



STATE HIGHWAY
ADMINISTRATION

MD 32 – South of Linden Church Road to I-70 Design-Build

Phase One – Statement of Qualifications

Howard County

Contract No. HO7565370

F.A.P. No. AC-NHPP-G-118-1(69)N

Date: March 2, 2018



ALLAN
MYERS +



WALLACE
MONTGOMERY

TABLE OF CONTENTS

Cover Letter	Pages 1-2
A. Design Builder Capability	Pages 3-20
i. Key Staff	Pages 3-7
1. <i>Design-Build Project Manager – Lewis Glassmire</i>	
2. <i>Design Manager – William Fiorillo, PE, DBIA</i>	
3. <i>Construction Manager – Eric Eastin</i>	
4. <i>Highway Engineer – Jason Kalasky, PE</i>	
5. <i>Water Resources Engineer – Diane Durscher, PE</i>	
ii. Firm Past Performance	Pages 8-19
1. <i>MD 404 Dualization Design-Build Project</i>	
2. <i>US 113 Dualization (Phase 3) Design-Build Project</i>	
3. <i>US 113 Dualization (Phase 4) Design-Build Project</i>	
4. <i>I-95 at Contee Road Interchange Design-Build Project</i>	
5. <i>I-95/MD 5 Branch Avenue Metro Access Improvements Project</i>	
6. <i>I-95 Express Toll Lanes</i>	
iii. Organizational Chart	Page 20
B. Project Understanding and Design-Build Approach	Pages 21-34
i. Understanding of the Project Goals and Scope	Pages 21-22
ii. Most Relevant and Critical Risks	Pages 23-28
iii. Approach to Design-Build	Pages 29-34
C. Legal & Financial Information	Page 35
i. Design-Build Team Organization	
ii. Liability	
Attachments	
<i>Teaming Agreement - Lead Design Firm</i>	
<i>Professional Liability Insurance - Lead Design Firm</i>	
iii. Bonding Capability	
iv. Conditions Surrounding Any Contract	



A.
DESIGN-BUILDER
CAPABILITY



EDUCATION: B.S./1975/
Civil Engineering

EXPERIENCE: 18 Years with
Myers, 42 Years in Industry

**CERTIFICATION &
TRAINING:** OSHA 10-hr
OSHA 30-hr

QUALIFICATIONS & EXPERIENCE

Lewis has 42 years of experience in heavy civil construction and project management. His experience includes managing large highway and bridge projects up to \$70M. He has served as the Design-Build Project Manager for four projects in Maryland and has constructed over \$500M in projects for MDOT SHA. Lew's extensive construction experience taught him to expedite construction schedules while minimizing delays for existing roadway users. His design-build leadership ensures integrated design and construction teams which implement good judgment to achieve project goals.

PROJECT EXPERIENCE

US 113 DUALIZATION (PHASE 3) DESIGN-BUILD, \$32M (WORCESTER COUNTY, MD) – As Design-Build Project Manager, Lew is responsible for design, construction, and management of a dual divided highway to alleviate congestion and improve safety. Lew coordinated with the design team to develop 5 ATCs that maximized the corridor's safety and mobility, while reducing overall cost. The project includes new service roads, J-Turn intersections and modified Maryland T intersection to maintain access to residential and commercial properties. Phasing was developed to maintain mobility while supporting utility clearance and phased ROW acquisition. Coordination with MD-DE Railroad is expected to reduce the railroad embargo by three months.

I-95 INTERCHANGE AT CONTEE ROAD DESIGN-BUILD, \$34M (PRINCE GEORGE'S COUNTY, MD) – As Design-Build Project Manager, Lew was responsible for the design and construction of a new interchange on I-95. Lew helped to develop Myers' accepted ATC shortened the bridge over I-95 by 82 feet and coordinated of an expedited design resulting in completion of the new bridge milestone for adjacent ICC D & E contract ahead of schedule. Roadway improvements included a divided 4-lane urban arterial road, a grade separated partial cloverleaf interchange connection with I-95, and a new bridge over I-95. The advertised SWM plan was optimized during design phase eliminating need for two basins through use of bio-swale and bio-retention treatment facilities. The Project received the MDQI Award of Excellence Partnership Construction Gold Award.

MD 43 EXTENDED FROM WEST OF US 40 TO MD 150, \$50M (BALTIMORE COUNTY, MD) – As Construction Manager, Lew was responsible for design, construction and management for this 3.8 mile four-lane divided highway including five bridges, two bridge rehabilitations, and three parallel 180' runs of 84" RCP. Lew was responsible for coordinating work zones near residential areas, wetlands, and a watershed to the Chesapeake Bay. In these areas, extensive erosion and sediment and storm water management measures were taken by the Myers team to ensure compliance. Considerable environmental management was performed around wetlands to ensure no disruption. Due to naturally wet ground conditions, earthwork operations, occurred in the hottest summer months for quality assurance.

I-95 EXPRESS TOLL LANES, \$54M (BALTIMORE COUNTY, MD) – As Construction Manager Lew was responsible for design, construction, and management for this project which involved eight general purpose lanes and four express toll lanes separated by concrete barriers. On this project, Lew developed a detailed MOT plan that kept crews protected and productive during night work operations on this site. The work included excavation; road widening; pavement rehabilitation; drainage/SWM, a value engineered major culvert reconstruction under all lanes of I-95 in phases while maintaining I-95 traffic and an active White Marsh Creek stream flows; major E&S control measures; and comprehensive MOT planning to ensure safe, uninterrupted traffic flow on this busy corridor.

EDUCATION: B.S./ 2000/ Civil Engineering

EXPERIENCE: 12 Years with WM, 18 Years in Industry

CERTIFICATION & TRAINING:
MD Registered PE #44063
Design-Build Institute of America (DBIA) #174762

QUALIFICATIONS & EXPERIENCE

Will is a MD registered PE offering over 18 years of experience in designing and managing design-build and design-bid-build Maryland transportation projects including new roadways and interchanges, expressway-arterial realignments, safety/capacity improvements, and innovative intersections such as J-Turns and roundabouts. He offers tremendous knowledge and management skills to apply unique combinations of design requirements that are often conflicting and develop a cost-effective solution to the design challenge. Will's experience also encompasses preparation of Alternative Concept

Designs, MOT schemes, and utilities coordination. He is familiar with MDOT SHA and AASHTO criteria, standards, and policies, CADD programs (Microstation, InRoads, AutoTurn) to develop designs/plans, and ProjectWise for transmitting project data. For the MD 32 Project, he will lead the design team members with different objectives to work together, produce coordinated, coherent designs, and execute a rolling submittals approach for the continual flow of substantial construction efforts. He will also ensure that protocols are implemented to achieve clear communication and cooperation with MDOT SHA, PRD, MDE and other project stakeholders.

