



HAMPTON ROADS SANITATION DISTRICT

REQUEST FOR PROPOSALS FOR THE PUBLIC-PRIVATE EDUCATION FACILITIES AND INFRASTRUCTURE ACT OF 2002 FOR THE HIGH PRIORITY INFLOW AND INFILTRATION REDUCTION PROGRAM

CIP NO. GN020300 | York County and Cities of Chesapeake, Newport News, and Norfolk, Virginia

PHASE 2: CONCEPTUAL TECHNICAL PROPOSAL | MAY 17, 2024

PREPARED FOR:

Hampton Roads Sanitation District

1434 Air Rail Avenue

Virginia Beach, Virginia 23455

Submitted via: Oracle Enterprise Resource Planning (ERP) System



IN COLLABORATION WITH SELECT PARTNERS:

Hazen

Brown AND Caldwell

WRA

rjn

**PUBLIC-PRIVATE EDUCATION FACILITIES AND
INFRASTRUCTURE ACT OF 2002 FOR THE HIGH PRIORITY
INFLOW AND INFILTRATION REDUCTION PROGRAM**

Hampton Roads Sanitation District
Attn: Katrina Davis, Engineering Department Contract Specialist
1434 Air Rail Avenue Virginia Beach, VA 23455

Dear Ms. Davis and Members of the Selection Committee,

Hampton Roads Sanitation District (HRSD) is one step closer to embarking on your one-of-a-kind effort to address consent decree inflow and infiltration (I/I) reduction projects. With local and national experience, a deep understanding of HRSD's history and goals blended with national leadership in I/I reduction and collaborative project delivery, our team was built to deliver this program. On behalf of our partners, Hazen and Sawyer (Hazen), Brown & Caldwell (BC), Whitman, Requardt & Associates, LLP (WRA) and RJN Group (RJN), we are excited to share our innovative approach to reach your program goals.

We have developed a data driven approach that offers HRSD the information necessary to quickly move forward with cost-effective solutions. Our approach will allow for modifications as data is collected through each successive set of improvements such that HRSD and our team can optimize each dollar invested in your I/I reduction program.

As you review our proposal, we'd like to draw your attention to the following components of our approach:

Comprehensive and cost-effective flow monitoring and SSES benchmarking effort to "level-set" our starting point |

Building from the historic knowledge offered by BC and recent experiences of SSES data collection and assessment of our partners, we are proposing a comprehensive data collection strategy encompassing flow monitoring, smoke testing, manhole inspections and CCTV throughout each of the High Priority Inflow and Infiltration Projects (HPIIRPs) identified. While we will leverage all relevant data provided by the localities, establishing a thorough database detailing current conditions will serve to validate tangible flow reductions resulting from implemented improvements. This approach not only enhances efficiency by expediting the acquisition of crucial data for planning and project prioritization but also ensures a more streamlined schedule.

A streamlined assessment, modeling and work package development approach to prioritize projects offering the greatest return on investment to HRSD |

Our team has developed a data-driven approach focused on delivering cost-effective I/I reduction solutions to reduce Sanitary Sewer Overflows (SSOs). Utilizing our partner's innovative flow and rainfall data analysis tool, HazenQ, we will rapidly generate calibrated RTK parameters that will be used to develop "mini models" to further prioritize where cost-effective I/I reduction projects can have the greatest impact. Drawing upon the collective expertise, in-depth knowledge, and innovative resources of our entire team, we are committed to developing the right solutions in the right locations for the right price. These solutions will be structured into construction work packages aligned with standards set forth by HRPDC, HRSD and the localities, facilitating expedited progress into the construction phase. This approach enables prompt post-flow monitoring to confirm the effectiveness of the improvements in reducing model-based SSO volumes, while also informing subsequent work packages.

An adaptive and flexible construction approach that optimizes the use of available contractor capacity and HRSD budget as the program progresses |

As a leading Water and Wastewater Design-Build, Burns & McDonnell has successfully delivered hundreds of design-build projects. To this end, we are inherently flexible and adaptable as we execute design-build projects. To that end, all our listed SSES specialty firms and contractor subs are being incorporated into the Burns & McDonnell subcontractor portal so we can begin immediately with SSES investigations and any construction opportunities identified. While we anticipate a few different construction packages for execution, we intend to leverage the specific capabilities of the contracting community to provide the greatest value to HRSD. By incorporating a number of contractors into our execution plan, we will have options to deliver these I/I projects effectively with minimal disruption to their other commitments to HRSD and your localities.



Along with our teaming partners, we are excited to offer our proposal to partner with HRSD to successfully deliver your I/I Reduction Program. We believe we have assembled the right resources to effectively deliver this high-priority program with a collaborative, flexible and transparent approach that will meet the expectations of your staff and customers. If you have any questions about our qualifications, please contact the undersigned.

Sincerely,
Burns & McDonnell Engineering Company, Inc.



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1.A EXPERIENCE OF PRIVATE ENTITY

PUBLIC AND PRIVATE I/I PROGRAMS

1 City of Kansas City, MO

- » Designed to comply with federally-mandated Consent Decree to reduce SSOs
- » Included utilizing advanced technologies for data collection, sharing, analysis and real-time reporting to identify I/I sources and develop targeted reduction strategies for both public-side and private-side I/I programs

1. PROJECT DESCRIPTION & DRIVERS | Kansas City’s I/I Reduction Program was developed as part of the City’s \$4.5 billion response to meeting the requirements of a federal Consent Decree focused on reducing overflows from Kansas City’s combined and separate sewer systems. As program manager through the planning and implementation phases of Kansas City’s Overflow Control Program, branded the Smart Sewer Program, **Burns & McDonnell developed an I/I reduction program for both public sewers and private inflow sources across nine separate sewer system basins and 16 I/I reduction project areas with a targeted 29%-45% system-wide I/I reduction goal.**

Flow monitoring was initially conducted and collection system hydraulic models were developed for I/I reduction areas. For the public sector I/I reduction, design protocols for cost-effective I/I reduction to prioritize defect repairs to be used by all design professionals were developed. Sewer system characterization was conducted in each of the areas and included comprehensive manhole inspection and confirmation of the connectivity of sewer mains.

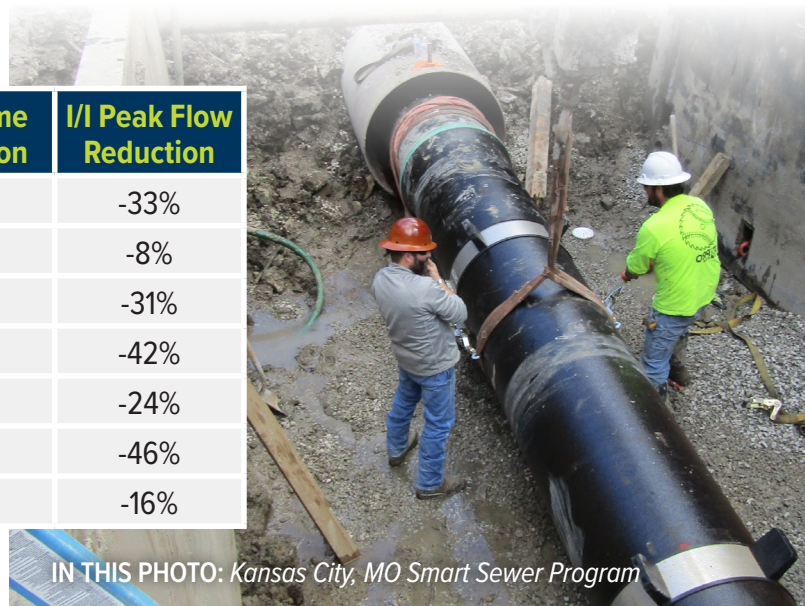
Burns & McDonnell managed design and construction contractor contracts on behalf of KC Water and conducted the post-construction flow monitoring to quantify the I/I peak flow and volume reductions.

Burns & McDonnell expanded the City’s I/I reduction program and assisted KC Water with developing and implementing a voluntary, private inflow reduction program called Keep Out the Rain (KOTR). KOTR targets the removal of illicit private inflow sources that are connected to the City’s sanitary sewer systems, which are suspected to contribute more than half the rainwater entering the system in some areas. Burns & McDonnell developed processes and procedures for conducting building plumbing evaluations by three consultants using over 12 field evaluation crews. Additionally, Burns & McDonnell prepared standard specifications and drawings for I/I source disconnections and procured over 15 different local plumbing contractors on behalf of the City.

The goal of the program was to identify and remove inflow sources from the private sector that were more cost-effective than from the public-sector. Our target cost-effectiveness source removal was \$1.15/gpd; through the first four years of the program, our estimated cost per flow removal was \$0.80/gpd. With a public participation rate of 93%, approximately 55,000 building plumbing evaluations have been completed, 6,400 inflow sources identified and 3,900 cost-effective sources have been removed free-of-charge to the residents.

Figure 1. Program Results

Project Area	I/I Volume Reduction	I/I Peak Flow Reduction
Round Grove Creek 2012	-19%	-33%
BRN (Blue River North Project 1)	-49%	-8%
BRS 1&2 (Blue River South Area 1&2)	-49%	-31%
LCRC 1 (Line Creek/Rock Creek Project 1)	- 49%	-42%
BRS 3 (Blue River South Area 3/ Project 3)	- 53%	-24%
BRC 1& 2 (Blue River Central Area 1 & 2)	- 66%	-46%
LCRC 2 (Line Creek/Rock Creek Project 2)	-54%	-16%



IN THIS PHOTO: Kansas City, MO Smart Sewer Program



2. PEAK FLOW REDUCTION, OVERFLOW VOLUME REDUCTION, OR SIMILAR THAT DEMONSTRATES THE SUCCESSFUL ELIMINATION OF INFLOW | Peak flow reduction and overflow volume reduction are critical in showcasing the successful elimination of inflow within the Kansas City I/I Reduction Program. From 2010-2023, a total of 14 I/I reduction projects have been constructed and over 6,400 private-sector inflow sources have been removed. As shown in Figure 3 on the previous page, **seven of the I/I reduction projects have had post-construction flow monitoring analysis completed and the change in I/I volume and peak flow reduction determined based on the pre/post construction flow analyses. The other nine projects are currently undergoing post-construction flow monitoring and data analysis. Additionally, it is estimated that over 44 million gallons of inflow has been removed from the private-sector.**

3. PROJECT DATES

DATE STARTED: 2010

DATE COMPLETED: Ongoing

4. PROGRAM BUDGET

TOTAL CONSTRUCTION COST: \$78.78 million

TOTAL ENGINEERING FEE: \$19 million

5. OWNER REFERENCE & CONTACT INFORMATION |

NAME: Andy Shively **TITLE:** Deputy Director

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6. KEY TEAM MEMBERS

- » Ron Coker | Program Director
- » John Pruss | Program Manager
- » Steve Stuempfig | Design Manager
- » Bryan Canzoneri | Construction Manager
- » Pratistha Paudel | System Performance Assessment
- » Cliff Cate | KOTR Project Manager
- » Brian Hiller | Data Management
- » Deron Huck | Design Engineer
- » Kevin Waddell | Cost Estimating
- » Laura Sykes | Project Controls
- » Saša Tomić | Data Analysis and Hydraulic Modeling
- » Steve Jonson | Field Assessment
- » Joe Darlington | Risk Management
- » Tim Pitman | Construction Observation | QA/QC



IN THESE PHOTOS: *Keep Out the Rain Project Teams went door to door to engaged property owner's within the service area to conduct evaluations of indoor and outdoor I/I sources.*



“Under the leadership of Burns & McDonnell as our program manager, I am proud of the successes of our City’s Smart Sewer Program, which will save Kansas Citizens billions of dollars and help achieve our climate sustainability and sewer overflow reduction goals. By using green infrastructure and working with neighborhoods, we are reducing the overall cost of this program and protecting our environment.”

Mayor Quinton Lucas
City of Kansas City, MO

IN THIS PHOTO: *The City of Kansas City, MO celebrates a finished KC Smart Sewer project with a ribbon cutting ceremony.*



COLLECTION SYSTEM ASSET MANAGEMENT PROGRAM

2

Jefferson County, AL

- » Prioritized the reduction of I/I to address and mitigate the impact of SSOs, with the goal of improving sewer system efficiency and compliance with environmental regulations
- » Used HazenQ data analysis tool and detailed hydraulic modeling to identify priority I/I removal areas to develop cost-effective strategies for reduction
- » Included SSES, design, construction administration and post-construction monitoring to effectively address sewer system issues

1. PROJECT DESCRIPTION & DRIVERS | As part of a 1996 Consent Order, Jefferson County, AL spent hundreds of millions of dollars on lining nearly 20% of the entire system to reduce I/I. Unfortunately, with so much investment, there is little evidence of any measurable reduction and wet weather SSOs continue to be a major problem. In response to this challenge, Hazen developed and implemented a system-wide collection system asset management program for the 3,137-mile system. Focused on helping the County reduce overflows while spending less money, a key strategy of this program is the identification of high I/I areas and identification of cost-effective corrective measures.

The HazenQ data analysis tool was used to disaggregate flow data from over 700 flowmeter locations into fast, medium and slow RDII responses and to develop early “mini-models” for early out projects before final model calibration.

Detailed hydraulic models were developed and calibrated, identifying priority I/I removal subbasins with the use of the hydraulic model and Optimatics Optimizer software, which indicated where comprehensive rehabilitation would be cost-effective.

The design and construction of all corrective measures were managed efficiently.

2. PEAK FLOW REDUCTION, OVERFLOW VOLUME REDUCTION, OR SIMILAR THAT DEMONSTRATES THE SUCCESSFUL ELIMINATION OF INFLOW

| The Hazen team has completed eight major I/I reduction projects and the average I/I reduction and peak flow reduction across the projects is 75%.

3. PROJECT DATES

DATE STARTED: January 2014

DATE COMPLETED: Ongoing

4. PROGRAM BUDGET

TOTAL CONSTRUCTION COST: >\$400 million

TOTAL ENGINEERING FEE: \$70 million

5. OWNER REFERENCE & CONTACT INFORMATION

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Environmental Services **PHONE:** 205-214-8610

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6. KEY TEAM MEMBERS

- » **Sean FitzGerald** | *Technical Lead*
- » **Dimitry Lebedev** | *Data Analysis and Hydraulic Modeling*
- » **Ashley Van Matre** | *Data Analysis and Hydraulic Modeling*

70 DESIGN-BUILD

HAZEN PROJECTS

\$8.5 BILLION

IN COLLABORATIVE DELIVERY
WATER/WASTEWATER PROJECTS

Hazen is a national leader in developing and implementing successful I/I programs, implementing innovative approaches to cost-effectively identify, prioritize, isolate and reduce I/I while maximizing cost effectiveness. Many of these programs are in coastal areas similar to HRSD including Ft. Lauderdale, FL, Clearwater, FL, Pinellas County, FL and Nantucket, MA. Hazen’s experience includes over two dozen I/I programs east of the Mississippi River.



IN THIS PHOTO: Priority SSES activities were conducted, including smoke testing and CCTV inspections. Source isolation was achieved utilizing micromonitoring techniques with flowmeters and, in many cases, I-tracker level sensors to rapidly isolate primary sources of inflow and infiltration.



I/I REDUCTION PROGRAM

3

Metropolitan St. Louis Sewer District, MO

- » Initiated to comply with a Consent Decree issued by the USEPA
- » Involved design and engineering services, program and project management and construction oversight to address SSO rehabilitation, I/I reduction and CSO separation
- » Strong emphasis on public communication and involvement, alongside conducting extensive property inspections

1. PROJECT DESCRIPTION & DRIVERS | As part of the Metropolitan Sewer District of St. Louis' (MSD) \$6 billion, 28-year response to a federal Consent Decree issued by the USEPA, Burns & McDonnell led design for the 10-Year Sanitary System Improvements Program in the Lemay Watershed. The Lemay Watershed service area covers approximately 119 square miles in the City of St. Louis and a portion of west and south St. Louis County. It includes the Gravois Creek sanitary sewer system, the Mackenzie Creek watershed, the Martigney Creek watershed and the University City watershed.

Burns & McDonnell was responsible for engineering and design, construction oversight, public communications and community outreach and programmatic quality control for 60 different projects throughout the basin. As part of our role, we also managed 34 consultants in the delivery of program initiatives involving wet weather storage facilities and pump stations, sanitary sewer relief and trunk sewers, CSO separation, SSO rehabilitation and repair, public and private I/I reduction, PIRR, public communication and involvement. Improvements were designed to eliminate constructed SSO outfalls, reduce/control flows in the major trunk sewers and sub-trunk sewers, provide regional storage facilities to attenuate peak wet weather flows, minimize I/I in the upstream portions of the watershed and coordinate with the Districts CSO Long-Term Control Plan (LTCP) team and CSO watershed consultant to identify cost-effective SSO/CSO solutions.

2. PEAK FLOW REDUCTION, OVERFLOW VOLUME REDUCTION, OR SIMILAR THAT DEMONSTRATES THE SUCCESSFUL ELIMINATION OF INFLOW | A key component of I/I reduction included removal and redirection of private-side illicit stormwater sources from the sanitary sewer system. During the delivery of the 10-year MSD program, Burns & McDonnell performed private property inspections at more than 50,000 properties, hosted more than 50+ public meetings and assessed and designed more than 50,000 LF of 12- to 42-inch separate stormwater sewers.

Thus far, there have been **247 completed projects District-wide and 85% of the constructed sanitary sewer overflow outfalls have been eliminated.** The projects completed by Burns & McDonnell were imperative for the removal of many of these SSO outfalls. Whether the projects completed

allowed for as SSO outfall to be removed as a product of the I/I reduction, or the project contributed to flow reduction for a downstream overflow to be removed at a later date, all of the work completed provided MSD the ability to meet their Consent Decree deadlines within our program area.

3. PROJECT DATES

DATE STARTED: August 2012

DATE COMPLETED: July 2022

4. PROGRAM BUDGET

TOTAL CONSTRUCTION COST: \$500 million*

TOTAL ENGINEERING FEE: \$57.9 million*

**This number is approximated for completion. Program construction is not yet complete, so this number may vary as time continues.*

5. OWNER REFERENCE & CONTACT INFORMATION |

NAME: Jim Dunajcik **TITLE:** Special Assistant Manager

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6. KEY TEAM MEMBERS

- » **Cliff Cate** | Private I/I
- » **Dustin Hill** | Hydraulic Modeling
- » **Curt Kimmel** | Planning Design
- » **Alli White** | Project Manager
- » **RJN** | Field services & SSES activities

IN THIS PHOTO: *In total, the private-side program was responsible for removing several millions of gallons of I/I flows from the sanitary system.*



CONSENT DECREE COMPLIANCE AND RWWMP PROGRAM MANAGEMENT

4

HRSD, Hampton Roads, VA

- » Navigated regulatory compliance through cohesive management planning, aligning with HRSD's structured approach to meet environmental regulations
- » Adopted innovative strategies for inflow and infiltration (I/I) reduction, emphasizing the critical need to minimize SSOs
- » Implemented a comprehensive suite of evaluative and improvement measures, including flow monitoring, SSES and hydraulic modeling, aiming at system resilience and efficiency

1. PROJECT DESCRIPTION & DRIVERS | From 2007 to 2018, BC acted as the Program Manager for HRSD, guiding compliance with regulatory directives aimed at reducing SSOs under a regional Consent Order and a federal Consent Decree. The culmination of this role was the completion of an Integrated Plan/Regional Wet Weather Management Plan (RWWMP) in September 2017, submitted to the VDEQ and EPA, showcasing a model of successful collaboration between utilities, localities and regulators for cost-efficient, large-scale wastewater management.

Key components of the program included a comprehensive Flow Monitoring Program, assessing wastewater flows, pressures and rainfall data across HRSD's system. This was augmented by the SSES Program, which evaluated the condition of the sewer infrastructure, including smoke testing and CCTV inspections of sewers and manholes. A notable initiative was the I/I Reduction Design-Build Project in Virginia Beach, where BC served as the Owner's Advisor, focusing on innovative solutions for I/I reduction, including exploring new contracting approaches and repair methodologies.

The Sewer Lateral Investigation Program (SLIP) further exemplified BC's innovative approach by using technologies such as rainfall simulation to identify I/I sources, coupled with effective community engagement strategies to encourage homeowner participation in I/I reduction efforts. Additionally, BC's extensive work in hydraulic modeling over eight years provided HRSD with invaluable insights into the hydraulic interactions within the regional system, supporting over \$80 million in optimized system improvements.

BC led the development of I/I Reduction Plans for the RWWMP, using data from flow monitoring and SSES to formulate targeted reduction strategies and cost-effective approaches for system-wide improvements. This effort was underpinned by a decade of coordination with localities, enhancing HRSD's credibility and facilitating the successful implementation of the RWWMP.

Moreover, BC's role in developing an Integrated Plan that incorporated the Sustainable Water Initiative for Tomorrow (SWIFT) program, the Rehab Action Plan (RAP) and the RWWMP, identified and prioritized more than \$1 billion in regional improvements.

2. PEAK FLOW REDUCTION, OVERFLOW VOLUME REDUCTION, OR SIMILAR THAT DEMONSTRATES THE SUCCESSFUL ELIMINATION OF INFLOW

| Through strategic planning and project optimization, BC assisted HRSD in achieving a \$400 million cost reduction, highlighting BC's instrumental contribution to advancing wastewater management practices and underscoring the success of these initiatives in fostering sustainable, cost-effective solutions for regional wastewater management challenges.

3. PROJECT DATES

DATE STARTED: 2007

DATE COMPLETED: 2018

4. PROGRAM BUDGET

TOTAL CONSTRUCTION COST: \$60 million

TOTAL ENGINEERING FEE: \$3.5 million

5. OWNER REFERENCE & CONTACT INFORMATION

NAME: Phil Hubbard **TITLE:** Project Manager

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6. KEY TEAM MEMBERS

- » **Andy Lukas** | *Technical Director*
- » **Richard Stahr** | *Principal in Charge*
- » **Chris Garrett** | *Rehab QC*
- » **Chris Wilson** | *Project Manager*
- » **Katherine Moore** | *Project Engineer*
- » **Dan Porter** | *SSES Technical Advisor*



SECAP UPDATE & COLLECTION SYSTEM MASTER PLAN

5

Little Rock Water Reclamation Authority, AR

- » Utilization of a pressure monitoring plan to evaluate low pressure areas and support hydraulic model calibrations
- » I/I analysis and documentation for multiple sewershed performance assessment reports, demonstrating successful reductions in I/I

1. PROJECT DESCRIPTION & DRIVERS | In 2008, RJN embarked on a critical mission to revitalize the Little Rock wastewater system through a comprehensive suite of SSES. This initiative aimed at updating the City's System Evaluation and Capacity Assurance Plan (SECAP), a cornerstone for ensuring the system's efficiency and compliance with regulatory standards.

Central to RJN's approach was an array of services focused on enhancing the system's infrastructure and operational effectiveness. At the forefront was program management, orchestrating the project's multifaceted components to ensure coherence and alignment with strategic objectives. Flow monitoring played a pivotal role, with the installation of 86 meters and nine rain gauges providing real-time data on water movement and contributing to informed decision-making.

A significant portion of the project was dedicated to exhaustive manhole inspections, totaling 5,971, which were crucial for identifying system vulnerabilities and areas needing urgent attention. Smoke testing, conducted over an extensive network of 1,000,092 LF, alongside dye testing in 150 instances, were instrumental in detecting and locating leaks and inflow sources.

These efforts have collectively enhanced the Little Rock wastewater system's capacity and reliability, demonstrating RJN's commitment to sustainable water management and environmental stewardship.

2. PEAK FLOW REDUCTION, OVERFLOW VOLUME REDUCTION, OR SIMILAR THAT DEMONSTRATES THE SUCCESSFUL ELIMINATION OF INFLOW |

Through years of engineering and SSES services, the system realized a total I/I reduction of 30%.

3. PROJECT DATES

DATE STARTED: 2008

DATE COMPLETED: Ongoing

4. PROGRAM BUDGET

TOTAL CONSTRUCTION COST: \$575 million

TOTAL ENGINEERING FEE: \$12 million

5. OWNER REFERENCE & CONTACT INFORMATION |

NAME: Howell Anderson, PE **TITLE:** Manager of Engineering Services **PHONE:** 501-688-1413

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6. KEY TEAM MEMBERS

» **Jeff Griffiths, PE** | *Field SSES Assessment*

LOCAL, RELEVANT EXPERIENCE

RJN HAS WORKED WITH MUNICIPALITIES THROUGHOUT HRSD'S SERVICE AREA INCLUDING:

- *Post Rehabilitation Flow Monitoring and SSES Basin Field Investigation (Virginia Beach, VA)*
- *SSES Area 43 (Chesapeake, VA)*
- *Asset Management Program and Sewer Assessment and GIS Program (Fairfax, VA)*



IN THIS PHOTO: *The project utilized CCTV review and NASSCO coding across 353,355 linear feet of the sewer system. This advanced diagnostic tool allowed for a detailed assessment of the system's condition, identifying defects and prioritizing repairs. Based on these comprehensive evaluations, RJN provided targeted rehabilitation recommendations, ensuring the system's resilience and reliability.*



1.B DEMONSTRATED PAST PROJECT PERFORMANCE

DESIGNERS & BUILDERS

We have completed over 150 progressive design-build projects in the water/ wastewater market ranging in size from \$1 million to \$500 million. We understand how critical early and accurate cost estimating and strict adherence to budget and schedule is on these projects. Burns & McDonnell developed early cost estimates and went at-risk on many of these projects at 30% design completion, shifting the risk profile on the project away from the owner to the design-builder. In cases where the owner wanted more design definition, the remainder of these projects went at-risk at 60% design completion. While these projects all have differing cost and risk profiles, they all have three things in common: they were all on-time, on-budget and have been completed without contractor-initiated change orders.

We have completed over 150 progressive design-build projects in the water/wastewater market ranging in size from \$1M to \$500M.



The success of our design-build projects has carried over into our program management service line. Kevin Waddell, our lead estimator, and his estimating team have priced \$39 billion in projects in recent years using the same early conceptual estimating techniques. **Below are five examples of our ability to maintain schedule and budget from design through start-up and commissioning on collaborative delivery projects. We provide one program (managed by Program Manager, John Pruss) and four progressive design-build projects (managed by Deputy Program Manager, Bryan Canzoneri).**

SMART SEWER PROGRAM

Kansas City, MO

For over 20 years, Burns & McDonnell has worked in close partnership with the City of Kansas City, MO, to jointly develop and implement its Overflow Control Program (branded KC Smart Sewer) to reduce the volume of combined sewer overflows and eliminate sanitary sewer overflows.

As program manager during the first 14 years of implementation, Burns & McDonnell works collaboratively with City staff and engages at all levels of the program to verify that the proper leadership, administration, project delivery, construction execution, monitoring and reporting and public communication measures are in place. Because of the scale of the program, Burns & McDonnell leads efforts to not only deliver the program, but also to prepare local engineering firms and construction contractors for the stricter protocols and procedures necessary to manage the scope, schedule, budget, quality and risk exposure for a program tied to Consent Decree compliance while leveraging the flexibility of an adaptive management approach to optimize overflow control measures as the program advances over time.

Risks for individual projects were monitored and mitigated through the development and maintenance of risk register and associated cost contingencies for design and construction risk exposures.

Burns & McDonnell's early conceptual cost estimating and performance of managing to budget and schedule was the key to a successful Consent Decree renegotiation under Project Manager, John Pruss's leadership. Through the first 14 years of program delivery, the program is on-budget and on-schedule with over \$1 billion in projects delivered.

Burns & McDonnell developed an integrated system-wide hydraulic model, which represents six Combined Sewer System (CSS) basins and seven Sanitary Sewer System (SSS) basins. This partnership yielded multiple optimized SSP projects that delivered cost-efficient CSO capture ranging from \$0.05/gallon to \$1.00/gallon resulting in savings of over \$1.2 billion, which includes refined system operations to optimize the capture of 80 - 100 MG of CSO volume which helped to eliminate an underground storage tunnel budgeted to cost over \$740 million.

PROJECT DATES

- **Date Started** | 2011
- **Date Completed** | Ongoing

TOTAL PROGRAM BUDGET

- **OPCC at Time of Budget Development**: | \$4.5 billion
- **Stipulated Price for Projects Completed or Under Construction** | \$1 billion
- **Final Contract Value** | Ongoing

REFERENCE

NAME: Andy Shively
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COLLABORATIVE PARTNER REFERENCE

NAME: Pete Browne | Kissick Construction
TITLE: President
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KEY TEAM MEMBERS

- » **Ron Coker** | Program Director
- » **John Pruss** | Program Manager
- » **Steve Stuempfig** | Design Manager
- » **Bryan Canzoneri** | Construction Manager
- » **Pratistha Paudel** | System Performance Assessment
- » **Cliff Cate** | KOTR Project Manager
- » **Brian Hiller** | Data Management
- » **Deron Huck** | Design Engineer
- » **Kevin Waddell** | Cost Estimating
- » **Laura Sykes** | Project Controls
- » **Saša Tomić** | Data Analysis and Hydraulic Modeling
- » **Steve Jonson** | Field Assessment
- » **Joe Darlington** | Risk Management
- » **Tim Pitman** | Construction Observation | QA/QC



COLLECTION SYSTEM & WWTP IMPROVEMENTS DESIGN-BUILD PROGRAM

Republic, MO

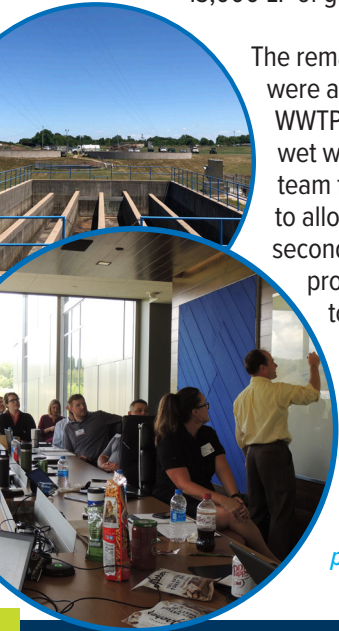
Burns & McDonnell has partnered with Republic, MO to develop solutions that utilize a forward-thinking and holistic mindset for this \$135 million wastewater program. By working with the City from initial planning through phased implementation of recommendations, we were better able to understand the City's priorities and evolving needs. We identified alternate funding sources, and assisted the City in acquiring \$50 million in direct allocations (ARPA and General Revenue) and \$50M in SRF loans to fund critical projects on accelerated schedules.

Under the leadership of Bryan Canzoneri, our Burns & McDonnell team was tasked with delivering five immediate action projects for the City of Republic, all via progressive design-build. These projects were deemed critical to meet regulatory compliance, increase the collection system level of service and provide the ability to accommodate future growth.

Three of the projects performed were collection system projects. The scope of work for these projects included designing and constructing a duplex submersible pump station, a triplex submersible pump station, 11,000 LF of force main and 13,000 LF of gravity sewer.

The remaining two projects completed by Burns & McDonnell were at the Wastewater Treatment Plant (WWTP). The existing WWTP has an Abatement Order on Consent due to an existing wet weather outfall used at the site during peak flow events. Our team first performed the solids handling and blending project to allow the City to meet compliance as soon as possible. The second project performed was the full WWTP upgrade. This project increased the facility from 3.2 MGD average day flow to 5 MGD average day flow, with a peak of 12 MGD. By coupling the blending project and the WWTP upgrades, the new facility will have a peak flow capacity of 16 MGD.

During times of labor and material price volatility, our Burns & McDonnell team delivered multiple projects simultaneously, as part of the overall program, within the City's budget by utilizing value engineering, innovative problem solving and continuous collaboration.



**KEVIN AND HIS TEAM HAVE
SUCCESSFULLY ESTIMATED MORE THAN
\$39B IN DESIGN-BUILD PROJECTS**

IN THIS PHOTO: Cost Estimating Lead, Kevin Waddell, performed conceptual estimating, scheduling and constructability analysis for the City's CIP masterplan for sanitary sewer conveyance system and wastewater treatment plant improvements. The total construction cost for the master plan was over \$120 million and helped the City with early cost certainty in order to allocate funds, seek funding sources and plan properly for the expected residential and commercial business growth.



PROJECT DATES

- **Date Started** | February 2022
- **Date Completed** | Ongoing

TOTAL PROGRAM BUDGET

- **Project Budget** | \$117 million
- **Stipulated Price*** | \$127 million
 - » **Projects to be completed by 2024**
\$32 million
 - » **Projects to be completed by 2026**
\$95 million

**additional owner requested scope item*

- **Final Contact Value** | Ongoing
 - » **Projects to be completed by 2024**
\$30 million*
 - » **Projects to be completed by 2026**
\$95 million

**To date the program is \$2 million under budget.*

REFERENCE

NAME: David Cameron
TITLE: City Administrator
PHONE: 417-732-3111
EMAIL: dcameron@republicmo.com

COLLABORATIVE PARTNER REFERENCE

NAME: Zach Compton | Jeff Asbell Excavating and Trucking
TITLE: Project Manager
PHONE: 620-210-2049
EMAIL: zcompton@jefffasbell.com

KEY TEAM MEMBERS

- » **Cliff Cate** | Program Manager
- » **Alli White** | Assistant Program Manager
- » **Bryan Canzoneri** | Construction Manager
- » **Curt Kimmel** | Collection System Lead
- » **Kevin Waddell** | Cost Estimating
- » **Steve Jonson** | Field Service Lead
- » **Glen Swann** | Superintendent
- » **John Duvenci** | Superintendent
- » **Brett Kreikemeier** | Lead Estimator



DISINFECTION IMPROVEMENTS DESIGN-BUILD

Savannah, MO

The City of Savannah, MO faced significant compliance deadlines under a MDNR operating permit requiring disinfection requirements to be met by September 2021. In 2018, the City hired Burns & McDonnell to complete a study that included condition assessments, UV treatment system configuration and layout for either an open channel or closed-vessel system, solids handling system improvements and an evaluation of water reuse opportunities. UV disinfection was determined to be the best option to treat the average day flow of 1 MGD and a peak flow of 4.1 MGD.

Following completion of the study, the City selected Burns & McDonnell to execute a design-build project (managed by Bryan Canzoneri) valued at \$1.65 million to complete final design, procurement and installation of the MDNR-required UV Disinfection Improvements. The improvements included a horizontal UV system inside a single channel with two banks containing multiple modules to meet varying flow conditions with each bank sized for average design flow of 1 MGD and a combined peak flow at 4.1 MGD.

The project was executed on time and under budget due to the early study and preliminary work, which enabled Burns & McDonnell to guarantee a lump sum price and schedule very early in the work, helping the City to meet its compliance deadline.

Procurement and final design began immediately and the UV system was operational by November 2021, just nine months after contract award. Upon successful completion of the project, Burns & McDonnell returned approximately \$150K of unused owner allowance money to the City.



BIOSOLIDS IMPROVEMENTS DESIGN-BUILD

Jefferson City, MO

The Jefferson City Regional Water Reclamation Facility (RWRf) is permitted for a flow of 11 MGD and utilizes sequencing batch reactors for biological treatment. For biosolids handling and disposal, the City employs aging lime stabilization and belt filter press dewatering systems. Existing thickeners, pumps, building and ancillary equipment are also advancing in years. In addition to evaluation existing infrastructure, the study included an analysis of historical RWRf loadings, projections of future growth and a regulatory forecast to help identify system needs and deficiencies. An assessment of existing land application practices indicated that the current use of lime stabilization provided an economic and viable means of biosolids management into the future.

Alternatives were developed that addressed the need to replace aging equipment and to optimize future biosolids operations. Recommendations included removal of the existing belt filter presses and installation of new centrifuges, new lime feed equipment, replacement of existing thickener equipment and other miscellaneous upgrades to system components.

A major project driver for the City was to reduce the O&M costs associated with biosolids processing. The Burns & McDonnell team evaluated four alternatives to improve on dewatering performance and recommended installation of centrifuges to reduce hauling costs. Similar to HRSD, Jefferson City is a capable, forward-thinking client. By utilizing a collaborative approach from Day One with this client, Burns & McDonnell made a conceptual plan, developed a project budget and delivered an under-budget project successfully.

By establishing a precise budget and, two years later, delivering a Guaranteed Maximum Price (GMP) that matched the original estimate, our team demonstrated our commitment to cost control and budget adherence.

PROJECT DATES

- **Date Started** | September 2020
- **Date Completed** | February 2022

TOTAL PROGRAM BUDGET

- **Stipulated Price** | \$1.65 million
- **Final Contact Value** | \$1.5 million

REFERENCE

NAME: Kirk Larson
TITLE: Mayor
PHONE: 660-254-1340
EMAIL: klarson@midlandgis.com

COLLABORATIVE PARTNER REFERENCE

NAME: Bryan Holder | RS Electric
TITLE: Estimator & Project Manager
PHONE: 816-596-0553
EMAIL: bryan@rselectriccorp.com

KEY TEAM MEMBERS

- » **Bryan Canzoneri** | Design-Build Project Manager
- » **Kevin Waddell** | Lead Estimator

PROJECT DATES

- **Date Started** | February 2023
- **Date Completed** | Ongoing

TOTAL PROGRAM BUDGET

- **Project Budget** | \$12.8 million
- **GMP** | \$12.6 million
- **Final Contact Value** | Ongoing

REFERENCE

NAME: Clara Haenchen
TITLE: Reclamation Facility Manager
PHONE: 573-634-6502
EMAIL: chaenchen@jeffcitymo.org

COLLABORATIVE PARTNER REFERENCE

NAME: Matt Tonies | Corrigan Company
TITLE: Project Manager
PHONE: 314-437-9297
EMAIL: matt.tonnies@corriganco.com

KEY TEAM MEMBERS

- » **Bryan Canzoneri** | Design-Build Project Manager
- » **Kevin Waddell** | Lead Estimator
- » **Brett Kreikemeier** | Estimator
- » **Cliff Cate** | Project Sponsor





HORIZONTAL COLLECTOR WELL PROGRESSIVE DESIGN-BUILD

Festus, MO

The Jefferson County Water Authority (JCWA) is the water provider for two of the largest communities in the southern St. Louis metropolitan area. JCWA operates a WTP that obtains all its raw water supply from a single horizontal collector well (HCW). When the HCW is out of service for any reason, JCWA must rely on their old bedrock wells for water supply. The water from these bedrock wells is mineralized, high in hardness and is not treated by the WTP. To address the need for a more reliable water supply, JCWA selected Burns & McDonnell in September 2020 to assess its system and the possibility of a second HCW. Shortly after the project began, JCWA experienced an emergency with their existing HCW: water quality suddenly plummeted and it could not meet demand. Our team worked with local contractors to perform a bathymetric survey of the Mississippi River, identify the issues and develop a design for repair work. **Initial design to completion of the repair was less than five months.**

This \$10 million progressive design-build project, will provide redundancy and additional raw water capacity to the JCWA. It includes the design and construction of a 3.5 MGD horizontal collector well along the banks of the Mississippi River and creates a more robust system. Additionally, it eliminates the reliance on neighboring utilities when demands exceed raw water capacity while allowing critical maintenance activities to be performed. Burns & McDonnell worked closely with the contractor to facilitate their specific approach, protocols and methods for pouring and sinking sections of the caissons. Sump pumps were installed to pump water from the bottom of the wet well as the contractor's specialty crew constructed the new well.

Through successful project delivery, our team delivered a project under the stipulated price. Our team's constant drive to reduce cost, deliver the project on budget and collaborate with the owner created a foundation of trust and partnership with the City. Due to our performance, we have continued to deliver the City's most important capital projects alongside their staff.

PROJECT DATES

- **Date Started** | November 2021
- **Date Completed** | September 2023

TOTAL PROGRAM BUDGET

- **Stipulated Price** | \$10.29 million
- **Final Contract Value** | \$9.9 million

REFERENCE

NAME: Gregory Camp
TITLE: JCWA President & City of Festus City Administrator
PHONE: 636-524-7005
EMAIL: gcamp@cityoffestus.org

COLLABORATIVE PARTNER REFERENCE

NAME: Rachele Lengermann | Plocher Construction
TITLE: Project Executive
PHONE: 618-654-9408
EMAIL: rmlengermann@plocherco.com

KEY TEAM MEMBERS

- » **Bryan Canzoneri** | Design-Build Project Manager
- » **Kevin Waddell** | Lead Estimator
- » **Curt Kimmel** | QA/QC

#6 DESIGN-BUILD FIRM

ENR-RANKED 2023

60+ DESIGN-BUILD PROJECTS

BURNS & MCDONNELL HAS DELIVERED IN WATER/
WASTEWATER MARKET IN THE LAST 5 YEARS

3,860+ COLLABORATIVE DELIVERY PROJECTS

ACROSS A RANGE OF INDUSTRIES

IN THIS PHOTO: As Project Manager for this Progressive Design-Build project, Bryan led the team through pre-construction to develop a conceptual design that could be built within the City's \$11M budget. As the project progressed to the Construction Phase, Bryan led the team through buyout, subcontracting, and overall execution of the project.



2 PROPOSED ORGANIZATION AND EXPERIENCE

Figure 2. Organizational Chart

FIRM AFFILIATION

- ¹Burns & McDonnell
- ²Hazen
- ³Brown and Caldwell
- ⁴WRA
- ⁵RJN

John's experience includes developing and delivering billion-dollar wet-weather Consent Decree programs, such as the \$4.5 billion KC Smart Sewer Program, along with similar programs in Kansas City, KS, Jackson, MS, Springfield, MO and Fort Smith, AR. Bryan has led over a dozen collaborative delivery and progressive design-build projects and programs in the water/wastewater market, valued at nearly \$500 million.

Due to the scale of this design-build project and the numerous public interface points, Jamie Butler, Burns & McDonnell's Director of Safety, will lead in fostering a safety culture aimed at protecting our design team, construction partners and the general public throughout the program's multi-year duration.



SAFETY
¹Jamie Butler

PROGRAM MANAGEMENT TEAM
¹John Pruss, PE (Program)
¹Bryan Canzoneri (DB/PPEA)

PROJECT SPONSOR
¹Paul Delphos, PE, DBIA

EXECUTIVE LEADERSHIP
¹Ron Coker, PE
²Dwayne Amos
³Richard Stahr, PE

Our executive team is led by Paul Delphos, Burns & McDonnell's practice leader in the Mid-Atlantic Region. Paul recently served in a management role for the 100 MGD Hampton Roads Sanitation District Sustainable Water Initiative for Tomorrow (SWIFT) working closely with Hazen on the Program team. He also was the PM for one of the few PPEA water projects performed in the Commonwealth which included multiple projects under a single contract.

Sean is a I/I leader who serves on national collection system technical committees and has authored multiple practice manuals related to SSO reduction. Pratistha served as the Deputy Director of Planning for the City of Houston and was involved in EPA consent decree planning, negotiations and compliance for over 10 years.

SYSTEM PLANNING
²Sean FitzGerald, PE | Project Planning Lead
¹Pratistha Pradhan Paudel, D.Eng, PE | Data Management & SSES

PROJECT DELIVERY
¹Steve Stuempfig, PE | Design Manager
¹Stephen Crede | Construction Manager

TIME-SERIES DATA ANALYSIS AND HYDRAULIC MODELING
²Marty Malone, PE
²Dimitry Lebedev, PE
²Ashley Van Matre, PE
¹Saša Tomić, PhD, PE

DATA REVIEW, FIELD SSES PLANNING AND PRIORITIZATION
²Craig Pearson, PE
²Anthony Carlisle, PE
²Brad Sweeney, PE
¹Dustin Hill, PE

COST-EFFECTIVE ANALYSES
³Andy Lukas, PE
²Sean FitzGerald, PE
¹Steve Stuempfig, PE
³Chris Wilson, PE
⁴John Thomas, PE

ADAPTIVE MANAGEMENT PLAN
³Andy Lukas, PE
²Sean FitzGerald, PE
³Richard Stahr, PE
¹Saša Tomić, PhD, PE

COMMUNICATIONS & LOCALITY ENGAGEMENT
Delceno Miles | Miles Agency (SWaM)
¹Jessica James

DATA MANAGEMENT
¹Brian Hiller

PRIVATE SIDE PROGRAM
¹Cliff Cate, PE
³Andy Lukas, PE
¹Alli White, PE

FIELD SSES ASSESSMENT
¹Steve Jonson
⁵Jeff Griffiths

***LOCAL SSES CONTRACTORS**
Tri-State Utilities - SSES services
Coastal Management Solutions
RJN
Dukes/Hydrostructures
Compliance EnviroSystems

Cliff has been instrumental in developing and delivering some of the nation's first high-value private-side I/I reduction programs for major utilities across the mid-west.

DESIGN DEVELOPMENT
¹Deron Huck, PE
¹Randy Patchett, PE
¹Curt Kimmel, PE
Craig Pearson, PE
²Will Gibson, PE, DBIA
²Brad Sweeney, PE
³Jeff Orzell
³Dan Porter, PE
⁴John Thomas, PE
⁴Lukas Terry, PE

TRAFFIC CONTROL
⁴Jason Wieszek, PE
Richmond Traffic Control (SWaM)

COST ESTIMATING
¹Kevin Waddell, PE, DBIA
¹Kelley Reeves

Kevin specializes in conceptual estimating for budget development and early design at-risk project conversion. He has supported more than 200 projects with a construction value of more than \$39 billion.

Steve served as Deputy Program Manager for the KC Smart Sewer Program with direct responsibility over the I/I reduction program.

Stephen has successfully delivered over 30 construction projects in the past 10 years. He recently led utility project delivery on Shreveport's \$1.3 billion Clean Water Shreveport Program and has supported the City of Chicago's Combined Sewer Rehab/Replacement Program program for nearly two decades.

Craig brings a wealth of experience working with HRSD. His expertise in collection system rehabilitation and public outreach was pivotal in HRSD's Phase I Inflow Reduction Program.

NORTH SHORE
¹Glen Swann | Area Project Manager
¹John Duvenci | Area Project Manager
Additional APMs as needed

SOUTH SHORE
¹Doug Hart | Area Project Manager
¹Tim Pitman | Area Project Manager
Additional APMs as Needed

PROJECT CONTROLS & DASHBOARDING
¹Joe Campbell
¹Laura Sikes

PROCUREMENT
¹Brett Kreikemeier, PE

QUALITY
¹Mike Pindak
¹Marvin Roberts

Notes:

A. State of Virginia reciprocity is currently in progress for all noted PEs.

B. Services such as surveying, underground utility locations, geotechnical, etc. will be procured as required for the improvements recommended by the project team.

C. Construction field inspection staff from Burns & McDonnell and our local partners will be utilized as required for SSES oversight and construction.

D. We purposely do not partner exclusively on design-build projects so that we can always provide you with the best pricing possible when delivering your projects. See page 25 (Part 4.A) for description of non-exclusivity and contractual relationships. The local contractors listed in the organizational chart have already expressed interest in bidding construction packages and are currently active in Burns & McDonnell's pre-qualification process.

LOCAL CONSTRUCTION CONTRACTORS
Bridgemen Civil
Tidewater Utilities
East Coast Infrastructure
Prism Contractors
Garney
MEB

THE RIGHT TEAM FOR HRSD

Our team has been custom-built for this I/I Program with Burns & McDonnell, a national leader in collaborative delivery, serving as the overall Program Manager and Design-Builder and local partners Hazen, BC, WRA and RJN, doing what they do best for HRSD. With knowledge of your system, a proven track record of innovative I/I reduction and the horsepower to meet your schedules, we are fully committed to make this program a success!

Our project approach is based on innovative system planning activities led by Hazen and BC that quickly develop, evaluate and define cost effective I/I solutions. As projects are identified, Burns & McDonnell will manage design development, optimize work packages and contract directly with local SSES and construction contractors, bringing knowledge of the area, local investment and depth to the successful delivery of your program.

As BC's national I/I reduction lead, Andy was actively involved in the development of the RWWMP and brings historical perspective of the Regional Wet Weather Management Plan (RWWMP) to our team. Chris will leverage his HRSD experience to support additional I/I efforts for the Portsmouth area. Richard was instrumental in the negotiations with USEPA during the RWWMP development and consent decree negotiations.



AN INTEGRATED TEAM (Part 2.A)

Over the next few pages, we provide brief introductions to our team's key personnel. We built a team of engineers, construction professionals and program delivery specialists that are all uniquely qualified for your program and eager to successfully deliver the HRSD program. Please refer to the **Appendix** for brief resumes of all team members shown on the organizational chart.



JOHN PRUSS, PE | PROGRAM MANAGER (PROGRAMS) | RELOCATING TO HAMPTON ROADS, VA

Over the last two decades, John has been intricately involved in regulatory strategy development and delivery of wastewater consent programs targeted at system improvements and reduced sewer overflows. His dedication to those programs is no more evident than with Kansas City's \$4.5 billion Smart Sewer Program where he has led the program for over a decade. **In its fourteenth year of delivery, KC Smart Sewer is under budget and on-schedule.**

That simply would not have happened without John's leadership and the owner's desire to deliver a successful program.

With another two decades still ahead for KC Smart Sewer, we are excited to have John step out of his role as Kansas City's program manager and take on the task of helping establish your I/I program. **As your Program Manager, John will leverage his wealth of experience with consent programs to lead our team in the development and delivery of strategic, cost-effective and long-lasting solutions for your program.** As with all consent programs, it's never just about project delivery and John's background in regulatory strategy will be invaluable in helping to determine how the I/I program fits best within HRSD's long-term Consent Decree strategy. **John lived in Virginia for nearly a decade and is excited to move back to the state to support this project!**



BRYAN CANZONERI | DEPUTY PROGRAM MANAGER (DB/PPEA) | KANSAS CITY, MO & HAMPTON ROADS, VA (DURING CONSTRUCTION) |

Over the past 15 years, Bryan has served as the design-build project manager or construction manager at risk on a variety of wastewater projects across the nation, ranging in size from \$1.5 million to \$165 million in total installed cost. He also has direct experience working with our Program Manager John Pruss, having served as KC Smart Sewer's Construction Manager from 2019-2022.

For your program, Bryan will again support John through the delivery of construction, serving as your deputy program manager with a focus on the PPEA delivery of the program's projects. Bryan's background in collaborative project delivery has helped him build a proficiency in work package development, conceptual cost estimating and schedule compliance. Combined with his ability to focus on construction at every phase of the project life cycle, Bryan is the perfect choice to support PPEA delivery of this important program.



SEAN FITZGERALD, PE | PROJECT PLANNING LEAD | CINCINNATI, OH |

As our planning lead, **Sean brings extensive experience with HRSD, particularly through the Boat Harbor Inflow Reduction Project. This experience equips him with valuable insights into HRSD's infrastructure,** allowing for innovative and effective solution development starting at the planning phase of the project. Sean has over 30 years of national experience in wastewater planning, assessment and rehabilitation of sewer systems, hydraulic analysis and the design of pipes and pump stations. Sean serves as Hazen's conveyance practice leader. A long-standing member of the WEF Collection System Committee, he co-authored two Manuals of Practice: FD-6 Existing Sewer Evaluation and Rehabilitation and FD-17 Prevention and Control of Sewer System Overflows. **Sean is actively supporting Hazen's current I/I reduction efforts on their Boat Harbor project and was instrumental in the development of HazenQ, which will be utilized to streamline our hydraulic modeling efforts.**



ANDY LUKAS, PE | COST-EFFECTIVE ANALYSES & ADAPTIVE MANAGEMENT PLAN | MILWAUKEE, WI |

Andy has experience in wastewater and stormwater facility planning with special expertise in performing capacity studies for systems with significant wet weather flows. **As BC's national I/I reduction expert Andy was actively involved in the development of the RWWMP and will be a core member of the Business Case Evaluation team,** providing a historical Regional Wet Weather Management Plan (RWWMP) perspective and supporting Adaptive Management Plan negotiations.





STEVE STUEMPFIG, PE | DESIGN MANAGER | KANSAS CITY, MO | Steve has spent the last 15 years of his career focusing on sewer infrastructure improvements, including sewer assessment and rehabilitation, hydraulic analysis and design for Consent Decree programs in Kansas City, MO and Omaha, NE. As part of his work on the KC Smart Sewer Program, **Steve served as a Deputy Program Manager, leading a large team in the execution of \$100M annually in system renewal projects. Steve’s project responsibilities included development and implementation of I/I reduction projects across 14 separate watersheds and development of an asset management approach to large diameter sewer main replacement projects throughout Kansas City’s collection system.**

For your program, Steve will play two vital roles. During planning elements of the program, Steve will support Sean, Andy and the planning team in the development of cost-effective solutions. Then as projects spin out of the planning phase into design and construction, Steve will follow the projects and fill the role of design manager. In this role, Steve will oversee all design work packages for the program while supporting our estimating and construction teams through the delivery phase of each project.



STEPHEN CREDE | CONSTRUCTION MANAGER | CHICAGO, IL & HAMPTON ROADS, VA (DURING CONSTRUCTION) | Stephen is a certified EPC Project Manager, with a background in design followed by nearly two decades in the field overseeing water/wastewater system improvement projects. Steve’s impressive track record in collaborative delivery projects, including support for Shreveport’s \$1.3 billion Clean Water Shreveport Program, Joliet’s \$1 billion Water Supply Program, and nearly two decades with the City of Chicago’s Combined Sewer Rehab/Replacement Program, demonstrates his exceptional ability to coordinate between clients, designers, contractors, and project stakeholders. This makes him an excellent choice to lead construction elements of your PPEA program.



MARTY MALONE, PE | TIME-SERIES DATA ANALYSIS & HYDRAULIC MODELING | VIRGINIA BEACH, VA | For 17 years, Marty has led teams in developing hydrologic and hydraulic models to support master planning and consent order-driven projects for several Hampton Roads localities’ water and sewer master planning efforts. He specializes in sewer collection system modeling of large, manifolded pressurized force main systems, including integrating modeling data with Esri’s GIS software. As part of HRSD’s Regional Hydraulic Model, Marty managed the team developing locality hydraulic models for the region’s 14 locality systems. Marty will oversee our modeling team, facilitate consistent modeling results and coordinate with the HRSD Regional Hydraulic Model (RHM) for utilization in any future adaptive management planning efforts.



CRAIG PEARSON, PE | DATA REVIEW, FIELD SSES PLANNING & PRIORITIZATION, CORRECTIVE ACTION PLANNING | VIRGINIA BEACH, VA | Craig specializes in program management, SSES, system monitoring, I/I analysis and construction management. **He brings a wealth of experience working with HRSD and his expertise in collection system rehabilitation and public outreach was pivotal in HRSD’s Phase I Inflow Reduction Program.** Craig will support our Cost-Effective Analyses and confirm alignment with HRSD SOPs (which are currently being developed by Hazen under their Boat Harbor contract).



PRATISTHA PRADHAN PAUDEL, D.ENG, PE | DATA MANAGEMENT & SSES LEAD | HOUSTON, TX | Pratistha brings HRSD over 20 years of higher education and technical experience working on wastewater planning, hydraulic modeling and data analytics. Her experience in developing innovative, future-looking solutions through effective use of data analytics, asset management and AI solutions distinguish her as a professional in the integrated digital water sector. Having served as the Deputy Director for Wastewater Planning at Houston Water, Pratistha also brings years of expertise in wastewater/stormwater modeling, planning and management with an owner’s perspective.

As our Data Management & SSES lead, Pratistha will seamlessly work with Sean and our subconsultants to deliver HRSD a successful data collection program. **She has experience with our partner firms, including having managed a \$6.75 million field services contract with RJN which involved flow monitoring, level monitoring, manhole inspections and SSES studies.**



RICHARD STAHR, PE | ADAPTIVE MANAGEMENT PLAN | CONCORD, NC | Richard’s 40 years of experience includes providing leadership and programmatic support on large CIP programs, **including having served as Program Manager for HRSD’s \$1.8 billion regional wet weather management program that included regulatory negotiations with EPA Region 3 and VDEQ.** Richard was instrumental in the negotiations with USEPA during the RWWMP development and consent decree negotiations. His proven history with HRSD and other consent decree negotiations across the country will support any future Adaptive Management Plan negotiations as required.





DELCEÑO MILES | COMMUNICATIONS & LOCALITY ENGAGEMENT | HAMPTON ROADS, VA |

Delceno has over 30 years of experience in public relations and project communications involving complex community coordination. She is active in the Hampton Roads community and has assisted with outreach and coordination for many public agency projects throughout the region. Delceno and her team of communications specialists will augment HRSD’s internal staff and will support our team with communications support and public outreach to localities and impacted homeowners.



