will result in lower repair costs and the purchase of additional vehicles will provide for increased staff efficiency.

FUNDING TYPE

Funding Type: Cash

CONTACTS

Contacts-Requesting Dept: Operations-Support Systems
Contacts-Dept Contacts: Lee Heath
Contacts-Managing Dept: Operations-Support Systems

PROPOSED SCHEDULE START DATE

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

COST ESTIMATE

Cost Estimate Class:	**Class 1 (-3% to +15%)**
PrePlanning	$1,401,665
PER	$0
Design	$0
PreConstruction	$0
Construction	$3,031,115
Closeout	$0
Est. Program Cost	**$4,432,780**
Contingency Budget	$0
Est. Project Costs	**$4,432,780**

System: General
Type: Strategic Planning

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
$500	$198	$302	$0	$0	$0	$0	$0	$0	$0	$0	$0

PROJECT DESCRIPTION

This project calls for professional engineering services to develop a comprehensive Sanitary Sewer Development Plan - 2025. The Plan will serve as a roadmap to guide HRSD to plan, design, and construct future CIP projects to address system deficiencies and to identify future system capacity needs within the HRSD territory. The project includes a comprehensive analysis of population projections, zoning densities and land uses in conformance with existing Locality Comprehensive Plans and development activity trends. The Plan will identify system extensions and expansions based on short and long-range system needs. The master plan will result in a dynamic digital development plan using ESRI, Web Apps and Power BI that supports flexible decision making.

PROJECT JUSTIFICATION

This project is needed for HRSD to meet the challenges of the future in a cohesive, consistent, and comprehensive manner and to ensure HRSD's interceptor networks, treatment plants, and outfalls can accommodate future needs. Since the last HRSD Development Plan was published in 2003, many system improvements have been and continue to be implemented in support of HRSD initiatives. These initiatives include the Consent Decree, the Regional Wet Weather Management Plan (RWWMP), the Chesapeake-Elizabeth and Boat Harbor Treatment Plant decommissions, and the SWIFT program. Most of these initiatives were the result of regulatory requirements and compliance; strategic planning with a focus on long range capacity needs was not the main driver.

FUNDING TYPE

Funding Type: Cash

CONTACTS

Contacts-Requesting Dept: Engineering
Contacts-Dept Contacts: Bambos Charalambous
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning	10/01/2024
PER	10/01/2024
Design Delay	02/01/2026
Design	02/01/2026
Bid Delay	02/01/2026
PreConstruction	02/01/2026
Construction	02/01/2026
Closeout	02/01/2026

COST ESTIMATE

Cost Estimate Class:	**Class 1 (-3% to +15%)**
PrePlanning	$25,491
PER	$474,509
Design	$0
PreConstruction	$0
Construction	$0
Closeout	$0
Est. Program Cost	**$500,000**
Contingency Budget	$0
Est. Project Costs	**$500,000**

Hypochlorite Generation Facility

PR_GN020700

System: General
Type: Facilities, Buildings and Capital Equipment

Driver Category: Performance Upgrades
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
$20,270	$0	$0	$104	$0	$832	$6,334	$12,653	$347	$0	$0	$0

PROJECT DESCRIPTION

This project includes design and construction of a high-strength hypochlorite generating facility with capacity to meet HRSD's projected treatment demands. The scope of work includes an enclosed building to house the manufacturing equipment and facilities for loading of raw materials. Pipe and pumps necessary for conveyance to existing or new storage tanks is also included.

PROJECT JUSTIFICATION

HRSD's chemical costs have risen sharply and an internal business case evaluation has demonstrated that investment in a hypochlorite generation facility is a financially prudent way to meet ongoing needs for this chemical. In addition to a positive net present value compared with continued reliance on outside suppliers, HRSD anticipates that onsite generation will result in a fresher product reducing overall demand.

