

RiverRenew Tunnel System Project Award

AlexRenew Board of Directors Meeting

November 17, 2020

How Water Works in the City of Alexandria



VIRGINIA
AMERICAN WATER

Drinking Water



**Storm, Sanitary,
and Combined
Sewer System**

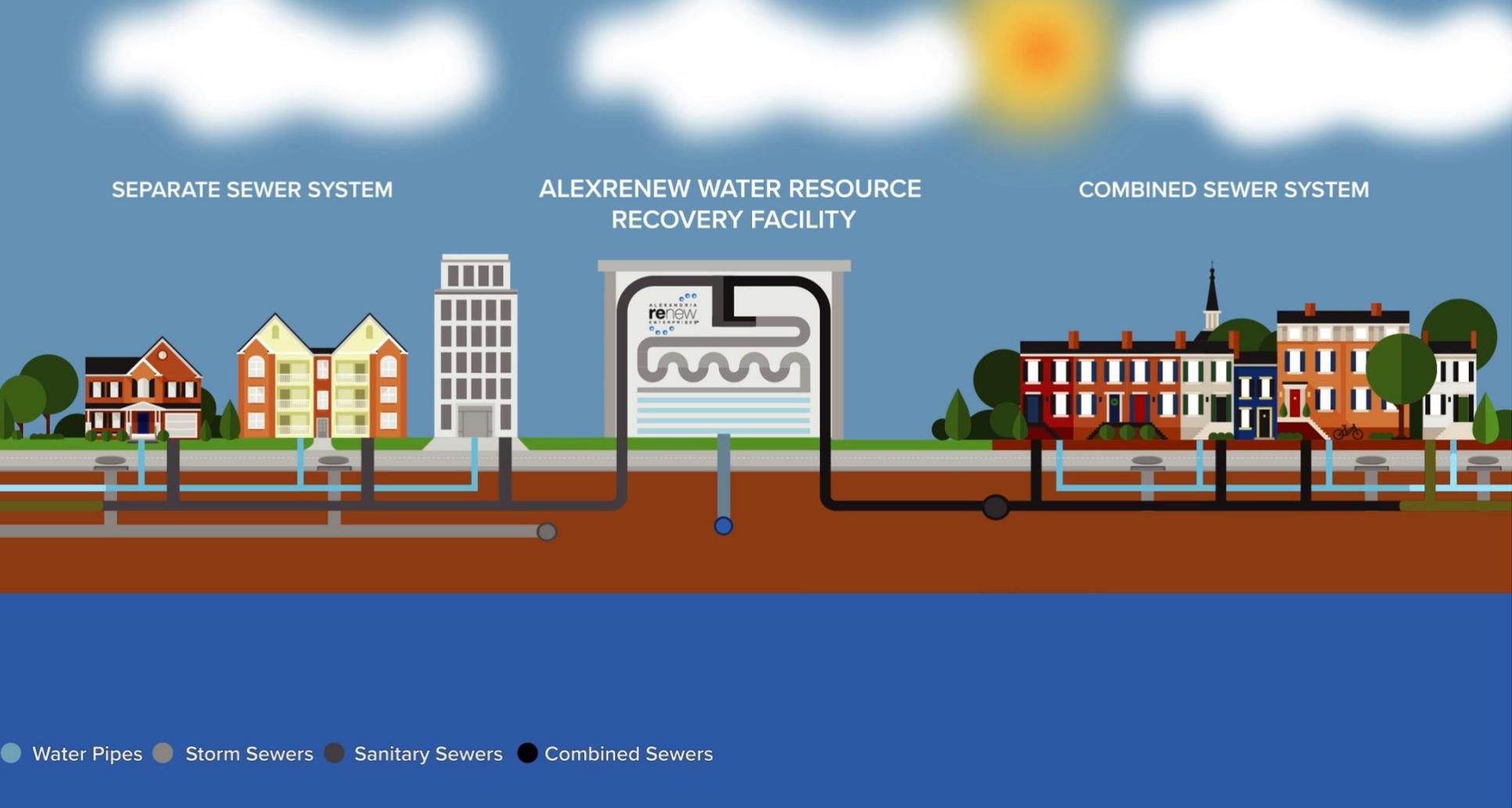


ALEXANDRIA
renew
ENTERPRISES®

**Wastewater
and Combined
Sewer Treatment**



Alexandria's Combined and Separate Sanitary Sewer Systems

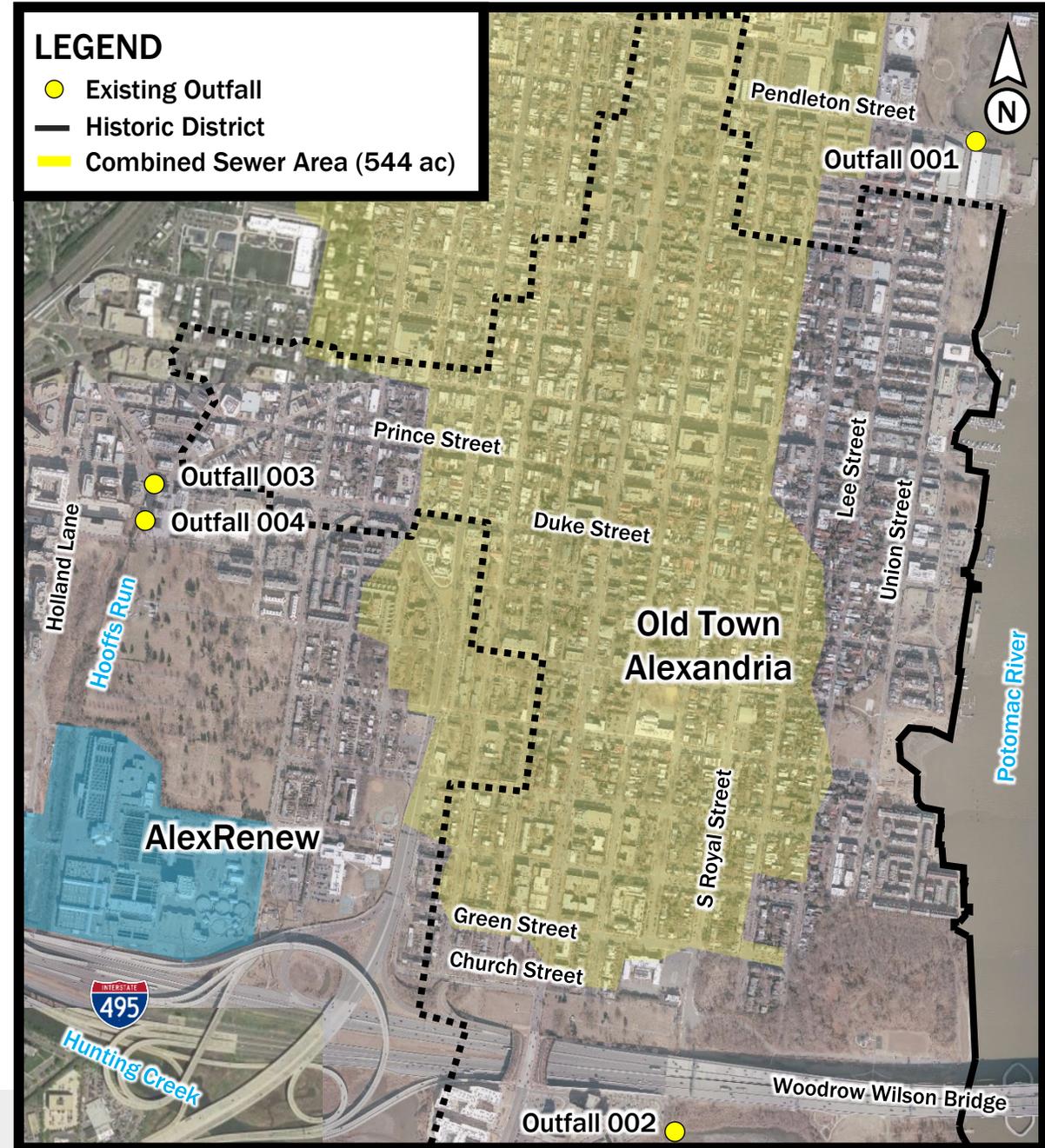


Over 130 Million Gallons of Rainwater Mixed with Sewage Pollutes Alexandria's Waterways Each Year via Four Outfalls

