

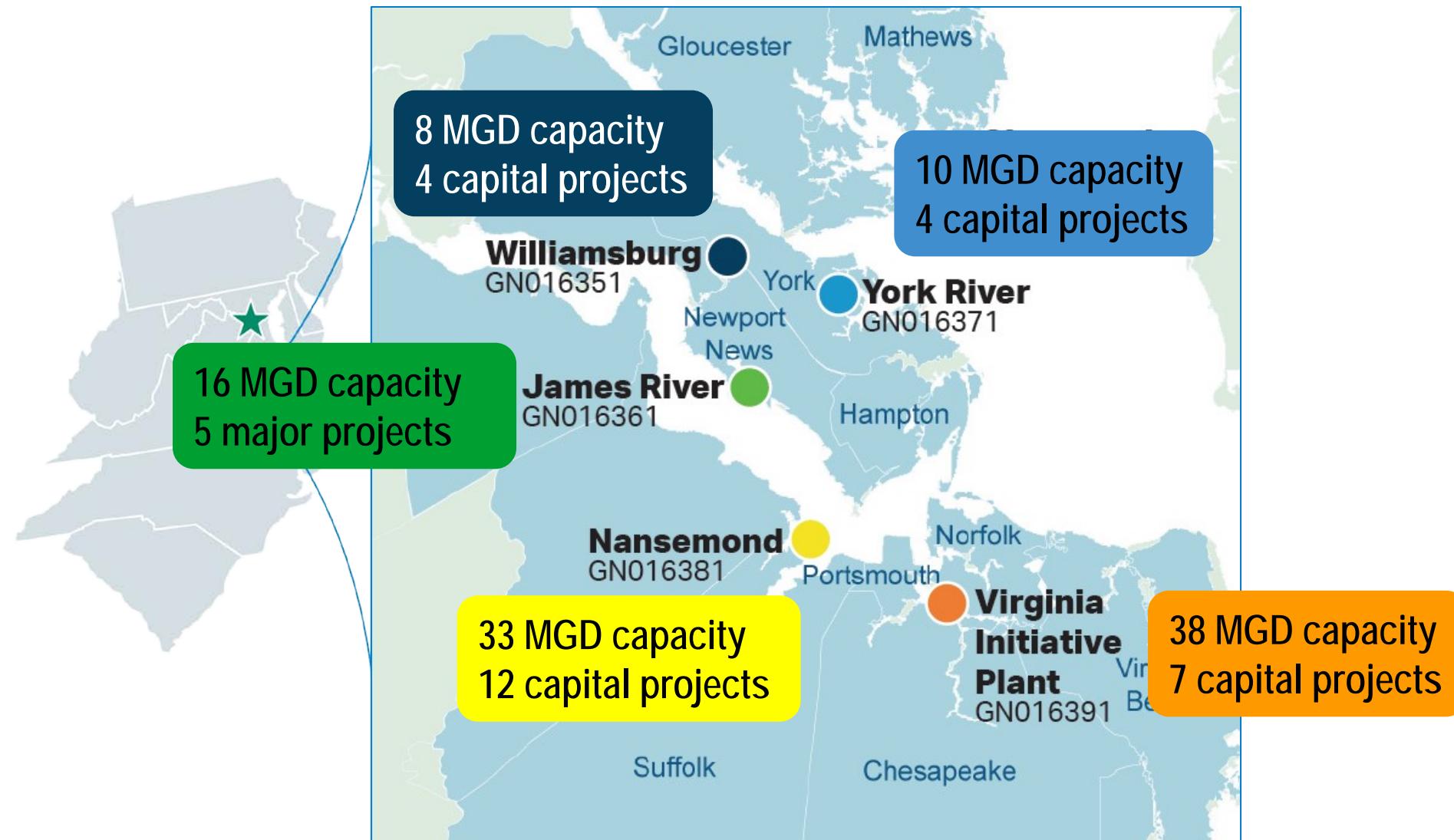


Full Scale Implementation Program (FSIP) Update

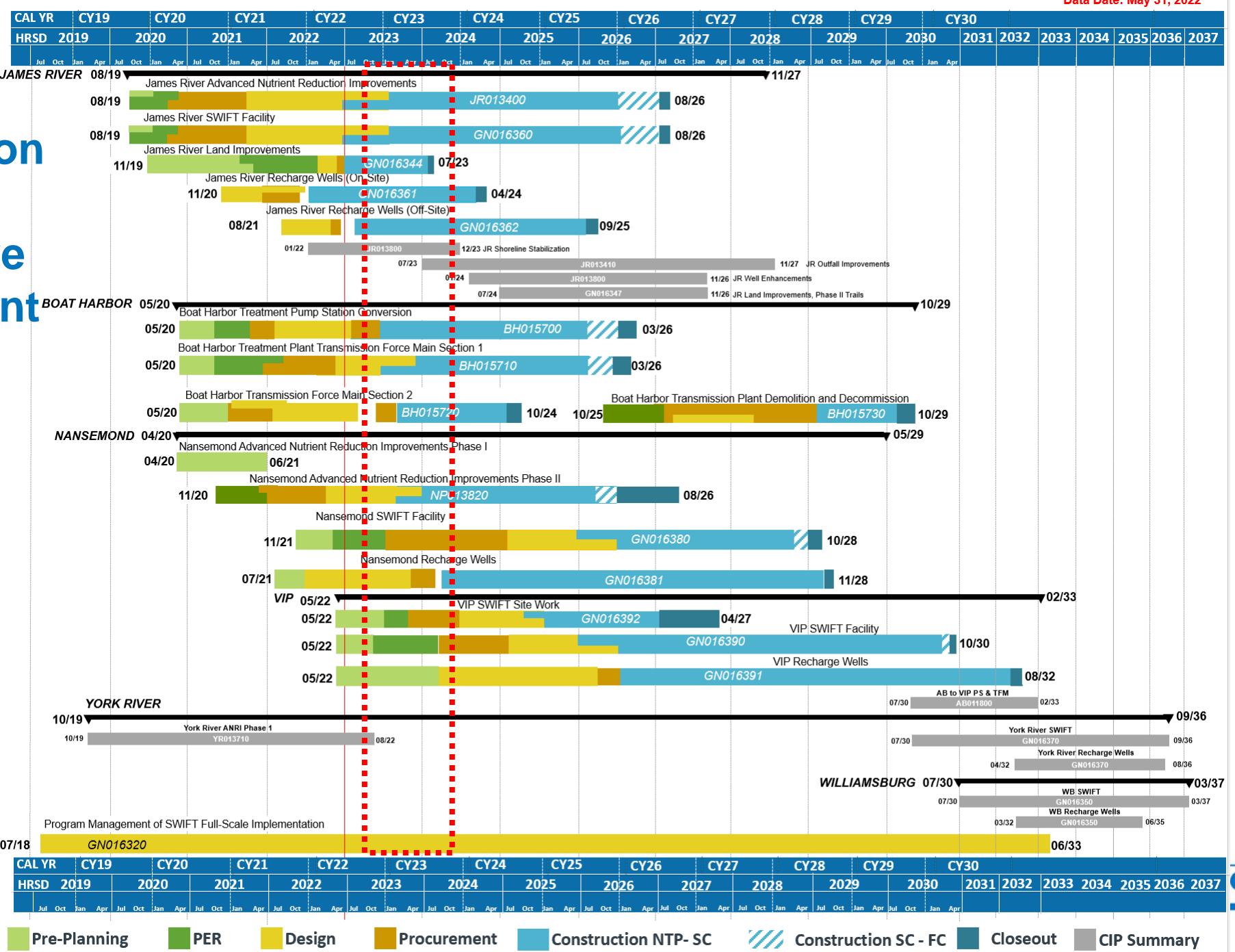
Potomac Aquifer Recharge
Oversight Committee
September 26, 2022

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.