FUNDING TYPE

Funding Type: Revenue Bond

CONTACTS

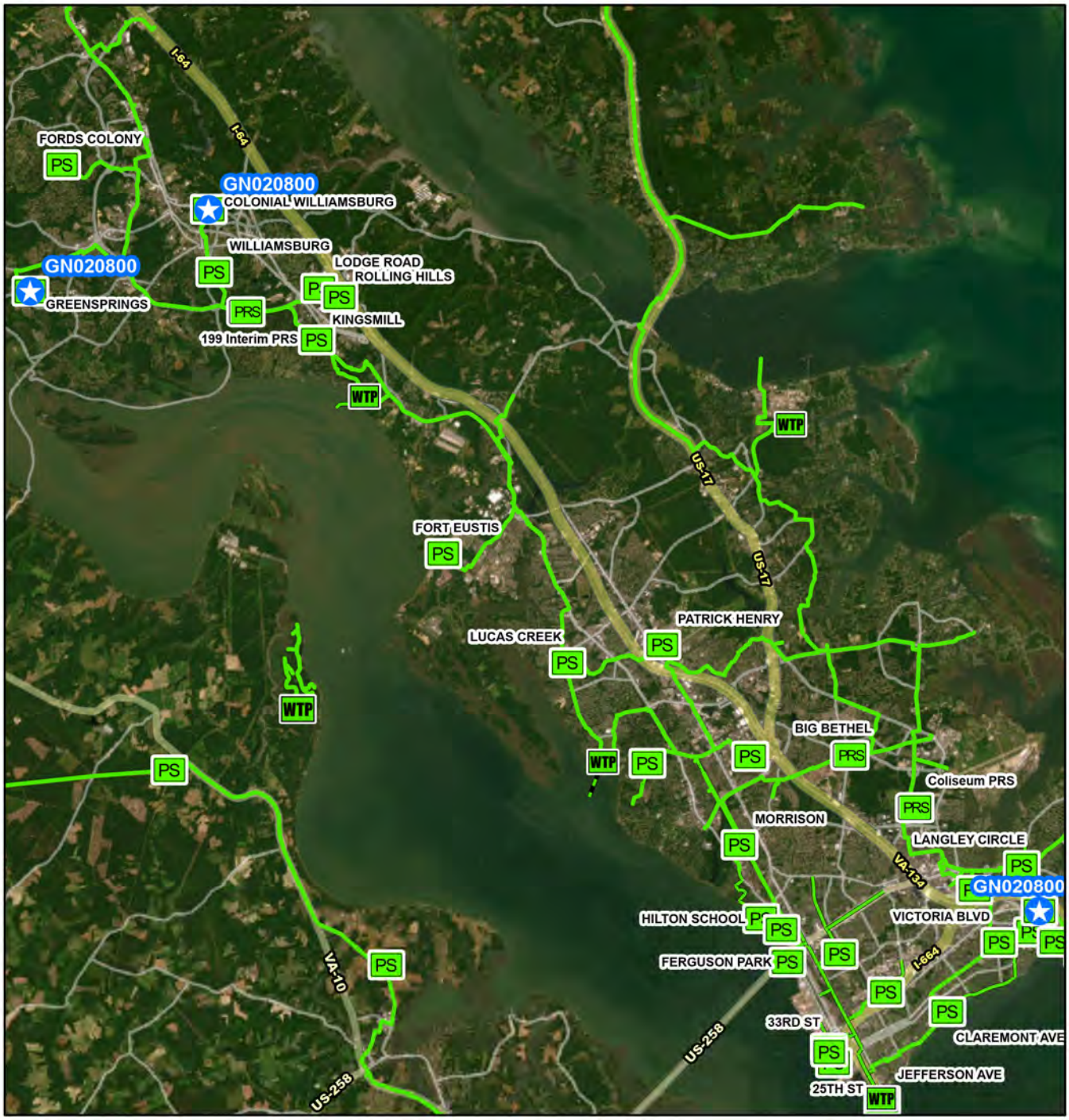
Contacts-Requesting Dept: Operations-Treatment
Contacts-Dept Contacts: Ryan Radspinner
Contacts-Managing Dept: Finance

PROPOSED SCHEDULE START DATE

PrePlanning	07/01/2026
PER	07/02/2026
Design Delay	07/02/2027
Design	07/03/2028
Bid Delay	07/02/2029
PreConstruction	01/02/2030
Construction	03/04/2030
Closeout	03/03/2031

COST ESTIMATE

Cost Estimate Class:	**Class 5 (-20% to +100%)**
PrePlanning	$0
PER	$104,000
Design	$832,000
PreConstruction	$93,600
Construction	$18,720,000
Closeout	$520,000
Est. Program Cost	**$20,269,600**
Contingency Budget	$2,080,000
Est. Project Costs	**$22,349,600**



GN020800

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

0 5,000 10,000 20,000 30,000 40,000 Feet

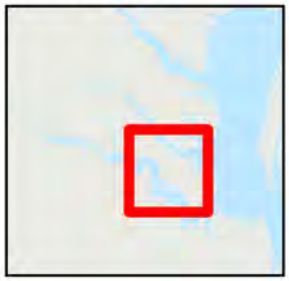
GN020800

North Shore Pump Station Influent Valve Installations

HRSD

N
W E
S

CIP Location



North Shore Pump Station Influent Valve Installations

PR_GN020800

System: General
Type: Pipelines

Driver Category: Aging Infrastructure/Rehabilitation
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
$878	$75	$798	$5	$0	$0	$0	$0	$0	$0	$0	$0

PROJECT DESCRIPTION

This project will include the installation of a shutoff isolation valve at Colonial Williamsburg, Greensprings, and Washington Street Pump Stations. The work will require the Contractor to bypass the pump station, isolate the last segment of piping between the terminal manhole and the pump station's wet well wall, remove a portion of the existing piping, install a new vertical gate valve, and complete the site restoration. Alternatives to the new in line valves will be assessed for the Washington Street station in the design due to congested utility corridor and potential excavation/dewatering costs.

PROJECT JUSTIFICATION

All three stations have failed sluice/slide gates and no longer have a permanent mechanical means to isolate system flows from entering into the station wet wells. These gates are required to provide Operations control of influent flows to perform maintenance activities inside the wet wells. The new valves offer a more robust and reliable means of isolating flow that enters the wet well than the sluice/slide gates. The use of temporary plugs induces some inherent safety concerns due to the potential unexpected flooding of the wet well should the temporary measure fail.