A 2017 Virginia law requires remediation of these outfalls by July 2025

Outfall	Overflow Volume (million gallons)*	Overflow Events*	2017 Law Requirement
001	46	37	4-6 overflows per year
002	40	46	80% bacteria reduction
003	25	70	99% bacteria reduction
004	17	45	99% bacteria reduction

*Yearly average based on 2000-2016 climate period



RiverRenew Tunnel System Project Snapshot

Major Tunnel System Project Components:

- 11,500-ft long, 12-ft diameter Waterfront Tunnel
- Outfall 001 and 002 Diversion Facilities
- 2,500-ft long, 6-ft diameter Hooffs Run Interceptor
- Tunnel Dewatering Pumping Station and Wet Weather Pumping Station (TD/WWPS)
- TD/WWPS Superstructure

Estimated Tunnel System Project Construction Cost:

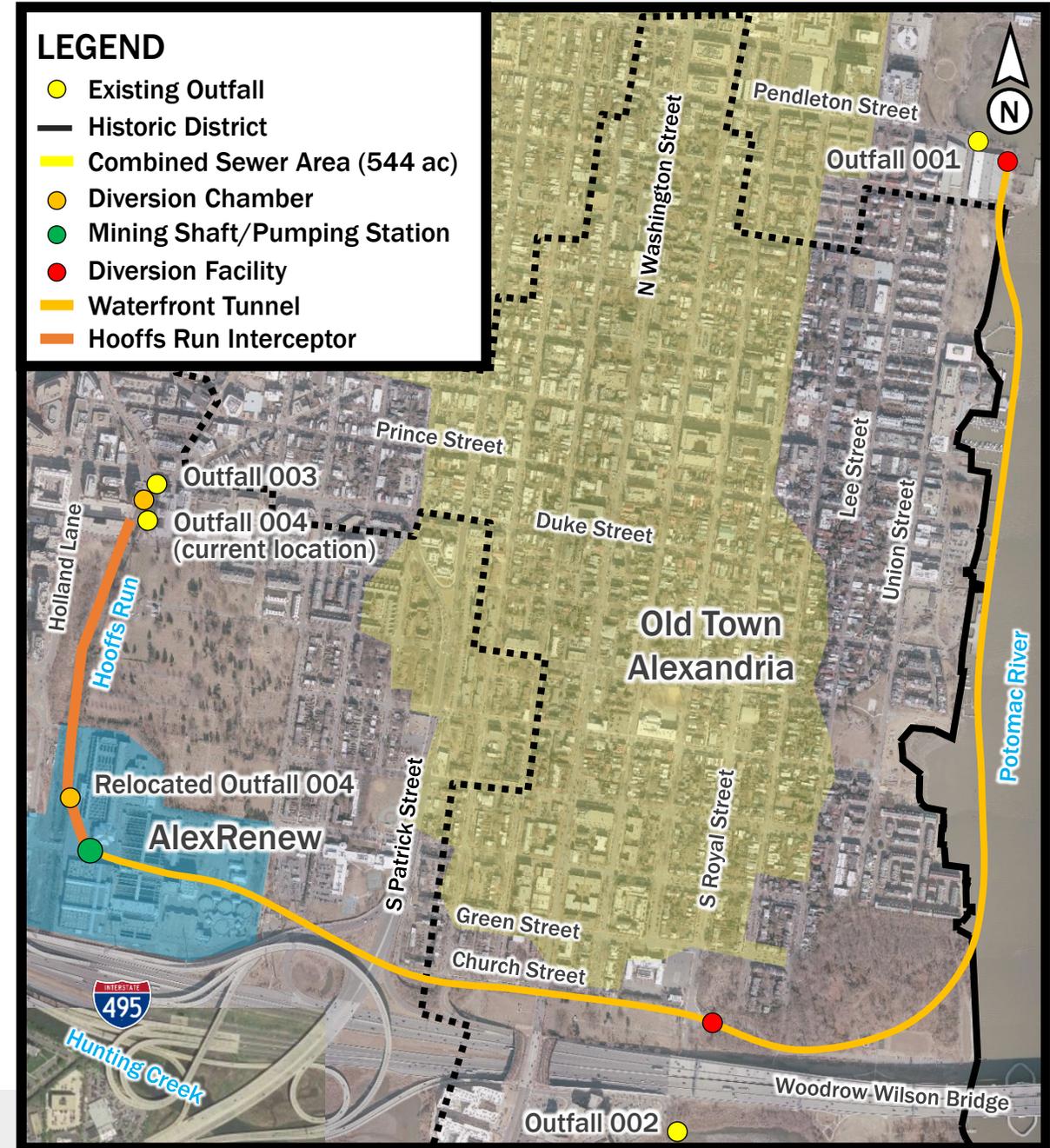
- \$346 – \$416 million (Aug 2020 Engineer's Estimate)

Estimated RiverRenew Program Capital Cost:

- \$506 – \$604 million (Aug 2020 Engineer's Estimate)

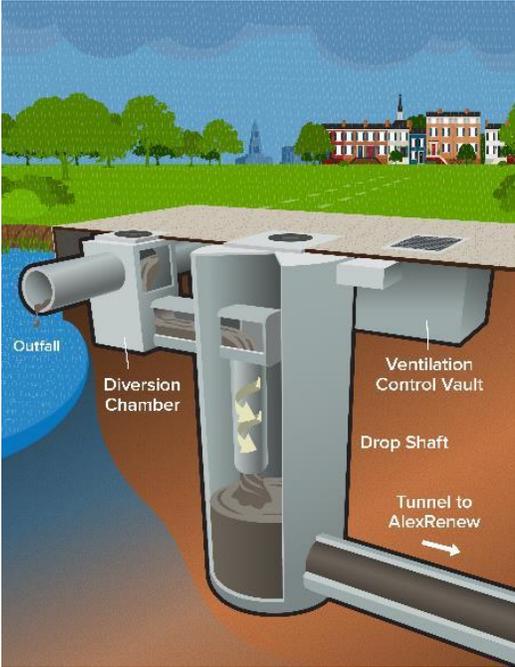
Tunnel System Project Schedule:

- December 2020 – July 2025 (Substantial Completion)