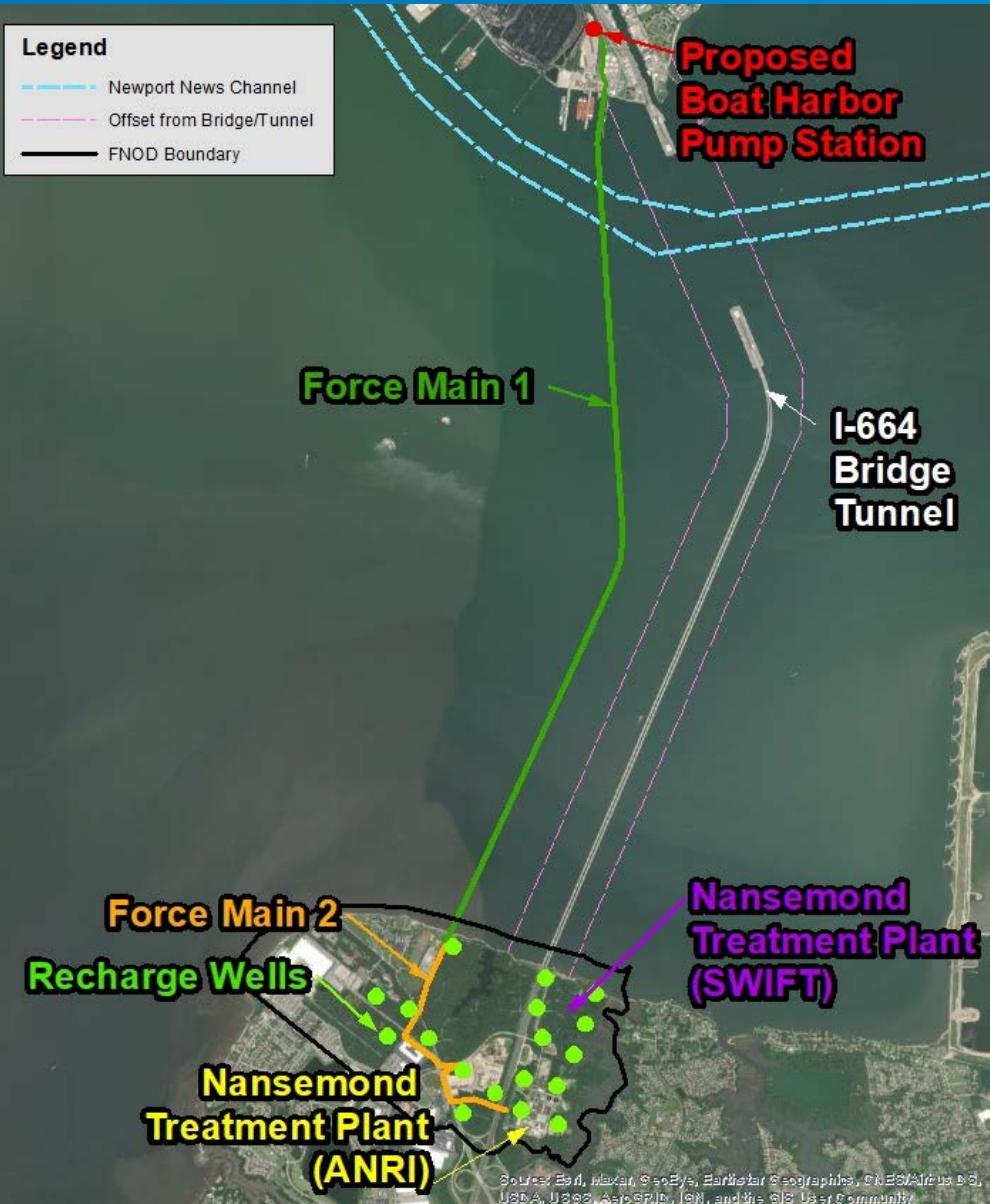


James River



- 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

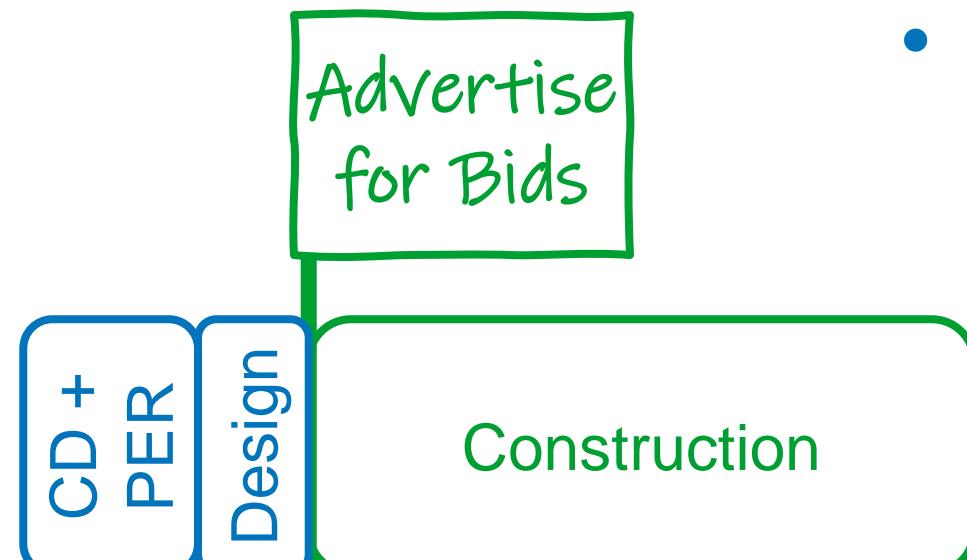
Boat Harbor Transition and Nansemond Improvements



- 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



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	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049			
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			