PROJECT EXPERIENCE

US 113 DUALIZATION (PHASE 4) DESIGN-BUILD, \$51.5M (WORCESTER COUNTY, MD) – Design Manager for the Myers/WM Team responsible for overseeing the complete design efforts for this safety and traffic operations project to convert approximately 4½ miles of US 113 from a 2-lane to a 4-lane divided median highway. Design efforts included roadway geometrics; H&H/SWM; ESC; TMP/MOT; structural; pavement/geotech; traffic (signals, lighting, signing, marking); landscaping; construction plans development; and securing permits. Developed innovative solutions including seven ATCs that provided over \$8M in cost savings and maximized the corridor's safety and mobility. Facilitated design discipline "kick-off" and over-the-shoulder coordination with the MDOT SHA Design Divisions, PRD, and environmental agencies along with regular interval coordination for utility relocations and environmental compliance.

US 113 DUALIZATION (PHASE 3) DESIGN-BUILD, \$32M (WORCESTER COUNTY, MD) – Highway Engineer for the Myers/WM Team on this safety and traffic operations project to convert four miles of US 113 from the existing 2-lane highway to a 4-lane divided median highway. Will was responsible for the dualized US 113, nine new consolidating access service roads, and the two "Maryland-T" and five "J-Turn" intersections geometric designs per AASHTO 2011; overall project layout and

grading, and staging-MOT development; and preparation of rolling interim and final construction plans submittals. He was responsible for assuring integration of designs between road geometrics, drainage/SWM, structures, and traffic. Facilitated stakeholder coordination including with the MD-DE RR and utilities for their concurrent relocations/upgrades. Developed five cost-effective ATCs that maximized the corridor's safety and mobility.

I-95 INTERCHANGE AT CONTEE ROAD DESIGN-BUILD, \$34M (PRINCE GEORGE'S COUNTY, MD) – Highway Engineer for the Myers/WM Team on this MdQI award winning (Partnering and MDOT SHA Project >\$5M) project to construct Contee Road, a divided 4-lane urban arterial road, and its grade separated partial cloverleaf interchange connection with I-95. Will was responsible for Contee Road, its three signalized intersection connections, and ramps (outer-directional, inner loop-cloverleaf) geometrics per AASHTO and MUTCD; overall project layout and grading (rough & final), staging/MOT development; and preparation of the interim and final construction plans. Developed cost-effective geometric refinements that allowed for constructing the maximum project scope/limits while minimizing adjacent communities, environmental, and the traveling public impacts. Facilitated construction support services such as RFI responses, redline revisions, as-built plans, etc.

EDUCATION: BA in Finance, Texas Tech University, 1993
EXPERIENCE: 6 Years with Myers, 24 Years in Industry
CERTIFICATION & TRAINING: OSHA 10-hour; OSHA 30-hour

QUALIFICATIONS & EXPERIENCE

As a Senior Construction Manager, Eric plans, directs and coordinates the activities of large, complex, and fast-tracked projects. He ensures that project goals and objectives are accomplished within scheduled timeframes and established budget, while ensuring safety during construction. Under Eric's oversight as Senior Project Manager, the BWI Airport Runway Expansion project was the first project at the airport ever to achieve the runway opening date. This goal was accomplished through daily schedule management and subcontractor coordination, and implementation of a project specific safety project "Don't Know, Don't Care." Eric's commitment to safety and schedule will ensure the success of the MD 32 project.

PROJECT EXPERIENCE

MD 404 – US 50 TO EAST OF HOLLY ROAD DESIGN-BUILD, \$105M (CAROLINE, QUEEN ANNE'S AND TALBOT COUNTIES, MD) – As Project Sponsor, Eric is responsible for managing daily activities throughout construction of the project. In this role, Eric helped implement the "Don't Know, Don't Care" safety program that encourages all levels of workers to spot safety hazards on the job to reduce both team injuries and possible hazards to the public. This project includes construction of MD 404 to a four-lane divided highway. The scope of improvements includes earthwork, pavement construction and rehabilitation, stormwater management, E&S control, construction of a new bridge over Norwich Creek, culverts, utility coordination, and environmental permitting.

US 113 DUALIZATION (PHASE 4) DESIGN-BUILD, \$51.5M (WORCESTER COUNTY, MD) – Construction Manager to widen US 113 to a four-lane divided highway. Eric is responsible for coordinating with the design engineer on phase drawings to create the most cost effective solutions and comply with construction requirements. Roadway improvements include earthwork, new pavement construction, existing pavement rehabilitation, drainage, stormwater management, erosion & sediment control, construction of a new bridge over Prunell Branch, utility coordination, environmental permit acquisition and culvert extensions.

US 113 DUALIZATION (PHASE 3) DESIGN-BUILD, \$32M (SHA – WORCESTER COUNTY, MD) – Senior Construction Manager for the design and construction of two additional lanes along US 113 alignment to create a dual divided highway to relieve congestion. The project improvements include new service roads, J-Turn intersections and a modified Maryland T intersection to maintain access to residential and commercial properties. Eric worked with the owner on this project to recover the schedule from a major utility delays. Eric reached an agreeable schedule with the owner by accelerating the schedule and getting the work back on track to be completed in a timely manner.

I-95/I-695 INTERCHANGE, \$57M (MDTA – BALTIMORE, MD) – As Construction Manager, Eric is responsible for managing daily activities throughout construction of the project coordination with owner and stakeholder, and adhering to all project requirements. This project included reconstruction involved the reconstruction and re-alignment of an existing 6-lane divided highway and a major stream alignment constructed by the Allan Myers team. Major items of work included full depth pavement reconstruction, milling and resurfacing, storm drainage, SWM basins, noise wall and retaining wall structures, two new culverts, one new bridge, and MOT.

EDUCATION: B.S./ 1993/ Civil Engineering

EXPERIENCE: 24 Years with WM, 24 Years in Industry

CERTIFICATION & TRAINING:
MD Registered PE #200364

QUALIFICATIONS & EXPERIENCE

Jason offers extensive experience in designing MDOT SHA projects including expressway-arterial road realignments and safety/ capacity-operations improvements, interchange modifications, new roadways and interchanges, J-Turns, and roundabouts. Jason is skilled in developing studies, designs and construction documents. His areas of expertise include final road geometrics-layout and drainage design, and staging/MOT development. He has an extensive knowledge of SWM,

and ESC designs; and environmental permits. Jason provides expertise and a deep understanding in designing MDOT transportation projects with a similar scope, nature, and complexity, as required for the MD 32 Design-Build project; he has extensive experience in the selection and application of the relevant design criteria, including AASHTO and MUTCD guidelines; MDOT SHA specifications and standards; and coordinating within multi-disciplinary teams.

