

ANNUAL REPORT BY THE DESIGN BUILD EXECUTIVE COMMITTEE REGARDING THE STATUS OF THE CITY OF BALTIMORE'S DESIGN BUILD PROJECTS

As mandated by the Design Build Project Delivery Procedures approved by the Board of Estimates on November 2, 2011, the Design Build Executive Committee (“DBEC”) is required to annually report on the description, status and participation by minority and women owned businesses on all pending Design Build projects. In addition, the DBEC makes recommendations regarding policy changes or implementation measures. The DBEC submits this Annual Report for 2021 covering the three projects currently under contract and approved by the DBEC and Board of Estimates.

I. DEPARTMENT OF TRANSPORTATION CENTRAL AVENUE PROJECT TR 12317 2021

The Department of Transportation’s (“DOT”), Central Avenue Design-Build (DB) Project (“Project”) was the first design-build project undertaken by the City. It was advertised on September 2, 2015 and Notice to Proceed (NTP) was issued on June 15, 2016. The Project primarily consists of the reconstruction of Central Avenue between Lancaster Street and Baltimore Street into an urban boulevard. [A key element of the Project is the extension of Central Avenue by the construction of a new Harbor Point Connector Bridge over the tidal inlet waters to the Harbor Point development site. The length of the Harbor Point Connector Bridge is approximately 260 feet.] The total length of the roadway reconstruction on Central Avenue is approximately 3,200 linear feet (8 city blocks). The scope of work includes construction of the above referenced new three (3) span four (4) lane bridge; replacement of bridges at Lancaster, Aliceanna, and Fleet Streets and Central Avenue; full-depth pavement reconstruction; concrete curb/gutter and sidewalk reconstruction; construction of ADA-compliant pedestrian ramps and driveway entrances within the Project limits; roadway drainage system upgrades and improvements; new street and pedestrian lighting; new pavement marking and signing; upgrades to water, sewer, and conduit utilities; and new traffic and pedestrian signals.

A. Project Status as of July 2021

The Central Avenue Project was awarded to Allan Myers MD, Inc., (“Myers”) on March 30, 2016. The Contract amount was \$46,777,777.00. There are four approved Extra Work Orders (EWOs) totaling \$4,766,255.26. There are multiple additional incomplete EWOs which may total approximately \$5,000,000. The current Contract amount is \$51,544,032.26. The Project utilizes multiple funding sources including Federal Aid, Transportation Improvement Funds (TIF), and City Capital Improvement Funds.

➤ **Schedule**

- Notice to Proceed (NTP) was issued for June 15, 2016 and the original completion was to be June 2021, which is NTP plus 5 years.
- Myers' originally proposed to complete the work in early 2020. However, design and construction challenges, contiguous construction, and site conditions required schedule adjustments. Currently, the schedule of completion is mid-2022.
- The Harbor Point Connector Bridge, which was part of Phase 1, was partially opened to traffic and pedestrians on July 2, 2018. Presently the bridge is fully available for traffic, bicycles, and pedestrians.
- The contractor has completed 99% of Phase 1 construction of Central Avenue between Dock Street and Aliceanna Street.
- Construction of Phase 2 is on-going. The Fleet Street bridge replacement has been completed. Phase 2 is approximately 60% complete. Phase 2 - from north of Aliceanna Street to just south of Baltimore Street, including coordination, submittals, approvals, and construction is ongoing. Phases 1 and 2 include many elements of pedestrian amenities and streetscape elements. Phase 2 construction started in the Fall of 2018.
- Construction of a new 26 story Liberty East high-rise building which includes the new Whole Foods Market, luxury condominiums, and high-end apartments is located between Lancaster Street and Aliceanna Street (south to north) and Central Avenue and Eden Street (west to east). Liberty East has been completed.

➤ **Scope Changes and Change Orders**

- There have been several scope changes on the project under Phase 1 and 2. These have included: additional aesthetic treatments on the bridge, installation of more energy efficient lighting, a delay in positioning of the north construction crane near Lancaster Street and Central Avenue, structural concrete restoration to two significant areas of the Central Avenue culvert top slab (located between Lancaster and Fleet Streets), and relocation and addition of water, sewer, manholes, electrical vaults, conduits, and utility infrastructure to accommodate present and future City needs.
- Change orders have included limiting staging areas; interactions with adjacent developers and property owners; a delay between bidding and awarding; various investigations for potential changes such as DPW's backflow preventer or DOT's realignment of the Lancaster Street intersection; prohibition of the staging of the south crane on a barge instead of on Harbor Point; unexpected field conditions; accommodation of businesses; and various necessary conduit and vault alignments; and design revisions. The change order requests originating from Myers are being actively addressed and resolved by the City. A limited few of the potential change orders may require resolution through the contract mandated City claims process.

