

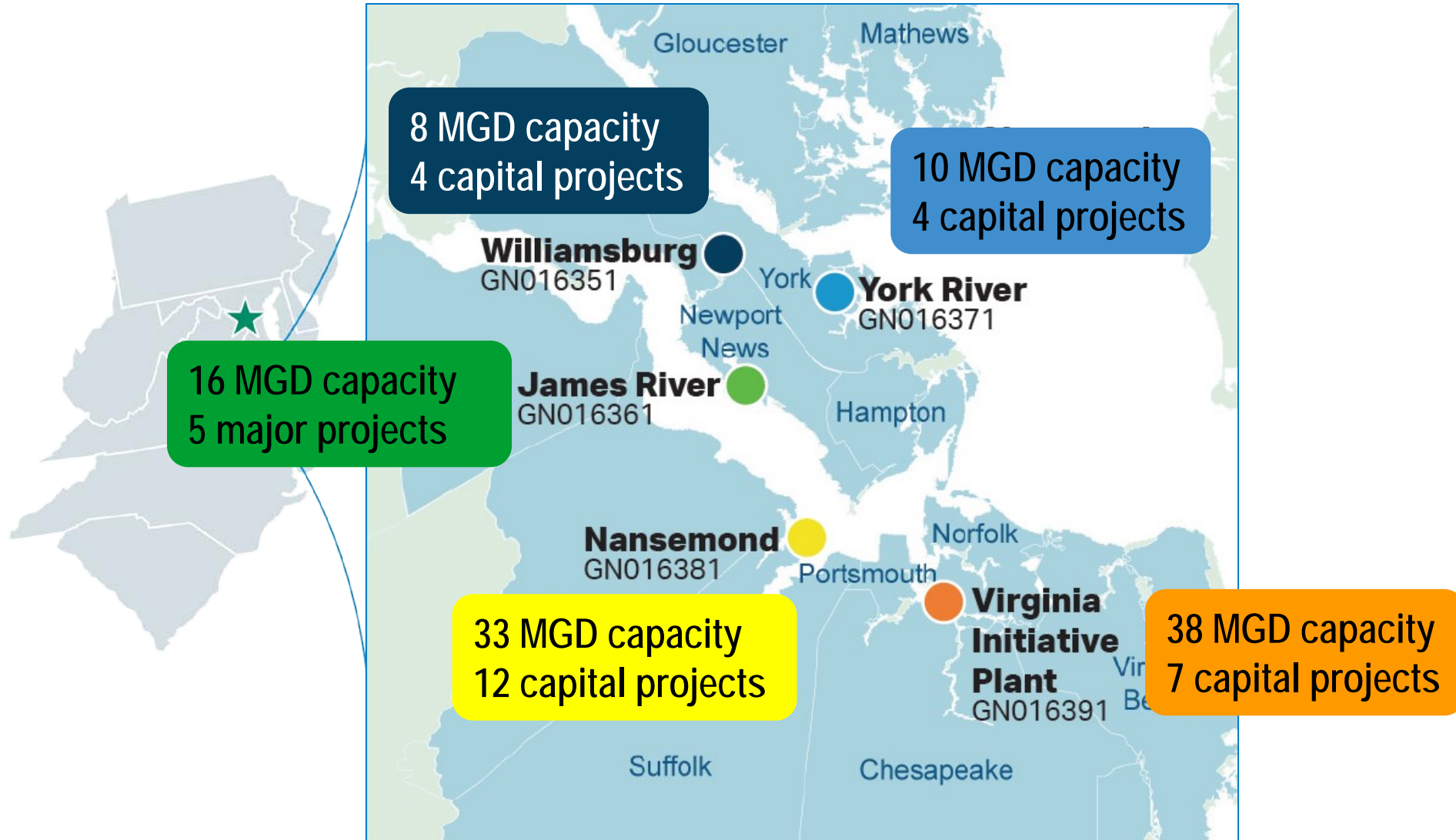


# Full Scale Implementation Program (FSIP) Update

Potomac Aquifer Recharge  
Oversight Committee  