PROJECT EXPERIENCE

US 113 DUALIZATION (PHASE 4) DESIGN-BUILD, \$51.5M (WORCESTER COUNTY, MD) – Highway Engineer serving the Myers/WM Team on this safety and traffic operations project to convert approximately 4½ miles of US 113 from a 2-lane to a 4-lane divided median highway. Jason is responsible for providing technical direction/ oversight and conducting design quality control (QC) reviews of the roadway-intersection geometrics-layouts, including “Maryland-T” and “J-Turns”, drainage, and construction staging/MOT designs and final roadway, drainage-SWM plans.

I-95/MD 5 BRANCH AVENUE METRO ACCESS, \$68M (PRINCE GEORGE’S COUNTY, MD) – Lead Highway Engineer on these phased projects of the I-95/MD 5 interchange; and MD 5 capacity modifications with a new MD 5 to the Metro 4-lane divided road. Jason was responsible the roadways, ramps (flyover, cloverleaf) and intersections (Continuous Green-T, “Maryland-T”, “Turbo” roundabout) geometrics per AASHTO and FHWA Publications, drainage and staging/ MOT designs; and final plans/IAPA development. Jason’s design efforts resulted in minimized property and utility impacts (avoided \$3M UG relocations) while maintaining existing traffic operations during construction and compatibility with future MD 5 improvements. Assisted MDOT SHA with stakeholder outreach - community specific workshops, utility/property impacts coordination. Provided Phase 5 construction support services.

US 301 AT MD 304, \$36M (QUEEN ANNE’S COUNTY, MD) – Highway Engineer serving on this

innovative dual roundabout interchange project. Jason was responsible for final ultimate grading, drainage collection/conveyance (spread, capacity, HGL, outfall) design and related construction documents. He coordinated the project’s drainage designs with the utility relocation designers.

I-95 INTERCHANGE AT CONTEE ROAD DESIGN-BUILD, \$34M (PRINCE GEORGE’S COUNTY, MD) – Highway Engineer responsible for drainage collection/conveyance design per MDOT SHA Drainage Manual and related construction plans for Contee Road, a new divided 4-lane arterial road, and its partial cloverleaf interchange connection with I-95. He was responsible for technical oversight and coordination of integrating designs between drainage, road geometrics and SWM.

I-95/I-495 GREENBELT METRO INTERCHANGE, \$68M (PRINCE GEORGE’S COUNTY, MD) – Lead Highway Engineer for concept through final design efforts of 2 miles of I-95/I-495 Capital Beltway traffic operation and Greenbelt Metro Station access interchange improvements. Beltway improvements consist of widening to provide auxiliary lanes between the Greenbelt Metro and MD 201 interchanges. The Metro interchange improvements consist of the realignment of two existing ramps and the construction of two new ramps. Jason provided hands-on development of typical sections, interchange geometrics per AASHTO 2011, drainage, staging-MOT, IAPA and construction plans; all in compatibility with the planned Metro TOD. Supported MDOT SHA’s value engineering and stakeholder outreach efforts.

EDUCATION: B.S./ 1992/ Civil Engineering

EXPERIENCE: 18 Years with WM, 25 Years in Industry

CERTIFICATION & TRAINING: MD Registered PE #24591

QUALIFICATIONS & EXPERIENCE

Diane specializes in H&H analyses and design including SWM; ESC; drainage; bridge and culvert design; bridge scour; TR-55 and TR-20 modeling; HEC-RAS and HY-8 modeling; and stream restoration. She has inspected existing SWM facilities and has MD Pond 378 criteria dam safety (breach analysis) design experience. In addition, Diane has H&H experience in scour evaluations; floodplain analyses; flood investigations; roadway drainage; aquatic/wildlife passage structures; and channel stabilization. For the MD 32 Design-Build Project, Diane provides a vast understanding of MDE SWM and ESC criteria and guidelines and MDOT SHA PRD procedures and policies; she is an approved MDE sediment and stormwater plans reviewer and has performed reviews on behalf of MDOT SHA PRD. She is currently providing technical direction and QC reviews of the SWM/ESC designs per the Maryland 2009 SWM Design Manual and 2011 Soil ESC Specs for the US 113 Phase 4 D-B project and through PRD reviews.

PROJECT EXPERIENCE

US 113 DUALIZATION (PHASE 4) DESIGN-BUILD, \$51.5M (WORCESTER COUNTY, MD) – Water Resources Engineer responsible for this design-build dualization project. Technical oversight and checked design packages for concept SWM; clearing/ grubbing; rough grading; small structures design; bridge maintenance of stream flow; and final roadway design. The SWM design proposed 57 facilities, including multiple wet swales, grass swales, bio-swale, and bioretention, and a wet pond. Reviewed and coordinated the integration of subconsultant work into the overall SWM report and plan set. ESC design based on perimeter controls in clearing to remain as long as possible.

MD 404 – US 50 TO EAST OF HOLLY ROAD DESIGN-BUILD, \$105M (QUEEN ANNE’S AND TALBOT COUNTIES, MD) – Water Resources Engineer responsible for H&H and ESC/maintenance of stream flow design for 15 proposed cross culverts under MD 404. Coordinated permitting with MDE non-tidal and SHA PRD. TR-20 hydrologic analyses incorporated stage-storage of ponding areas upstream of the existing and proposed structures; stage-discharge relationships were based on HY8 analyses. Coordinated culvert discharge changes with SWM designers. Coordinated ESC design with rough grading and final design stages to match ESC device locations through the packages.

US 113 DUALIZATION (PHASE 3) DESIGN-BUILD, \$32M (WORCESTER COUNTY, MD) – Water Resources Engineer responsible for overseeing several design packages for concurrent construction of four miles of US 113. Design

packages included concept SWM; rough grading; small structure design; and final roadway design. SWM design proposes 74 facilities including multiple wet swales, grass swales, bio-swales, submerged gravel wetlands, and micro-bioretention. Coordinated SWM/drainage designs early with the proposed utility relocations to minimize changes later in design. ESC design included multiple phases for each construction stage, matching the MOT design.

US 301 AT MD 304, \$36M (QUEEN ANNE’S COUNTY, MD) – Water Resources Engineer responsible for this interchange project, requiring subconsultant coordination and QA/QC. SWM design includes 56 ESD facilities, primarily wet swales based on soil boring results. ESC design includes seven construction phases. H&H analysis of proposed impacts to five existing and two new cross culverts. Designed plunge pool systems for cross culvert outfall stabilization. QA/QC of stream relocation design, including HEC-RAS for existing and proposed channels with floodplain benches.