Boat Harbor Pump Station Location

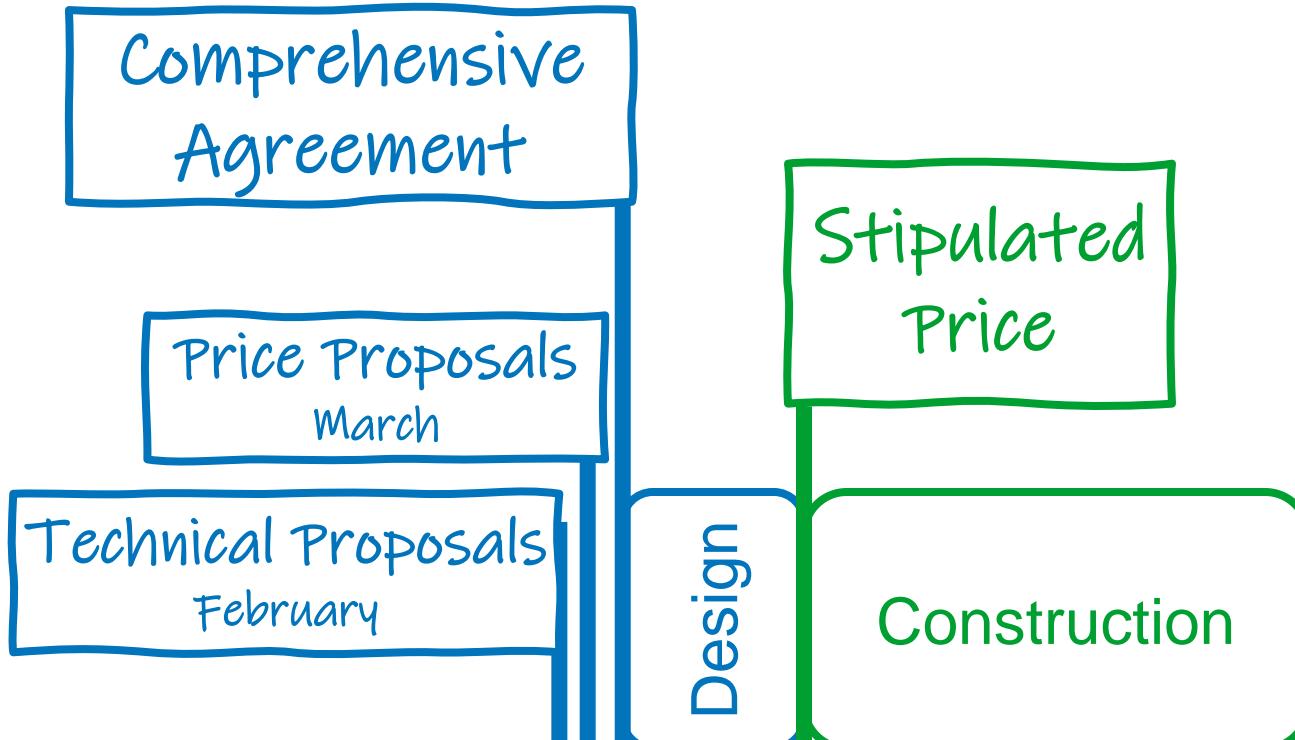
- Higher elevation

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

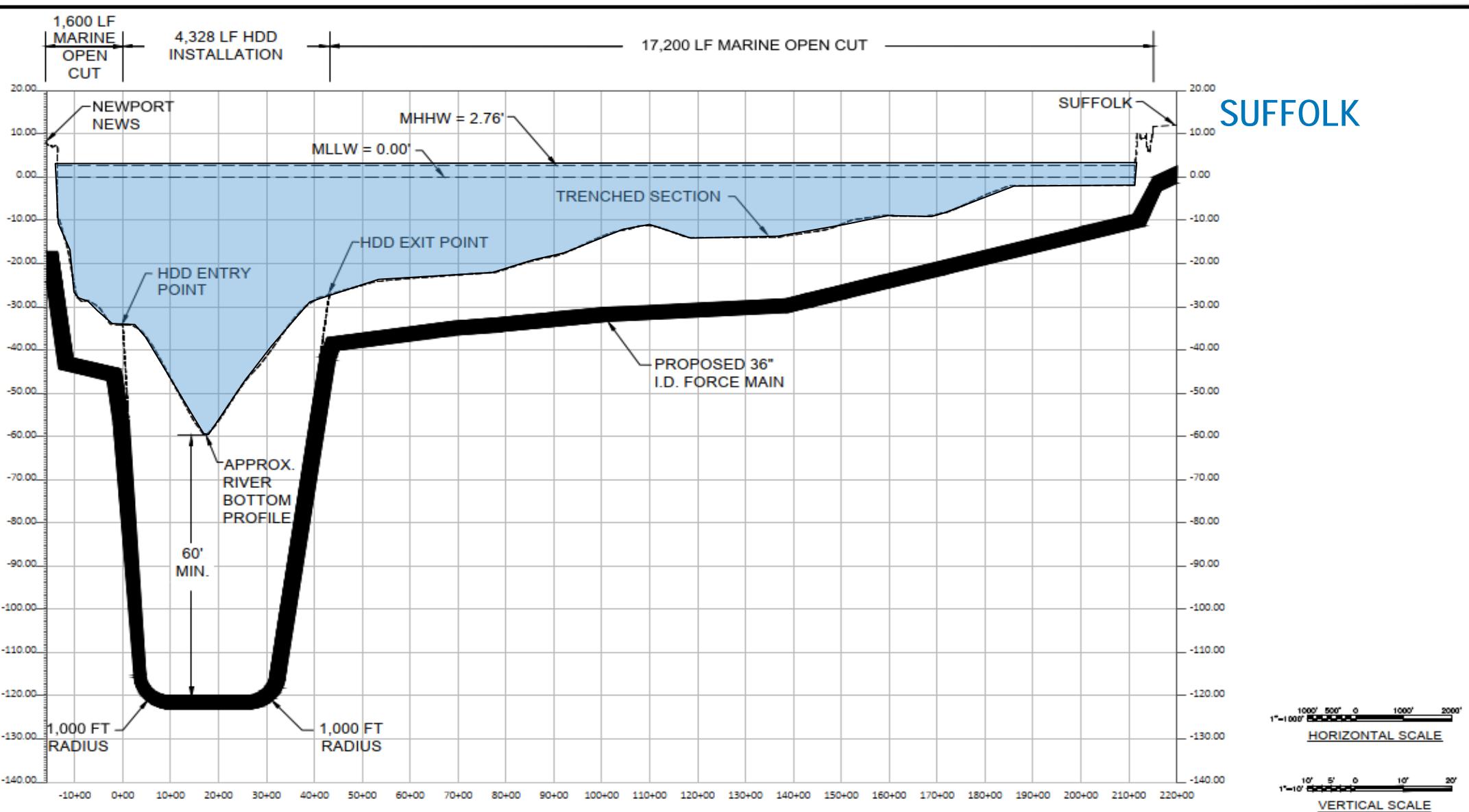


- Team selected -> Garney Construction with Dewberry