September 26, 2022

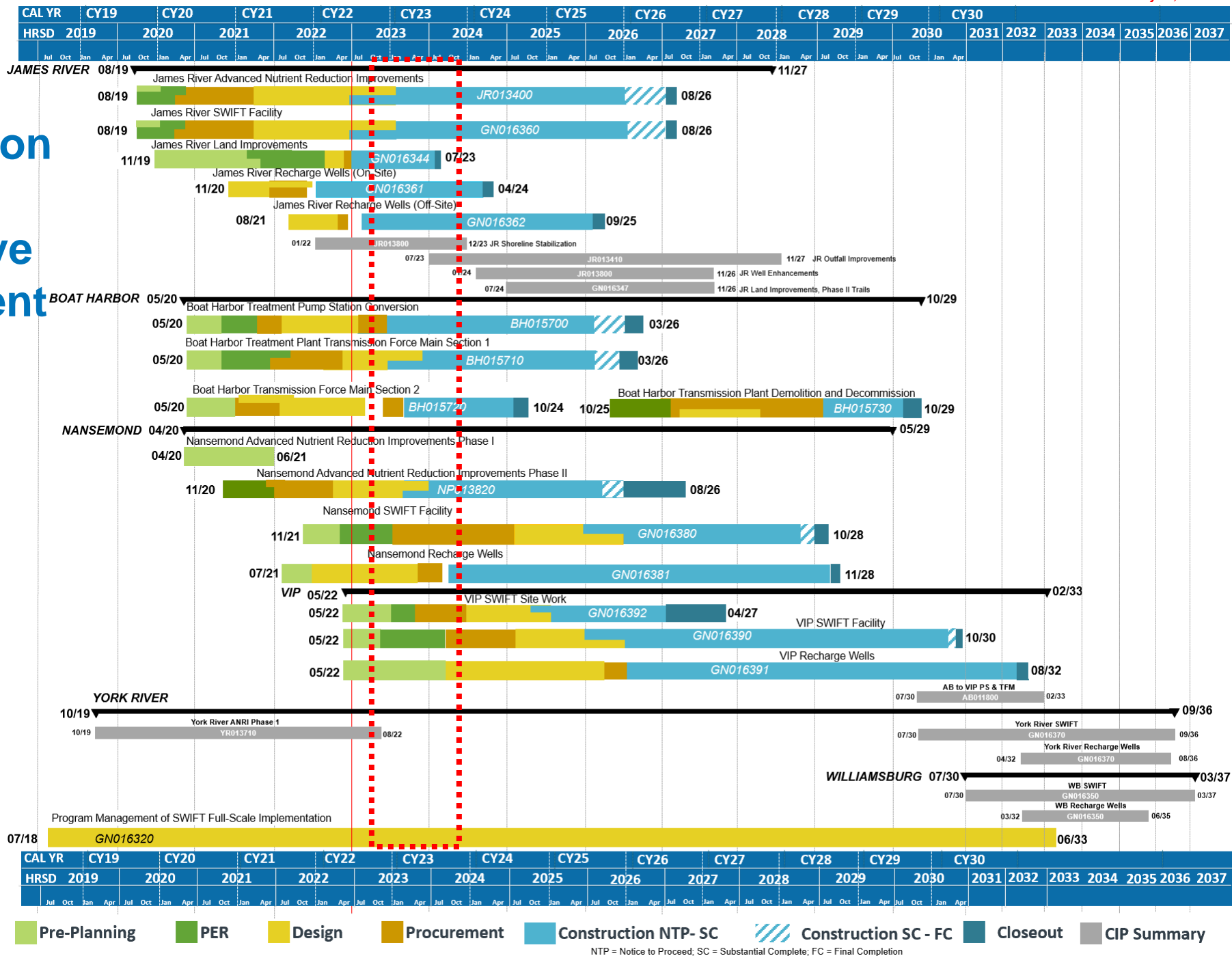
Lauren Zuravnsky, P.E.  
Chief of Design & Construction - SWIFT