CLIFF CATE, PE | PRIVATE SIDE PROGRAM | KANSAS CITY, MO |

For the past 29 years, Cliff has been instrumental in leading SSES field work, including developing standard procedures and processes for wastewater programs, master plans, hydraulic studies and rehabilitation projects for Consent Decree programs in Omaha, NE, Kansas City, Springfield and Saint Louis, MO and Memphis, TN. Cliff is a member of WEF’s National Collection System Committee and is currently serving as the Technical Program Lead for the Private Property Virtual Library (PPVL) subcommittee. **His experience in developing Private-Side I/I programs in Johnson County, KS, Kansas City, Saint Louis and Springfield, MO, which includes some of the first private-side programs in the nation with significant pay-back results, will be key in helping develop your private-side program.**



KEVIN WADDELL, PE, DBIA | COST ESTIMATING LEAD | KANSAS CITY, MO |

Kevin brings nearly 30 years of experience working as a project manager, lead estimator and preconstruction manager in the water/wastewater industry. In his role as Preconstruction Director for Burns & McDonnell’s water practice, Kevin and his team are responsible for development of budgetary/conceptual cost estimates, subcontractor and supplier pricing and availability assessments and coordination between design and estimating teams for more accurate final project construction costs on all of our design-build projects. **Having successfully estimated over \$39 billion in design-build projects, most at very early stages of design, Kevin and his team are an integral part of our design-build capability.** For your program, Kevin will work closely with our design and construction teams to develop early conceptual estimates used to make key strategic decisions as the program develops.



BRIAN HILLER | DATA MANAGEMENT | KANSAS CITY, MO |

Brian has close to two decades of dedicated expertise in empowering water and wastewater utilities through the strategic utilization of Geographic Information Systems (GIS) and advanced asset management systems. His extensive **background includes spearheading multiple successful implementations of Cityworks AMS, Cityworks PLL and Cityworks Online, along with providing valuable insights into enterprise GIS deployments, particularly focusing on the implementation of the ArcGIS Utility Network for wastewater utilities.** Brian’s proficiency is further underscored by his certification as an Esri ArcGIS Expert and his recognition as a Prosci Certified Change Manager. For your program, Brian will lead data management, providing an integral interface between data collected and utilized by our team and your program oversight and long-term data management needs.

PAUL DELPHOS
PROJECT SPONSOR



“I am so excited to present this team to HRSD. When I joined Burns & McDonnell three years ago, it was because of their extensive capabilities with progressive design-build project delivery. Having the opportunity to bring that experience to HRSD, blending it with the very best planning and design consultants that are familiar with your I/I projects and your Consent Decree Program, is a dream come true for me.”



LONG-STANDING RELATIONSHIPS (Part 2.B)

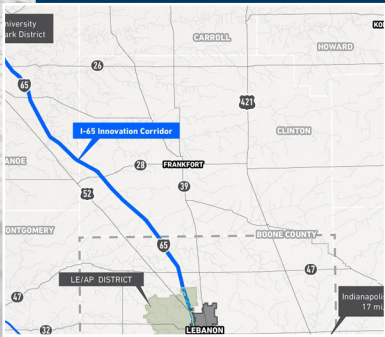
As a program manager and design-builder of large municipal capital programs and projects, Burns & McDonnell understands the importance of collaborating with hundreds of design consultants and construction contractors in the delivery of large programs and projects. While our relationships with Hazen and BC are still developing, as our firms begin to overlap in different areas of the country, our project experience is growing quickly. Currently we have over \$200 million in projects underway where we are directly contracted to one another. Listed to the right are projects and programs where our firms have contracted together, or partnered without direct contractual relationships in the successful delivery of our client's projects or programs.



ADVANCED WATER PURIFICATION FACILITY

Ventura, CA

Hazen + Burns & McDonnell are currently collaborating on the Advanced Water Purification Facility (AWPF) in Ventura, CA. This \$100+ million facility will treat wastewater to drinking water standards, which will then be injected into a local groundwater basin for storage and later extracted and delivered to customers.



INDIANA ECONOMIC DEVELOPMENT CORPORATION'S \$2 BILLION LEAP PROJECT

Lebanon, IN

The State of Indiana's \$2 billion LEAP Economic Development initiative aims to transform 20,000 acres of central Indiana farmland into an advanced technology corridor along Interstate 65 between Indianapolis and Chicago. The area lacks the water and

wastewater infrastructure needed to support the State's investment. Burns & McDonnell + BC, will deliver a green-field treatment plant capable of treating groundwater under the direct influence of surface water (GWUDI) transferred from Northeast Indiana. Led by Paul Delphos, the preliminary design for the first 10 MGD of treatment capacity is complete, with completion slated for 2027. The project has an ultimate build-out capacity of 40 MGD, estimated to cost over \$250 million and is scheduled for delivery by 2032. Burns & McDonnell has proposed a design-build delivery method for the project.

Our history of cooperation and shared expertise emphasizes our ability to bring together the best teams to deliver exceptional outcomes for our clients, leveraging our collective strengths and deep industry knowledge.

SAMPLE COLLABORATIVE DELIVERY PROJECTS WHERE OUR TEAMS HAVE WORKED TOGETHER

- » Advanced Water Purification Facility | Ventura, CA
- » LEAP Project | Indiana Economic Development Corporation
- » New Contaminated Waste Plant Facility | USACE
- » Cloud Data Center | Confidential Client & Location
- » LCAAP Dewatering | USACE
- » CEHRT Pilot and Demo | NEORSD
- » W07.4 Ches-Liz Storage Evaluation | HRSD
- » Reuse Plant Expansion | Broward County, FL
- » Chemical Feed System Upgrades | Denver, CO
- » DOSD Blueprint | Columbus, OH
- » Westerly Facilities Plan | NEORSD, Ohio
- » 2018 DA Reach 1 Design and CM | Salt Lake City, UT
- » Wastewater Master Plan | East Bay Municipal Utility District
- » Ashley Springs CRP | Salt Lake City, UT
- » JWTP Expansion Options Evaluation | Salt Lake City, UT
- » MWS CWN Pump Stations Design | Nashville, TN
- » Gowanus Canal | NYCDEP
- » SA investigation/PER | City of Chesapeake, VA
- » Multi-Phase Sewer Assessment And GIS Program | Fairfax, VA
- » WWTP Preliminary Engineering Report and Design PPEA | Fredericksburg, VA
- » Park Terrace Manhole 198 Study | Fairfax County DPWES
- » Waywood/Downcrest Pump Station Rehab Study | Fairfax County DPWES
- » Flow Monitoring Analysis | Herndon, VA
- » Montebello Water Filtration Plant Chlorine Handling Safety Improvements | Baltimore, MD
- » Huguenot Pump Station and Tank Construction | Chesterfield County, VA
- » Lead and Copper Rule Revision | Herndon, VA
- » Annual Engineering Services - WTF | Henrico County DPU
- » James River Oil Spill | Henrico County DPU
- » Annual Engineering Services - Sludge Residuals Study | Henrico County DPU
- » Annual Engineering Services - Water Filtration Evaluation | Henrico County DPU
- » Allegheny-Lomond Sewer System Evaluation | Prince William County Service Authority
- » Allegheny-Lomond Sewer Design | Prince William County Service Authority
- » Annual Engineering Services - WTP | Richmond DPU
- » Annual Engineering Services - Filter Evaluation | Richmond DPU
- » Annual Engineering Services - Lead Service Line Inventory | Richmond DPU
- » Annual Engineering Services - Lead and Copper Rule Support | Richmond DPU
- » Flat Branch Interceptor Improvements | Upper Occoquan Service Authority
- » Potomac Water Filtration Plant Stage 2 | Washington Suburban Sanitary Commission



2.C.D ANTICIPATED CONTRACTUAL RELATIONSHIPS

SINGLE POINT OF ACCOUNTABILITY

Burns & McDonnell will be your project's single point of contact and accountability. We will integrate with our partners Hazen, Brown & Caldwell, WRA and RJN, and include the Miles Agency throughout both the Interim and Comprehensive Agreements portions of the Program. We will also contract with local SSES contractors during the Interim Agreement and during the Comprehensive Agreement portions where appropriate, as well as local construction contractors during the Comprehensive Agreement portion of the Program.

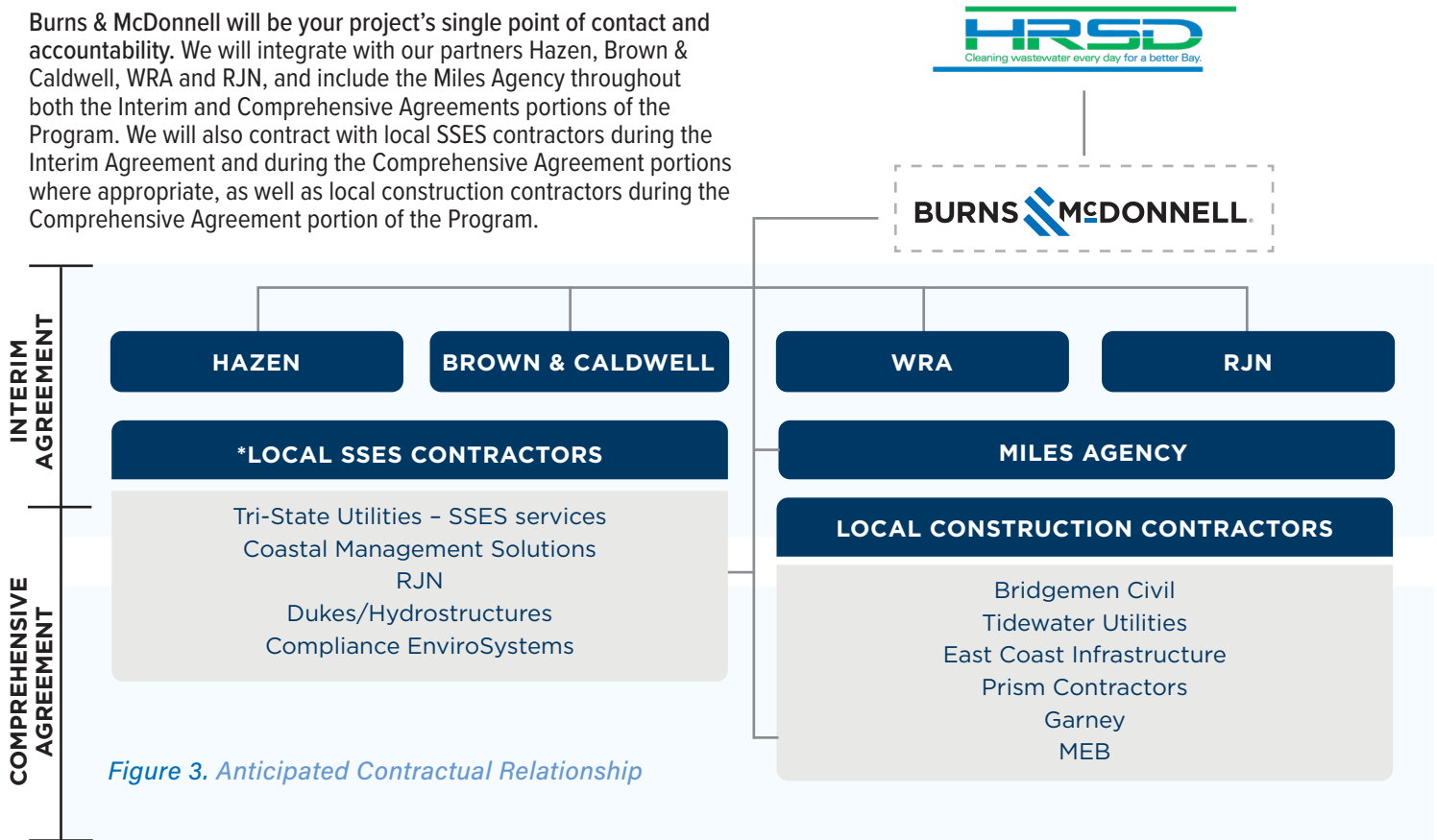
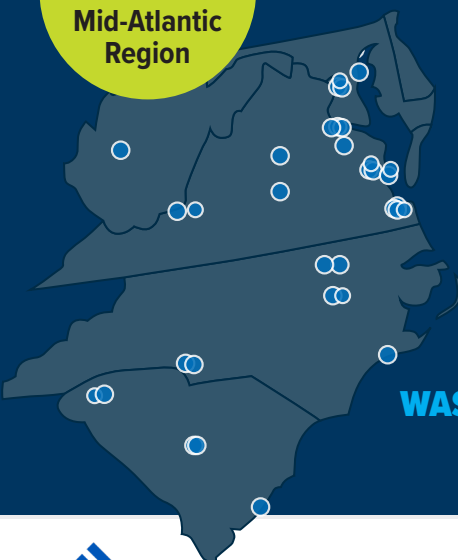


Figure 3. Anticipated Contractual Relationship

OUR TEAM BY THE NUMBERS

38
offices in the
Mid-Atlantic
Region



#6 DESIGN-BUILD FIRM*
*ENR-Ranked (2023)
Burns & McDonnell

19,000+
professional staff

4,000+
collaborative delivery projects

**#15 PROGRAM
MANAGEMENT FIRM***
*ENR-Ranked (2023)
Burns & McDonnell

2,200+
water & wastewater
professionals

300+
design-build/CMAR projects in
water/wastewater market

**#7 DESIGN
FIRM***
*ENR-Ranked (2023)
Burns & McDonnell

25+
I/I related projects on the East
Coast in the past 5 years

\$70B+
capital programs managed
across the country

**#4, #5, #14, #23
WASTEWATER DESIGN FIRMS**
*ENR-Ranked (2023)
Hazen, BC, Burns & McDonnell, RJN

200+
projects with public works/
utilities in Virginia

\$29B+
delivered via collaborative
delivery methods

3 PROGRAM UNDERSTANDING & TECHNICAL APPROACH

With an aggressive interim goal of completing all round one I/I reduction projects by the end of 2028 in accordance with HRSD’s Sixth Amendment to Consent Decree’s and a 47% SSO volume over the North and South Shore regions by 2030, HRSD needs a partner that can effectively develop, manage, and implement a successful and cost-effective I/I reduction program. We are that partner! Our data-driven planning approach evaluates multiple repair methodologies in the development of cost-effective basin strategies, packaged and delivered through a highly efficient progressive design-build process.

SYSTEM PLANNING ACTIVITIES

Led by Sean FitzGerald, PE (Hazen) and Andy Lukas, PE (BC)

BASIN SPECIFIC DATA COLLECTION PLANS

Taking advantage of BC’s previous basin work used to develop the Regional Wet Weather Management Plan (RWWMP), Andy Lukas and Chris Wilson will lead our team through early basin reviews to quickly understand the strategy and approach developed for each of the high-priority I/I reduction projects (HPIIRPs). By layering on additional data obtained from the localities in the years since the RWWMP was developed, our team will determine where we have data gaps and will inform the development of Basin Specific Data Collection Plans for each of the 19 basins within the HPIIRPs.

Prioritization will focus on basins where early I/I reduction activities can provide both significant impact for HRSD by way of flow reduction as well as substantial feedback which will be used to improve our approach in later basins. Leveraging our team’s extensive knowledge of the RWWMP, we will also assess and propose additional areas beyond the HPIIRPs that have potential for cost-effective I/I reduction and may recommend adding flow meters to these areas alongside the HPIIRP locations. This additional data gathering will enable our team to swiftly adapt if any of these areas prove more promising for I/I reduction, or if opportunities within the HPIIRP zones are limited. Our selection process for these additional areas for flow metering will prioritize the following criteria:

Areas Modeled with Associative Flow Parameters: Basins where flow parameters were derived from association with similar basins or wet well levels and pump run times will be evaluated. Differences in projected peak flows might indicate potential areas for significant I/I reduction in these basins.

Least Cost-Effective Capacity Projects: Basins containing the least cost-effective capacity projects will be examined to identify potential opportunities for updated flow projections or localized I/I reduction. Finding I/I removal potential in these areas could lead to significant cost savings in capital projects.

Extremely Leaky Areas: Basins outside of HPIIRPs that exhibit extreme leakage (>10,000 gallons per acre per day) and are associated with the top 25% largest SSOs prior to RWWMP project improvements will be evaluated to determine if targeted I/I reduction could provide substantial benefits.

SSES AND FLOW MONITORING FIELD WORK

Based on our team’s extensive experience with I/I programs, having synoptic flow data is fundamental to confidently compare data across locations on an apples-to-apples basis. Conditions change every year and seasonally within any given year in the HRSD service area that significantly impact I/I response. Having long-term synoptic data allows our team to evaluate the success of I/I reduction within the HPIIRP areas and leverage that data to support the adaptive management plan development.

While we believe that our early action data collection plans will provide most of the necessary data for program implementation, accurate flow monitoring may still be challenging in specific scenarios. This is particularly true in small basins with low flow levels and velocity, locations affected by pump station wet well levels, or where meters cannot be feasibly installed beyond the wet-well influent pipes’ drawdown. In such cases, we will rely on our experience to explore alternative measurement methods, including pump station run times, on/off times, temporary clamp-on flow meters, and level sensors.



“In any successful I/I reduction program, good data is a must! Our approach combines previously collected data with enhanced basin specific data to evaluate multiple repair technologies and develop informed and cost-effective basin rehabilitation strategies which can be adapted with data-driven feedback from early construction packages.”

SEAN FITZGERALD
PROJECT PLANNING LEAD



Data collection is relatively low in cost as compared to the repairs scheduled for each basin. With the limited window of time to complete the program, our approach will focus on implementing data collection as quickly as possible to catch the Fall 2024 low groundwater conditions and the Spring 2025 rainy season. To deliver this work, our team has already identified and pre-qualified several SSES firms that can be contracted in a quick and effective manner. Further, our team plans to develop and utilize basin specific data collection including the following strategies:

Flow micro detection is a proven efficient strategy to better isolate sources of I/I and maximize the cost-effectiveness of rehabilitation. It supports an adaptive and nimble approach as these meters are easy to install and move at any given time. We envision sensors covering approximately 5,000 LF of sewer mains but this is not a strict rule and will be dictated by flow conditions.

Smoke testing is a cost-effective method to identify significant inflow sources. By smoke testing entire basins, we can maximize the potential to find high inflow sources (low hanging fruit) that can be addressed quickly. By starting in the fall, we hit the lowest groundwater part of the season. Heavy rainfall will cause a rapid increase in groundwater levels but will also quickly drain back down. Our team will monitor levels in real time to maximize effectiveness of our data collection.

By starting **CCTV** immediately, our team can quickly identify sewer segments with potential significant I/I. The data will also inform our data-driven I/I reduction strategy alternative. Our team fully understands that this program is not driven by asset management, but the benefits of gathering additional data as soon as possible and having wider coverage will result in better opportunities to inform cost-effective SSO volume reduction solutions early.

Since manholes can be a significant source of I/I, conducting robust **manhole inspections** with rapid collection tools will result in significant inflow reduction.

Our team will collect and manage all SSES and flow metering field data within RJN's Clarity software platform. Clarity unites powerful data analytics, smart AI automation, and GIS data management tools to deliver a single resource for monitoring and assessing system conditions and performance. Both historical and new data will be managed within Clarity and will be accessible to HRSD, our program team and Locality members through a user friendly, web-based dashboard.

If a major inflow source is discovered before or during pre-construction flow monitoring, we'll recommend removal to avoid skewing results and prevent unnecessary rehabilitation recommendations. For MOM issues, localities may be asked to make timely repairs; otherwise, our team will work with HRSD to leverage existing HRSD contracts or mobilize pre-qualified subcontractors under agreed time and materials terms to make quick repairs.

COMPONENTS OF BASIN SPECIFIC DATA COLLECTION PLANS

Long Term Flow Metering | Install and maintain at least one long term flow monitor and rain gauge in each basin and carefully selected control basins. If there are sufficiently accurate pump station flow meters, those could serve as the primary flow measurement but level data upstream of the lift station is still desired.

Temporary Flow Metering | Install temporary flow meters and/or level sensors farther upstream (micro metering) in each basin to better isolate and characterize I/I sources. These sensors will be placed as long as needed to inform the I/I response to various rainfall events and may stay in place or be reinstalled after corrective measures are implemented, which could be phased based on outcomes. The number and selection of locations will be based on evaluation of previous data.

Smoke Testing | Immediately begin smoke testing all basins. Consider smoke testing non single family residential private sewer systems where data indicates potential for significant inflow sources. Locality data will be reviewed to determine locations where recent, quality data already exists.

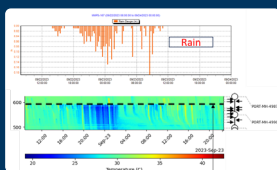
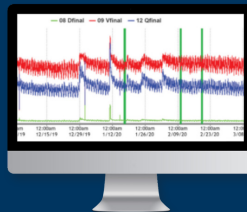
CCTV | Immediately begin CCTV on all pipes and service laterals where locality data is not sufficiently current or is missing completely. In some cases, laterals in areas with quality CCTV data may be inspected if the data indicates potential issues. CCTV will be prioritized first to the leakiest basins based on previous data.

Manhole Inspections | Conduct manhole inspections using state of the art, low-cost 360-degree scans with mobile equipment that does not require a truck and provides high quality data. The flooding potential of each manhole, such as known flooding, vented covers, etc., will be recorded along with signs of potential inflow, such as fractured pavement, subsidence, or numerous pavement patches.

✓ INNOVATIVE APPROACH | FLOW METERING AND SSES Data Gathering

Clarity by RJN

Anywhere, anytime, Clarity® merges robust data analytics, AI automation, and GIS tools. Created by our teaming partner, RJN, we will leverage Clarity® for managing Flow Monitoring and CCTV. RJN built a custom Clarity dashboard for their SECAP Master Plan in Arkansas.



Distibuted Temperature Sensing (DTS)

Our team has experience using DTS to locate large sources that contribute to wet weather peak flow. The graph to the left shows temperature data recorded in the HRSD VIP Service Area I/I Reduction Phase 1 system during a storm when I/I inputs were colder than the wastewater.

AI-Assisted Defect Coding

CCTV inspections may be completed using artificial intelligence (AI) technology. AI generated defect coding provides a consistent and efficient method for coding CCTV, which in turn allows the field crews to focus on safety and field production. We successfully use this technology the Clean Water Shreveport Program.

Manhole Cameras

Our team will conduct Manhole inspections using state of the art, low-cost 360-degree scans with mobile equipment that does not require a truck and provides high quality data. We successfully use these cameras on KCMO Smart Sewer Program.



BASIN MINI-MODELS

Our team will review and analyze time series data utilizing HazenQ, Hazen’s innovative flow and rainfall data analysis program. With HazenQ, all existing and new data, including all flow, level, and SCADA data, will be input and rapidly analyzed with automated data analysis tools that can fully summarize years of data within a few minutes. Results from HazenQ include:

- Base sanitary flow and daily diurnal patterns
- Groundwater infiltration by season
- Storm event identification, summary, and return period statistics for the entire data set exportable to Excel
- Rainfall derived I/I volume for all events

Utilizing the RTK generation tool in HazenQ, our team will be able to rapidly generate calibrated RTK parameters that can be generated by season or across any time range. Figure 4 illustrates an example of the RTK tool and the resulting predicted flows plotted against the actual flows as well as 45-degree plots of accuracy.

The calibrated RTK’s will be used to develop and implement “mini-models” that are based on continuous calibration and season rather than a single event. The I/I response in the HRSD system is highly variable to seasonal and antecedent conditions. The Basin Mini Models will allow our team to quickly identify where inflow is persistent regardless of season or groundwater, and also to identify areas where peak flows occur more after back-to-back events.

These models can then be used to predict the hydrograph for any rainfall event, or an event such as the HRSD 5-year peak flow recurrence event can be loaded into the tool and the output hydrograph will be generated without the need for separate software. Results will then be used to support our I/I reduction strategies alternative analyses, to revise RTK parameters for the RHM’s and to evaluate post-construction I/I reduction effectiveness. The predicted peak flows will be normalized to a gallons per day per acre to be consistent with the previous RWWMP work and is also a well-established metric to inform priorities and potential for cost-effective I/I reduction.

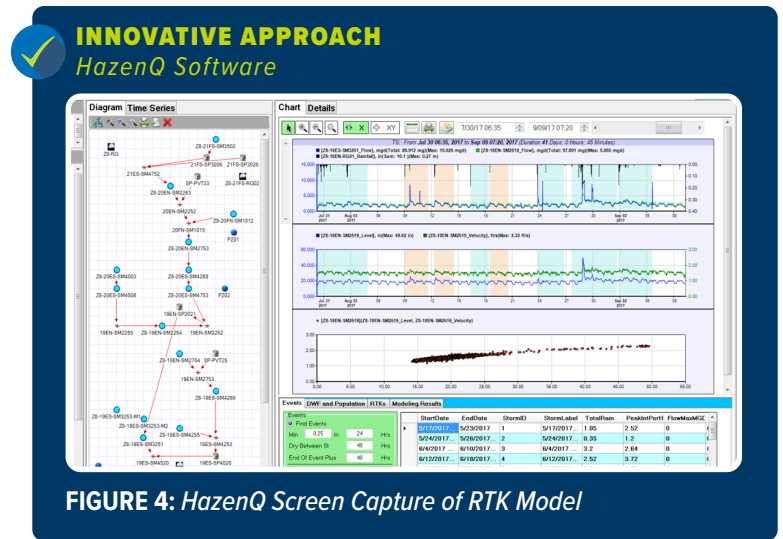


FIGURE 4: HazenQ Screen Capture of RTK Model

REPAIR TECHNOLOGIES AND ASSOCIATED COSTS (THE “TOOL BOX”)

Our team will work with each locality to, gather their established design and construction standards, and develop an owner agreed upon best practices manual for typical sewer rehabilitation and repair activities. We anticipate the manual to first follow broadly applied locality standards, second HRPDC standards, third HRSD standards, and then industry standards to fill in any gaps.

At the program’s inception, our team will assemble a sewer rehabilitation best practices manual (the “tool box”) to effectively tackle I/I issues. Drawing upon our extensive national and local experience, we possess a profound understanding of which rehabilitation technologies and products (the “tools”) are most suitable for addressing each unique asset condition and type of I/I. Several factors influence the selection of preferred methods:

- Comprehensive Rehab vs. Data-Driven Strategies
- Ability to Work on Private Property
- Initial I/I Characteristics
- Extent of Isolation and Observation of I/I Sources
- Expected Lifespan of Corrective Action
- Consideration of Structural Renewal as a Co-benefit

In many instances, a combination of methods is employed for maximum effectiveness. **Page 157 of the Appendix** includes a general guide for various I/I reduction methods that can be seamlessly integrated into the overall I/I reduction program. HRSD stands to reap substantial benefits from our team’s wealth of experience, empowering us to develop robust corrective measures aligned with our objective of achieving cost-effective SSO reduction.

I/I Source	Corrective Measure	Fuel VI Impact	Medium and Slow I/I Impact	Relative Cost	Risks	
PIPELINE COVER	Missing or Broken Cleanout Cap	Cleanout cap replacement	Very High	Low to Medium	Very Low	Property owner removes cap
	Downspout connection	Downspout redirect	Very High to High	Low to Medium	Low	May cause drainage issues on property. Private property
	Area/finish Drain connection	Area/finish drain disconnection	Very High	Medium to High	Medium to High	Can be very expensive and difficult
	Sump Pump Connection	Sump pump disconnect	High	High	Medium to High	Finding place to discharge can be difficult
PIPELINE COVER	Defective private lateral	Private lateral lining/replacement	Low	Medium to High	Very High	Disruptive work on private property
	Leaky Public Lateral and connection	Public lateral lining/replacement with full 360 lateral connection seal	Medium to High	Medium to High	High	Most effective as part of main CPP
	Leaky Public Lateral and connection	Short length style lateral connection seal	Low to medium	Low to medium	Medium	Sewer cleaning can damage betts
	Leaky Public Lateral and connection	Lateral connection chemical graft	Low to medium	Low to medium	Low	Highly dependent on soil and groundwater fluctuations. Generally not a long term solution.
	Leaky abandoned lateral or tap	Plug or do not re-activate if CPP lining	Medium to High	Medium to High	Low	Future property owner may want to reconnect
	Leaky joints or minor defects	Main line grout	Low to medium	Medium to High	Low	Highly dependent on soil and groundwater fluctuations. Generally not a long term solution.
	Leaky joints or minor defects	Spot liner	Low to medium	Low to medium	High	Generally only good for single leak
	Leaky joints, multiple fractures	Full CPP of main line with restacks	Low to medium	Medium to High	Medium	Effectiveness depends on I/I migration. Best when combined with public lateral lining.
	Storm sewer leaking and short connecting this lateral or main sewer	CPP storm sewer	Medium to High	Medium to High	Medium	Requires extensive field evaluation to identify.
	Broken or collapsed pipe	CPP main sewer and public lateral with 360 lateral connection seal	Medium to High	Medium to High	High	Requires extensive field evaluation to identify. If other sources suspected this should be the option.
MANHOLE	Broken or collapsed pipe	Pipe replacement	Low to medium	Medium to High	Very High	Effectiveness depends on I/I migration. Best when combined with public lateral lining.
	Vented manhole lid in low area	Manhole cover replacement	Medium to High	Low	Very low	
	Vented manhole lid in low area	Inflow dash	Medium to High	Low	Very low	Difficult to maintain and can cause lid to wobble
	Inflow through frame and cover and chimney	Internal chimney seal	Medium	Medium	Low	Durability highly dependent on installation
	Inflow through frame and cover and chimney	Manhole frame and cover replacement and external seal	Medium to High	Medium	Medium to High	Disruptive work on private property
	Inflow through frame and cover and chimney	External gasket and cementitious manhole lining	Low	Medium	Medium	Monitor should be waterproof. Not for highly corrosive environment
	Leaking through joints	Polymer manhole lining	Low	Medium	High	High dependent on quality of installation.
Leaking through pipe connection	Manhole injection grouting and cement mortar plug	Low to Medium	Medium to High	Medium		
Storm sewer connection	Disconnect	Very High	Low	Very high		

FIGURE 5. “TOOL BOX”: Page 157 of the Appendix includes a general guide for various I/I reduction methods that can be seamlessly integrated into the overall I/I reduction program.



I/I REDUCTION STRATEGIES ANALYSIS

The following I/I reduction strategy alternatives will be evaluated for each HPIIRP basin. If the minimum I/I density threshold is not met in a particular area it will be removed from consideration unless data shows some easily removed direct inflow. Some alternatives may be eliminated on a case-by-case basis depending on the system data.

For each alternative, the team will utilize the mini-models and, where feasible, the Local Hydraulic Models (LHM) to identify any additional local gravity improvements needed to convey the peak flows and to develop a predicted “post-rehab” hydrograph. Rehabilitation costs and local conveyance improvements cost will be developed for each alternative.

FIVE I/I REDUCTION STRATEGY ALTERNATIVES TO EVALUATE

Inflow removal only | This alternative involves removing known direct public inflow sources where a tributary drainage area can be estimated. In many cases, corrective actions addressing inflow, especially on the public side, will be implemented quickly prior to larger project packages. This allows for rapid feedback of success. All other strategy alternatives will assume inflow removal as part of the alternative. Private inflow will be evaluated more closely since this involves work on private property.

Full comprehensive rehabilitation of public assets and private laterals | For this alternative, our team will price complete rehabilitation or replacement of all public sewer mains, manholes, and public laterals where minimum I/I density threshold is met. The inclusion of private laterals will depend on various factors and will be discussed and agreed upon with HRSD.

Targeted comprehensive rehabilitation of public assets and possible private laterals | For this alternative, our team will price targeted rehabilitation or replacement of public sewer mains, manholes, and public laterals where I/I density is above a threshold to be determined. The inclusion of private laterals will depend on various factors and will be discussed and agreed upon with HRSD.

Data-Driven rehabilitation for I/I removal | This alternative will generally follow the same “data-driven” approach as the RWWMP. For any pipe rehabilitated or replaced, the connecting manholes and public laterals will also be rehabilitated.

Combination of alternatives to meet RWWMP target peak flows | This alternative will strictly focus on achieving the targeted peak flow established in the RWWMP for each HPIIRP area.

ADDITIONAL PRIVATE-SIDE I/I REDUCTION FOR HRSD CONSIDERATION

Should HRSD want to consider private side I/I reduction, our team will develop a program related to improvements that can be utilized to enhance I/I reduction in the HPIIRP areas. We understand HRSD’s perspectives on pursuing I/I reduction on private property – it needs to be prioritized toward high yield inflow source removal first, with activities related to infiltration source removal only when necessary.

Our team’s vast experience with successful private property programs in Kansas City, Saint Louis, Milwaukee, and Jefferson County will complement our local experience with the Sewer Lateral Improvement Program (SLIP) for HRSD. We know what counts and what can be cost-effectively removed. Clear processes and procedures for finding private inflow sources will be implemented very early in the contract. We will work closely with HRSD and with the localities and their appropriate ordinances to mitigate priority inflow sources and track results utilizing our program management dashboards.

Cost Effective Analysis Example (for local SSO reduction)

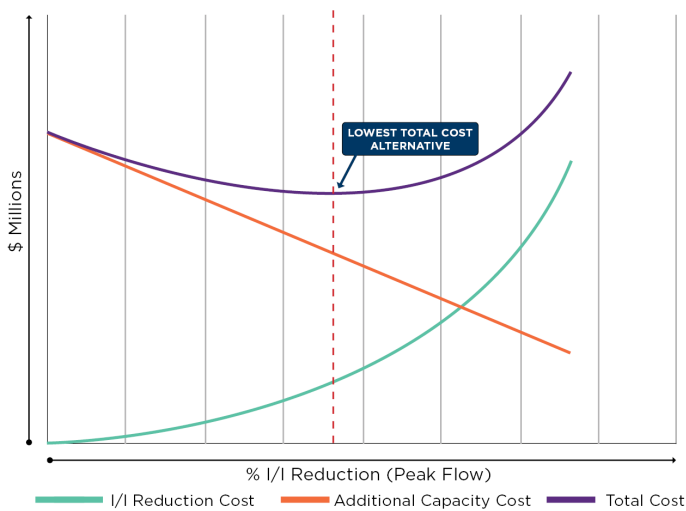


FIGURE 6. REDUCTION OPTIMIZATION: *The goal is to find the level of I/I reduction that results in the lowest total cost of the RWWMP.*

SELECTING THE MOST COST-EFFECTIVE SOLUTION

To perform a true cost-effective analysis to select the optimum I/I reduction strategy, consideration must be given for any additional, or possibly reduced, costs for downstream capacity improvements to meet the target SSO reduction. A lot of effort was put into sizing and costing local and regional system capacity improvements to meet the target SSO reduction, but these were all sized assuming the I/I reduction goals were met and do not necessarily reflect a cost-effective amount of I/I reduction. Additionally, the RWWMP was conducted at a relatively high level and followed robust analyses given the amount of data available.

Figure 6 shows conceptually how to optimize the I/I reduction strategy. The goal is to find the level of I/I reduction that results in the lowest total cost. As shown in the figure, the preferred I/I reduction strategy alternative is the one that, when added to additional conveyance and capacity improvements, results in the lowest total cost to meet the SSO reduction goals.

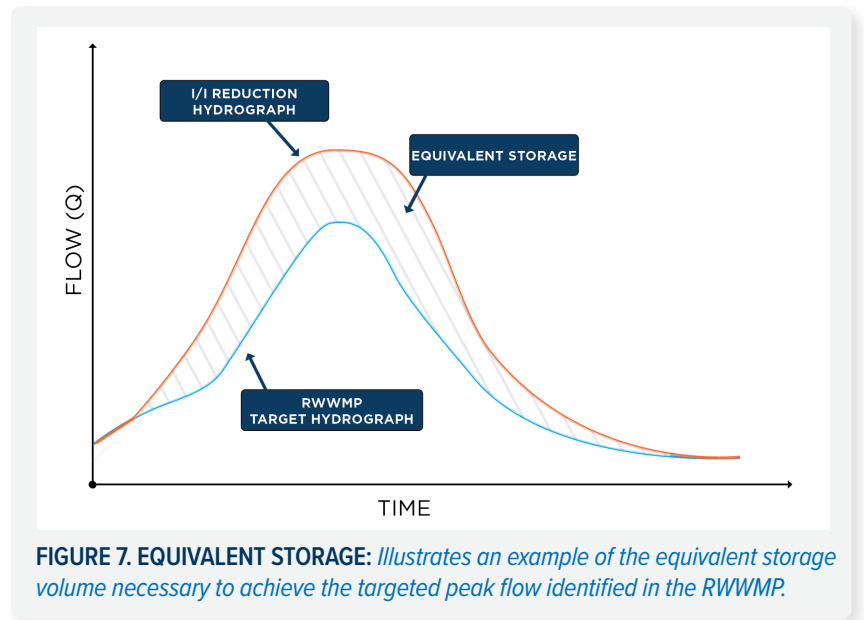


Given the inherent complexity of HRSD’s system and how incremental flow reductions from each Locality basin impacts flows in the downstream system, it is not feasible to explicitly identify and cost all incremental additional or upsized improvements in the downstream system with certainty and in a timely manner. This is especially true given the long run times and complexity of the RHMs .

Rather than running the RHMs to evaluate each I/I reduction strategy alternative for each HPIIRP area, our team proposes the use of an equivalent storage volume in each project area to enable us to quickly assess the relative cost difference between each I/I reduction strategy alternative.

This equivalent storage volume is meant to account for each I/I reduction strategy’s impact on other planned downstream capacity improvements that are necessary to achieve the targeted peak flow reduction. Figure 7 illustrates an example of the equivalent storage volume necessary to achieve the targeted peak flow identified in the RWWMP for an I/I reduction strategy alternative that falls short of the targeted I/I reduction identified in the RWWMP. The equivalent storage volume is represented

by the difference in total volume between the future conditions RWWMP hydrograph and the projected hydrograph for each I/I reduction strategy alternative. With this streamlined approach, we will be able to quickly identify the most cost-effective strategy to optimize local system performance and support achievement of HRSD’s overall SSO reduction goal.



PROPOSED BASIN SPECIFIC COST-EFFECTIVE APPROACH

1. Calculate the I/I reduction cost for each strategy alternative.
2. Calculate equivalent storage volume and cost for each I/I reduction strategy alternative.
3. Sum the costs for I/I reduction, equivalent storage volume and additional locality conveyance improvements for each of the five strategy alternatives.
4. Compare the total costs for each strategy alternative and select the strategy alternative with the lowest total cost as the “Preliminary Preferred I/I Reduction Alternative.”

To confirm how incremental peak flow reductions from each HPIIRP area may impact flow in HRSD’s downstream system, we recommend that our team of experienced modelers run the RHMs with all of the Preliminary Preferred Alternatives for the HPIIRP areas within each treatment plant service area (TPSA). This will enable HRSD and our Program Team to validate the pricing used for the equivalent storage volume and determine the combined contribution of the Preliminary Preferred Alternatives toward achieving the targeted SSO volume reduction.

CONFIRMING THE PRELIMINARY HPIIRP PREFERRED ALTERNATIVE

1. Run the RHMs with all planned future HPP capacity improvements and the Preliminary Preferred I/I Reduction Strategy Alternative within each HPP area to calculate their combined impact on the targeted SSO volume reduction within each TPSA .
2. Calculate the cost to eliminate any remaining SSO volume required to meet the TPSA SSO reduction target established by the RWWMP. This can be accomplished by using the cost of the RWWMP HPPs divided by the total SSO volume removed to determine a \$/(SSO gallon removed) in each TPSA.
3. Compare the total cost to eliminate any remaining SSO volume to the total cost of the equivalent storage volume derived in the basin specific cost-effectiveness analysis.
4. If these total costs do not fall within a reasonable range of each other, then we will adjust the total cost of the equivalent storage and rerun our cost-effective analysis. For example, if the total cost used for equivalent storage is significantly lower than the total estimated cost required to eliminate the remaining SSO volume to meet the TPSA target, then our approach would underestimate the cost-effectiveness of the I/I reduction work. We will adjust the cost of equivalent storage volume if needed to assure the proper selection of the most cost-effective I/I reduction strategy alternative for each HPIIRP area.
5. Make necessary adjustments and finalize Corrective Action Plan for each HPIIRP area based on updated equivalent storage volume costs to generate the “Final Preferred I/I Reduction Strategy Alternative.”
6. Submit Final Preferred I/I Reduction Strategy Alternative to HRSD for go forward consideration prior to releasing any of the HPIIRP areas within a given TPSA for construction.



PROJECT DELIVERY ACTIVITIES

Led by Steve Stuempfig and Bryan Canzoneri (Burns & McDonnell)

WORK PACKAGE DEVELOPMENT AND PRIORITIZATION

As HPIIRP projects move out of planning, our project delivery team will strategically divide the projects into work packages that match the contracting community’s capabilities and capacity, work area location or repair strategy. By coupling our design and construction team members, these work packages will be strategic, cost-effective and adaptable through the life of the program.

During the planning phase, we used our “toolbox” to select the most cost-effective solutions to address I/I. In the work package development step, our engineering team will confirm the effectiveness of these technologies by thoroughly evaluating the SSES data and, in coordination with our contractors, develop final plans and specifications.

We recognize technology and product selection for rehabilitation can vary by locality due to availability, owner preferences and contractor capability. Our vast experience with I/I rehabilitation will help safeguard HRSD from poor technology and product selection.

Through the cost effective analysis, our team will identify necessary local conveyance improvements based on our projected reduction goals for the selected I/I strategy. Should any of these improvements coincide with the rehabilitation plans, we will collaborate closely with HRSD to seamlessly integrate them into the rehabilitation packages, provided it aligns with HRSD’s preferences.

As projects move into the final design and permitting stage, we will assign packages to locality-specific design leads. Assigning one design lead per locality will **allow our team to build a rapport and trust with the locality contacts and the community as the work packages are ushered through design and construction.** Additionally, it provides the HRSD North and South Shore Project Managers with a **single point of contact for each project.**

PROCUREMENT AND SUBCONTRACTING STRATEGY

As part of the Subcontracting Plan, the construction team will conduct an outreach effort. They will identify the expertise and capacity of the local and regional contracting community, while also discerning any additional contracting needs that extend beyond these resources. This information will help shape how the work package scopes are written.

The scopes will reflect how the available contracting community will bid and perform the work. Aligning project scopes to leverage available construction capabilities and capacity will allow our team to **set subcontractors up for success and verify that work packages are being bid in a competitive environment.**

As projects are conceptualized and move into the implementation phase, the project delivery team will develop bid documents for each project. The team will develop front-end documents that outline the general project requirements and necessary flow-downs in line with the Comprehensive Agreement. The Construction Manager will take the lead on writing the scopes of work and outline the specific criteria for each subcontract bid package. Our procurement lead, Brett Kreikemeier, will then be responsible for management of each bid package from issuance through award.



“As projects are identified, Burns & McDonnell will prioritize design development, optimize work packages and contract directly with local SSES and construction contractors, bringing knowledge of the area, local investment and depth to the successful delivery of your program.”

STEVE STUEMPFIG, DESIGN MANAGER



INNOVATIVE APPROACH

Transparency and collaboration through digital dashboards

Management and work progress reporting for each project will be managed within GIS based plans and ArcGIS Online (AGOL). This will provide a platform for HRSD to have constant visualization of work progress and making stakeholder communication easier to facilitate with the visual aids within these platforms (if preferred).

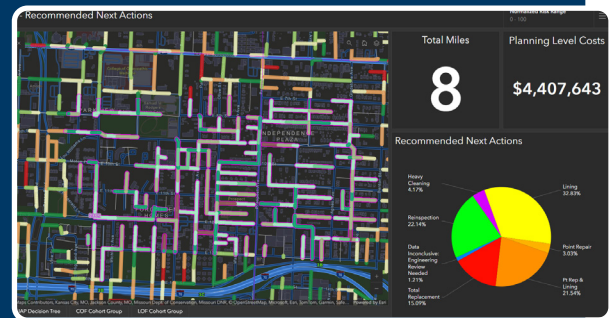


Figure 8: KCMO Annual Sewer Rehabilitation Program. Annual MOM activities are planned and managed within an AGOL dashboard providing stakeholders with real time access to active work orders and future planned work.



PRICING VALIDATION AND CONTRACT AMENDMENTS

Our initial estimate produced during the early planning phase will create the framework for the project pricing. The project pricing will then be refined during project delivery with actual bid numbers obtained from the bidders for each work package. While incomplete, these documents will give us market pricing for the majority of the project scope prior to finalization of the Issued for Construction documents. Once we obtain this pricing, we will interview the low bidder and next lowest bidder to confirm understanding of project scope, compare quantities and work hours against our internal estimate, align on the project assumptions, confirm the bidders' approach to completing the work and discuss any exclusions or clarifications. The team will then use this information to level the bids. The apparent low bidder will then be carried in the overall pricing for that project scope.

Our project delivery team will also include estimated cost for scope gaps not covered by the bidders that will be bought out during project execution, costs for design development items that are known but not yet on the drawings and other typical indirect costs to complete the project. **Pricing will be compiled in an open book format, giving HRSD full transparency into how the costs were developed. Once the project team and HRSD agree on the pricing, the team will execute the comprehensive agreement for the construction work. Based on our proprietary meeting, we understand HRSD is anticipating multiple contract modifications to the comprehensive agreement as basins are completed. We agree with this approach and will work with HRSD to develop an optimal number of phases over the duration of the project.**

Our team uses online platform Building Connected to manage the issuance, correspondence and collection of bid packages. Utilization of this platform helps to streamline the process and allows all bidders access to the most recent information.

Level	Number	Name	Start Date	End Date	Quantity	Unit	Price
1	S-100	Civil, Structural, Mechanical	8/10/2024	5:00 PM CDT	1		
2	S-300	HVAC & Plumbing	8/10/2024	5:00 PM CDT	1		
3	S-400	Electrical	8/10/2024	5:00 PM CDT	3		
4	S-500	Canopy	8/10/2024	5:00 PM CDT	3		
5	S-600	Instrumentation & Controls	8/10/2024	5:00 PM CDT	1		

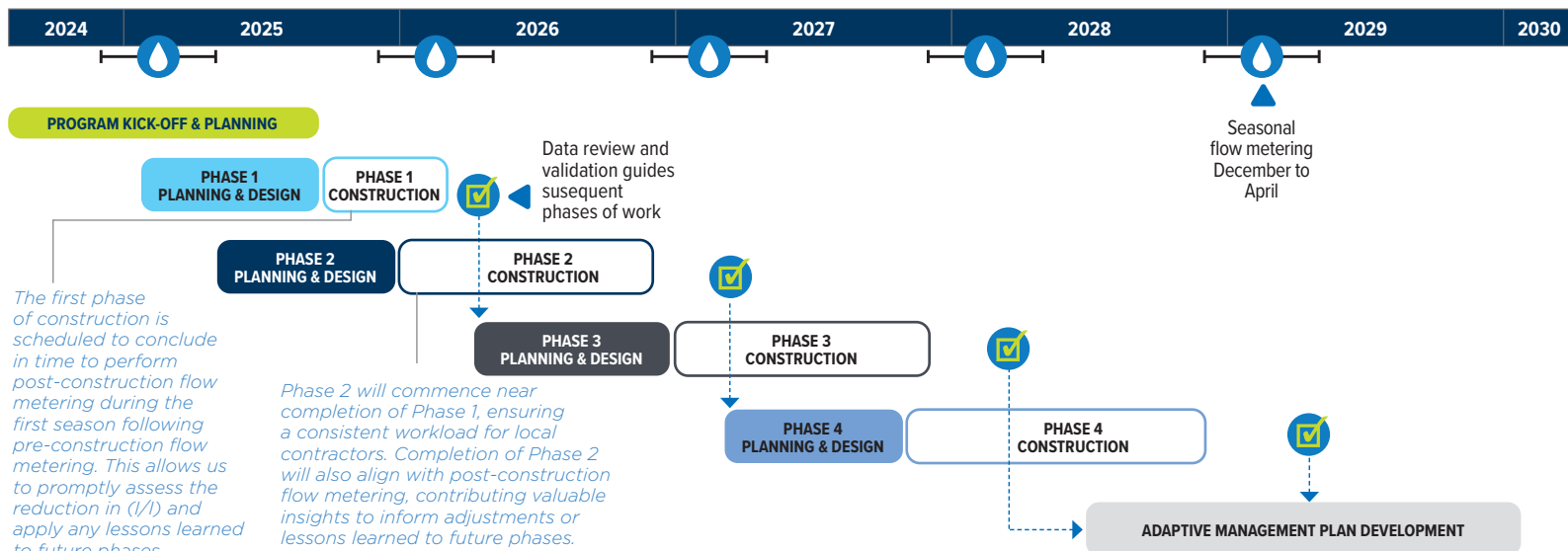
CONSTRUCTION SCHEDULE AND TIMELINES

Our initial timeline development outlines four distinct phases of construction work. **These phases are strategically planned to optimize the flow monitoring seasons and optimize workload within the construction community.**

The first phase of construction is scheduled to conclude in time to perform post-construction flow metering during the first season following pre-construction flow metering. This sequence allows us to promptly assess the reduction in I/I and apply any lessons learned to Phases 3 and 4. Phase 2 will commence near the completion of Phase 1, ensuring a consistent workload for local contractors. Completion of Phase 2 will also align with post-construction flow metering, contributing valuable insights to inform adjustments or lessons learned for Phase 4.

Figure 9 provides a visual representation of our initial scheduling strategy. Our approach to project delivery is focused on strategic scheduling of phases to optimally utilize flow monitoring seasons to gauge effectiveness and guide subsequent phases of work. To demonstrate this philosophy, we have broken construction into four phases. However, our intention is to work with HRSD to define an optimal number of phases that meets HRSD's needs both in project delivery and for contracting purposes. **A high-level schedule for the project is included in Appendix page 26.**

Figure 9: Preliminary Construction Phases Aligned to Optimize I/I Reduction Feedback



Year One Opportunity: Since the first year of the program is focused on planning efforts for the HPIIRP projects, we believe there is an opportunity to assemble and align our construction team through participation on current HRSD I/I projects. This early feedback loop would also better inform our planners and designers and better align our construction resources in preparation of the larger program. We would welcome the opportunity to discuss any opportunity to engage on these projects with HRSD staff.



CONSTRUCTION EXECUTION

Our team structure is organized to manage many work areas and subcontractors simultaneously. Our on-site team will be led by Construction Manager, Stephen Crede. Stephen will be responsible for tailoring our standard construction management processes for delivery of this program, including project schedule management, cost and change management and subcontractor management.

As construction ramps up, we will onboard various Area Project Managers, to oversee and coordinate the work. We anticipate having multiple Area Project Managers dedicated to the North Shore and South Shore as work packages roll out across localities. They will be responsible for delivery of their respective projects including management and coordination of the subcontractors to confirm conformance with project scope and quality requirements. They will track and manage costs for their projects following the cost management process developed by Stephen.

Our team strives to create successful relationships with our subcontractors on every project. We begin by setting clear expectations for responsibilities. Before awarding a project, we conduct thorough scope reviews with each low bidder to confirm what's included in their pricing. We will also communicate safety and quality requirements, as well as the project schedule.

Area Project Managers will also be responsible for coordinating and expediting shop drawings and RFIs. As an integrated design-builder, our Area Project Managers work closely with the design staff to expedite timely reviews of shop drawings and facilitate resolution of any submittal questions amongst the design team, subcontractors and vendors. They will also work hand-in-hand with our assigned HRSD North and South Shore Project Managers to resolve any issues when they arise and document these resolutions in the RFI process.

POST CONSTRUCTION FLOW MONITORING

One of the most important components of this Program is to **accurately measure (to the greatest extent practicable) the reduction in I/I after construction and to develop new RTK parameters.** To do this, our team will use what is known as a "control basin" approach to measuring I/I reduction. The control basin approach is where flow is measured at locations where I/I reduction efforts are being made (rehab meter) and at areas where no improvements are to be made (control meter). This approach is critical since rainfall varies on a yearly basis and antecedent conditions have a large impact on the HRSD system I/I response. The control basin should be located near the rehabilitation basin, have a reasonably similar size and have a similar I/I response.

Effectiveness is measured by the change in the relationship between two meters before and after rehabilitation for R-value and peak flows for each rainfall event (see **Figure 10** on the next page). Using linear regression, the change in slope for pre and post is used as a reasonable and objective measurement of I/I reduction. The team will likely perform interim I/I reduction measurements, as early out inflow reduction improvements are implemented to get early feedback on effectiveness.

COMMUNICATION THROUGH CONSTRUCTION



Our communications team will integrate established, proven communications processes and tools related to successful I/I reduction programs across the country with Delceno Miles's (Miles Agency's) extensive, local experience in the HRSD service area. This approach includes layering multiple communication methods for road closures and major traffic impacts, including door-to-door outreach, posting door hangers/notices of work, social media, direct email to and meetings with impacted stakeholders, corridor-wide e-mail communications, website updates and updates in a Weekly Construction Update. Our team will also work with local partners to help disseminate information to impacted owners, residents and visitors. We create open lines of communication to convey project updates and also address any concerns expressed by business members or the community. This two-way communication will help inform our plans for business access during construction.



IN THIS PHOTO: *Our project management and technical teams regularly interface with impacted residents, businesses and community members at workshops and open houses (such as this public event in Shreveport, LA).*

Our project management and technical teams regularly interface with impacted residents, businesses and community members at workshops and open houses. These information sessions give us an opportunity to convey complex data or updates face-to-face and answer questions from those affected by ongoing project work. This is just one example of how we make owners successful and help foster positive relationships between owners and the communities they serve.



Additionally, areas where our data-driven approach is the preferred alternative should be constructed first so that post construction monitoring can be performed to determine if this approach is achieving the desired results. If not, the team will need to evaluate if additional I/I reduction measures are warranted or if SSO reduction targets are better achieved with upsizing improvements. Comprehensive I/I reduction is more predictable and therefore early feedback is not as critical.

The overall goal is to compare the actual results to the predicted results in terms of cost and effectiveness. The RHM's will be used to assess the SSO reduction to determine how much additional SSO volume reduction is needed to achieve the required 69% by 2040. These results will then be used to determine if I/I reduction is a strategy that should be continued or if convey and treat is the more cost-effective option.

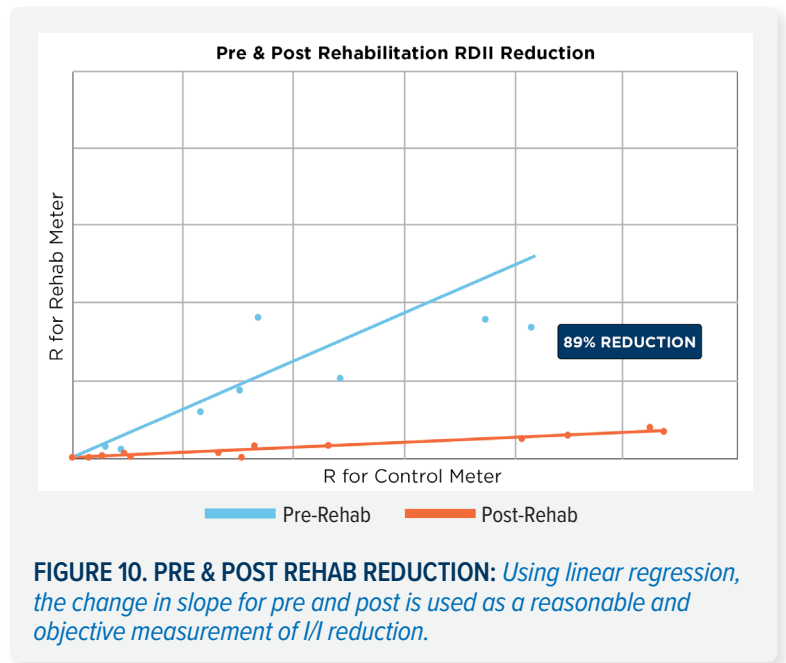


FIGURE 10. PRE & POST REHAB REDUCTION: *Using linear regression, the change in slope for pre and post is used as a reasonable and objective measurement of I/I reduction.*

ADAPTIVE MANAGEMENT PLAN DEVELOPMENT

Upon completion of each I/I reduction project, our team will deploy flow monitors to gather post-rehabilitation data sufficient to support I/I reduction analysis. These results may support continuation of additional I/I reduction work under the program and feed into an Adaptive Management Plan analysis for determining remaining capacity needs for controlling SSOs per the Consent Decree. As our team members did during the HPP selection process, we will support HRSD's evaluation of remaining work and assess priorities for SSO reductions that derive the greatest benefits to the region. The plan would also need to consider schedule, cost and dependencies between projects that together can contribute to confident negotiations with the agencies for a potential Consent Decree modification during the adaptive management check-in point in 2030.