- Multiple agency and permit coordination
- Design underway

CAL YR		CY19			CY20			CY21			CY22			CY23			CY24			CY25			CY26			CY27			CY28			CY29		
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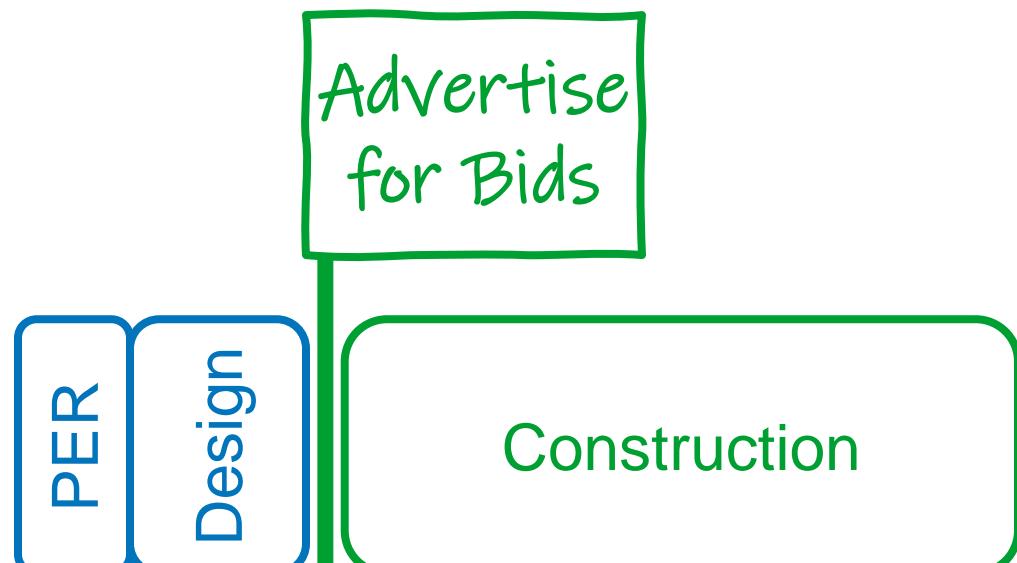