I-95 INTERCHANGE AT CONTEE ROAD DESIGN-BUILD, \$34M (PRINCE GEORGE’S COUNTY, MD) – Water Resources Engineer responsible for designing SWM; ESC for multiple construction stages; cross culverts; coordinating storm drain design based on SWM needs; and permitting for each construction stage (NPDES, Wetlands, SWM, ESC). Coordinated among the contractor, MDE, and certifying subconsultant to secure as-built approvals of eight ponds and 53 ESD facilities.

OWNER CONTACT

MDOT State Highway Admin
Rob Marchetti, PE
410-662-7400
rmarchetti@sha.state.md.us

CONTRACT/PROJECT NO.

AW8965170

DELIVERY METHOD

Design-Build

CONSTRUCTION COST

Initial Contract Value:

\$104,997,777

Final Contract Value:

\$105,687,947 Currently

Reason for Difference:

SHA negotiated ROW acquisition enhancements

SCHEDULE PERFORMANCE

Initial Completion Date:

Substantial November 2017

Final July 2017

Final Completion Date:

Substantial November 2017

Final July 2017 - On Schedule

PROJECT DESCRIPTION

Wallace Montgomery (WM) worked with Allan Myers (Myers) under the MD 404 Corridor Safety Constructors (CSC) Design-Build Team that constructed two additional lanes along 9 miles of the existing MD 404 creating a four-lane divided highway for alleviating traffic congestion from US 50 to east of Holly Road along MD 404, particularly during peak traffic volumes on summer weekends. The project incorporated safety improvements with the construction of “J-Turns” and “Maryland-T” intersections to eliminate unprotected left turns from side streets, and new service roads to consolidate access points with MD 404 from the adjacent properties. Additional improvements include roadway tie-ins to and from the already dualized highway sections, a 115 ft. single-span bridge over Norwich Creek, 18 small structure classified roadway cross culvert extensions/replacements including box and multi-cell pipes, new/rehabilitated roadway pavement, closed/open drainage systems, stormwater quality ESDv and quantity facilities, intersection lighting, signing, pavement marking, traffic signal modification at US 50, ITS devices, noise abatement earth berms, concrete screen fencing, and landscaping. Engineering services provided by WM included overall final design management surveying; highway, structural, pavement, drainage and H&H design; Transportation Management Plan (TMP) and MOT; traffic (signal, lighting, ITS, signing, marking) engineering; construction documents preparation; utility coordination of the relocations and clearing of aerial and underground facilities; construction support services including facilitating project partnering/progress meetings; and securing erosion & sediment control/maintenance of stream approvals (for waterway culverts) along with ensuring environmental compliance with wetlands/waterways and forest permits.

The Project was divided into three segments by the MD 404 CSC Team with Myers fully responsible (earthwork, structures, drainage, paving, traffic features) for the 3.6 miles Segment C from east of MD 480 through Holly Road. The MD 404 CSC Team was awarded the project based on a “best value selection” process.

Our Team received approval of seven innovative and cost-effective ATCs for inclusion within the Project that resulted in over \$11 million in savings.

SUCCESSFUL METHODS, APPROACHES, AND INNOVATIONS

Maximize Project Elements to Improve Operations and Safety – WM facilitated a design focused on safety and mobility related to the roadway geometrics-layout design in accordance with AASHTO and MDOT SHA requirements including: 1) Auxiliary lanes and queueing assessments; 2) Providing adequate acceleration/deceleration lengths for safer merging movements at intersections; 3) Intersection geometry accommodating WB-67s and farm equipment with 17-ft.+ wheel bases; and 4) Access/Service Drives with compliant acceleration/deceleration lanes and sight lines.

Minimize Inconvenience to the Community and Traveling Public – The construction/MOT sequencing limited the number of traffic shifts and Myers utilized night-shift for the majority of operations to limit disruptions to the traveling public. The sequence maintained traffic on the existing road while constructing the new dualization road and then shifting traffic onto the newly built road to rehabilitate the existing road. One final shift to split traffic (a lane in each direction) between the roadways for completing the median areas and to facilitate the full opening to traffic of the divided 4-lane road. Access to adjacent properties was maintained at all times along with integrating proposed access roads and J-Turns movements as early as possible. We implemented cost-effective, practical design solutions focused on limiting full depth pavement reconstruction and wedge/leveling resurfacing of the existing mainline to accelerate construction and minimize user delays.

Minimize Overall Impacts and Provide Proactive Coordination – Although wetlands/WUS and forested areas were permitted with allowable impacts, we recognized MDOT SHA’s and environmental agencies’ desire to avoid and/or minimize to the greatest extent possible. Reductions were achieved by adjusting the new dualized roadway’s profile; reducing the roadside hinge slope; minimizing culvert lengths/maximizing headwall heights; and re-routing the runoff to eliminate proposed MDOT SHA cross culverts. Finally, WM orchestrated the reduction of the RFP prescribed Access Road 2 typical section’s lane and shoulder widths in accordance with AASHTO’s Low Volume Local Road criteria to further minimize impacts to Wetland WL011W as specifically identified in the Wetlands/Waterways Permit. Myers/WM developed/implemented with MDOT SHA a public outreach plan using stakeholder meetings, electronic media, fliers, etc. that provided ongoing, transparent information. In addition, WM facilitated bi-monthly utility relocation and monthly environmental agencies compliance coordination meetings.

RELEVANCE OF WORK TO THE PROJECT

The MD 404 Dualization Project is relevant because of the Design-Build project delivery involving the expansion of an existing two-lane road to a four-lane divided major corridor highway serving through traffic and the adjacent properties and communities. Additionally, the MD 404 Project focused on supporting safety, providing efficient highway operations, and enhancing mobility along MD 404 for the traveling public. Also, a similar major project scope item, Myers constructed in accordance with WM prepared designs of new waterway (24/7 flow) conveyance multi-cell pipe and box culverts crossings of MD 404. We developed maintenance of stream approaches at these culverts by using innovative construction techniques and working in coordination with our MOT designs/staging. Finally, the MD 404 project had the same the goals of minimizing impacts and inconveniences to the traveling public and adjacent properties/communities. With the sound engineering design practices, the WM Design Team reduced environmental wetland/waterway and forest impacts by 33% and 11%, respectively. Also, Myers/WM with an integrated development of the TMP and staging/MOT phasing, and proactive public outreach; minimized potential roadway user delays during construction.