➤ **Logistics (Ongoing Progress)**

- The Fleet Street Bridge construction has been completed.
- Design submittals are complete for Phase 2 work.

- The Phase 2 utility re-construction is underway and approximately 70 % complete.
- Construction submittals such as RFIs, materials selection, shop drawings, redline revisions continue to be submitted, reviewed, and processed.
- The City is coordinating with all stakeholders, property developers, contractors, City design and City construction management sections as needed.

➤ **Special Considerations**

- The Liberty East /Whole Foods high-rise being constructed by Bozzuto Construction Inc. for Harbor East Development Group is complete and essentially fully leased.
- Utility relocations and approvals are challenging, time consuming , and complicated. This is due in part to the involvement of 3rd party lessees as well as the abundance of active existing utilities in the corridor.
- Baltimore City has continued to conduct meetings and facilitate communication within DOT and DPW, Myers and multiple stakeholders.
- Traffic detours, lane shifts, and congestion are ongoing challenges.
- In addition to being Baltimore City’s first DB project and one of DOT’s largest construction projects, this project is also technically complex and located in a highly developed and growing portion of the City.
- The COVID-19 coronavirus impacted the construction progress. Construction continued through the pandemic. Reduced vehicular and pedestrian traffic aided in advancing the work.
- Essentially, traffic has returned to pre-pandemic volumes.

B. Minority and Women Owned Business Participation

The Project is federally funded, and Maryland Disadvantaged Business Enterprise (DBE) standards apply, not the City’s MBE/WBE. Myers is meeting the established 30% overall DBE goal, 28% construction and 2% design goals as shown below. The breakouts below reflect the commitments that Myers had received at the time of bidding as well as the status to date. Myers continues to adjust as the construction advances, to meet the participation goals:

<u>Design Phase DBE Participation Business</u>	<u>Commitment</u>	<u>Total Paid to Date</u>	<u>June 2021</u>
		Through 6/30/2021	<u>%</u>
Design Phase DBE Participation DBE Company	(DBE Plan Rev.3)		
Athavale, Lystad & Associates	\$ 472,361.16	\$ 453,466.72	96.00%
Floura Teeter Landscape Architects, Inc.	\$ 105,000.00	\$ 102,942.36	98.04%
J.K. Datta Consultants, Inc.***	\$ -	\$ -	
	\$ 299,500.00	\$ 293,121.45	97.87%

Synterra Ltd.	\$	92,900.00	\$	92,900.00	100.00%
Albrecht Engineering, Inc.	\$	64,133.00	\$	64,133.00	100.00%
Remline Corporation	\$	199,624.44	\$	126,316.12	63.28%