FUNDING TYPE

Funding Type: Revenue Bond

CONTACTS

Contacts-Requesting Dept: Operations-Interceptors
Contacts-Dept Contacts: Donald Jennings
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning	07/01/2024
PER	11/01/2024
Design Delay	05/01/2025
Design	06/01/2025
Bid Delay	10/01/2025
PreConstruction	11/01/2025
Construction	12/01/2025
Closeout	07/01/2026

COST ESTIMATE

Cost Estimate Class:	**Class 5 (-20% to +100%)**
PrePlanning	$0
PER	$50,000
Design	$100,000
PreConstruction	$5,200
Construction	$717,600
Closeout	$5,200
Est. Program Cost	**$878,000**
Contingency Budget	$145,600
Est. Project Costs	**$1,023,600**

Microbial Source Tracking Identified Locality Repair Program

PR_GN020900

System: General
Type: Locality and Private Property

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

PROGRAM CASH FLOW PROJECTION ($,000)

Prog Cost	Exp to Previous Year	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35
$4,000	$0	$0	$1,143	$1,143	$1,143	$571	$0	$0	$0	$0	$0

PROJECT DESCRIPTION

This project will provide funding for the Microbial Source Tracking (MST) Program required as part of the Integrated Plan.

PROJECT JUSTIFICATION

Several water bodies in the Hampton Roads region remain impaired by bacteria with elevated levels found in dry weather in areas that have no record of sewer overflow and, in some cases, in areas without any public sewer infrastructure. Dry weather, ongoing, sources almost always present a greater impact to water quality than isolated wet weather-related sewer overflows. Surface water monitoring data following SSOs has indicated that the impacts of a transient SSO on the long-term impairment of a waterway are minimal, supporting the conclusion that waterway impairments in the Hampton Roads area are driven by chronic and persistent sources. Given that the regional sanitary sewer system has no chronic capacity-related overflow locations, the most effective approach toward achieving a higher degree of public health protection is to identify and eliminate the sources of bacterial contamination, specifically those that are known to represent the greatest risk to public health - human sources. To this end, HRSD has implemented its Microbial Source Tracking Program. This focused water quality monitoring effort, in partnership with local governments and the Virginia Department of Health, has been successfully used to identify, locate, and eliminate chronic and persistent non-SSO-related sources of human-sourced bacteria.

FUNDING TYPE

Funding Type: Cash

CONTACTS

Contacts-Requesting Dept: Water Quality
Contacts-Dept Contacts: Jamie Mitchell
Contacts-Managing Dept: Water Quality

PROPOSED SCHEDULE START DATE

PrePlanning	07/01/2025
PER	07/01/2025
Design Delay	07/02/2025
Design	07/02/2025
Bid Delay	07/02/2025
PreConstruction	07/02/2025
Construction	07/01/2026
Closeout	01/02/2030

COST ESTIMATE

Cost Estimate Class:	**Class 1 (-3% to +15%)**
PrePlanning	$0
PER	$0
Design	$0
PreConstruction	$0
Construction	$4,000,000
Closeout	$0
Est. Program Cost	**$4,000,000**
Contingency Budget	$0
Est. Project Costs	**$4,000,000**

Microbial Source Tracking Identified Locality Repairs (FY25)

PR_GN020910

System: General
Type: Locality and Private Property

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

PROGRAM CASH FLOW PROJECTION ($,000)

Prog Cost	Exp to Previous Year	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35
$300	$300	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

PROJECT DESCRIPTION

This project will provide FY25 funding for the Microbial Source Tracking (MST) Program required as part of the Integrated Plan.

PROJECT JUSTIFICATION

Several water bodies in the Hampton Roads region remain impaired by bacteria with elevated levels found in dry weather in areas that have no record of sewer overflow and, in some cases, in areas without any public sewer infrastructure. Dry weather ongoing sources almost always present a greater impact to water quality than isolated wet weather-related sewer overflows. Surface water monitoring data following SSOs has indicated that the impacts of a transient SSO on the long-term impairment of a waterway are minimal supporting the conclusion that waterway impairments in the Hampton Roads area are driven by chronic and persistent sources. Given that the regional sanitary sewer system has no chronic capacity-related overflow locations the most effective approach toward achieving a higher degree of public health protection is to identify and eliminate the sources of bacterial contamination specifically those that are known to represent the greatest risk to public health - human sources. To this end HRSD has implemented its Microbial Source Tracking Program. This focused water quality monitoring effort in partnership with local governments and the Virginia Department of Health has been successfully used to identify locate and eliminate chronic and persistent non-SSO-related sources of human-sourced bacteria.

FUNDING TYPE

Funding Type: Cash

CONTACTS

Contacts-Requesting Dept: Water Quality
Contacts-Dept Contacts: Kyle Curtis
Contacts-Managing Dept: Water Quality

PROPOSED SCHEDULE START DATE

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

COST ESTIMATE

Cost Estimate Class:	**Class 1 (-3% to +15%)**
PrePlanning	$0
PER	$0
Design	$0
PreConstruction	$0
Construction	$300,000
Closeout	$0
Est. Program Cost	**$300,000**
Contingency Budget	$0
Est. Project Costs	**$300,000**

Microbial Source Tracking Identified Locality Repairs (FY26)

PR_GN020920

System: General
Type: Locality and Private Property

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

PROGRAM CASH FLOW PROJECTION ($,000)

Prog Cost	Exp to Previous Year	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35
$500	$0	$500	$0	$0	$0	$0	$0	$0	$0	$0	$0

PROJECT DESCRIPTION

This project will provide FY26 funding for the Microbial Source Tracking (MST) Program required as part of the Integrated Plan.