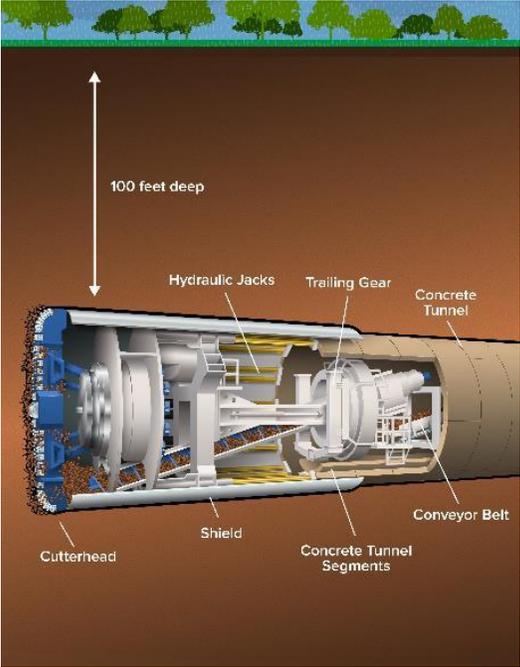


Major Components of the RiverRenew Tunnel System Project

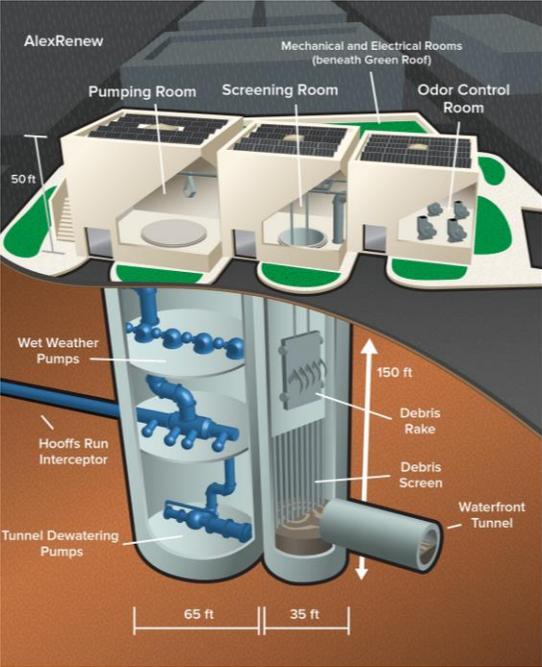
Waterfront Tunnel



Tunnel Dewatering and Wet Weather Pumping Station



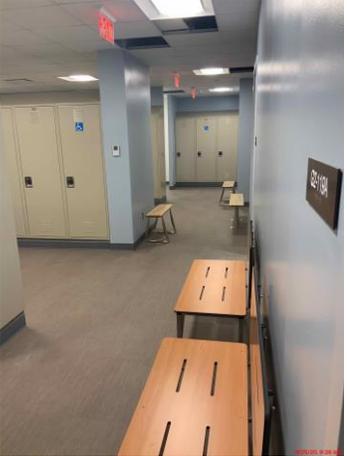
Hooffs Run Interceptor



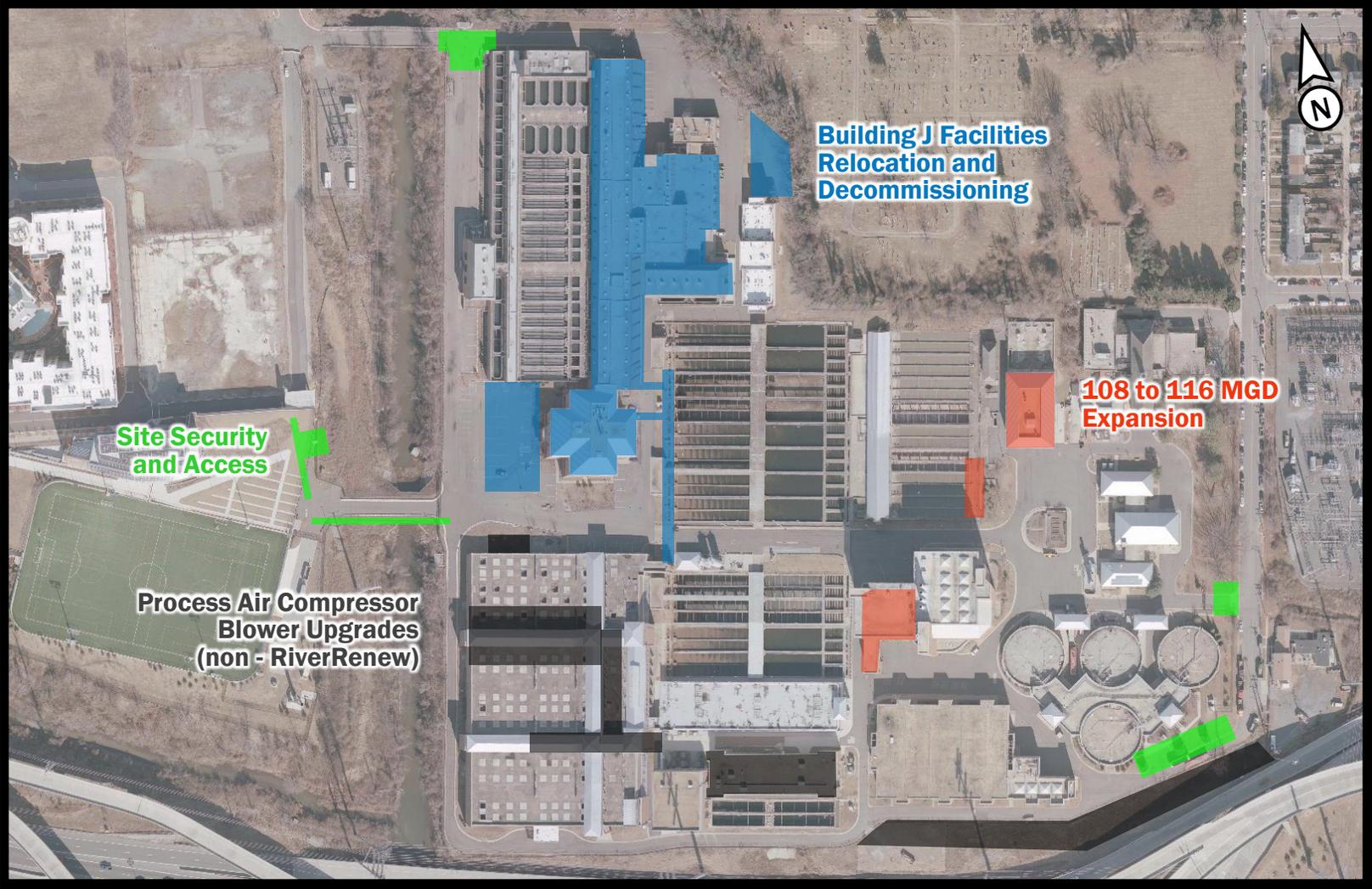
RiverRenew Construction Projects have been Ongoing at AlexRenew since August 2019 to Keep the Program On-Schedule