Total Design DBE Participation **\$1,233,518.60**

Total Design DBE Participation through 6/30/2021 **\$1,132,879.65**
91.84%

Construction Phase DBE Participation

DBE Company	DBE Plan Rev.3	Total Paid to Date Through 6/30/2021	June 2021 %
J&M Sweeping	\$ 100,000.00	\$ 94,263.40	94.26%
Barbie's Recycling & Hauling, Inc.	\$ 181,424.20	\$ 181,424.20	100.00%
Load Runner Trucking	\$ 1,100,000.00	\$ 764,760.25	69.52%
Quarry Products Unlimited, Inc.	\$ 98,704.00	\$ 98,703.64	100.00%
Machado Construction Co. Inc.	\$ 4,112,884.69	\$ 1,584,852.42	38.53%
Priceless Industries, Inc.	\$ 145,000.00	\$ 79,264.64	54.67%
Native Terrain Restoration Services	\$ 290,000.00	\$ -	0.00%
Traffic Systems, Inc.	\$ 2,650,000.00	\$ 1,217,586.87	45.95%
Road Safety, LLC.	\$ 200,000.00	\$ 217,796.45	108.90%
Nasir and Associates, LLC.	\$ 1,775,244.73	\$ 2,880,349.35	162.25%
Mohawk Bridge & Iron Inc.	\$ 520,000.00	\$ 499,393.49	96.04%
Wilton Corporation	\$ 325,000.00	\$ 291,733.86	89.76%
Doughboy Hauling	\$ 19,579.97	\$ 19,579.97	100.00%
GE Frisco	\$ 243,867.00	\$ 275,454.10	112.95%
Hirshmugl Heine & Assoc.	\$ 4,680.00	\$ 4,680.00	100.00%
TNM Trucking	\$ 159,214.00	\$ 166,817.50	104.78%
Traffic Engineering Services	\$ 170,000.00	\$ 196,702.80	115.71%
Utility Imaging	\$ 16,000.00	\$ 16,098.75	100.62%
Handon Services	\$ 100,000.00	\$ 95,760.47	95.76%
Aaron's Concrete Pumping Inc.	\$ 14,100.14	\$ 14,100.14	100.00%
Ackerman & Baynes, LLC	\$ 182,935.00	\$ 182,935.87	100.00%
DACO Construction	\$ 159,020.22	\$ 151,069.21	95.00%
Rowen Concrete	\$ 25,000.00	\$ 48,640.02	194.56%
Sunrise Safety Services	\$ 18,479.52	\$ 33,932.33	183.62%
Keys Materials & Utilities	\$ 25,302.62	\$ 25,302.62	100.00%
CC's Industries, LLC	\$ 23,536.24	\$ 23,536.24	100.00%
Patrick Thomas Trucking	\$ 79,750.00	\$ 149,258.50	187.16%

M Luis Products	\$	3,319.00	\$	3,319.97	100.03%
Dimensional Products, Inc.	\$	47,236.00	\$	35,362.96	74.86%
Marine Solutions, Inc.	\$	9,560.00	\$	9,560.00	100.00%
Total Construction DBE Participation			\$	12,799,837.33	
Total Construction DBE Participation through 6/30/2021			\$	9,362,240.02	73.14%
Total DBE Participation			\$	14,033,355.93	
Total DBE Participation through 6/30/2021			\$	10,495,119.67	74.79%

C. Implementation and Policy Challenges with Recommendations

The Project is approximately 80 % complete - post procurement. The DOT is developing specific and detailed recommendations to submit to the DBEC regarding implementation or policy challenges to enhance future DB procurements. The specific and detailed recommendations, upon completion, will be reviewed internally and submitted for the DBEC’s consideration.

**II. DEPARTMENT OF TRANSPORTATION
COMPREHENSIVE CONDUIT FACILITY DESIGN, MANAGEMENT, AND
CONSTRUCTION SERVICES PROJECT (PMAR) TR-16020**

The Comprehensive Conduit Facility Design, Management, and Construction Services Project (“Project”) is DOT’s and the City’s first Program Manager at Risk project. Due to the uniqueness of the Program Manager at Risk delivery method, DOT approached the DBEC about the possibility of structuring the Project using a *Program Manager at Risk* (“PMAR”) approach.

The PMAR delivery method is essentially a hybrid of the Design Build method. The DBEC concluded that given the similarity between this PMAR project and traditional design build projects that the Project should comply, to the greatest extent possible, with the Design Build Resolution of the BOE and be overseen by the DBEC. Suitability of the project for the PMAR approach was determined by several factors. During development of the Request for Proposals, DOT and the Conduit Section (now Conduit Division) determined that an expedited schedule was required because untimely project execution would result in loss of available funding. Additionally, it was determined that the nature of the work is not conducive to Design-Bid-Build; inspection, design, construction, and database population must occur concurrently lending itself to Program/Asset Management. For maintaining the conduit infrastructure, design work does not necessarily dictate construction. Instead, inspection reveals the need for design and then construction commences. The DBEC and the BOE agreed with the approach selected by DOT and DOT awarded the contract in August 2016.

The Project primarily consists of inspection of conduit manholes (i.e. the structural condition, duct occupancy, cable owner identification, etc.), design and planning of an asset security mechanism retrofitted to secure/monitor entry of conduit manholes and cable racks as needed; design, construction, excavation, modification, repair of manhole chimney top slab, manhole

replacement, and conduit duct bank; construction management; data input into a GIS data collection and database editing and maintenance; financial tracking and reporting; safety retrofits and program compliance system-wide.