PROJECT JUSTIFICATION

Several water bodies in the Hampton Roads region remain impaired by bacteria with elevated levels found in dry weather in areas that have no record of sewer overflow and, in some cases, in areas without any public sewer infrastructure. Dry weather ongoing sources almost always present a greater impact to water quality than isolated wet weather-related sewer overflows. Surface water monitoring data following SSOs has indicated that the impacts of a transient SSO on the long-term impairment of a waterway are minimal supporting the conclusion that waterway impairments in the Hampton Roads area are driven by chronic and persistent sources. Given that the regional sanitary sewer system has no chronic capacity-related overflow locations the most effective approach toward achieving a higher degree of public health protection is to identify and eliminate the sources of bacterial contamination specifically those that are known to represent the greatest risk to public health - human sources. To this end HRSD has implemented its Microbial Source Tracking Program. This focused water quality monitoring effort in partnership with local governments and the Virginia Department of Health has been successfully used to identify locate and eliminate chronic and persistent non-SSO-related sources of human-sourced bacteria.

FUNDING TYPE

Funding Type: Cash

CONTACTS

Contacts-Requesting Dept: Water Quality
Contacts-Dept Contacts: Kyle Curtis
Contacts-Managing Dept: Water Quality

PROPOSED SCHEDULE START DATE

PrePlanning	07/01/2025
PER	07/01/2025
Design Delay	07/01/2025
Design	07/01/2025
Bid Delay	07/01/2025
PreConstruction	07/01/2025
Construction	07/01/2025
Closeout	07/01/2026

COST ESTIMATE

Cost Estimate Class:	**Class 5 (-20% to +100%)**
PrePlanning	$0
PER	$0
Design	$0
PreConstruction	$0
Construction	$500,000
Closeout	$0
Est. Program Cost	**$500,000**
Contingency Budget	$0
Est. Project Costs	**$500,000**

Regional Granular Activated Carbon Reactivation Facility

PR_GN021000

System: General
Type: Water Reuse

Driver Category: NPDES Compliance
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
$235,085	$0	$0	$0	$0	$0	$11,060	$11,530	$16,431	$80,712	$80,712	$34,639

PROJECT DESCRIPTION

This project will include PER, design, and construction of a granular activated carbon (GAC) reactivation facility that would accept and treat exhausted GAC for the Hampton Roads region. This design will be based on a preliminary study completed in Spring 2024 that investigated the feasibility and practicality of a regional GAC reactivation facility. The facility will be built at either the Nansemond Treatment Plant or the decommissioned Chesapeake-Elizabeth Treatment Plant.

PROJECT JUSTIFICATION

With per-and polyfluoroalkyl substance (PFAS) regulatory developments, the demand for GAC continues to grow. The U.S. EPA released lifetime health advisories (LHAs) for four PFAS in June 2022 and provided draft maximum contaminant levels (MCLs) for multiple PFAS in Spring 2023. These regulatory developments will advance implementation of GAC for Virginia drinking water utilities to manage PFAS in finished waters.
HRSD will also have significant GAC reactivation demands from its planned SWIFT facilities at James River and Nansemond by 2028, with additional demands possible from the Virginia Initiative Plant in the future. The GAC Reactivation Study in 2024 concluded through a cost-benefit analysis that onsite GAC reactivation would not only provide HRSD with a significantly lower net present value to reactivate GAC (~ 33% reduction when compared to third-party reactivation), but also offer several non-financial benefits, such as control over GAC production in a highly volatile GAC market.

FUNDING TYPE

Funding Type: Revenue Bond

CONTACTS

Contacts-Requesting Dept: Operations-Treatment
Contacts-Dept Contacts: Shirley Smith
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning	07/02/2029
PER	09/03/2029
Design Delay	06/03/2030
Design	06/03/2030
Bid Delay	03/02/2032
PreConstruction	03/02/2032
Construction	06/02/2032
Closeout	12/04/2034

COST ESTIMATE

Cost Estimate Class:	**Class 5 (-20% to +100%)**
PrePlanning	$10,400
PER	$10,089,040
Design	$20,178,080
PreConstruction	$2,017,808
Construction	$201,780,800
Closeout	$1,008,904
Est. Program Cost	**$235,085,032**
Contingency Budget	$40,356,160
Est. Project Costs	**$275,441,192**

Conceptual Project Development (FY25)

PR_GN021200

System: General
Type: Strategic Planning

Driver Category: Risk Mitigation
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
$500	$318	$182	$0	$0	$0	$0	$0	$0	$0	$0	$0

PROJECT DESCRIPTION

This project will provide funding to take a concept for selected CIP projects or studies to a level that it can be chartered, budgeted, and scheduled appropriately.