“With the completion of the MD 404 upgrade, our administration is proud to deliver on the number one priority for Queen Anne’s Talbot, and Caroline counties – complete and a year and a half ahead of schedule.” – Governor Hogan

Project Similarities

- ✓ SHA Design-Build Safety & Capacity Project
- ✓ 2 to 4-Lane Divided Road
- ✓ Protected Left Intersections
- ✓ Bridge and Box Culvert Crossings of Waterways
- ✓ On-Going Utility Relocations
- ✓ Reduced Resources Impacts
- ✓ PRD SWM-ESC Approvals

Proposed Staff Involvement

- Eric Eastin*
 - Diane Durscher, PE*
 - Tom Heil, PE, DBIA
 - Eric Sender, PE, DBIA
 - Dave Borusiewicz, PE, DBIA
 - John Rectanus, PE, PTOE
 - Roberto Barcena, PE
 - Dave Giumento
 - Shannon Moody
- * Proposed Key Staff



OWNER CONTACT

MDOT State Highway Admin
David Phillips
410-545-8823
dphillips@sha.state.md.us

CONTRACT/PROJECT NO.
WO6365170

DELIVERY METHOD
Design-Build

CONSTRUCTION COST
Initial Contract Value:
\$32,157,777

Final Contract Value:
\$31,642,563 Currently

SCHEDULE PERFORMANCE
Initial Completion Date:
October 2017

Final Completion Date:
July 2018 Scheduled

Reason for Difference:
Directed schedule extensions
for right-of-way clearance

PROJECT DESCRIPTION

Allan Myers (Myers) is serving as the design-builder and lead contractor with Wallace Montgomery (WM) as the lead designer on this project to partially realign and upgrade four miles of US 113 (Worcester Highway). Located south of Berlin in Worcester County, the project begins North of Massey Branch and continues to Five Mile Branch Road (abutting Phase 4). The project consists of the construction of two additional lanes along the existing two-lane US 113 to create a dual four-lane divided highway. It also includes the construction of "Maryland-T" and "J-Turn" intersection improvements to eliminate unprotected left turns from side streets and new service roads to consolidate, but maintain access to residential, agricultural and commercial properties. Roadway improvements include new pavement construction and pavement reconstruction/ rehabilitation of existing roadways and shoulders; an at-grade railroad crossing of US 113; reforestation; drainage collection systems; stormwater management (SWM) wet, grass and bio-swales, submerged gravel wetland, micro-bioretenion, and bioretention facilities; intersection lighting, signing, pavement markings; and road cross culvert extensions/ replacements. Design services provided by WM include surveys, highway, structural, pavement, water resources, and landscape design; geotechnical and traffic engineering; transportation management plan (TMP) and maintenance of traffic (MOT) development; utility coordination for the relocations of existing facilities; securing SWM, ESC/ temporary stream flow approvals along with ensuring environmental permitting compliance; and construction services including shop drawing reviews and redline revisions.

SUCCESSFUL METHODS, APPROACHES, AND INNOVATIONS

Maximize Project Elements to Improve Operations and Safety – The Myers/WM Team developed an ATC for an integrated a "jug-handle like" U-Turn movement from US 113 southbound (SB) to US 113 northbound (NB) into the Newark Road at-grade intersection connection, which eliminated an unsafe conflict between a US 113 SB J-Turn movement with merging traffic from Newark Road onto US 113 NB (refer to plan shown on right). To enhance multi-modal operations and safety through the Project limits, our roadway layout allows for corridor-wide bicycle facilities along US 113 utilizing the roadway's 10 ft. outside shoulders and bicycle pocket lanes at right turn acceleration/deceleration lanes for intersections and at J-Turn Loons/acceleration lanes.

Minimize Inconvenience to the Community and Traveling Public – To minimize the number of stages and traffic shifts, the Myers/WM Team sequenced the project in conjunction with environmental time-of-year forest clearing and in-stream work restriction and the concurrent MDOT SHA acquisition of the project's right-of-way and the utility companies' relocations of their facilities. Our Team completed a comprehensive TMP with phase specific MOT Plans. The TMP included operational analyses of each MOT phase to ensure proper operation and maintaining, at a minimum, existing (pre-construction) levels of service. We also integrated a "jug-handle like" U-Turn return movement from US 113 NB to SB within the Newark Road at-grade connection with US 113 SB, which reduced a NB vehicle's trip distance to head south by 3 miles. Finally, we integrated intersection emergency crossovers (mountable Islands) for EMS vehicles to move directly through the proposed "Maryland-T" and "J-Turn" intersections.

Minimize Overall Impacts and Provide Proactive Coordination – The SWM design provides for all water quality treatment in Environmental Site Design (ESD) micro-scale practices along the proposed roadways. Maximizing the use of linear wet and grass swales in lieu of rectangular/square submerged gravel wetland facilities greatly limited the disturbance footprint – specifically with reduced forest impacts. The Myers Team instituted formal construction partnering/ progress meetings to achieve Project goals and efficiently resolve issues. Also, we facilitated monthly-bimonthly meetings with MDOT SHA District 1 and utility stakeholders to coordinate roadway and utility relocation design efforts and scheduling of overhead aerial and underground facility relocations. In addition, we developed and implemented a public outreach plan communicating to the traveling commuter through variable message signs, project web page, media and toll-free number and with adjacent property owners through written notifications such as fliers/ door hangers and through individual one-on-one meetings to coordinate crop planting/ harvesting activities and temporary and permanent access to fields. Finally, the Myers Team coordinated the roadway designs and construction scheduling with the MD-DE Railroad Company to fully integrate their new US 113 at-grade rail line crossing into the project.

RELEVANCE OF WORK TO THE PROJECT

The US 113 Phase 3 (Southern Section) Dualization Project is relevant because of the Design-Build project delivery involving the expansion of an existing two-lane road to a four-lane divided major corridor highway. Also, the US 113 Project purpose is to improve safety for a road corridor with accident rates exceeding Statewide averages and operations. Like the proposed MD 32 concept, improved roadway corridor safety and operations will be achieved through consolidating adjacent property access points with nine new access roads and incorporating two "Maryland-T" and five "J-Turn" intersections to eliminate left turn or unprotected left turns along US 113. Also, this project had the same the goal of minimizing impacts/ inconveniences, which primarily was achieved through proactive extensive coordination. The Myers Team facilitated timely on-going coordination of the proposed improvements and construction scheduling with the utility owners for their concurrent relocations and the adjacent property owners for assuring adequate access to their farmlands. Our extensive coordination with the railroad resulted in a 3-month reduction of the rail-line closure embargo needed to construct the at-grade crossing.