A. Project Status as of June 2021

- Project Awarded to KCI-CG Tri-Venture (“Tri-Venture”) on August 10, 2016. Contract Amount \$26,108,286.00 (Professional Services - \$5,841,986.00 Construction - \$20,266,300.00) per year for five (5) years. To date (through June of 2021) the Contract amount is \$89,308,286.00.
- Schedule Related
 - Notice to Proceed was issued on February 22, 2017.
 - The Contract expires February 20, 2022, a five-year term, with the option of two (2) one-year extensions.
 - Currently the Contract is in its fifth year.
- Scope Changes and Change Orders – one change order has been executed to date. However, it was processed as a no-cost or no-time extension change order.

A variety of tasks have been assigned through this contract ranging from traditional engineering design, inspection, and construction, to achieving design solutions for complicated construction tasks to efforts which support the growth of the Conduit Division on a day-to-day basis. To date, over 100 professional and construction services tasks have been assigned under the TR-16020 Contract.

Assignments under the Professional Services category generally consist of manhole engineering and structural inspections, manhole occupancy and tracing inspections, design of conduit corridor projects, asset management support services, GIS database development and maintenance, as well as Capital and Strategic Planning.

Construction Services assignments include construction of supplemental ducts for various BGE 4kV upgrades, construction of a parallel duct bank system along the North Avenue corridor, from Bentalou St to Milton Avenue, construction of conduit improvements along Greenmount Avenue from 29th St to East 43rd Street, clearing obstructions in conduits, along with repairing/rehabilitating/replacing electric manholes.

- Task assignments:
 - MH Reconstruction Design (Professional Services) - 11
 - Cable Tracing Inspection Tasks (Professional Services) -37
 - PW Inspector Tasks (Professional Services) - 11
 - GIS/Asset Management related tasks (Professional Services) - 12
 - Conduit Corridor Design Tasks (Professional Services) - 2
 - MH Reconstruction Tasks (Construction) 9
 - CSR Response Tasks – (multiple tickets each task) (Construction) - 4
 - BGE 4kV Conduit Construction Tasks (Construction) – 7

- Conduit Corridor Construction Tasks (Construction) - 2
 - Capital Improvements and Strategies Planning Consulting Task
 - MH Access Management Task
- Logistics

This Contract has been able to expeditiously address design and construction issues for the Department. Conduit improvements have been completed in advance of the North Avenue MTA project to replace our conduit system prior to the work of the MTA Streetscape projects. The work kept planned Conduit road cuts from occurring after the Streetscape project is complete. This will eliminate the maintenance and repairs the conduit system would have required. The same is true for the Greenmount Corridor project. Conduit improvements were completed ahead of the ongoing Streetscape project.

Asset Management Program support continues with formalization of business processes such as development of SOP/ Workflow (Document) Implementation Plan. The GIS Data Editing and Database team of the Tri-Venture has updated the GIS Database Administration SOP to include new procedures that ensure no user edit versions are excluded from reconcile and post processes. In parallel, the program provides Conduit IT Administrator with technical consultation and support for enterprise technology implementation (Cityworks, SalesForce, OnBase etc.) that leverage mapping information for publishing and maintaining GIS map services.

Within this Contract, an allowance has been made for unanticipated reactive maintenance work. Reactive maintenance work consists of activities generated as a result of Service Requests received from the Conduit Maintenance Yard. These Service Requests typically consist of manhole frame and cover replacements, duct obstruction clearing, split ducting, etc. On the other hand, this Contract has also developed a proactive maintenance approach that focuses on identifying and attacking problem corridors before they result in service requests by the Conduit lessees.

Conducting proactive maintenance work requires developing criteria to rank and prioritize projects. The prioritization has been developed in a manner that optimizes existing and future Conduit Division resources. Capital drivers included in the ranking system include, but are not limited to, the condition of the asset, criticality of the damage to the asset, asset location in proximity to other projects/repairs, sociopolitical factors, estimated repair cost, and availability of resources to repair the asset.

Conduit Program logistics for strategic planning and prioritization to rehabilitate segments of the system is determined by a multitude of factors. DOT's program inspection, records research, and asset management allows for determination of the following factors:

- Duct Obstruction/Duct Availability
- Alternative Duct Route
- Benefit to planned Duct Lease Work in the area
- Impacts of Cable Owners Service Outage
- Duct Material, Age, and Service life

- Adjacent Utility Impacts on Conduit
- Opportunity for Economic Development/Sociopolitical Priority
- Other planned/ongoing projects
- Structural Assessment
- External influences

A ranking system has been established which assigns points for the criteria. This process will inform our Capital Planning strategy to prioritize many of the forecasted capital projects.