Building J: New lab



Building J: New locker rooms

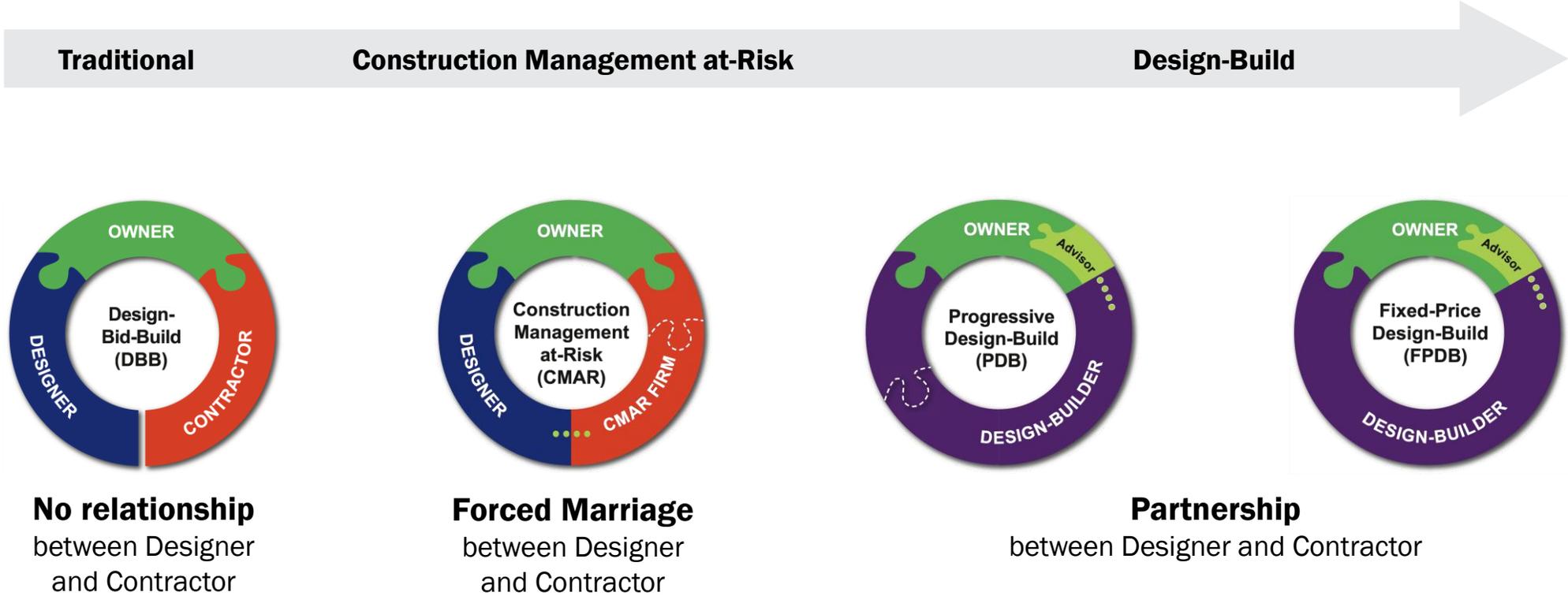


New security booth



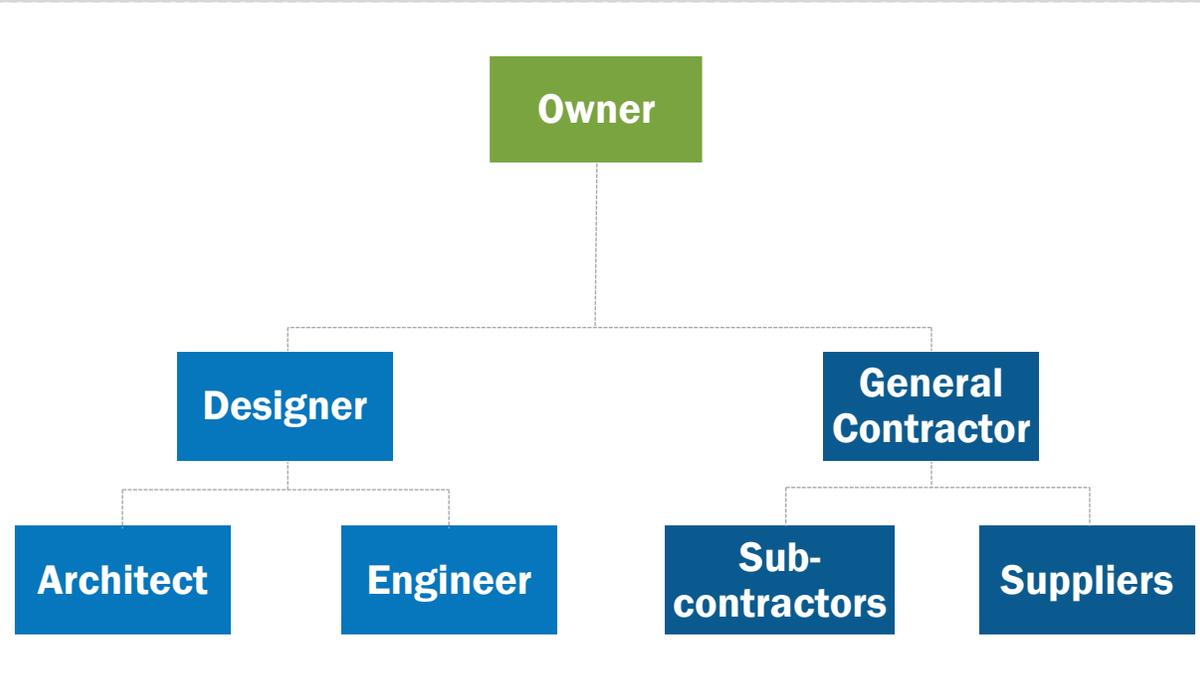
108 to 116: Upgraded pumps

Summary of Major Project Delivery Methods

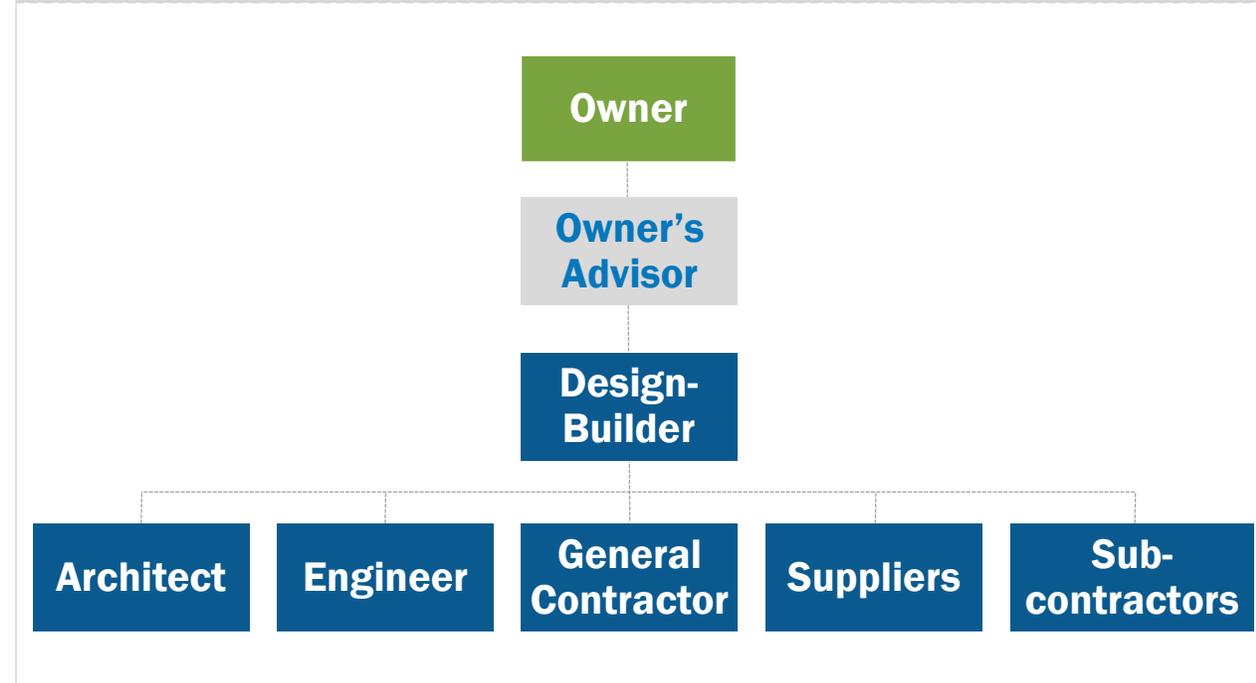


Design-Bid-Build vs Design-Build Project Organization

Design-Bid-Build Delivery

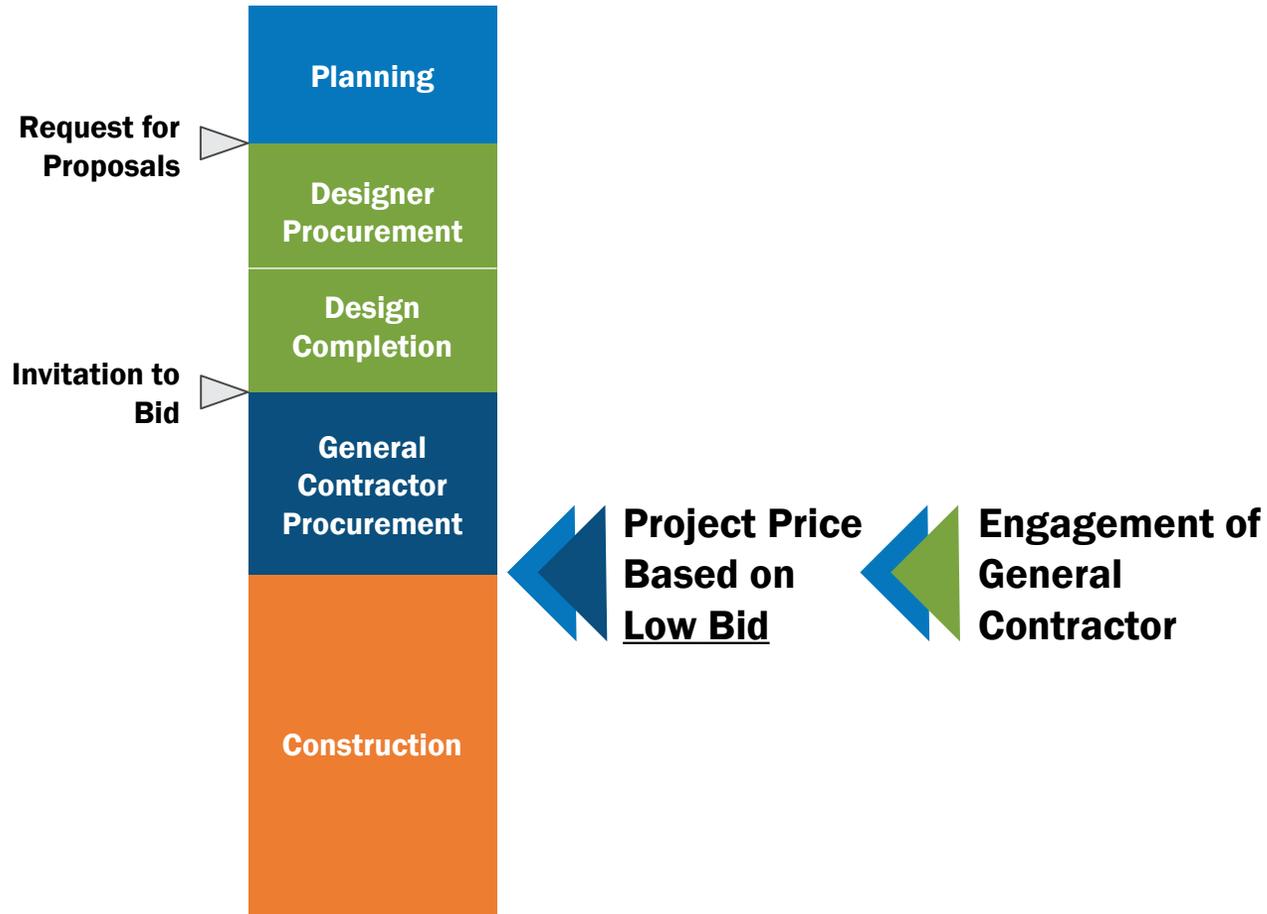


Design-Build Delivery

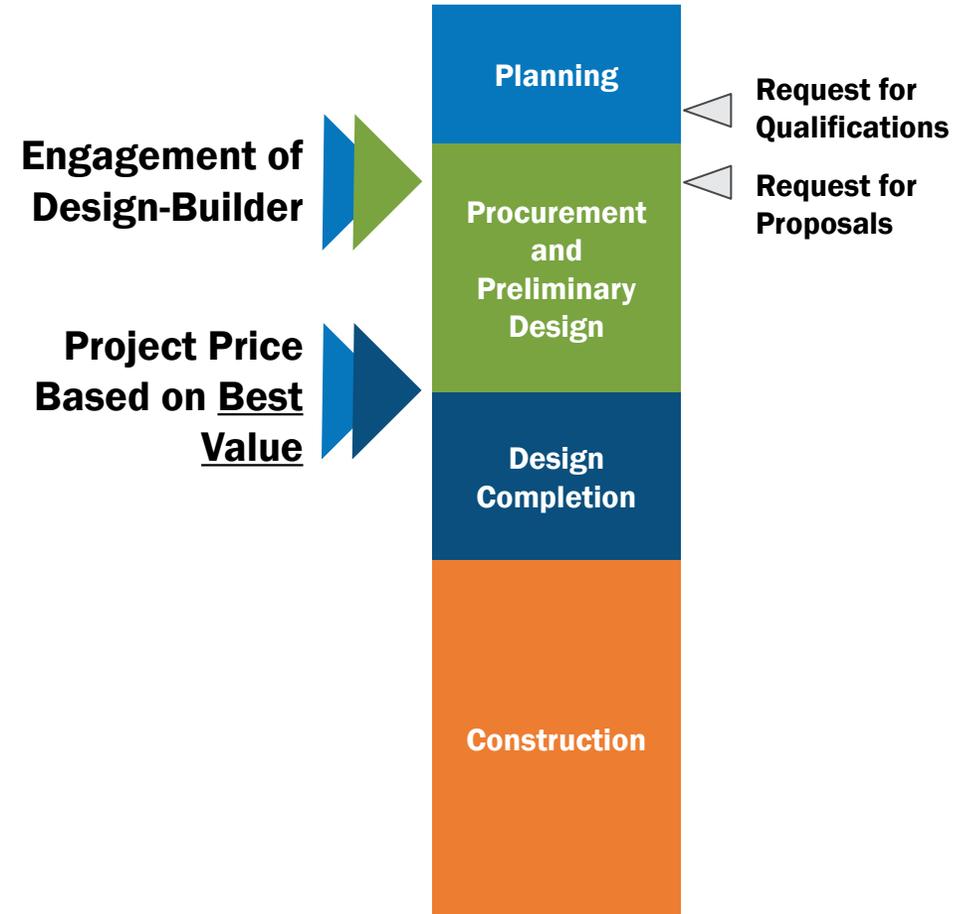


Major Differences between Design-Bid-Build and Design-Build

Design-Bid-Build Delivery



Design-Build Delivery



Key Benefits of Design-Build Project Delivery



Direct relationship between Contractor and Designer

- Fosters collaboration, teamwork, and innovation
- Owner does not manage the design/construction interface



Single Point of Responsibility

- Reduces owner exposure to claims and cost overruns
- Majority of responsibility shifted to Design-Builder



Shorter Project Delivery and Construction Durations



Owner Obtains Early Knowledge of Project Price