The application of adaptive management principles will be essential throughout the implementation of all HPIIRPs as well as to refine future capacity improvements which may involve proposing alternative capacity improvement projects based on RHM results. Several of the priority I/I reduction projects included in this program have accompanying capacity improvements in the locality system where they are located. There may be opportunities to refine the nature of these project synergies based on findings in the field or additional hydraulic modeling, with changes being different I/I reduction goals or different capacity improvements. The drivers for any changes would be improved cost-effectiveness and better resiliency for SSO control.

Examples of projects where we could leverage synergies:

- Chesapeake PS 072, force main and gravity sewer upgrades associated with I/I work in CHES-032, CHES-047, CHES-067 and CHES-111
- Newport News gravity main improvements associated with I/I reduction in NEWP-013 and NEWP-015
- York project to extend Lodge Road PS wet well (NS-PS-233) associated with I/I reduction in YORK-006

INTEGRATING FUTURE WORK INTO YOUR CONSENT DECREE PROGRAM

Richard Stahr stands ready to continue supporting HRSD's long-term regulatory compliance strategy efforts at every step going forward. In addition, John Pruss brings his in-depth experience helping other wastewater utilities negotiate Consent Decree modifications in EPA Regions 3, 6 and 7. Richard and John each work very closely with utility leadership and its outside legal counsel, including AquaLaw, to adapt regulatory strategy to integrate new work and changes in commitments into their Consent Decree programs. Our team looks forward to working collaboratively with HRSD and the regulatory agencies and providing strong technical justification for any changes in future capacity improvements.

(Part 4.A) *At your request and for the benefit of the overall project, we have not secured exclusive arrangements with any subcontractors or specialty firms to maximize your potential cost savings through competitive pricing. To expedite the contracting process in anticipation of a quick start, we have contacted the SSES and construction contractors, listed in the org chart, to confirm their interest in the project and are in the process of pre-qualifying each to support on this program. As we progress through the project, additional interested contractors will be invited to bid on proposed projects.*



PART 5 PROPOSED TERMS AND CONDITIONS

Burns & McDonnell has reviewed the draft agreement included in the RFP provided by HRSD with in-house counsel and insurance advisors. We are fully committed to reaching a mutually agreeable set of terms and believe that we can do so. We have attached red lines to the agreement with comments in the margin on Appendix Page 27. Below is a brief summary of key discussion topics:

- In respect to impacts due to not meeting Contract Times, we would like to discuss including a reasonable cap on the liquidated damages and waiving consequential or special damages. This item needs discussion, as we will need to understand the potential impacts to HRSD in order to propose fair and reasonable limits.
- We would like to propose a Limitation on Liability in the amount of the Contract Value.
- The Interim Agreement includes terms and conditions relative to engineering and construction. During the planning period, the construction related terms will likely not apply. There are several examples commented on in Article 5 of the agreement. We would like to work together to clarify which terms apply to the work in the interim agreement and make sure the terms align to the scope.
- The Owner indemnity clause under section 5.06.G in the General Conditions was omitted by the Supplemental Conditions. We'd like to consider adding this clause back into the Agreement as well as a general Owner indemnity clause (see 7.19.D drafted in the red lined document).
- Regarding the resolution of claims made by other contractors, we would like to understand if it is HRSD's intent that this would include claims made by contractors contracted directly with a Locality and working in the vicinity of each HPP work site, as well as to other public utility contractors working in the vicinity. We would like to understand how our work would be coordinated with work by other Contractors unknown to HRSD.
- We would like to discuss our reliance upon information provided by HRSD related to Locality asset condition assessment information, sewer system GIS information, and other information provided by each locality to HRSD as noted in the MOU between Owner and Locality.
-



IN THIS PHOTO: *This \$86 million, 20 MGD progressive design-build WTP was delivered in 2019 as a joint-venture between Burns & McDonnell and Garney for the City of Thornton, CO. By conducting concurrent piloting and design, plus segmented work packages for construction, our team expedited processes, enabled early starts and saved 15 months in the schedule.*



APPENDICES



PART 6 Appendices		APPENDIX
A	Resumes for personnel and major subconsultant personnel in organization chart.	2-25
B	Detailed Program implementation and completion schedule.	26
C	Objections and requested modifications to General Conditions, Supplementary Conditions, and Interim Agreement.	27
D	In accordance with RFP Sections 3.01.J and 3.02.E, any necessary updates and supplementation of information and documents provided in satisfaction of RFQ, Sections 4.03.B.2, 4.03.B.3.a-c, and 4.04.D.3-7.	156



6.A RESUMES FOR PERSONNEL & MAJOR SUBCONSULTANTS



Glenn Swann, proposed North Shore Area Project Manager, served as Site Manager and led Siloam Spring's WTP upgrades, managed construction activities and confirmed onsite safety, chairing weekly meetings with subcontractors and the client.

PROJECT SPONSOR AND EXECUTIVE TEAM

Our team is here to provide executive level leadership for your I/I Reduction Program. Members of the Executive Team will be available to meet with HRSD quarterly to gauge program performance, guide strategy and address any concerns HRSD staff may have with the delivery of the program.



PAUL DELPHOS, PE, DBIA PROJECT SPONSOR

Paul is Burns & McDonnell's practice leader in the Mid-Atlantic Region. Paul recently served in a management role for the 100 MGD Hampton Roads Sanitation District Sustainable Water Initiative for Tomorrow (SWIFT) advanced water treatment and groundwater recharge program, working closely with Hazen throughout. As your Project Sponsor, Paul will be responsible for utilizing his established relationships with local partners, understanding of HRSD and experience in Virginia Design-Build and PPEA processes, to facilitate seamless collaboration between HRSD and our project team.



RON COKER, PE EXECUTIVE TEAM

Ron has guided Burns & McDonnell's water practice to become a national leader in progressive design-build project delivery over the last 10 years. With a background in providing executive leadership for some of the largest collaborative delivery programs in the central United States, including Kansas City's \$4.5 billion KC Smart Sewer Program and \$1.5 billion Capital Improvements Management Office, Shreveport's \$1.3 billion Clean Water Shreveport Program and Wichita's \$500 million progressive design-build NWWF, Ron is a hands-on leader who will regularly participate in updates with HRSD leadership to support successful program delivery.



DWAYNE AMOS, PE EXECUTIVE TEAM

Dwayne leads Hazen's Virginia Beach office, offering deep insight into Hampton Roads' water/wastewater utilities and HRSD's local needs. He brings 30 years of expertise in engineering, focusing on water and wastewater facility design and construction management, including handling multiple Annual Services contracts with extensive task orders in Hampton Roads. Further, Dwayne has supported a number of design-build projects with HRSD, including the SWIFT Research Center and Providence Road Off-Line Storage Facility, as well as playing an important role on the SWIFT Program Management team.



RICHARD STAHR, PE EXECUTIVE TEAM

Richard has over 40 years of experience including developing water and wastewater facilities, wet weather management, owner's advisory services, asset management, regulatory negotiations and information technology selection and implementation for clients across the United States. He successfully negotiated the original consent decree for HRSD and will leverage his experience as a member of the executive team to continually offer guidance related to long-term planning and regulatory strategy.

Read more about our dedicated project team in the following pages.





JOHN PRUSS, PE
PROGRAM MANAGER

Over the last two decades, John has been intricately involved in regulatory strategy development and delivery of wastewater consent programs targeted at system improvements and reduced sewer overflows. His dedication to those programs is no more evident than with Kansas City’s \$4.5 billion Smart Sewer Program where he has led the program for over a decade. In its fourteenth year of delivery, KC Smart Sewer is under budget and on-schedule. That simply would not have happened without John’s leadership and the owner’s desire to deliver a successful program.

With another two decades still ahead for KC Smart Sewer, we are excited to have John step out of his role as Kansas City’s program manager and take on the task of helping establish your I/I program. As your Program Manager, John will leverage his wealth of experience with consent programs to lead our team in the development and delivery of strategic, cost-effective and long-lasting solutions for your program. As with all consent programs, it’s never just about project delivery and John’s background in regulatory strategy will be invaluable in helping to determine how the I/I program fits best within HRSD’s long-term Consent Decree compliance strategy.

- » **FIRM** | Burns & McDonnell
- » **YEARS OF EXPERIENCE** | 35
- » **EDUCATION** | MS, Environmental Health Science; BS, Civil Engineering
- » **LICENSE/REGISTRATION** | Professional Engineer (MO, MS); (Pending reinstatement of expired Virginia PE)
- **\$4.5B KC Smart Sewer Consent Decree Program** | *Kansas City, MO* | Program Manager
- **\$1.3B Clean Water Shreveport Consent Decree Program** | *Shreveport, LA* | Strategic Plan Development
- **\$1B WW Consent Decree Program** | *Unified Government of Wyandotte County and Kansas City, Kansas* | Strategic Plan Development
- **\$850M WW Consent Decree Program** | *Jackson, MS* | Program Manager, Strategic Plan Development and Regulatory Support
- **\$650M WW Consent Decree Program** | *Fort Smith, AR* | Strategic Plan Development and Regulatory Support
- ***\$200M WW Consent Decree Program** | *Springfield, MO* | Program Manager*



BRYAN CANZONERI
DEPUTY PROGRAM MANAGER

Over the past 15 years, Bryan has served as the design-build project manager or construction manager at risk on a variety of wastewater projects across the nation, ranging in size from \$1.5 million to \$165 million in total installed cost. He also has direct experience working with our Program Manager John Pruss, having served as KC Smart Sewer’s Construction Manager from 2019-2022.

For your program, Bryan will again support John through the delivery of construction, serving as your deputy program manager with a focus on the PPEA delivery of the program’s projects. Bryan’s background in collaborative project delivery has helped him build a proficiency in work package development, conceptual cost estimating and schedule compliance. Combined with his ability to focus on construction at every phase of the project life cycle, Bryan is the perfect choice to support PPEA delivery of this important program.

- » **FIRM** | Burns & McDonnell
- » **YEARS OF EXPERIENCE** | 18
- » **EDUCATION** | BS, Industrial Engineering Technology
- » **LICENSE/REGISTRATION** | N/A
- **\$136M Wastewater Utility Capital Program Progressive Design-Build** | *Republic, MO* | Design-Build Program Manager
- **\$92M Kaw Point Modernization Project** | *Unified Government of Wyandotte County and Kansas City, KS* | Design-Build Project Manager
- **\$10M JCWA Collector Well Progressive Design Build** | *Festus, MO* | Design-Build Project Manager
- **\$9M Marshall WWTP Progressive Design-Build** | *Marshall, MO* | Design-Build Project Manager
- **\$4.5B KC Water Smart Sewer Program** | *Kansas City, MO* | Construction Manager
- **\$65M Freemont WWTP Expansion CMAR** | *Freemont, OH* | Design-Build Project Manager*
- **\$110M SW WWTP CMAR and Utility Expansion Program** | *Cape Coral, FL* | Sub-contract Manager*



*Prior to joining Burns & McDonnell



SEAN FITZGERALD, PE
PLANNING LEAD

As our planning lead, Sean brings extensive experience with HRSD, particularly through the Boat Harbor Inflow Reduction Project. This experience equips him with valuable insights into HRSD’s infrastructure, allowing for innovative and effective solution development starting at the planning phase of the project.

Sean has over 30 years of national experience in wastewater planning, assessment and rehabilitation of sewer systems, hydraulic analysis and the design of pipes and pump stations. Sean serves as Hazen’s conveyance practice leader. A long-standing member of the WEF Collection System Committee, he co-authored two Manuals of Practice: FD-6 Existing Sewer Evaluation and Rehabilitation and FD-17 Prevention and Control of Sewer System Overflows.

- » **FIRM** | Hazen
- » **YEARS OF EXPERIENCE** | 33
- » **EDUCATION** | MS, Environmental Engineering; BS, Civil Engineering
- » **LICENSE/REGISTRATION** | Professional Engineer (OH, KY, NY, TX, DC, MN, FL)
- **Boat Harbor Inflow Reduction Program, Phase 1** | *Hampton Roads Sanitation District (HRSD), Hampton and Newport News, VA* | Technical Lead
- **Collection System Master Plan** | *Pinellas County Public Utilities, Pinellas County, FL* | Technical Lead
- **Collection System Capacity Assessment** | *Sarasota County, FL* | Technical Lead
- **Phase I Infiltration and Inflow Program** | *City of Ft. Lauderdale, FL* | Senior Project Manager
- **Collection System Asset Management Program** | *Jefferson County, AL* | Technical Lead



PRATISTHA PRADHAN PAUDEL, D.ENG, PE
DATA MANAGEMENT & SSES

Pratistha brings HRSD over 20 years of higher education and technical experience working on wastewater planning, hydraulic modeling and data analytics. Her experience in developing innovative, future-looking solutions through effective use of data analytics, asset management and AI solutions distinguish her as a professional in the integrated digital water sector. Having served as the Deputy Director for Wastewater Planning at Houston Water, Pratistha also brings years of experience in wastewater/stormwater modeling, planning and management with an owner’s perspective.

As our Data Management & SSES lead, Pratistha will seamlessly work with Sean and our subconsultants to deliver HRSD a successful data collection program. She has experience with our partner firms, including having managed a \$6.75 million field services contract with RJN which involved flow monitoring, level monitoring, manhole inspections and SSES studies.

- » **FIRM** | Burns & McDonnell
- » **YEARS OF EXPERIENCE** | 21
- » **EDUCATION** | Doctorate, Civil Engineering (Water Resources); MS, Integrated Water Resources Management; BS, Civil Engineering
- » **LICENSE/REGISTRATION** | Professional Engineer (TX)
- **KC Water I/I Program** | *Kansas City, MO* | Technical Manager
- **Houston Consent Decree** | *Houston, TX* | Planning Lead/Supervising Engineer*
- **Model Conversion, Update and CRMP Project Evaluation** | *Fort Smith, AR* | Technical Manager
- **Wastewater Advanced Infrastructure Analytics Platform** | *Houston, TX* | Co-Developer*

*Experience prior to joining Burns & McDonnell





STEVE STUEMPFIG, PE
DESIGN MANAGER

Steve has spent the last 15 years of his career focusing on sewer infrastructure improvements, including sewer assessment and rehabilitation, hydraulic analysis and design for Consent Decree programs in Kansas City, MO and Omaha, NE. As part of his work on the KC Smart Sewer Program, Steve served as a Deputy Program Manager, leading a large team in the execution of \$100 million annually in system renewal projects. Steve’s project responsibilities included development and implementation of I/I reduction projects across 14 separate watersheds and development of an asset management approach to large diameter sewer main replacement projects throughout Kansas City’s collection system.

For your program, Steve will play two vital roles. During planning elements of the program, Steve will support Sean and the planning team in the development of cost effective solutions. Then as projects spin out of the planning phase into design and construction, Steve will follow the projects and fill the role of design delivery manager. In this role, Steve will oversee all designs and design managers for the program while supporting our estimating and construction teams through the delivery phase of each project.

- » **FIRM** | Burns & McDonnell
- » **YEARS OF EXPERIENCE** | 16
- » **EDUCATION** | BS, Civil Engineering
- » **LICENSE/REGISTRATION** | Professional Engineer (KS)
- **Keep Out the Rain Program** | *Kansas City, MO* | Project Manager
- **KC Water I/I Program** | *Kansas City, MO* | Program Manager, Deputy Program Manager and Project Delivery Manager
- **Gilmore Avenue Sewer Separation Project** | *Omaha, NE* | Project Manager
- **Omaha Forest Lawn Creek Inflow Removal and Outfall Storm Sewer Project** | *Omaha, NE* | Project Manager
- **CSO 19 Sewer Separation and Green Infrastructure Project** | *Unified Government, Kansas City, KS* | Project Manager



STEPHEN CREDE
CONSTRUCTION MANAGER

Stephen is a certified EPC Project Manager, with a background in design followed by nearly two decades in the field overseeing water/wastewater system improvement projects. Steve’s ability to interface and coordinate between clients, designers, contractors and project stakeholders and his impressive track record in collaborative delivery projects, such as supporting Shreveport’s \$1.3 billion Clean Water Shreveport Program, Joliet’s \$1 billion Water Supply Program and nearly two decades the City of Chicago’s Combined Sewer Rehab/Replacement Program, makes him an excellent choice to lead construction elements of your PPEA program.

- » **FIRM** | Burns & McDonnell
- » **YEARS OF EXPERIENCE** | 25
- » **EDUCATION** | BS, Civil Engineering
- » **LICENSE/REGISTRATION** | N/A
- **Joliet Alternative Water Source Program** | *Joliet, IL* | Construction Manager | Project Cost: \$1.2B
- **Joliet Water Main Replacement Program** | *Joliet, IL* | Construction Manager
- **Clean Water Shreveport** | *Shreveport, LA* | Plan and Specifications Reviewer
- **Water Delivery Progressive Design-Build** | *Homewood, IL* | Design Manager | Project Cost: \$12.2M
- **WWTP Consolidation** | *Frankfort, IL* | Construction Manager
- **Lord Street Drainage Basin Combined Sewer Separation Program** | *Elgin, IL* | Project Manager
- **I-90 Move Illinois Water Transmission Main Relocation Program** | *Northwest Suburban Municipal Joint Action Water Agency, Multiple Locations* | Construction Manager
- **Joint Waste Sludge Disposal Main Program** | *Fox River Water Reclamation District & Elgin, IL* | Construction Manager





MARTY MALONE, PE
 TIME-SERIES DATA ANALYSES AND
 HYDRAULIC MODELING

For 17 years, Marty has led teams in developing hydrologic and hydraulic models to support master planning and consent order-driven projects for several Hampton Roads localities' water and sewer master planning efforts. He specializes in sewer collection system modeling of large, manifolded pressurized force main systems, including integrating modeling data with Esri's GIS software. As part of HRSD's Regional Hydraulic Model, Marty managed the team developing locality hydraulic models for the region's 14 locality systems. Marty will oversee our modeling team, facilitate consistent modeling results and coordinate with the HRSD RHM for utilization in any future adaptive management planning efforts.

- » **FIRM** | Hazen
- » **YEARS OF EXPERIENCE** | 17
- » **EDUCATION** | ME, Environmental Engineering; BS, Environmental Engineering
- » **LICENSE/REGISTRATION** | Professional Engineer (VA)
- **Water and Sewer Master Plan** | *Western Virginia Water Authority, Roanoke, VA* | As Project Manager, Marty managed water and sewer modeling staff utilizing InfoWater Pro and InfoWorks ICM for the Authority's systems in Roanoke City and County. The team improved model accuracy by addressing simulated flow issues and collaborated with economic development staff to project future water demand and sewer flows.
- **Consent Order Capacity Assessment Modeling** | *City of Virginia Beach, VA* | Marty led the development of a comprehensive hydraulic sewer and force main model using Innovyze's InfoSWMM software. He streamlined the process by developing GIS-based scripts for sewer flow allocation and efficiently calibrating the model at 150 locations, significantly reducing the areas requiring dynamic modeling from 400 to 175. This approach offered time and cost savings while fulfilling Consent Order requirements.
- **Sanitary Sewer Master Planning** | *City of Virginia Beach, VA* | As Project Manager, Marty led Virginia Beach's sanitary sewer master planning, fulfilling consent order requirements by completing 117 sewer master plan reports over five years. He collaborated with Planning and Economic Development Departments to estimate sewer flows for the Strategic Growth Area initiative, using Innovyze's InfoSWMM to model 400 pump stations and 200 miles of force main.



DEMITRY LEBEDEV, PE
 TIME-SERIES DATA ANALYSES AND
 HYDRAULIC MODELING

Demitry is Hazen's lead hydraulic modeler and database programmer. He has 25 years of experience in flow monitoring, data analysis and hydraulic modeling. He also has experience in developing applications involving specific means of data collection, database management and web-based visualization. He developed multiple engineering software programs used both internally and by different municipalities.

- » **FIRM** | Hazen
- » **YEARS OF EXPERIENCE** | 25
- » **EDUCATION** | MS, Civil Engineering; BS, Civil Engineering
- » **LICENSE/REGISTRATION** | Professional Engineer (OH)
- **Collection System Modeling and Capacity Assessment** | *Sarasota, FL* | Serving as Technical and Modeling Lead for Capacity Assurance, Demitry was responsible for development and calibration of the dynamic and predictive hydraulic models for priority areas using flow monitoring data, pump run time data, pressure data and SmartCover level data as well as capacity assessment of all assets in the model using various design storms.
- **Collection System Master Plan** | *Pinellas County, FL* | Demitry served as Technical and Modeling Lead, aiding in site selection, coordination, technical review and analysis of flow survey, rainfall and piezometric data to characterize the flow regime of the Zone 8 sewershed. Responsible for development of the modeling methodology and protocol to establish methods and procedures to be applied across all study zones of the PCU service area to ensure consistency in the development of a dynamic sanitary sewer model.
- **Collection System Capacity Assessment and Capacity Assurance** | *Jefferson County, AL* | Demitry served as Modeling Lead responsible for developing a comprehensive hydraulic model to evaluate the existing collection system under various loading and operational conditions, identify capacity limitations, improve system operations, develop a CIP and to support a CAP. Basin models were developed using InfoWorks ICM and calibrated to the flow data collected from 560 locations installed over the period of five years.





ASHLEY VAN MATRE, PE
TIME-SERIES DATA ANALYSES AND
HYDRAULIC MODELING

Ashley is a key part of Hazen’s conveyance group and has extensive experience in collection system flow data analysis, planning, optimization and hydraulic/hydrologic modeling, including work with HRSD’s Boat Harbor I/I Reduction Program.

- » **FIRM** | Hazen
- » **YEARS OF EXPERIENCE** | 6
- » **EDUCATION** | BS, Electrical Engineering
- » **LICENSE/REGISTRATION** | Professional Engineer (OH)
- **Boat Harbor Inflow Reduction Program, Phase II** | *HRSD, Hampton and Newport News, VA* | Ashley was responsible for data analysis and strategy development for the Inflow Reduction Program – Phase II. This includes data review and analysis, including data quality review and gap analysis. The analyzed data will be utilized to prioritize potential inflow investigations and inflow reduction efforts.
- **Collection System Asset Management Program** | *Jefferson County, AL* | Ashley supported Data Analysis and Modeling for the program and assisted with the creation of the Trussville and Warrior capacity assessment reports. Responsibilities included assisting with the evaluation and categorization of these project areas, assisting with running various model simulations, figure generation in Infoworks ICM, creation of figures for the report using ArcMap and assisting with the writing of the report.
- **Pinellas County Master Plan Hydraulic Model Calibration** | *Pinellas County, FL* | Ashley supported calibration of a highly complex hydraulic model as part of overall Master Plan development.
- **Trussville Basin Hydraulic Model Calibration** | *Jefferson County, AL* | Ashley assisted with the review and updating of the existing hydraulic model for the basin. Performed the dry weather and wet weather calibration for this basin, which included using RTK unit hydrographs, the Infoworks’ groundwater infiltration module, subcatchment delineation and sub-catchment population estimations.
- **Remedial Measures Plans** | *Jefferson County, AL* | Ashley provided Data Analysis. Assisted with the evaluation, planning and creation of various remedial measures reports.



SAŠA TOMIĆ, PHD, PE
TIME-SERIES DATA ANALYSES AND
HYDRAULIC MODELING

Saša is an award-winning designer of leading hydraulic modeling software, a trusted digital transformation adviser to water utilities and a recognized digital water pioneer. He was the lead developer and patent author for Bentley’s GEMS platform and product manager of Innovyze’s water products. Saša combines over 30 years of experience in software development, hydraulic modeling and data analytics in the water utility industry, leveraging his advanced degrees in civil engineering and computer science to help water utilities use digital twin solutions to become more efficient. Saša is a trusted advisor for digital water startups and cutting-edge utilities and an active member of WEF, AWWA and SWAN hydraulic modeling and digital twin committees, where he actively contributes to industry manuals and guidelines.

- » **FIRM** | Burns & McDonnell
- » **YEARS OF EXPERIENCE** | 32
- » **EDUCATION** | PhD, Civil Engineering; MS, Computer Science; MS, Civil Engineering; BS, Civil Engineering
- » **LICENSE/REGISTRATION** | Professional Engineer (NY)
- **KC Water I/I Program** | *Kansas City, MO* | As one of the System Planning Service Lane leads, Saša provides KC Water with technical guidance and industry expertise in different aspects of hydraulic modeling, capacity assessment and digital water transformation. In this role, he wrote guidelines and standards that set the direction for program implementation, actively participated in hydraulic modeling tasks and provided the bridge between different service lanes through digital water integration.
- **Clean Water Shreveport** | *Shreveport, LA* | Saša brought InfoWorks ICM experience and innovative approaches to hydraulic modeling and system capacity for Shreveport, enhancing program planning and digital water integration with his industry knowledge and connections.
- ***Sanitary Sewer Overflow Reduction Program** | *San Antonio Water System (SAWS), San Antonio, TX* | Serving as Sanitary Sewer technical lead, Saša equipped SAWS with hydraulic model training and quality control for their SSO reduction program, pioneering the first US integration of sanitary sewer and river models to pinpoint inflow sources.

**Prior to joining Burns & McDonnell*





CRAIG PEARSON, PE

DATA REVIEW, FIELD SSES PLANNING AND PRIORITIZATION

Craig specializes in program management, SSES, system monitoring, I/I analysis and construction management. He brings a wealth of experience working with HRSD and his expertise in collection system rehabilitation and public outreach was pivotal in HRSD’s Phase I Inflow Reduction Program. Craig will support our Cost-Effective Analysis and confirm alignment with HRSD SOPs (which are currently being developed by Hazen under their Boat Harbor contract).

- » **FIRM** | Hazen
- » **YEARS OF EXPERIENCE** | 14
- » **EDUCATION** | BS, Civil Engineering
- » **LICENSE/REGISTRATION** | Professional Engineer (VA)
- **Inflow Reduction Program Phase I** | *HRSD, Hampton and Newport News, VA* | Craig served as Project Manager, overseeing a comprehensive effort to identify, prioritize and eliminate inflow within the sanitary sewer system. This involved both traditional evaluation methods, like dry and wet weather manhole inspections and CCTV inspections and innovative approaches, such as tidal CCTV inspections and flood testing of storm drains. Craig played a crucial role in implementing unique strategies across the Hampton University campus and various localities, including remote monitoring and rehabilitation within private properties.
- **Boat Harbor Inflow Reduction Program, Phase 1** | *HRSD, Hampton and Newport News, VA* | As Program Manager, Craig led engineering efforts to address wet weather and saltwater inflow sources in the Boat Harbor area. His leadership encompassed data analysis, modeling and the development of on-call contracts for sewer rehabilitation, showcasing his capability to manage complex inflow reduction projects efficiently.
- **Green Run IFM and Dam Neck IFM Condition Assessment Support** | *HRSD, Hampton Roads, VA* | Craig was responsible for managing work orders for the exposure, access and restoration of 13 condition assessment sites, including conducting specialty inspections and testing. His focus on public outreach ensured smooth operations throughout the project’s duration.



ANTHONY CARLISLE, PE

DATA REVIEW, FIELD SSES PLANNING AND PRIORITIZATION

Anthony has worked on several projects related to CMOM assistance, collection systems evaluation and rehabilitation and the design of pumping stations. He has played a key role in the development of hydraulic and water quality process models for collection systems and has become well-versed in the design of collection system improvements.

- » **FIRM** | Hazen
- » **YEARS OF EXPERIENCE** | 14
- » **EDUCATION** | BS, Civil Engineering
- » **LICENSE/REGISTRATION** | Professional Engineer (OH)
- **Collection System Capacity Assessment and Capacity Assurance** | *Jefferson County, AL* | Anthony served as Flow Monitoring Lead, responsible for development and calibration of hydraulic models for several large dynamic sewer basins.
- **Collection System Modeling and Capacity Assessment** | *Sarasota, FL* | Anthony served as Analysis Lead and Modeler for Capacity Assurance and development and calibration of the dynamic and predictive hydraulic models for priority areas using flow monitoring data, pump run time data, pressure data and SmartCover level data as well as capacity assessment of all assets in the model using various design storms and will develop a target level of service for the system.
- **Collection System Master Plan** | *Pinellas County Utilities, FL* | Anthony served as Flow Monitoring Lead coordinating with the flow survey provider to install, QC and develop a flow survey database for model calibration and evaluation. Flow survey data was used to characterize dry and wet weather flow parameters unique to each metershed, perform and I/I analyses and provide recommendations.
- **Capacity, Management, Operation and Maintenance (CMOM) Program Assistance** | *Miamisburg, OH* | Anthony served as Engineer for the review, documentation and evaluation of practices and procedures related to CMOM activities. Project activities include survey coordination and the development of the Collection System GIS Database, standard construction specifications and details, sewer assessment and cleaning programs, an asset management software tool, codified ordinances and regulations, standard operating procedures and scheduling for city-wide CCTV, cleaning and preventative maintenance.





BRAD SWEENEY, PE

DATA REVIEW, FIELD SSES PLANNING AND PRIORITIZATION/WORK PACKAGE DESIGN

Brad has broad experience with sanitary sewer collection systems and force mains, utility condition assessment and asset management. His experience with HRSD includes both data collection and management of SSES contracts, sewer rehabilitation and replacement designs and contract administration.

- » **FIRM** | Hazen
- » **YEARS OF EXPERIENCE** | 9
- » **EDUCATION** | MS, Environmental Engineering; BS, Civil Engineering
- » **LICENSE/REGISTRATION** | Professional Engineer (VA, NC, GA)
- **Boat Harbor Inflow Reduction Program, Phase II** | *HRSD, Hampton and Newport News, VA* | Brad served as Task Manager Lead on construction method evaluation and sewer rehabilitation procurement tasks where he coordinated with HRSD stakeholders and key localities to identify pathways for the potential development of sewer rehabilitation contracts to support the program.
- **North Shore Gravity Sewer Improvements, Phase I** | *HRSD, Hampton, Newport News and Williamsburg, VA* | Brad served as Project Engineer/Project Manager. Duties included contracting and managing subconsultants, obtaining survey, geotechnical investigation and CCTV video, review of the CCTV video, development of the Preliminary Engineering Report, design and bid documents, coordination of construction inspection, overseeing construction administration, coordination with the client, invoicing and managing project schedule and budget.
- **Orcutt Avenue-Mercury Boulevard Gravity Sewer** | *HRSD, Hampton and Newport News, VA* | Brad served as Project Engineer in the repair, rehabilitation, or replacement of approximately 20,500 lf of sanitary sewer interceptor ranging in diameter from 15-to 30-inches and 95 manholes. Duties included drafting and design, development of the specifications and cost estimate and assisting the project manager with the preparation of design deliverables.



DUSTIN HILL, PE

DATA REVIEW, FIELD SSES PLANNING AND PRIORITIZATION/WORK PACKAGE DESIGN

For nearly 20 years, Dustin has served communities across the nation while assisting with their program delivery. Dustin specializes in data analysis, hydraulic modeling, capital planning and project delivery. He utilizes innovation to develop data-driven solutions and he partners with owners to deliver the right projects that best-serve their utility from concept through construction. Dustin has played a key role in Consent Decree programs in Jackson MS, Shreveport LA, Fort Smith AR and St Louis MO and he is excited to use his experience when serving HRSD.

- » **FIRM** | Burns & McDonnell
- » **YEARS OF EXPERIENCE** | 19
- » **EDUCATION** | MS, Water Resources; BS, Civil Engineering
- » **LICENSE/REGISTRATION** | Professional Engineer (MO)
- **Consent Decree Program Management** | *Jackson, MS* | In Jackson, MS, Dustin analyzed flows, developed models and evaluated sewer capacity, using InfoWorks ICM for over 90 pump stations to prioritize sewer projects for the consent decree.
- **Clean Water Shreveport** | *Shreveport, LA* | Dustin oversaw Shreveport’s consent decree planning, including hydraulic modeling and system evaluations, creating toolsets for compliance, sewer rehabilitation and capacity planning strategies.
- **MSD I/I Reduction Program** | *St. Louis, MO* | Dustin provides support for the MSD Private I/I Program through project management, project engineering, quality assurance review and technical advisory roles for the Lemay and Deer Creek Sanitary Sewer System Improvement. This Private I/I program includes a collection of over 50 independent projects bid through Design-Bid-Build delivery and extending across the University City, Gravois Creek, Martigney Creek, Deer Creek and Mackenzie Creek Watersheds.
- **Joplin I/I Reduction Program - Phase I** | *Joplin, MO* | Dustin modeled sewer systems to identify I/I reduction strategies, providing a 10-year plan, a hydraulic model and a project list to reduce SSOs and support future city development.
- **Model Conversion, UPdate and CRMP Project Evaluation** | *Fort Smith, AR* | Technical Support





ANDY LUKAS, PE

COST-EFFECTIVE ANALYSES, ADAPTIVE MANAGEMENT PLAN AND PRIVATE-SIDE PROGRAM

Andy has experience in wastewater and stormwater facility planning with special expertise in performing capacity studies for systems with significant wet weather flows. As BC's national I/I reduction leader, Andy was actively involved in the development of the RWWMP and will be a core member of the Cost Effective Analysis team, providing a historical Regional Wet Weather Management Plan (RWWMP) perspective and supporting Adaptive Management Plan negotiations.

- » **FIRM** | BC
- » **YEARS OF EXPERIENCE** | 33
- » **EDUCATION** | MS, Civil Engineering; BS, Civil Engineering
- » **LICENSE/REGISTRATION** | Professional Engineer (WI)
- **Flow Monitoring, SSES and I/I Reduction Programs, Regional Wet Weather Plan and Consent Order Compliance** | [HRSD, Virginia Beach, VA](#) | Andy served as Hydraulic Modeling and I/I Technical Advisor on this project, which includes performing briefing presentations to US EPA and Virginia Department of Environmental Quality staff. He also developed the methodology for determining cost-effective levels of I/I reduction within each treatment plant service area for the Regional Wet Weather Management Plan. Andy also helped select the pilot I/I reduction rehabilitation areas in Virginia Beach and Newport News, including overseeing the I/I reduction analyses performed for the pilots.
- **Heights-Hilltop Local Sanitary Sewer Evaluation Survey** | [Cleveland, OH](#) | Andy served as Project Advisor and led the effort for project field investigation prioritization and the procedures for analyzing micro monitor data in support of subsequent fieldwork. He has also contributed to the approach for developing and evaluating alternatives within the hydraulic model and strategies for addressing private property I/I.
- **Private Property Infiltration and Inflow Reduction Program Consulting Services** | [Milwaukee, WI](#) | Andy served as Project Manager, providing services have included policy development, private property inspections, lateral inspections, data analysis, flow monitoring and analysis, recommendations for repair, rehab design, public involvement and flow reduction effectiveness evaluations.



CHRIS WILSON, PE

COST-EFFECTIVE ANALYSES

Chris has 30 years of experience in program management, project management, business management, risk analysis, stormwater system modeling and design, construction management, wastewater collection/transmission system design, evaluation and rehabilitation experience. His background also includes water system modeling/master planning and treatment facility analysis. His extensive experience in the Hampton Roads area includes management of Consent Order/Consent Decree work since 2007.

- » **FIRM** | BC
- » **YEARS OF EXPERIENCE** | 30
- » **EDUCATION** | MS, Environmental Engineering; BS, Civil and Environmental Engineering
- » **LICENSE/REGISTRATION** | Professional Engineer (VA)
- **Regional Wet Weather Management Program** | [HRSD, Hampton Roads, VA](#) | Chris served as Deputy Program Manager providing overall program coordination on Regional Wet Weather Management Program for HRSD. The program involved regional coordination of 13 cities and counties and HRSD with Virginia Department of Environmental Quality (DEQ) and U.S. EPA to complete enforcement programs focused on wet weather capacity improvement and aging infrastructure replacement.
- **VIP/Portsmouth Inflow/Infiltration Reduction** | [HRSD, Hampton Roads, VA](#) | Chris served as Project Manager for the design and construction of flow monitoring, SSES and sewer rehabilitation to reduce flow to HRSD's Camden Ave Pump Station as part of the High Priority Project for the RWWMP.
- **Condition Assessment and Prompt Repair Program** | [HRSD, Hampton Roads, VA](#) | Chris served as Project Manager providing overall program coordination for HRSD's Consent Decree-required Condition Assessment Program and Prompt Repair Program. Work involved traditional and innovative condition assessment practices for gravity sewers, manholes, pump stations and force mains. Chris led development of a \$187 million Rehabilitation Action Plan.





JOHN THOMAS, PE
COST-EFFECTIVE ANALYSES

John is responsible for providing civil engineering and hydraulic modeling services for a wide range of civil and environmental engineering projects including planning and design of wastewater and water pipelines and pumping stations. He has also assisted in several modeling projects for the cities of Richmond and Lynchburg and for Chesterfield County. His experience includes GIS, geospatial data collection and database management.

- » **FIRM** | WRA
- » **YEARS OF EXPERIENCE** | 18
- » **EDUCATION** | BS, Civil Engineering
- » **LICENSE/REGISTRATION** | Professional Engineer (VA)
- **Center Avenue I/I Remediation Phase II** | *HRSD, Newport News, VA* | John served as Project Engineer responsible for development of the Preliminary Engineering Report and design plans for the remediation and replacement of 8,700 LF of 60-year-old 18-inch – 24-inch gravity sewer pipe and associated manholes.
- **Locality System Monitoring & Condition Assessment Design-Bid-Build Pilot Project** | *HRSD, Newport News, VA* | John served as Project Engineer responsible for design of 13,000 LF of gravity sewer, associated manholes and homeowner lateral rehabilitation with CIPP. This project required bypass and temporary piping to facilitate maintenance of existing flows.
- **Small Communities Collection System Rehabilitation Project** | *HRSD, West Point and Urbanna, VA* | John served as Senior Project Engineer for evaluation of 16 locations that were identified and prioritized as “prompt repairs”. The project identified multiple defects in the sanitary sewer collection system that ranged from severe I/I to structural failure of existing infrastructure. CCTV and maintenance records were reviewed, and technical memoranda (TM’s) were prepared to summarize the extent of required repairs and estimated costs for each location. After reviewing the TM’s with HRSD’s North Shore Engineering Department Project Manager and Middle Peninsula Engineering and Operations staff, the decision was made to divide the repairs into three phases for construction, based on available CIP funding and scheduling requirements.



RICHARD STAHR, PE
ADAPTIVE MANAGEMENT PLAN

Richard’s 40 years of experience includes providing leadership and programmatic support on large CIP programs, including having served as Program Manager for HRSD’s \$1.8 billion regional wet weather management program that included regulatory negotiations with EPA Region 3 and VDEQ. Richard was instrumental in the negotiations with USEPA during the RWWMP development and consent decree negotiations. His proven history with HRSD and other consent decree negotiations across the country will support any future Adaptive Management Plan negotiations as required.

- » **FIRM** | BC
- » **YEARS OF EXPERIENCE** | 40
- » **EDUCATION** | MS, Sanitary Engineering; BS, Civil Engineering
- » **LICENSE/REGISTRATION** | Professional Engineer (VA)
- **Regional Wet Weather Management Program** | *HRSD, Virginia Beach, VA* | Richard served as Program Manager for \$1.8B regional wet weather management program that includes regulatory negotiations with EPA Region 3 and VDEQ. Forty-seven separate Work Orders have been completed on time and on budget and 10 major contracts were managed.
- **Condition Assessment and Prompt Repair Program** | *HRSD, Hampton Roads, VA* | Richard served as Project Officer, providing technical and programmatic oversight for HRSD’s Consent Decree-required Condition Assessment Program and Prompt Repair Program. He led the development of a \$187 million Rehabilitation Action Plan. In addition, he was the contract manager for more than \$25 million in prompt repairs projects discovered during the condition assessment
- **Atlantic Cambi Project** | *HRSD, Virginia Beach, VA* | Richard served as Project Officer managing internal BC design resources and performing quality review of key deliverables. This major project was delivered using a CMAR approach.
- **Wet Weather Program Management** | *Greenville, SC* | Richard has directed the development and execution of the technical approach that led to the \$533 million capital program including more than 70 discrete projects.





MILES AGENCY | DELCENO MILES
COMMUNICATIONS &
LOCALITY ENGAGEMENT

Delceno has over 30 years of experience in public relations and project communications involving complex community coordination. She is active in the Hampton Roads community and has assisted with outreach and coordination for many public agency projects throughout the region. Delceno and her team of communications specialists will augment HRSD’s internal staff and will support our team with communications support and public outreach to localities and impacted homeowners.

- » **FIRM** | Miles Agency
- » **YEARS OF EXPERIENCE** | 30
- » **EDUCATION** | MA, Strategic Communication; BA, Psychology
- » **LICENSE/REGISTRATION** | N/A
- **Chesapeake Joint Land Use Study (JLUS) Hampton Roads Planning District Commission** | *Chesapeake, VA* | Delceno led the public engagement strategy that includes crafting a written and robust engagement plan, public meetings (virtual and in person), stakeholder interviews, HRPDC social media platforms and project webpage, Technical Committee and Policy Committee, military CPLOs, etc.
- **Hampton Roads Bridge-Tunnel Expansion** | *Norfolk and Hampton, VA* | Delceno is leading the communications task team with VDOT on this \$3.8 billion-dollar historic project. Delceno wrote the communications plan that includes robust engagement strategies and media planning, designed the project logo that is being widely used to identify the project, conducts community presentations to diverse organizations and is responsible for developing the Constant Contact project newsletter and updating content on the project website and other communication sources.
- **Stormwater Master Plan** | *Newport News, VA* | Delceno is leading the community engagement strategy that includes public meetings, stakeholder interviews, collateral development, environmental justice plan and focus groups.
- **City Park Master Plan** | *Portsmouth, VA* | Delceno led the public engagement strategy that included public meetings, stakeholder group briefings and community events to encourage broad public input.



JESSICA JAMES
COMMUNICATIONS &
LOCALITY ENGAGEMENT

Jessica develops strategies that help clients communicate their vision and secure support for their programs and projects. Recognizing that every client and project has different needs, Jessica and her team work closely with the project team and client to create a communications strategy to build trust with stakeholders, minimize risk for the client and to tell the project’s story. And when it comes to communicating complex or technical information to elected officials or the public, Jessica and her team have numerous tactics they can use including the development of infographics, news stories, press releases, presentations, fact sheets and more!

- » **FIRM** | Burns & McDonnell
- » **YEARS OF EXPERIENCE** | 17
- » **EDUCATION** | MS, Journalism & Marketing Communication; BS, Organizational Leadership
- » **LICENSE/REGISTRATION** | N/A
- **Republic WWTP Improvements Design-Build Program** | *Republic, MO* | Jessica leads communications and public information to support the City’s water infrastructure investments. Her work includes the development of key messages, a cohesive brand style-guide, fact sheets, presentations and the creation of supporting graphics to visually represent complicated water-rate impacts.
- **Water Delivery Progressive Design-Build** | *Homewood, IL* | Jessica provided support for all public information efforts as the Village prepared to transition to a new water supplier and treatment system. Her work included the creation of a project logo, project updates in the Village’s quarterly magazine, water bill stuffers, creation and distribution of a project summary brochure, provided media training for the client, drafted social posts and coordinated the ribbon cutting event.
- **NWWF Progressive Design-Build** | *Wichita, KS* | Jessica leads all strategic communications efforts on this \$500 million project, including writing press releases; managing agency partners; planning and generating social media and website content; managing the content calendar; creating project team presentations; planning, hosting and executing special project-related events; keeping the City informed regularly.





BRIAN HILLER
DATA MANAGEMENT

Brian has nearly two decades of experience in empowering water and wastewater utilities through the strategic utilization of GIS and advanced asset management systems. His extensive background includes spearheading multiple successful implementations of Cityworks AMS, Cityworks PLL and Cityworks Online, along with providing valuable insights into enterprise GIS deployments, particularly focusing on the implementation of the ArcGIS Utility Network for wastewater utilities. Brian’s proficiency is further underscored by his certification as an Esri ArcGIS Expert and his recognition as a Prosci Certified Change Manager. For your program, Brian will lead data management, providing an integral interface between data collected and utilized by our team and your program oversight and long-term data management needs.

- » **FIRM** | Burns & McDonnell
- » **YEARS OF EXPERIENCE** | 18
- » **EDUCATION** | MS, Business Administration; BS, Geography
- » **LICENSE/REGISTRATION** | ESRI Certification
- **KC Smart Sewer Program** | *Kansas City, MO* | Brian manages GIS services for Kansas City’s \$4.5B Smart Sewer Program focused on reducing overflows from combined sewer systems and preventing overflows from separate sewer systems. His role on the program including providing GIS and asset management services for the organization’s current wastewater master plan, private I/I program, and GIS and GPS support for the ongoing sanitary sewer system evaluation and repair projects.
- **Clean Water Shreveport** | *Shreveport, LA* | Brian leads a team of GIS professionals that setup, manage and maintain GIS and asset management applications to support the program. This support includes management of citizen engagement applications, mobile workforce solutions, program dashboards and various web-based mapping applications. Tools used on the program include Zoho CRM, ArcGIS Online, Cityworks, Survey123 for ArcGIS, PowerBi and ArcGIS Dashboards.
- **Jackson Consent Decree Program** | *Jackson, MS* | Brian worked with the City to help the organization utilize technology in support of consent decree program management activities. He helped deploy ArcGIS mobile applications to streamline the field survey/inspection processes and has helped configure the City’s Cityworks Asset Management System (AMS).



CLIFF CATE, PE
PRIVATE SIDE PROGRAM

For the past 29 years, Cliff has been instrumental in leading SSES field work, including developing standard procedures and processes for wastewater programs, master plans, hydraulic studies and rehabilitation projects for Consent Decree programs in Omaha, NE, Kansas City, Springfield and Saint Louis, MO and Memphis, TN. Cliff is a member of WEF’s National Collection System Committee and is currently serving as the Technical Program Lead for the Private Property Virtual Library (PPVL) subcommittee. His experience in developing Private-Side I/I programs in Johnson County, KS, Kansas City, Saint Louis and Springfield, MO, which include some of the first private-side programs in the nation with significant pay-back results, will be key in helping develop your private-side program.

- » **FIRM** | Burns & McDonnell
- » **YEARS OF EXPERIENCE** | 29
- » **EDUCATION** | MS, Engineering Management; BS, Civil Engineering
- » **LICENSE/REGISTRATION** | Professional Engineer (CO, MO, NE)
- **KC Smart Sewer Keep Out the Rain Private I/I Removal Program** | *Kansas City, MO* | Cliff managed the program’s development, including protocols for private side I/I assessment and removal. He helped craft the governing ordinance, evaluated over 50,000 properties and oversaw the disconnection of 4,000+ I/I sources.
- **MSD I/I Reduction Program** | *St. Louis, MO* | As Technical Advisor, Cliff guided the development of field evaluation processes for private side inflow removal and contributed to the safety manual for field crews.
- **Joplin I/I Reduction Program - Phase I** | *Joplin, MO* | Cliff directed a multi-year effort to eliminate unpermitted discharges, improving the wastewater system. This work formed the basis for an I/I Reduction and Capital Program.
- **Republic WWTP Improvements Design-Build Program** | *Republic, MO* | Cliff serves as Project Director for this \$136M multi-phase, progressive design-build project focused on improving Republic’s wastewater collection system and treatment capability.





ALLI WHITE, PE
PRIVATE I/I

Alli has spent her career serving wastewater utilities across the nation. As part of Burns & McDonnell's role as LeMay Basin Manager for Saint Louis MSD's Project Clear, an \$6B Consent Decree program targeted at reducing sewer overflows, Alli was responsible for the execution of a large private-side I/I reduction program. As part of her work on the program, Alli developed private I/I reduction solutions for the disconnection of private drains from the sewer system for thousands of homes throughout the basin. She was also responsible for the interface between MSD and the public, and she played a significant role in public outreach. Further, where I/I reduction efforts weren't cost-effective, Alli partnered with MSD to design relief sewers to increase the collection system level of service and eliminate constricted sanitary sewer overflows. For your program, Alli will utilize her experience in program management, regulatory coordination and private I/I reduction to develop cost effective private-side solutions for HRSD.

- » **FIRM** | Burns & McDonnell
- » **YEARS OF EXPERIENCE** | 11
- » **EDUCATION** | BS, Civil Engineering
- » **LICENSE/REGISTRATION** | Professional Engineer (OH, IL, MO)
- **MSD I/I Reduction Program** | *Metropolitan St. Louis Sewer District* | Project Manager
- **Republic WWTP Improvements Design-Build Program** | *Republic, MO* | Program Manager
- **West Plains MO SSES & Capital Program Development** | *West Plains, MO* | Project Director
- **Shrewsbury Sanitary Relief Sewer and I/I Reduction (Weil Ave and I-44)** | *Chesterfield, MO* | Project Manager and Technical Design Lead
- **Clean Water Shreveport** | *Shreveport, Louisiana* | Technical Design Lead



STEVE JONSON
FIELD SSES ASSESSMENT

Steve's role as Field Services Manager for Burns & McDonnell's national water practice makes him responsible for equipment procurement, safety, instruction and oversight of all field activities. **With extensive experience in all phases of collection system diagnostic inspections and testing both at Burns & McDonnell and previously Jacobs, Steve utilizes his background in flow monitoring, manhole inspections, smoke testing, cleaning and CCTV inspection to guide SSES contractors and field crews in data gathering for large wastewater consent programs. Steve will serve that exact role on your program, focusing on optimization of data gathering with a focus on quality control of all sanitary sewer evaluation studies (SSES) fieldwork.**

- » **FIRM** | Burns & McDonnell
- » **YEARS OF EXPERIENCE** | 23
- » **EDUCATION** | BS, Civil Engineering
- » **LICENSE/REGISTRATION** | Professional Engineer (IL)
- **Republic WWTP Improvements Design-Build Program** | *Republic, MO* | Steve served as the Field Service Technical lead on this project. The scope of field services includes: collection of 2,500+ manhole locations and a 60-day flow monitoring program, development and calibration of a hydraulic model and development of a comprehensive wastewater master plan.
- **KC Water I/I Program** | *Kansas City, MO* | Steve led field services for inspection and testing for the \$4.5 billion Consent Decree program. As Program Manager at Burns & McDonnell, his key goal was to prepare City staff, consultants and contractors for the massive workload required to implement this capital program, ensuring compliance with EPA's data management and schedule requirements. Besides overseeing the SSES data collection, Steve directed training and field service activities, focusing on building capacity within the City's minority-owned business community as an added benefit.
- **Clean Water Shreveport** | *Shreveport, LA* | Steve supported the project team in addressing sanitary sewer overflows (SSOs) using a data-driven approach to evaluate the City's historical SSO records. Based on this, targeted strategies for SSO mitigation and reduction were implemented, including focused capital projects, sewer cleaning and review of the City's Collection System CMOM programs.





JEFF GRIFFITHS, PE, ENV SP
FIELD SSES ASSESSMENT

Mr. Griffiths, a certified Envision Sustainability Professional (ENV SP), has spent more than two decades working with clients to leverage innovative and emerging technologies to enhance the pipeline assessment process. He works closely with clients to add value by delivering cost-effective engineering solutions to improve overall system performance and service life. His strong knowledge base includes deploying multi-sensor inspection (MSI) technologies across myriad environments, always implementing best practices to ensure results that achieve client goals.

- » **YEARS OF EXPERIENCE** | 27
- » **EDUCATION** | MBA, Marketing & Finance; BS, Mechanical Engineering
- » **LICENSE/REGISTRATION** | Professional Engineer, Envision Sustainability Professional
- **Large Diameter Pipe Assessment** | *Baltimore, MD* | Jeffrey managed multiple subcontractors (MBE/WBS/SBE, etc.), to provide services including condition assessment planning, condition inspection technology selection, inspection and engineering analysis and risk assessments to develop recommendations for prioritized rehabilitation measures.
- ***Tri-Basin Condition Assessment** | *WSSC Water, MD* | Jeffrey acted as senior project manager for this assessment. A condition inspection of sewer mains (90,000 LF) as part of a sewer study to address increasing I/I, future flows and capacity needs was performed as well as data collection and categorization per NASSCO PACP inspection standards.
- ***Consent Decree Condition Assessment** | *Newport News, VA* | Jeffrey served as part of the City’s comprehensive SSES, performing CCTV inspections and sanitary sewer cleaning on over 100,000 LF.
- ***Flow Model Calibration** | *Winston-Salem, NC* | Jeffrey supported the team as senior project manager in an effort to update flow projections and evaluate capacity needs, performed temporary flow monitoring in over 40 locations followed by the installation of 15 permanent meters and 10 rain gauges. Data was collected, reviewed and reported on a weekly basis. The permanent meters were installed in problem areas with increasing I/I and concerns over pump station capacity.



JAMIE BUTLER
PROJECT SAFETY

Jamie Butler serves Burns & McDonnell as Director of Safety and Health with over 30 years of experience in the construction industry. His strong organizational and leadership skills contribute to decreased incident rates while attaining increased productivity as well as reduced costs.

Burns & McDonnell ranks in the top 5% of U.S. contractors in Days Away, Restrictions and Transfers (DART), Total Recordable Incident Rate (TRIR) and Experience Modification Rate (EMR), according to data from the Bureau of Labor Statistics. Our safety philosophy revolves around building a culture of safety for our staff, partners, sub-contractors and craft.

Because of the number, type and distributed geography of projects within your I/I Reduction Program we have asked Jamie to oversee development of our project specific safety program by our on-site safety personnel.

- » **FIRM** | Burns & McDonnell
- » **YEARS OF EXPERIENCE** | 33
- » **EDUCATION** | AS, Occupational Safety & Health
- » **LICENSE/REGISTRATION** | Construction Healthy & Safety Technologist
- **Corporate Director of Safety and Health** | *Burns & McDonnell* | *Kansas City, MO* | In his role as Director of Safety and Health, Jamie is responsible for hundreds of safety personnel in the implementation of safety programs across more than \$6B annually in active capital projects and programs.
- **NWWF Progressive Design-Build** | *Wichita, KS* | Safety Program Development
- **Component Finish Facility** | *Confidential Aerospace Manufacturer* | Safety Manager
- **Low Sulfur Gasoline Project** | *Ponca City, OK* | Safety Supervisor
- **Deepcut Point Project** | *Ponca City, OK* | Safety Supervisor





DERON HUCK, PE
DESIGN DEVELOPMENT

Deron has over 30 years of proven success in delivering sustainable and innovative solutions to complex water and wastewater infrastructure projects for municipal clients. Deron has detailed technical expertise with wastewater collection systems, capital improvement program development, wet-weather and infiltration/inflow (I/I) performance analyses, hydraulic modeling, master planning, design and CMOM plans. For your program, Deron will serve as a Design Development Manager focused on defining and packaging design alternatives for the program.

- » **FIRM** | Burns & McDonnell
- » **YEARS OF EXPERIENCE** | 29
- » **EDUCATION** | BS, Civil Engineering
- » **LICENSE/REGISTRATION** | Professional Engineer (IL, KS, MO, NE, PR, VA)
- **KC Smart Sewer Program** | *Kansas City, MO* | Deron helped initiate the Smart Sewer Program in 2010 and has served several positions on the program, including Project Delivery Lead. His work included oversight of Design Managers, Construction Managers, Project Managers and Field Operations Managers in identifying potential risks related to delivery of sanitary and combined sewer design and construction projects and identify viable risk mitigation strategies. Deron also served as a Senior Technical Advisor for projects related to I/I removal, sewer rehabilitation, green infrastructure, sewer separation and relief sewers.
- **Keep Out the Rain Program** | *Kansas City, MO* | Deron served as Senior Technical Advisor for KOTR and was responsible for reviewing and assessing technical aspects and design solutions for the City’s voluntary private-side program.
- **Omaha CSO** | *Omaha, NE* | Deron served as Project Manager and was responsible for preliminary design efforts and plan development for the Gilmore Sewer Enhancement Project focused on reducing wet weather overflows from the City’s combined and separate sewer systems. The project involved neighborhood sewer separation of storm and sanitary sewers and computational fluid dynamic model of a complex bend upstream of an existing sewer tunnel.