Proposed profile of Force Main under the James River



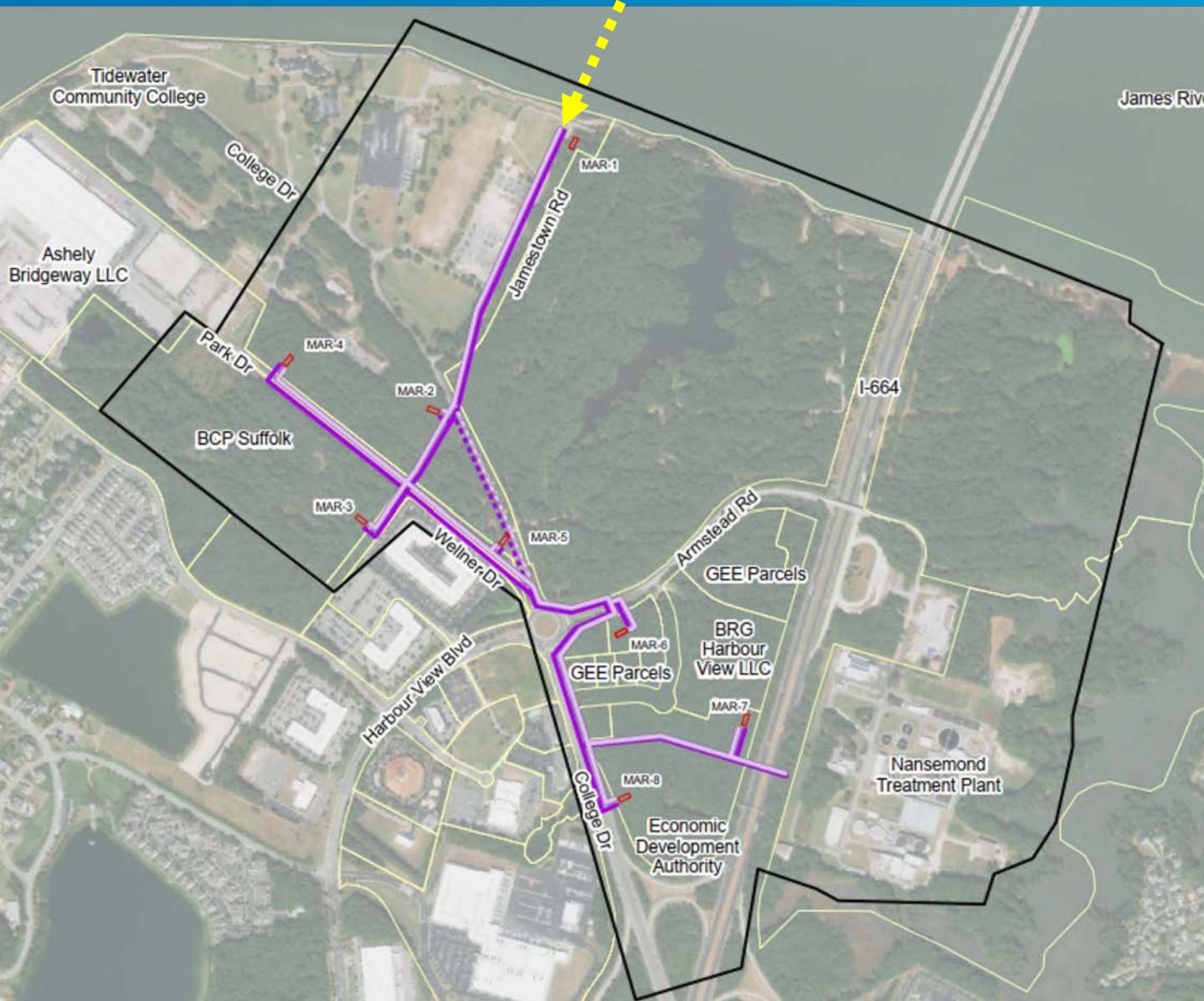
Boat Harbor Transmission Force Main (Land-2) Project Status

- Design by CDM Smith



Boat Harbor Transmission Force Main (Land-2)