Owner can Consider Non-price Factors in Selection

RiverRenew Tunnel System Project Procurement Timeline



AlexRenew Received Statements of Qualifications from Eight Teams in Response to the Request for Qualifications



Archer Western/Vinci/Bessac JV
Designer: AECOM



Clark/Atkinson/Michels LLC
Designers: Cowi, Arcadis



Dragados/Halmar JV
Designer: Mott MacDonald



Kenny
Designer: Parsons
Subcontractor: Ulliman Schutte



Kiewit/McNally JV
Designers: McMillen Jacobs,
Wade Trim



Lane
Designer: Brierley



Obayashi/Jay Dee JV
Designers: Hatch, Freese and
Nichols, Schnabel-SWS



Traylor/Shea JV
Designer: Jacobs
Subcontractor: Corman

AlexRenew Shortlisted Three Teams for Invitation to Submit Proposals in Response to the Request for Proposal Documents



Clark/Atkinson/Michels LLC
Designers: COWI, Arcadis



Kiewit/McNally JV
Designers: McMillen Jacobs,
Wade Trim

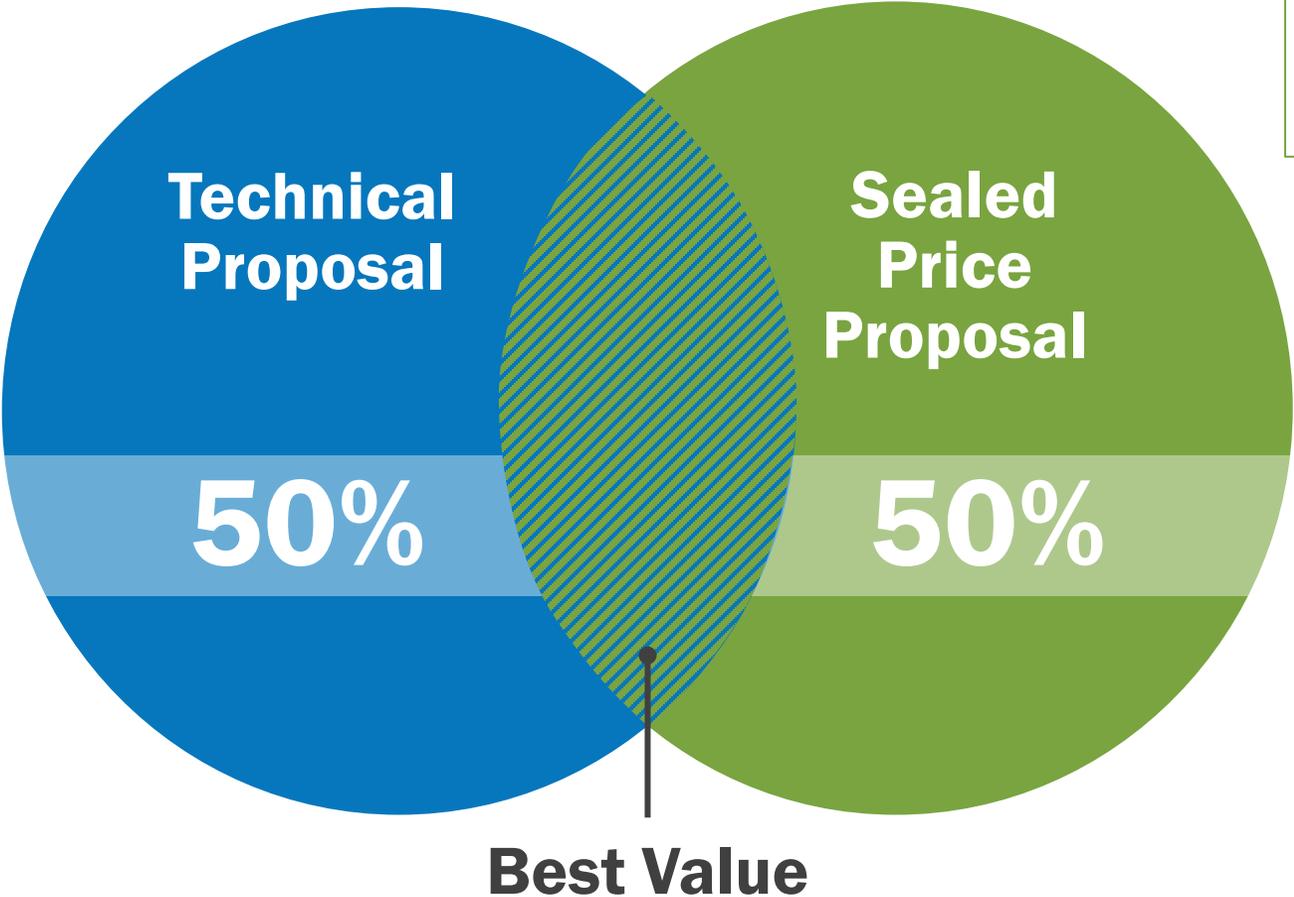


Traylor/Shea JV
Designer: Jacobs
Subcontractor: Corman

Collaborative Meetings were Held with Shortlisted Proposers from March through June 2020