RANDY PATCHETT, PE
DESIGN DEVELOPMENT

Randy is a senior project manager and civil engineer with extensive experience in I/I reduction and sanitary sewer rehabilitation projects dating back to the start of his career as one of RJN’s first employees. Over the course of his career, Randy has served utilities throughout the Midwest, including having served as design lead for the Northwest Suburban Municipal Joint Action Water Agency in suburban Chicago and serving Program Delivery Manager for Shreveport’s \$1.3B Clean Water Shreveport Program.

- » **FIRM** | Burns & McDonnell
- » **YEARS OF EXPERIENCE** | 39
- » **EDUCATION** | BS, Civil Engineering
- » **LICENSE/REGISTRATION** | Professional Engineer (IL)
- **Shreveport Sanitary Sewer Overflow Consent Decree Program** | *Shreveport, LA* | Randy served as Program Delivery Manager for design and construction-related services for compliance with USEPA Consent Decree, sanitary sewer overflow mitigation and sanitary sewer collection system projects.
- **Mount Prospect Flow Monitoring Program** | *Mount Prospect, IL* | Randy served as Project Manager on a study of the sanitary sewer system for the Village of Mount Prospect, Illinois, that is part of an ongoing maintenance program. Responsibilities included analysis of flow data collected over a period of one month and preparation of a report outlining project findings and recommendations.
- **Wet Weather Corrective Action Program** | *Boston, MA* | Randy served as Project Manager for a sewer system evaluation study (SSSES), design and construction of collection system improvements for more than 200,000 LF of sewer laterals and interceptors ranging from 6- to 96-inches in diameter.
- **Basin D I/I Investigation and Flow Monitoring Study** | *Woodridge, IL* | Randy served as Project Manager in the review of 15,000 LF of televised sewer, identification and quantification of I/I sources and structural defects, recommendations for rehabilitation of selected I/I defects and structural defects and flow monitoring of four drainage basins.





CURT KIMMEL, PE
DESIGN DEVELOPMENT

Curt has worked for nearly 20 years on the St Louis MSD Consent Decree program preparation, design and delivery. Curt has been responsible for program management, design, technical leadership and construction support on the MSD program. Further, Curt has led and supported collaborative delivery projects for collection system projects, lift station upgrades, WWTP Facilities and peak weather response systems. Curt will use his extensive program, collaborative delivery and design experience to support HRSD in design development through the life of your program.

- » **FIRM** | Burns & McDonnell
- » **YEARS OF EXPERIENCE** | 19
- » **EDUCATION** | BS, Civil Engineering
- » **LICENSE/REGISTRATION** | Professional Engineer (MO), Envision SP
- **Republic WWTP Improvements Design-Build Program** | *Republic, MO* | Curt is developing a system-wide asset inventory, condition assessment, a 60-day flow monitoring program and constructing a hydraulic model for the existing sewer system.
- **Gravois Trunk Sanitary Storage Facility** | *St. Louis, MO* | Curt served as the Project Manager for this project that included a fast-paced re-evaluation of MSD’s original SSO Control Master Plan to eliminate two Constructed SSO Outfalls, improve access to the existing sanitary trunk sewer and protect the existing sanitary trunk sewer from the natural geomorphological process of Gravois Creek.
- **Lemay and Deer Creek Sanitary System Improvements** | *St. Louis, MO* | Curt managed and technically designed numerous sanitary sewer projects in the Lemay and Deer Creek areas, focusing on I/I reduction and stormwater management over a 23-year period.
- **Metropolitan St. Louis Sewer District Lemay Watershed Consent Decree Program Management** | *Chesterfield, MO* | Curt contributed to stormwater planning, performed private property inspections and led public meetings, assessing and designing stormwater sewers to disconnect illicit flows.
- **Lindley Drive Sanitary Relief** | *Chesterfield, MO* | As Project Manager, Curt designed sewer upgrades to control basement backups, alleviate surcharging, eliminate SSO outfalls and abandon a wet-weather pump station.



WILL GIBSON, PE, ASSOC. DBIA
DESIGN DEVELOPMENT

Will is an experienced, hands-on Program Manager with a strong background in local conveyance projects. He has 20 years’ experience in the water industry with a substantial background in pipeline projects including small- to large-diameter gravity and pressure main design, various trenchless methodologies and technologies, direct and indirect condition assessment studies and construction management.

- » **FIRM** | Hazen
- » **YEARS OF EXPERIENCE** | 20
- » **EDUCATION** | BS, Engineering Technology
- » **LICENSE/REGISTRATION** | Professional Engineer (VA); Associate Design-Build Professional
- **Boat Harbor Inflow Reduction Program, Phase 1** | *HRSD, Hampton and Newport News, VA* | Will served as Program Manager. Engineering services to reduce wet weather and saltwater inflow sources in the Boat Harbor service area, including data analysis, modeling, SSES prioritization, micro-monitoring/SSES activities, sewer rehabilitation design, construction services, inflow reduction analysis and verification, creation of program SOPs and development of sewer rehabilitation on-call contracts for HRSD.
- **Force Main Evaluation Program, Phases I and II** | *Virginia Beach, VA* | Will served as Program Manager for a 10-year, \$2 million in services, condition assessment program, including 19 work orders, 40+ pipe samples analyzed, 18,000+ soil tests conducted, 146,000 LF of soil survey, 31 corrosion analyses, 190-miles of FM assessment, deployment of direct assessment technologies, soils corrosivity maps and prioritization of FM replacement CIPs through use of the Risk Model.
- **Western Trunk Force Main Replacement** | *HRSD, Virginia Beach, VA* | Will served as Project Manager included abandonment of 5,900 lf of 20” asbestos cement (AC) force main, 700 lf of new 16” force main, four City of Virginia Beach force main interconnections, two new 48” valve complexes, dual line stops and bypass ports and 36” bypass piping on existing 48” PCCP FM.





JEFF ORZELL
DESIGN DEVELOPMENT

Jeff Orzell joins Brown and Caldwell as a Project Manager. Based in the Virginia Beach office, Jeff will be working closely on local projects throughout the area. Prior to joining BC, Jeff served as a Staff Engineer for Kennedy Jenks, Project Engineer at Kirlin Builders, LLC, a Project Engineer at Branscome, Inc., a Site Development Coordinator at MCPS and Field Engineer for Century Concrete, INC. Jeff graduated from Virginia Military Institute with a BS in Civil Engineering.

- » **FIRM** | BC
- » **YEARS OF EXPERIENCE** | 7
- » **EDUCATION** | BS, Civil Engineering
- » **LICENSE/REGISTRATION** | Engineer in Training
- **WO10 Meter Vault Replacement Phase 1** | *City of Virginia Beach, VA* | Engineering services during construction support a meter vault replacement project.
- **WO11 Meter Vault Replacement Phase 2** | *City of Virginia Beach, VA* | Bidding and construction phase engineering services support a meter vault replacement project.
- **Chesapeake DPU Fentress Water Main** | *City of Chesapeake, VA* | Extension of the City water main due to possible groundwater contamination from nearby Fentress Airfield, including pre-procurement of material and an updated cost estimate.
- **Wilroy PRS and Tank** | *HRSD, City of Chesapeake, VA* | Construction of a new Pressure Reducing Station (PRS) with ~80 ft of assistance and approximately 12 MGD along Wilroy Road in Suffolk, VA, including a new 2.9 MG wastewater storage tank and site plan application.
- **PS 441 Bidding and CA Services** | *City of Virginia Beach, VA* | Task included 100% Design Revision and finalizing bid documents.



DAN PORTER, PE
DESIGN DEVELOPMENT

As part of BC's, design development team for your program, Dan will draw upon his experience with SSES projects, CMOM programs, planning/ program development for gravity sewer and your own force main program to develop design packages focused on cost-effective repairs within the sanitary sewer systems of your customer communities.

- » **FIRM** | BC
- » **YEARS OF EXPERIENCE** | 10
- » **EDUCATION** | BS, Civil Engineering
- » **LICENSE/REGISTRATION** | Professional Engineer (VA)
- **Pipeline Prompt Repair Program** | *HRSD, Hampton Roads, VA* | Dan serves as Project Engineer for HRSD's Condition Assessment Program, providing design, analysis and permitting support for numerous repairs to sewer interceptor system infrastructure. Projects include pipeline open trench replacements, cured-in-place pipe liners, manhole rehabilitation, wet well rehabilitation and a force main repair on the banks of the Elizabeth River.
- **Force Main Condition Assessment Program Phase II** | *HRSD, Hampton Roads, VA* | As part of HRSD's second phase force main condition assessment program. Dan developed risk criteria from client workshops which included likelihood and consequence of failure based on experience from the first-generation program as well as the use of established criticality criteria.
- **I/I Identification and Abatement Program** | *Mentor, OH* | Dan served as Project Manager for a multi-year, multi-phase effort to develop and calibrate a system hydraulic and hydrologic model, assess system level of service and identify inflow and infiltration elimination and abatement projects.





LUKAS TERRY, PE
DESIGN DEVELOPMENT

Lukas has played an integral role in the design support provided for 16 task orders under the HRSD Interceptor System Improvements contract as well as for stand-alone utilities rehabilitation projects such as Hampton Trunk A & B IFM Replacement, Center Avenue I/I, Claremont IFM Replacement and Jefferson Avenue IFM Replacement Phase I (1A and 1B). He has experience in a range of civil engineering projects including planning and design of water and wastewater pipelines, sewer condition assessments and site inspections during construction. AutoCAD and Civil3D are among his skills.

- » **FIRM** | WRA
 - » **YEARS OF EXPERIENCE** | 12
 - » **EDUCATION** | BS, Civil Engineering; Minor, Mechanical Engineering Technology.
 - » **LICENSE/REGISTRATION** | Professional Engineer (VA)
- **Locality System Monitoring & Condition Assessment Design/Bid/Build Pilot Project, Newport News** | *HRSD, Newport News, VA* | Lukas managed design and construction for PS 008’s rehabilitation, leveraging City SSES and CCTV reports to guide the project, marking it as an HRSD pilot for Design-Bid-Build evaluation.
 - **Center Avenue I/I, Newport News** | *HRSD, Newport News, VA* | Lukas was instrumental in remediating and replacing 8,700 LF of aged gravity sewer pipe and manholes, overseeing the construction plan development and process management.
 - **Small Communities Collection System Rehabilitation Project** | *West Point and Urbanna, VA* | As Project Engineer, Lukas evaluated and prioritized repairs across 16 locations, addressing severe I/I and structural failures and coordinated phased construction based on funding and scheduling.
 - **Airport Comprehensive Sewer Plan** | *Newport News, VA* | As senior project engineer, Lukas led a condition assessment of the airport’s sewer system, recommending rehabilitation strategies and managing construction administration, ensuring coordination for site access.



JASON WIESZEK, PE
TRAFFIC CONTROL

Mr. Wieszek has 22 years of experience in the design and management of transportation infrastructure projects. Clients over those years have included those at the municipal, state and federal level. At the municipal level, his responsibilities have included management and design of projects with a variety of funding sources, involving the full range of project development from the pre-scoping phase through the delivery of final bid documents. Services for these projects have included, but are not limited to road design, drainage, SWM, environmental, MOT, public involvement, signing, utilities, pavement marking, traffic, signals, ROW, landscaping, lighting, survey and geotechnical.

- » **FIRM** | WRA
 - » **YEARS OF EXPERIENCE** | 22
 - » **EDUCATION** | BS, Civil Engineering
 - » **LICENSE/REGISTRATION** | Professional Engineer (VA)
- **HRSD Hampton Trunk A & B Replacement** | *HRSD, Newport News, VA* | Jason developed traffic plans for ~1.5 miles of new 36” Sewer Force Main installation, coordinating traffic controls to ensure public and worker safety.
 - **Gravity Sewer & Water Distribution System VDOT I-64 Hampton Roads Express Lane Network Study** | *Virginia Department of Transportation, Chesapeake, Virginia* | Jason contributed to conceptual design and cost estimates for I-64/I-464/Dominion Boulevard interchange modifications, including traffic control pricing during construction.
 - **VDOT VA Route 337 (Nansemond Parkway)** | *Virginia Department of Transportation, Suffolk and Chesapeake, VA* | Jason helped design and prepare plans for upgrading ~5 miles of road, focusing on construction sequences, traffic maintenance and utility impact resolutions.
 - **Wastewater Pump Station 145, Force Main, Gravity Sewer Replacement and Water Distribution System: Project Engineer** | *Norfolk, VA* | Jason developed traffic plans for utility replacements, planning and designing a realigned sanitary system, a new pump station and water system improvements in Freemason area.





KEVIN WADDELL, PE
COST ESTIMATING

Kevin brings nearly 30 years of experience working as a project manager, lead estimator and preconstruction manager in the water/wastewater industry. In his role as Preconstruction Director for Burns & McDonnell’s water practice, Kevin and his team are responsible for development of construction cost estimates, subcontractor and supplier pricing and availability assessments and coordination between design and estimating teams for more accurate final project construction costs on all of our design-build projects. Having successfully estimated over \$39 billion in design-build projects, most at very early stages of design, Kevin and his team are an integral part of our design-build capability. For your program, Kevin will work closely with our design and construction teams to develop early conceptual estimates that can rely upon to make key strategic decisions as the program develops.

- » **FIRM** | Burns & McDonnell
- » **YEARS OF EXPERIENCE** | 29
- » **EDUCATION** | BS, Civil Engineering
- » **LICENSE/REGISTRATION** | Designated Design-Build Professional; Professional Engineer (KS)
- **Republic Wastewater Treatment Design-Build Program** | *Republic, MO* | Kevin served as Preconstruction Manager and Lead Estimator for this \$136M capital program.
- **Jefferson City Biosolids Improvements Design-Build** | *Jefferson City, MO* | Kevin and the preconstruction team were able to identify very early that the City could not afford what it wanted at a cost of over \$14 million. The team was able to reset the City’s budget expectations, paving the way for the design-build team to ultimately provide a project at \$12.6 million that the City needed and was within the original budget of \$12.8 million.
- **Marshall WWTP Design-Build** | *Marshall, MO* | Kevin developed the final design-build cost estimate and participated in the presentation of the final project price to the Client. The final design-build cost proposal to the client was under the budget established 9 months prior.
- **Northwest Water Facility** | *Wichita, KS* | Kevin led Burns & McDonnell’s estimators in the successful JV delivery of this \$500M project.



KELLEY REEVES
COST ESTIMATING

As part of Burns & McDonnell’s estimating team, Kelley works with clients across the county to plan and construct water and wastewater facilities. Kelley’s responsibilities include leading the preconstruction process, reviewing designs for constructability, producing cost estimates at various design stages and construction planning. Over the course of his career, Kelley has delivered more than 32 projects on time and under budget.

- » **FIRM** | Burns & McDonnell
- » **YEARS OF EXPERIENCE** | 25
- » **EDUCATION** | BS, Technology Studies
- » **LICENSE/REGISTRATION** | N/A
- ***KCMO Blue River WWTP Biosolids Facility** | *Kansas City, MO* | Kelley served as Mechanical Pre-Construction Manager and Senior Estimator. Responsible for conceptual mechanical layouts and estimating required for the original pursuit. Led the selection and procurement of equipment, subcontractors and materials. The scope of work included the extensive renovation of an existing 120 mgd WWTP, new sludge dewatering, sludge diversion and the addition of a \$130M thermo hydrolysis process (THP).
- ***KCMO 87th Street Pump Station Rehabilitation Project** | *Kansas City, MO* | Kelley served as Project Manager. Responsible for all submittals, RFIs, permits, purchase orders, subcontracts, change orders, cost tracking, construction schedule and financial reporting. The scope of work included the renovation of an existing 65’ deep pump station. New electrical gear, eddy current drives, PLC, course screens, fine screens and pumps were installed. The project included a 60 MGD bypass of the existing station for a 10-month period.

**Prior to joining Burns & McDonnell*





GLEN SWANN
AREA PROJECT MANAGER

With a focus on large-scale infrastructure projects in the water and wastewater industries, Glen brings decades of experience to Burns & McDonnell. As a seasoned General Superintendent, he plays a pivotal role in overseeing the entirety of construction operations, verifying a comprehensive approach to safety, quality and schedule adherence. Glen’s responsibilities extend to coordinating the diverse tasks of various trade divisions, emphasizing constructability, preplanning, mobilization and efficient utilization of personnel and support equipment. He ensures the company’s projects are completed successfully through meticulous execution and a well-planned construction process.

- » **FIRM** | Burns & McDonnell
- » **YEARS OF EXPERIENCE** | 29
- » **EDUCATION** | Academic Diploma, Electrical Construction and Maintenance
- » **LICENSE/REGISTRATION** | N/A
- **Nederland Raw Water Treatment Plant** | *Nederland, TX* | Site Construction Manager
- **Phase II DB WWTP Improvements** | *Marshall, MO* | Site Manager
- **CIP #3 Lift Station 4 and Force Main Upgrades** | *Republic, Missouri* | Superintendent
- **Republic WWTP Blending (Auxiliary Treatment Improvements Design-Build)** | Superintendent
- **JCWA Horizontal Collector Well Progressive Design-Build** | *Festus, MO* | Site Superintendent
- **Siloam Springs Water Treatment Plant Upgrades Design-Build** | *Siloam Springs, AR* | Site Construction Manager



JOHN DUVENCI, ENV SP
AREA PROJECT MANAGER

Over the last decade, John has supported construction management teams by providing guidance, recommendations and direction for construction contracts. This often includes proactively facilitating the timely resolution of construction-related issues that arise, working collaboratively with design professionals and construction contractors and recommending solutions to owners in order to reduce project risks. John evaluates and manages changes to construction scope of work, including schedule and construction cost impacts, contractor claims and change orders.

- » **FIRM** | Burns & McDonnell
- » **YEARS OF EXPERIENCE** | 7
- » **EDUCATION** | MS, Environmental Engineering; BS, Civil Engineering
- » **LICENSE/REGISTRATION** | Envision SP
- **KC Water I/I Program** | *Kansas City, MO* | John served as a construction management resource for 21 separate contracts, totaling approximately \$200 million. John attended monthly progress meetings for each active construction project and helped facilitate resolutions amongst the project manager, design professional and construction contractor. As projects evolved, John updated KC Water management on each project’s risks, action items, schedule and budget. He reviewed design professionals’ comments pertaining to contractors’ baseline project schedule, monthly schedule updates, schedule of values, monthly pay applications, claims and change orders. John monitored the performance of RPR services provided by design professionals and provided constructive feedback. He also confirmed that the contractors’ work was completed in accordance with the construction contract documents.
- **Water Main Replacement, Target Green** | *Kansas City, MO* | As Resident Project Representative, John confirmed that the project’s design— including stormwater collection, underground storage units and vegetated bioretention facilities—was constructed as specified in the contract documents. When unforeseen conditions presented technical challenges, he collaborated with the design engineer, landscape architect, contractor and KC Water to provide direction on how work should proceed.





DOUG HART
AREA PROJECT MANAGER

Doug has over 32 years of experience in the role of a superintendent and construction manager, working start to finish on a variety of water and wastewater projects from beginning to closeout. In these roles, he oversaw multiple processed pay applications, change orders, submittals and supervised submission of RFIs. He has experience managing shutdowns and power outages, electrical, instrumentation and controls systems, quality control and safety. He is well versed in procurement, subcontracts, labor supervision and change order management.

- » **FIRM** | Burns & McDonnell
- » **YEARS OF EXPERIENCE** | 32
- » **EDUCATION** | N/A
- » **LICENSE/REGISTRATION** | N/A
- **Savannah UV EPC** | [Savannah, MO](#) | As Site Manager, Doug subcontractors to bring the project to a successful completion. He worked with plant staff and sub-contractors to start-up the plant and complete the project on time.
- **Morrison CO WTP Construction** | [Morrison, CO](#) | Doug oversaw all work being installed, sub-contractors, materials ordering and verified all equipment and materials were on-site in order to keep project moving forward.
- **Siloam Springs Water Treatment Plant Upgrades Design-Build** | [Siloam Springs, AR](#) | As Site Manager, Doug managed subcontractors, coordinated with plant staff, and oversaw installations. He scheduled plant shutdowns, ensured safety and quality, and led the start-up and commissioning, achieving on-time, under-budget project completion.
- ***Thomas P. Smith Water Reclamation Facility Upgrade** | [Tallahassee, FL](#) | Senior Electrical Superintendent
- ***Piedmont Regional WWTP** | [Piedmont, SC](#) | General Superintendent
- ***Capital Improvements Program** | [Palm Beach County, FL](#) | Construction Manager
- ***Southwest Well Field Expansion** | [Cape Coral, FL](#) | Superintendent

**Prior to joining Burns & McDonnell*



TIM PITMAN, PE
AREA PROJECT MANAGER

Tim is 29 years of experience as an engineer, construction manager, construction superintendent and resident project representative. With this rare blend of experience, it's no surprise that his project experience spans both traditional and collaborative project delivery and program delivery for large wastewater consent programs.

- » **FIRM** | Burns & McDonnell
- » **YEARS OF EXPERIENCE** | 29
- » **EDUCATION** | MS, Geotechnical Engineering; BS, Civil Engineering
- » **LICENSE/REGISTRATION** | Professional Engineer (AB)
- **KC Smart Sewer Program** | [Kansas City, MO](#) | Tim performed the role of Field Operations Manager for all active Smart Sewer projects, overseeing the construction observation roles of various DP's in adherence with clients expectations.
- **St. Joseph Whitehead Creek Stormwater Separation** | [St. Joseph, MO](#) | Tim served as Resident Project Representative.
- **Kansas City MO Smart Sewer Program Management FY21** | [Kansas City, MO](#) | Field Operations Manager
- **Lake Fort Smith Reservoir and Water Intake Structure** | [Fort Smith, AR](#) | Resident Project Representative
- **FL Topeka PC2 Pkg A CDB Servic** | [Topeka, KS](#) | Construction Superintendent
- **Wichita Aquifer Storage & Recovery Phase II** | [Wichita, KS](#) | Construction Manager
- **MGP Floor/Wall Finishes Starch** | [Atchison, KS](#) | Construction Superintendent





JOE CAMPBELL
PROGRAM CONTROLS &
DASHBOARD REPORTING

Joe Campbell has more than 25 years of project controls experience across large capital programs in the water/wastewater, power and oil, gas and chemicals industry. With a background in both program management and design-build project delivery, Joe will be responsible for establishing a program controls program that clearly tracks and reports individual project status and earned value with our consultant and contractor teams through an easy-to-understand dashboard environment.

- » **FIRM** | Burns & McDonnell
- » **YEARS OF EXPERIENCE** | 28
- » **EDUCATION** | BS, Business Administration
- » **LICENSE/REGISTRATION** | N/A
- **Clean Water Shreveport** | *Shreveport, LA* | Joe’s responsibilities include developing and leading a cohesive, program wide controls approach in the areas of finance, schedule, contracts, risk, operational procedures and program information/documentation. As part of this project, Joe implemented a revised payment application process, including the creation of new payment application templates, tracking processes and streamlining of workflows – which resulted in a 65% decrease in payment processing time. He collaborated with City staff to revise change management processes and workflows shaving weeks off of the overall change management approval process.
- **Entergy Alliance Program** | *Houston, TX* | Joe served as the Program Controls Manager to manage the design and construction of substations and transmission lines throughout the southeast region. Program management services consisted of integration and standardization of multiple reporting tools, which established a single reporting methodology used by the client’s corporate headquarters and acquired companies for financial, schedule, earned value and risk analysis. Joe was responsible for development of a rating system to assist the client steering committee in for funding consideration and execution.
- **Harris County Flood Control Program** | *Harris County, TX* | Joe provided program controls support for this significant flood control program.



LAURA SYKES
PROGRAM CONTROLS &
DASHBOARD REPORTING

As an associate project controls specialist at Burns & McDonnell, Laura specializes in project scheduling and cost control for design-build projects / programs to verify assets are completed on-time, on-budget and in accordance with the contract specifications. Her background spreads across the water/wastewater, energy and oil, gas and chemicals markets.

- » **FIRM** | Burns & McDonnell
- » **YEARS OF EXPERIENCE** | 17
- » **EDUCATION** | BS, Chemical Engineering
- » **LICENSE/REGISTRATION** | N/A
- **KC Water I/I Program** | *Kansas City, MO* | Laura was responsible for updating project schedules, budgets, earned progress and program dashboards for this \$4.5B consent program.
- **Sharyland Utilities Midland Program** | *Big Lake, TX* | Laura was responsible for schedule development, cost management, schedule updates, forecasting, cash flow management, client reporting and invoice management. Streamlined subcontractor invoicing/review by integrating the company’s standard earned value system with the subcontractor’s pay applications.
- **Railhead Substation** | *White Deer, TX* | Laura served as EPC Project Controls Lead for a 345-kV greenfield substation. Responsible for cost management, schedule updates, forecasting, cash flow management, client reporting and invoicing.
- **Port Arthur Reliability Project** | *Entergy - Port Arthur, Texas* | Laura was project controls lead for two greenfield substations, a new bridge and access roads, multiple remote end substation upgrades and the connecting transmission line (12.9 miles of 230kV) in the Port Arthur, Texas area. Responsibilities included development and baselining of a resource-loaded schedule, Critical Path Method schedule management, resource loading crew planning, earned value management, S-Curve progress reporting, commodity tracking, cost report management, forecasting, cash flows, accruals, subcontract invoice reviews and change management.





BRETT KREIKEMEIER, PE
PROCUREMENT

Brett serves as senior estimator. His experience includes heavy civil, infrastructure and water treatment projects. He previously worked as a cost engineer, senior project engineer, project manager and estimator for large and small municipal projects throughout Florida and the Kansas City Metro area. As an estimator, he is responsible for collaborating with the project team from the conceptual stage through construction, creating and implementing cost-effective solutions for our clients and preparing estimates for those clients, with a focus on design build and other alternative delivery method projects.

- » **FIRM** | Burns & McDonnell
- » **YEARS OF EXPERIENCE** | 12
- » **EDUCATION** | BS, Civil & Environmental Engineering
- » **LICENSE/REGISTRATION** | Professional Engineer (FL, KS, MO)

- **Republic WWTP Expansion MBR & Solids Handling** | [Republic, MO](#) | There are five projects in this capital program, all are progressive design-build. For CIP #7 and the WWTP Blending Project, Brett was responsible for developing 30%, 60% and 90% at-risk estimates to the client. He was also the estimate lead for self-perform estimates for the work to be constructed utilizing Burns & McDonnell craft labor. Brett also provided estimate reviews of subcontractor pricing.
- **Joliette Alternative Water Source Program** | [Midwest, U.S.](#) | Burns & McDonnell was retained as the Owner’s Representative for this billion dollar water supply program. Brett supported independent review of the program’s construction cost estimates for five projects selected for evaluation. The Owner is using our estimates and detailed evaluations to reset the expected CIP costs for the program through its completion. Brett evaluated the differences between the estimates and presented findings in a workshop with the Owner, Program Manager and Burns & McDonnell. This workshop allowed the Owner to understand the cost buildup and more confidently set the budget.
- **Republic WWTP Improvements Design-Build Program** | [Republic, MO](#) | Brett was responsible for developing 30%, 60% and 90% at-risk estimates to the client. He was also the estimate lead for self-perform estimates for the work to be constructed utilizing Burns & McDonnell craft labor. Brett also provided estimate reviews of subcontractor pricing.



MIKE PINDAK, PE, LEED AP
QUALITY

With nearly 40 years of experience in quality review, technical development and capital project execution, Mike is the perfect choice to develop and lead the quality program for I/I Reduction Program. He recently led quality for Wichita’s Northwest Water Facility where he was responsible for managing project compliance of all plans, codes, standards, specifications and practices related to construction. He also implemented a project-specific quality management plan for both subcontractors and self-perform work and developed the commissioning plan for plant equipment.

- » **FIRM** | Burns & McDonnell
- » **YEARS OF EXPERIENCE** | 38
- » **EDUCATION** | MS, Civil Engineering; BS, Civil Engineering
- » **LICENSE/REGISTRATION** | Professional Engineer (MD), LEED Accredited Professional

- **Clean Water Shreveport** | [Shreveport, LA](#) | EPC Project Manager
- **\$500M NWWF Progressive Design-Build** | [Wichita, KS](#) | Quality Manager
- **\$87M WTP Replacement Design-Build** | [Thornton, CO](#) | Commissioning Program Development
- **\$300M Antler and STACK Water Transfer Systems** | [Devon Energy Group](#) | Program Manager
- **\$42M East & West Waterlines and Pond Connection Waterlines & Pump Stations** | [Devon Energy Group, Midwest U.S.](#) | Program Manager
- **Nederland Raw Water Treatment Plant** | [Nederland, TX](#) | EPC Project Manager





MARVIN ROBERTS, PE QUALITY

Marvin has over 13 years of working in the construction industry serving as construction manager, quality control manager, construction superintendent, and resident project representative. He has worked closely with municipal clients to facilitate and manage construction improvements including sewer collection system improvements, trenchless technologies, lift stations, and water/wastewater treatment facilities. He recently served as the Construction Manager for the Clean Water Shreveport program where he provided oversight for twenty-five (25) Federally Mandated Sanitary Sewer Replacement/Rehabilitation Projects. He brings this direct experience working with municipalities on similar projects and mandates to provide quality control for your projects.

- » **FIRM** | Burns & McDonnell
 - » **YEARS OF EXPERIENCE** | 13
 - » **EDUCATION** | BS, Construction Engineering
 - » **LICENSE/REGISTRATION** | N/A
-
- **\$1.3B Clean Water Shreveport** | [Shreveport, LA](#) | As Construction Manager, Marvin provided construction management oversight for twenty-five Consent Decree sanitary sewer replacement/rehabilitation projects totaling \$105M. Projects included sewer conveyance/collection system upgrades on pipelines (gravity mains, force mains) and lift stations. Oversight consisted of projects utilizing open trench (120,000 L.F.) and trenchless technology (1.2 million L.F.). Trenchless technology installation methods included pipe bursting, cased auger jack/bore, cured-in-place (CIPP), slurry auger boring and close tolerance horizontal directional drilling.
 - **KC Water I/I Program** | [Kansas City, MO](#) | Field Operations Manager
 - **\$50M Water Treatment Plant** | [Monroe, LA](#) | Construction Manager
 - **\$44M Queensboro Area 2 Rehab Project** | [Shreveport, LA](#) | Construction Manager
 - **South Highlands Sanitary Sewer Service Replacement** | [Shreveport, LA](#) | Construction Manager
 - **W. Canal & Valleyview Sewer Trunk Main Replacement** | [Shreveport, LA](#) | Construction Manager



6.C OBJECTIONS AND REQUESTED MODIFICATIONS TO CONDITIONS

AGREEMENT BETWEEN OWNER AND PRIVATE ENTITY ON THE BASIS OF A STIPULATED PRICE

THIS AGREEMENT is by and between Hampton Roads Sanitation District (HRSD) (Owner), and [name] (Private Entity).

Terms used in this Agreement have the meanings stated herein and in the General Conditions and the Supplementary Conditions.

Owner and Private Entity hereby agree as follows:

PROJECT INFORMATION

Design-Build Contract: High Priority Inflow and Infiltration Reduction Program (GN020300) (Contract)

Engineer: Private Entity has retained [name] (Engineer) for the performance of professional engineering services under this Contract.

Authorized Representatives: Owner and Private Entity each hereby designates a specific individual authorized to act as representative with respect to the performance of responsibilities under this Contract. Such an individual shall have authority to transmit instructions, receive formal notices, receive information, and render decisions relative to this Contract on behalf of the respective party that the individual represents.

1. Owner's Authorized Representative:

Bruce Husselbee, Director of Engineering
1434 Air Rail Avenue, Virginia Beach, Virginia 23455
(757) 460-7012; bhusselbee@hrsd.com

2. Private Entity's Authorized Representative:

[Name], [Title]
[Address]
[Phone Number]; [Email Address]

ARTICLE 1 – THE WORK

1.01 *General Description of Work*

- A. Private Entity shall provide professional engineering, construction, and support services necessary to design and construct multiple sanitary sewer rehabilitation and replacement projects within gravity sanitary sewer systems, utilizing a design/build delivery method governed by an Interim Agreement and Comprehensive Agreement. The goal of this Program is to reduce capacity-related sanitary sewer overflows (SSOs) within the pre-selected locality catchments through the cost-effective reduction of inflow and infiltration (I&I).

ARTICLE 2 – CONTRACT TIMES

2.01 *Time is of the Essence/Importance*

- A. All time limits for Private Entity's attainment of Milestones, if any, Substantial Completion, and completion and readiness for final payment, as stated in the Contract, are of the essence/importance in the Contract.

Commented [SMH1]: Private Entity will self-perform the professional engineering services, as well as subcontract with consultants for some professional services.

Commented [CB2]: We understand that this agreement is the interim agreement. We assume that the comprehensive agreement will be formed by amending this agreement.

Commented [PJJ3]: Definition of localities in which work will be performed is requested. They will be viewed as a third party

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2.02 Contract Times [Dates]

- A. Private Entity will substantially complete the Work on or before [date].
- B. Private Entity will have the Work completed and ready for final payment, in accordance with Paragraph 14.06 of the General Conditions, on or before [date].

[or]

2.01 Contract Times [Days]

- A. Private Entity will substantially complete the Work within [number] calendar days after the Effective Date.
- B. Private Entity will have the Work completed and ready for final payment, in accordance with Paragraph 14.06 of the General Conditions, within [number] calendar days after the Effective Date.

2.02 Liquidated Damages

- A. Private Entity and Owner recognize that ~~time is of the essence as stated in Paragraph 2.01 above, and that~~ Owner ~~will may~~ suffer financial and other losses if the Work is not completed and Milestones, if applicable, not achieved within the times specified in Paragraph 2.02 above, plus any extensions thereof allowed in accordance with the Contract. The parties also recognize the delays, expense, and difficulties involved in proving, in a lawsuit or arbitration proceeding, the actual loss suffered by Owner if the Work is not completed on time. Accordingly, instead of requiring any such proof, Owner and Private Entity agree that as liquidated damages for delay (but not as a penalty):
 1. *Substantial Completion:* Private Entity shall pay Owner \$[number] for each day that expires after the time (as duly adjusted pursuant to the Contract) specified in Paragraph 2.02 above for Substantial Completion, until the Work is substantially complete.

Liquidated damages shall be Owner's sole and exclusive remedy for any unexcused delay in performance of the Work. The aggregate amount of liquidated damages shall not exceed X.

- ~~0. Completion of Remaining Work: After Substantial Completion, if Private Entity shall neglect, refuse, or fail to complete the remaining Work within the Contract Times (as duly adjusted pursuant to the Contract) for completion and readiness for final payment, Private Entity shall pay Owner \$[number] for each day that expires after such time until the Work is completed and ready for final payment.~~
- ~~0. Liquidated damages for failing to timely attain Substantial Completion, final completion, and Milestones, if applicable, are not additive, and will not be imposed concurrently. Liquidated damages for failing to attain Substantial Completion shall take precedence.~~

2.052.03 Consequential or Special Damages

~~A. IN NO EVENT WILL EITHER PARTY BE LIABLE TO THE OTHER PARTY FOR ANY SPECIAL, INDIRECT, PUNITIVE, OR CONSEQUENTIAL DAMAGES INCLUDING, WITHOUT LIMITATION, DAMAGES OR LOSSES IN THE NATURE OF INCREASED PROJECT COSTS, LOSS OF REVENUE OR PROFIT, LOST PRODUCTION, CLAIMS BY CUSTOMERS OF OWNER LOCALITIES, OR GOVERNMENTAL FINES OR PENALTIES. Private Entity shall reimburse Owner (1) for any fines or penalties imposed on Owner as a direct result of the Private Entity's failure to attain Substantial Completion according to the Contract Times, and (2) for the actual costs~~

Commented [CB4]: We propose this just reflect the time for the interim agreement work to be completed. Then we would establish substantial completion dates for the construction work in each amendment for the construction work (comprehensive agreement).

Commented [BC5]: We would like to propose a reasonable cap on liquidated damages.

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~~reasonably incurred by Owner for engineering, construction observation, inspection, and administrative services needed after the time specified above in Paragraph 3.02 for Substantial Completion (as duly adjusted pursuant to the Contract), until the Work is substantially complete. The total amount for Consequential Damages shall not exceed five percent (5%) of the Contract Price and all approved Contract Price modifications.~~

~~B. After Private Entity achieves Substantial Completion, if Private Entity shall neglect, refuse, or fail to complete the remaining Work within the Contract Times, Contractor shall reimburse Owner for the actual costs reasonably incurred by Owner for engineering, construction~~

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observation, inspection, and administrative services needed after the time specified above in Paragraph 2.02 for Work to be completed and ready for final payment (as duly adjusted pursuant to the Contract), until the Work is completed and ready for final payment.

~~D.A.~~ The Consequential Damages imposed in this Paragraph are supplemental to any liquidated damages for delayed completion established in this Agreement.

2.04 Limitation on Liability

IN CONSIDERATION FOR THE MUTUALLY NEGOTIATED PRICING AND PAYMENT PROVISIONS, AND TERMS AND CONDITIONS CONTAINED IN THIS AGREEMENT, THE TOTAL AGGREGATE LIABILITY OF DESIGN-BUILDER, ITS OFFICERS, DIRECTORS, SHAREHOLDERS, EMPLOYEES, AGENTS, SUBCONTRACTORS AND SUPPLIERS, AND ANY OF THEM, TO OWNER AND OWNER'S PERSONNEL, AND ANYONE CLAIMING BY, THROUGH OR UNDER OWNER OR OWNER'S PERSONNEL, FOR ANY AND ALL CLAIMS, LOSSES, LIABILITIES, COSTS, EXPENSES, OR DAMAGES WHATSOEVER ARISING OUT OF, RESULTING FROM, OR IN ANY WAY RELATED TO THE WORK OR THIS AGREEMENT SHALL NOT EXCEED THE CONTRACT PRICE PAID TO DESIGN-BUILDER.

Notwithstanding anything to the contrary in this Agreement, all limitations of liability and waivers of consequential damages specifically expressed in this Agreement shall apply to all claims, causes of actions, theories of recovery, and demands at law, equity, or otherwise, including but not limited to breach of contract, breach of warranty, strict liability, products liability, and negligence of any degree. Such limitations and waivers shall not apply to either Party's indemnity obligations under this Agreement for third-party property damage, bodily injury, or death, nor to either Party's fraud or willful misconduct.

Commented [BC6]: We would like to propose a reasonable limitation on liability.

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ARTICLE 3 – CONTRACT PRICE

3.01 ~~Stipulated Contract Price~~

- A. Owner shall pay Private Entity for completion of the Work in accordance with the Contract Documents the amounts that follow, subject to adjustment under the Contract:
 - 1. Design Services:
 - a. For Design Services, ~~a lump sum of \$[amount] ([words] dollars)~~ an amount based on time and material rates set forth in Exhibit X.
 - b. For Builder Support During Design, a lump sum of \$[amount] ([words] dollars).
 - 2. Construction Services:
 - a. For Engineering Services During Construction, a lump sum of \$[amount] ([words] dollars).
 - b. For Construction, a lump sum of \$[amount] ([words] dollars).
 - 3. For all Work (totals for all items 3.01.A.1 through 3.01.A.2) equals a lump sum of \$[amount] ([words] dollars), which is also known as the CCL as defined in the Supplementary Conditions.

ARTICLE 4 – PAYMENT PROCEDURES

4.01 ~~Submittal and Processing of Payments~~

- A. Private Entity shall submit Applications for Payment in accordance with Article 14 of the General Conditions. Owner will process Applications for Payment as provided in the General

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Conditions.

4.02 **Progress Payments; Retainage**

- A. Owner shall make progress payments on account of the Contract Price on the basis of Private Entity's Applications for Payment monthly during performance of the Work as provided in Paragraph 4.02.A.1 below, provided that such Applications for Payment have been submitted in a timely manner and otherwise meet the requirements of the Contract. All such payments will be measured by the Schedule of Values established as provided in the General Conditions (and in the case of Unit Price Work based on the number of units completed) or, in the event there is no Schedule of Values, as provided elsewhere in the Contract.
1. Prior to Substantial Completion, progress payments will be made in an amount equal to the percentage indicated below but, in each case, less the aggregate of payments previously made and less such amounts as Owner may withhold, including but not limited to liquidated damages, in accordance with the Contract.
 - a. 95 percent of Work completed (with the balance being retainage); and
 - b. 95 percent of cost of materials and equipment not incorporated in the Work but delivered, suitably stored, and accompanied by documentation satisfactory to Owner as provided in Paragraph 14.01.B of the General Conditions (with the

Commented [SMH7]: Assuming we conduct work in multiple localities at the same time, we would like to propose that retainage get released as work in each locality is substantially complete.



balance being retainage).

- B. Upon Substantial Completion, the retainage shall be further reduced below 5 percent to that amount necessary to assure completion as determined by the Owner. The determination of any such reduction shall be at the sole discretion of the Owner.
- C. Notwithstanding the provisions above, no retainage shall be withheld with respect to the portion of a payment application pertaining to engineering, design, and other professional services.

4.03 Diversity Procurement

- A. The Private Entity, Project Design Professionals, Construction Subcontractors, and Suppliers are encouraged to provide the participation of small, women-owned, and minority-owned (SWaM) businesses, service-disabled veteran-owned businesses (SDVOB), or disadvantaged business enterprises (DBE) in this Agreement. With each monthly Application for Payment, the Private Entity shall document the following:
 - 1. if the Private Entity is designated by the Commonwealth of Virginia as a SWaM, SDVOB, and/or DBE, the designation type and the dollar value of Work completed by the Private Entity,
 - 2. dollar value of Work completed by Project Design Professionals, Construction Subcontractors, and/or Suppliers designated by the Commonwealth of Virginia as small businesses,
 - 3. dollar value of Work completed by Project Design Professionals, Construction Subcontractors, and/or Suppliers designated by the Commonwealth of Virginia as women-owned businesses,
 - 4. dollar value of Work completed by Project Design Professionals, Construction Subcontractors, and/or Suppliers designated by the Commonwealth of Virginia as minority-owned businesses,
 - 5. dollar value of Work completed by Project Design Professionals, Construction Subcontractors, and/or Suppliers designated by the Commonwealth of Virginia as SDVOB, and
 - 6. dollar value of Work completed by Project Design Professionals, Construction Subcontractors, and/or Suppliers designated by the Commonwealth of Virginia as DBE.

4.04 Construction Subcontractor and Supplier Payments

- A. In accordance with §2.2-4354 of the Code of Virginia:
 - 1. Private Entity is liable for the entire amount owed to any Construction Subcontractor or Supplier with which it contracts. Private Entity shall not be liable for amounts otherwise reducible due to the Construction Subcontractor's or Supplier's noncompliance with the terms of the contract. In the event that the Private Entity withholds all or a part of the amount promised to the Construction Subcontractor or Supplier under the contract, the Private Entity shall notify the Owner and Construction Subcontractor or Supplier in writing of their intention to withhold all or a part of the Construction Subcontractor's or Supplier's payment with the reason for nonpayment. Payment by the Construction Subcontractor or Supplier contracting with the Private Entity shall not be a condition precedent to payment to any lower-tier Construction Subcontractor or Supplier,

Commented [SMH8]: Prompt payment statute

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regardless of the Private Entity receiving payment for amounts owed to the Private Entity. Any provision in a contract contrary to this Section 4.04 shall be unenforceable.

2. Within 7 calendar days of each payment by Owner to Private Entity under this Agreement, Private Entity shall either:
 - a. pay the Construction Subcontractor or Supplier for the proportionate share of the total payment received from the Owner attributable to the Work performed by the Construction Subcontractor or Supplier; or
 - b. notify the Owner and Construction Subcontractor or Supplier in writing of the intention to withhold all or part of the Construction Subcontractor's or Supplier's payment with the reason for nonpayment.
3. Private Entity shall pay interest to its Construction Subcontractor or Supplier on all amounts owed by the Private Entity that remain unpaid after 7 calendar days following receipt by the Private Entity of payment from Owner for Work performed by the Subcontractor or Supplier, except for amounts withheld as allowed in this Paragraph 2.
4. Unless otherwise provided under the terms of this Agreement, interest shall accrue at the rate of 1 percent per month.
 - a. Private Entity shall include in each of its subcontracts a provision requiring each Construction Subcontractor or Supplier to include or otherwise be subject to the same payment and interest requirements set forth in this Paragraph.
 - b. A subcontract modification shall not be made for the purpose of providing reimbursement for the interest charges. A cost reimbursement claim shall not include any amount for reimbursement for the interest charge.

4.05 Final Payment

- A. Upon final completion and acceptance of the Work in accordance with Paragraph 14.06 of the General Conditions, Owner shall pay the remainder of the Contract Price.

4.06 Consent of Surety

- A. Owner may withhold final payment or return or release retainage at Substantial Completion or any other time, unless Private Entity submits written consent of the surety to such payment, return or release.

ARTICLE 5 – REPRESENTATIONS, CERTIFICATIONS, AND STIPULATIONS

5.01 Private Entity's Representations

- A. To induce Owner to enter into this Contract, Private Entity makes the following representations:
 1. Private Entity has provided their social security number or federal employer identification number in Owner's Online Oracle Enterprise Resource Planning (ERP) system.
 2. Private Entity has examined and carefully studied the Contract Documents, any data, and reference items identified in the Contract Documents.
 3. Private Entity has visited the Site, conducted a thorough visual examination of the Site and adjacent areas, and become familiar with the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

Commented [BC9]: This won't be true until the work in the interim agreement is done. This will be done by the time we enter into the comprehensive agreement.



4. Private Entity is familiar with all Laws and Regulations that may affect cost, progress, and performance of the Work.
5. Private Entity has carefully studied the reports, if any, of explorations and tests of subsurface conditions at or adjacent to the Site and the drawings, if any, of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Contract Documents, with respect to the Technical Data in such reports and drawings.
6. Private Entity has carefully studied the reports and drawings, if any, relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Contract Documents, with respect to Technical Data in such reports and drawings.
7. Private Entity has considered the information known to Private Entity itself, and to Construction Subcontractors and Project Design Professionals that Private Entity has selected as of the Effective Date; information commonly known to design professionals, Private Entities, and contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Contract Documents; and the Site-related reports and drawings, if any, identified in the Contract Documents or otherwise made available to Private Entity, with respect to the effect of such information, observations, and documents on (a) the cost, progress, and performance of the Work; (b) the means, methods, techniques, sequences, and procedures of construction to be employed by Private Entity; and (c) Private Entity's safety precautions and programs.
8. Based on the information and observations referred to in the preceding Paragraph, Private Entity agrees that no further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract Documents.
9. Private Entity is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Contract Documents.
10. Private Entity has submitted online discussion(s) through Owner's Online Oracle ERP system as written notice of all conflicts, errors, ambiguities, or discrepancies that Private Entity has discovered in the Contract Documents and of discrepancies between Site conditions and the Contract Documents and confirms that the written resolution by Owner is acceptable to Private Entity.
11. Private Entity has determined that the Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance and furnishing of the Work.
12. Private Entity's entry into this Contract constitutes an incontrovertible representation by Private Entity that without exception all prices in the Agreement are premised upon performing and furnishing the Work required by the Contract Documents.
13. Private Entity is organized or authorized to transact business in the Commonwealth of Virginia in accordance with Title 13.1 and/or Title 50 of the Code of Virginia. Private Entity shall not allow its existence to lapse or its certificate of authority or registration to transact business in the Commonwealth of Virginia, if so, required under Title 13.1 and/or Title 50 of the Code of Virginia, to be revoked or cancelled at any time during the

Commented [BC10]: This won't be true until the work in the interim agreement is done. This will be done by the time we enter into the comprehensive agreement.

Commented [SMH11]: This won't be true until the work in the interim agreement is done. This will be done by the time we enter into the comprehensive agreement. *Note - this comment is applicable to most of the bullets within this section.

Commented [SMH12]: This paragraph conflicts with scope to perform further locality data review and site investigation work to define scope of construction work.

Commented [SMH13]: We have to prepare the contract documents representing the construction work to be performed.

Commented [SMH14]: The scope of work is open ended so cost will vary depending on effort required to define scope of each construction project.

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term of this Agreement. If the Private Entity fails to remain in compliance with the provisions of this section, Owner reserves the right to cancel this Agreement.

14. Private Entity does not, and shall not during the performance of the contract, knowingly employ an unauthorized alien as defined in the Federal Immigration Reform and Control Act of 1986, in accordance with §2.2-4311.1 of the Code of Virginia.

5.02 *Private Entity's Certifications*

- A. Private Entity certifies that it has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for or in executing the Private Entity Contract. For the purposes of this Paragraph:
 1. "Corrupt practice" means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the Proposal process or in the Design-Build Contract execution.
 2. "Fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the Proposal process or the execution of the Design-Build Contract to the detriment of Owner, (b) to establish Proposal or Contract prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition.
 3. "Collusive practice" means a scheme or arrangement between 2 or more Proposers, with or without the knowledge of Owner, a purpose of which is to establish Proposal or Contract prices at artificial, non-competitive levels.
 4. "Coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the Proposal process or affect execution of the Design-Build Contract.

5.03 *Anti-Discrimination Requirements*

- A. For all contracts over \$10,000 the Private Entity shall not discriminate against any employee or applicant for employment because of race, religion, color, sex, national origin, age, disability or other basis prohibited by state law relating to discrimination in employment. During the performance of this Agreement, the Private Entity shall:
 1. post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this nondiscrimination clause,
 2. in all solicitations or advertisements for employees placed by or on behalf of the Private Entity, will state that such Private Entity is an equal opportunity employer. Notices, advertisements and solicitations placed in accordance with federal law, rule or regulation shall be deemed sufficient for the purpose of meeting the requirements of this section, and
 3. include the provisions of the foregoing clauses in every Construction Subcontract or purchase order over \$10,000, so that the provisions will be binding upon each Construction Subcontractor or Supplier, all in accordance with §2.2-4311 of the Code of Virginia.
- B. Further, in accordance with §2.2-4343.1 of the Code of Virginia, the Private Entity shall not discriminate against a faith-based organization on the basis of the organization's religious character or impose conditions that restrict the religious character of the faith-based organization, except in accordance with §2.2-4343.1.F of the Code of Virginia, that no funds shall be expended on contracts for religious worship, instruction, or proselytizing, or impair,

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diminish, or discourage the exercise of religious freedom by the recipients of such goods, services, or disbursements.

- C. In accordance with the Virginia Human Rights Act §2.2-3900 of the Code of Virginia, the Private Entity shall safeguard all individuals within the Commonwealth from unlawful discrimination in employment because of race, color, religion, national origin, sex, pregnancy, childbirth or related medical conditions, age, marital status, sexual orientation, gender identity, disability, or status as a veteran; preserve the public safety, health, and general welfare; further the interests, rights, and privileges of individuals within the Commonwealth; and protect citizens of the Commonwealth against unfounded charges of unlawful discrimination.

5.04 Drug Free Workplace Requirements

- A. For all contracts over \$10,000 the Private Entity shall maintain a drug-free workplace. During the performance of this Agreement, the Private Entity shall:
 - 1. provide a drug-free workplace for the Private Entity's employees,
 - 2. post in conspicuous places, available to employees and applicants for employment, a statement notifying employees that the unlawful manufacture, sale, distribution, dispensation, possession, or use of a controlled substance or marijuana is prohibited in the Private Entity's workplace and specifying the actions that will be taken against employees for violations of such prohibition,
 - 3. state in all solicitations or advertisements for employees placed by or on behalf of the Private Entity that the Private Entity maintains a drug-free workplace, and
 - 4. include the provisions of the foregoing clauses in every Construction Subcontract or purchase order over \$10,000, so that the provisions will be binding upon each Construction Subcontractor or Supplier, all in accordance with §2.2-4312 of the Code of Virginia.

ARTICLE 6 – CONTRACT DOCUMENTS

6.01 Contents

- A. The Contract Documents consist of the following:
 - 1. This Agreement (inclusive).
 - 2. General Conditions (inclusive; not attached but incorporated by reference).
 - 3. Supplementary Conditions (inclusive; not attached but incorporated by reference).
 - 4. Addenda (numbers 1 to [#], inclusive; not attached but incorporated by reference).
 - 5. Exhibits to this Agreement (enumerated as follows):
 - a. ~~Private Entity's Statement of Qualifications submitted in Owner's Online Oracle ERP system (Solicitation [#]; Response [#]; not attached but incorporated by reference).~~
 - b.a. ~~Private Entity's Technical Proposal Scope of the Design Professional Services (Interim Agreement) submitted in Owner's Online Oracle ERP system (Solicitation [#]; Response [#]; not attached but incorporated by reference).~~
 - e.b. [OPTIONAL] Scope of Work Proposal Amendment, following completion of the Design Professional Services (Comprehensive Agreement), dated [date] (pages 1 to [#], inclusive, attached).

Commented [SMH15]: We would rather not attach the SOQ or proposal wholesale. It's common for our scope and approach to be refined through discussions with the Owner after award but before contract. We would rather conform the technical aspects of our proposal into a scope document and attach it to the Contract. We can also attach other exhibits as necessary, such as Org Charts, schedules, etc.



e.c. [List other exhibits, if any]

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6. The following which may be delivered or issued on or after the Effective Date of this Agreement and are not attached hereto:
 - a. Notice to Proceed.
 - b. Performance Bond (together with power of attorney; See Supplementary Conditions Paragraph 6.01).
 - c. Payment Bond (together with power of attorney).
 - d. Insurance Certificates.
 - e. Escrow Agreement (if applicable).
 - f. Work Change Directives (if applicable).
 - g. Change Orders (if applicable).
- B. The Contract Documents listed in Paragraph 6.01.A are attached to this Agreement (except as expressly noted otherwise above).
- C. There are no Contract Documents other than those listed above in this Article 6.
- D. The Contract Documents may only be amended, modified, or supplemented as provided in the Contract.

ARTICLE 7 – TERMINATION PROVISIONS

1.01 *Termination of Agreement*

- A. Suspension of Work or termination of the Agreement shall be in accordance with Article 15 of the General Conditions.
- B. Execution of this Agreement and the performance of any services provided hereunder shall not require or bind the Owner to retain the Private Entity for the construction phase of the project. Final negotiations and an amendment to the Agreement will occur at a time when the final scope and total cost of the construction effort can be more accurately defined. If a Scope of Work and compensation for the construction related activities cannot be successfully negotiated, the Owner reserves the right to terminate this Agreement for convenience in accordance with Section 15.03 of the General Conditions and compensate the Private Entity to complete the design related efforts associated with this Project and use the record specifications and record drawings to bid and construct the needed improvements associated with the Project. The Owner will then have the right to use the documents as defined in Paragraph 3.04 of the General Conditions and as further modified in the Supplementary Conditions. In negotiating the cost to complete the design related efforts, the Private Entity and the Owner each hereby commits to negotiate a reasonable price in relation to the cost of the services provided. The Owner may, in its sole discretion, elect to cancel the Project and compensate the Private Entity for design related services completed and other termination expenses as provided for in Section 15.03 of the General Conditions.

Commented [SMH16]: Construction-related terms and conditions will not be applicable to the design professional services.

ARTICLE 8 – MISCELLANEOUS

8.01 *Assignment of Agreement: Unless expressly agreed to elsewhere in the Agreement, no assignment by a party hereto of any rights under or interests in the Agreement will be binding on the other party hereto without the written consent of the party sought to be bound; and, specifically but without limitation, money that may become due and money that is due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an*

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assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Agreement.