Project Status – *site plan have been superseded*

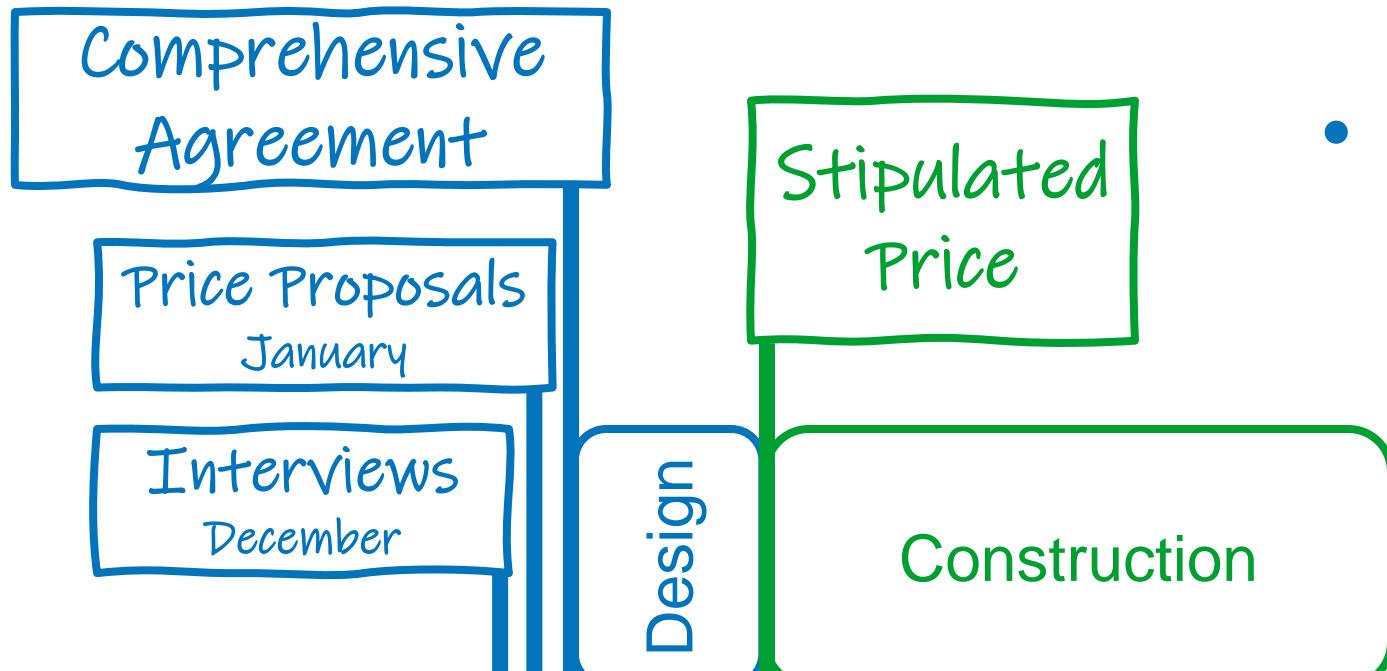


- Interface with FM1 and Nansemond TP
- Coordinate with multiple private properties
- 48" HDPE Force Main
- Micro-tunnel under I-664

- 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



Wastewater Upgrades

Advanced Nutrient Reduction Improvements



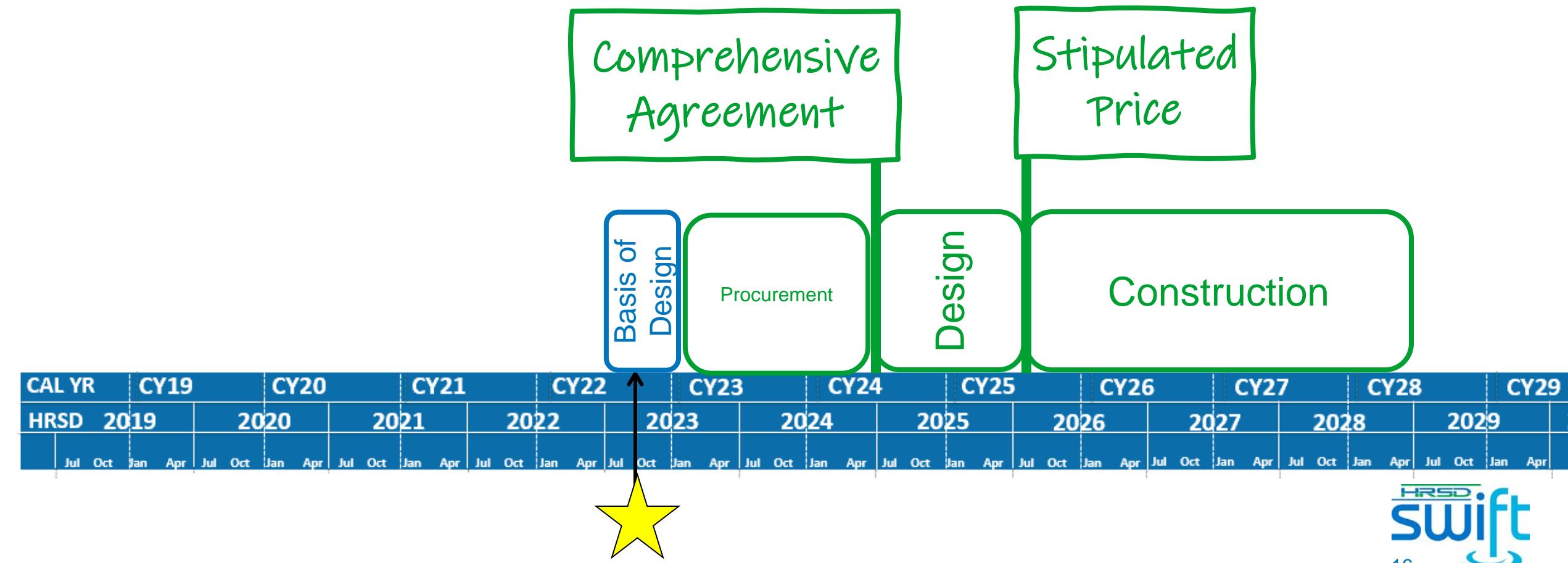
- Increase plant capacity - 50 MGD
- Major new infrastructure
- Improve nutrient reduction
- Treat to SWIFT influent quality