# General Location of SWIFT Treatment and Recharge Facilities



# SWIFT Full Scale Implementation Program has multiple active and concurrent projects.

Data Date: May 31, 2022



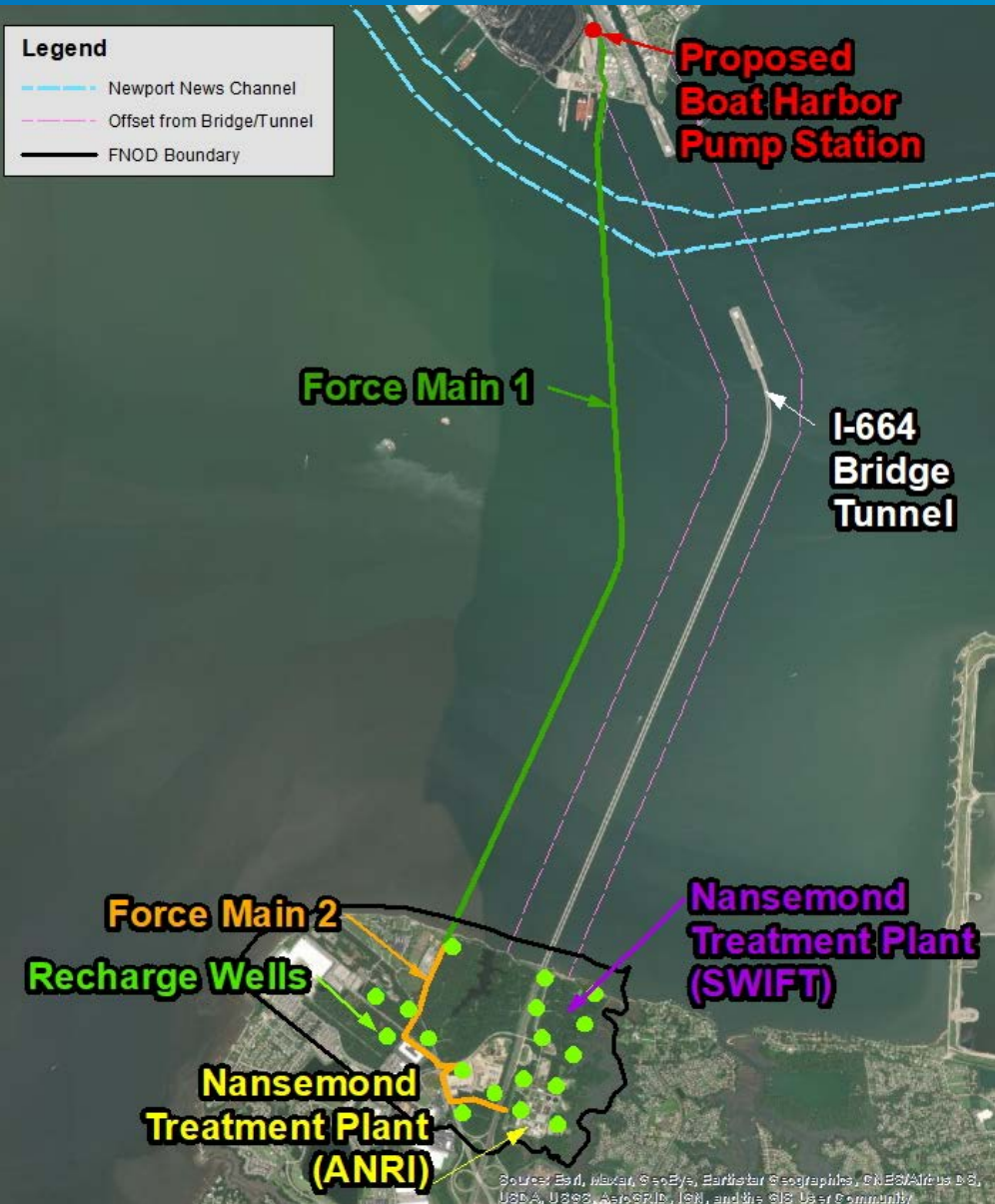
# James River



- SWIFT + Nutrient Improvements (design build) project has started construction
- Two well drilling contracts under way
- UIC Permit
- Recharge expected in 2026
- Multiple project efforts related to City park enhancements



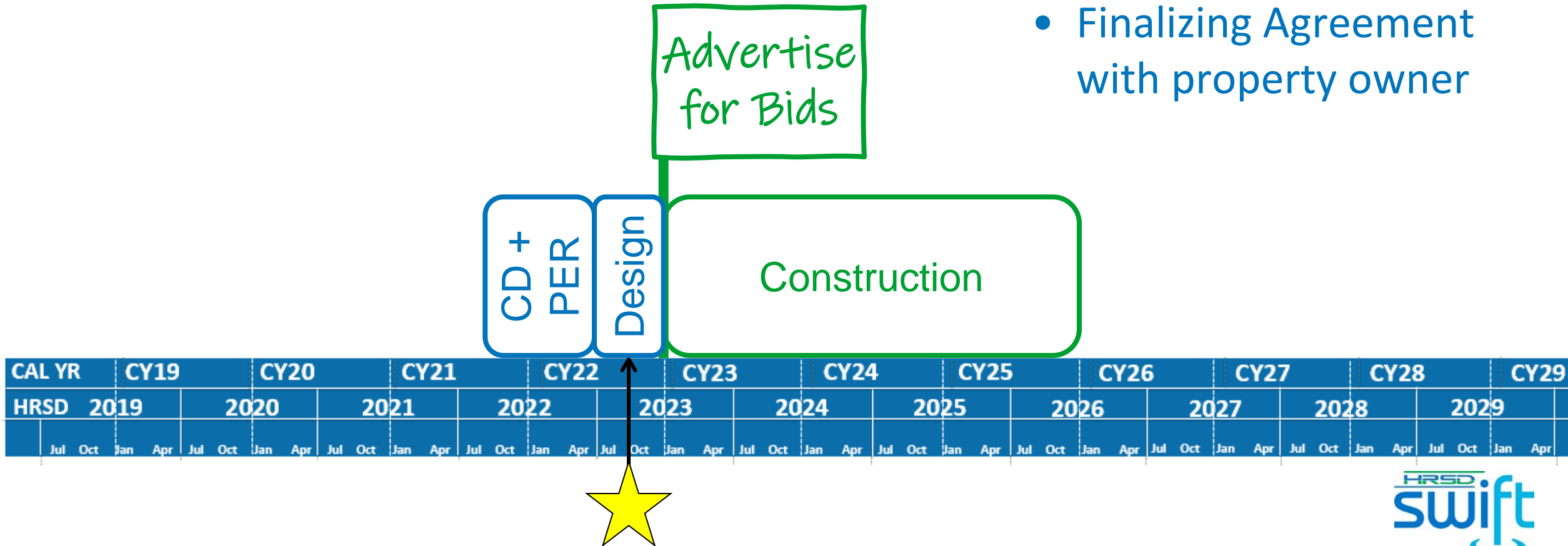
# Boat Harbor Transition and Nansemond Improvements



- Construct new equalization and pumping facility in Newport News
- Convey screened and de-gritted wastewater in a new transmission force main
- Expand hydraulic and treatment capacity at Nansemond in Suffolk
- All 4 projects must be operational by 2025 to meet strategy and program goals
- SWIFT improvements following wastewater improvements
- Install recharge wells and monitoring wells