March 4, 2020	Week of March 30th	Week of May 11th	Week of May 11th	Week of June 14th	Week of June 22nd
Kickoff Meeting	Confidential Geotechnical Conference Call	Confidential Meeting No. 1	Terms & Conditions Meeting (Confidential)	Confidential Meeting No. 2	Confidential Meeting No. 3
<ul style="list-style-type: none"> • Non-confidential meeting with all teams to review Request for Proposal Documents 	<ul style="list-style-type: none"> • Discuss Geotechnical Data and Baseline Reports • Alternative Technical Concepts 	<ul style="list-style-type: none"> • Waterfront Tunnel • Diversion Facilities • Alternative Technical Concepts 	<ul style="list-style-type: none"> • Discuss contract terms and conditions in a confidential setting 	<ul style="list-style-type: none"> • Hooffs Run Interceptor • Alternative Technical Concepts 	<ul style="list-style-type: none"> • Tunnel Dewatering and Wet Weather Pumping Station • Maintenance of Plant Operations • System Integration • Alternative Technical Concepts

Proposals Include a Technical Component and Price Component, Weighted Equally



Unsuccessful shortlisted proposers provided proposal payment for intellectual property

RiverRenew Tunnel System Project Evaluation Committee and Technical Advisors

Evaluation Committee Members



**Emily
Baker**

City of
Alexandria
Deputy City
Manager



**Caitlin
Feehan**

Committee
Chair and
RiverRenew
Program
Manager



**Jimena
Larson**

RiverRenew
Program
Engineer



**Christine
McIntyre**

AlexRenew
Director of
Finance

Technical Advisors

Justin Carl Program Advisor

Mike Loulakis Procurement Advisor

Liz Minyard Procurement Lead

Bruce Ball Pumping Station Lead

Stephen Njoloma Design Manager

Jenn Jordan Tunnel and Geotech Lead

Rafael Castro Program Advisory Team

Other Technical Resources:

Geoff Hughes, Rosa Castro-Krawiec, Ed Cronin,
Kelvin Coles, Jim Ohnigian, Ray Hashimee, Justin
Brown, Paul Whitener, Terry Zentkovitch

RiverRenew Tunnel System Project Evaluation Committee Roles and Responsibilities

Evaluation Committee

- **Evaluate** Technical Proposals based on criteria outlined in the Instructions
- **Discuss evaluations**
- **Conduct scoring** on Technical Proposals
- **Make recommendation** on the selection of a Design-Builder to the AlexRenew CEO

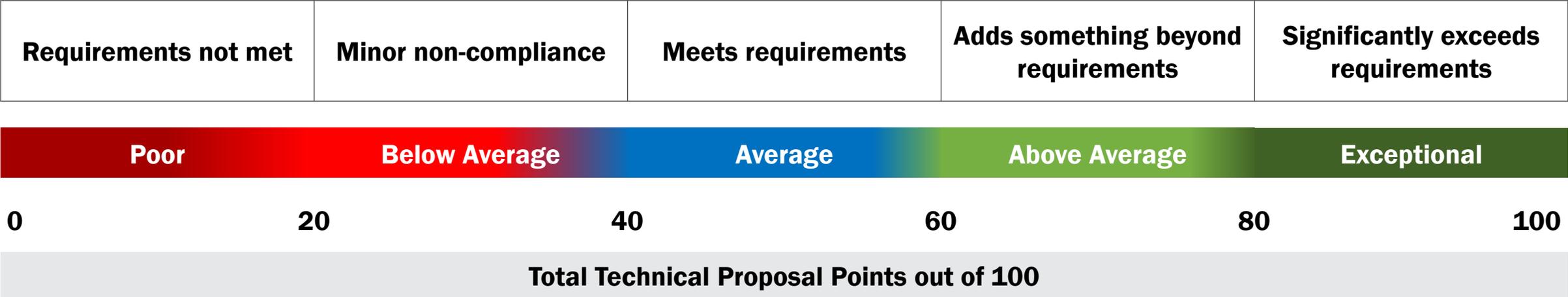
Technical Advisors

- **Ensure** Technical Proposals comply with RFP requirements
- **Answer questions** regarding technical components
- **Contribute technical review**
- **Discuss** technical elements with the Evaluation Committee

The Following Factors were Considered in the Evaluation of the Technical Proposals

Evaluation Factors	Weighting
 Team Organization and Commitment	30
 Design and Construction Plan	40
 Community Impact Mitigation Plan	10
 Design and Construction Schedule	10
 Maintenance of Plant Operations and Systems Integration	10
TOTAL	100

Metrics for the Evaluation of Technical Proposals



Traylor-Shea Joint Venture was Determined to be the Successful Proposer for the RiverRenew Tunnel System Project

Item	TSJV	Proposer A	Proposer B
Technical Proposal Score (out of 100 points)	66.1	49.3	67.1
Price Proposal (\$ millions)	\$453.5	\$469.1	\$589.6M
Price Proposal Score (out of 100 points)	100.0	96.7	76.9
Total Score (out of 100 points)	83.1	73.0	72.0

Best Value



Traylor-Shea Joint Venture Profile



Core Project Team from **Blue Plains Tunnel**:
Engineering News Record's Top Project of 2016



Strong Local Presence

- Traylor headquartered in Alexandria, VA
- Shea headquartered in Washington, DC
- Local Jacobs offices throughout metro area



Extensive experience in construction of **tunnels**,
combined sewer structures, and **pumping stations**

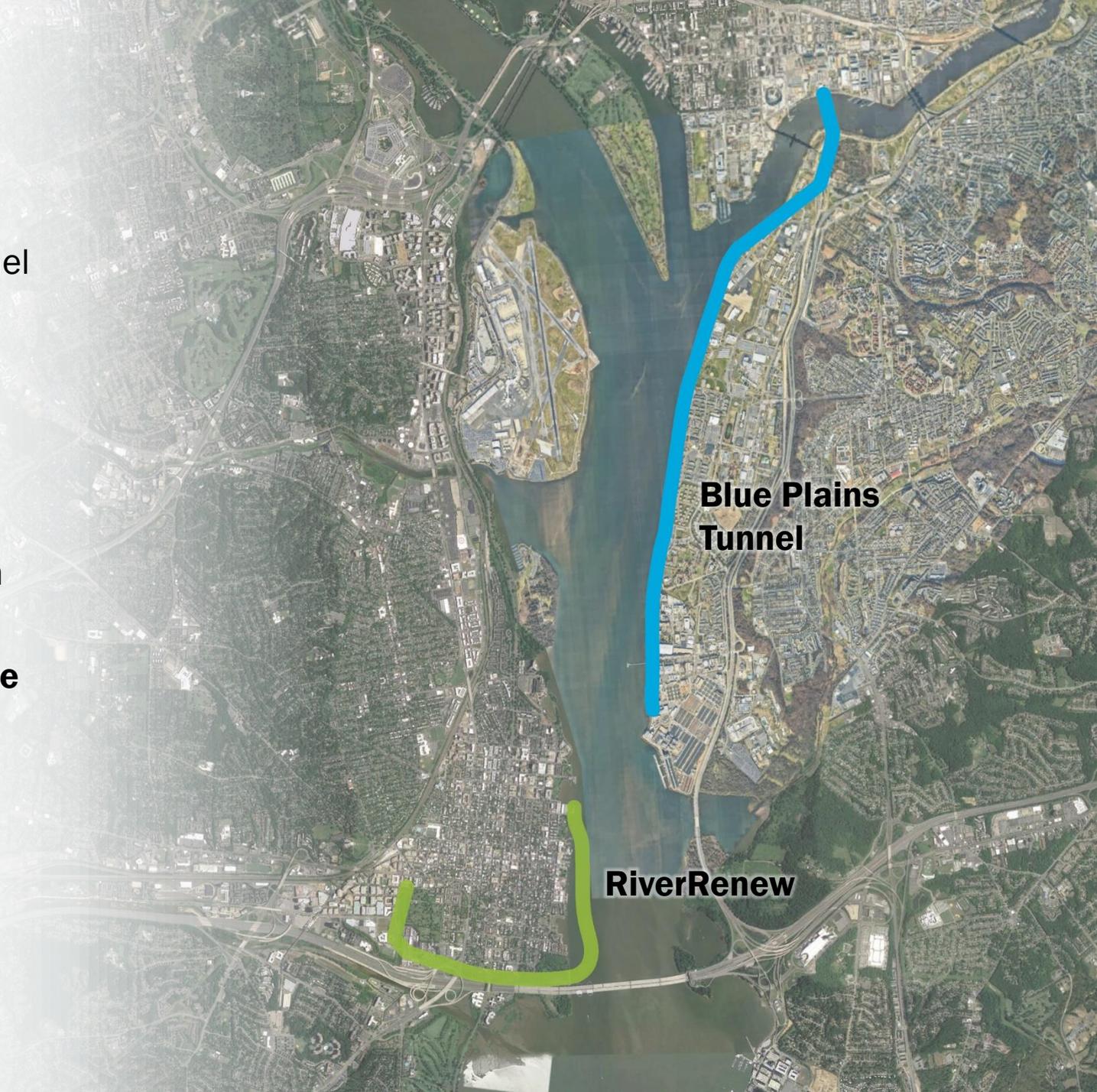


History of team working together (Traylor, Shea,
and Jacobs)