"I have never had a Design Build Team put forth the effort to assist, facilitate and coordinate the utility relocations on a Project as I have with the Myers Team."
– Mr. Bruce Poole, Former
SHA District 1 Utility Engineer

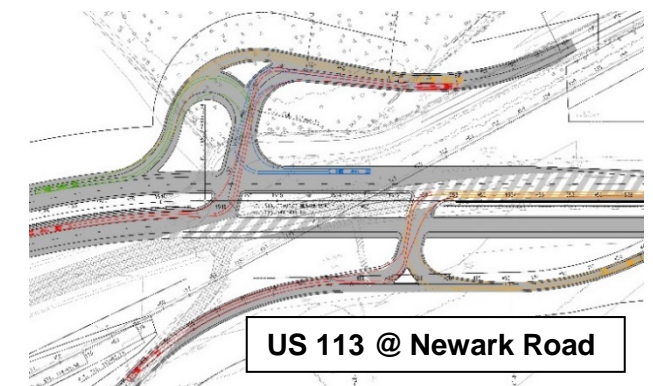
Project Similarities

- ✓ SHA Design-Build Safety & Capacity-Operations Project
- ✓ 2 to 4-Lane Divided Road
- ✓ Protected Left or Eliminated Left-Turn Intersections
- ✓ On-Going Utility Relocations
- ✓ Waterway Road Crossing - Culvert Construction
- ✓ SWM Facilities per the SWM Act of 2007 "New Regs"

Proposed Staff Involvement

- Lew Glassmire*
- Eric Eastin*
- Will Fiorillo, PE, DBIA*
- Diane Durscher, PE*
- Eric Sender, PE, DBIA
- Justin Myers, PE, DBIA
- John Rectanus, PE, PTOE
- Jessica Klinefelter, CEP
- Bob Evans, PE, PTOE
- Roberto Barcena, PE
- Eric Cooper, PLS

* Proposed Key Staff



US 113 @ Newark Road



OWNER CONTACT

MDOT State Highway Admin
David Phillips
410-545-8823
dphillips@sha.state.md.us

CONTRACT/PROJECT NO.

WO6355170

DELIVERY METHOD

Design-Build

CONSTRUCTION COST

Initial Contract Value:

\$51,356,777

Final Contract Value:

\$51,356,777 Currently

SCHEDULE PERFORMANCE

Initial Completion Date:

October 2019

Final Completion Date:

October 2019 – On Schedule

PROJECT DESCRIPTION

Wallace Montgomery (WM) as engineer of record is teamed with Allan Myers to partially realign and provide safety and traffic operation upgrades along 4½ miles of US 113 (Worcester Highway). The project begins just north of MD 365 and ends at Five Mile Branch Road. The scope of work consists of providing two additional lanes to create a dual four-lane divided highway and includes new service roads consolidating US 113 access points with adjacent properties. Additional improvements include road tie-ins with existing dual highway sections; new/reconstructed/rehabilitated pavement; an at-grade railroad crossing of US 113; 70 ft. span prestressed concrete slab bridge over the Purnell Branch; road culvert extensions/replacements/rehabilitations, drainage systems and SWM facilities; intersection lighting; signing and markings; signal modifications; and landscaping. Engineering services provided by WM include surveying; highway, structural, pavement, drainage, landscape and utility conduit relocation design; geotechnical and traffic engineering; Transportation Management Plan (TMP) and maintenance of traffic (MOT) development; construction plans preparation; securing SWM, E&S Control/ temporary stream flow approvals from PRD/ MDE/ USACE along with ensuring environmental permitting compliance.

The Myers/WM Team developed practical, innovative and cost-effective design solutions that provided \$8M in cost savings and met the project goals of enhancing safety and mobility and reducing impacts to environmental resources.

SUCCESSFUL METHODS, APPROACHES, AND INNOVATIONS

Maximize Project Elements to Improve Operations and Safety – WM developed an alternative technical concept optimizing the proposed US 113 Business (BUS) and US 113 intersection. The proposed intersection provided substantial safety benefit by eliminating the left turn from US 113 BUS to US 113 Northbound (NB) and the U-turn movement from US 113 Southbound (SB) conflict. It also improved operations by channelizing the left turn from US 113 BUS to US 113 NB through a half Maryland-T intersection and repurposing the existing ramp from US 113 SB onto US 113 BUS to provide a “jug-handle like” return to US 113 NB. In addition, WM assessed the tie-ins with the adjoining dual highway sections to ensure continuity and compatibility and accordingly updated the RFP Phase 4 dualized road geometrics to properly meet the on-going Phase 3 Section’s design.

Minimize Inconvenience to the Community and Traveling Public – WM developed a TMP and staged MOT plans for the construction of US 113. MOT design was fully consistent with MDOT SHA/ MUTCD work zone criteria. Our Team sequenced the project in conjunction with developing the final road geometrics to provide safe traffic control through the final road’s proposed five “crossovers”, where the existing road switches between northbound to southbound; and maintain existing intersection and US 113 2-lane, 2-way operations, and property accessibility throughout construction. The TMP included traffic analyses of the phasing to ensure operations meeting pre-construction levels of service. Finally, the Team optimized the new service roads and connections to ensure adequate turning movements and maximized frontage separation with the adjoining properties.

Minimize Overall Impacts and Provide Proactive Coordination – The approach to construct the US 113 bridge crossing of the Purnell Branch reduced impacts (wetlands by 6,400 SF, buffers by 29,300 SF) to the adjacent environmentally sensitive Bald Cypress Swamp areas. This approach included: 1) Retaining the existing US 113 road/ roadside grading and rehabilitating (deck overlay, new parapets) the existing bridge over Purnell Branch to eliminate downstream swamp impacts; 2) Utilizing steel pipe pile/ sheet piling type abutments to eliminate footer excavation within Purnell Branch and the swamp wetlands; and 3) Utilizing 1:2 reinforced soil slopes for the new dualized road adjacent to the upstream swamp wetlands. Underground utility relocations applied trenchless methods to avoid impacts at resources. WM coordinated with MDOT SHA Structures over adequate service life and the environmental agencies over acceptable Five Mile Branch conveyance capacity/ fish passage requirements with the proposed rehabilitation of the existing US 113 box culvert (upstream) and then providing an open channel through the new median and triple - 60” RCPs downstream under the new road. Monthly coordination meetings facilitated concurrent utility relocation efforts. Coordination with the railroad integrated road geometrics and their new crossing. WM conducted early design “kick-off” meetings and continued coordination with PRD and the agencies to fully understand their requirements.

RELEVANCE OF WORK TO THE PROJECT

The US 113 Phase 4 (Southern Section) Dualization Project is relevant because of the Design-Build project delivery involving the expansion of an existing two-lane road to a four-lane divided major corridor highway serving commuters and the adjacent properties and communities. Additionally, the US 113 Project purpose is to improve safety for a road corridor with accident rates exceeding the Statewide average and providing efficient highway operations. Like the proposed MD 32 concept, improved roadway corridor safety and operations will be achieved through limiting egress/ingress connections through consolidating adjacent property access points with nine new service roads and incorporating three “Maryland-T” and six “J-Turn” intersections to eliminate left turn or unprotected left turn movements to and from US 113. Also, for the US 113 Phase 4 Project, WM prepared designs and construction plans of roadway bridge structures (prestressed concrete slab, box culvert, multi-cell pipe) crossing/ conveyance of streams with impact minimization measures to sensitive environmental resources. The Phase 4 Project required SWM for water quality and quantity requirements due to the additional impervious. WM designed and secured PRD approvals for 59 ESD micro-scale facilities and a MD-378 criteria wet pond along with their ESC approvals for mass grading, cross culvert installations, and the final roadway.