- 8.02 *Successors and Assigns: Owner and Private Entity each binds itself, its successors, assigns, and legal representatives to the other party hereto, and its successors, assigns, and legal representatives, in respect to all covenants, agreements, and obligations contained in the Agreement.*
- 8.03 *Severability: Any provision or part of the Agreement held to be void or unenforceable under any applicable law or regulations shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon Owner and Private Entity, who agree that the Agreement shall be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.*
- 8.04 *Permission to Use HRSD Name and Social Media Release: The Private Entity or any of its employees or agents shall not use HRSD's name, logo, proprietary information, or site photographs in any format for any personal or professional marketing or public relations material or social media use without prior review and approval from the Owner. These materials include, but are not limited to, advertisements, news releases, published articles, customer lists, social media posts, advertorials or any other promotional purposes. Owner's Director of Communications shall be provided with any material to be shared with the public at least 7 business days prior to the planned release of the information.*

This Agreement will be effective on [date] (which is the Effective Date of the Contract).

The Agreement and all subsequent changes to the Agreement will be approved and executed using Owner's Enterprise Project Management (Unifier) system. Physical signatures (on the Agreement and future Change Orders) will not be required if acknowledged by Private Entity through the online system.



PERFORMANCE BOND

PRIVATE ENTITY (name and address):

«PrivateEntity»
«Address_Line_1»
«Address_Line_2»

SURETY (name and address of principal place of business):

«Surety»
«Surety_Address1»
«Surety_Address2»

OWNER (name and address):

Hampton Roads Sanitation District
1434 Air Rail Avenue
Virginia Beach, Virginia 23455

DESIGN-BUILD CONTRACT

Effective Date of the Contract: «Contract_Date»
Amount: «Contract_Value»
Description: High Priority Inflow and Infiltration Reduction Program (GN020300)

BOND

Bond Number:
Date (not earlier than the Effective Date of the Contract):
Amount:
Modifications to this Bond Form: None See Paragraph 16

Surety and Private Entity, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Design-Build Performance Bond to be duly executed by an authorized officer, agent, or representative. By signing your name electronically below, you are agreeing that your electronic signature is the legal equivalent of your physical signature on this form. A paper copy of this form is not required at this time. Owner reserves the right to ask for a paper copy of this form at a later date.

[Note: Provide supplemental execution by any additional parties, such as joint venturers.]

PRIVATE ENTITY AS PRINCIPAL

SURETY

«PrivateEntity»
Private Entity's Name

«Surety»
Surety's Name

By: _____ (Seal)
Signature

By: _____ (Seal)
Signature (attach power of attorney)

Print Name

Print Name

Title

Title

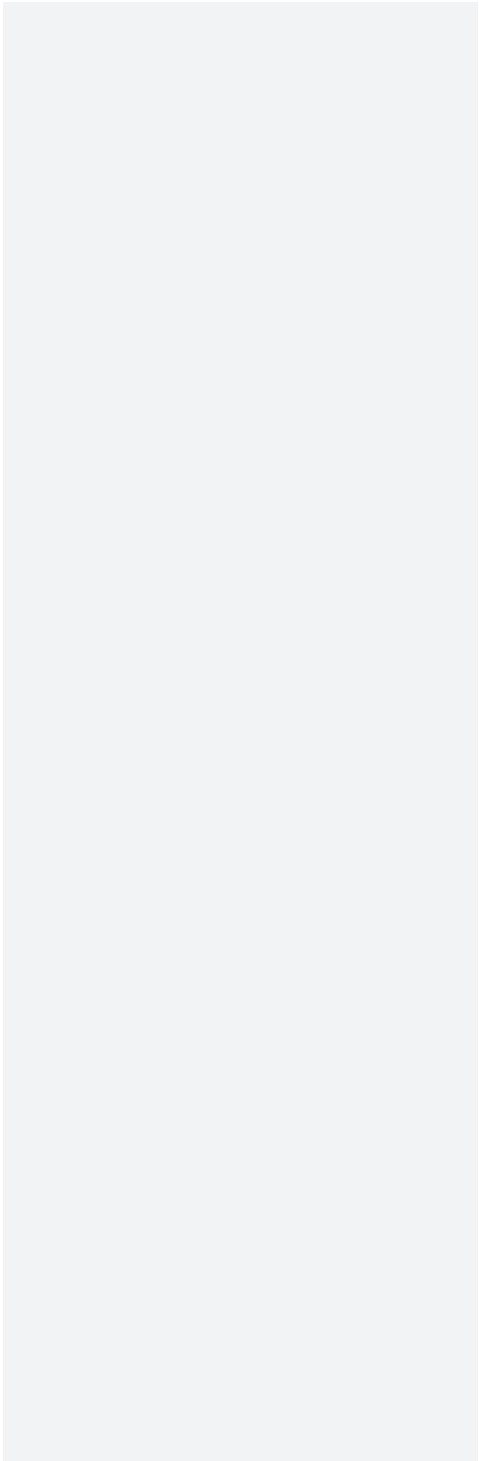
Attest: _____
Signature

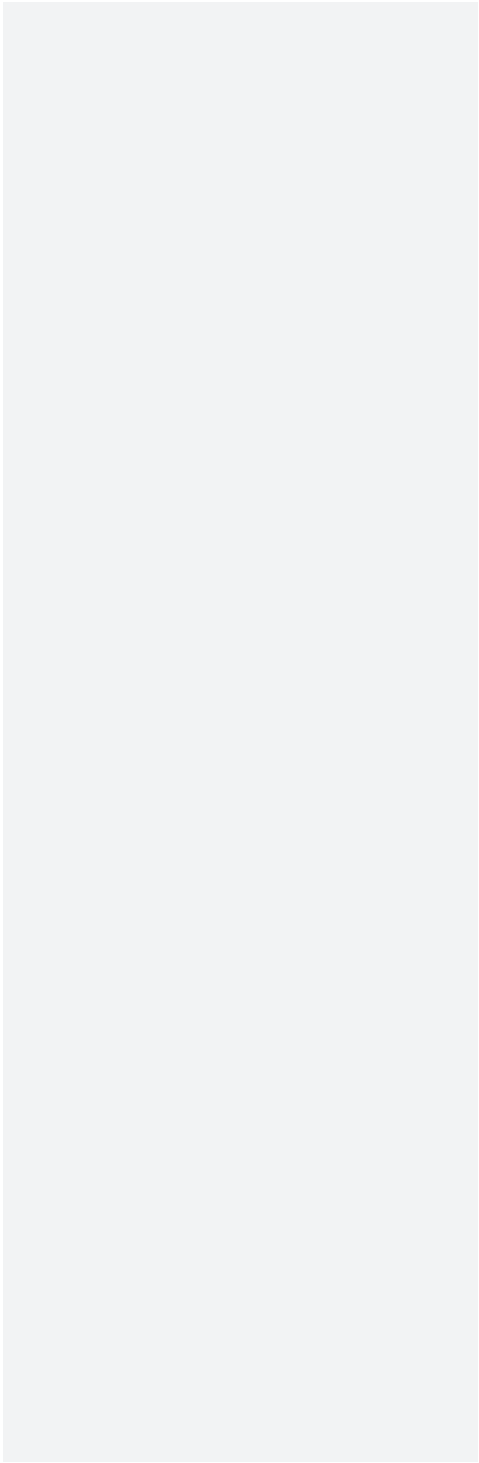
Attest: _____
Signature

Title

Title

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1. The Private Entity and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner for the performance of the Design-Build Contract, which is incorporated herein by reference.

2. If the Private Entity performs the Design-Build Contract, the Surety and the Private Entity shall have no obligation under this Bond, except when applicable to participate in a conference as provided in Paragraph 3.

3. If there is no Owner Default under the Design-Build Contract, the Surety's obligation under this Bond shall arise after:

3.1 The Owner first provides notice to the Private Entity and the Surety that the Owner is considering declaring a Private Entity Default. Such notice shall indicate whether the Owner is requesting a conference among the Owner, Private Entity, and Surety to discuss the Private Entity's performance. If the Owner does not request a conference, the Surety may, within five (5) business days after receipt of the Owner's notice, request such a conference. If the Surety timely requests a conference, the Owner shall attend. Unless the Owner agrees otherwise, any conference requested under this Paragraph 3.1 shall be held within ten (10) business days of the Surety's receipt of the Owner's notice. If the Owner, the Private Entity, and the Surety agree, the Private Entity shall be allowed a reasonable time to perform the Design-Build Contract, but such an agreement shall not waive the Owner's right, if any, subsequently to declare a Private Entity Default;

3.2 The Owner declares a Private Entity Default, terminates the Design-Build Contract, and notifies the Surety; and

3.3 The Owner has agreed to pay the Balance of the Design-Build Contract Price in accordance with the terms of the Design-Build Contract to the Surety, or to a Private Entity or contractor selected to perform the Design-Build Contract.

4. Failure on the part of the Owner to comply with the notice requirement in Paragraph 3.1 shall not constitute a failure to comply with a condition precedent to the Surety's obligations, or release the Surety from its

HIGH PRIORITY INFLOW AND INFILTRATION REDUCTION PROGRAM (GN020300)

obligations, except to the extent the Surety demonstrates actual prejudice.

5. When the Owner has satisfied the conditions of Paragraph 3, the Surety shall promptly and at the Surety's expense take one of the following actions:

5.1 Arrange for the Private Entity, with the consent of the Owner, to perform and complete the Design-Build Contract;

5.2 Undertake to perform and complete the Design-Build Contract itself, through its agents or independent contractors;

5.3 Obtain bids or negotiated proposals from qualified Private Entities or contractors acceptable to the Owner for a contract for performance and completion of the Design-Build Contract, arrange for a contract to be prepared for execution by the Owner and a Private Entity or contractor selected with the Owner's concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Design-Build Contract, and pay to the Owner the amount of damages as described in Paragraph 7 in excess of the Balance of the Design-Build Contract Price incurred by the Owner as a result of the Private Entity Default; or

5.4 Waive its right to perform and complete, arrange for completion, or obtain a new Private Entity or contractor, and with reasonable promptness under the circumstances:

5.4.1 After investigation, determine the amount for which it may be liable to the Owner and, as soon as practicable after the amount is determined, make payment to the Owner; or

5.4.2 Deny liability in whole or in part and notify the Owner, citing the reasons for denial.

6. If the Surety does not proceed as provided in Paragraph 5 with reasonable promptness, the Surety shall be deemed to be in default on this Bond seven days after receipt of an additional notice from the Owner to the Surety demanding that the Surety perform its obligations under this Bond, and the Owner shall be entitled to enforce any remedy available to the Owner. If



the Surety proceeds as provided in Paragraph 5.4, and the Owner refuses the payment or the Surety has denied liability, in whole or in part, without further notice the Owner shall be entitled to enforce any remedy available to the Owner.

7. If the Surety elects to act under Paragraph 5.1, 5.2, or 5.3, then the responsibilities of the Surety to the Owner shall not be greater than those of the Private Entity under the Design-Build Contract, and the responsibilities of the Owner to the Surety shall not be greater than those of the Owner under the Design-Build Contract. Subject to the commitment by the Owner to pay the Balance of the Design-Build Contract Price, the Surety is obligated, without duplication, for:

7.1 the responsibilities of the Private Entity for correction of defective work and completion of the Design-Build Contract;

7.2 additional legal, design professional, and delay costs resulting from the Private Entity's Default, and resulting from the actions or failure to act of the Surety under Paragraph 5; and

7.3 liquidated damages, or if no liquidated damages are specified in the Design-Build Contract, actual damages caused by delayed performance or non-performance of the Private Entity.

8. If the Surety elects to act under Paragraph 5.1, 5.3, or 5.4, the Surety's liability is limited to the amount of this Bond.

9. The Surety shall not be liable to the Owner or others for obligations of the Private Entity that are unrelated to the Design-Build Contract, and the Balance of the Design-Build Contract Price shall not be reduced or set off on account of any such unrelated obligations. No right of action shall accrue on this Bond to any person or entity other than the Owner or its heirs, executors, administrators, successors, and assigns.

10. The Surety hereby waives notice of any change, including changes of time, to the Design-Build Contract or to related subcontracts, purchase orders, and other obligations.

11. Any proceeding, legal or equitable, under this Bond may be instituted in any court of competent jurisdiction where the construction portion of the Project is located, and shall be instituted within two years after a declaration of Private Entity Default, or within two years

after the Private Entity ceased working, or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this paragraph are void or prohibited by law, the minimum periods of limitations available to sureties as a defense in the jurisdiction of the suit shall be applicable.

12. Notice under this Bond to the Surety, the Owner, or the Private Entity shall be in writing, and mailed or delivered to the recipient's address as shown in this Bond.

13. When this Bond has been furnished to comply with a statutory or other legal requirement where the construction portion of the Project is located, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted from this Bond and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

14. Definitions

14.1 Balance of the Design-Build Contract Price: The total amount payable by the Owner to the Private Entity under the Design-Build Contract after all proper adjustments have been made including allowance for the Private Entity for any amounts received or to be received by the Owner in settlement of insurance or other claims for damages to which the Private Entity is entitled, reduced by all valid and proper payments made to or on behalf of the Private Entity under the Design-Build Contract.

14.2 Design-Build Contract: The agreement between the Owner and Private Entity identified as such in this Bond, including all Contract Documents and changes duly made to such Design-Build Contract.

14.3 Private Entity Default: Failure of the Private Entity, which has not been remedied or waived, to perform or otherwise to comply with a material term of the Design-Build Contract.

14.4 Owner Default: Failure of the Owner, which has not been remedied or waived, to pay the Private Entity as required under the Design-Build Contract, or to perform and complete or comply with the other material terms of the Design-Build Contract.



14.5 Contract Documents: All the documents that comprise the contract between the Owner and Private Entity.

15. Any singular reference to Private Entity, Surety, Owner, or other party shall be considered plural where applicable.

16. Modifications to this Bond are as follows:



PAYMENT BOND

PRIVATE ENTITY (name and address):

«PrivateEntity»
«Address_Line_1»
«Address_Line_2»

SURETY (name and address of principal place of business):

«Surety»
«Surety_Address1»
«Surety_Address2»

OWNER (name and address):

Hampton Roads Sanitation District
1434 Air Rail Avenue
Virginia Beach, Virginia 23455

DESIGN-BUILD CONTRACT

Effective Date of the Contract: «Contract_Date»
Amount: «Contract_Value»
Description: High Priority Inflow and Infiltration Reduction Program (GN020300)

BOND

Bond Number:
Date (not earlier than the Effective Date of the Contract):
Amount:
Modifications to this Bond Form: None See Paragraph 18

Surety and Private Entity, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Payment Bond to be duly executed by an authorized officer, agent, or representative. By signing your name electronically below, you are agreeing that your electronic signature is the legal equivalent of your physical signature on this form. A paper copy of this form is not required at this time. Owner reserves the right to ask for a paper copy of this form at a later date.

[Note: Provide supplemental execution by any additional parties, such as joint venturers.]

PRIVATE ENTITY AS PRINCIPAL

SURETY

«PrivateEntity»
Private Entity's Name

«Surety»
Surety's Name

By: _____ (Seal)
Signature

By: _____ (Seal)
Signature (attach power of attorney)

Print Name

Print Name

Title

Title

Attest: _____
Signature

Attest: _____
Signature



Title

Title

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1. The Private Entity and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner to pay for labor, services, materials, and equipment furnished for use in the performance of the Design-Build Contract, which is incorporated herein by reference, subject to the following terms.

2. If the Private Entity promptly makes payment of all sums due to Claimants, and defends, indemnifies, and holds harmless the Owner from claims, demands, liens, or suits by any person or entity seeking payment for labor, services, materials, or equipment furnished for use in the performance of the Design-Build Contract, then the Surety and the Private Entity shall have no obligation under this Bond.

3. If there is no Owner Default under the Design-Build Contract, the Surety's obligation to the Owner under this Bond shall arise after the Owner has promptly notified the Private Entity and the Surety (at the address described in Paragraph 13) of claims, demands, liens, or suits against the Owner or the Owner's property by any person or entity seeking payment for labor, services, materials, or equipment furnished for use in the performance of the Design-Build Contract, and tendered defense of such claims, demands, liens, or suits to the Private Entity and the Surety.

4. When the Owner has satisfied the conditions in Paragraph 3, the Surety shall promptly and at the Surety's expense defend, indemnify, and hold harmless the Owner against a duly tendered claim, demand, lien, or suit.

5. The Surety's obligations to a Claimant under this Bond shall arise after the following:

5.1 Claimants that do not have a direct contract with the Private Entity,

5.1.1 have furnished a written notice of non-payment to the Private Entity, stating with substantial accuracy the amount claimed and the name of the party to which the materials were, or equipment was, furnished or supplied, or for which the labor was done or performed, within ninety (90) days after having last

performed labor or services, or last furnished materials or equipment included in the Claim; and

5.1.2 have sent a Claim to the Surety (at the address described in Paragraph 13).

5.2 Claimants who are employed by or have a direct contract with the Private Entity have sent a Claim to the Surety (at the address described in Paragraph 13).

6. If a notice of non-payment required by Paragraph 5.1.1 is given by the Owner to the Private Entity, that is sufficient to satisfy a Claimant's obligation to furnish a written notice of non-payment under Paragraph 5.1.1.

7. When a Claimant has satisfied the conditions of Paragraph 5.1 or 5.2, whichever is applicable, the Surety shall promptly and at the Surety's expense take the following actions:

7.1 Send an answer to the Claimant, with a copy to the Owner, within sixty (60) days after receipt of the Claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed; and

7.2 Pay or arrange for payment of any undisputed amounts.

7.3 The Surety's failure to discharge its obligations under Paragraph 7.1 or 7.2 shall not be deemed to constitute a waiver of defenses the Surety or Private Entity may have or acquire as to a Claim, except as to undisputed amounts for which the Surety and Claimant have reached agreement. If, however, the Surety fails to discharge its obligations under Paragraph 7.1 or 7.2, the Surety shall indemnify the Claimant for the reasonable attorney's fees the Claimant incurs thereafter to recover any sums found to be due and owing to the Claimant.

8. The Surety's total obligation shall not exceed the amount of this Bond, plus the amount of reasonable

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attorney's fees provided under Paragraph 7.3, and the amount of this Bond shall be credited for any payments made in good faith by the Surety.

9. Amounts owed by the Owner to the Private Entity under the Design-Build Contract shall be used for the performance of the Design-Build Contract and to satisfy claims, if any, under any design-build performance bond. By the Private Entity furnishing and the Owner accepting this Bond, they agree that all funds earned by the Private Entity in the performance of the Design-Build Contract are dedicated to satisfy obligations of the Private Entity and Surety under this Bond, subject to the Owner's priority to use the funds for the completion of the work.

10. The Surety shall not be liable to the Owner, Claimants, or others for obligations of the Private Entity that are unrelated to the Design-Build Contract. The Owner shall not be liable for the payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligation to make payments to or give notice on behalf of Claimants, or otherwise have any obligations to Claimants under this Bond.

11. The Surety hereby waives notice of any change, including changes of time, to the Design-Build Contract or to related subcontracts, purchase orders, and other obligations.

12. No suit or action shall be commenced by a Claimant under this Bond other than in a court of competent jurisdiction where the construction portion of the Project is located, or after the expiration of one year from the date (1) on which the Claimant sent a Claim to the Surety pursuant to Paragraph 5.1.2 or 5.2, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Design-Build Contract, whichever of (1) or (2) first occurs. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

13. Notice and Claims to the Surety, the Owner, or the Private Entity shall be mailed or delivered to the address shown on the page on which their signature appears. Actual receipt of notice or Claims, however accomplished, shall be sufficient compliance as of the date received.

14. When this Bond has been furnished to comply with a statutory or other legal requirement where the construction portion of the Project is located, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted from this Bond and provisions conforming to such statutory or other legal requirement shall be deemed incorporated here. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

15. Upon requests by any person or entity appearing to be a potential beneficiary of this Bond, the Private Entity and Owner shall promptly furnish a copy of this Bond or shall permit a copy to be made.

16. Definitions

16.1 **Claim:** A written statement by the Claimant including at a minimum:

1. The name of the Claimant;
2. The name of the individual or entity for which the labor or services were done, or materials or equipment furnished;
3. A copy of the agreement or purchase order pursuant to which labor, services, materials, or equipment were furnished for use in the performance of the Design-Build Contract;
4. A brief description of the labor, services, materials, or equipment furnished;
5. The date on which the Claimant last performed labor or services, or last furnished materials or equipment, for use in the performance of the Design-Build Contract;
6. The total amount earned by the Claimant for labor, services, materials, or equipment furnished as of the date of the Claim;
7. The total amount of previous payments received by the Claimant; and
8. The total amount due and unpaid to the Claimant for labor, services, materials, or equipment furnished as of the date of the Claim.

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16.2 **Claimant:** An individual or entity having a direct contract with the Private Entity or with a subcontractor of the Private Entity to furnish labor, services, materials, or equipment for use in the performance of the Design-Build Contract. The term Claimant also includes any individual or entity that has rightfully asserted a claim under an applicable mechanic's lien or similar statute against the real property upon which the Project is located. The intent of this Bond shall be to include without limitation in the terms "labor, services, materials, or equipment" that part of the water, gas, power, light, heat, oil, gasoline, telephone service, or rental equipment used in the Design-Build Contract, architectural and engineering services required for performance of the work of the Private Entity and the Private Entity's subcontractors, and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials, or equipment were furnished.

16.3 **Design-Build Contract:** The agreement between the Owner and Private Entity identified on the cover page, including all Contract Documents and all changes made to the agreement and the Contract Documents.

16.4 **Owner Default:** Failure of the Owner, which has not been remedied or waived, to pay the Private Entity as required under the Design-Build Contract, or to perform and complete or comply with the other material terms of the Design-Build Contract.

16.5 **Contract Documents:** All the documents that comprise the agreement between the Owner and Private Entity.

17. Any singular reference to Private Entity, Surety, Owner, or other party shall be considered plural where applicable.

18. Modifications to this Bond are as follows:



CONDITIONS OF THE CONTRACT



**STANDARD GENERAL CONDITIONS OF THE
CONTRACT BETWEEN OWNER AND DESIGN-BUILDER**

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STANDARD GENERAL CONDITIONS OF THE CONTRACT BETWEEN OWNER AND DESIGN-BUILDER

ARTICLE 1 – DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

- A. Wherever used in the Contract Documents and printed with initial capital letters, the following terms have the meanings indicated which are applicable to both the singular and plural thereof. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.
1. *Addenda*: Written or graphic instruments issued by Owner prior to the opening of Proposals which clarify, correct, or change the Request for Qualifications, Request for Proposals, or the proposed Contract Documents, including the Conceptual Documents.
 2. *Agreement*: The written instrument, executed by Owner and Design-Builder, that sets forth the Contract Price and Contract Times, identifies the parties, and designates the specific items that are Contract Documents.
 3. *Application for Payment*: The form which is to be used by Design-Builder during the course of the Work in requesting progress or final payments and which is to be accompanied by such supporting documentation as is required by the Contract Documents.
 4. *Authorized Representative*: The individual designated by a party to represent it with respect to this Contract, as indicated in the Agreement.
 5. *Change Order*: A document which is signed by Design-Builder and Owner and authorizes an addition, deletion, or revision in the Work, or an adjustment in the Contract Price or the Contract Times, or other revision to the Contract, issued on or after the Effective Date of the Contract.
 6. *Claim*: A demand or assertion by Owner or Design-Builder seeking an adjustment of Contract Price or Contract Times, or both, or other relief with respect to the terms of the Contract. A request or proposal for a Change Order is not a Claim.
 7. *Conceptual Documents*: The documents prepared by or for the Owner to describe the Work to be performed, issued to Proposers during the design-builder selection process, and expressly identified in the Agreement.
 8. *Constituent of Concern*: Asbestos, petroleum, radioactive materials, polychlorinated biphenyls (PCBs), hazardous waste, and any substance, product, waste, or other material of any nature whatsoever that is or becomes listed, regulated, or addressed pursuant to (a) the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. §§9601 et seq. (“CERCLA”); (b) the Hazardous Materials Transportation Act, 49 U.S.C. §§5101 et seq.; (c) the Resource Conservation and Recovery Act, 42 U.S.C. §§6901 et seq. (“RCRA”); (d) the Toxic Substances Control Act, 15 U.S.C. §§2601 et seq.; (e) the Clean Water Act, 33 U.S.C. §§1251 et seq.; (f) the Clean Air Act, 42 U.S.C. §§7401 et seq.; or (g) any other Laws or Regulations regulating, relating to, or imposing liability or standards of conduct concerning, any hazardous, toxic, or dangerous waste, substance, or material.



9. *Construction*: The part of the Work that consists generally of making physical improvements at the Site, and is the result of performing or furnishing of labor, the furnishing and incorporating of materials and equipment into the Work (including any correction of defective Construction), and the furnishing of services (other than Design Professional Services) and documents, all as required by the Contract Documents and Construction Drawings and Construction Specifications, as duly modified.
10. *Construction Drawings*: Documents prepared by or for Design-Builder, and approved by Owner for purposes of allowing Design-Builder to proceed with the Construction or specific portions of the Construction, and consisting of drawings, diagrams, illustrations, schedules, and other data that graphically show the scope, extent, and character of the Construction (or specific portions of the Construction) to be performed by or for Design-Builder. Construction Drawings are not Contract Documents.
11. *Construction Specifications*: Documents prepared by or for Design-Builder, and approved by Owner for purposes of allowing Design-Builder to proceed with the Construction or a specific portion of the Construction, and consisting of written requirements for materials, equipment, systems, standards, workmanship, and administrative procedures as applied to the Construction (or a specific portion of the Construction). Construction Specifications are not Contract Documents.
12. *Construction Subcontract*: A written agreement between Design-Builder and a Construction Subcontractor for provision of all or a portion of the Construction, and any delegated Design Professional Services.
13. *Construction Subcontractor*: An individual or entity (other than a Supplier) having a direct contract with Design-Builder or with any other Construction Subcontractor for the performance of a part of the Construction, and any delegated Design Professional Services.
14. *Contract*: The entire and integrated written agreement between Owner and Design-Builder concerning the Work.
15. *Contract Documents*: Those items so designated in the Agreement, and which together comprise the Contract.
16. *Contract Price*: The money that Owner has agreed to pay Design-Builder for completion of the Work in accordance with the Contract Documents.
17. *Contract Times*: The numbers of days or the dates stated in the Agreement to (a) achieve Milestones, if any; (b) achieve Substantial Completion; and (c) complete the Work.
18. *Design-Builder*: The individual or entity with which Owner has contracted for performance of the Work, as designated in the Agreement.
19. *Design Professional Services*: That part of the Work comprised of the furnishing of engineering, surveying, architecture, and other design services as set forth in a mutually agreed scope of work exhibit, and including which may include but not limited to providing research, analysis, and conclusions regarding engineering and related matters; exercising professional judgment with respect to technical issues; the preparation of plans, reports, calculations, models, schematics, drawings, specifications, Design Submittals, the Construction Drawings, Construction Specifications, and other instruments of service; other services included in the Contract Documents and required to be performed by or under the responsible charge of licensed design professionals; and the review of shop drawings, observation of construction, response to requests for

Commented [BC17]: The construction documents represent the work that will be performed under the comprehensive agreement. We would consider them Contract Documents. We would like to understand the reasoning behind not defining them as Contract Documents.

Commented [BC18]: Same comment as directly above.



information or interpretation, analysis of the technical aspects of Change Orders, and other engineering and related professional services provided by or for licensed design professionals during Construction.

20. *Design Agreement*: A written agreement between Design-Builder and a design firm or entity for provision of Design Professional Services.
21. *Design Submittal*: A Submittal that pursuant to Laws and Regulations or this Contract must be prepared by or under the supervision of a licensed engineer or other licensed design professional, including drawings, specifications, Construction Drawings, Construction Specifications, and revisions to such documents (but not including Record Documents).
22. *Effective Date of the Contract*: The date indicated in the Agreement on which the Contract becomes effective, but if no such date is indicated it means the date on which the Agreement is signed and delivered by the last of the two parties to sign and deliver.
23. *Engineer*: The Project Design Professional identified as Engineer in the Agreement, and engaged by Design-Builder to provide engineering and related professional services under a Design Agreement.
24. *Hazardous Environmental Condition*: The presence at the Site of Constituents of Concern in such quantities or circumstances that may present a danger to persons or property exposed thereto. The presence at the Site of materials that are necessary for the execution of the Work, or that are to be incorporated in the Work, and that are controlled and contained pursuant to industry practices, Laws and Regulations, and the requirements of the Contract, does not establish a Hazardous Environmental Condition.
25. *Laws and Regulations; Laws or Regulations*: Any and all applicable laws, statutes, rules, regulations, ordinances, binding resolutions, codes, decrees, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.
26. *Liens*: Charges, security interests, or encumbrances upon Contract-related funds, real property, or personal property.
27. *Milestone*: A principal event in the performance of the Work that the Contract requires Design-Builder to achieve by an intermediate completion date or by a time prior to Substantial Completion of Construction.
28. *Notice of Award*: The written notice by Owner to a Proposer stating that Owner will enter into the design-build contract with the Proposer.
29. *Notice to Proceed*: A written notice by Owner to Design-Builder fixing the date on which the Contract Times will commence to run and on which Design-Builder shall start to perform the Work.
30. *Owner*: The individual or entity with which Design-Builder has contracted regarding the Work, and which has agreed to pay Design-Builder for the performance of the Work, pursuant to the terms of the Contract.
31. *Owner's Consultant*: An individual or entity with which the Owner has contracted to furnish services (typically including planning, preparation of Conceptual Documents, and advisory services) to Owner with respect to the Project, and which is identified as such in the Agreement.



32. *Owner's Site Representative*: A representative of Owner at the Site, as indicated in Paragraph 10.05.
33. *Project*: The total undertaking to be accomplished for Owner by engineers, consultants, Design-Builder, subcontractors, and others, including planning, study, design, construction, testing, start-up, and commissioning, and of which the Work to be performed under the Contract Documents is a part.
34. *Project Design Professionals*: The Engineer and any other independent entities or individuals, or employees of Design-Builder, engaged by Design-Builder or a Construction Subcontractor to provide Design Professional Services with respect to a portion of the Work.
35. *Proposal*: The documents submitted by Design-Builder in response to the Request for Proposals, setting forth technical concepts, proposed prices, and other conditions for the Work to be performed, and stating any proposed revisions, modifications, clarifications, exceptions, or supplements to the proposed Contract Documents.
36. *Proposal Amendment*: A Contract Document that is prepared after submittal of Design-Builder's Proposal; identifies mutually agreed revisions, modifications, exceptions, supplements, and clarifications to the Proposal or proposed Contract Documents; and is executed by Owner and Design-Builder.
37. *Proposer*: An entity that submits a Statement of Qualifications or Proposal to Owner.
38. *Record Documents*: The record copy of all Construction Drawings, Construction Specifications, Addenda, Change Orders, Work Change Directives, and approved Submittals maintained by Design-Builder at the Site, including any annotations to such documents made by Design-Builder during Construction.
39. *Record Drawings and Record Specifications*: Documents depicting the completed Project, or a specific portion of the completed Project, based on or comprised of the Record Documents delivered to Owner by Design-Builder at the completion of the Construction.
40. *Request for Proposals*: The document prepared by or for Owner specifying and describing Owner's objectives, the procedures to be followed in preparing and submitting a Proposal, and the process for evaluating Proposals and awarding a contract.
41. *Request for Qualifications*: The document prepared by or for Owner requesting that Proposers submit a Statement of Qualifications with respect to their candidacy for selection as Design-Builder.
42. *Schedule of Values*: A schedule, prepared and maintained by Design-Builder, allocating portions of the Contract Price to various portions of the Work, and used as the basis for reviewing Design-Builder's Applications for Payment.
43. *Site*: Lands or areas indicated in the Contract Documents as being furnished by Owner upon which Construction is to be performed, including rights-of-way and easements, and such other lands furnished by Owner which are designated for use of Design-Builder.
44. *Statement of Qualifications*: The document submitted by a Proposer in response to the Request for Qualifications, including any completed forms, attachments, and exhibits.



45. **Submittal:** A written or graphic document, prepared by or for Design-Builder, which the Contract Documents require the Design-Builder to submit to the Owner. Submittals may include reports, preliminary drawings and specifications, cost estimates, proposed Construction Drawings and Construction Specifications, progress schedules, cash flow projections, Schedules of Values, shop drawings, product data, samples, delegated designs, certifications, proposed modifications to the Construction Drawings and Construction Specifications, results of tests and evaluations, results of source quality control testing and inspections, results of field or Site quality control testing and evaluations, sustainable design information, information on special procedures, operations and maintenance data, sustainable design closeout information, record documents, records of spare parts and extra stock materials, and other such documents required by the Contract Documents. Submittals, whether approved or accepted by Owner or not, are not Contract Documents. Claims, notices, Change Orders, Applications for Payment, and requests for information/interpretation are not Submittals.
46. **Substantial Completion:** The time at which the Construction (or a specified part thereof) has progressed to the point where it is sufficiently complete, in accordance with the Contract Documents, so that the Construction (or the specified part thereof) can be utilized for the purposes for which it is intended. The terms “substantially complete” and “substantially completed” as applied to all or part of the Construction refer to Substantial Completion thereof.
47. **Supplementary Conditions:** The part of the Contract Documents which amends or supplements these General Conditions.
48. **Supplier:** A manufacturer, fabricator, supplier, distributor, or vendor having a direct contract with Design-Builder or with any Construction Subcontractor to furnish materials or equipment to be incorporated in the Work by Design-Builder or a Construction Subcontractor, and any lessor of rental equipment used by Design-Builder or a Construction Subcontractor during Construction at the Site.
49. **Technical Data:** Data contained in boring logs, recorded measurements of subsurface water levels, laboratory test results, and other factual, objective information regarding (a) subsurface conditions at the Site, (b) physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities), or (c) environmental conditions at the Site, that are set forth in any geotechnical or environmental report prepared for the Project and relied upon by Design-Builder in agreeing to a price (either stipulated, or a Guaranteed Maximum Price) that includes Construction.
50. **Underground Facilities:** All underground lines, pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or systems, including but not limited to those that produce, transmit, distribute, or convey telephone or other communications, cable television, fiber optic transmissions, power, electricity, light, heat, gases, oil, crude products, liquid petroleum products, water, steam, waste, wastewater, storm water, other liquids or chemicals, fire or police signal systems, or traffic or other control systems; and any encasements containing such facilities or systems.
51. **Underground Facilities Data:** Information and data shown or indicated in the Contract Documents or otherwise provided to Design-Builder by Owner with respect to existing Underground Facilities at or adjacent to the Site.

Commented [SMH19]: The Supplemental Conditions deleted most of this section and clarified that a Submittal is “A written or graphic document, prepared by or for Proposer, which the RFQ Documents require the Proposer to submit to the Owner.”

We don't understand why most of this section was deleted. We would consider all of these items submittals.



52. *Unit Price Work*: Work to be paid for on the basis of unit prices.
53. *Work*: The entire design and construction or the various separately identifiable parts thereof required to be performed or furnished by Design-Builder under the Contract Documents. Work includes and is the result of performing or furnishing Design Professional Services and Construction required by the Contract Documents and all labor, services, and documentation necessary to produce such Design Professional Services and Construction; furnishing, installing, and incorporating all materials and equipment into such Construction; and related services such as testing, start-up, and commissioning, all as required by the Contract Documents.
54. *Work Change Directive*: A written directive to Design-Builder, issued on or after the Effective Date of the Contract, signed by Owner, ordering an addition, deletion or revision in the Work.

1.02 *Terminology*

- A. The words and terms discussed in Paragraph 1.02.B are not defined terms that require initial capital letters, but when used in the Contract Documents have the indicated meanings.
- B. *Intent of Certain Terms or Adjectives*:
1. The word “day” shall constitute a calendar day of 24 hours measured from midnight to the next midnight.
 2. The word “defective,” when modifying the word “Construction” refers to Construction that ~~is unsatisfactory, faulty, or deficient in that it~~ does not conform to the Contract Documents, or does not meet the requirements of any inspection, reference standard, test or approval referred to in the Contract Documents, or has been damaged prior to Owner’s final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion) provided that the defect was not caused by Owner.
 3. The word “furnish,” when used in connection with services, materials, or equipment, shall mean to supply and deliver said services, materials or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.
 4. The word “install,” when used in connection with services, materials, or equipment, shall mean to put into use or place in final position said services, materials or equipment or equipment complete and ready for intended use.
 5. The words “perform” or “provide” when used in connection with services, materials, or equipment, shall mean to furnish and install said services, materials, or equipment complete and ready for intended use.
 6. When “furnish,” “install,” “perform,” or “provide” is not used in connection with services, materials, or equipment in a context clearly requiring an obligation of Design- Builder, “provide” is implied.
 7. Unless stated otherwise in the Contract Documents, words or phrases that have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with that meaning.



ARTICLE 2 – PRELIMINARY MATTERS

2.01 *Delivery of Bonds and Evidence of Insurance*

- A. *Bonds*: When Design-Builder delivers the executed Agreements to Owner, Design-Builder shall also deliver to Owner such Bonds as Design-Builder may be required to furnish in accordance with Paragraph 6.01.A.
- B. *Evidence of Insurance*: Before any Work is started, Design-Builder and Owner shall each deliver to the other those certificates of insurance that Design-Builder and Owner respectively are required to purchase and maintain in accordance with Article 6.

2.02 *Copies of Documents*

- A. Owner shall furnish to Design-Builder four printed copies of the Contract (including one fully executed counterpart of the Agreement), and one copy in electronic portable document format (PDF). Additional printed copies will be furnished upon request at the cost of reproduction.
- B. Owner shall maintain and safeguard at least one original printed record version of the Contract. Owner shall make such original printed record version of the Contract available to Design-Builder for review.

2.03 *Conceptual Documents*

- A. *Design-Builder's Review of Conceptual Documents*:
 - 1. Design-Builder acknowledges that the Conceptual Documents furnished by Owner are preliminary and incomplete, and subject to stated limitations and reservations.
 - 2. Design-Builder ~~may rely on the accuracy of the Conceptual Documents shall carefully review, analyze, and until Design-Builder is able to verify~~ the contents and suitability of the Conceptual Documents ~~before proceeding with the Work (including but not limited to during the Design Professional Services phase of the Work).~~
 - 3. Design-Builder shall promptly report in writing to Owner any conflict, error, ambiguity, or discrepancy that Design-Builder may discover in the Conceptual Documents, whether during such review or at any later point.
 - 4. Upon receipt of a report from Design-Builder that there is a conflict, error, ambiguity, or discrepancy in the Conceptual Documents, Owner shall either provide a written interpretation, clarification, or correction to Design-Builder, or authorize Design-Builder to correct or resolve the issue under a Change Order providing an equitable adjustment in Contract Times or Contract Price, or both.
 - 5. Design-Builder shall not proceed with any Work affected by a reported conflict, error, ambiguity, or discrepancy in the Conceptual Documents until the issue is resolved.
- B. Owner shall not be responsible for any deficiency in the Conceptual Documents that Design-Builder does not discover or report to Owner.
- C. Subject to the foregoing review and reporting obligations, Design-Builder may use the Conceptual Documents as a partial basis for performing or furnishing Design Professional Services, including the preparation of Design Submittals such as the Construction Drawings and Construction Specifications, but despite any such use of the Conceptual Documents the Design-Builder nonetheless shall be responsible to Owner for the quality and soundness of the Design Professional Services.



2.04 *Before Starting the Work*

- A. *Preliminary Schedules:* Within 10 days after commencement of the Contract Times (unless otherwise specified in the Contract Documents), Design-Builder shall submit the following to Owner for Owner's timely review:
1. A preliminary progress schedule indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract Documents;
 2. A preliminary schedule of Submittals (including Design Submittals) which will list each required Submittal and the times for submitting, reviewing, and processing each Submittal;
 3. A preliminary Schedule of Values for all of the Work which will include quantities and prices of items which when added together equal the Contract Price and subdivides the Work into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work; and
 4. A preliminary cash flow projection estimating that portion of the Contract Price to be due during each month of performance.

2.05 *Authorized Representatives*

- A. The Authorized Representative for each party has been designated in the Agreement. A party may change its Authorized Representative at any time by giving notice to the other party of the name, mailing and delivery addresses, e-mail address, and telephone numbers of the new Authorized Representative.

2.06 *Initial Conference*

- A. Within 20 days after the Contract Times start to run, Design-Builder will arrange a conference attended by Owner and Design-Builder and others as appropriate to establish a working understanding among the parties as to the Work and to discuss the design concepts, schedules referred to in Paragraph 2.04.A, procedures for handling Submittals, processing Applications for Payment, maintaining required records, and other matters.

2.07 *Review of Schedules*

- A. Not less than 10 days before submission of the first Application for Payment (unless otherwise provided in the Contract Documents), Design-Builder will arrange a conference attended by Design-Builder, Owner, and others as appropriate to review and discuss the schedules submitted in accordance with Paragraph 2.04.A. Design-Builder shall have an additional 10 days after the conference to make corrections and adjustments and to complete and resubmit the schedules for Owner's acceptance. No progress payment shall be made to Design-Builder until Design-Builder submits schedules that comply with the following requirements:
1. Design-Builder's progress schedule shall provide an orderly progression of the Work to completion within any specified Milestones and the Contract Times.
 2. Design-Builder's schedule of Submittals shall provide a workable arrangement for submitting, reviewing, and processing Submittals in accordance with Article 8.
 3. Design-Builder's Schedule of Values shall provide a reasonable allocation of the Contract Price to component parts of the Work.

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2.08 *Electronic Transmittals*

- A. Except as otherwise stated elsewhere in the Contract, the Owner and Design-Builder may transmit, and shall accept, Project-related correspondence, text, data, documents, drawings, information, and graphics, including but not limited to Submittals, in electronic media or digital format, either directly, or through access to a secure Project website.
- B. If the Contract does not establish protocols for electronic or digital transmittals, then Owner and Design-Builder shall jointly develop such protocols.
- C. Unless expressly stated otherwise elsewhere in this Contract, Design-Builder shall not be obligated to furnish documents (including but not limited to Construction Drawings, Construction Specifications, or Record Drawings and Record Specifications) to Owner in any executable, native-file format.
- D. When transmitting items in electronic media or digital format, the transmitting party makes no representations as to long term compatibility, usability, or readability of the items resulting from the recipient's use of software application packages, operating systems, or computer hardware differing from those used in the drafting or transmittal of the items, or from those established in applicable transmittal protocols.

ARTICLE 3 – DOCUMENTS: INTENT, AMENDING, REUSE

3.01 *Contract Documents*

- A. The Contract Documents are complementary; what is called for by one is as binding as if called for by all.
- B. It is the intent of the Contract Documents to require the design and construction of a functionally complete project (or part thereof).
- C. Design-Builder shall prepare or furnish Construction Drawings and Construction Specifications that are in accord with the Contract Documents and that describe a functionally complete Project (or part thereof) to be constructed in accordance with such Construction Drawings and Construction Specifications, as duly modified.
- D. The Contract supersedes prior negotiations, representations, or agreements, whether written or oral.
- E. Design-Builder will furnish or perform all labor, documentation, services (including professional services), materials, and equipment that may reasonably be inferred from the Contract Documents or from prevailing custom or trade usage as being required to produce the intended result whether or not specifically called, for at no additional cost to Owner.

3.02 *Reference Standards*

- A. *Standards, Specifications, Codes, Laws or Regulations:*
 - 1. Reference to standards, specifications, manuals or codes of any technical society, organization or association, or to Laws or Regulations, whether such reference be specific or by implication, shall mean the standard, specification, manual, code, or Laws or Regulations in effect on the Effective Date except as may be otherwise specifically stated in the Contract Documents.
 - 2. No provision of any such standard, specification, manual, or code, or instruction of a Supplier, shall be effective to change the duties and responsibilities of Owner, Design-Builder, or any of their subcontractors, consultants, agents, or employees from those set

Commented [SMH20]: This was deleted in the Supplemental Conditions.. We think these should become part of the contract documents.



forth in the Contract Documents, nor shall it be effective to assign to Owner or its officers, directors, members, partners, employees, agents, consultants, or subcontractors any duty or authority to supervise or direct the furnishing or performance of the Work or any duty or authority to undertake responsibility inconsistent with the provisions of the Contract Documents.

3.03 *Resolving Discrepancies*

- A. If there is a discrepancy between (1) the Conceptual Documents or other Contract Documents issued with the Request for Qualifications or Request for Proposals and (2) the Proposal, the Proposal will control.
- B. If there is a discrepancy between (1) the Conceptual Documents, other Contract Documents issued with the Request for Qualifications or Request for Proposals, or the Proposal and (2) the Proposal Amendment, the Proposal Amendment will control.
- C. If there is a discrepancy between (1) the Contract Documents and (2) the Construction Drawings and Construction Specifications, the Contract Documents will control unless Design-Builder gave notice of the discrepancy in a Submittal, and Owner approved the Submittal, pursuant to the provisions of Article 8.

3.04 *Ownership and Reuse of Documents*

- A. All documents prepared for or furnished to Owner by Design-Builder pursuant to this Contract (including but not limited to Design Submittals) are instruments of service. With respect to such documents:
 1. Design-Builder shall have and retain the ownership, title, and property rights, including copyright, patent, intellectual property, and common law rights, in the documents.
 2. During the course of the Project, Design-Builder will provide copies of Design Submittals to Owner for purposes of review and comment. Owner may retain copies of such documents for its records.
 3. Owner may use its copy of the Record Drawings and Record Specifications for Owner's purposes in operating and maintaining the constructed facilities.
 4. Upon Owner's termination of this Contract for cause or convenience pursuant to Paragraph 15.02 Article 15, Owner shall receive a limited, non-exclusive license to use any completed Design Submittals in continuing the Project, subject to the limitations in this Paragraph 3.04. A completed Design Submittal is a Design Submittal that has been marked "FOR CONSTRUCTION", "IFC" or other markings indicating that it is final and complete for use.
 5. The documents prepared or furnished by Design-Builder under this Contract, regardless of ownership, transfer, license, completion status, or termination of the Contract, are for Design-Builder's use, and are not intended or represented to be suitable for use on the Project by Owner or any party other than Design-Builder, or for reuse by Owner or others on extensions of the Project or on any other project, except as otherwise stated in this Contract. Any use or reuse by Owner or others on Owner's behalf will be at Owner's sole risk, and without liability or legal exposure to Design-Builder, the Project Design Professionals, or their subconsultants, and Owner shall indemnify and hold harmless Design-Builder, the Project Design Professionals, and their subconsultants from all claims, damages, losses and expenses, including attorneys' fees, arising out of or resulting from

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ARTICLE 4 – COMMENCEMENT AND PROGRESS OF THE WORK

4.01 *Commencement of Contract Times*

- A. The Contract Times will commence to run on the Effective Date of the Contract.

4.02 *Starting the Work*

- A. Design-Builder shall start to perform the Work as of the Effective Date of the Contract. No Construction shall be done at the Site prior to the Effective Date of the Contract.

4.03 *Progress Schedule*

- A. Owner may rely on the progress schedule established in accordance with Paragraph 2.04, as duly adjusted, in planning and conducting ongoing operations and other work at the Site.
- B. Design-Builder shall adhere to the progress schedule established in accordance with Paragraph 2.04 as it may be adjusted from time to time, as provided below:
 - 1. Design-Builder shall submit to Owner proposed adjustments in the progress schedule that will not change the Contract Times (or Milestones). Owner shall accept such adjustments provided that Owner, in planning and conducting ongoing operations and other work at the Site, has not reasonably relied on the schedule element that is proposed to be adjusted. If Owner has so relied, then Owner and Design-Builder shall promptly meet and seek a resolution that addresses the objectives of both parties, or adjust the Contract Price.
 - 2. Design-Builder shall submit proposed adjustments in the progress schedule that will change the Contract Times (including Milestones) in accordance with the requirements of Paragraph 11.06. Such adjustments may only be made by a Change Order.
- C. *Continuing the Work:* Design-Builder shall continue the Work and adhere to the progress schedule during all disputes or disagreements with Owner. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, except as Design-Builder and Owner may otherwise agree in writing.

4.04 *Delays in Design-Builder's Progress*

- A. If Owner or other contractors performing work at or adjacent to the Site by arrangement with the Owner or anyone for whom Owner is responsible delays, disrupts, or interferes with the performance or progress of the Work, then Design-Builder shall be entitled to an equitable adjustment in the Contract Times and Contract Price. Design-Builder's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Design-Builder's ability to complete the Work within the Contract Times.
- B. Design-Builder shall not be entitled to an adjustment in Contract Price or Contract Times for delay, disruption, or interference within the control of Design-Builder. Delay, disruption, and interference attributable to and within the control of a Project Design Professional, Construction Subcontractor, or Supplier shall be deemed to be delays within the control of Design-Builder.
- C. If Design-Builder's performance or progress is delayed, disrupted, or interfered with by unanticipated causes not the fault of and beyond the control of Owner, Design-Builder, and those for which they are responsible, then Design-Builder shall be entitled to an equitable adjustment in Contract Times and Contract Price. Design-Builder's entitlement to such an adjustment of the Contract Times is conditioned on such adjustment being essential to Design-Builder's ability to complete the Work within the Contract Times. Such an adjustment

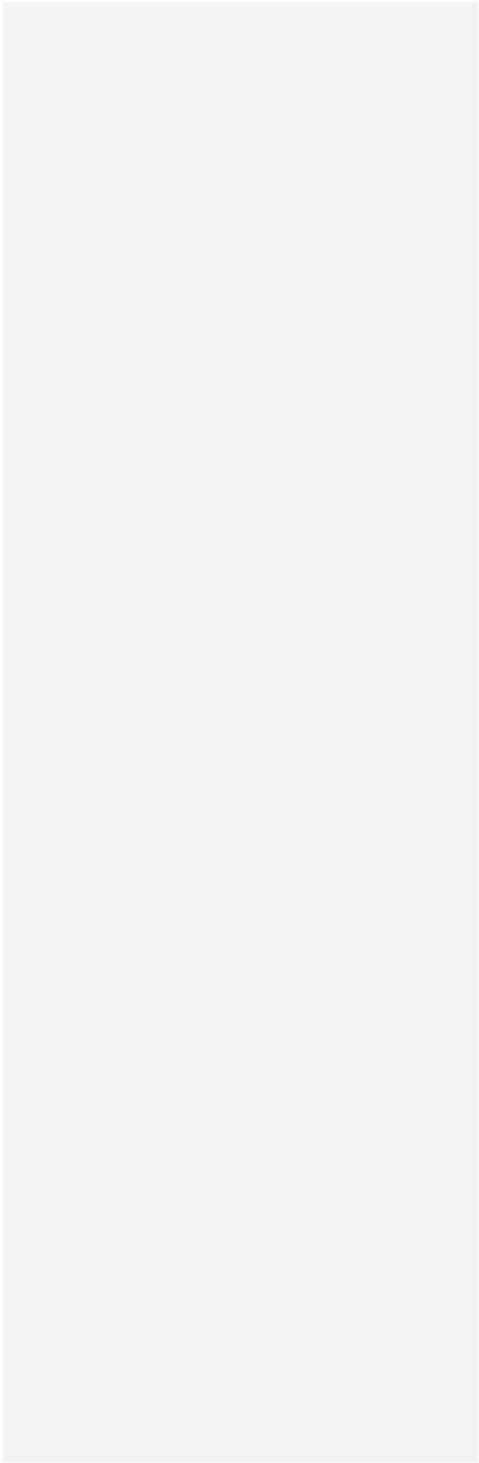
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shall be Design- Builder's sole and exclusive remedy for the delays, disruption, and interference described in



this paragraph. Causes of delay, disruption, or interference that may give rise to an adjustment in Contract Times under this paragraph include but are not limited to the following:

1. Severe and unavoidable natural catastrophes such as fires, floods, epidemics, and earthquakes;
 2. Abnormal weather conditions;
 3. Acts or failures to act of utility owners (other than those performing other work at or adjacent to the Site by arrangement with the Owner, as contemplated in Article 9); and
 4. Acts of war or terrorism.
- D. Delays, disruption, and interference to the performance or progress of the Work resulting from the existence of a differing subsurface or physical condition, an Underground Facility that was not shown or indicated by the Contract Documents, or not shown or indicated with reasonable accuracy, and those resulting from Hazardous Environmental Conditions, are governed by Article 5.
- E. Paragraph 9.03 governs delays, disruption, and interference to the performance or progress of the Work resulting from the performance of certain other work at or adjacent to the Site.
- F. Design-Builder shall not be entitled to an adjustment in Contract Price ~~or Contract Times~~ for any delay, disruption, or interference if such delay is concurrent with a delay, disruption, or interference caused by or within the control of Design-Builder.
- G. If Design-Builder seeks an adjustment in Contract Price or Contract Times under this paragraph, Design-Builder shall submit a request for a Change Order to Owner within 30 days of the ~~commencement~~ known impact of the delaying, disrupting, or interfering event.

ARTICLE 5 – SITE; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS

5.01 Availability of Lands

- A. Owner shall furnish the Site. Owner shall notify Design-Builder of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Design-Builder will have to comply in performing the Work. Design-Builder shall be entitled to an equitable adjustment in the Contract Times and Contract Price if Owner fails to provide Design-Builder with access to the Site necessary for Design-Builder to perform the Work.
- B. Upon reasonable written request, Owner shall furnish Design-Builder with a current statement of record legal title and legal description of the lands upon which the Construction is to be performed and Owner's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws or Regulations.
- C. Design-Builder shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

5.02 Use of Site and Other Areas

A. Limitation on Use of Site and Other Areas:

1. Design-Builder shall confine construction equipment, the storage of materials and equipment, and the operations of construction workers to the Site and other areas permitted by Laws or Regulations, and shall not unreasonably encumber the Site and

Commented [SMH21]: The supplemental conditions deleted this clause. We were under the impression that the Owner will provide all access necessary for the performance of the Work; SC 5.01 needs to be discussed. See also 10.01.A.3 regarding Owner's obligations to furnish the Site.



other areas with construction equipment or other materials or equipment. Design-Builder shall assume full responsibility for any damage to any such land or area, or to



the owner or occupant thereof or of any adjacent land or areas, resulting from the performance of the Work.

2. Should any claim be made by any such owner or occupant because of the performance of Work, Design-Builder shall promptly settle with such other party by negotiation, or otherwise resolve the claim by arbitration or other dispute resolution proceeding, or at law.
3. To the fullest extent permitted by Laws or Regulations, Design-Builder shall indemnify and hold harmless Owner, Owner's consultants, and anyone directly or indirectly employed by any of them from and against all claims, costs, losses and damages (including, but not limited to, fees of engineers, architects, attorneys and other professionals and court and arbitration or other dispute resolution costs) arising out of or resulting from any claim brought by any such owner or occupant against Owner, or any other party indemnified hereunder to the extent caused by or based upon Design-Builder's performance of the Construction.

- B. **Removal of Debris:** During the performance of the Construction, Design-Builder shall keep the premises free from accumulations of waste materials, rubbish, and other debris resulting from the Construction. Removal and disposal of such waste materials, rubbish, and other debris shall conform to applicable Laws or Regulations.
- C. **Cleaning:** Prior to Substantial Completion, Design-Builder shall clean the Site and make it ready for utilization by Owner. At completion of Construction, Design-Builder shall remove all tools, appliances, construction equipment, temporary construction and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.
- D. **Loading Structures:** Design-Builder shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Design-Builder subject any part of the Construction or adjacent property to stresses or pressures that will endanger it.

Commented [SMH22]: On similar projects, Owner's have allowed us to dispose of debris generated during sewer cleaning at their wastewater treatment facility at no cost. We'd like to propose a similar arrangement here.

5.03 Reference Points

- A. Design-Builder shall be responsible for laying out the Work and shall protect and preserve reference points and property monuments established by Owner, and shall make no changes or relocations of such reference points or monuments without the prior written approval of Owner. Design-Builder shall report to Owner whenever any reference point or property monument is lost or destroyed, or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points or property monuments by professionally qualified personnel.