Blue Plains Tunnel Project Achievements

- **Constructed in the same ground** using a tunnel boring machine (Lady Bird)
- Lady Bird mined the **23-ft diameter, 4.5-mile-long tunnel in 23 months**
- Tunnel mined from an **active wastewater treatment plant**
- Coordinated with **concurrent pumping station construction**
- Completed with **no impacts to Consent Decree milestones**
- **Under budget**
- 1.4 million man-hours with **zero lost time incidents**
- Numerous national and international **awards**



Key Projects Delivered by Traylor-Shea Team

	TRAYLOR	SHEA	JACOBS*
Westside Subway Extension, Phase 1 LACMTA Los Angeles, CA 2014 - Present	✓	✓	✓
Blue Plains Tunnel DC Water Washington, DC 2011 - 2015	✓		✓
South Cobb Tunnel Cobb County Water System Cobb County, GA 2007 - 2010	✓	✓	
Upper Northwest Interceptor 1&2 SRCSD Sacramento, CA 2007 - 2010	✓	✓	✓
Brightwater Conveyance System King County Wastewater Division Bothell, WA 2005 - 2009	✓	✓	
San Vicente Pipeline SDCWA San Diego, CA 2005 - 2010	✓	✓	✓
Northeast Interceptor Sewer City of Los Angeles Los Angeles, CA 2002 - 2005	✓	✓	
North Outfall Sewer - East Central Interceptor LA Public Works Los Angeles, CA 2000 - 2005	✓	✓	
Arrowhead Water Conveyance Tunnels MWD Los Angeles, CA 2003 - 2009	✓	✓	✓
Gold Line Metro LACMTA Los Angeles, CA 2004 - 2007	✓		✓
University Link Contract U220 Sound Transit Seattle, WA 2009 - 2013	✓		✓
Queens Bored Tunnel of the Eastside Access Project NYMTA New York 2009 - 2013	✓		✓
Ohio River Tunnel Louisville and Jefferson County Metropolitan Sewer District Louisville, KY 2017 - Present	✓	✓	
North Outfall Replacement Sewer City of LA Board of Public Works Los Angeles, CA 1989 - 1992	✓	✓	
Metrowest Tunnel MWRA Boston, MA 1996 - 2003	✓	✓	

Traylor +
Shea
30
years

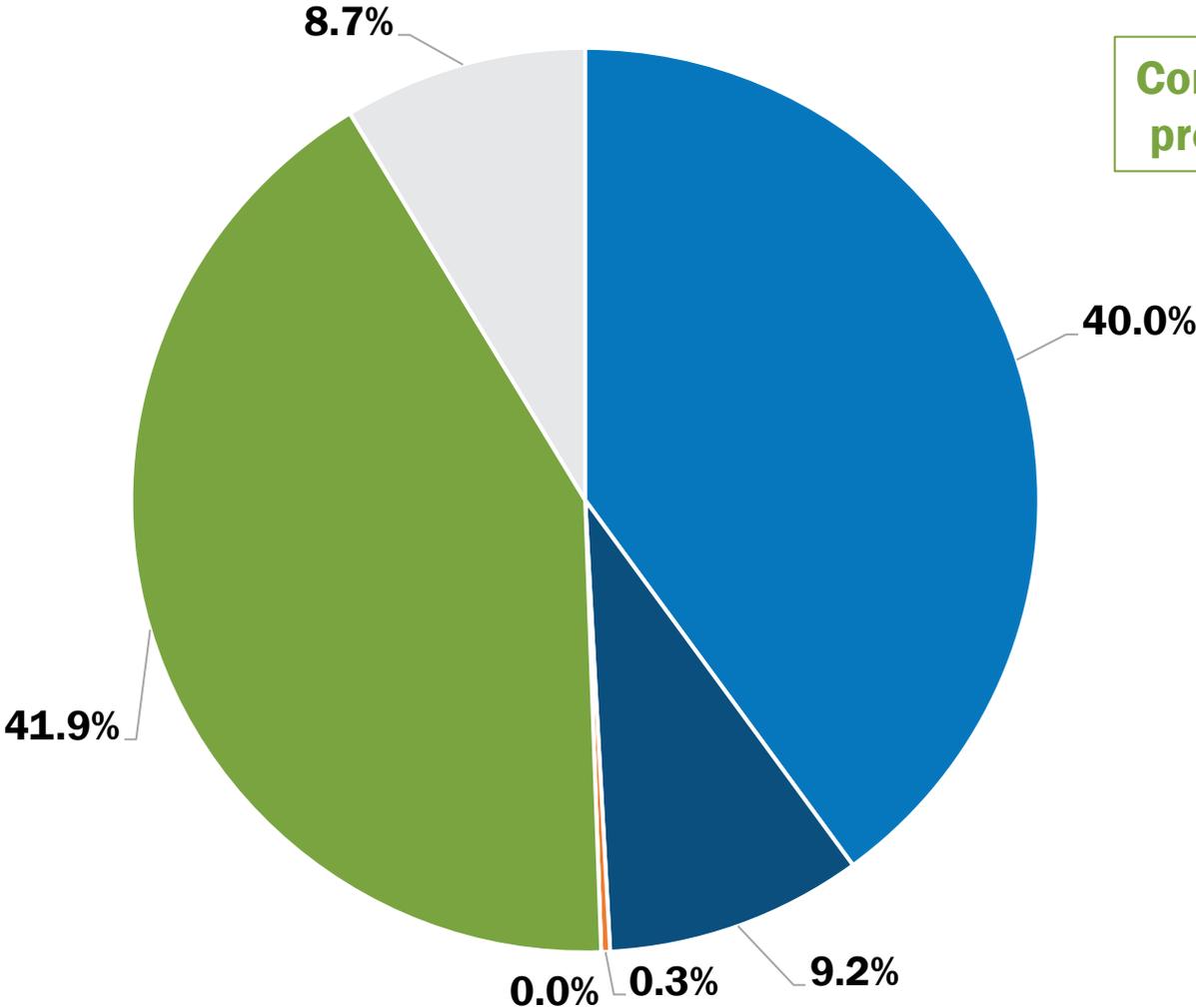
Traylor +
Jacobs
20
years

* including CH2M HILL and Halcrow

Over 90% of RiverRenew Tunnel System Project Work is Anticipated to be Conducted by Firms based in Alexandria or the Greater Washington Metropolitan Area

Contract requires compliance with prevailing wage rates and fringes

- Alexandria
- Northern Virginia
- Other Virginia
- District of Columbia
- Maryland
- Non-Local



Note: Percentages based on total contract value, with the exception of allowances

Award of Tunnel System Project Contract Establishes Cost Certainty for the RiverRenew Program