Project Similarities

- ✓ SHA Design-Build Safety & Capacity-Operations Project
 - ✓ 2 to 4-Lane Divided Road
 - ✓ Protected Left Intersections
 - ✓ On-Going Utility Relocations
 - ✓ Waterway Road Crossings
 - ✓ Sensitive Environmental Resources
 - ✓ PRD SWM-ESC Approvals
- Proposed Staff Involvement*
- Lew Glassmire*
 - Eric Eastin*
 - Will Fiorillo, PE, DBIA*
 - Jason Kalasky, PE*
 - Diane Durscher, PE*
 - Tom Heil, PE, DBIA
 - Justin Myers, PE, DBIA
 - Jessica Klinefelter, CEP
 - Bob Evans, PE, PTOE
 - Roberto Barcena, PE
- * Proposed Key Staff



OWNER CONTACT

MDOT State Highway Admin
Kevin Oberheim, PE, CCM
410-241-1120
koberheim@sha.state.md.us

CONTRACT/PROJECT NO.

PG4195172

DELIVERY METHOD

Design-Build (D-B)

CONSTRUCTION COST

Initial Contract Value:

\$30,700,000

Final Contract Value:

\$33,744,188

Reason for Difference:

Updated for new bike lane requirements and upgrade of a WSSC watermain crossing

SCHEDULE PERFORMANCE

Initial Completion Date:

May 2014

Final Completion Date:

November 2014

Reason for Difference:

Owner directed schedule extension to coincide with opening of the I-95 CD Roads

PROJECT DESCRIPTION

Allan Myers (Myers) and Wallace Montgomery (WM) teamed to design and construct MDOT SHA's I-95 at Contee Road Interchange Design-Build Project. The project involved Myers' construction of an arterial roadway, Contee Road (now known as Konterra Drive), and its grade separated partial cloverleaf interchange connection with I-95. The four-lane divided Contee Road replaced the adjacent existing two-lane Van Dusen Road and its crossing over I-95. The Contee Road Interchange connects within the I-95 collector-distributor (CD) roadways between MD 198 and the ICC - MD 200. The work included constructing a 4-span steel haunched girder bridge over I-95 along with demolition of the existing overpass bridge, two interchange direct outer connection ramps and two cloverleaf inner loop ramps, and the relocated at-grade connections of Sweitzer Lane and Van Dusen Road to Contee Road. The project purpose was to increase the capacity of Contee Road and provide a new access point with I-95, driven by the traffic demands of the County's northern region communities including the Konterra Town Center, a 2000-acre mixed-use development bordering both sides of I-95. Engineering services provided by WM include surveying; highway, structural, pavement, and drainage design; Transportation Management Plan (TMP) and MOT development; geotech, traffic (signals, lighting, ITS, signing, marking), and utility (water main & conduits) engineering; landscape architecture; construction documents preparation; stakeholder/public outreach; and securing SWM/E&S Control approvals along with ensuring compliance with NEPA and environmental commitments for wetlands/streams and forest impacts. Our Team developed ATCs to reduce the Contee Road bridge costs with the realignment of the under passing I-95 Northbound CD Road and adjoining interchange ramps and the use of concrete F-Shape barriers at the abutments; resulting in the shorting of the bridge by 82 ft. and providing symmetrical spans.

SUCCESSFUL METHODS, APPROACHES, AND INNOVATIONS

Maximize Project Elements to Improve Operations and Safety – The Myers Team applied innovative solutions, that resulted in over \$3 million in cost savings towards the Contract's \$33M maximum price limit and allowed us to construct the maximum contract scope of an additional ½ mile of new Contee Road and a new at-grade signalized Contee Road intersection with a ¼ mile realignment of Van Dusen Road. Furthermore, WM developed additional "ultimate" Van Dusen intersection signal and signing/marketing plans for a future Konterra Town Center roadway connection. Finally, to further enhance access and multi-modal features, WM incorporated full bicycle compliance in accordance with post-award issued revised SHA policy with providing 6 ft. marked bike lanes along Contee Road and pocket lanes between the travel and right turn lanes at the relocated Sweitzer and Van Dusen intersections.

Minimize Inconvenience to the Community and Traveling Public – Our Team sequenced the project in conjunction with roadway profile refinements reducing vertical differential and meeting grades between existing and proposed roadways to maintain traffic and intersection movements/operations at all times throughout construction; completing the work in the minimum number of stages; facilitating smooth transitions between existing and new; minimizing traffic disruption and maximizing accessibility with adjacent properties. In addition, we sequenced the project's earthwork to minimize on-road hauls, which minimized inconveniences to the traveling public and surrounding communities.

Minimize Overall Impacts and Provide Proactive Coordination – Our SWM approach minimized the project footprint, reduced environmental resource impacts, and increased available mitigation areas by providing for water quality treatment in Environmental Site Design (ESD) micro-scale practices along the roadways instead of concentrating the treatment in end-of-line pond facilities. MD DNR permitted forest impacts at 24.43 acres—we achieved 19.65 acres in actual impacts. For the DNR permitted 24.43 acres of impacts, 14.52 acres of on-site reforestation was required of the Team. The Myers/WM Team achieved 27.57 acres of on-site reforestation; replacing the 19.65 acres of impacts plus an additional 7.92 acres. Also, we achieved 1,243 LF in actual Waters of the US impacts. A 123 LF reduction of the JPA permitted 1,366 LF impacts. Also, at the Project's eastern limits, we eliminated SWM ponds and were able to re-establish a primarily open-channel waterway. Our Team coordinated with the environmental agencies, prepared necessary environmental summaries for NEPA reevaluations, and held monthly utility coordination meetings to coordinate concurrent relocations.

Project Similarities

- ✓ SHA Design-Build Traffic Capacity and Access Project
- ✓ 2 to 4-Lane Divided Roadway
- ✓ New Bridge Overpass with Demolition of Existing Bridge
- ✓ Minimized Traffic Impact
- ✓ Reduced Environmental Resources impacts
- ✓ SWM ESD & MD 378 Criteria Pond Facilities

Proposed Staff Involvement

- Lew Glassmire*
 - Will Fiorillo, PE, DBIA*
 - Jason Kalasky, PE*
 - Diane Durscher, PE*
 - Eric Sender PE, DBIA
 - Dave Borusiewicz PE, DBIA
 - John Rectanus, PE, PTOE
 - William Wallace, PE
 - Robert Evans, PE, PTOE
- * Proposed Key Staff

Myers/WM received the 2016 MdQI Partnering in Construction Gold Award of Excellence for exemplifying a high level of achievement through their practice of the Partnering principles and also the Award of Excellence for MDOT SHA Project of the Year >\$5M Category.