# Boat Harbor Pump Station Project Status

- Design-Bid-Build
- Design by RK&K
- Finalizing Agreement with property owner





# Boat Harbor Pump Station Location

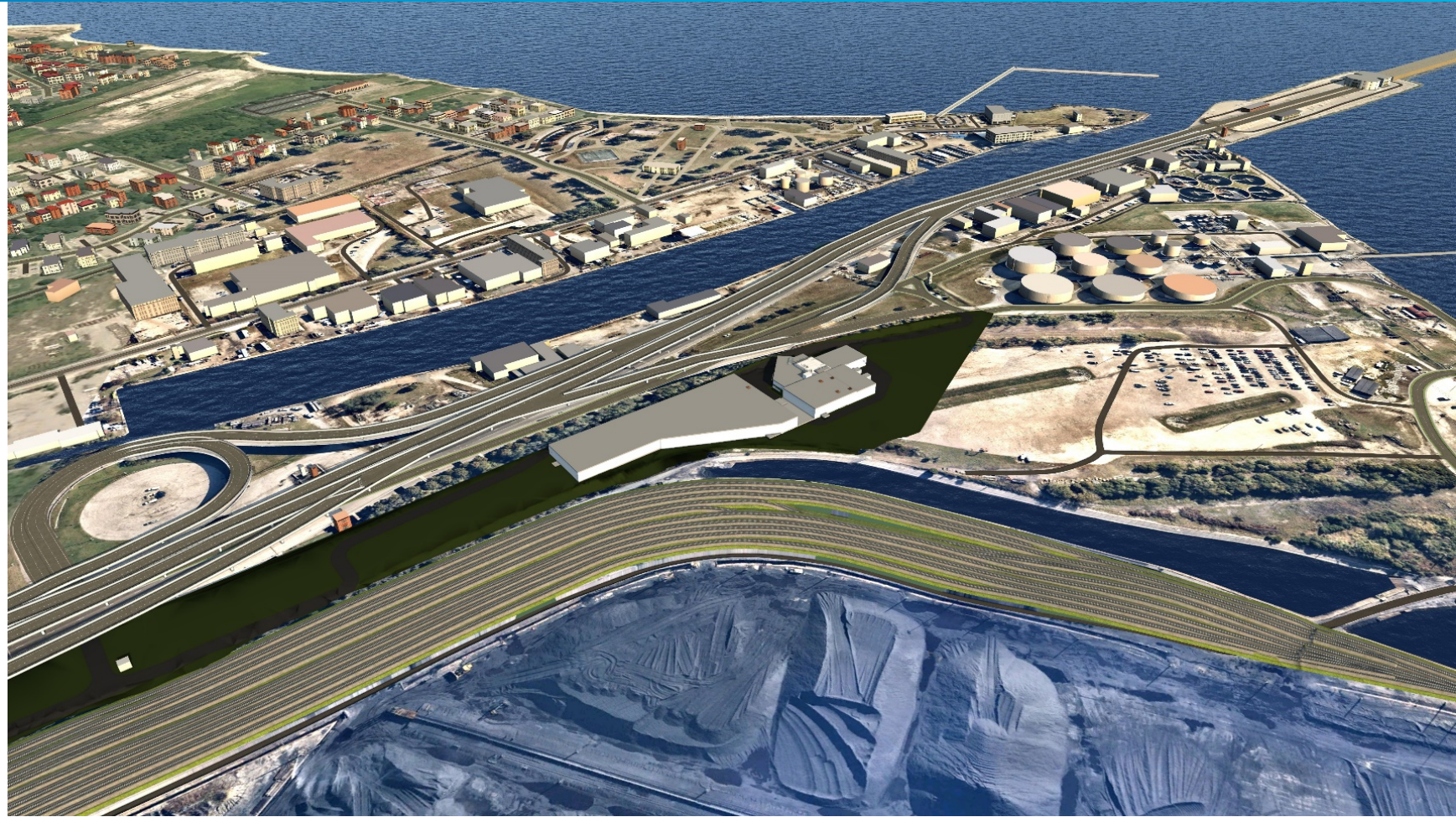
- Higher elevation





# Boat Harbor Pump Station

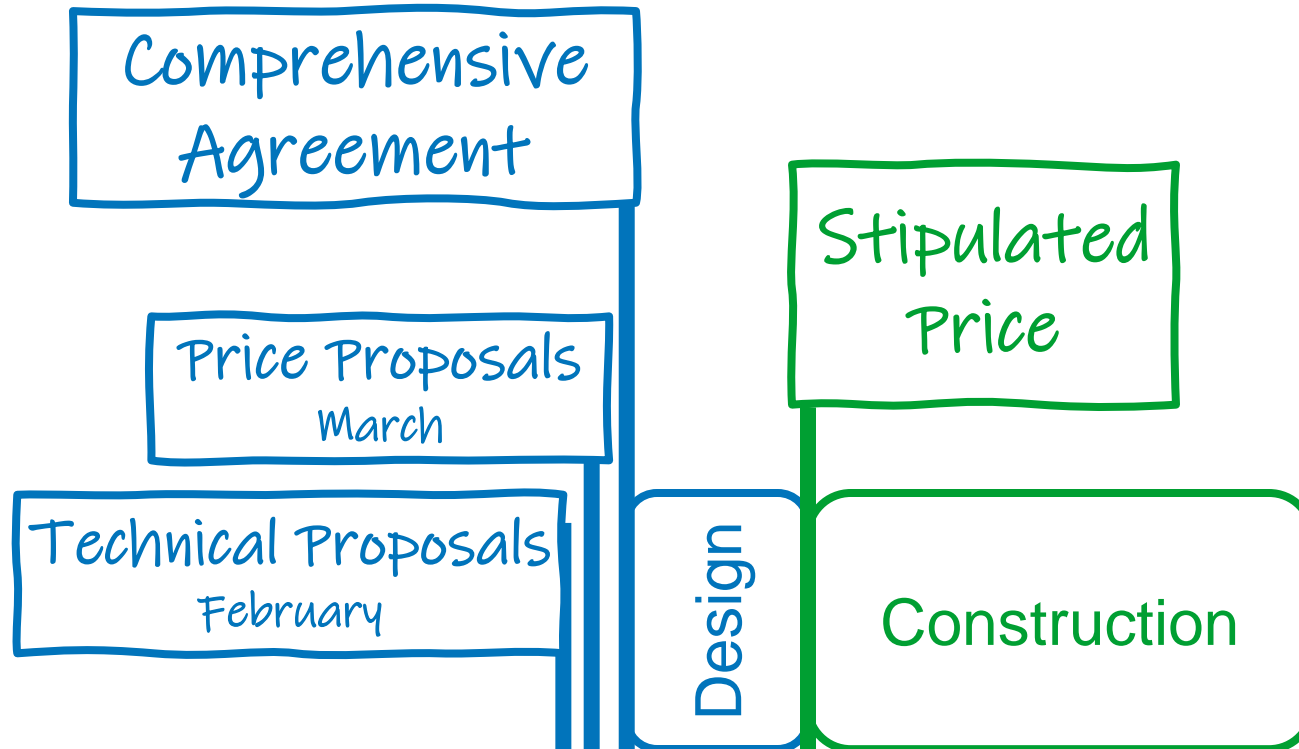
- 14.5 MGD average flow
- 36.5 MGD peak flow