PROJECT JUSTIFICATION

New project budgets and schedules are typically estimated by the requesting Operations work center and programmed into the CIP program by Finance using these projections. The scopes and estimates for these projects are challenging for in-house staff to fully explore and accurately develop under typical market conditions. Recent bidding conditions have presented challenges even for experienced consultants estimating fully designed projects. Early conceptual project development of select projects will help to identify key elements of projects that could lead to dramatic changes in cost or schedule allowing for better confidence in CIP programming.

FUNDING TYPE

Funding Type: Cash

CONTACTS

Contacts-Requesting Dept: Engineering
Contacts-Dept Contacts: Delane Carty
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning	11/01/2024
PER	10/01/2025
Design Delay	10/01/2025
Design	10/01/2025
Bid Delay	10/01/2025
PreConstruction	10/01/2025
Construction	10/01/2025
Closeout	10/01/2025

COST ESTIMATE

Cost Estimate Class:	**Class 1 (-3% to +15%)**
PrePlanning	$500,000
PER	$0
Design	$0
PreConstruction	$0
Construction	$0
Closeout	$0
Est. Program Cost	**$500,000**
Contingency Budget	$0
Est. Project Costs	**$500,000**

Treatment Plant Dewatering Centrifuge Equipment Rehabilitation

PR_GN021300

System: General
Type: Biosolids

Driver Category: Aging Infrastructure/Rehabilitation
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
$1,250	$500	$750	$0	$0	$0	$0	$0	$0	$0	$0	$0

PROJECT DESCRIPTION

This project will allow for the refurbishment of dewatering centrifuge equipment previously procured by HRSD as salvage equipment or via intergovernmental agreement. In FY24, we purchased a number of used DS706 centrifuges from a salvage auction (DCWATER) and acquired by trade (Denver Metro) from operational funds. Several of these machines are being allocated for existing capital projects as follows: (note that these machines will be refurbished as part of their respective two CIPs.) GN016700 Treatment Plant Solids Handling Replacement Phase II James River TP 2 x DS706 GN017400 Treatment Plant Dewatering Replacement Phase III, VIP 2 x DS706. The remaining centrifuges that have been purchased/procured are currently being stored at the Atlantic Treatment Plant and will be refurbished and placed at HRSD facilities that currently operate DS706 centrifuges as shelf spares. Centrifuges require routine off-site repair and refurbishment that can take from 3-12 months in duration. HRSD's design approach for dewatering facilities is to install units to meet maximum monthly operational throughput plus a single redundant unit; when a centrifuge is off-site for rehabilitation, the plant lacks redundancy and may lack needed processing capacity if a mechanical failure occurs in an operating unit. After the completion of this project, these ready shelf spares would allow the facilities to rely on their full design redundancies during periodic rehabilitation of existing installed equipment.

PROJECT JUSTIFICATION

This project allows HRSD's Condition Assessment Superintendent to obtain a quote for the rehabilitation 8 on-hand centrifuges to serve as shelf spare and replacement equipment for installed units at Atlantic, James River, Nansemond, Williamsburg, and York River Treatment Plants (and at the completion of GN017400, the Virginia Initiative Plant). Once refurbished and brought into the normal cycle of refurbishment of our current machines, we anticipate the service life of the refurbished machines to be greater than 15 years. Similarly, the current DS706 machines installed at WB, JR, YR, NP, AT (and VIP, at the completion of GN017400) are viable as long as we have suitable backup equipment. Without this insertion of new machines/parts etc., we would need to program the replacement of these machines with new equipment within 5-10 years. With suitable backup equipment and the ability to maintain design redundancy, the existing DS706s have an expected service life of greater than 15 years.

FUNDING TYPE

Funding Type: Revenue Bond

CONTACTS

Contacts-Requesting Dept: Operations
Contacts-Dept Contacts: Chris Wilson
Contacts-Managing Dept: Operations

PROPOSED SCHEDULE START DATE

PrePlanning	
PER	12/02/2024
Design Delay	01/02/2025
Design	01/02/2025
Bid Delay	01/03/2025
PreConstruction	01/03/2025
Construction	03/01/2025
Closeout	01/02/2026

COST ESTIMATE

Cost Estimate Class:	**Class 5 (-20% to +100%)**
PrePlanning	$0
PER	$0
Design	$0
PreConstruction	$0
Construction	$1,250,000
Closeout	$0
Est. Program Cost	**$1,250,000**
Contingency Budget	$0
Est. Project Costs	**$1,250,000**

Fleet Management (FY26)

PR_GN021400

System: General
Type: Facilities, Buildings and Capital Equipment

Driver Category: Aging Infrastructure/Rehabilitation
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
$2,953	$0	$2,953	$0	$0	$0	$0	$0	$0	$0	$0	$0

PROJECT DESCRIPTION

This project will provide for replacement of aging fleet vehicles and purchase of additional vehicles to meet the needs of the organization. An itemized list of vehicles to be replaced or added is maintained by the Support Systems Division.

PROJECT JUSTIFICATION

Replacement of aging vehicles will result in lower repair costs and the purchase of additional vehicles will provide for increased staff efficiency.