Future Nansemond Facility



Nansemond SWIFT Design Build Project Status

- Developing basis of design

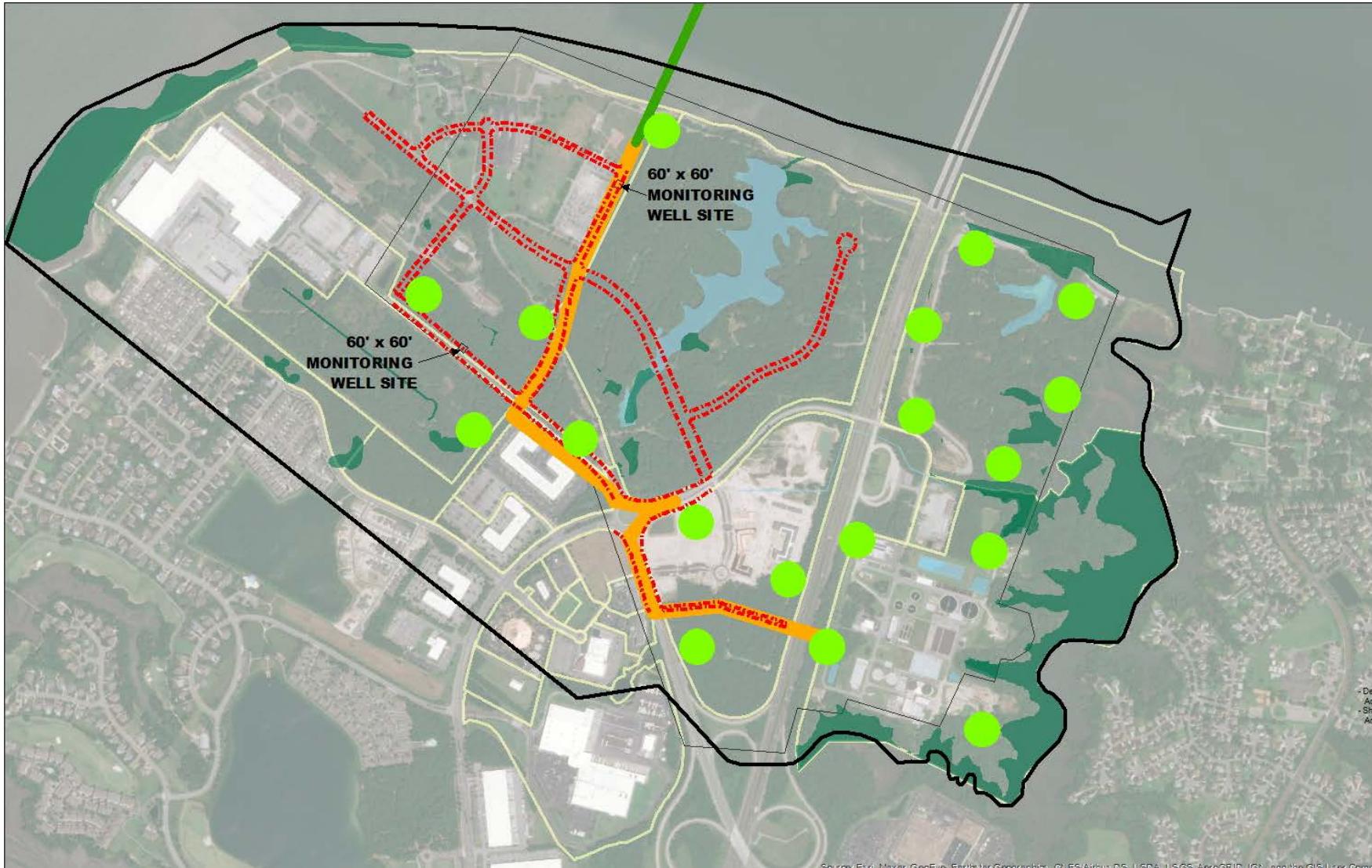


Full-Scale SWIFT Facility



- **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