- Screening
- Grit removal
- 1.5 MG daily equalization
- 12 MG wet weather equalization





# Boat Harbor Transmission Force Main (Aqueous-1)

## Design Build Project Status

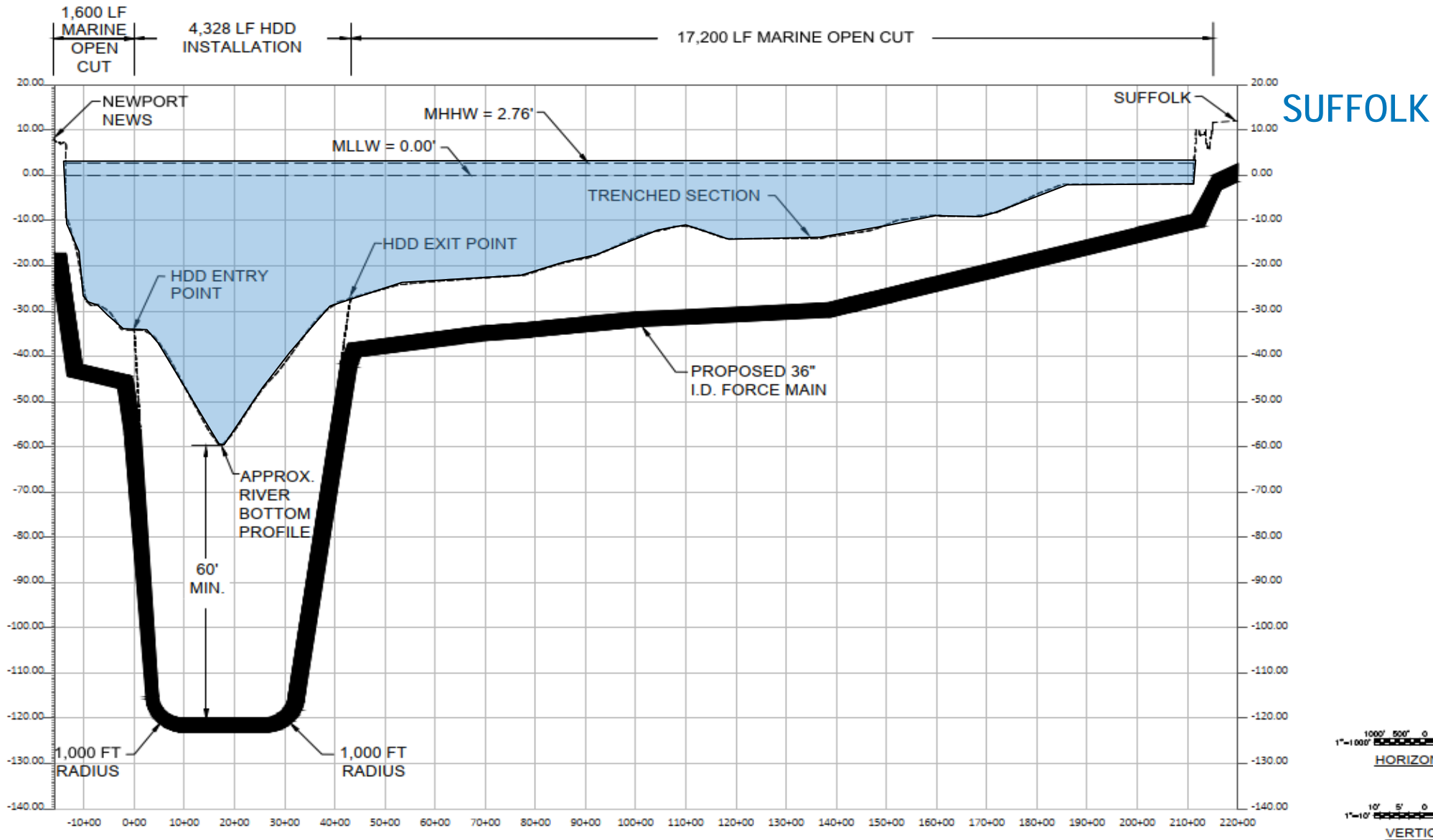


- Team selected -> Garney Construction with Dewberry
- Multiple agency and permit coordination
- Design underway