B. Minority and Women Owned Business Participation

The Project is not federally funded and as such, the City’s MBE/WBE standards apply, not the State Disadvantaged Business Enterprise standards. TRI-VENTURE is fully committed to meeting the established 27% MBE and 10% WBE goal for professional services and 27% MBE and 7% goal for construction. The breakouts below reflect MBE/WBE participation from Contract award through the end of FY21:

Professional Services				
Consultant	Proposed Fee Professional Services Contract	Percentage of Professional Services Contract	Invoiced to Date Thru FY21 (1-48)	Percentage of Professional Services Contract (Invoiced thru FY 21)
AB Consultants, Inc.	\$ 140,095.68	2.40%	\$ 378,056.38	1.60%
Baker Engineering	\$ 186,340.02	3.20%	\$ 1,895,486.44	8.00%
Constellation Design	\$ 180,191.15	3.00%	\$ 5,968.48	0.03%
CST Engineering, Inc.	\$ 288,261.05	4.90%	\$ 2,448,078.11	10.33%
iCivil, Inc.	\$ 70,047.79	1.20%	\$ 486,361.62	2.05%
Infrastructure Technologies, LLC	\$ 70,047.79	1.20%	\$ 14,497.94	0.06%
Itenology Corporation	\$ 200,000.00	3.40%	\$ 671,376.82	2.83%
Ross Technical Services, Inc.	\$ 224,152.92	3.80%	\$ 1,052,006.65	4.44%
SAMMS Engineering	\$ 560,382.31	9.60%	\$ 2,201,812.65	9.29%
Sabra Wang	\$ 272,121.26	4.60%	\$ 217,153.11	0.92%
Sue Ann's Office Supply	\$ 303,994.50	1.50%	\$ -	0.00%
Total Professional Services M/WBE	\$ 2,495,634.47	42.70%	\$ 9,370,798.20	39.55%

Construction Services				
Consultant	Proposed Fee Construction Services Contract	Percentage of Construction Services Contract	Invoiced to Date Thru FY21 (1-48)	Percentage of Professional Services Contract (Invoiced thru FY 21)
Couser Supply	\$ 1,367,975.25	6.80%	\$ 3,919,956.63	5.99%
Cuddy and Associates, LLC	\$ 1,215,978.00	6.00%	\$ 8,171,536.72	12.49%
Machado Concrete Co., Inc.	\$ 810,652.00	4.00%	\$ 3,845,562.04	5.88%
Priceless Industries, Inc.	\$ 202,663.00	1.00%	\$ 75,310.16	0.12%
R.E. Harrington Plumbing & Heating	\$ 1,621,304.00	8.00%	\$0.00	0.00%
Baker Engineering Service, Inc.	\$ 303,994.50	1.50%	\$ 650,171.65	0.99%
Sunrise Safety Services, Inc.	\$ 202,663.00	1.00%	\$ 306,950.15	0.47%
Paniagua Ent., Inc.	\$ 709,320.50	3.50%	\$ 7,779,050.66	11.89%
Priority Construction Corp.	\$ 425,592.30	2.10%	\$ 1,016,553.43	1.55%
Bryant Concrete Construction	\$ 283,728.20	1.40%	\$ 300,188.00	0.46%
WSI, Inc.*	\$ (1,418,641.00)	0.00%	\$0.00	0.00%
Total Construction Services M/WBE	\$ 5,725,229.75	28.30%	\$ 26,065,279.44	39.83%
* WSI - \$\$ reallocated to Paniagua, Ent., Inc., Priority Construction Corp. and Bryant Concrete Construction				

The TR-16020 Contract is a task-driven Contract and because of the variety of assignments issued, it has been found that additional resources have been required to meet the task assignment needs. The Tri-Venture has worked in collaboration with the City Minority and Women’s Business Opportunity Office (MWBOO) and the Conduit Division to engage subcontractors and have added to the contract subcontractors who could provide services to match assignments and fulfill goals of all involved in the program.