5.04 Differing Site Conditions

- A. **Design-Builder may rely on the accuracy of the Technical Data with respect to subsurface conditions at the Site.** Design-Builder shall promptly, and before the conditions are disturbed, give a written notice to Owner of (i) subsurface or latent physical conditions at the Site (whether discovered during investigation of the Site or during Construction) which differ materially from those indicated in the Contract Documents, or in any Technical Data, or (ii) unknown physical conditions at the Site, of an unusual nature, which differ materially from those ordinarily encountered and generally recognized as **inhering-inherent** in work of the character called for by the Contract Documents.
- B. Owner will investigate the Site conditions promptly after receiving the notice. Design-Builder shall supplement the notice by promptly submitting to Owner any additional

Commented [SMH23]: Would SSES data that represents the condition of underground sewer pipes and manholes, such as CCTV provided by Localities be considered subsurface structures?



information regarding schedule and cost impacts, and a specific request for a Change Order. Owner shall then make a determination regarding the site condition and the impact, if any, on Contract Price and Contract Times. If the conditions do materially so differ and cause an increase or decrease in the Design-Builder's cost of, or the time required for, performing any part of the Work, whether or not changed as a result of the conditions, an equitable adjustment shall be made under this clause and the Contract Price or Times modified in writing by Change Order in accordance with Article 11.

- C. No request by Design-Builder for an equitable adjustment under this Paragraph 5.04 shall be allowed unless Design-Builder has given the written notice required.
- D. The provisions of this Paragraph 5.04 are not intended to apply to a Hazardous Environmental Condition or Underground Facility uncovered or revealed at the Site.

5.05 *Underground Facilities*

A. *Procedure for Identifying Underground Facilities:* Promptly after the Effective Date of the Contract, Design-Builder shall review the Underground Facilities Data furnished by Owner and use ASCE 38, "Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data," as a basis for establishing a procedure ("Underground Facilities Procedure") for the further identification, investigation, and mapping of Underground Facilities at or adjacent to the Site. Design-Builder shall establish and use the Underground Facilities Procedure to aid in the provision of Design Professional Services and the performance of Construction, and to reduce and manage risks associated with Underground Facilities. Such Underground Facilities Procedure shall take into account the Site and the nature of the Project.

- 1. The Underground Facilities Procedure shall include a plan to keep Underground Facilities information current as Design-Builder proceeds with the provision of Design Professional Services, and to add new or relocated Underground Facilities information to the base utility or Site drawings.
- 2. To manage the potential impact of design changes on Underground Facilities, Design-Builder shall modify or reapply the Underground Facilities Procedure as the design progresses and changes.

B. *Design-Builder's Responsibilities:* Unless otherwise expressly provided in the Contract, Design-Builder shall have full responsibility for the following; and, subject to the provisions of Paragraphs 5.05.C, D, and E, the cost of all of the following will be included in the Contract Price:

- 1. Establishing and executing the Underground Facilities Procedure referred to in Paragraph 5.05.A, including updating, modification, and reapplication duties;
- 2. Coordinating the Work with the owners (including Owner) of such Underground Facilities, during the provision of Design Professional Services and Construction;
- 3. Verifying the actual location of specific Underground Facilities through exposure, as needed for the Design Professional Services;
- 4. Complying with applicable state and local utility damage prevention Laws and Regulations during Construction; and
- 5. The safety and protection of all existing Underground Facilities at the Site, and repairing any damage to such Underground Facilities resulting from the Construction, subject to the provisions of Paragraph 5.05.D.

Commented [SMH24]: This indicates Contractor is responsible for coordinating the work with localities. Does this include gaining access to the sites? what requirements could localities place on contractor as owner of the sewer assets to be repaired?

Commented [PJJ25R24]: MOU between Locality and HRSD says: Provide to the applicable Locality complete copies of record drawings of improvements constructed by DB within that Locality within thirty (30) days of completion or amendment of such drawings;

Commented [BC26R25]: RFP Paragraph 1.04.B says "HRSD will coordinate the identification and reduction of overflows with locality partners."

MOU Paragraph B.1.s indicates "HRSD will cooperate with Localities when requested to incorporate other locally funded infrastructure improvements as part of any RWWMP project, provided that HRSD can do so consistent with the approved RWWMP schedule and HRSD's project-related costs do not increase by more than ten percent (10%) (a Locality may pay any amount of additional HRSD cost above the 10% threshold in order to satisfy this condition)."

Private Entity will look for HRSD to coordinate with Locality to identify and incorporate locally funded infrastructure improvements as part of each I/I reduction project. This will be a collaborative effort by HRSD, the Locality, and Private Entity.



- C. *Results of Design-Builder's Execution of Underground Facilities Procedure:* If, during the execution of the Underground Facilities Procedure referred to in Paragraph 5.05.A, the Design-Builder identifies an Underground Facility that was not shown or indicated in the Underground Facilities Data, or was not shown or indicated with reasonable accuracy, causing an increase or decrease in the Design-Builder's cost of, or the time required for, providing Design Professional Services or performing the Construction, then Design-Builder shall submit to Owner a request for a Change Order seeking an equitable adjustment to the Contract Price or Times under this clause. Such request shall be made within 30 days of the identification of the Underground Facility in question.
- D. *Underground Facility Found During Construction:* If Design-Builder believes that an Underground Facility that is uncovered, exposed, or revealed at the Site during Construction was not shown or indicated in the Underground Facilities Data, or was not shown or indicated with reasonable accuracy, and also that such Underground Facility was not identified or mapped with reasonable accuracy despite Design-Builder's adequate establishment and execution of the Underground Facilities Procedure referred to in Paragraph 5.05.A, then Design-Builder shall promptly give written notice to Owner, and supplement the notice by submitting to Owner a request for a Change Order seeking an equitable adjustment to the Contract Price or Times under this clause. Such request shall be made within 30 days of the uncovering or revealing of the Underground Facility in question.
1. *Owner's Review:* Owner will investigate the Underground Facility found during Construction promptly after receiving the notice. If Owner concurs with Design-Builder that the Underground Facility that is uncovered, exposed, or revealed at the Site was not shown or indicated in the Underground Facilities Data, or was not shown or indicated with reasonable accuracy, and further was not identified or mapped with reasonable accuracy despite Design-Builder's adequate establishment and execution of the Underground Facilities Procedure referred to in Paragraph 5.05.A, causing an increase or decrease in the Design-Builder's cost of, or the time required for, performing any part of the Work, whether or not changed as a result of the actual location, then an equitable adjustment shall be made under this clause and the Contract Price or Times modified in writing by Change Order in accordance with Article 11. If Owner does not concur with Design-Builder, then Owner shall so indicate in writing, with a specific explanation of the reason for non-concurrence.
 2. No request by Design-Builder for an equitable adjustment under Paragraph 5.05.D shall be allowed unless Design-Builder has given the written notice required.
- E. *Inadequate Establishment or Execution of Underground Facilities Procedure:* If Design-Builder does not establish an Underground Facilities Procedure that is (1) adequate for the Site and the nature of the Project and (2) consistent with the guidelines set forth in ASCE 38, "Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data," or Design-Builder does not adequately execute a duly established Underground Facilities Procedure, then Design-Builder shall bear all costs associated with the presence of an Underground Facility that was not identified or located with reasonable accuracy, including but not limited to delay, redesign, relocation, and increased Construction costs, if such Underground Facility would have been identified and located with reasonable accuracy by an adequate and properly executed Underground Facilities Procedure that was consistent with ASCE 38.



5.06 *Hazardous Environmental Conditions at Site*

- A. *Reliance by Design-Builder on Technical Data Authorized:* Design-Builder may rely on the accuracy of the Technical Data with respect to environmental conditions at the Site.
- B. Design-Builder shall not be responsible for removing or remediating any Hazardous Environmental Condition encountered, uncovered, or revealed at the Site unless such removal or remediation is expressly identified in the Contract Documents to be within the scope of the Work.
- C. Design-Builder shall be responsible for controlling, containing, and duly removing all Constituents of Concern brought to the Site by Design-Builder, Project Design Professionals, Construction Subcontractors, Suppliers, or anyone else for whom Design-Builder is responsible, and for any associated costs; and for the costs of removing and remediating any Hazardous Environmental Condition created by the presence of any such Constituents of Concern.
- D. If Design-Builder encounters, uncovers, or reveals a Hazardous Environmental Condition (whether during Site investigation or during Construction) whose removal or remediation is not expressly identified in the Contract Documents as being within the scope of the Work, or if Design-Builder or anyone for whom Design-Builder is responsible creates a Hazardous Environmental Condition as set forth in paragraph C, then Design-Builder shall immediately: (1) secure or otherwise isolate such condition; (2) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 7.16); and (3) notify Owner (and promptly thereafter confirm such notice in writing). Owner shall promptly determine whether to retain a qualified expert to evaluate such condition or take corrective action, if any, and take such actions as are necessary to permit Owner to timely obtain required permits and provide Design-Builder the written notice required by Paragraph 5.06.E. If Design-Builder or anyone for whom Design-Builder is responsible created the Hazardous Environmental Condition in question as set forth in paragraph C, then Owner may remove and remediate the Hazardous Environmental Condition, and impose a set-off against payments to account for the associated costs.
- E. Design-Builder shall not resume Work in connection with such Hazardous Environmental Condition or in any affected area until after Owner has obtained any required permits related thereto, and delivered written notice to Design-Builder either (1) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work, or (2) specifying any special conditions under which such Work may be resumed safely.
- F. If after receipt of such written notice Design-Builder does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special conditions, then the portion of the Work that is in the area affected by such condition shall be deleted from the Work, following the contractual change procedures in Article 11. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 9.
- G. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Design-Builder, Project Design Professionals, Construction Subcontractors, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or



relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition (1) was not shown or indicated in the Contract Documents or the Technical Data, or identified in the Contract Documents to be included within the scope of the Work, and (2) was not created by Design-Builder or by anyone for whom Design-Builder is responsible as set forth above in paragraph C. Nothing in this Paragraph 5.06.G shall obligate Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

- H. To the fullest extent permitted by Laws and Regulations, Design-Builder shall indemnify and hold harmless Owner and its officers, directors, members, partners, employees, agents, consultants, and subcontractors from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the Design-Builder's failure to control, contain, or remove a Constituent of Concern brought to the Site by Design-Builder or by anyone for whom Design-Builder is responsible, or to a Hazardous Environmental Condition created by a Constituent of Concern brought to the Site by Design-Builder or by anyone for whom Design-Builder is responsible. Nothing in this Paragraph 5.06.H shall obligate Design-Builder to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

Commented [SMH27]: This was deleted by the Supplemental Conditions. We would prefer to keep this provision in the contract.

ARTICLE 6 – BONDS AND INSURANCE

6.01 Performance, Payment, and Other Bonds

- A. Design-Builder shall furnish a performance bond and a payment bond, each in an amount at least equal to the Contract Price, as security for the faithful performance and payment of Design-Builder's obligations under the Contract. These bonds shall remain in effect until one year after the date when final payment becomes due, or until completion of the correction period specified in Paragraph 14.08, whichever is later, except as provided otherwise by Laws or Regulations, the terms of a prescribed bond form, the Supplementary Conditions, or other specific provisions of the Contract. Design-Builder shall also furnish such other bonds as are required by the Supplementary Conditions or other specific provisions of the Contract.
- B. All bonds shall be in the form prescribed by the Contract except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (as amended and supplemented) by the Financial Management Service, Surety Bond Branch, U.S. Department of the Treasury. A bond signed by an agent or attorney-in-fact must be accompanied by a certified copy of that individual's authority to bind the surety. The evidence of authority shall show that it is effective on the date the agent or attorney-in-fact signed the accompanying bond.
- C. Design-Builder shall obtain the required bonds from surety companies that are duly licensed or authorized in the jurisdiction in which the Project is located to issue bonds in the required amounts.
- D. If the surety on a bond furnished by Design-Builder is declared bankrupt or becomes insolvent, or its right to do business is terminated in any state or jurisdiction where any part of the Project is located, or the surety ceases to meet the requirements above, then Design-Builder shall promptly notify Owner and Engineer and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which shall comply with the bond and surety requirements above.



- E. If Design-Builder has failed to obtain a required bond, Owner may exclude the Design-Builder from the Site and exercise Owner's termination rights under Article 15.
- F. Upon request to either Owner or Design-Builder from any Construction Subcontractor, Project Design Professional, Supplier, or other person or entity claiming to have furnished labor, services, materials, or equipment used in the performance of the Work, the recipient of the request shall provide a copy of the payment bond to such person or entity.

6.02 *Insurance—General Provisions*

- A. Owner and Design-Builder shall obtain and maintain insurance as required in this Article and in the Supplementary Conditions.
- B. All insurance required by the Contract to be purchased and maintained by Owner or Design-Builder shall be obtained from insurance companies that are duly licensed or authorized, in the state or jurisdiction in which the Project is located, to issue insurance policies for the required limits and coverages. Unless a different standard is indicated in the Supplementary Conditions, all companies that provide insurance policies required under this Contract shall have an A.M. Best rating of A-VII or better.
- C. All Commercial General Liability, Automobile Liability, Excess/Umbrella Liability, and Contractor's Pollution Liability insurance policies providing additional insured coverage and required by the Contract to be purchased and maintained by Design-Builder shall be primary and without contribution by insurance of the same type and form maintained by Owner.
- D. Alternative forms of insurance coverage, including but not limited to self-insurance and "Occupational Accident and Excess Employer's Indemnity Policies," are not sufficient to meet the insurance requirements of this Contract, unless expressly permitted in the Supplementary Conditions.
- E. Design-Builder shall require (a) its Construction Subcontractors and Engineer (and any other Project Design Professional that is an independent individual or entity) to purchase and maintain commercial general liability, automobile liability, workers' compensation, employer's liability, professional liability (as applicable), and umbrella or excess liability insurance, and (b) its Construction Subcontractors to purchase and maintain contractor's pollution liability insurance. Design-Builder shall use commercially reasonable efforts to contractually require a ~~All such required insurance shall to~~ meet the same requirements for the applicable category of insurance established in this Contract for Design-Builder, unless otherwise indicated in the Supplementary Conditions.
- F. Design-Builder shall deliver to Owner, with copies to each additional insured (as identified in this Article, in the Supplementary Conditions, or elsewhere in the Contract), certificates of insurance establishing that Design-Builder has obtained and is maintaining the policies, coverages, and endorsements required by the Contract. Upon request by Owner or any other insured, Design-Builder shall also furnish other evidence of such required insurance, including but not limited to copies of policies and endorsements, documentation of applicable self-insured retentions (if permitted) and deductibles, and evidence of insurance required to be purchased and maintained by Design-Builder's Construction Subcontractors, Engineer, and any other Project Design Professional that is an independent individual or entity. Design-Builder may block out (redact) any confidential premium or pricing information contained in any policy or endorsement furnished under this provision.
- G. Owner shall deliver to Design-Builder, with copies to each additional insured (as identified in this Article, the Supplementary Conditions, or elsewhere in the Contract), certificates of



insurance establishing that Owner has obtained and is maintaining the policies, coverages, and endorsements required of Owner by the Contract (if any). Upon request by Design-Builder or any other insured, Owner shall also provide other evidence of such required



insurance (if any), including but not limited to copies of policies and endorsements, and documentation of applicable self-insured retentions and deductibles. Owner may block out (redact) any confidential premium or pricing information contained in any policy or endorsement furnished under this provision.

- H. Failure of Owner or Design-Builder to demand such certificates or other evidence of the other party's full compliance with these insurance requirements, or failure of Owner or Design-Builder to identify a deficiency in compliance from the evidence provided, shall not be construed as a waiver of the other party's obligation to obtain and maintain such insurance.
- I. If either party does not purchase or maintain all of the insurance required of such party by the Contract, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage.
- J. If Design-Builder has failed to obtain and maintain required insurance, Owner may exclude the Design-Builder from the Site, impose an appropriate set-off against payment, and exercise Owner's termination rights under Article 15.
- K. Without prejudice to any other right or remedy, if a party has failed to obtain required insurance, the other party may elect to obtain equivalent insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and the Contract Price shall be adjusted accordingly.
- L. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Design-Builder or Design-Builder's interests.

~~The insurance and insurance limits required herein shall not be deemed as a limitation on Design-Builder's liability under the indemnities granted to Owner and other individuals and entities in the Contract.~~

6-046.03 Design-Builder's Insurance

- A. *Workers' Compensation and Employer's Liability:* Design-Builder shall purchase and maintain workers' compensation and employer's liability insurance for:
 - 1. Claims under workers' compensation, disability benefits, and other similar employee benefit acts.
 - ~~2. United States Longshoreman and Harbor Workers' Compensation Act and Jones Act coverage (if applicable).~~
 - ~~3-2.~~ Claims for damages because of bodily injury, occupational sickness or disease, or death of Design-Builder's employees (by stop-gap endorsement in monopolist worker's compensation states).
 - ~~4-3.~~ Foreign voluntary worker compensation (if applicable).
- B. *Commercial General Liability—Claims Covered:* Design-Builder shall purchase and maintain commercial general liability insurance, covering all operations by or on behalf of Design-Builder, on an occurrence basis, against:
 - 1. Claims for damages because of bodily injury, sickness or disease, or death of any person other than Design-Builder's employees.
 - 2. Claims for damages insured by reasonably available personal injury liability coverage.



3. Claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom.
- C. *Commercial General Liability—Form and Content:* Design-Builder’s commercial liability policy shall be written on a 1996 (or later) ISO commercial general liability form (occurrence form) and include the following coverages and endorsements:
1. Products and completed operations coverage:
 - a. Such insurance shall be maintained for three years after final payment.
 - b. Design-Builder shall furnish Owner and each other additional insured (as identified in the Supplementary Conditions or elsewhere in the Contract) evidence of continuation of such insurance at ~~final payment~~completion of the Work and ~~for three-one years~~ thereafter.
 2. Blanket contractual liability coverage, to the extent permitted by law, ~~including but not limited to coverage of Design-Builder’s contractual indemnity obligations in Paragraph 7-19.~~
 3. Broad form property damage coverage.
 4. Severability of interests and no insured-versus-insured or cross-liability exclusions.
 5. Underground, explosion, and collapse coverage.
 6. Personal ~~and advertising~~ injury coverage.
 7. Additional insured endorsements that include both ongoing operations and products and completed operations coverage through ISO Endorsements CG 20 10 10 01 and CG 20 37 10 01 (together). If Design-Builder demonstrates to Owner that the specified ISO endorsements are not commercially available, then Design-Builder may satisfy this requirement by providing equivalent endorsements.
 0. ~~For design professional additional insureds, ISO Endorsement CG 20 32 07 04, “Additional Insured—Engineers, Architects or Surveyors Not Engaged by the Named Insured” or its equivalent.~~

~~F.D.~~ *Commercial General Liability—Excluded Content:* The commercial general liability insurance policy, including its coverages, endorsements, and incorporated provisions, shall not include any of the following:

1. Any modification of the standard definition of “insured contract.”
2. Any exclusion for water intrusion or water damage.
3. Any provisions resulting in the erosion of insurance limits by defense costs.
4. Any exclusion of coverage relating to earth movement.
5. Any exclusion for the insured’s vicarious liability, strict liability, or statutory liability.
6. Any limitation or exclusion based on the nature of Design-Builder’s work.
7. Any professional liability exclusion broader in effect than ISO form CG 22 79 07 98 or equivalent.

~~F.E.~~ *Automobile liability:* Design-Builder shall purchase and maintain automobile liability insurance against claims for damages because of bodily injury or death of any person or property damage ~~arising out of~~caused by the ownership, maintenance, or use of any motor vehicle. The automobile liability policy shall be written on an occurrence basis.



~~G.F.~~ *Umbrella or excess liability:* Design-Builder shall purchase and maintain umbrella or excess liability insurance written over the underlying employer's liability, commercial general liability, and automobile liability insurance described in the paragraphs above. Subject to industry-standard exclusions, the coverage afforded shall be procured on a "~~follow the form~~ coverage as broad as" basis as to each and every one of the underlying policies. Design-Builder may meet the combined limits of insurance (underlying policy plus applicable umbrella or excess) specified for employer's liability, commercial general liability, and automobile liability through the primary policies alone, or through combinations of the primary insurance policies and an umbrella or excess liability policy ~~that follows the form of~~ with coverage as broad as the underlying policy, as specified herein.

~~H.G.~~ *Contractor's pollution liability insurance:* Design-Builder shall purchase and maintain a policy covering third-party injury and property damage claims, including clean-up costs, as a result of pollution conditions arising from Design-Builder's operations and completed operations. This insurance shall be maintained for no less than three years after final completion.

~~H.H.~~ *Additional insureds:* The Design-Builder's commercial general liability, automobile liability, umbrella or excess, and pollution liability policies shall include and list as additional insureds Owner and any individuals or entities identified as required additional insureds in the Supplementary Conditions; include coverage for the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of all such additional insureds; and the insurance afforded to these additional insureds shall provide primary coverage for all claims covered thereby (including as applicable those arising from both ongoing and completed operations) on a non-contributory basis. Design-Builder shall obtain all necessary endorsements to support these requirements.

~~H.I.~~ *Professional liability insurance:*

1. Design-Builder shall be responsible for purchasing and maintaining professional liability insurance. This insurance shall provide protection against claims arising out of performance of professional design or related services, and caused by a negligent error, omission, or act for which Design-Builder is legally liable.
2. If in the performance of this Contract any Design Professional Services, or other professional engineering or similar services, are to be performed by an independent design professional, under direct contract to Design-Builder ~~or at any lower contractual tier~~, then Design-Builder shall be responsible for assuring that such independent design professional purchases and maintains professional liability insurance. This insurance shall provide protection against claims arising out of performance of professional design or related services, and caused by a negligent error, omission, or act for which the independent design professional is legally liable.
3. If a Construction Subcontractor ~~at any tier~~ will provide or furnish design, engineering, or other similar professional services under this Contract, as the result of a delegation of professional design responsibilities or otherwise, then Design-Builder shall assure that such Construction Subcontractor purchases and maintains applicable professional liability insurance. This insurance shall provide protection against claims arising out of performance of professional design or related services, and caused by a negligent error, omission, or act for which the insured party is legally liable.
4. Any professional liability insurance required under this Contract shall be maintained throughout the duration of the Contract and for a minimum of three years after

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Substantial Completion. For each claims-made professional liability policy furnished and



maintained to satisfy the requirements of this Paragraph 6.03.I, the retroactive date on the policy shall pre-date the commencement of furnishing services on the Project.

~~K.L.~~ *General provisions:* The policies of insurance required by this Paragraph 6.03 shall:

1. Include at least the specific coverages provided in this Article.
2. Be written for not less than the limits of coverage provided in this Article and in the Supplementary Conditions, or required by Laws or Regulations, whichever is greater.
3. Contain a provision or endorsement that the coverage afforded will not be canceled, materially changed, or renewal refused until at least 10 days' prior written notice has been given to Design-Builder. Within 3 days of receipt of any such written notice, Design-Builder shall provide a copy of the notice to Owner and each other insured under the policy.
4. Remain in effect at least until final payment and Design-Builder's departure from the Site (and longer if expressly required elsewhere in this Contract), and at all times thereafter when Design-Builder may be correcting, removing, or replacing defective Construction as a warranty or correction obligation, or otherwise, or returning to the Site to conduct other tasks arising from the Contract Documents.
- ~~0. Provide applicable protection from claims that may arise out of or result from the performance of the Work, whether such performance is by Design-Builder, a Project Design Professional, any Construction Subcontractor or Supplier, or anyone directly or indirectly retained by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable.~~

~~6.06~~ *6.04* **Owner's Liability Insurance**

- A. In addition to the liability insurance required to be provided by Design-Builder, the Owner, at Owner's option and expense, may purchase and maintain Owner's own liability insurance to protect Owner against claims which may arise with respect to the Project.
- B. Owner's liability policies, if any, operate separately and independently from policies required to be provided by Design-Builder, and Design-Builder cannot rely upon Owner's liability policies for any of Design-Builder's obligations to the Owner or third parties.

~~6.07~~ *6.05* **Property Insurance**

- A. *Builder's Risk:* Unless otherwise provided in the Supplementary Conditions, Design-Builder shall purchase and maintain builder's risk insurance upon the Construction on a completed value basis, in the amount of the full insurable replacement cost thereof (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). This insurance shall:
 1. Include the Owner ~~and Design-Builder as named additional insureds,~~ and all Construction Subcontractors ~~and Owner's subcontractors of every tier, including supplies, vendors, manufacturers, architects, and engineers, and any individuals or entities required by the Supplementary Conditions to be insured under such builder's risk policy, as insureds or named additional insureds as their interest appear while on the Site. For purposes of the remainder of this Paragraph 6.05, Paragraphs 6.06 and 6.07, and any corresponding Supplementary Conditions, the parties required to be insured shall collectively be referred to as "insureds."~~
 2. Be written on a builder's risk "all risk" policy form that shall at least include insurance for physical loss or damage to the Construction, temporary buildings, falsework, and

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materials and equipment in transit, and shall insure against at least the following perils



or causes of loss: fire; lightning; windstorm; riot; civil commotion; terrorism; vehicle impact; aircraft; smoke; theft; vandalism and malicious mischief; mechanical breakdown, boiler explosion, and artificially generated electric current; earthquake; volcanic activity, and other earth movement; flood; collapse; explosion; debris removal; demolition occasioned by enforcement of Laws and Regulations; water damage (other than that caused by flood); and such other perils or causes of loss as may be specifically required by the Supplementary Conditions. If insurance against mechanical breakdown, boiler explosion, and artificially generated electric current; earthquake; volcanic activity, and other earth movement; or flood, are not commercially available under builder's risk policies, by endorsement or otherwise, such insurance may be provided through other insurance policies acceptable to Owner and Design-Builder.

3. Cover, as insured property, ~~at least~~ the following: (a) the ~~Construction Work~~ (including but not limited to all buildings, structures, foundations, excavations, underground property, pilings, underground pipes, flues, drains, wiring, cables, and the like) and all materials, supplies, machinery, apparatus, equipment, fixtures, and other property of a similar nature that are to be incorporated into the ~~Construction Work~~, including Owner-furnished or assigned property; (b) spare parts inventory required within the scope of the Contract; and (c) temporary works which are not intended to form part of the permanent ~~Construction Work~~ but which are intended to provide working access to the Site, or to the ~~Construction Work~~, or which are intended to provide temporary support for the ~~Construction Work~~, including scaffolding, form work, fences, shoring, lighting, cribbing, falsework, and temporary structures.
4. Cover expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects).
5. Extend to cover damage or loss to insured property to be incorporated into the Work while in temporary storage at the Site or in a storage location outside the Site (but not including property stored at the premises of a manufacturer or Supplier).
6. Extend to cover damage or loss to insured property to be incorporated into the Work while in transit.
- ~~7. Allow for partial occupation or use of the Construction by Owner, such that those portions of the Construction that are not yet occupied or used by Owner shall remain covered by the builder's risk insurance.~~
- ~~8-7.~~ Provide for the waiver of claims and waiver of the insurer's subrogation rights, as set forth in Paragraph 6.06.
- ~~9-8.~~ Provide primary coverage for all losses and damages caused by the perils or causes of loss covered.
- ~~10-9.~~ Not include a co-insurance clause.
- ~~11-10.~~ Include an exception for ensuing losses from physical damage or loss with respect to any defective workmanship, design, or materials exclusions.
- ~~12. Include performance/hot testing and start up.~~
- ~~13-11.~~ Be maintained in effect, subject to the provisions herein regarding Substantial Completion and partial occupancy or use of the Construction by Owner, until the Construction is complete.

- B. *Notice of Cancellation or Change:* All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with this

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Paragraph 6.05 will contain a provision or endorsement that the coverage afforded will not be canceled ~~or materially changed~~ or renewal refused until at least 10 days' prior written notice has been given to the purchasing policyholder. Within 3 days of receipt of any such written notice, the purchasing policyholder shall provide a copy of the notice to each other insured.

- C. *Deductibles:* The purchaser of any required builder's risk or property insurance shall pay for costs not covered because of the application of a policy deductible.
- ~~D. *Partial Occupancy or Use by Owner:* If Owner will occupy or use a portion or portions of the Construction prior to Substantial Completion of all the Work as provided in Paragraph 14.04, then Owner (directly, if it is the purchaser of the builder's risk policy, or through Design-Builder) will provide notice of such occupancy or use to the builder's risk insurer. The builder's risk insurance shall not be canceled or permitted to lapse on account of any such partial use or occupancy; rather, those portions of the Construction that are occupied or used by Owner may come off the builder's risk policy, while those portions of the Construction not yet occupied or used by Owner shall remain covered by the builder's risk insurance.~~
- ~~E.D. *Additional Insurance:* If Design-Builder elects to obtain other special insurance to be included in or supplement the builder's risk or property insurance policies provided under this Paragraph 6.05, it may do so at Design-Builder's expense.~~
- ~~F.E. *Insurance of Other Property:* If the express insurance provisions of the Contract do not require or address the insurance of a property item or interest, such as tools, construction equipment, or other personal property owned by Design-Builder, a Construction Subcontractor, or an employee of Design-Builder or a Construction Subcontractor, then the entity or individual owning such property item will be responsible for deciding whether to insure it, and if so in what amount.~~
- ~~G.F. *Loss of Use and Delay in Start-up:* Unless otherwise expressly stated elsewhere in this Contract, the Owner is responsible, at its option, for purchase and maintenance of insurance to protect Owner against the loss of use or delays in start-up caused by property damage.~~

~~6.086.06 Waiver of Rights~~

- A. All policies purchased in accordance with Paragraph 6.05, expressly including the builder's risk policy, shall contain provisions to the effect that in the event of payment of any loss or damage the insurers will have no rights of recovery against any insureds thereunder, or against any ~~Project Design Professional or its consultants, or their officers, directors, members, partners, and employees, agents, consultants, or subcontractors.~~ Owner and Design-Builder waive all rights against each other and the respective officers, directors, members, partners, employees, ~~and agents, consultants, and subcontractors~~ of each and any of them, for all losses and damages caused by, arising out of, or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Construction ~~and Work, or that could have been covered by property insurance if a party is instead self-insured, and including deductibles in all cases. Such waiver and release includes all rights of subrogation and rights of recovery; and, in addition, waive all such rights against the Project Design Professionals, their consultants, all Construction Subcontractors, all individuals or entities identified in the Supplementary Conditions as insureds, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, under such policies for losses and damages so caused.~~ None of the above waivers shall extend to the rights that any party making such waiver may have to the proceeds of insurance held by Owner or Design-Builder as trustee or fiduciary, or otherwise payable under any policy



so issued.

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- B. Owner waives all rights against Design-Builder, the Project Design Professionals, and the Construction Subcontractors, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, for:
 - 1. Loss due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Construction caused by, arising out of, or resulting from fire or other perils whether or not insured by Owner; and
 - 2. Loss or damage to the completed Project or part thereof caused by, arising out of, or resulting from fire or other insured peril or cause of loss covered by any property insurance maintained on the completed Project or part thereof by Owner during partial occupancy or use pursuant to Paragraph 14.04, after Substantial Completion pursuant to Paragraph 14.03, or after final payment pursuant to Paragraph 14.06.
- C. Any insurance policy maintained by Owner covering any loss, damage, or consequential loss referred to in Paragraph 6.06.B shall contain provisions to the effect that the insured is allowed to waive the insurer's rights of subrogation against Design-Builder, Project Design Professionals, Construction Subcontractors, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, in a written contract executed prior to the loss, damage, or consequential loss.
- D. Design-Builder shall be responsible for assuring that each Construction Subcontract contains provisions whereby the Construction Subcontractor waives all rights against Owner, Design-Builder, all individuals or entities identified in the Supplementary Conditions as insureds, the Project Design Professionals, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, relating to, or resulting from any of the perils or causes of loss covered by builder's risk insurance and any other property insurance applicable to the Project.

6-096.07 *Receipt and Application of Property Insurance Proceeds*

- A. Any insured loss under the builder's risk and other policies of property insurance required by Paragraph 6.05 will be adjusted and settled with the named insured that purchased the policy. Such named insured shall act as fiduciary for the other insureds, and give notice to such other insureds that adjustment and settlement of a claim is in progress. Any other insured may state its position regarding a claim for insured loss in writing within 15 days after notice of such claim.
- B. Proceeds for such insured losses may be made payable by the insurer either jointly to multiple insureds, or to the named insured that purchased the policy in its own right and as fiduciary for other insureds, subject to the requirements of any applicable mortgage clause. A named insured receiving insurance proceeds under the builder's risk and other policies of insurance required by Paragraph 6.05 shall maintain such funds in a segregated account, and distribute such proceeds in accordance with such agreement as the parties in interest may reach, or as otherwise required under the dispute resolution provisions of this Contract or applicable Laws and Regulations.
- C. If no other special agreement is reached, the damaged Construction shall be repaired or replaced, the money so received applied on account thereof, and the Construction and the cost thereof covered by Change Order, if needed.



ARTICLE 7 – DESIGN-BUILDER’S RESPONSIBILITIES

7.01 *Design Professional Services*

- A. Design-Builder shall provide the Design Professional Services as mutually agreed in a scope of work exhibit~~needed to successfully perform and complete the Work required under this Contract.~~
- B. *Standard of Care:* The standard of care for all Design Professional Services performed or furnished by Design-Builder under this Contract will be the care and skill ordinarily used by members of the subject profession practicing under similar circumstances at the same time and in the same locality. If Owner discovers any Design Professional Services that do not meet such Standard of Care within one (1) year from completion of the Services, Owner shall notify Design-Builder in writing and provide Design-Builder an opportunity to reperform and correct such Services. Such reperformance and correction by Design-Builder shall be Owner’s sole remedy and Contractor’s sole obligation with regard to the quality of the Design Professional Services.

7.02 *Construction*

- A. Design-Builder shall perform and furnish the Construction as mutually agreed in an Amendment pursuant to the Contract Documents, the Construction Drawings, and the Construction Specifications, as duly modified.
- B. Design-Builder shall keep Owner advised as to the progress of the Construction.

7.03 *Supervision and Superintendence of Construction*

- A. Design-Builder shall supervise, inspect, and direct the Construction competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to provide the Construction in accordance with the Contract Documents. Design-Builder shall be solely responsible for the means, methods, techniques, sequences, and procedures of Construction.
- B. At all times during the progress of Construction, the Design-Builder shall assign a competent resident superintendent who shall not be replaced without written notice to Owner and Owner’s written consent, not to be unreasonably withheld~~except under extraordinary circumstances.~~

7.04 *Labor; Working Hours*

- A. Design-Builder shall provide competent, suitably qualified personnel to perform the Work as required by the Contract Documents. Design-Builder shall at all times maintain good discipline and order at the Site.
- B. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise indicated in the Contract Documents, and in the absence of any Laws or Regulations to the contrary, Design-Builder may perform the Construction on legal holidays, during any or all hours of the day, and on any or all days of the week, at Design-Builder’s sole discretion.

7.05 *Services, Materials, and Equipment*

- A. Unless otherwise specified in the Contract Documents, Design-Builder shall furnish or cause to be furnished and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and

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incidentals necessary for the performance, testing, start-up, and completion of the Work.

- B. All materials and equipment incorporated into the Work shall be as specified by Owner or in the Construction Drawings or Construction Specifications, and unless specified otherwise shall be new and of good quality. All warranties and guarantees specifically called for by the Contract Documents shall expressly run to the benefit of Owner. If required by Owner, Design-Builder shall furnish satisfactory evidence (including reports of required tests) as to



the source, kind, and quality of materials and equipment.

- C. All materials and equipment shall be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise provided in the Contract Documents.

7.06 *“Or Equals” and Substitutions*

- A. If an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, then during the preparation of the proposed Construction Drawings and Construction Specifications, the Design-Builder may request that Owner authorize the use of other items of material or equipment, or items from other proposed suppliers, by including the proposed items in the proposed Construction Drawings or Construction Specifications, with required notice to Owner that the Submittal contains a variation from the Contract Documents. Owner in its sole discretion may approve the use of the item if Owner determines that the item is functionally equal to that named and sufficiently similar so that no change in related Work will be required, taking into consideration whether the item:
 - 1. Is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;
 - 2. Will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole;
 - 3. Has a proven record of performance and availability of responsive service; and
 - 4. Is not objectionable.
- B. *Effect of Owner’s Determination:* Neither approval nor denial of an “or-equal” request shall result in any change in Contract Price. The denial of an “or-equal” request shall be final and binding, and may not be reversed through an appeal under any provision of the Contract Documents.
- C. *Substitutes:* During the preparation of the proposed Construction Drawings and Construction Specifications, the Design-Builder may propose a substitute to an item of material or equipment that is required to be furnished by the Contract Documents. Any such proposal shall be made in a transmittal to Owner that is separate from and independent of any Design Submittals. The proposal shall describe the advantages, disadvantages, and changes in Contract Price or Contract Time associated with the proposed substitute. Approval of the proposed substitute shall be at Owner’s sole discretion. If approved, the substitute item shall be incorporated in the Construction Drawings and Construction Specifications.
- D. *Design Professional Review:* Before Design-Builder transmits its proposal to Owner, the Project Design Professional that designed the portion of the Work affected by the proposed “or equal” or substitute shall review and approve the proposal.
- E. *Construction Drawings and Construction Specifications:* “Or equal” or substitute proposals with respect to items of material or equipment that are required in the Construction Drawings and Construction Specifications shall be considered proposed modifications of the Construction Drawings and Construction Specifications, and shall be governed by the provisions of Paragraph 8.02.H.



7.07 *Concerning Project Design Professionals, Construction Subcontractors, Suppliers, and Others*

- A. Design-Builder may retain Project Design Professionals, Construction Subcontractors, and Suppliers for the performance of parts of the Work. Such Project Design Professionals, Construction Subcontractors, and Suppliers must be acceptable to Owner.
- B. Design-Builder shall retain specific Project Design Professionals, Construction Subcontractors, Suppliers, or other individuals or entities for the performance of designated parts of the Work if required to do so by the Contract Documents (including but not limited to the Proposal Amendment) as of the Effective Date.
- C. Prior to entry into any binding Design Agreement, Construction Subcontract, or purchase order, Design-Builder shall submit to Owner the identity of the proposed Project Design Professional, Construction Subcontractor, or Supplier (unless Owner has already deemed such proposed contractual party acceptable, during the bidding process or otherwise). Such proposed contractual party shall be deemed acceptable to Owner unless Owner raises a substantive, reasonable objection within 5 days.
- D. Owner may require the replacement of any Project Design Professional, Construction Subcontractor, Supplier, or other entity retained by Design-Builder to perform any part of the Work solely on the basis of substantive, reasonable objection after due investigation. Design-Builder shall submit an acceptable replacement for the rejected Project Design Professional, Construction Subcontractor, Supplier, or other entity.
- E. If Owner requires the replacement of any Project Design Professional, Construction Subcontractor, Supplier, or other entity retained by Design-Builder to perform any part of the Work, then Design-Builder shall be entitled to an adjustment in Contract Price or Contract Times, or both, with respect to the replacement.
- F. No acceptance by Owner of Engineer or of any Project Design Professional, Construction Subcontractor, Supplier, or other entity, whether initially or as a replacement, shall constitute a waiver of the right of Owner to the completion of the Work in accordance with the Contract Documents.
- G. As between Design-Builder and Owner, Design-Builder shall be fully responsible to Owner for all acts and omissions of the Project Design Professionals, Construction Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work, just as Design-Builder is responsible for Design-Builder's own acts and omissions.
- H. Design-Builder shall be solely responsible for scheduling and coordinating the services and work of the Project Design Professionals, Construction Subcontractors, Suppliers, and all other individuals or entities performing or furnishing any of the Work.
- I. Design-Builder shall restrict all Project Design Professionals, Construction Subcontractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work from communicating directly with Owner, except in case of an emergency or a matter involving public health, safety, or welfare, or as otherwise expressly allowed herein.
- J. Owner may furnish to any Project Design Professional, Construction Subcontractor, or Supplier, to the extent practicable, information about amounts paid to Design-Builder on account of Work performed for Design-Builder by the requesting party.
- K. Nothing in the Contract Documents:



1. Shall create for the benefit of any Project Design Professional, Construction Subcontractor, Supplier, or other third-party individual or entity any contractual relationship between Owner and such third-party individual or entity; nor
2. Shall create any obligation on the part of Owner to pay or to see to the payment of any money due any Project Design Professional, Construction Subcontractor, Supplier, or other third-party individual or entity except as may otherwise be required by Laws and Regulations.

7.08 *Patent Fees and Royalties*

- A. Design-Builder shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If a particular invention, design, process, product, or device is specified in the Conceptual Documents or other Contract Documents for use in the performance of the Construction, and if to the actual knowledge of Owner its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, then Owner has disclosed the existence of such rights to Design-Builder in the Conceptual Documents or other Contract Documents.
- B. To the fullest extent permitted by Laws or Regulations, Design-Builder shall indemnify and hold harmless Owner and Owner's Consultant, and the officers, directors, partners, employees or agents, and other consultants of each and any of them from and against all claims, costs, losses and damages (including but not limited to all fees and charges of engineers, architects, attorneys and other professionals and all court or arbitration or other dispute resolution costs) ~~arising out of or resulting from any~~ to the extent caused by Design-Builder's infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the specification or incorporation in the Work of any invention, design, process, product or device, except those required by the Contract Documents.
- C. To the fullest extent permitted by Laws or Regulations, Owner shall indemnify and hold harmless Design-Builder and its officers, directors, members, partners, employees or agents, Project Design Professionals, Construction Subcontractors, and Suppliers from and against all claims, costs, losses and damages (including but not limited to all fees and charges of engineers, architects, attorneys and other professionals and all court or arbitration or other dispute resolution costs) arising out of or resulting from any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product or device required by the Contract Documents, but not identified by Owner as being subject to payment of any license fee or royalty to others required by patent rights or copyrights.

7.09 *Permits and Utility Charges*

- A. The Contract Documents allocate responsibility for obtaining and paying for specified permits, licenses, certificates of occupancy, and approvals of governmental authorities having jurisdiction over the Work. Each party shall assist the other, when necessary, in obtaining such permits, licenses, certificates, and approvals.
- B. Design-Builder shall pay all charges of utility owners for temporary service to the Work. Owner shall pay all charges of utility owners for connections for providing permanent service to the Work, and for capital costs related thereto.



7.10 *Taxes*

- A. Design-Builder shall pay all sales, consumer, use, and other similar taxes required to be paid by Design-Builder in accordance with the Laws or Regulations of the place of the Project which are applicable during the performance of the Work.

7.11 *Laws and Regulations*

- A. Design-Builder shall give all notices required by and comply with all Laws and Regulations applicable to the performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, Owner shall not be responsible for monitoring Design-Builder's compliance with any Laws or Regulations.
- B. If Design-Builder performs any Work knowing or having reason to know that it is contrary to Laws or Regulations, Design-Builder shall bear all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work.
- C. Changes in Laws or Regulations that occur after the date on which the Design-Builder committed to the Contract Price (whether by negotiation or making an offer or proposal) and affect the cost or time of performance shall be the subject of an equitable change in Contract Price or Contract Times.

7.12 *Record Documents*

- A. Design-Builder shall maintain the Record Documents in good order, in a safe place at the Site. Design-Builder shall annotate the Record Documents to show all changes and clarifications made (whether in the field or otherwise) during performance of Construction. The Record Documents, as annotated, will be available to Owner for reference. Upon completion of the Construction, Design-Builder shall deliver the Record Documents, as annotated, to Owner.
- B. After receipt and review of the Record Documents from Design-Builder upon completion of Construction, the Owner may comment on any possible inaccuracies. After Owner and Design-Builder collaboratively address any such comments, the Record Documents shall be deemed to be Record Drawings and Record Specifications.
- C. The Record Drawings and Record Specifications are Contract Documents, and are binding upon Design-Builder with respect to its obligations to comply with the Contract Documents, including but not limited to correction period responsibilities and warranty obligations.

7.13 *Safety and Protection*

- A. Design-Builder shall be solely responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the Work. Such responsibility does not relieve Construction Subcontractors of their responsibility for the safety of persons or property in the performance of their work, nor for compliance with applicable safety Laws and Regulations. Design-Builder shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury, or loss to:
 1. All persons on the Site or who may be affected by the Work;
 2. All the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and

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Safety Representatives from both the Owner and Private Entity shall coordinate efforts as necessary to assure a safe work environment for their respective, facilities and/or equipment impacted by the Work. This in no way relieves the Private Entity of their responsibility for initiating, maintaining and supervising all safety precautions and programs in connection with the Work as specified in Paragraph 7.13 of the General Conditions and Supplementary Conditions



- 3. Other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, utilities and Underground Facilities not designated for removal, relocation, or replacement in the course of Construction.
- B. Design-Builder shall comply with applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection. Design-Builder shall notify Owner; the owners of adjacent property, Underground Facilities, and other utilities; and other contractors and utility owners performing work at or adjacent to the Site, when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property or work in progress.
- C. Design-Builder shall comply with the applicable requirements of Owner's safety programs, if any. The Supplementary Conditions identify any Owner's safety programs that are applicable to the Work.
- D. Design-Builder shall inform Owner of the specific requirements of Design-Builder's safety program with which Owner and its employees and representatives must comply while at the Site.
- E. Until Substantial Completion, aAll damage, injury, or loss to any property referred to in Paragraph 7.13.A.2 or 7.13.A.3 caused, directly or indirectly, in whole or in part, by Design-Builder, any Construction Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Design-Builder.
- F. Design-Builder's duties and responsibilities for safety and for protection of the Construction shall continue until Substantial Completion such time as all the Work is completed, Owner has issued a notice to Design-Builder in accordance with Paragraph 14.06.B that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion), and Design-Builder has left the Site.
- G. Design-Builder's duties and responsibilities for safety and protection shall resume whenever Design-Builder or any Construction Subcontractor, Supplier, or other representative returns to the Site to fulfill warranty or correction obligations, or to conduct other tasks arising from the Contract Documents.

7.14 *Safety Representative*

- A. Design-Builder shall designate a qualified and experienced safety representative at the Site whose duties and responsibilities shall be the prevention of accidents and the maintaining and supervising of safety precautions and programs.

7.15 *Hazard Communication Programs*

- A. Design-Builder shall be responsible for coordinating any exchange of safety data sheets or other hazard communication information required to be made available to or exchanged between or among any Construction Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work ~~employers~~ at the Site in accordance with Laws or Regulations.

7.16 *Emergencies*

- A. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, Design-Builder is obligated to act to prevent threatened damage, injury or loss. Design-Builder shall give Owner prompt written notice if Design-Builder believes

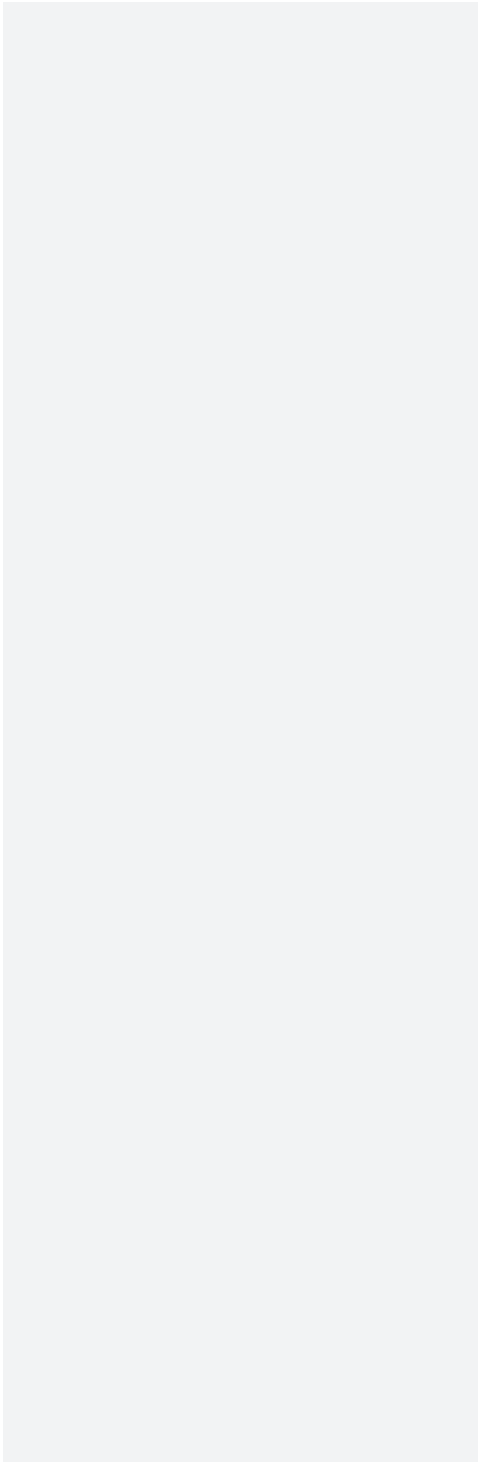
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that any significant changes in the Work or variations from the Contract Documents



have been caused thereby or are required as a result thereof. If a change in the Contract Documents is required because of the action taken by Design-Builder in response to such an emergency, a Work Change Directive or Change Order will be issued.

7.17 Post-Construction Phase

A. Design-Builder shall:

- ~~1. Provide assistance in connection with the start up and testing of any equipment or system.~~
- ~~2. Assist Owner in training staff to operate and maintain the Work.~~

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7.18 *Design-Builder's General Warranty and Guarantee*

A. Design-Builder warrants and guarantees to Owner that Design-Builder will perform and complete the Construction as required by the Contract Documents, and that all Construction will be in accordance with the Contract Documents, the Construction Drawings, and the Construction Specifications (as duly modified in accordance with the Contract), and will not be defective. Design-Builder shall repair or reperform, at its sole cost and expense, all defective Construction that is discovered and called to Design-Builder's attention by Owner prior to the expiration of one (1) year after Substantial Completion of the Work as provided in Section 14.08. This repair and reperformance obligation is Design-Builder's exclusive liability and Owner's sole remedy with respect to the quality of the Work. EXCEPT AS PROVIDED HEREIN, THERE ARE NO WARRANTIES OR GUARANTEES, EXPRESSED OR IMPLIED, WITH RESPECT TO THE WORK OR SERVICES, AND CONTRACTOR DISCLAIMS ANY IMPLIED WARRANTIES OR WARRANTIES IMPOSED BY LAW, INCLUDING, BUT NOT LIMITED TO, WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

B. Design-Builder's warranty and guarantee hereunder excludes defects or damage caused by:

1. Abuse, modification or improper maintenance or operation by persons other than Design-Builder, Construction Subcontractors, or Suppliers or any other individual for whom Design-Builder is responsible; or
2. Normal wear and tear under normal usage; or
- ~~2-3. Acts of God, flood, hurricane, tornado, or other event of force majeure.~~

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C. None of the following will constitute an acceptance by Owner of Work that is not in accordance with the Contract Documents or a release of Design-Builder's obligation to perform the Work in accordance with the Contract Documents, unless expressly stated otherwise in writing:

1. Observations by Owner;
2. The making of any progress or final payment;
3. The issuance of a certificate of Substantial Completion;
4. Use or occupancy of the Work or any part thereof by Owner;
5. Any review and approval of a Submittal;
6. Any inspection, test, or approval by others; or
7. Any correction of defective Construction by Owner.

7.19 *Indemnification*

A. To the fullest extent permitted by Laws and Regulations, Design-Builder shall indemnify and

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hold harmless Owner, Owner’s Consultant, and their officers, directors, members, partners, employees, agents, consultants, and subcontractors, from losses, damages, and judgments (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) arising from third-party claims or actions relating to or resulting from the performance or furnishing of the Work, provided that any such claim, action, loss, damages, or judgment is attributable to bodily injury, sickness, disease, or death, or to damage to or destruction of tangible property (other than the Work itself) including the loss of use resulting therefrom, but only to the extent caused by any negligent act or omission of Design-Builder, a Project



Design Professional, any Construction Subcontractor, any Supplier, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors.

- B. In any and all claims or actions against Owner, Owner's Consultant, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, by any employee (or the survivor or personal representative of such employee) of Design-Builder, a Project Design Professional, any Construction Subcontractor, any Supplier, any individual or entity directly or indirectly employed or retained by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 7.19.A shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Design-Builder, a Project Design Professional, or any Construction Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.

- C. The indemnification obligations of Design-Builder under Paragraph 7.19.A shall not extend to the liability of Owner's Consultant, other consultants or design professionals of Owner, or their officers, directors, members, partners, employees, agents, consultants, or subcontractors arising out of the preparation or approval of maps, drawings, opinions, reports, surveys, designs, or specifications.

- D. To the fullest extent permitted by Laws and Regulations, and in addition to any other obligations of the Owner under the Contract or otherwise, Owner shall indemnify and hold harmless Private Entity, Private Entity's Subcontractors and Suppliers and their officers, directors, employees, and agents from and against all claims, costs losses, damages and judgments (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) attributable to bodily injury, sickness, disease, or death, or to injury to, damage to or destruction of tangible property (other than Work itself) including the loss of use resulting therefrom but only to the extent caused by any negligent act or omission of Owner, Owner's employees, or third parties working at or near the Site under contract with the Owner.

Commented [PJJ30]: Mutual indemnity is requested.

ARTICLE 8 – SUBMITTALS

8.01 *Design-Builder's Preparation of Submittals*

- A. Design Submittals shall be prepared by Project Design Professionals, on behalf of Design-Builder.
- B. The appropriate Project Design Professional shall review and approve each Submittal (including but not limited to all Design Submittals), other than those Submittals not involving technical or engineering matters, before Design-Builder's transmittal of such Submittal to Owner. Such review and approval shall account for the following, as appropriate:
1. That any items covered by such Submittal will, after installation or incorporation in the Construction, comply with the information and requirements in the Contract Documents and the Construction Drawings and Construction Specifications, as duly modified, and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents, Construction Drawings, and Construction Specifications, as duly modified.
 2. That if the Submittal includes any proposed modification of the Contract Documents, Construction Drawings, or Construction Specifications, or any proposed variation from the requirements of such documents, such proposed modification or variation is acceptable based on the standards of the engineering profession (or other applicable design

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profession), and if implemented will be supported by signing or sealing by a licensed design professional, as necessary.

- C. Before Design-Builder's transmittal of a Submittal to Owner, the Design-Builder shall, as applicable:
 - 1. Review and coordinate the Submittal with other Submittals and with the requirements of the Work, the Contract Documents, the Construction Drawings, and the Construction Specifications, as duly modified;

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2. Determine and verify all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect to the Submittal, and confirm that the Submittal is complete with respect to all related data included in the Submittal;
 3. Determine and verify the suitability of proposed materials and equipment with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation; and
 4. Determine and verify all information relative to Design-Builder's responsibilities for the means, methods, techniques, sequences, and procedures of construction, and for safety precautions and programs incident thereto.
- D. Design-Builder shall give Owner specific written notice of any proposed modification of the Contract Documents, Construction Drawings, or Construction Specifications, and any variations that a Submittal may have from the requirements of the Contract Documents, Construction Drawings, and Construction Specifications, as duly modified. This notice shall be set forth in a written communication separate from the Submittal; and, in addition, in the case of a Submittal in drawing form, by a specific notation made on the drawing itself.
- E. Each Submittal shall bear a stamp or specific written certification by Design-Builder that it has satisfied its obligations under the Contract Documents with respect to preparation of the Submittal, and that Design-Builder approves the Submittal.
- F. All Submittals must be acceptable based on compliance with form and content requirements of the Contract Documents. Design-Builder shall submit Design Submittals for Owner's review and approval. Other Submittals shall not require express approval, except as indicated in the Supplementary Conditions or elsewhere in the Contract Documents.

8.02 *Owner's Review of Submittals*

- A. Owner will review all Submittals, and may comment on any Submittal. Any response to a Submittal by Owner shall be in accordance with the schedule of required Submittals accepted by Owner as required by Paragraph 2.07, and the provisions of the Contract Documents.
- B. For those Submittals requiring Owner's review and approval, Owner's response will be in writing and will indicate either that Owner approves the Submittal or rejects the Submittal. Owner may also include comments regarding the approved or rejected Submittal. For those Submittals that do not require approval, the Submittal shall be deemed acceptable to Owner unless Owner responds with a timely objection or adverse comment.
- C. Unless a specific provision of the Contract Documents expressly provides otherwise, Owner's review of a Submittal will be to determine if the Submittal complies with and is consistent with the Contract Documents. If Owner concludes that a Submittal requiring approval complies with and is consistent with the Contract Documents, the Owner shall approve such Submittal.
- D. Owner's approval, rejection, or acceptance of a Submittal will not extend to the means, methods, techniques, sequences, or procedures of Construction, or to safety precautions or programs incident thereto.
- E. Owner's review, comments, approval, rejection, or acceptance of Submittals shall not relieve Design-Builder from responsibility for (1) performance of the Work in accordance with the Contract Documents, (2) the scheduling and progress of the Work, (3) the means,



methods, sequences, techniques, and procedures of Construction, and safety precautions and programs incident thereto, or (4) any variation from the requirements of the Contract Documents, unless Design-Builder has in a separate written communication at the time of submission called Owner's attention to each such variation, and Owner has given written approval of each such variation; nor shall Owner's review, comments, approval, rejection, or acceptance of a Submittal impose any such responsibility on Owner.