CAL YR		CY19				CY20				CY21				CY22				CY23				CY24				CY25				CY26				CY27				CY28				CY29			
HRSD		2019				2020				2021				2022				2023				2024				2025				2026				2027				2028				2029			
		Jul	Oct	Jan	Apr	Jul	Oct	Jan	Apr	Jul	Oct	Jan	Apr	Jul	Oct	Jan	Apr	Jul	Oct	Jan	Apr	Jul	Oct	Jan	Apr	Jul	Oct	Jan	Apr	Jul	Oct	Jan	Apr	Jul	Oct	Jan	Apr								



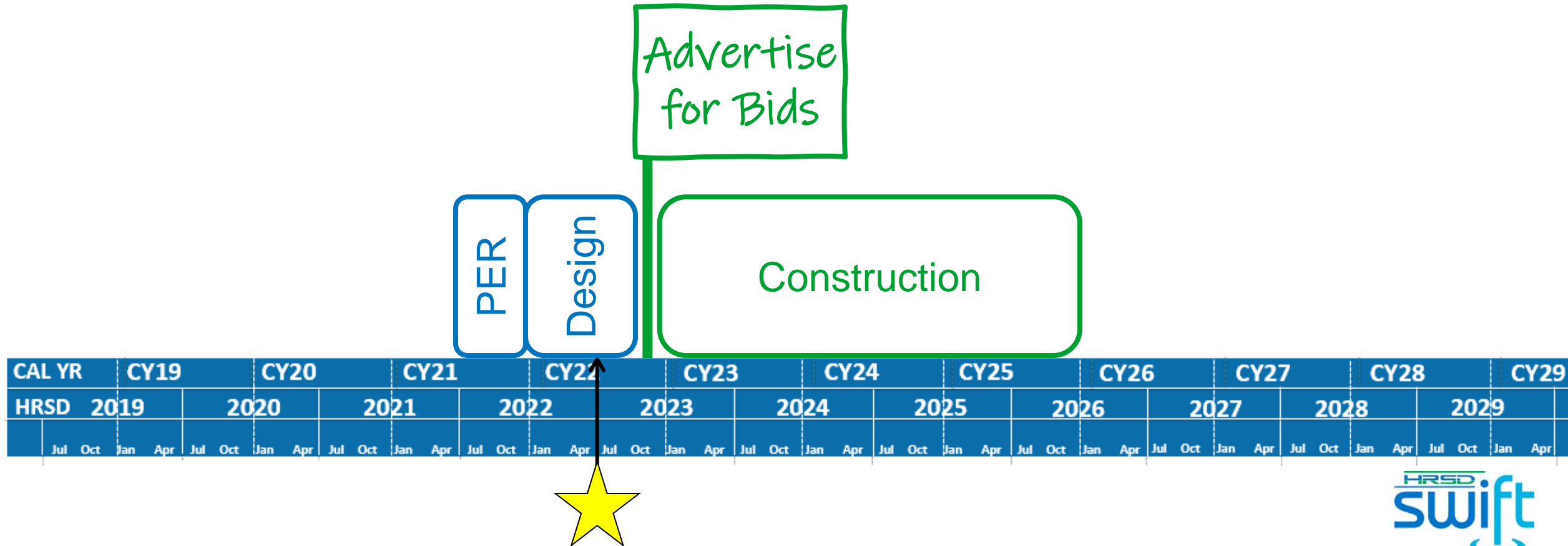
# Proposed profile of Force Main under the James River