C. Implementation and Policy Challenges with Recommendation

As DOT approaches the midpoint of Year 5 of this Contract, the Department has experienced many of the benefits of the D/B process. However, as DOT investigates further, it is realizing that while other City agencies and their project managers impacted by the Central Avenue Project have good understanding of the D/B process and the goal of fast and efficient delivery of this Project, other stakeholders from outside the City lack that level of understanding. In particular, businesses in the vicinity of the work and a separate, private construction project did not fully appreciate the impacts on them from such a large project as Central Avenue. Therefore, DOT is recommending a work group that includes all procuring agencies with representatives from Engineering & Contract Admin., Law Department, Finance, MWBOO, and Audits to discuss lessons learned and develop recommendations for future projects. Those recommendations should come in the form of a report to be presented to the D/B committee for review and approval.

III. DEPARTMENT OF PUBLIC WORKS **BACK RIVER HEADWORKS PROJECT SC 918H**

The Department of Public Works (“DPW”), Back River Headworks Improvements Project (“Headworks Project”), SC 918H, primarily entails construction of new headworks facilities, consisting of an influent pumping station, a fine screen facility, a grit removal facility, and wet weather storage facilities. The City’s Wet Weather Program determined that the construction of the Headworks Project is the single, most cost-effective solution to elimination of the City’s sanitary sewer overflows and to comply with the Wet Weather Consent Decree.

The Headworks Project is being delivered under the Construction Manager-at-Risk (CMAR) delivery method and is the City’s first CMAR project. The CMAR delivery method is another alternative project delivery method like Design Build. What distinguishes CMAR from DB is that CMAR has two separate contracts; one for design, the other for construction. One procurement is used to advertise both phases and only one firm is selected by the City. Following the design phase, the winning bidder and the City engage in negotiations to agree on a Guaranteed Maximum Price (“GMP”). If the parties agree on GMP then the successful firm contracts with the City for the construction phase. If GMP cannot be agreed, then the City would be free to re-advertise the construction portion of the work.

The Headworks Project was originally advertised as a traditional design-bid-build project with a 100% design having been completed prior to advertising for bids. Two bids were received, the lowest of which was \$90,000,000.00 over the budget for the project. DPW then approached the Design Build Executive Committee (“DBEC”) about the possibility of structuring the Headworks Project using a modified CMAR method.¹ DPW and the DBEC concluded that a modified CMAR delivery method had the best potential to reduce construction costs. The DBEC concluded that given the similarity between this CMAR project and traditional design build projects that the Headworks project should comply, to the greatest extent possible, with the Design Build Resolution of the Board of Estimates (“BOE”) and be overseen by the DBEC. The BOE agreed and accepted the DBEC’s recommendation to use the CMAR delivery method on January 27, 2016.

A. Project Status as of August 2021

Background Pre-Construction:

- Project was advertised on January 29, 2016 after the BOE approved the request for Proposals using the CMAR method.
- Four proposals were received on March 2, 2016
 - All proposals were found to be responsive and were evaluated
- The evaluation process followed the procedures as established in the RFP which included review based on the following criteria
 - Qualifications and approach (65%)
 - Financial capacity and proposed fees (15%)

¹ Modified by virtue of the fact that a 100% design existed. The design phase for the Headworks Projects, unlike traditional CMAR projects, consisted mainly of value engineering and to modify the 100% design to reduce costs.

- Interview (20%)
- Interviews were conducted on March 15, 2016
- All scoring was reviewed and finalized by the evaluation panelists on March 15, 2016
- March 25, 2016 – Selection of preferred CMAR firm, a joint venture between Clark Construction and Ulliman Schutte, Inc. (“Clark/US”)
- March 29, 2016 – Presentation to DBEC which approved the selection of Clark/US.
- March 30, 2016 – DPW notified Clark/US of DPW’s intent to recommend award by the BOE to Clark/US, subject to reaching agreement on all terms and conditions and completion of all administrative procedures
- May 4, 2016 – The BOE Approved award to Clark/US.
- May 25, 2016 – CMAR firm submitted signed contract documents for processing by DPW.
- July 22, 2016 Notice to Proceed for Pre-Construction was issued.
- GMP Estimates were received:
 - November 2016.
 - January 2017.
- GMP package bids were received:
 - March 2017.
 - April 2017.
- GMP Negotiations progressed from April through May 2017.
- GMP Package and Pricing were submitted to the BOE for processing in May 2017
- GMP cost of \$429,776,789.
- BOE Approval of the GMP Package and Contract for the Headworks Construction occurred on June 28, 2017.