FUNDING TYPE

Funding Type: Cash

CONTACTS

Contacts-Requesting Dept: Operations-Support Systems
Contacts-Dept Contacts: Lee Heath
Contacts-Managing Dept: Operations-Support Systems

PROPOSED SCHEDULE START DATE

PrePlanning	07/01/2025
PER	07/01/2025
Design Delay	07/01/2025
Design	07/01/2025
Bid Delay	07/01/2025
PreConstruction	07/01/2025
Construction	07/01/2025
Closeout	07/01/2026

COST ESTIMATE

Cost Estimate Class:	**Class 5 (-20% to +100%)**
PrePlanning	$0
PER	$0
Design	$0
PreConstruction	$0
Construction	$2,952,842
Closeout	$0
Est. Program Cost	**$2,952,842**
Contingency Budget	$0
Est. Project Costs	**$2,952,842**

Water Quality Department Instrumentation Equipment (FY26)

PR_GN021500

System: General
Type: Facilities, Buildings and Capital Equipment

Driver Category: Performance Upgrades
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
$664	$0	$664	$0	$0	$0	$0	$0	$0	$0	$0	$0

PROJECT DESCRIPTION

This project will provide for analytical equipment for the Water Quality Department for Fiscal Year 2026.

PROJECT JUSTIFICATION

The sampling and analytical equipment will support various projects and programs led by the Water Quality Department.

FUNDING TYPE

Funding Type: Cash

CONTACTS

Contacts-Requesting Dept: Water Quality
Contacts-Dept Contacts: Jamie Mitchell
Contacts-Managing Dept: Water Quality

PROPOSED SCHEDULE START DATE

PrePlanning	07/01/2025
PER	07/01/2025
Design Delay	07/01/2025
Design	07/01/2025
Bid Delay	07/01/2025
PreConstruction	07/01/2025
Construction	07/01/2025
Closeout	07/01/2026

COST ESTIMATE

Cost Estimate Class:	**Class 5 (-20% to +100%)**
PrePlanning	$0
PER	$0
Design	$0
PreConstruction	$0
Construction	$664,000
Closeout	$0
Est. Program Cost	**$664,000**
Contingency Budget	$0
Est. Project Costs	**$664,000**

Coatings and Concrete Rehabilitation & Replacement Program

PR_GN021600

System: General
Type: Facilities, Buildings and Capital Equipment

Driver Category: Aging Infrastructure/Rehabilitation
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
$20,600	$0	$0	$2,289	$2,289	$2,289	$2,289	$2,289	$2,289	$2,289	$2,289	$2,289

PROJECT DESCRIPTION

This project will provide funding for the scheduled rehabilitation and replacement of coatings and concrete systems across the district including but, not limited to, treatment plants, pump stations, and the complexes.

PROJECT JUSTIFICATION

Coatings and Concrete Rehabilitation & Replacements needs are regularly assessed and scheduled across the district based on severity and accessibility. This program will ensure there is funding in each fiscal year to address large scale replacement and repair needs.

FUNDING TYPE

Funding Type: Revenue Bond

CONTACTS

Contacts-Requesting Dept: Engineering
Contacts-Dept Contacts: Amber DiSomma
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning	07/01/2025
PER	07/01/2025
Design Delay	07/01/2025
Design	07/01/2025
Bid Delay	07/01/2025
PreConstruction	07/01/2025
Construction	07/01/2026
Closeout	07/01/2034

COST ESTIMATE

Cost Estimate Class:	**Class 5 (-20% to +100%)**
PrePlanning	$0
PER	$0
Design	$0
PreConstruction	$0
Construction	$20,599,960
Closeout	$0
Est. Program Cost	**$20,599,960**
Contingency Budget	$1,031,248
Est. Project Costs	**$21,631,208**

Coating and Concrete Rehabilitation and Replacement FY26

PR_GN021610

System: General
Type: Facilities, Buildings and Capital Equipment

Driver Category: Aging Infrastructure/Rehabilitation
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
$2,010	$0	$2,010	$0	$0	$0	$0	$0	$0	$0	$0	$0

PROJECT DESCRIPTION

This fiscal year will include the following coatings and concrete projects; Atlantic Primary Clarifier ducting and scrubber recoating and repairs, Army Base BNR Tank structural restoration, Virginia Initiative Plant Secondary Clarifier trough coatings and concrete restoration, and Williamsburg Secondary Clarifiers coatings installation.

PROJECT JUSTIFICATION

Atlantic Primary Clarifier ducting and scrubbers coating is flaking badly, and fiberglass is missing in multiple sections which, will require larger repairs. Army Base BNR Tanks are structurally unsound and need rehabilitation to continue functioning at current capacities. Virginia Initiative Plant Secondary Clarifier troughs have concrete chipped away in multiple areas are require concrete restoration and well as recoating. Williamsburg Secondary Clarifiers require coating to prevent further erosion of concrete from wear and algae growth as well as protect the installed brushes.