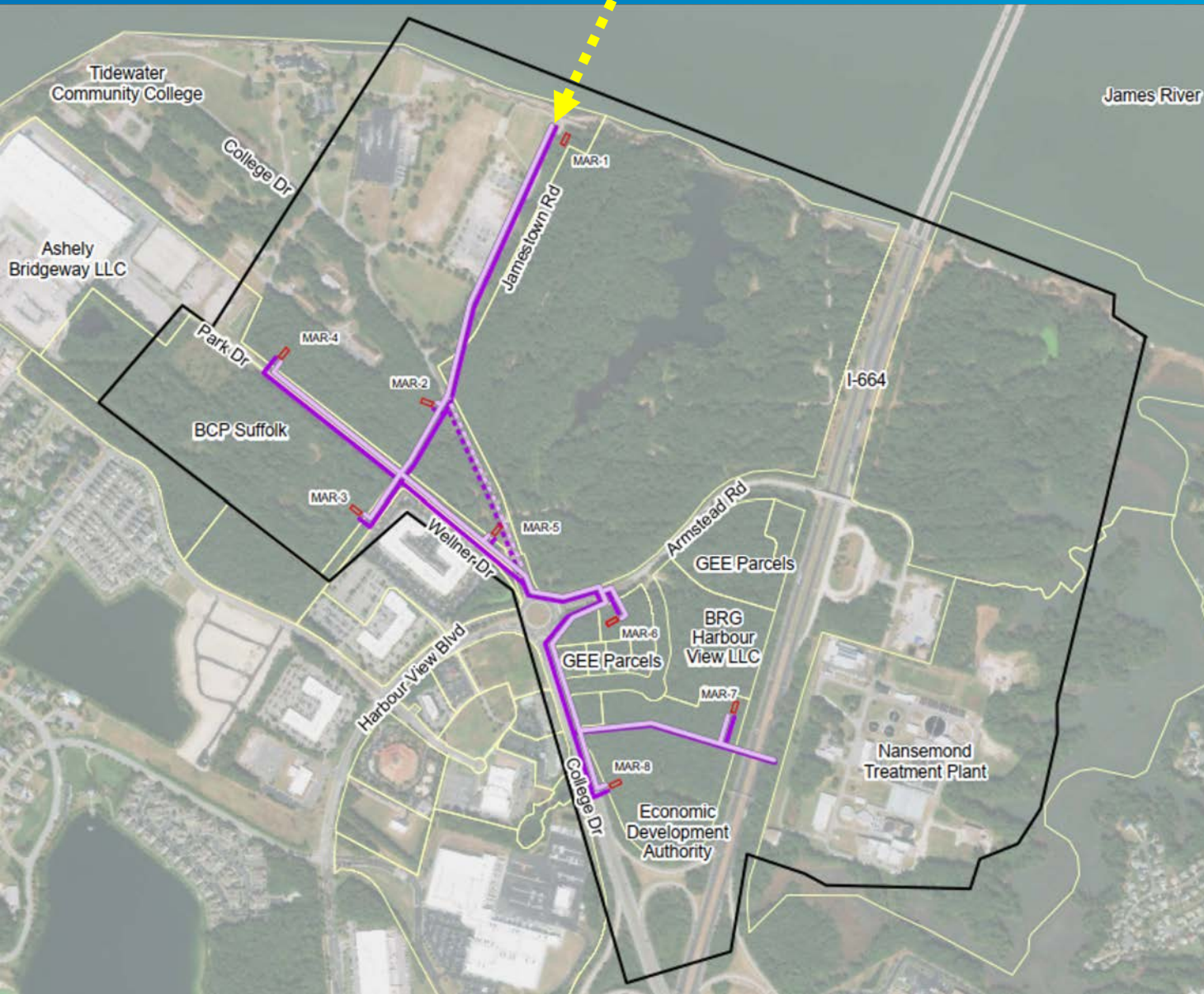
# Boat Harbor Transmission Force Main (Land-2) Project Status

- Design by CDM Smith



# Boat Harbor Transmission Force Main (Land-2)

## Project Status – *site plan have been superseded*



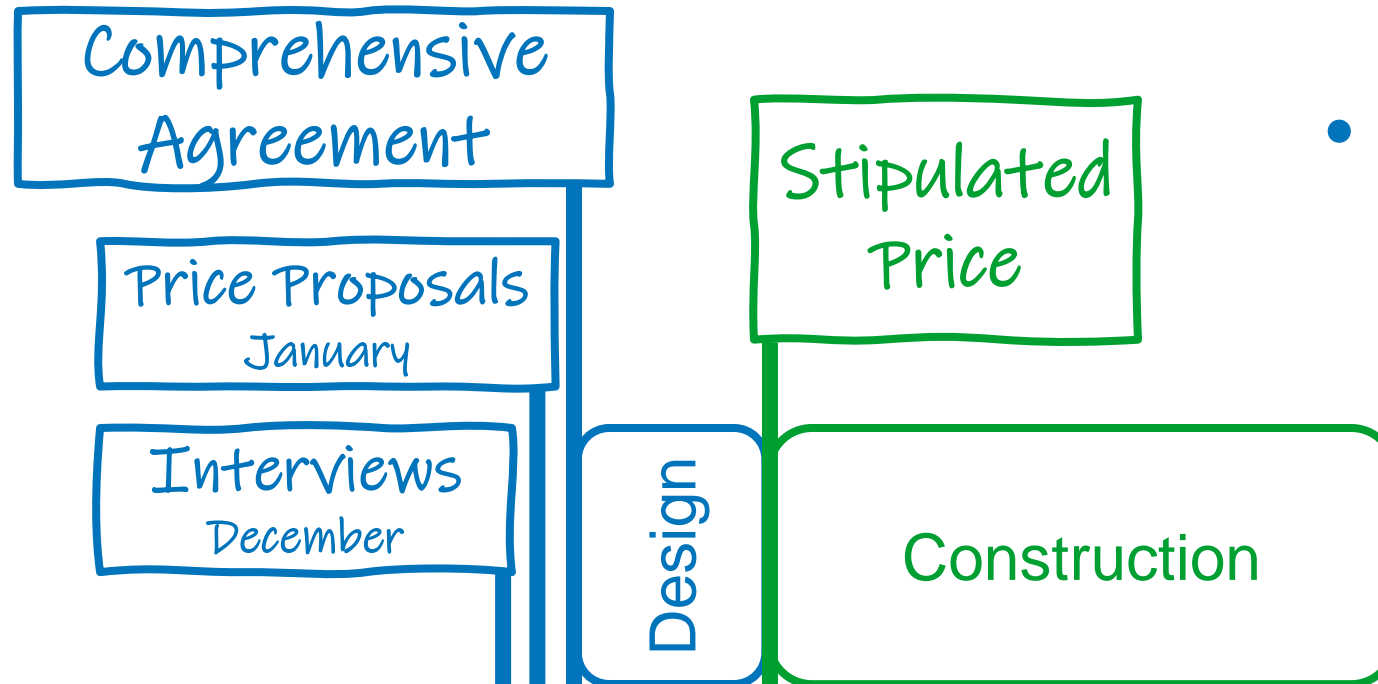
- Interface with FM1 and Nansemond TP
- Coordinate with multiple private properties
- 48" HDPE Force Main
- Micro-tunnel under I-664
- Coordinate with managed aquifer recharge wells
- 30"-12" SWIFT Water pipe
- 16" Backwash pipe