- F. Construction tasks and expenditures by Design-Builder prior to Owner's review and approval or acceptance of any Submittal will be at the sole risk of Design-Builder.
- G. In reviewing, approving, rejecting, accepting, or commenting on any Design Submittal, Owner does not assume responsibility for the design, for any deficiencies in the Design Submittal or in the Design Professional Services by which they were prepared, or for constructability, cost, or schedule problems that may arise in connection with the Design Submittal.
- H. The parties acknowledge that Design-Builder's design responsibilities continue after commencement of Construction. During the course of Construction, the Design-Builder may propose modifications to the Construction Drawings and Construction Specifications. Owner shall approve such proposed modifications if (1) they comply with and are consistent with the Contract Documents, (2) Design-Builder has demonstrated that the modification is minor in character, or will not be detrimental to the quality and function of the Work, (3) the appropriate Project Design Professional has reviewed and approved the proposed modification with respect to any technical or engineering matters, and (4) Owner has not relied on the previously-approved Construction Drawings and Construction Specifications, such that the proposed modification would be detrimental to the Owner's interests. At its option, Owner may also approve more substantial or divergent proposed modifications, provided that the appropriate Project Design Professional has reviewed and approved the proposed modification with respect to any technical or engineering matters.

ARTICLE 9 – OTHER CONSTRUCTION

9.01 Other Work

- A. In addition to and apart from the Work to be performed and furnished by Design-Builder under the Contract Documents, the Owner may perform other construction work at or adjacent to the Site during the course of the Project. Such other work may be performed by Owner's employees, or through contracts between the Owner and third parties. Owner may also arrange to have third-party utility owners perform work on their utilities and facilities at or adjacent to the Site.
- B. If Owner performs other work at or adjacent to the Site with Owner's employees, or through contracts for such other work, then Owner shall give Design-Builder written notice thereof prior to starting any such other work. If Owner has advance information regarding the start of any third-party utility work at or adjacent to the Site, Owner shall provide such information to Design-Builder.
- C. Design-Builder shall afford proper and safe access to the Site to each contractor that performs such other work, each utility owner performing other work, and to Owner, if Owner is performing other work with Owner's employees, and provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work. Design-Builder shall do all cutting, fitting, and patching of the Construction that may be required to properly connect or otherwise make its several parts

Commented [SMH31]: Edits have been made to this Article, however we suggest that Article 9 be removed unless Owner intends other construction work at or near the Site.



come together and properly integrate with such other work. Design-Builder shall not endanger any work of others by cutting, excavating, or otherwise altering such work; provided, however, that Design-Builder may cut or alter others' work with the written consent of Owner and the others whose work will be affected.

- D. If the proper execution or results of any part of the Construction depends upon work performed by others under this Article 9, Design-Builder shall visually inspect such other work and promptly report to Owner in writing any delays, or observed defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of the Construction. Design-Builder's failure to so report will constitute an acceptance of such other work as fit and proper for integration with the Construction, except for latent defects and deficiencies in such other work. Design-Builder shall be entitled to an equitable adjustment to the Contract Times and Contract Price to the extent performance of the Work is delayed or otherwise impacted by other work performed by Owner's contractors or third-party utility owners as set forth in 9.03.A.

9.02 Coordination

- A. If Owner intends to contract with others for the performance of other work at or adjacent to the Site, to perform other work at or adjacent to the Site with Owner's employees, or to arrange to have utility owners perform work at or adjacent to the Site, the following will be set forth in the Supplementary Conditions or provided to Design-Builder prior to the start of any such other work:
 - 1. The identity of the individual or entity that will have authority and responsibility for coordination of the activities among the various contractors;
 - 2. An itemization of the specific matters to be covered by such authority and responsibility; and
 - 3. The extent of such authority and responsibilities.
- B. If the Supplementary Conditions do not identify the individual or entity that will have authority and responsibility for coordination of the activities among the various contractors, Owner shall have sole authority and responsibility for such coordination.

9.03 Legal Relationships

- A. If, in the course of performing other work for Owner at or adjacent to the Site, the Owner's employees, any other contractor working for Owner, or any utility owner that Owner has arranged to perform work, causes damage to the Construction or to the property of Design-Builder or the Construction Subcontractors, or delays, disrupts, interferes with, or increases the scope or cost of the performance of the Construction, through actions or inaction, then Design-Builder shall be entitled to an equitable adjustment in the Contract Price or the Contract Times, or both. The entitlement to, and extent of, any such equitable adjustment shall take into account information (if any) regarding such other work that was provided to Design-Builder in the Contract Documents, and any provisions in Laws or Regulations concerning utility action or inaction, or related remedies. When applicable, any such equitable adjustment in Contract Price shall be conditioned on Design-Builder assigning to Owner all Design-Builder's rights against such other contractor or utility owner with respect to the damage, delay, disruption, or interference that is the subject of the adjustment. Design-Builder's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Design-Builder's ability to complete the Work within the Contract Times.

Commented [SMH32]: The Supplemental Conditions deletes and adds a new section here. We believe this Paragraph should remain in the Contract.



- B. Design-Builder shall take reasonable and customary measures to avoid damaging, delaying, disrupting, or interfering with the work of Owner, any other contractor, or any utility owner performing other work at or adjacent to the Site. If Design-Builder fails to take such



measures and as a result damages, delays, disrupts, or interferes with the work of any such other contractor or utility owner, then Owner may impose a set-off against payments due to Design-Builder, and assign to such other contractor or utility owner the Owner's contractual rights against Design-Builder with respect to the breach of the obligations set forth in this paragraph.

- C. When Owner is performing other work at or adjacent to the Site with Owner's employees, Design-Builder shall be liable to Owner for damage to such other work, and for the reasonable direct delay, disruption, and interference costs incurred by Owner as a result of Design-Builder's failure to take reasonable and customary measures with respect to Owner's other work. In response to such damage, delay, disruption, or interference, Owner may impose a set-off against payments due to Design-Builder.
- D. If Design-Builder damages, delays, disrupts, or interferes with the work of any other contractor, or any utility owner performing other work at or adjacent to the Site, through Design-Builder's failure to take reasonable and customary measures to avoid such impacts, or if any claim arising out of Design-Builder's actions, inactions, or negligence in performance of the Work at or adjacent to the Site is made by any such other contractor or utility owner against Design-Builder or Owner, then Design-Builder shall (1) promptly attempt to settle the claim as to all parties through negotiations with such other contractor or utility owner, or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law, and (2) indemnify and hold harmless Owner and its officers, directors, members, partners, employees, agents, consultants and subcontractors from and against any such claims, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such damage, delay, disruption, or interference.

ARTICLE 10 – OWNER'S RESPONSIBILITIES

10.01 General

- A. Owner shall do the following in a timely manner so as not to delay the services of Design-Builder:
 - 1. If requested in writing by Design-Builder, furnish reasonable evidence satisfactory to Design-Builder that sufficient funds are available and committed for the entire cost of the Project. Unless such reasonable evidence is furnished, Design-Builder is not required to commence or continue any Work, or may, if such evidence is not presented within a reasonable time, stop Work upon 15 days' notice to the Owner;
 - 2. Make payments to Design-Builder promptly when they are due, as provided in Paragraph 14.01 and 14.06;
 - 3. Furnish the Site as set forth in Paragraph 5.01; arrange for safe access to and make all provisions for Design-Builder to enter upon public and private property as may reasonably be required for Design-Builder to perform Work under the Contract.
 - 4. Furnish to Design-Builder, as required for performance of the Work, the following, all of which Design-Builder may use and rely upon in performing services under this Agreement:
 - a. Environmental assessment and impact statements;

Commented [SMH33]: This was deleted by the supplemental conditions. We believe omitting this paragraph is not appropriate because the Private Entity will rely upon information provided by Owner related to Locality asset condition assessment information, sewer system GIS information, and other information provided by each Locality to HRSD as noted in MOU between Owner and Locality.

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- b. Property, boundary, easement, right-of-way, and other special engineering surveys or data;
 - c. Property descriptions;
 - d. Zoning, deed, and other land use restrictions;
 - e. Utility and topographic mapping and surveys;
 - f. Explorations and tests of subsurface conditions at or adjacent to the Site; geotechnical reports and investigations; drawings of physical conditions relating to existing surface or subsurface structures at the Site; any information or data known to Owner concerning underground facilities at the Site; hydrographic surveys, laboratory tests and inspections of samples, materials, and equipment; with appropriate professional interpretation of such information or data;
 - g. Any other available information pertinent to the Project including reports and data relative to previous designs, or investigation at or adjacent to the Site;
 - h. Engineering surveys to establish reference points which in Owner's judgment are necessary to enable Design-Builder to proceed with the Work;
 - i. Assistance to Design-Builder in filing documents required to obtain necessary permits, licenses, and approvals of governmental authorities having jurisdiction over the Project; and
 - j. Permits, licenses, and approvals of government authorities that the Contract Documents expressly require Owner to obtain.
 - ~~j.~~ k. SSES and flow monitoring data.
5. Provide information known to Owner relating to the presence of materials and substances at the Site that could create a Hazardous Environmental Condition.
- B. If an obligation ascribed to Owner in Paragraph 10.01.A is expressly assigned to Design-Builder, in the description of the Work or elsewhere in the Contract Documents, then such express assignment to Design-Builder shall supersede the provision in Paragraph 10.01.A.
- C. Recognizing and acknowledging that Design-Builder's services and expertise do not include the following services, Owner shall furnish or obtain, as required for the Project:
- a. Accounting, bond and financial advisory (including, if applicable, "municipal advisor" services as described in Section 975 of the Dodd-Frank Wall Street Reform and Consumer Protection Act (2010) and the municipal advisor registration rules issued by the Securities and Exchange Commission), independent cost estimating, and insurance counseling services.
 - b. Legal services with regard to issues pertaining to the Project as Owner requires, or Design-Builder reasonably requests.
 - c. Such auditing services as Owner requires to review cost submittals or ascertain how or for what purpose Design-Builder has used the money paid.
- D. Examine all studies, reports, alternate solutions, sketches, drawings, specifications, proposals, Submittals (including Design Submittals), and other documents presented by Design-Builder (including obtaining advice of an attorney, insurance counselor, and other consultants as Owner deems appropriate with respect to such examination), and if a decision is required with respect to any such document, render such decision in writing pursuant to any specific

Commented [PJJ34]: We request this paragraph not be omitted in case Owner needs to seek a major Consent Decree Modification as part of Adaptive Management Plan implementation.

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schedule, or if no specific schedule pertains, within a reasonable



time after receipt of the document.

Commented [SMH35]: This was deleted by the supplemental conditions. We request these paragraphs not be omitted. Our collaborative delivery approach will involve review of Private Entity's recommended sewer system improvements and timely decisions by Owner.

10.02 *Insurance*

- A. Owner's responsibilities with respect to purchasing and maintaining liability and property insurance are set forth in Article 6.

10.03 *Limitations on Owner's Responsibilities*

- A. The Owner shall not supervise, direct, or have control or authority over, nor be responsible for, Design-Builder's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Design-Builder to comply with Laws or Regulations applicable to the furnishing or performance of the Work. Owner will not be responsible for Design-Builder's failure to perform the Work in accordance with the Contract Documents.

10.04 *Undisclosed Hazardous Environmental Condition*

- A. Owner's responsibility with respect to undisclosed Hazardous Environmental Conditions uncovered or revealed at the Site is set forth in Paragraph 5.06.

10.05 *Owner's Site Representative*

- A. Owner may furnish an Owner's Site Representative to observe the performance of Construction. The duties, responsibilities and limitations of authority of any such Owner's Site Representative and assistants will be as provided in the Supplementary Conditions.

10.06 *Owner's Consultants and Managers*

- A. Owner's Consultant, if any, is identified in the Agreement.
- B. Owner shall advise Design-Builder of the identity and scope of services of any other independent consultants or managers retained by Owner to perform or furnish services in regard to the Project, including, but not limited to, cost estimating, project peer review, value engineering, constructability review, program management, project management, or contract administration.
- C. Neither Owner's Consultant, Owner's Site Representative, nor any other consultant or manager retained by Owner, has any duties, responsibilities, or authorities with respect to Design-Builder, unless expressly provided in this Contract. Owner's Consultant and such other consultants and managers shall not supervise, direct, or have control or authority over, nor be responsible for, Design-Builder's means, methods, techniques, sequences, or procedures of construction or the safety precautions and programs incident thereto, or for any failure of Design-Builder to comply with Laws or Regulations applicable to the furnishing or performance of the Work; and will not be responsible for Design-Builder's failure to perform the Work in accordance with the Contract Documents.

10.07 *Safety Programs*

- A. While at the Site, Owner's employees and representatives shall comply with the specific applicable requirements of Design-Builder's safety programs of which Owner has been informed pursuant to Paragraph 7.13.D.
- B. Owner shall inform Design-Builder of any specific requirements of safety or security programs that are applicable to Design-Builder while at the Site.



10.08 *Permits and Approvals*

- A. Owner shall obtain reviews, approvals, certificates, and permits from governmental authorities having jurisdiction over the Project as indicated in the Contract Documents.

ARTICLE 11 – AMENDING THE CONTRACT DOCUMENTS; CHANGES IN THE WORK

11.01 *Amending and Supplementing Contract Documents*

- A. The Contract Documents may be amended or supplemented by a Change Order or a Work Change Directive.
 - 1. *Change Orders*: If an amendment or supplement to the Contract Documents includes a change in the Contract Price or the Contract Times, such amendment or supplement must be set forth in a Change Order. A Change Order also may be used to establish amendments and supplements of the Contract Documents that do not affect the Contract Price or Contract Times.
 - 2. *Work Change Directives*: The Work modification ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order. When a Work Change Directive is issued, the parties will promptly meet to attempt to negotiate the Work Change Directive's effect, if any, on the Contract Times and Contract Price. The effect, if any, on Contract Times and Contract Price, together with the Work Change Directive's addition, deletion, or revision to the Work, will be set forth in a subsequently issued Change Order.
- B. Either Owner or Design-Builder may propose or request a Change Order. With respect to certain events, this Contract may indicate specific times in which such requests or proposals must be submitted to the other party. With respect to all other events, the request or proposal shall be submitted to the other party within 30 days of the event giving rise to the request or proposal.

11.02 *Authorized Changes in the Work*

- A. Without invalidating the Contract and without notice to any surety, and notwithstanding any other provision of the Contract, Owner may, at any time or from time to time, order or authorize additions, deletions, or revisions in the Work within the general scope of the Contract. Such changes may be accomplished by a Change Order, if Owner and Design-Builder have agreed as to the effect, if any, of the changes on Contract Times or Contract Price; or by a Work Change Directive. Upon receipt of any such document, Design-Builder shall promptly proceed with the Work involved; or, in the case of a deletion in the Work, promptly cease construction activities with respect to such deleted Work. Added or revised Work shall be performed under the applicable conditions of the Contract Documents. Nothing in this paragraph shall obligate Design-Builder to undertake work that Design-Builder reasonably concludes cannot be performed in a manner consistent with Design-Builder's safety or professional obligations under the Contract Documents or Laws and Regulations.

11.03 *Unauthorized Changes in the Work*

- A. Design-Builder shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any Work performed that is not required by the Contract Documents, as duly amended, except in the case of an emergency as provided in Paragraph 7.16, or in the case of uncovering Construction as provided in Paragraph 13.03.A.3.



11.04 *Changes Involving the Design*

- A. To the extent a change, whether proposed by Design-Builder or Owner, ordered by Owner, or set forth in a proposed Change Order or in a Work Change Directive, involves the design (as set forth in the Construction Drawings, Construction Specifications, or otherwise) or other engineering or technical matters, such changes must be reviewed and approved by the applicable Project Design Professional. The review and approval may occur at the time the change occurs, or as part of Design-Builder's provision of Professional Design Services in response to the change.

11.05 *Change of Contract Price*

- A. The Contract Price may only be changed by a Change Order. Any Claim regarding an adjustment in the Contract Price shall be presented by written notice to the other party in accordance with Paragraph 16.01.
- B. If the Contract Price is based on Cost of the Work, then the provisions in the Agreement regarding Cost of the Work and changes in the Design-Builder's fee, Contract Price, Guaranteed Maximum Price, and Guaranteed Maximum Fee, apply.
- C. The value of any Work covered by a Change Order or of any adjustment in the Contract Price will be determined as follows:
 - 1. Where the Work involved is covered by unit prices contained in the Contract Documents, by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 12.02); or
 - 2. Where the Work involved is not covered by unit prices contained in the Contract Documents, by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 11.05.D); or
 - 3. Where the Work involved is not covered by unit prices contained in the Contract Documents, and agreement to a lump sum is not reached under Paragraph 11.05.C.2, then on the basis of the Cost of the Work for price adjustments (determined as provided in the Cost of the Work provisions in the Agreement, if applicable, or in Paragraph 12.01), plus a Design-Builder's Fee for overhead and profit (determined as provided in Paragraph 11.05.D).
- D. *Design-Builder's Fee:* The Design-Builder's fee for overhead and profit on Change Orders shall be determined as follows:
 - 1. A mutually acceptable fixed fee; or
 - 2. If a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:
 - a. For costs incurred under Paragraphs 12.01.B.1.a. and 12.01.B.2, the Design-Builder's fee shall be 15 percent;
 - b. For costs incurred under Paragraph 12.01.B.3, 12.01.B.4, 12.01.B.5, and 12.01.B.6, the Design-Builder's fee shall be 5 percent;
 - c. With respect to Construction Subcontracts, where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of this Contract is that the Design-Builder's fee shall be based on: (1) a fee of 15 percent of the costs incurred under Paragraph 12.01 by the subcontractor that actually performs the Work, at whatever tier, and (2) with respect to Design-Builder

Commented [SMH36]: These terms are not defined



itself, and to any Construction Subcontractors of a tier higher than that of the Construction Subcontractor that actually performs the Work, a fee of 5 percent of the amount (fee plus underlying costs incurred) attributable to the next lower tier Construction Subcontractor; provided, however, that for any such subcontracted work the maximum total fee to be paid by Owner shall be no greater than 27 percent of the costs incurred by the Construction Subcontractor that actually performs the Work;

- d. With respect to Design Agreements, the Engineer or other invoicing Project Design Professional under a Design Agreement may add a fee of 5 percent to an invoice from a lower tier design entity, and Design-Builder may add a fee of 5 percent to an invoice from Engineer or other invoicing Project Design Professional; Owner shall not be responsible for any other mark-up at any tier (other than those incorporated in a factor, multiplier, hourly rate, or stipulated sum from the entity performing the subject Design Professional Services);
- e. No fee will be payable on the basis of costs itemized in Paragraph 12.01.B.7 or 12.01.C;
- f. The amount of credit to be allowed by Design-Builder to Owner for any change which results in a net decrease in cost will be the amount of the actual net decrease in cost plus a deduction in Design-Builder's fee by an amount equal to 5 percent of such net decrease; and
- g. When both additions and credits are involved in any one change, the adjustment in Design-Builder's fee shall be computed on the basis of the net change in accordance with Paragraphs 11.05.D.2.a through 11.05.D.2.e., inclusive.

11.06 *Change of Contract Times*

- A. The Contract Times may only be changed by a Change Order. Any Claim regarding an adjustment of the Contract Times shall be presented by written notice to the other party pursuant to Paragraph 16.01.
- B. Design-Builder's entitlement to an adjustment of the Contract Times under this Contract is conditioned on such adjustment being essential to Design-Builder's ability to complete the Work within the Contract Times.

11.07 *Execution of Change Orders*

- A. Owner and Design-Builder shall execute appropriate Change Orders covering:
 - 1. Changes in the Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive;
 - 2. Changes in Contract Price resulting from an Owner set-off, unless Design-Builder has duly contested such set-off;
 - 3. Changes in the Work which are: (a) ordered by Owner pursuant to Paragraph 11.02, (b) required because of Owner's correction of defective Work under Paragraph 13.05 or Owner's acceptance of defective Work under Paragraph 13.07, or (c) agreed to by the parties (all subject to the need for review and approval by the applicable Project Design Professional pursuant to Paragraph 11.04); and

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- 4. Changes in the Contract Price or Contract Times, or other changes, which embody the substance of any final and binding results under Article 16.
- B. If Owner or Design-Builder refuses to execute a Change Order that is required to be executed under the terms of this Paragraph 11.07, it shall be deemed to be of full force and effect, as if fully executed.

11.08 *Notice to Sureties*

- A. If notice of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times) is required by the provisions of any Bond to be given to a surety, the giving of any such notice will be Design-Builder's responsibility. The amount of each applicable Bond will be adjusted to reflect the effect of any such change.

ARTICLE 12 – COST OF THE WORK ADJUSTMENTS; UNIT PRICE WORK

12.01 *Cost of the Work*

- A. *Costs of the Work Adjustment:* When the price of Work covered by a Change Order or an adjustment in Contract Price is to be determined on the basis of Cost of the Work, the Cost of the Work adjustment means the sum of all costs necessarily incurred and paid by Design-Builder in the proper performance of the specific portion of the Work. The costs to be reimbursed to Design-Builder will be only those additional or incremental costs required because of the change of the Work or because of the event giving rise to the adjustment. If the Agreement contains Cost of the Work provisions, such provisions shall govern in determining the Cost of the Work for Change Order or adjustment purposes. If the Agreement does not contain Cost of the Work provisions, then the provisions in Paragraph 12.01 shall apply.
- B. *Costs Included:* The Cost of the Work adjustment does not include any of the costs itemized in Paragraph 12.01.C, and shall include only the following items with respect to the subject Work:
 - 1. Payroll costs for employees in the direct employ of Design-Builder in the performance of the subject Work, under schedules of job classifications agreed upon by Owner and Design-Builder in advance of such performance.
 - a. Such employees shall include without limitation superintendents, foremen, and other personnel employed full-time at the Site. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the subject Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits which shall include social security contributions, unemployment, excise and payroll taxes, workers' compensation, health and retirement benefits, bonuses, sick leave, vacation, and holiday pay applicable thereto. The expenses of performing the subject Work outside the hours or days permitted by this Contract shall be included in the above to the extent such performance of Work is authorized by Owner.
 - b. Such employees shall also include engineers, engineering technicians, architects, and others providing Design Professional Services as employees of Design-Builder. For purposes of this Paragraph 12.01.B.1.b, Design-Builder shall be entitled to payment for such employees an amount equal to salary costs times a factor, as designated in the Agreement, for services in the performance of the subject Work.

Commented [BC37]: We suggest using an agreed upon rate sheet instead of a labor multiplier.



2. Cost of all materials and equipment furnished and incorporated in the subject Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts shall accrue to Design-Builder unless Owner deposits funds with Design-Builder with which to make payments, in which case the cash discounts shall accrue to Owner. All trade discounts, rebates, and refunds and returns from sale of surplus materials and equipment shall accrue to Owner, and Design-Builder shall make provisions so that they may be obtained.
3. Cost of permits obtained by Design-Builder.
4. Payments made by Design-Builder to Construction Subcontractors for subject Work performed or furnished by such Construction Subcontractors. If any subcontract provides that the Construction Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Construction Subcontractor's Cost of the Work and fee shall be determined in the same manner as Design-Builder's Cost of the Work and fee.
5. Payments made by Design-Builder for Design Professional Services provided or furnished with respect to the subject Work under a Design Agreement.
6. Costs of special consultants (not including Project Design Professionals), including but not limited to testing laboratories, attorneys, and accountants, retained for services specifically related to the subject Work.
7. Supplemental costs including the following items:
 - a. The proportion of necessary transportation, travel, and subsistence expenses of Design-Builder's employees incurred in discharge of duties connected with the Work.
 - b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office and temporary facilities at the Site and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost, less market value, of such items used but not consumed that remain the property of Design-Builder.
 - c. Rentals of all construction or engineering equipment and machinery, and their parts, whether rented from Design-Builder or from others in accordance with rental agreements approved by Owner, and the costs of transportation, loading, unloading, installation, dismantling and removal of such equipment, machinery, and parts. All such costs shall be in accordance with the terms of such rental agreements. The rental of any such equipment, machinery, or parts shall cease when its use is no longer necessary for the Work.
 - d. Sales, consumer, use, and other similar taxes related to the subject Work, and for which Design-Builder is liable, imposed by Laws or Regulations.
 - e. Deposits lost for causes other than negligence of Design-Builder, any Construction Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.
 - f. Losses, damages, and related expenses caused by damage to the subject Work not compensated by insurance or otherwise, sustained by Design-Builder in connection with the furnishing and performance of the Work provided they have resulted from causes other than the negligence of Design-Builder, any Construction Subcontractor,

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or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses shall be included in the Cost of the Work for the purpose of determining Design-Builder's fee.

- g. The cost of utilities, fuel, and sanitary facilities at the Site, as applicable to the subject Work.
- h. Minor expenses such as long distance telephone calls, telephone service at the Site, express and courier services, and similar petty cash items in connection with the Work.
- i. Cost of premiums for all Bonds and insurance Design-Builder is required by the Contract Documents to purchase and maintain.

C. *Costs Excluded:* The term Cost of the Work shall not include any of the following items:

- 1. Payroll costs and other compensation of Design-Builder's officers, executives, principals (of partnerships and sole proprietorships), general managers, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by Design-Builder whether at the Site or in Design-Builder's principal or a branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 12.01.B.1, all of which are to be considered administrative costs covered by the Design-Builder's fee.
- 2. Expenses of Design-Builder's principal and branch offices other than Design-Builder's office at the Site.
- 3. Any part of Design-Builder's capital expenses, including interest on Design-Builder's capital employed for the subject Work and charges against Design-Builder for delinquent payments.
- 4. Costs due to the negligence of Design-Builder, any Construction Subcontractor, Engineer or other Project Design Professionals, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.
- 5. Other overhead or general expense costs of any kind, and the costs of any item not specifically and expressly included in Paragraph 12.01.B.

D. *Design-Builder's Fee:* When the value of the Work covered by a Change Order is determined on the basis of Cost of the Work, Design-Builder's fee shall be determined as set forth in Paragraph 11.05.D.

E. *Documentation:* Whenever the cost of any Work is to be determined pursuant to Paragraph 12.01.B and 12.01.C, Design-Builder will establish and maintain cost records in accordance with generally accepted accounting practices and submit in a form acceptable to Owner an itemized cost breakdown together with supporting data.

Commented [BC38]: I suggest deleting these positions from this paragraph as these folks may be involved in executing the work.

12.02 Unit Price Work

- A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all of Unit Price Work an amount



equal to the sum of the established unit prices for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of determining an initial Contract Price. Determinations of the actual quantities and classifications of Unit Price Work performed by Design-Builder will be made by Owner.

- B. If Design-Builder's compensation is based on Cost of the Work, this Contract will not include compensation under unit prices unless expressly stated otherwise.
- C. Each unit price will be deemed to include an amount considered by Design-Builder to be adequate to cover Design-Builder's overhead and profit for each separately identified item.
- D. Design-Builder or Owner may seek an adjustment in the Contract Price if:
 - 1. The quantity of any item of Unit Price Work performed by Design-Builder differs materially and significantly from the estimated quantity of such item indicated in the Agreement;
 - 2. Such an adjustment would not duplicate, and is coordinated with, any other related adjustments of Contract Price; and
 - 3. Design-Builder has incurred additional expense, or less expense, as a result of the variation in quantity.

ARTICLE 13 – TESTS AND INSPECTIONS; CORRECTION, REMOVAL, OR ACCEPTANCE OF DEFECTIVE CONSTRUCTION

13.01 Access to Construction

- A. Owner, Owner's Consultant, Owner's Site Representative, and other representatives and personnel of Owner, independent testing laboratories, and governmental agencies with jurisdictional interests will have access to the Site and the Construction at reasonable times for their observation, inspecting, and testing. Design-Builder shall provide them proper and safe conditions for such access and advise them of Design-Builder's Site safety procedures and programs so that they may comply therewith as applicable.

13.02 Tests, Inspections, and Approvals

- A. Design-Builder shall be responsible for arranging, obtaining, and paying for all inspections and tests required:
 - 1. By the Contract Documents, unless the Contract Documents expressly allocate responsibility for a specific inspection or test to Owner;
 - 2. By Laws and Regulations, unless the Contract Documents or Laws and Regulations expressly allocate responsibility for a specific inspection or test to Owner;
 - 3. To attain Owner's acceptance of materials or equipment to be incorporated in the Construction;
 - 4. By manufacturers of equipment furnished under the Contract Documents;
 - 5. To meet the requirements of the Construction Drawings and Construction Specifications;
 - 6. For testing, adjusting, and balancing of mechanical, electrical, and other equipment to be incorporated into the Construction; and

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7. For acceptance of materials, mix designs, or equipment submitted for approval prior to Design-Builder's purchase thereof for incorporation in the Construction.

Commented [SMH39]:

- B. Owner shall be responsible for arranging, obtaining, and paying for all inspections and tests expressly required by the Contract Documents or Laws and Regulations to be furnished and paid for by Owner, except that costs incurred in connection with tests or inspections of covered Construction shall be governed by the provisions of Paragraph 13.03.
- C. All inspections and tests shall be performed by independent inspectors, testing laboratories, or other qualified individuals or entities acceptable to Owner and Design-Builder.
- D. If the Contract Documents require the Construction (or part thereof) to be approved by Owner or another designated individual or entity, then Design-Builder shall assume full responsibility for arranging and obtaining such approvals.
- E. Design-Builder shall give Owner reasonable notice of the planned schedule for all required inspections, tests, and approvals.
- F. Design-Builder shall give Owner timely notice of readiness of the Construction (or specific parts thereof) for all required inspections and tests, and shall cooperate with inspection and testing personnel to facilitate required inspections and tests.
- G. Each party shall provide the other with copies of any certificates of inspection or approval obtained with respect to tests and inspections.
- H. Both parties may rely on the results of inspections and tests, performed pursuant to this paragraph and the governing provisions of the Contract Documents, Laws and Regulations, and the Construction Drawings and Construction Specifications.
- I. If any Construction (or the construction work of others) that is required to be inspected, tested, or approved is covered by Design-Builder without written concurrence of Owner, then ~~Contractor-Design-Builder~~ shall, if requested by Owner, uncover such Construction for observation. Such uncovering shall be at Design-Builder's expense unless Design-Builder has given Owner timely notice of Design-Builder's intention to cover the same and Owner has not acted with reasonable promptness in response to such notice.

Commented [PJJ40R39]: We do not think these items are applicable for the type of work we expect to perform. Contract documents will define the inspection and testing services required.

13.03 Uncovering Construction

- A. If Owner considers it necessary or advisable that covered Construction be observed by Owner or inspected or tested by others, then Design-Builder, at Owner's request, shall uncover, expose or otherwise make available for observation, inspection, or testing, as Owner may require, that portion of the Construction in question, furnishing all necessary labor, material, and equipment.
 - 1. If the Construction had been covered contrary to the written request of Owner or a requirement of the Contract Documents, then uncovering it for Owner's observation and re-covering it shall be at Design-Builder's expense, regardless of whether it is defective.
 - 2. If it is found that the covered Construction is defective, Design-Builder shall pay all costs and damages caused by or resulting from such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement, re-covering, or reconstruction (including but not limited to all fees and charges of engineers, architects, attorneys and other professionals, all court or arbitration or other dispute resolution costs, and all costs of repair or replacement of work of others); ~~and Owner shall be entitled to an appropriate decrease in the Contract Price.~~

Commented [PJJ41]: If the work is remedied, the Owner should not be entitled to a decrease in the Contract Price.



3. If the covered Construction is not found to be defective, Design-Builder shall be allowed an increase in the Contract Price or an extension of the Contract Times (or Milestones), or both, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, re-covering, and reconstruction, subject to the provisions of Paragraph 13.03.A.1.

13.04 *Defective Construction*

- A. It is Design-Builder's obligation to assure that the Construction is not defective.
- B. Owner shall give Design-Builder prompt written notice of all defective Construction of which Owner has actual knowledge. Owner may reject, accept, or correct defective Construction.
- C. Promptly after receipt of written notice of defective Construction, unless Owner expressly indicates that it will accept the defective Construction, Design-Builder shall correct all such defective Construction, whether or not fabricated, installed, or completed; or, if Owner has rejected the defective Construction, remove it from the Project and replace it with Construction that is not defective.
- D. When correcting defective Construction, Design-Builder shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Construction.

13.05 *Owner May Correct Defective Construction*

- A. If Design-Builder fails within a reasonable time after written notice from Owner to correct defective Construction or to remove and replace rejected Construction, or if Design-Builder fails to perform the Construction in accordance with the Contract Documents, or if Design-Builder fails to comply with any other provision of the Contract Documents, Owner may, after 7 days' written notice to Design-Builder, correct and remedy any such deficiency.
- B. In exercising the rights and remedies under this Paragraph 13.05 Owner shall proceed expeditiously. In connection with such corrective and remedial action, Owner may exclude Design-Builder from all or part of the Site, take possession of all or part of the Construction, and suspend Design-Builder's services related thereto, and incorporate in the Construction all materials and equipment stored at the Site or for which Owner has paid Design-Builder but which are stored elsewhere. Design-Builder shall allow Owner, Owner's Consultant, Owner's Site Representative, and Owner's other representatives, agents, employees, and contractors, access to the Site to enable Owner to exercise the rights and remedies under this paragraph.

13.06 *Costs*

- A. Design-Builder shall bear all costs arising out of or relating to the correction, removal, or replacement of defective Construction, ~~including but not limited to repair of adjacent Work or property; delay costs and impacts; fees and charges of engineers, architects, attorneys, and other professionals; and all court, arbitration, or other dispute resolution costs.~~
- ~~B. All costs, losses, and damages (included but not limited to fees and charges of engineers, architects, attorneys and other professionals, all court or arbitration or other dispute resolution costs, and all costs of repair or replacement of work of others) incurred or sustained by Owner in exercising its rights and remedies arising from defective Construction under this Article will be charged against Design-Builder, by set-off against payment or otherwise.~~
- ~~C.B.~~ Design-Builder shall not be allowed an extension of the Contract Times (or Milestones) because of any delay in the performance of the Work attributable to defective Construction.

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13.07 *Owner's Acceptance of Defective Construction*

- A. If, instead of requiring correction or removal and replacement of defective Construction, Owner prefers to accept it, Owner may do so. If such acceptance is proposed prior to final payment, it shall be subject to confirmation by the applicable Project Design Professional that such acceptance is in general accord with the design intent and applicable engineering principles, and will not endanger public safety. ~~Design-Builder shall pay all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys and other professionals and all court or arbitration or other dispute resolution costs) attributable to Owner's evaluation of and determination to accept such defective Construction.~~ If any such acceptance occurs prior to final payment, a mutually agreed Change Order will be issued incorporating the necessary revisions in the Contract Documents, and Owner shall be entitled to an appropriate decrease in the Contract Price reflecting the diminished value of the Construction so accepted.

13.08 *Owner May Stop Construction*

- A. If Construction is defective, or Design-Builder fails to supply sufficient skilled workers or suitable materials or equipment, or fails to furnish or perform Construction in such a way that the completed Construction will conform to the Contract Documents, Owner may order Design-Builder to stop Construction or any portion thereof, until the cause for such order has been eliminated; however, this right of Owner to stop Construction will not give rise to any duty on the part of Owner to exercise this right for the benefit of Design-Builder or any other party.

ARTICLE 14 – PAYMENTS TO DESIGN-BUILDER; COMPLETION

14.01 *Progress Payments*

- A. *Basis for Progress Payments:* The Schedule of Values established as provided in Paragraph 2.04 will serve as the basis for progress payments. Progress payments on account of Unit Price Work will be based on the number of units completed.
- B. *Application for Progress Payment:* On or about the date established in the Agreement for submission of each application for progress payment (but not more often than once a month), Design-Builder shall submit to Owner for review an Application for Payment filled out and signed by Design-Builder covering the Work completed as of the date indicated on the Application and accompanied by supporting documentation as required by the Contract Documents. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment shall also be accompanied by a bill of sale, invoice or other documentation warranting that Owner has received the materials and equipment free and clear of all Liens and evidence that the materials and equipment are covered by appropriate property insurance and other arrangements to protect Owner's interest therein, all of which will be satisfactory to Owner.
- C. *Payment of Obligations:*
1. Beginning with the second Application for Payment, each Application shall include an affidavit of Design-Builder stating that all previous progress payments received on account of the Work have been applied on account to discharge Design-Builder's legitimate obligations associated with prior Applications for Payment.
 2. If Design-Builder contends that it has withheld payment of underlying obligations for good cause, then Design-Builder shall inform Owner of the identity of the entity from

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which Design-Builder has withheld payment, the amount of the withholding, and the reason for the withholding.

- D. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.
- E. *Review of Applications:*
1. Owner will, within 10 days of receipt of each Application for Payment, either indicate in writing its acceptance of the Application and state that the Application is being processed for payment, or return the Application to Design-Builder indicating in writing its reasons for refusing to accept the Application.
- F. Not more than 10 days after accepting such Application the amount will become due and when due will be paid by Owner to Design-Builder.
1. If Owner should fail to pay Design-Builder at the time the payment of any amount becomes due, then Design-Builder may, at any time thereafter, upon serving written notice that he will stop the Work within 7 days after receipt of the notice by Owner, and after such 7-day period, stop the Work until payment of the amount owing has been received. Written notice shall be deemed to have been duly served if sent by certified mail to the last known business address of Owner.
 2. Payments due but unpaid shall bear interest at the rate specified in the Agreement.
 3. No Progress Payment nor any partial or entire use or occupancy of the Project by Owner shall constitute an acceptance of any Work not in accordance with the Contract Documents.
- G. *Reduction in or Refusal to Make Payment:*
1. Owner may impose a set-off against the whole or any part of any such payment, or nullify any previous payment because of subsequently discovered evidence or the results of subsequent inspections or tests, to the extent that is reasonably necessary to protect Owner from loss because:
 - a. Claims have been made against Owner on account of Design-Builder's conduct in the performance or furnishing of the Work, or Owner has incurred costs, losses, or damages on account of Design-Builder's conduct in the performance or furnishing of the Work, including but not limited to claims, costs, losses, or damages from breach of warranty, workplace injuries, adjacent property damage, non-compliance with Laws and Regulations, and patent infringement;
 - b. Design-Builder has failed to take reasonable and customary measures to avoid damage, delay, disruption, and interference with other work at or adjacent to the Site;
 - c. Design-Builder has failed to provide and maintain required bonds or insurance;
 - d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Design-Builder is responsible;
 - e. Owner has incurred extra charges or engineering costs related to submittal reviews, evaluations of proposed substitutes, tests and inspections, or return visits to manufacturing or assembly facilities;
 - f. The Construction is defective, requiring correction or replacement;



- g. Owner has been required to correct defective Construction in accordance with Paragraph 13.05, or has accepted defective Construction pursuant to Paragraph 13.07;
 - h. The Contract Price has been reduced by Change Orders;
 - i. An event that would constitute a default by Design-Builder and therefore justify a termination for cause has occurred;
 - j. Liquidated damages, special damages, or performance damages have accrued under the Contract Documents as a result of Design-Builder's failure to achieve Milestones, Substantial Completion, final completion of the Work, or performance requirements, as applicable;
 - k. Liens have been filed in connection with the Work, except where Design-Builder has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such liens; or
 - l. There are other items entitling Owner to a set off against the amount recommended.
2. If Owner imposes any set-off against payment, Owner will give Design-Builder immediate written notice stating the reasons for such action and the specific amount of the reduction, and promptly pay Design-Builder any amount remaining after deduction of the amount so withheld. Owner shall promptly pay Design-Builder the amount so withheld, or any adjustment thereto agreed to by Owner and Design-Builder, if Design-Builder remedies the reasons for such action. The reduction imposed shall be binding on Design-Builder unless it duly presents a written notice of Claim contesting the reduction.

14.02 *Design-Builder's Warranty of Title*

- A. Design-Builder warrants and guarantees that title to all Construction, materials, and equipment covered by any Application for Payment, whether already incorporated in the Project or not, will pass to Owner no later than the time of payment free and clear of all Liens.

14.03 *Substantial Completion*

- A. When Design-Builder considers the Work ready for its intended use Design-Builder shall notify Owner in writing that the Work is substantially complete (except for items specifically listed by Design-Builder as incomplete) and request that Owner issue a certificate of Substantial Completion. Promptly thereafter, Owner and Design-Builder shall make an inspection of the Work to determine the status of completion. If Owner does not consider the Work substantially complete, Owner will notify Design-Builder in writing giving the reasons therefor.
- B. If Owner considers the Work substantially complete:
 - 1. Owner and Design-Builder will confer regarding Owner's use or occupancy of the Work following Substantial Completion, review the builder's risk insurance policy with respect to the end of the builder's risk coverage, and confirm the transition to coverage of the Work under a permanent property insurance policy held by Owner. Unless Owner and Design-Builder agree otherwise in writing, Owner shall bear responsibility for security, operation, protection of the Work, property insurance, maintenance, heat, and utilities upon Owner's use or occupancy of the Work.

Commented [PJJ42]: Owner's use to include use by Locality if Locality owns the asset

Commented [PJJ43]: Owner or Locality that Owns the asset.



2. Owner will prepare and deliver to Design-Builder a certificate of Substantial Completion which shall fix the date of Substantial Completion. Owner shall attach to the certificate a punch list of items to be completed or corrected before final payment.
- C. After Substantial Completion the Design-Builder shall promptly begin work on the punch list of items to be completed or corrected prior to final payment. In appropriate cases Design-Builder may submit monthly Applications for Payment for completed punch list items, following the progress payment procedures set forth above.
- D. Owner shall have the right to exclude Design-Builder from the Site after the date of Substantial Completion subject to allowing Design-Builder reasonable access to remove its property and complete or correct items on the punch list.

14.04 *Partial Use or Occupancy*

- A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Construction which (1) has specifically been identified in the Contract Documents, or (2) Owner and Design-Builder agree constitute a separately functioning and usable part of the Construction that can be used by Owner for its intended purpose without significant interference with Design-Builder's performance of the remainder of the Construction, subject to the following:
 1. Owner at any time may request Design-Builder in writing to permit Owner to use or occupy any such part of the Construction that Owner believes to be ready for its intended use and substantially complete. If Design-Builder agrees that such part of the Work is substantially complete, Design-Builder and Owner will follow the procedures of Paragraph 14.03 for that part of the Construction.
 2. Design-Builder at any time may notify Owner in writing that Design-Builder considers any such part of the Work ready for its intended use and substantially complete and request Owner to issue a certificate of Substantial Completion for that part of the Work.
 3. Within a reasonable time after either such request, Owner and Design-Builder shall make an inspection of that part of the Work to determine its status of completion. If Owner does not consider that part of the Work to be substantially complete, Owner will notify Design-Builder in writing giving the reasons therefor. If Owner considers that part of the Work to be substantially complete, the provisions of Paragraph 14.03 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.
 4. No use or occupancy of part of the Construction will be accomplished prior to compliance with the requirements of Paragraph 6.05 regarding property insurance.

Commented [PJJ44]: Or Locality that owns the sewer system assets

14.05 *Final Inspection*

- A. Upon written notice from Design-Builder that the entire Work or an agreed portion thereof is complete, Owner will make a final inspection with Design-Builder and will notify Design-Builder in writing of all particulars in which this inspection reveals that the Work is incomplete or defective. Design-Builder shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

14.06 *Final Payment*

- A. *Application for Payment:*
 1. After Design-Builder has completed all such corrections to the satisfaction of Owner and



delivered in accordance with the Contract Documents all maintenance and operating instructions, schedules, guarantees, Bonds, certificates or other evidence of insurance, certificates of inspection, and Record Documents, Design-Builder may make application for final payment following the procedure for progress payments.

2. The final Application for Payment shall be accompanied (unless previously delivered) by:
 - a. All documentation called for in the Contract Documents;
 - b. Consent of the surety, if any, to final payment;
 - c. Satisfactory evidence that all title issues have been resolved such that title to all Work, materials, and equipment has passed to Owner free and clear of any Liens or other title defects, or will so pass upon final payment;
 - d. A list of all disputes that Design-Builder believes are unsettled; and
 - e. Complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of the Work, and of Liens filed in connection with the Work.
 3. In lieu of such releases or waivers of Liens specified in Paragraph 14.06.A.2, and as approved by Owner, Design-Builder may furnish receipts or releases in full and an affidavit of Design-Builder that: (a) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed, and (b) all payrolls, material and equipment bills and other indebtedness connected with the Work for which Owner might in any way be responsible, or which in any way might result in liens or other burdens on Owner's property, have been paid or otherwise satisfied. If any Project Design Professional, Construction Subcontractor, or Supplier fails to furnish such a release or receipt in full, Design-Builder may furnish a Bond or other collateral satisfactory to Owner to indemnify Owner against any Lien.
- B. *Final Payment and Acceptance:* If Owner is satisfied that the Work has been completed and Design-Builder's other obligations under the Contract Documents have been fulfilled, Owner will, within 10 days after receipt of the final Application for Payment, give written notice to Design-Builder that the Work is acceptable. Otherwise, Owner will return the Application to Design-Builder, indicating in writing the reasons for refusing to process final payment, in which case Design-Builder shall make the necessary corrections and resubmit the Application.
- C. *Completion of Work:* The Work is complete (subject to surviving obligations) when it is ready for final payment.
- D. *Payment Becomes Due:* The amount will become due and will be paid by Owner to Design-Builder 30 days after the presentation to Owner of the acceptable Application and accompanying documentation, in appropriate form and substance and with Owner's notice of acceptability.

14.07 Waiver of Claims

- A. The making of final payment will not constitute a waiver by Owner of claims or rights against Design-Builder. Owner expressly reserves claims and rights arising from unsettled Liens, from defective Work appearing after final inspection pursuant to Paragraph 14.05, from Design-Builder's failure to comply with the Contract Documents or the terms of any special guarantees specified therein, from unresolved disputes or Claims presented by Owner, or from Design-Builder's continuing obligations under the Contract.



- B. The acceptance of final payment by Design-Builder will constitute a waiver by Design-Builder of all claims and rights against Owner other than those pending matters that have been duly submitted to dispute resolution under the provisions of Article 16.

14.08 *Correction Period*

- A. If within one year after the date of Substantial Completion of the entire Work or such longer period of time as may be prescribed by Laws or Regulations or by the terms of any applicable special guarantee required by the Contract Documents or by any specific provision of the Contract Documents, any Construction is found to be defective, Design- Builder shall promptly, without cost to Owner and in accordance with Owner's written instructions, (1) correct such defective Construction, or, if it has been rejected by Owner, remove it from the Site and replace it with Construction that is not defective, and (2) satisfactorily correct or remove and replace any damage to other Construction or the work of others resulting therefrom. If Design-Builder does not promptly comply with the terms of such instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Construction corrected or the rejected Construction removed and replaced, and all costs, losses, and damages caused by or resulting from such removal and replacement (including but not limited to all fees and charges of engineers, architects, attorneys and other professionals, all court or arbitration or other dispute resolution costs, and all costs of repair or replacement of work of others) will be paid by Design-Builder.
- B. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Conceptual Documents.
- C. Where defective Construction (and damage to other Construction resulting therefrom) has been corrected, or removed or replaced, under this Paragraph 14.08, the correction period hereunder with respect to such Construction will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed, not to exceed two years from Substantial Completion.

ARTICLE 15 – SUSPENSION OF WORK AND TERMINATION

15.01 *Owner May Suspend Work*

- A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than 90 days by notice in writing to Design-Builder, which will fix the date on which Work will be resumed. Design-Builder shall resume the Work on the date so fixed. Design-Builder shall be entitled to an adjustment in the Contract Price or an extension of the Contract Times, or both, directly attributable to any such suspension.

15.02 *Owner May Terminate for Cause*

- A. The occurrence of any one or more of the following events justifies termination for cause:
 - 1. Design-Builder's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment, or failure to adhere to the progress schedule as duly adjusted).
 - 2. Design-Builder's disregard of Laws or Regulations of any public body having jurisdiction.
 - 3. Design-Builder's violation in any substantial way of provisions of the Contract Documents.



- B. If one or more of the events identified in Paragraph 15.02.A occurs, Owner may, after giving Design-Builder (and the surety, if any) 7 days' written notice, terminate the services of Design-Builder, take possession of any completed Design Submittals prepared by or for Design-Builder (subject to the limited license and indemnification provisions of Paragraph 3.04), exclude Design-Builder from the Site, take possession of the Work, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Design-Builder but which are stored elsewhere, and finish the Work as Owner may deem expedient. In such case Design-Builder shall not be entitled to receive any further payment until the Work is finished. If the unpaid balance of the Contract Price exceeds all costs, losses and damages sustained by Owner arising out of or resulting from completing the Work (including but not limited to all fees and charges of engineers, architects, attorneys and other professionals and all court or arbitration or other dispute resolution costs) such excess will be paid to Design-Builder. If such costs, losses and damages exceed such unpaid balance, Design-Builder shall pay the difference to Owner. Such costs, losses and damages incurred by Owner will be incorporated in a Change Order. When exercising any rights or remedies under this paragraph Owner shall not be required to obtain the lowest price for the Work performed.
- C. Notwithstanding Paragraph 15.02.B, Design-Builder's services will not be terminated if Design-Builder begins, within 7 days of receipt of notice of intent to terminate, to correct its failure to perform and proceeds diligently to cure such failure within no more than 30 days of receipt of said notice.
- D. Where Design-Builder's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Design-Builder then existing or which may thereafter accrue. Any retention or payment of moneys due Design-Builder by Owner will not release Design-Builder from liability.

15.03 *Owner May Terminate for Convenience*

- A. Upon 7 days' written notice to Design-Builder, Owner may, without cause and without prejudice to any other right or remedy of Owner, elect to terminate the Contract. In such case, Design-Builder shall be paid (without duplication of any items) for:
 1. Completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;
 2. Expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses;
 3. Amounts paid ([including cancellation fee](#)) in settlement of terminated contracts with Project Design Professionals, Construction Subcontractors, Suppliers and others (including but not limited to all fees and charges of engineers, architects, attorneys and other professionals and all court or arbitration or other dispute resolution costs incurred in connection with such terminated contracts); and
 4. Reasonable expenses directly attributable to termination.
- B. Design-Builder shall not be paid on account of loss of anticipated profits or revenue or other economic loss arising out of or resulting from such termination.



15.04 *Design-Builder May Stop Work or Terminate*

- A. If, through no act or fault of Design-Builder, the Work is suspended for a period of more than 90 days by Owner or under an order of court or other public authority, Owner fails to act on any Application for Payment within 30 days after it is submitted, or Owner fails for 30 days to pay Design-Builder any sum finally determined to be due, then Design-Builder may, upon 7 days' written notice to Owner, and provided Owner does not remedy such suspension or failure within that time, terminate the Contract and recover from Owner payment on the same terms as provided in Paragraph 15.03.A. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Owner has failed for 30 days to pay Design-Builder any sum finally determined to be due, Design-Builder may upon 7 days' written notice to Owner stop the Work until payment is made of all such amounts due Design-Builder, including interest thereon. The provisions of this paragraph are not intended to preclude Design-Builder from obtaining an increase in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Design-Builder's stopping Work as permitted by this paragraph.

ARTICLE 16 – DISPUTES

16.01 *Methods and Procedures*

- A. *Notice of Claim:* If Owner and Design-Builder are not in agreement regarding a proposed or requested Change Order, other proposed adjustment of Contract Price or Contract Times, a Work Change Directive issued by Owner, or any other relief proposed or requested under the Contract, then either party may provide written notice of a Claim to the other party. Such notice of Claim shall be given within 90 days of: the proposal or request for a Change Order; such other proposed adjustment of Contract Price or Contract Times; the issuance of the Work Change Directive; or the proposal or request for other relief under the Contract. The notice of Claim shall be given within the 90 days regardless of whether the other party has responded to such proposal, request, or issuance, and regardless of whether discussions or negotiations are in progress; provided, however, that the parties may extend the time to give such notice of Claim by mutual written agreement. The notice of Claim shall include a statement of position, specification of the remedy sought, and supporting documentation.
- B. *Response:* Within 30 days of the date of notice of Claim, the receiving party shall respond with a written statement of position and any supporting documentation.
- C. *Direct Negotiations:* Owner and Design-Builder agree to directly negotiate all Claims between them in good faith for a period of 60 days from the date of notice of Claim.
- D. *Mediation:* If direct negotiations are unsuccessful in resolving a Claim, then Owner and Design-Builder shall submit the unsettled Claim to mediation by a mutually agreeable mediator or mediation service. Owner and Design-Builder agree to participate in the mediation process in good faith. The process shall be conducted on a confidential basis, and shall be completed within 120 days.
1. The fees and expenses, including filing fees, of the mediator and any mediation service shall be shared equally by Owner and Design-Builder.
 2. The mediation shall be held in the locality where the Project is located, unless another location is mutually agreed upon by the parties.
 3. A settlement (if any) resulting from such mediation will be specifically enforceable under the prevailing law, by any court having jurisdiction.



- 4. Participation in the mediation process in good faith is a condition precedent to commencing final or binding dispute resolution.
- E. If mediation is unsuccessful in resolving a Claim, then within 120 days of the completion of the mediation (1) the parties may mutually agree to a binding dispute resolution process of their choice, or (2) the claimant may give notice to the other that the claimant will seek to have the dispute resolved by a binding dispute resolution method established in this Contract, or if no such method has been established, by a court of competent jurisdiction. Failure by claimant to give such notice in a timely manner shall result in a waiver of the Claim.

ARTICLE 17 – MISCELLANEOUS

17.01 Giving Notice

- A. Whenever any provision of the Contract Documents requires the giving of written notice to the other party to this Contract, it will be deemed to have been validly given if delivered to the Authorized Representative of the other party:
 - 1. In person, by a commercial courier service or otherwise; or
 - 2. By registered or certified mail, postage prepaid; or
 - 3. By e-mail, with the words “Formal Notice” or similar in the e-mail’s subject line.

17.02 Computation of Times

- A. When any period of time is referred to in the Contract Documents by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

17.03 Cumulative Remedies

- A. Unless expressly stated otherwise in this Contract, the duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to, and are not to be construed in any way as a limitation of, or waiver of, any rights and remedies available to any or all of them which are otherwise imposed or available by:
 - 1. Laws or Regulations; or
 - ~~2. Any special warranty or guarantee; or~~
 - ~~3.2.~~ Other provisions of the Contract.
- B. The provisions of Paragraph 17.03.A will be as effective as if repeated specifically in the Contract in connection with each particular duty, obligation, right and remedy to which they apply.

17.04 Limitation of Damages

- A. With respect to this Contract and any and all Claims and other matters at issue, ~~Owner~~ ~~neither party~~ shall ~~not~~ be liable to ~~Design-Builder~~ ~~the other party~~ for any claims, costs, losses, or damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained ~~by Design-Builder~~ on or in connection with any other project or anticipated project.

Commented [PJJ45]: Design-Builder’s General Warranty and Guarantee are covered in Article 7.18



17.05 *No Waiver*

- A. A party's non-enforcement of any provision shall not constitute a waiver of that provision, nor shall it affect the enforceability of that provision or of the remainder of this Contract.

17.06 *Survival of Obligations*

- A. All representations, indemnifications, warranties and guarantees made in, required by or given in accordance with the Contract Documents, as well as all continuing obligations indicated in the Contract Documents, will survive final payment, completion and acceptance of the Work and termination or completion of the Contract.

17.07 *Controlling Law*

- A. The Contract Documents will be construed in accordance with the law of the place of the Project.

17.08 *Headings*

- A. Article and paragraph headings are inserted for convenience only and do not constitute parts of these General Conditions.



**SUPPLEMENTARY CONDITIONS OF THE
CONTRACT BETWEEN OWNER AND PRIVATE ENTITY**

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These Supplementary Conditions amend or supplement EJCDC® D-700, Standard General Conditions of the Contract Between Owner and Design-Builder (2016). The General Conditions remain in full force and effect except as amended.