FUNDING TYPE

Funding Type: Revenue Bond

CONTACTS

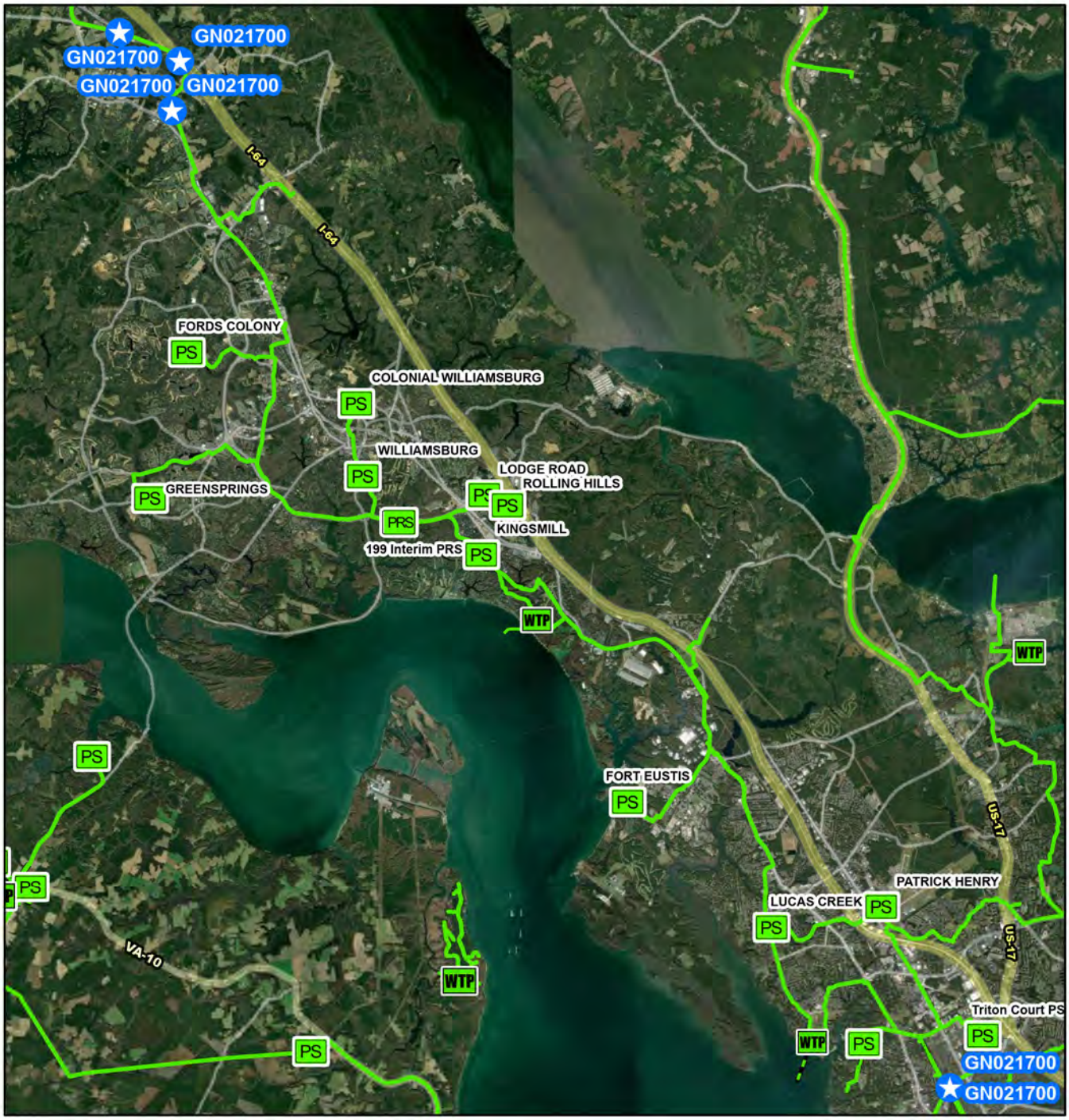
Contacts-Requesting Dept: Engineering
Contacts-Dept Contacts: Amber DiSomma
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning	07/01/2025
PER	07/01/2025
Design Delay	07/01/2025
Design	07/01/2025
Bid Delay	07/01/2025
PreConstruction	07/01/2025
Construction	07/01/2025
Closeout	07/01/2026

COST ESTIMATE

Cost Estimate Class:	**Class 5 (-20% to +100%)**
PrePlanning	$0
PER	$0
Design	$0
PreConstruction	$0
Construction	$2,010,000
Closeout	$0
Est. Program Cost	**$2,010,000**
Contingency Budget	$40,200
Est. Project Costs	**$2,050,200**



GN021700

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

0 5,00010,000 20,000 30,000 40,000 Feet

N
W E
S

CIP Location

GN021700

Interceptor System Valve Improvements Phase II

HRSD

Interceptor System Valve Improvements Phase II

PR_GN021700

System: General
Type: Pipelines

Driver Category: Aging Infrastructure/Rehabilitation
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
$3,125	$0	$513	$1,541	$1,071	$0	$0	$0	$0	$0	$0	$0

PROJECT DESCRIPTION

This project will utilize a phase approach to removing and replacing failed valves that are critical to the interceptor system. Phase II of the project will address the following failed valves, JR1041-5, JR3007-3, W5060-1, W5064-3, W5067-1, and W5072-5

PROJECT JUSTIFICATION

The valves identified in the project description have failed, are critical to the operation of the interceptor system, and require specialized equipment (line stops) to isolate the force main and replace the failed valve. Valve JR1041-5 is located between the CSX train tracks and the Virginia Living Museum. This valve was installed in 1966 and flow from the southwestern part of the JRTP service area pass through this valve. Maintenance records indicate that this valve failed in 2021. Valve JR3007-3 has failed in the open position, this valve conveys flow from the several City of Newport News pump stations and is necessary to isolate flow for NF-039. Valves W5060-1, W5064-3, W5067-1, and W5072-5, have all failed are and located in the northern end of the Williamsburg Treatment Plant service area. Due to the location of these valves, diversion capabilities do not exist.