# Nansemond Wastewater Upgrade (ANRI)

## Design Build Project Status

- Team selected -> Garney with Tetra Tech
- Design is underway



CAL YR		CY19				CY20				CY21				CY22				CY23				CY24				CY25				CY26				CY27				CY28				CY29			
HRSD		2019				2020				2021				2022				2023				2024				2025				2026				2027				2028				2029			
		Jul	Oct	Jan	Apr	Jul	Oct	Jan	Apr	Jul	Oct	Jan	Apr	Jul	Oct	Jan	Apr	Jul	Oct	Jan	Apr	Jul	Oct	Jan	Apr	Jul	Oct	Jan	Apr	Jul	Oct	Jan	Apr	Jul	Oct	Jan	Apr								



# Wastewater Upgrades

## Advanced Nutrient Reduction Improvements



- Increase plant capacity - 50 MGD
- Major new infrastructure
- Improve nutrient reduction
- Treat to SWIFT influent quality

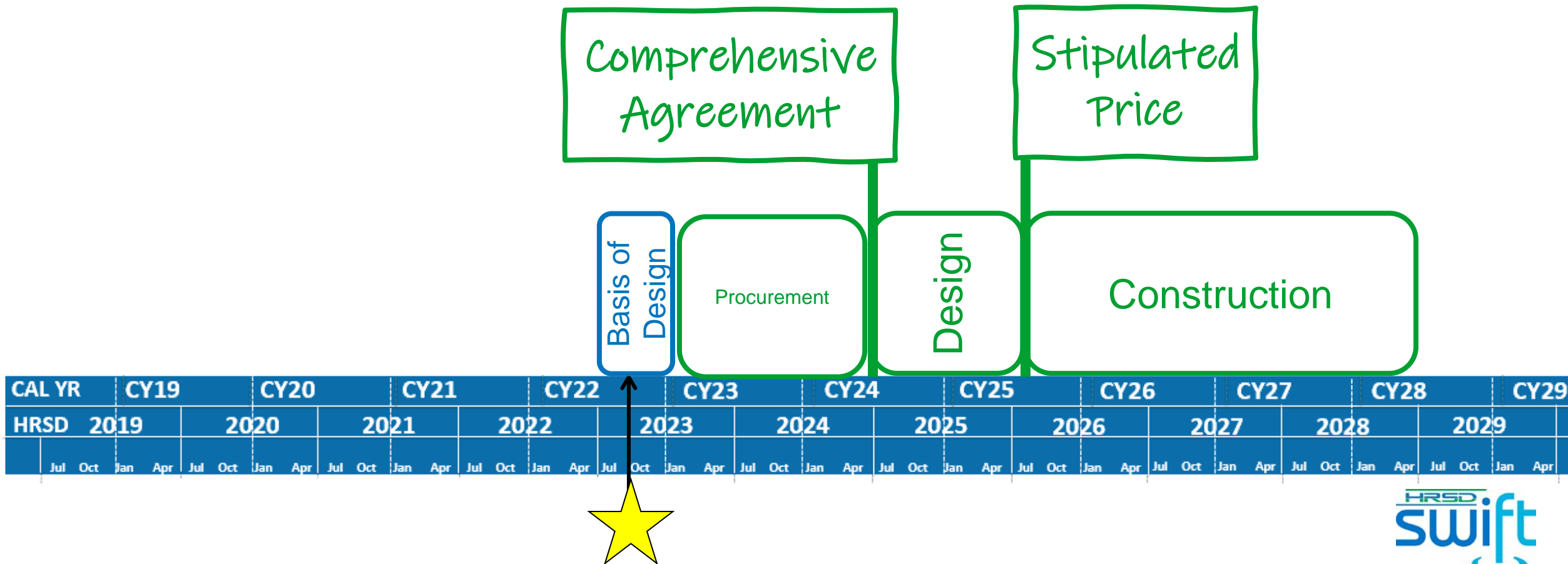


# Future Nansemond Facility



# Nansemond SWIFT Design Build Project Status

- Developing basis of design





## Full-Scale SWIFT Facility



- 33 MGD capacity recharge
- Multi-barrier Advanced Water Treatment
- Piping distribution network to all Wells



# Nansemond Managed Aquifer Recharge Wells

2.5 MGD per well





## SWIFT FSIP Update: VIP

- Strategic planning

## SWIFT FSIP Update: YR, WB

- After VIP planning