The terms used in these Supplementary Conditions have the meanings stated in the General Conditions. Additional terms used in these Supplementary Conditions have the meanings stated below, which are applicable to both the singular and plural thereof.

The address system used in these Supplementary Conditions is the same as the address system used in the General Conditions, with the prefix "SC" added – for example, "Paragraph SC-4.05."

ARTICLE 1 – DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

- SC-1.01 Delete in its entirety Paragraph 1.01.A.1 and replace it with the following:
1. Addenda: Written or graphic instruments issued by Owner prior to the opening of the Conceptual Technical Proposals, which clarify, correct, or change the Request for Proposals.
- SC-1.01 Delete Paragraph 1.01.A.2 in its entirety and replace it with the following:
2. Agreement: The Interim Agreement or Comprehensive Agreement.
- SC-1.01 Delete Paragraph 1.01.A.13 in its entirety and replace it with the following:
13. *Construction Subcontractor*: An individual or entity (other than a Supplier) having a direct contract with Private Entity or with any other Construction Subcontractor for any Design Professional Services or the performance of a part of the Construction, or performing any Design Professional Services or Construction for the Project, including as a consultant, subconsultant, or otherwise.
- SC-1.01 Delete in its entirety Paragraph 1.01.A.18 and replace it with the following:
18. *Design-Builder (Private Entity)*: The terms Design-Builder and Private Entity shall be used interchangeably and shall mean the individual or entity with which Owner has contracted for performance of the Work, as designated in the Agreement.
- SC-1.01 Delete in its entirety Paragraph 1.01.A.31 and replace it with the following:
31. *Owner's Consultant (Owner's Advisor)*: the terms Owner's Consultant and Owner's Advisor shall be used interchangeably and shall mean an individual or entity with which the Owner has contracted to furnish services (typically including planning, preparation of Conceptual Documents, and advisory services) to Owner with respect to the Project, and which is identified as such in the Agreement.
- SC-1.01 Delete in its entirety Paragraph 1.01.A.42 and replace it with the following:
42. Schedule of Values: A schedule, prepared and maintained by Private Entity and accepted by the Owner, allocating portions of the Contract Price to various portions of the Work, and used as the basis for reviewing Private Entity's Applications for Payment.
- SC-1.01 Delete in its entirety Paragraph 1.01.A.43 and replace it with the following:
43. Site: The proposed Locality basins included in the initial Program (as provided in the Request for Proposals).

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SC-1.01 Delete in its entirety Paragraph 1.01.A.45 and replace it with the following:
45. Submittal: A written or graphic document, prepared by or for Proposer, which the RFQ Documents require the Proposer to submit to the Owner.

SC-1.01 Amend Paragraph 1.01.A.46 by adding the following subparagraphs:

Substantial Completion is further defined as (a) that degree of completion of the Project's operating facilities or systems sufficient to provide the Owner with benefit from the full time, uninterrupted, continuous operation of the Work; and (b) all required functional, performance and acceptance or startup testing has been successfully demonstrated for all components, devices, equipment, and instrumentation and control to the satisfaction of the Owner in accordance with the requirements of the Specifications; and (c) all inspections required have been completed and identified conditions corrected. Specific items of Work which shall be completed prior to declaration of Substantial Completion include, but are not limited to, the following:

1. Conformance with all training services requirements, unless specified for post-startup period.
2. Correction of all state, local, and other regulatory agencies defective work lists related to the Work.
3. Submittals have been received and approved by the Owner including, but not necessarily limited to, the following:
 - a. Draft record documents.
 - b. Operation and maintenance manuals, including service and maintenance agreements.
 - c. Equipment data forms.
 - d. Manufacturers' certificates of proper installation.
 - e. Factory test reports.
4. All special accessories have been provided that are required to place each item of equipment in full operation. These special accessory items include, but are not limited to, specified spare parts, test equipment, adequate oil and grease or other lubrication, air filters, light bulbs, fuses, special tools, valve operators, and other expendable items required for startup and operation of the operating facilities or systems as a whole.
5. All additional warranty or insurance coverage requirements have been provided.

SC-1.01 Delete in its entirety Paragraph 1.01.A.53 and replace it with the following:
53. *Work*: The entire design and construction or the various separately identifiable parts thereof required to be performed or furnished by Private Entity under the Contract Documents. Work includes and is the result of performing or furnishing Design Professional Services and Construction required by the Contract Documents and all labor, services, and documentation necessary to produce such Design Professional Services and Construction; furnishing, installing, and incorporating all materials and equipment into such Construction; and related services such as testing, start-up, commissioning, training, and monitoring, all as required by the Contract Documents.

Commented [BC1]: We envision individual substantial completions for each locality project area.



Work excludes the equipment, machinery, tools, vehicles, supplies, etc. used by the Private Entity to complete the work.

SC-1.01 Add the following to the list of items in Paragraph 1.01.A, as numbered items:

55. *Bonds*: Performance and payment bonds and other instruments of security.
56. *Comprehensive Agreement*: The written instrument pursuant to and satisfying the requirements of Virginia Code § 56-575.9 executed by Owner and Private Entity, that sets forth the Contract Price and Contract Times, identifies the parties, and designates the specific items that are Contract Documents.
57. *Contract Cost Limit (CCL)*: The price submitted by the Private Entity as part of the Price Proposal Form and as further negotiated with the Owner as part of the execution of the Agreement. The CCL is a guaranteed maximum price for the cost of the Work covered by the Agreement as defined by the Contract Documents. The CCL for the Work will be established using generally recognized methods for design-build contracting, including detailed accounting for design services; pre-construction services; of the Work; general and administrative costs (overhead); and profit.
58. *Field Order*: A written order issued by Owner which orders minor changes in the Work, but which does not involve a change in the Contract Price or the Contract Times.
59. *Functionally Complete*: A Project has met these criteria for Functionally Complete when all equipment and facilities have reached a state where they can be used for their intended purpose in a safe manner as defined by the Contract Documents.
60. *Interim Agreement*: The written instrument pursuant to Virginia Code § 56-575.9:1, executed by Owner and Private Entity, that sets forth the Contract Price and Contract Times, identifies the parties, and designates the specific items that are Contract Documents.
61. *Request for Change in Scope*: A document which is signed by Owner's Consultant and/or Private Entity, which requests a change or changes to the Work.
62. *Stipulated Price*: The final CCL as amended by any Change Order established between the Owner and Private Entity prior to beginning any construction-related activities. The Stipulated Price for the Work will be established using generally recognized methods for design build contracting, including a detailed accounting for design services; pre-construction services; the estimated cost of the Work; general and administrative costs (overhead); and profit.

Commented [SMH2]: We're used to seeing GMP agreements including information on how the price is compiled (define cost of work, contingency, allowance, and fee). The cost of work definition is only relative to changes and there's no definition for contingency.

ARTICLE 2 – PRELIMINARY MATTERS

2.01 *Delivery of Bonds and Evidence of Insurance*

SC-2.01 Delete in their entirety Paragraphs 2.01.A and 2.01.B and replace them with the following:

- A. *Performance and Payment Bonds*: When Contractor submits their approval of the Agreement to Owner electronically, Contractor shall also electronically submit to Owner the performance bond and payment bond (if the Contract requires Contractor to furnish such bonds).
- B. *Evidence of Contractor's Insurance*: When the Contractor submits their approval of the Agreement to Owner electronically, Contractor shall also electronically submit to Owner certificates, endorsements, and other evidence of insurance required to be

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provided by Contractor in accordance with Article 6, except to the extent the Supplementary Conditions expressly establish other dates for delivery of specific insurance policies.

- C. *Evidence of Owner's Insurance:* After receipt of electronic approval of the Agreement and electronic submittal of all required bonds and insurance documentation, Owner shall promptly provide an electronic copy to Contractor, with copies to each additional insured (as identified in the Contract), the certificates and other evidence of insurance required to be provided by Owner under Article 6.

2.02 *Copies of Documents*

SC-2.02 Delete in its entirety Paragraph 2.02.

2.04 *Before Starting the Work*

SC-2.04 Delete in its entirety Paragraph 2.04.

2.07 *Review of Schedules*

SC-2.07 Delete the third sentence of Paragraph 2.07.A and replace it with the following:

No progress payment shall be made to Private Entity until Private Entity updates and submits schedules that comply with the following requirements:

2.08 *Electronic Transmittals*

SC-2.08 Delete Paragraph 2.08.C and replace it with the following:

- A. Unless expressly stated otherwise in this Contract, Private Entity shall provide documents in accordance with HRSD's Design and Construction Standards.

ARTICLE 3 – DOCUMENTS: INTENT, AMENDING, REUSE

3.01 *Contract Documents*

SC-3.01 Delete in its entirety Paragraph 3.01.C.

3.02 *Reference Standards*

SC-3.02 Add new Paragraph 3.02.A.3

All Work shall be performed and completed in conformance with the latest version of the Locality standards, HRPDC standards, or HRSD standards, in that order or priority. If Work to be performed is not covered by one of these sources, then the Private Entity shall suggest a product, approach, etc. to Owner, and obtain the written approval of Owner prior to commencing that portion of the Work.

3.03 *Resolving Discrepancies*

SC-3.03 Delete in their entirety Paragraphs 3.03.A and 3.03.B.

ARTICLE 4 – COMMENCEMENT AND PROGRESS OF THE WORK

4.01 *Commencement of Contract Times*

SC-4.01 Delete in its entirety Paragraph 4.01 and replace it with the following:

1.01 *Commencement of Contract Times; Notice to Proceed*

- A. The Contract Times will commence to run on the 30th calendar day after the Effective Date of the Agreement, or, if a Notice to Proceed is given, on the

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day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within 30 calendar days after the Effective Date of the Agreement. Unless agreed to in writing by Owner and Private Entity, the Contract Times will commence to run no later than the 90th calendar day after the last day for receipt of the Proposal or the 30th calendar day after the Effective Date of the Agreement, whichever date is earlier, the effective date of the Notice to Proceed.

4.02 *Starting the Work*

SC-4.02 Delete Paragraph 4.02.A and replace it with the following:

- A. Private Entity shall start to perform the Work on the date when the Contract Times commence to run. No Work shall be done at the Site prior to the date on which the Contract Times commence to run.

ARTICLE 5 – SITE; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS

1.01 *Availability of Lands*

SC-5.01 Delete Paragraphs 5.01.A and 5.01.B and replace them with the following:

- A. The majority of the work proposed for this Program is located within public Rights-of-Way. However, if any work proposed by the Private Entity is proposed to be on private property, written consent from Owner must be obtained before any work may commence. If investigative (e.g., CCTV, smoke testing, etc.) work is proposed, Owner will obtain a Right of Entry for the Private Entity to perform their work. If construction (e.g., grouting, lining, replacement, etc.) work is proposed, Private Entity will obtain written permission from the property owner for this work.

- B. Intentionally Omitted.

1.02 *Use of Site and Other Areas*

SC-5.02 Delete Paragraphs 5.02.A.2 and 5.02.A.3 and replace them with the following:

- 2. If a claim for bodily injury (including death) of a third party or damage to third-party property arises out of the negligence of the Private Entity or those for which Private Entity is responsible, including Construction Subcontractors, Private Entity shall:
 - a. take immediate corrective or remedial action as required by Paragraph 7.13, or otherwise;
 - b. inform the Owner in writing of any and all claims within 7 calendar days of notification by a third party;
 - c. promptly attempt to settle the claim within 60 calendar days through negotiations, or otherwise resolve the claim by arbitration or other dispute resolution proceeding, or at law; and
 - d. to the fullest extent permitted by Laws or Regulations, indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and construction subcontractors of each and any of them from and against any such claim for bodily injury (including death) or damage to third-party property, and against all resulting costs, losses, and damages (including but not limited to all fees and charges of engineers,

Commented [BC3]: It was our understanding from the proprietary meeting that the Owner would be securing access for this work by entering into an agreement with the property owner.

Commented [SMH4]: To avoid inconsistencies and duplication, we suggest deleting this Section and cover indemnification in section 7.19.



architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against Owner, Owner's Consultant, to the extent caused directly or indirectly, in whole or in part by, or based upon, Private Entity's performance of the Work, or because of other actions or conduct of the Private Entity or those for which Private Entity is responsible, including Construction Subcontractors.

3. To the fullest extent permitted by applicable Laws or Regulations, Private Entity shall indemnify and hold harmless Owner, Owner's Consultant, and anyone directly or indirectly employed by any of them from and against all claims, costs, losses and damages (including, but not limited to, fees of engineers, architects, attorneys and other professionals and court and arbitration or other dispute resolution costs) arising out of or resulting from any claim brought by any such owner or occupant against Owner, or any other party indemnified hereunder to the extent caused by or based upon Private Entity's performance of the Work.

SC-5.02 Delete in its entirety Paragraph 5.02.C and replace it with the following:

- C. *Cleaning*: Private Entity shall clean their work zone daily as required by their Right-of-Way permit if working in the right of way, but shall not leave equipment, debris, or equipment at the Site that may endanger the health, safety, or welfare of the motoring public or residents. If work is performed on private property the site shall be cleaned according to the terms of the Right of Entry or Agreement between the property owner and Private Entity/Owner.

1.03 *Reference Points*

SC-5.03 Delete in its entirety Paragraph 5.03

1.04 *Differing Site Conditions*

SC-5.04 Add new subparagraph immediately after Paragraph 5.04.A:

1. No reports of explorations or tests of subsurface conditions at or adjacent to the Site, or drawings of physical conditions relating to existing surface or subsurface structures at the Site, are known to Owner.
2. During the Design Professional Services phase, Private Entity shall make provisions to obtain additional information regarding subsurface and physical conditions as they specifically relate to the Site and to proper design and construction of the Work.

5.06 *Hazardous Environmental Conditions at Site*

SC-5.06 Delete Paragraph 5.06.A and replace it with the following:

- A. No reports or drawings related to Hazardous Environmental Conditions at the Site are known to Owner.

SC-5.06 Delete Paragraph 5.06.G and replace it with the following:

- G. Intentionally Omitted.

SC-5.06 Add new paragraph immediately after Paragraph 5.06.H:

- I. HRSD is required in accordance with 29 CFR 1910.1200, to inform Private Entity personnel that work centers within HRSD have hazardous chemicals on site. HRSD and Private Entity personnel may be exposed to these hazardous chemicals while

Commented [PJJ5]: Would SSES data that represents the condition of underground sewer pipes and manholes, such as CCTV provided by Localities, be considered subsurface structures?

Commented [BC6]: We would like this not to be deleted.

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working at HRSD work centers. A written Hazard Communication Program has been developed to inform personnel of the specific hazardous chemicals at the work center and the related safety information including protective measures, special precautions and emergency procedures to be observed. The Hazard Communication Program including Safety Data Sheets for each hazardous chemical at the work center will be reviewed with the Private Entity after the Notice to Proceed is issued. It is the responsibility of the Private Entity to request a meeting with representatives of HRSD's Safety Division and/or work center staff to review this program prior to beginning any on-site efforts at the work center or centers impacted by this Project. The Private Entity is responsible for communicating the information contained in the Hazard Communication Program to their personnel and subcontractors working at the work center.

ARTICLE 6 – BONDS AND INSURANCE

6.01 *Performance, Payment, and Other Bonds*

SC-6.01 Delete Paragraph 6.01.A and replace it with the following:

- A. Private Entity shall furnish a performance bond and a payment bond, each in an amount equal to the Contract Price (CCL) at the time of the award of the Contract, as a security for the faithful performance and payment of Private Entity's obligations under the Contract. These bonds shall remain in effect until one year after the date when final payment becomes due, or until completion of the correction period specified in Paragraph 14.08, whichever is later, except as provided otherwise by Laws or Regulations, the Supplementary Conditions, or other specific provisions of the Contract. The performance bond may be provided at a later date agreed to by the Owner, but shall be provided prior to the beginning of any construction efforts. Private Entity shall also furnish such other bonds as required below:
1. After approval of Stipulated Price, the Private Entity shall furnish an updated performance bond and payment bond (or rider), each in an amount equal to the updated Contract Price.

6.02 *Insurance – General Provisions*

SC-6.02 Add new subparagraph immediately after Paragraph 6.02.B:

1. Private Entity may obtain workers' compensation insurance from an insurance company that has not been rated by A.M. Best, provided that such company (a) is domiciled in the state in which the Project is located, (b) is certified or authorized as a workers' compensation insurance provider by the appropriate state agency having jurisdiction, and (c) has been accepted to provide workers' compensation insurance for similar projects by the state within the last 12 months.

SC-6.02 Add new subparagraph immediately after Paragraph 6.02.E:

1. The Private Entity shall ensure that all Construction Subcontractors carry all applicable category of insurance; however, Owner does not specify required limits.

SC-6.02 Delete Paragraph 6.02.F and replace it with the following:

- B. Private Entity shall deliver to Owner, with copies to each additional insured (as identified in this Article, in the Supplementary Conditions, or elsewhere in the Contract), certificates of insurance (including copies of relevant endorsements)

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establishing that Private Entity has obtained and is maintaining the policies, coverages, and endorsements required by the Contract. ~~Upon request by Owner or any other insured, Private Entity shall also furnish other evidence of such required insurance, including but not limited to copies of endorsements, evidence of insurance required to be purchased and maintained by Private Entity's Construction Subcontractors, Engineer, and any other Project Design Professional that is an independent individual or entity. Private Entity may block out (redact) any confidential premium or pricing information contained in any policy or endorsement furnished under this provision.~~

Commented [JP7]: We will provide COIs and relevant endorsements. This language is unclear as to what else may wanted.

6.03 *Private Entity's Insurance*

- SC-6.03 Modify subparagraph 6.03.A.3 by replacing the word, "monopolist" with the word, "monopolistic".
- SC-6.03 Add new subparagraph immediately after Paragraph 6.03.A.4:
~~5. Owner shall be named as an Alternate Employer by endorsement.~~
- SC-6.03 Delete subparagraph 6.03.B.2 and replace it with the following:
2. Claims for damages insured by reasonably available personal or advertising injury liability coverage.
- SC-6.03 Add new subparagraph immediately after Paragraph 6.03.B.3:
4. Contractual Liability.
- SC-6.03 Amend Paragraph 6.03.C and to delete the first sentence and replace it with the following, but retaining all subparagraphs unless otherwise modified by the Supplemental Conditions:
- C. ~~Commercial General Liability—Form and Content:~~ Private Entity's commercial liability policy shall be written on an ~~1996 (or later) Insurance Services Organization, Inc. (ISO) commercial general liability occurrence basis form (or equivalent)~~ and include the following coverages and endorsements:
- SC-6.03 Delete subparagraph 6.03.C.1.a and replace it with the following:
- a. Such insurance shall be maintained for ~~onethree~~ years after ~~final payment or termination of the Contract~~ completion of the Work.
- SC-6.03 Delete subparagraph 6.03.C.3 and replace it with the following:
3. Property damage coverage.
- SC-6.03 Amend subparagraph 6.03.C.4 by adding the following new sentence:
Insured-versus-insured and cross liability exclusions do not apply to Owner.
- SC-6.03 Delete subparagraph 6.03.C.5 and replace it with the following:
5. Intentionally Omitted.
- SC-6.03 Delete subparagraph 6.03.C.7 and replace it with the following:
7. Additional insured endorsements that include both ongoing operations and products and completed operations coverage through ISO Endorsements CG 20 10 ~~07 04~~ and CG 20 37 ~~07 04~~, or their equivalent.



- SC-6.03 ~~Modify subparagraph 6.03.C.8 by replacing, “CG 20 32 07 04” with, “CG 20 32 12 19”.~~
- SC-6.03 Add new subparagraph immediately after subparagraph 6.03.C.8:
9. The General Aggregate Limits will apply per project. No other project or claims unrelated to the Project shall have an effect on the General Aggregate Limits of the Design-Builder’s commercial liability policy provided under the Contract.
- SC-6.03 Delete subparagraph 6.03.D.1 and replace it with the following:
1. Any modification of the ~~standard~~ISO definition of “insured contract” ~~(except to delete the railroad protective liability exclusion if Private Entity is required to indemnify a railroad or others with respect to Work within 50 feet of railroad property).~~
- SC-6.03 Delete subparagraph 6.03.D.3 and replace it with the following:
3. Any provisions resulting in the erosion of insurance limits by defense costs, ~~other than those already incorporated in ISO form CG 00 01.~~
- SC-6.03 Delete subparagraph 6.03.D.4 and replace it with the following:
4. Any exclusion of coverage relating to earth subsidence or movement.
- SC-6.03 Delete subparagraph 6.03.D.5 and replace it with the following:
5. Any exclusion for the insured’s vicarious liability, strict liability, or statutory liability ~~(other than worker’s compensation).~~
- SC-6.03 Modify subparagraph 6.03.D.7 by replacing, “CG 22 79 07 98” with, “CG 22 80 04 13”.
- SC-6.03 ~~Modify the last sentence in Paragraph 6.03.E by replacing the word, “occurrence” with the word, “accident”.~~
- SC-6.03 Delete the second sentence of Paragraph 6.03.G and replace it with the following:
- This insurance shall be maintained for ~~three one~~ years after ~~final~~ completion of the Work.
- SC-6.03 Amend Paragraph 6.03.G by adding the following new sentence:
- If written on a “claims made” basis, the retroactive date will pre-date the commencement of the Work.
- SC-6.03 Delete Paragraph 6.03.H and replace it with the following:
- H. *Additional Insureds Ongoing and Completed Operations, and Waiver of Subrogation:*
 The Private Entity’s commercial general liability, automobile liability, umbrella or excess, and pollution liability policies shall include and list as additional insureds Owner, ~~Owner’s Consultant, and any individuals or entities identified as required additional insureds;~~ include coverage for their respective officers, directors, members, partners, and employees, ~~agents, consultants, subcontractors, and subconsultants~~ or each and any of all such additional insureds; and the insurance afforded to these additional insureds shall provide primary coverage for ~~all~~ claims covered thereby (including as applicable those ~~arising from~~ caused by both Private Entity’s ongoing and completed operations) on a non-contributory basis to insurance of the same type and form maintained by Owner. (except for Automobile Liability).
 Where not prohibited by law the Private Entity’s commercial general liability, automobile liability, umbrella or excess, and workers compensation policies and



employer's liability shall include a waiver of subrogation endorsement in favor of the Owner, ~~Owner's Consultant, and any individuals or entities identified herein.~~ Private Entity shall obtain all necessary endorsement to support these requirements. The

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additional insureds shall include the following:

1. Owner: Hampton Roads Sanitation District
1434 Air Rail Avenue
Virginia Beach, Virginia 23455

- SC-6.03 Delete the first sentence of subparagraph 6.03.I.1 and replace it with the following:
1. Private Entity shall be responsible for purchasing and maintaining professional liability insurance with limits equal to \$1,000,000 per claim and in the aggregate. This insurance shall be specific to the Project, primary, and non-contributory. This insurance shall provide protection against claims ~~arising out of~~ during performance of professional design or related services, and caused by a negligent act, error, or omission, ~~or act~~ for which Private Entity is legally liable.
- SC-6.03 Delete the first sentence of subparagraph 6.03.I.4 and replace it with the following:
- Any professional liability insurance required under this Contract shall be maintained throughout the duration of the Contract and for ~~three one~~ years after Substantial Completion of the Work.
- SC-6.03 Delete subparagraph 6.03.J.1 and replace it with the following:
1. Include the specific coverages provide in this Article. ~~SC-~~
- 6.03 Delete Paragraph 6.03.J.2 and replace it with the following:
2. ~~Be written for the stated limits of coverage provided in this Article and in the Supplementary Conditions, or required by Laws or Regulations, whichever is greater.~~
- SC-6.03 Delete the first sentence of subparagraph 6.03.J.3 and replace it with the following:
- Contain a provision or endorsement that the coverage afforded will not be canceled, ~~materially changed,~~ or renewal refused until at least 30 calendar days prior written notice has been given to Private Entity (10 calendar days Non-Payment).
- SC-6.03 Modify the first sentence of subparagraph 6.03.J.4 by replacing the words, "Remain in effect at least until final payment" with the words, "Remain in effect for one ~~three~~ years after final payment completion of the Work".
- SC-6.03 Add new paragraphs immediately after Paragraph 6.03.J:
- A. The required limits for commercial general liability and automobile liability must be met by the primary policies, and not by reference to excess or umbrella insurance provided in other policies.
 - B. The limits of liability for the insurance required by Paragraph 6.03 of the General Conditions for the Private Entity shall provide coverage for ~~not less than~~ the following amounts, ~~or greater where required by Laws or Regulations:~~
 1. Workers' Compensation and Employer's Liability under Paragraph 6.03.A of the General Conditions:

State: Virginia	Statutory
Federal, if applicable (e.g., Longshoreman's):	Statutory
Jones Act coverage, if applicable:	
Bodily injury by accident, each accident	\$ 1,000,000

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Bodily injury by disease, aggregate

\$ — N/A

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- | | |
|---|----------------------|
| Employer's Liability: | |
| Bodily injury, each accident | \$ 100,000 |
| Bodily injury by disease, each employee | \$ 100,000 |
| Bodily injury/disease aggregate | \$ 500,000 |
| Voluntary Worker Compensation: | Statutory |
2. Commercial General Liability under Paragraphs 6.03.B, 6.03.C, and 6.03.D of the General Conditions:

General Aggregate:	\$ 24 ,000,000
Products – Completed Operations Aggregate:	\$ 14 ,000,000
Personal and Advertising Injury:	\$ 12 ,000,000
Each Occurrence (Bodily Injury and Property Damage):	\$ 12 ,000,000
Damage to Rented Premises (Fire Damage):	\$ 100,000
Medical Expenses (Any one person):	\$ 5,000
 3. Automobile Liability under Paragraph 6.03.E of the General Conditions:

Each Accident Combined Single Limit of:	\$ 12 ,000,000
--	---------------------------
 4. Umbrella or Excess Liability under Paragraph 6.03.F of the General Conditions:

Per Occurrence:	\$ 102 ,000,000
General Aggregate:	\$ 102 ,000,000
 5. Contractor's Pollution Liability insurance under Paragraph 6.03.G of the General Conditions:

Each Claim:	\$ 21 ,000,000
General Aggregate:	\$ 21 ,000,000
 6. Contractor's Professional Liability/Errors and Omissions under Paragraph 6.03.I of the General Conditions:

Each Claim:	\$ 21 ,000,000
General Aggregate:	\$ 21 ,000,000
 7. *Unmanned Aerial Vehicle Liability Insurance:* If Private Entity uses unmanned aerial vehicles (UAV – commonly referred to as drones) at the Site or in support of any aspect of the Work, Private Entity shall obtain UAV liability insurance in the amounts stated; name Owner, Owner's Consultant, and all individuals and entities identified in the Supplementary Conditions as additional insureds; and provide a certificate to Owner confirming Private Entity's compliance with this requirement. Such insurance will provide coverage for property damage, bodily injury or death, and invasion of privacy. Private Entity shall ensure any subcontractors using UAV's carry the required liability insurance and provide the

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same additional insured protections:

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Each Claim: \$ 1,000,000
 General Aggregate: \$ 1,000,000

~~8. Additional Coverages: In the event the Private Entity utilizes a vessel or barge in execution of the contract, all owned and non-owned vessels or barges shall be insured; including crew coverage and contractual liability. Hull insurance shall be carried for the full value of replacement. Owner shall be named as additional insured on all watercraft insurance coverage:~~

~~Protection and Indemnity: \$ 1,000,000~~

~~If operations involve the use of owned or non-owned aircraft of watercraft, coverage must be provided for bodily injury and property damage arising out of ownership, maintenance, use, or entrustment, thereof as follows:~~

~~General Aggregate: \$ 2,000,000~~

~~Each Occurrence (Bodily Injury and Property Damage): \$ 1,000,000~~

6.05 Property Insurance

SC-6.05 Amend Paragraph 6.05.A delete the first sentence up until but not including "This insurance shall:" and replace it with the following:

- A. ~~Builder's Risk; Prior to mobilization and/or procurement of any materials or equipment for delivery to the Site, Private Entity shall purchase and maintain builder's risk insurance upon the Work on a completed value basis of \$74,000,000 including materials, labor, overhead and profit, subject to such deductible amounts described herein in the amount of the full insurable replacement cost thereof (subject to such deductible amounts) until Substantial Completion based on what is commercially and reasonably available in the insurance marketplace at the time of placement. Should any portion of the Work be deemed uninsurable and/or insurance unobtainable under the all-risk builder's risk policy Private Entity would expect the Owner to assume responsibility of any loss in excess of coverage, limits, and uncovered losses to the Work. The claimant shall be responsible for payment of any and all deductibles. Private Entity shall have special peril of open peril builder's risk insurance coverage including "Named Storms", flood, and earthquake perils, subject to sublimit noted in this section.~~

Commented [PJ8]: Design Builder anticipates phased completion of the Work with a single substantial Completion Date associated with each construction work package. As individual projects are completed we would release them from our BR policy and they would be put into the care and control of HRSD/Locality.

SC-6.05 Delete subparagraph 6.05.A.2 and replace it with the following:

2. Be written on a builder's risk "all risk" policy form that shall ~~at least~~ include insurance for physical loss or damage to the Work, temporary buildings, falsework, and materials and equipment ~~to be incorporated into the Work~~ stored and in transit, and shall insure against ~~at least~~ the following perils or causes of loss: fire; lightning; windstorm; hail; riot; civil commotion; terrorism; vehicle impact; aircraft; smoke; theft; vandalism and malicious mischief; ~~mechanical breakdown, boiler explosion, and artificially generated electric current~~; earthquake; volcanic activity, and other earth movement; flood; collapse; explosion; debris removal; demolition and increased cost of construction occasioned by enforcement of Laws and Regulations; water damage (other than that caused by flood); and such other perils or causes of loss as may be specifically required by the Supplementary Conditions. ~~If insurance against mechanical breakdown, boiler explosion, and artificially generated electric~~

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~~current; earthquake; volcanic activity, and other earth movement; or flood or windstorm, are not commercially available under builder's risk policies, by endorsement or otherwise, such insurance may be provided through other insurance policies acceptable to Owner and Private Entity.~~

SC-6.05

Delete subparagraph 6.05.A.4 and replace it with the following:

4. Cover ~~12 months of~~ expenses incurred in the repair or replacement of any insured property (soft costs that cover ~~additional expediting and extra~~ expenses associated with a loss), ~~in the amount of \$6,500,000 or 5 percent of the hard costs, incurred in~~

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~~the repair or replacement of any insured property (including but not limited to costs, fees and charges of engineers, architects, accounting, advertising, permits, interest, taxes, fees, legal, insurance premiums, etc.).~~

SC-6.05 Amend subparagraph 6.05.A.5 by adding the following to the end of the sentence, “with an applicable sublimit of \$3,000,000.”

~~SC-6.05 Amend subparagraph 6.05.A.6 by adding the following to the end of the sentence, “with an applicable sublimit of \$1,000,000.”~~

SC-6.05 Delete subparagraph 6.05.A.10 and replace it with the following:

10. Not include a co-insurance clause or show coinsurance as ‘nil’.

SC-6.05 Delete Paragraph 6.05.A.13 and replace it with the following:

13. Be maintained in effect, subject to the provisions herein regarding Substantial Completion and benefit from the Project by Owner, until the Work is complete.

SC-6.05 Add new subparagraph immediately after Paragraph 6.05.A.13:

~~14. Provide insurance sublimit coverage of \$10,000,000 or the full value of the Work, whichever is less, for earth movement (earthquake), flood, and windstorm.~~

SC-6.05 Modify the first sentence of Paragraph 6.05.B by replacing the words, “10 calendar days’ prior written notice” with the words, “30 calendar days prior written notice (10 calendar days Non-Payment)”.

SC-6.05 Delete Paragraph 6.05.C and replace it with the following:

C. *Deductibles:* The Private Entity shall be responsible for all policy deductibles on Builder’s Risk ~~or property insurance. Maximum property deductibles permitted without prior agreement with the Owner shall be \$50,000 all other perils, 2 percent of insured value for wind and hail and \$50,000 flood and earthquake. The Private Entity shall be responsible for any and all deductibles under such insurance.~~

SC-6.05 Delete Paragraph 6.05.G and replace it with the following:

G. Intentionally Omitted.

ARTICLE 7 – DESIGN-BUILDER’S RESPONSIBILITIES

7.04 *Labor; Working Hours*

SC-7.04 Delete Paragraph 7.04.B and replace it with the following:

B. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise indicated in the Contract Documents, and in the absence of any Laws or Regulations to the contrary, all Construction at the Site shall be performed during regular working hours. Private Entity will not perform Work on any legal holiday. Private Entity may perform Construction at the Site outside regular working hours or on a legal holiday only with Owner’s written consent, which will not be unreasonably withheld.

SC-7.04 Add new subparagraph immediately after 7.04.B.

1. Regular working hours will be Monday through Friday between 7:00 am and 7:00 pm, unless otherwise approved by HRSD or required by the Locality where work is

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- SC-7.04 Add new paragraph immediately after Paragraph 7.04.B:
- C. Private Entity acknowledges and agrees that the Owner selected the Private Entity for award of the Contract, in part, because of the special qualifications of Private Entity's key personnel. Private Entity shall not reassign or transfer key personnel to other duties or positions such that they are no longer available to provide the Owner with the expertise, experience, judgment, and personal attention at the level proposed without first notifying the Owner to proposed reassignment or transfer. The Owner shall have the right to interview and review the qualifications for acceptance of any proposed change in key personnel which will not be unreasonably denied.
- 7.09 *Permits and Utility Charges*
- SC-7.09 Delete Paragraph 7.09.A and replace it with the following:
- A. The Private Entity is responsible for obtaining and paying for any and all permits, licenses, certificates of occupancy, and approvals of governmental authorities having jurisdiction over the Work.
- 7.12 *Record Documents*
- SC-7.12 Delete the fourth sentence of Paragraph 7.12.A and replace it with the following:
- Upon completion of the Work, the Private Entity shall provide Record Documents and other required information to the Owner in accordance with the terms and conditions of the Contract Documents.
- 7.13 *Safety and Protection*
- SC-7.13 Add new subparagraph immediately after Paragraph 7.13.C:
1. The following Owner safety programs are applicable to the Work: *Owner's Design and Construction Standards*, latest version, is available for review at <https://www.hrsd.com/standards>.
- 7.14 *Safety Representative*
- SC-7.14 Add new paragraph immediately after Paragraph 7.14.A:
- B. Safety Representatives from both the Owner and Private Entity shall coordinate efforts as necessary to assure a safe work environment for their respective, facilities and/or equipment impacted by the Work. This in no way relieves the Private Entity of their responsibility for initiating, maintaining and supervising all safety precautions and programs in connection with the Work as specified in Paragraph 7.13 of the General Conditions and Supplementary Conditions.
- 7.19 *Indemnification*
- SC-7.19 Delete Paragraph 7.19.A and replace it with the following:
- A. To the fullest extent permitted by Laws and Regulations, and in addition to any other obligations of the Private Entity under the Contract or otherwise, Private Entity shall indemnify and hold harmless Owner, Owner's Consultant, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all third-party claims, costs losses, damages and judgments (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to or resulting from the performance or

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Work, provided that any such claim, action, loss, cost, judgment, or damage is attributable to bodily injury, sickness, disease, or death, or to injury to, damage to or destruction of tangible property (other than ~~work~~ itself) including the loss of use resulting therefrom but only to the extent caused by any negligent act or omission of Private Entity, a Project Design Professional, or any Construction Subcontractor, Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work or anyone for whose acts any of them may be liable.

7.20 *Submittals Using Project Management Software*

SC-7.20 Add new paragraph immediately after Paragraph 7.19:

7.10 *Submittals Using Project Management Software*

- A. Private Entity, shall submit the following information and documentation using the HRSD Project Management Software (Oracle Enterprise Resource Planning (ERP) and Unifier systems):
 - 1. Pay applications.
 - 2. Shop Drawings, Operations and Maintenance (O&M) Manuals, and Material and Spare Parts Turnover forms.
 - 3. Certificate of Substantial Completion.
 - 4. Other forms and submittals as mutually agreed upon.
- B. Private Entity personnel shall attend HRSD training to implement usage of software.

ARTICLE 8 – SUBMITTALS

8.01 *Design-Builder's Preparation of Submittals*

SC-8.01 Add new subparagraph immediately after 8.01.A:

- 1. Private Entity shall develop and submit to Owner for approval, a list of Design Submittals and Construction Drawings based on the scope of work proposed during the Agreement for the Project.

ARTICLE 9 – OTHER CONSTRUCTION

9.03 *Legal Relationships*

SC-9.03 Delete in its entirety Paragraph 9.03.A and replace it with the following:

- A. Intentionally Omitted.

9.04 *Claims Between Contractors*

SC-9.04 Add new paragraph immediately after Paragraph 9.03:

9.01 *Claims Between Contractors*

- A. Should Private Entity cause damage to the work or property of any other contractor at the Site, or should any claim arising out of Private Entity's performance of the Work at the Site be made by any other contractor against Private Entity or Owner, Private Entity shall promptly attempt to settle with such other contractor by agreement, or to otherwise resolve the dispute by arbitration or at law.

Commented [PJJ9]: Is it HRSD's intent to include other contractors contracted directly with localities working in the vicinity of each work Site? We would like to understand how our work would be coordinated with work by other Contractors unknown to HRSD.



- B. Private Entity shall, to the fullest extent permitted by Laws and Regulations, indemnify and hold harmless Owner and the officers, directors, partners, employees, agents and other consultants and construction subcontractors of each and any of them from and against all claims, costs, losses and damages (including, but not limited to, reasonable fees and charges of engineers, architects, attorneys, and other professionals and court and arbitration costs) arising directly, indirectly or consequentially out of any action, legal or equitable, brought by any other contractor against Owner to the extent said claim is based on or arises out of Private Entity's performance of the Work. Should another contractor, not under the control of the Owner, cause damage to the Work or property of Private Entity or should the performance of work by any other contractor, not under the control of the Owner, at the Site give rise to any other Claim, Private Entity shall not institute any action, legal or equitable, against Owner or permit any action to be maintained and continued in its name or for its benefit in any court or before any arbiter which seeks to impose liability on or to recover damages from Owner on account of any such damage or Claim.
- C. If Private Entity is delayed at any time in performing or furnishing Work by any act or negligence of another contractor, not under the control of the Owner, and Owner and Private Entity are unable to agree as to the extent of any adjustment in Contract Times attributable thereto, Private Entity may make a Claim for an extension of times in accordance with Article 11. An extension of the Contract Times shall be Private Entity's exclusive remedy with respect to Owner for any delay, disruption, interference, or hindrance caused by any other contractor.

Commented [PJJ10]: Is it HRSD's intent to include Locality contractors?

Commented [PJJ11]: Delay by 3rd party would be considered a force majeure event and result in adjustment in both schedule and cost of impact.

Commented [BC12]: This section defined what information we could rely on. We don't think this section should be intentionally omitted.

ARTICLE 10 – OWNER'S RESPONSIBILITIES

10.01 General

SC-10.01 Delete subparagraph 10.01.A.1 and replace it with the following:

1. Intentionally Omitted.

SC-10.01 Delete subparagraph 10.01.A.4 and replace it with the following:

4. Intentionally Omitted.

SC-10.01 Delete in their entirety Paragraphs 10.01.B, 10.01.C, and 10.01.D and replace it with the following:

- B. Intentionally Omitted.
- C. Intentionally Omitted.
- D. Intentionally Omitted.

10.05 Owner's Site Representative

SC-10.05 Add new subparagraph immediately after Paragraph 10.05.A:

1. On this Project, Owner will not furnish an Owner's Site Representative to represent Owner at the Site or assist Owner in observing the performance of the Work.

ARTICLE 11 – AMENDING THE CONTRACT DOCUMENTS; CHANGES IN THE WORK

11.01 Amending and Supplementing Contract Documents

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- SC-11.01 Add new subparagraph immediately after Paragraph 11.01.A.2:
3. *Field Orders:* Owner may authorize minor changes in the Work if the changes do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Such changes will be accomplished by a Field Order and will be binding on Owner and also on Private Entity, which shall perform the Work involved promptly. If Private Entity believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, or both, then before proceeding with the Work at issue, Private Entity shall submit a Change Proposal as provided herein.
- 11.02 *Authorized Changes in the Work*
- SC-11.02 Add new paragraph immediately after Paragraph 11.02.A:
- B. Changes in the Work requested by the Owner will be documented by the Owner's Consultant through the use of a Request for Change in Scope. This document will be prepared by the Owner's Consultant and shall describe the proposed changes. The document shall be signed by the Owner's Consultant and Private Entity and provided to the Owner for information.
- 11.05 *Change of Contract Price*
- SC-11.05 Delete in its entirety subparagraph 11.05.D.2.d and replace it with the following:
- d. Intentionally Omitted.
- 11.07 *Execution of Change Orders*
- SC-11.07 Delete in its entirety Paragraph 11.07.B and replace it with the following:
- B. Intentionally Omitted.
- 11.09 *Claims*
- SC-11.09 Add new paragraph immediately after Paragraph 11.08:
- 11.09 *Claims*
- A. *Notice:* If Owner and Private Entity are unable to agree on entitlement to, or on the amount or extent, if any, of an adjustment in the Contract Price or an adjustment of the Contract Times that should be allowed as a result of any order of Owner pursuant to Paragraph 11.02.A or other occurrence for which the Contract Documents provide that such adjustment(s) may be made, a Claim may be made therefor. Written notice of intent to make such a Claim shall be submitted to the other party promptly and in no event more than 15 calendar days after the start of the occurrence or event giving rise to the Claim.
- B. *Documentation:* Substantiating documentation shall be submitted by the claiming party within 30 calendar days after delivery of the notice required by Paragraph 11.09.A.
- C. *Decision:* The other party shall render a decision on the Claim no more than 30 calendar days after the receipt of the substantiating documentation required by Paragraph 11.09.B. This decision will be final and binding unless the claiming party gives notice of intention to exercise its rights under Article 16 within 30 calendar days of receipt of the decision and exercises such rights

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within 30 calendar days of giving the notice of intent.

- D. *Time Limit Extension*: The time limits of Paragraphs 11.09.B and 11.09.C may be extended by mutual agreement.

ARTICLE 12 – COST OF THE WORK ADJUSTMENTS; UNIT PRICE WORK

12.01 *Cost of Work*

SC-12.01 Delete subparagraph 12.01.B.7.c and replace it with the following:

c. Construction Equipment and Machinery:

- 1) Rentals of all construction equipment and machinery, and the parts thereof in accordance with rental agreements approved by Owner, and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs shall be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the Work.
- 2) Costs for equipment and machinery owned by Private Entity will be paid at a rate not to exceed that shown for such equipment in the Rental Rate Blue Book for Construction Equipment. An hourly rate will be computed by dividing the monthly rates by 176. These computed rates will include all operating costs. Costs will include the time the equipment or machinery is in use on the changed Work and the costs of transportation, loading, unloading, assembly, dismantling, and removal when directly attributable to the changed Work. The cost of any such equipment or machinery, or parts thereof, shall cease to accrue when the use thereof is no longer necessary for the changed Work. Equipment or machinery with a value of less than \$1,000 will be considered small tools.

12.03 *Cash Allowances*

SC-12.03 Add new paragraph immediately after Paragraph 12.02:

12.01 *Cash Allowances*

- A. The Contract Price includes all allowances so named in the Contract Documents. Private Entity shall cause the Work so covered to be performed for such sums as may be acceptable to Owner. Private Entity agrees that:
1. The allowances include the cost to Private Entity (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and
 2. Except as set forth in the Contract Documents, Private Entity's costs for unloading and handling on the Site, labor, installation costs, overhead, profit, and other expenses contemplated for the allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment on account of any of the foregoing will be valid.
- B. Prior to final payment, an appropriate Change Order will be issued to reflect actual amounts due Private Entity on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted.

ARTICLE 14 – PAYMENTS TO DESIGN-BUILDER; COMPLETION

14.01 *Progress Payments*

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- SC-14.01 Delete the first sentence of Paragraph 14.01.A and replace it with the following:
The Schedule of Values established and accepted by the Owner as provided in Paragraph 2.04 will serve as the basis for progress payments.
- SC-14.01 Delete in their entirety Paragraphs 14.01.E and 14.01.F and replace it with the following:
- E. *Review of Applications:* Progress payments shall be made by the Owner to the Private Entity according to the following procedure:
1. No more than 30 calendar days after presentation of the Application for Payment to Owner, the amount recommended, with concurrence from Owner's Consultant, will become due and will be paid by Owner to Private Entity.
 2. If Owner should fail to pay Private Entity at the time the payment of any amount becomes due, then Private Entity may, at any time thereafter, upon serving written notice that he will stop the Work within 7 calendar days after receipt of the notice by Owner, and after such 7-day period, stop the Work until payment of the amount owing has been received. Written notice shall be deemed to have been duly served if sent by certified mail to the last known business address of Owner.
 3. No Progress Payment nor any partial or entire use or occupancy of the Project by Owner shall constitute an acceptance of any Work not in accordance with the Contract Documents.
- F. Intentionally Omitted.
- SC-14.01 Delete subparagraph 14.01.G.1.j and replace it with the following:
- a. Liquidated damages have accrued under the Contract Documents as a result of Private Entity's failure to achieve Milestones, if any, Substantial Completion, final completion of the Work, or performance requirements, as applicable;
- 14.03 *Substantial Completion*
- SC-14.03 Add new subparagraph after Paragraph 14.03.B:
3. If some or all of the Work has been determined not to be at a point of Substantial Completion and will require re-inspection or re-testing by Owner or its representatives, the cost of such re-inspection or re-testing, including the cost of time, travel and living expenses, shall be paid by Private Entity to Owner. If Private Entity does not pay, or the parties are unable to agree as to the amount owed, then Owner may impose a reasonable set-off, in accordance with Paragraph 14.01.G of the General Conditions, against payments due under Article 14 of the General Conditions.

ARTICLE 16 – DISPUTES

16.01 *Methods and Procedures*

- SC-16.01 Delete in its entirety Paragraph 16.01 and replace it with the following:
- A. Owner's action under Paragraph 11.09.C or a denial pursuant to Paragraphs 11.09.C shall become final and binding 30 calendar days after receipt of written notice of Owner's action or decision unless, within that time period, Owner or Private Entity gives to the other party written notice of intent to submit the Claim to a process of bilateral negotiations as set forth below.

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- B. Within 30 calendar days of the delivery of such notice, Owner and Private Entity shall meet and confer regarding the Claim. A good-faith effort to negotiate resolution shall be made by both parties.
- C. If the negotiations are unsuccessful, management representatives of Owner and Private Entity at least one tier above the individuals who met initially shall meet, confer, and negotiate within 45 calendar days of the closure of the unsuccessful negotiations.
- D. If the claim is not resolved by negotiation, either Owner or Private Entity may request within 10 calendar days of termination of negotiations non-binding mediation of any Claim submitted for a decision under Paragraph 11.09 before such decision becomes final and binding. If both parties agree to mediation in writing within 10 calendar days, the mediation will proceed and be governed by the Construction Industry Mediation Rules of the American Arbitration Association in effect as of the Effective Date of the Agreement. The request for mediation shall be submitted in writing to the American Arbitration Association and the other party to the Contract. Timely submission of the request shall stay the effect of Paragraph 11.09.
- E. Owner and Private Entity shall participate in the mediation process in good faith. The process shall be concluded within 60 calendar days of filing of the request. The date of termination of the mediation shall be determined by application of the mediation rules referenced above.
- F. If the Claim is not resolved by negotiation and mediation, Owner's action under Paragraph 11.09 or a denial pursuant to Paragraphs 11.09 shall become final and binding 30 calendar days after termination of the mediation unless, within that time period, Owner or Private Entity:
 - 1. gives to the other party written notice of intent to submit the Claim to a court of competent jurisdiction, or
 - 2. agrees with the other party in writing to submit the Claim to another dispute resolution process, or
 - 3. agrees with the other party in writing to extend the time for commencing a claim in court or in another dispute resolution process.
- G. Notwithstanding any applicable statute of limitations, a party giving notice under Paragraph 16.01 shall commence an action on the Claim within 6 months of said notice. Failure to do so shall result in the Claim being time-barred and Owner's action or denial shall become final and binding.

16.02 *Attorney's Fees*

SC-16.02 Add new paragraph immediately after Paragraph 16.01:

16.02 *Attorney's Fees*

- A. For any matter subject to final resolution under this Article, the prevailing party shall be entitled to an award of its attorney's fees incurred in the final resolution proceedings, in an equitable amount to be determined in the discretion of the court, arbitrator, arbitration panel, or other arbiter of the matter subject to final resolution, taking into account the parties' initial demand or defense positions in comparison with the final results.

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ARTICLE 17 – MISCELLANEOUS

17.01 *Giving Notice*

SC-17.01 Amend subparagraph 17.01.A.3 to read as follows:

3. By e-mail, with the words “Formal Notice” or similar in the e-mail’s subject line and follow up within 7 calendar days as listed in subparagraph 17.01.A.1 or 17.01.A.2.

17.07 *Controlling Law*

SC-17.07 Add new paragraph immediately after Paragraph 17.07.A:

- B. Any formal proceedings shall be instituted in the Circuit Court of the City of Virginia Beach, Virginia, or the United States District Court for the Eastern District of Virginia, Norfolk Division.

Add new **ARTICLE 18 – STATUTORY REQUIREMENTS**

SC-18.01 The Public-Private Education Facilities and Infrastructure Act of 2002 (Va. Code § 56-575.1 *et seq.*) (the “PPEA”).

- A. The Contract is subject to the PPEA and the requirements thereof are incorporated into the Supplementary Conditions by reference and shall be binding on the parties as if fully restated herein.
- B. Prior to developing or operating the Project, Private Entity shall enter into a Comprehensive Agreement with Owner which shall satisfy all requirements of Va. Code § 56-575.9.
- C. Nothing in the Contract shall be construed as or deemed a waiver of the sovereign immunity of the Owner or any affected local jurisdiction or any officer or employee thereof with respect to the participation in, or approval of all or any part of the Project or its operation, including but not limited to interconnection of the Project with any other infrastructure or project.

SC-18.02 Public Contract Provisions

- A. During the performance of this Contract, the Private Entity agrees as follows:
 1. The Private Entity will not discriminate against any employee or applicant for employment because of race, religion, color, sex, national origin, age, disability, or other basis prohibited by state law relating to discrimination in employment, except where there is a bona fide occupational qualification reasonably necessary to the normal operation of the Private Entity. The Private Entity agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this nondiscrimination clause.
 2. The Private Entity, in all solicitations or advertisements for employees placed by or on behalf of the Private Entity, will state that such Private Entity is an equal opportunity employer.
 3. Notices, advertisements and solicitations placed in accordance with federal law, rule or regulation shall be deemed sufficient for the purpose of meeting the requirements of this section.
- B. The Private Entity will include the provisions of the foregoing paragraphs 18.02.A.1, 18.02.A.2 and 18.02.A.3 in every subcontract or purchase order of over \$10,000, so

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that the provisions will be binding upon each Construction Subcontractor or vendor.

- C. The Private Entity does not, and shall not during the performance of the Contract, knowingly employ an unauthorized alien as defined in the federal Immigration Reform and Control Act of 1986.
- D. Private Entity shall be authorized to transact business in the Commonwealth of Virginia as a domestic or foreign business entity if so required by Title 13.1 or Title 50 of the Code of Virginia, as amended, or as otherwise required by law. Owner may void the Contract with Private Entity if Private Entity fails to remain in compliance with the provisions of this paragraph.
- E. During the performance of the Contract, the Private Entity agrees to (i) provide a drug-free workplace for Private Entity's employees; (ii) post in conspicuous places, available to employees and applicants for employment, a statement notifying employees that the unlawful manufacture, sale, distribution, dispensation, possession, or use of a controlled substance or marijuana is prohibited in Private Entity's workplace and specifying the actions that will be taken against employees for violations of such prohibition; (iii) state in all solicitations or advertisements for employees placed by or on behalf of Private Entity that Private Entity maintains a drug-free workplace; and (iv) include the provisions of the foregoing clauses in every subcontract or purchase order of over \$10,000, so that the provisions will be binding upon each subcontractor or vendor, including Construction Subcontractors. For the purposes of this paragraph, "drug-free workplace" means the Site for the performance of Work done in connection with the Contract awarded to Private Entity, the employees of whom are prohibited from engaging in the unlawful manufacture, sale, distribution, dispensation, possession or use of any controlled substance or marijuana during the performance of the Contract.

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6.D SOQ ACCURACY

In accordance with RFP Sections 3.01.J and 3.02.E, any necessary updates and supplementation of information and documents provided in satisfaction of RFQ, Sections 4.03.B.2, 4.03.B.3.a-c, and 4.04.D.3-7.

We confirm that information and documents submitted to HRSD as part of the SOQ remain accurate and current, including in response to RFQ Sections 4.03.B.2, 4.03.B.3.a-c, and 4.04.D.3-7.

All information submitted in our Team's SOQ in response to RFQ Sections 4.03.B.2 and 4.03.B.3.a-c remains accurate and HRSD can rely on such information as if it were submitted with and incorporated into the Proposal.



Figure 9. I/I Reduction Methods

	I/I Source	Corrective Measure	Fast I/I Impact	Medium and Slow I/I Impact	Relative Cost	Risks
PRIVATE	Missing or Broken Cleanout Cap	Cleanout cap replacement	Very High	Low to Medium	Very low	Property owner removes cap
	Downspout connection	Downspout redirect	Very high to high	Low to Medium	Low	May cause drainage issues on property. Private property
	Area/French Drain connection	Area/French drain disconnection	Very High	Medium to High	Medium to high	Can be very expensive and difficult
	Sump Pump Connection	Sump pump disconnect	High	High	Medium to high	Finding place to discharge can be difficult
	Defective private lateral	Private lateral lining/ replacement	Low	Medium to High	Very high	Disruptive work on private property
PUBLIC SEWER	Leaky Public lateral and connection	Public lateral lining/ replacement with full 360 lateral connection seal	Medium to High	Medium to High	High	Most effective as part of main CIPP
		Short brim style lateral connection seal	Low to medium	Low to medium	Medium	Sewer cleaning can damage brim
		Lateral connection chemical grout	Low to medium	Low to medium	Low	Highly dependent on soil and groundwater fluctuations. Generally not a long term solution.
	Leaky abandoned lateral or tap	Plug or do not reinstate if CIPP lining	Medium to High	Medium to High	Low	Future property owner may want to reconnect
	Leaky joints or minor defects	Main line grout	Low to medium	Medium to High	Low	Highly dependent on soil and groundwater fluctuations. Generally not a long term solution.
		Spot liner	Low to medium	Low to medium	High	Generally only good for single leak
	Leaky joints, multiple fractures	Full CIPP of main line with end seals	Low to medium	Medium to High	Medium	Effectiveness depends on I/I migration. Best when combined with public lateral lining.
	Storm sewer leaking and short circuiting into lateral or main sewer	CIPP storm sewer	Medium to High	Medium to High	Medium	Requires extensive field evaluation to identify.
		CIPP main sewer and public lateral with 360 lateral connection seal	Medium to High	Medium to High	High	Requires extensive field evaluation to identify. If other sources suspected this should be the option.
	Broken or collapsed pipe	Pipe replacement	Low to medium	Medium to High	Very high	Effectiveness depends on I/I migration. Best when combined with public lateral lining.
MANHOLE	Vented manhole lid in low area	Manhole cover replacement	Medium to High	Low	Very low	
		Inflow dish	Medium to High	Low	Very low	Difficult to maintain and can cause lid to wobble
	Interflow through frame and cover and chimney	Internal chimney seal	Medium	Medium	Low	Durability highly dependent on installation
		Manhole frame and cover replacement and external seal	Medium to High	Medium	Medium to High	Disruptive work on private property
	Leaking though joints	External grout and cementitious manhole lining	Low	Medium	Medium	Mortar should be waterproof. Not for highly corrosive environment
		Polymer manhole lining	Low	Medium	High	High dependent on quality of installation.
	Leaking through pipe connection	Manhole injection grouting and cement mortar plug	Low to Medium	Medium to High	Medium	
	Storm sewer connection	Disconnect	Very high	Low	Very high	



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