Construction Progress to Date:

- Construction Phase Milestones:
 - June 29, 2017 – Construction NTP
 - December 30, 2020 – Technical Compliance Milestone.
 - October 31, 2021 – Substantial Completion.
 - October 31, 2021 – City issue Conditional Acceptance.
- The project has met the Technical Compliance Milestone and is undergoing punch list walk throughs and Contractor is addressing the punch list items to meet requirements for Conditional Acceptance
- All facilities are substantially complete, including concrete work, steel structures, masonry, roofing systems, doors and windows, paint systems, and other architectural elements.
- Wet storage facilities hydrostatic testing has been completed
- Influent Pump Station: all large pump assemblies (8) have been installed and tested, including pumps, motors, VFDs, shafts, electrical cabinets, and auxiliary systems.
- All coarse screens (4) and fine screens (6) have been installed and tested.
- Grit Effluent Conduit is complete.
- Tie-in to the existing Primary Settlement Tanks (PST) has been completed.
- Overflow Conduit has been hydrostatically tested and accepted.
- Influent Junction Chamber is substantially complete.
- Completed the internal lining of Influent Conduit IC-1.

- Equalization Tanks No. 1 and 2 are substantially complete and are undergoing process testing.
- Equalization Tanks valve vault is substantially complete and is undergoing valve testing.
- Mass backfilling and rough grading is substantially complete.
- Site duct bank installation is complete.
- Odor Control facilities A, B, &C are substantially complete and are undergoing testing.
- Electrical substations A and B are substantially complete and energized.
- Large-diameter pipes and Victaulic rework have been completed and tested.
- Phases 1, 2, and 3 Testing of the Mechanical and Electrical equipment is completed at all facilities.
- Phases 1, 2, and 3 Start-up and Commissioning of the Process Controls System is substantially completed, except Phase 3 Startup of the EQ Tanks and valve vault is ongoing
- Equipment Training program for Plant Personnel has been completed.
- Schedule Progress and proposed logic revision are currently under review.
- Weekly issues, Quality Control/Quality Assurance, schedule, partnering, risk, start-up, Maintenance of Plant Operations, and Initial/ Preparatory meetings are held regularly with all involved parties.
- Overall, the Project has met the Technical Completion Milestone, which is included in the Contract for free-flowing influent flow effective December 31, 2020, thus, fulfilling the Modified Consent Decree (MCD) mandate. The Conditional Acceptance Milestone for the Project is October 31, 2021.

B. Minority and Women Owned Business Participation

The Pre-Construction phase of the project was funded by the City and Baltimore County therefore City MBE/WBE Goals of 10% and 3% respectively applied during the pre-construction process.

Pre-Construction Fee	\$3,490,000
Contractual Participation Requirements:	MBE \$349,000 10%
	WBE \$104,700 3%

Pre-Construction Phase MBE/WBE participation (completed 4/30/17):

<u>SUBCONTRACTOR</u>	<u>Amount Reported</u>	<u>Participation Reported</u>
Shah Associates	\$ 183,008	5.24%
Roane's	\$71,444	2.05%
SP Arch	\$34,848	1.0%
Native Sons	\$60,000	1.72%
Horton	\$20,800	0.6%
C. L. McCoy	\$7,000	0.20%
CMC Repro & Assoc.	\$9,310	0.27%
MBE Totals	\$386,410	11.07%
<u>SUBCONTRACTOR</u>	<u>Amount Reported</u>	<u>Participation Reported</u>
Stella May	\$46,812	1.34%
Carroll	\$48,722	1.40%
Keep U Clean Jan Svc	\$4,100	0.12%
WBE Totals	\$99,634	2.85%

Construction Phase MBE/WBE Participation:

The Construction phase of the Headworks Project is being funded by the state's revolving fund therefore the state's Disadvantaged Business Enterprise standards apply and not the City's MBE/WBE standards. The Construction phase of the project has the MBE and WBE State Goals of 18% and 16% respectively.

Clark/US's committed estimates for the MBE/WBE participation are 12.82% and 5.45% respectively at this time. The level of efforts expended on contacting regional and local DBE businesses has been documented and will continue to be recorded in accordance with MDE guidelines for reporting purposes.