Points of Cost Certainty

June 2018:
Long Term Control
Plan Update

October 2018:
Preliminary
Engineering Report

April 2019:
30% Request for
Proposal Documents

August 2019:
\$24M Awarded for
Construction at Plant

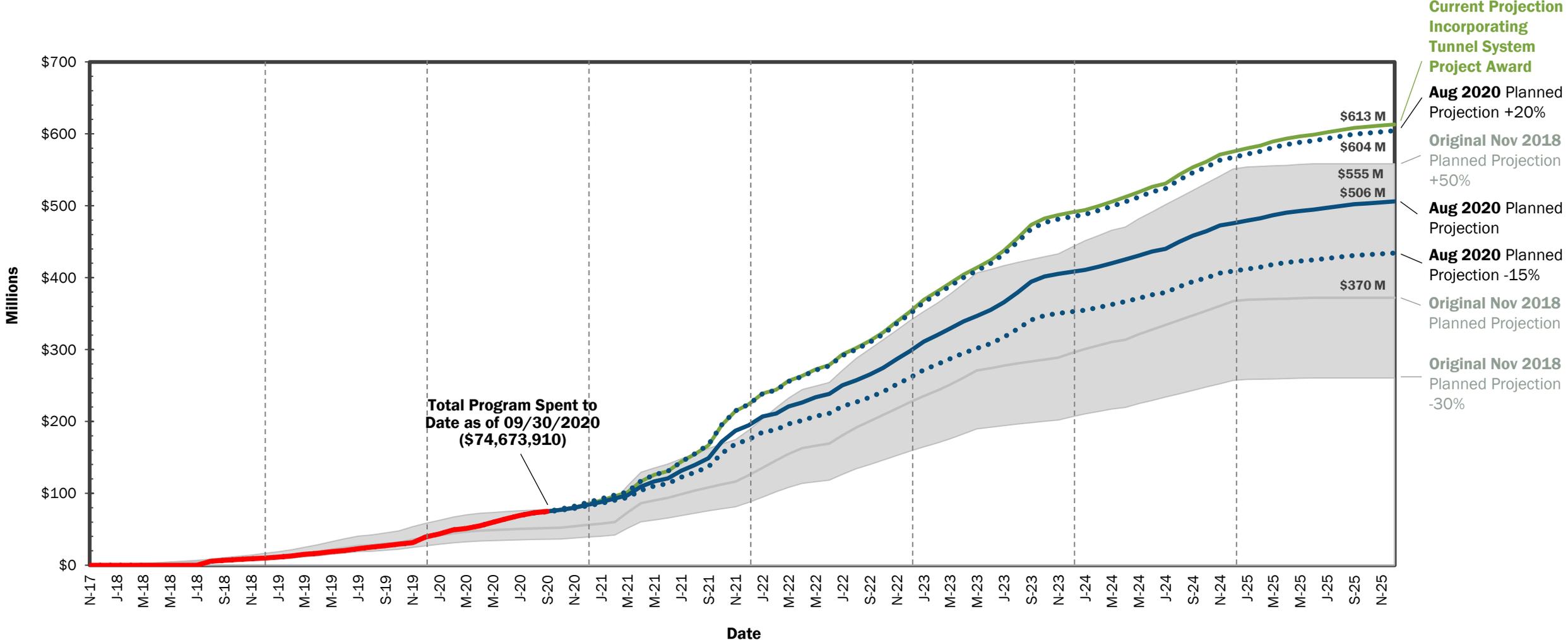
September 2019:
60% Request for
Proposal Documents

August 2020:
Post-Addenda Request
for Proposal Documents

November 2020:
Tunnel System
Project Award

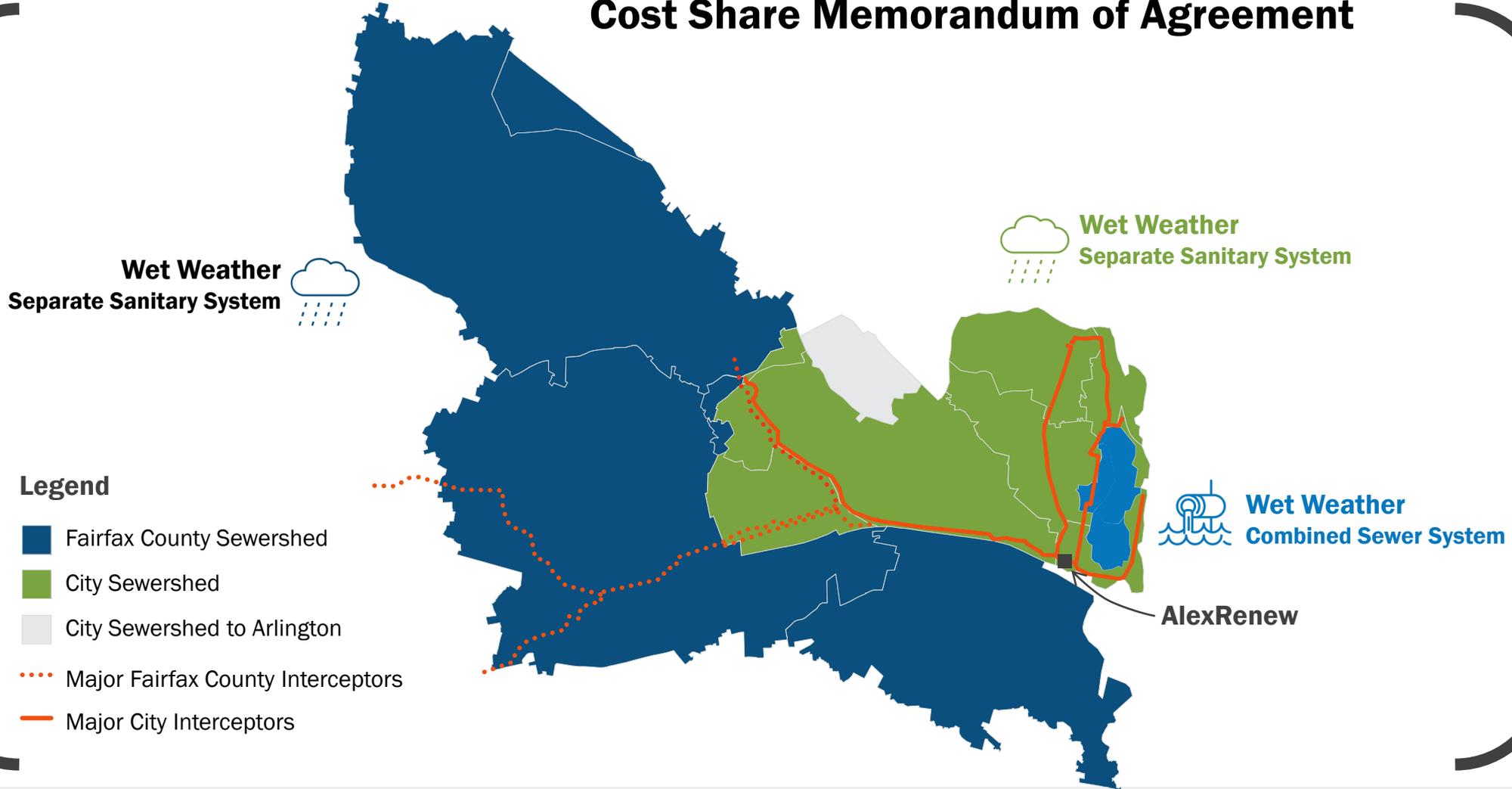
Project Definition	0-2%	5%	10%	20 to 30%	30%	30%
Cost Variability based on Project Definition	-30 to +50%	-30 to +50%	-30 to +50%	-20 to +30%	-15 to +20%	Less than 1%
Program Capital Cost	\$356M	\$370M	\$457M	\$464M	\$506M	\$613M
Program Capital Cost (High)	\$535M	\$555M	\$587M	\$597M	\$604M	

RiverRenew Program Spending Plan Incorporating Tunnel System Project Award



AlexRenew, Fairfax County, and the City Partnered to Share Costs to Address Systemwide Wet Weather Issues

Cost Share Memorandum of Agreement



The Estimated Rate Impact of RiverRenew on the Monthly Sewer Bill is Anticipated to Increase between \$30 and \$40 in 2025

Current Interest Rates	Current Monthly Sewer Bill (2021)	Anticipated Sewer Rate Increase by 2025	Total Monthly Sewer Bill (2025)
+0.5 percent	\$44	\$29	\$73
+2.0 percent		\$38	\$82

NOTE: Average monthly bill assumes usage of 4,000 gallons and excludes City's Sewer Collection Charges

RiverRenew Tunnel System Project Next Steps

- **November 17:** AlexRenew Board of Directors Approval
- **November 17-18:** Communicate Award to External Parties
- **December 1:** Notice to Proceed issued to Design-Builder
- **December 2020 – February 2021**
 - Virtual Council-Board Workgroup Meeting
 - Virtual Community Listening Sessions to Introduce Design-Builder



To learn more, visit www.alexrenew.com