FUNDING TYPE

Funding Type: Revenue Bond

CONTACTS

Contacts-Requesting Dept: Operations-Interceptors
Contacts-Dept Contacts: Michael Johnson
Contacts-Managing Dept: Operations-Interceptors

PROPOSED SCHEDULE START DATE

PrePlanning	07/01/2025
PER	07/01/2025
Design Delay	01/01/2026
Design	01/01/2026
Bid Delay	09/01/2026
PreConstruction	09/01/2026
Construction	11/01/2026
Closeout	01/01/2028

COST ESTIMATE

Cost Estimate Class:	**Class 5 (-20% to +100%)**
PrePlanning	$0
PER	$175,000
Design	$450,000
PreConstruction	$0
Construction	$2,500,000
Closeout	$0
Est. Program Cost	**$3,125,000**
Contingency Budget	$500,000
Est. Project Costs	**$3,625,000**

North Shore and Small Communities Division Aerial Crossing Improvements

PR_GN021800

System: General
Type: Pipelines

Driver Category: Aging Infrastructure/Rehabilitation
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
$607	$0	$498	$109	$0	$0	$0	$0	$0	$0	$0	$0

PROJECT DESCRIPTION

This project is to address all issues identified in the North Shore and Small Communities Division Aerial Crossing Inspection reports.

PROJECT JUSTIFICATION

In 2024, HRSD issued a task order for Collins Engineers Incorporated to provide structural engineering services that included inspecting and evaluating all aerial crossings to include the support system in the HRSD's North Shore Interceptor System. The aerial crossings are critical components of the interceptor system. Given their exposure to environmental factors such as weather, wear, and potential structural degradation, regular inspection and evaluation are necessary to maintain their functionality. In the comprehensive assessment, Collins identified multiple issues at various locations, which included signs of corrosion, structural weaknesses, and other concerns that could impact the long-term integrity of the aerial crossings and supports. Addressing the issues is essential to minimize further degradation and potential failures. Along with completing the evaluation of the North Shore system, Collins was able to inspect and evaluate Small Communities Division (SCD) aerial crossings as well. Those items found in the SCD inspection need to be addressed as well.

FUNDING TYPE

Funding Type: Revenue Bond

CONTACTS

Contacts-Requesting Dept: Operations-Interceptors
Contacts-Dept Contacts: Michael Johnson
Contacts-Managing Dept: Operations-Interceptors

PROPOSED SCHEDULE START DATE

PrePlanning	07/01/2025
PER	07/01/2025
Design Delay	09/01/2025
Design	09/01/2025
Bid Delay	12/01/2025
PreConstruction	12/01/2025
Construction	12/01/2025
Closeout	09/01/2026

COST ESTIMATE

Cost Estimate Class:	**Class 5 (-20% to +100%)**
PrePlanning	$0
PER	$17,000
Design	$100,000
PreConstruction	$0
Construction	$490,000
Closeout	$0
Est. Program Cost	**$607,000**
Contingency Budget	$125,000
Est. Project Costs	**$732,000**

Roofing Rehabilitation & Replacement Program

PR_GN021900

System: General
Type: Facilities, Buildings and Capital Equipment

Driver Category: Aging Infrastructure/Rehabilitation
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
$2,364	$0	$0	$263	$263	$263	$263	$263	$263	$263	$263	$263

PROJECT DESCRIPTION

This project will provide funding for the scheduled rehabilitation and replacement of roofing systems across the district including but, not limited to, treatment plants, pump stations, and the complexes.

PROJECT JUSTIFICATION

Roofing needs are regularly assessed and scheduled across the district based on severity and accessibility. This program will ensure there is funding in each fiscal year to address large scale replacement and repair needs.

FUNDING TYPE

Funding Type: Revenue Bond

CONTACTS

Contacts-Requesting Dept: Engineering
Contacts-Dept Contacts: Amber DiSomma
Contacts-Managing Dept: Engineering

PROPOSED SCHEDULE START DATE

PrePlanning	07/01/2026
PER	07/01/2026
Design Delay	07/01/2026
Design	07/01/2026
Bid Delay	07/01/2026
PreConstruction	07/01/2026
Construction	07/01/2026
Closeout	07/01/2035

COST ESTIMATE

Cost Estimate Class:	**Class 5 (-20% to +100%)**
PrePlanning	$0
PER	$0
Design	$0
PreConstruction	$0
Construction	$2,364,000
Closeout	$0
Est. Program Cost	**$2,364,000**
Contingency Budget	$118,200
Est. Project Costs	**$2,482,200**