The estimated percentages translate into the following dollar amounts to be spent with the MBE/WBE subcontractors, based on the Contract amount of \$429,776,789:

- MBE 12.82% \$55,092,484
- WBE 5.45% \$23,426,947

At this time, Clark/US has invoiced for \$397,716,646.74, which is approximately 92.5% of the contract amount and is exceeding both MBE and WBE goals based on current billing. The following MBE/WBE participation has been reported:

<u>SUBCONTRACTOR</u>	<u>MBE CONTRACT</u>		<u>Participation Reported</u>	
MBE Companies	Amount	% of total contract	Amount	% of invoiced amount
Capital Development Design, Inc.	\$1,870,402.00	0.44%	\$ 2,519,121.97	0.63%
EMC2, Inc.	\$75,200.00	0.02%	\$ 397,257.98	0.10%
Horton	\$12,500,000.00	2.91%	\$ 12,557,462.97	3.16%
Inново Construction LLC	\$1,990,000.00	0.46%	\$ 1,999,817	0.50%
JD Belfield	\$60,000.00	0.01%	-	
Keep U Clean Janitorial Svc.	\$121,816.00	0.03%	\$123,291.87	0.03%
LCCI	\$330,000.00	0.08%	\$463,151.91	0.12%
NSL/Freestate	\$16,636,200.00	3.87%	\$ 15,973,600.11	4.02%
Weathespoon & Williams	\$592,190.00	0.14%	\$ 632,344.87	0.16%
Allan Myers - lower tier: Mohawk Bridge & Iron, Doughboy Hauling	\$4,333,333.00	1.01%	\$ 5,304,159.63	1.33%
Baseline	\$388,000.00	0.09%	\$562,712.58	0.14%
Cagley & Associates	\$18,300.00	0.00%	\$ 15,880.00	0.00%
Ruff Nex	\$1,698,106.00	0.40%	\$ 2,177,738.44	0.55%
Bulldog Construction	\$173,417.00	0.04%	\$2,123,499.15	0.53%
Clark Water- Sub	-	-	\$59,242.00	0.01%
Ulliman Schutte - lower tier: Ideal, GE Frisco, TBD	\$13,754,520.00	3.20%	\$ 11,985,007.13	3.01%
MBE Totals	\$55,092,484	12.82%	\$56,894,287.61	14.31%
<u>SUBCONTRACTOR</u>	<u>WBE CONTRACT</u>		<u>Participation Reported</u>	
WBE Companies	Amount	% of contract amount	Amount	% of invoiced amount
A&S Refuse LLC	\$551,000.00	0.13%	\$271,698.25	0.07%
Baltimore Waterproofing	\$232,200.00	0.05%	\$ 128,952	0.03%

Regional Contracting Services LLC	\$2,853,580.00	0.66%	\$2,449,048.15	0.62%
Stella May Contracting	\$4,030,627.00	0.94%	\$ 4,030,772.16	1.01%
TMI Striping	\$12,279.00	0.00%	\$ 12,278.00	0.00%
Regional Drywall & Acoustic Panel	\$75,325.00	0.02%	-	N/A
Rowen Concrete	\$2,166,667.00	0.50%	\$ 2,599,593.46	0.65%
DN Tanks - lower tier: Jernigan's, Acorn Supply & Distributing	\$350,919.00	0.08%	\$ 414,933.95	0.10%
Eisenhart Steel	\$1,479,110.00	0.34%	\$ 1,857,423.42	0.22%
Ulliman Schutte - lower tier: J&S Valves, Robnet, Acorn Supply & Distributing, Roane's Rigging & Transfer	\$12,226,240.00	2.84%	\$ 12,666,297.31	3.18%
WBE Totals	\$23,426,947.00	5.45%	\$23,430,996.70	5.89%

C. Implementation and Policy Challenges with Recommendation

From the first three years of construction, DPW has the following recommendations for the DBEC's consideration:

- Engage and award the project to the CMAR prior to 30% design documents to maximize their input
- Place monetary provisions to enforce timely baseline schedule development
- This contract used the Army Corps of Engineers specification regarding Quality Assurance/Quality Controls. The DBEC should consider modifying this specification so that it is more applicable to the Construction Industry
- Include more details on definitions of the different funds' categories and risk ownership i.e., Owner Allowances, Constructions Contingency. and the intended use of the funds to eliminate any disagreements over which category covers what work.
- Evaluate percentage of total contract value for self-performance based on market availability
- Evaluate cost sharing percentage of Construction Contingency to carefully balance between cost savings being incentives vs cost savings being CMAR profit margin