RELEVANCE OF WORK TO THE PROJECT

The I-95 Contee Road Interchange Project is relevant because of the Design-Build delivery involving the expansion of an existing two-lane road to a four-lane divided arterial roadway. Construction of the new Contee Road Bridge overpass and removal of the existing Van Dusen Road bridge was time critical, similar to the Triadelphia Bridge overpass of MD 32. The Myers/WM Team developed an approach that ensured all elements were constructed without delay; resulting in completion the new bridge 6 weeks ahead of the interim milestone date. Finally, the I-95 at Contee Road Interchange Project focused on supporting efficient highway operations and access for commuters and the adjacent communities. Our Team delivered a project fully compatible with future interchange and Konterra Town Center improvements while minimizing impacts and enhancing mobility for existing properties/communities. This project exemplified a design-build partnership between to meet budgetary constraints and the future needs of the adjacent communities and roadway users.



OWNER CONTACT

MDOT State Highway Admin
Eric Marabello
410-545-8770
emarabello@sha.state.md.us

CONTRACT/PROJECT NO.

PG4135172 and PG4945172

DELIVERY METHOD

Design-Bid-Build

CONSTRUCTION COST

Initial Contract Value:

\$63,962,000

Final Contract Value:

\$67,562,784

Reason for Difference:

Unforeseen HazMat and NOAA
Satellite Dish Disposal/Removal

SCHEDULE PERFORMANCE

Initial Completion Date:

January 2017

Final Completion Date:

November 2016

Reason for Difference:

Revised sequence to allow
construction within multiple
work areas simultaneously.

PROJECT DESCRIPTION

Wallace Montgomery (WM) provided engineering services for the I-95/MD 5 Branch Avenue Metro Access Improvement Project. The project improved safety and alleviated congestion along I-95/I-495 and MD 5 and enhanced accessibility for all transportation modes to the Branch Avenue Metrorail Station and its future transit orientated developments. Services ranged from post-planning studies through PS&E, and they included highway, hydraulic and hydrology (H&H) – drainage, structural, SWM, erosion and sediment control (ESC), and landscape designs; MOT and transportation management plan (TMP) development; traffic engineering; geotech engineering and pavement design; environmental permitting (wetland/stream and forest impacts); storm drain structural inspections; NEPA reevaluations; public involvement; and construction services. The project was constructed under two phases:

Phase 1 (PG4135172) – Consisted of modifications to the MD 5, I-95/I-495 Capital Beltway Interchange along with safety and resurfacing improvements. The primary elements of the interchange modifications were the construction of a new semi-direct flyover ramp from the Inner Loop to MD 5 Southbound (SB) replacing a cloverleaf ramp, realignment of a directional ramp from the Outer Loop to MD 5 SB, and a cloverleaf ramp from MD 5 Northbound (NB) to the Inner Loop. The construction of the directional ramp and the flyover ramp includes 5-bridges, including over I-95 and MD 5 and 4-retaining walls.

Phase 2 (PG4945172) – Consisted of MD 5 corridor existing intersection capacity/operation improvements and the construction of a new access road “Woods Way” providing an additional connection between the Metro and MD 5 SB. Phase 2 featured the reconstruction of MD 5 NB from Auth Way to Auth Road with the lowering (grade-cut) to allow for the access road’s single-span bridge over the MD 5 NB travel lanes and the dual lane Continuous Green-T Intersection connection with MD 5 SB; and multi-modal improvements between MD 5, the adjacent County roadway network and the Branch Avenue Metro Rail Station.

SUCCESSFUL METHODS, APPROACHES, AND INNOVATIONS

Maximize Project Elements to Improve Operations and Safety – WM identified traffic operations/ safety and constructability concerns with the developed planning concept of the full complete project (both Phases). WM studied several alternatives to improve the planned concept and then refined the final interchange configuration and MD 5 corridor layout through a process of traffic analysis and constructability assessments and proper application of design criteria (AASHTO). This resulted in revisions to planning concept interchange ramps with changing the semi-direct flyover ramp’s diverge/merge configurations from I-95/I-495 and to MD 5 and the access road’s Continuous Green-T connection configuration with MD 5 SB; all in consideration of future MD 5 median HOV/ETL and downstream MD 5 SB access improvements. Also, WM developed a “Maryland-T” configuration and a 2-1 lane “turbo” roundabout for the access road’s terminus intersection with the Metro.

Minimize Inconvenience to the Community and Traveling Public – WM provided traffic data collection and analysis and developed a Transportation Management Plan and MOT plans to efficiently and safely stage all construction activities with minimal increased delays than pre-existing conditions. Under Phase 1, we provided analysis and contract documents for an I-95/I-495 continuous 14-hour closure for erecting more efficiently and safely (for workers and traveling public) the I-95/I-495 and MD 5 flyover ramp bridge overpasses. Under Phase 2, WM developed the MD 5 corridor’s widening and reconstruction staging/MOT for the access road connection while maintaining all MD 5 existing travel lanes and intersection movements/ operations for the project’s duration.

Minimize Overall Impacts and Provide Proactive Coordination – WM designed five retaining walls in support of the MD 5 NB grade cut and access road connection to avoid impacts to properties. Refinements to the alignment of the new access road minimized wetland impacts. We prepared contract documents for a waterway channel relocation/restoration along with using reinforced

earth slopes to eliminate an encroaching ramp embankment into the waterway. With the opening of the Phase 1 interchange modifications, “before” and “after” traffic studies updated the design year traffic volumes for Phase 2. The evaluation concluded that the adjacent County roads did not require the substantial capacity widening as originally planned, which eliminated significant utility and R/W impacts. WM assisted MDOT SHA in coordinating the Project designs to minimize or mitigate impacts to existing County, WMATA, and utility facilities. In addition, WM staff attended and developed graphics for community specific project workshop and property owner R/W acquisition meetings. WM coordinated with a “Utility Relocation Team” to co-locate the drainage systems with utility relocations along MD 5 and County roads including lowering a Verizon duct bank at the access road for sufficient clearance.

RELEVANCE OF WORK TO THE PROJECT

The I-95/MD 5 Branch Avenue Metro Access Improvement Project is relevant because of its similar purpose for improving highway safety and traffic capacity-operations. The project’s final product reduced rear end collisions along both MD 5 and I-95/I-495, which was achieved through maintaining continuous through traffic flow with proper lane use, adequate traffic diverges/ merges, and the redistribution of traffic access to and from MD 5 in conjunction with the elimination of through traffic stop-controls along MD 5. This project had the same the goals of minimizing impacts (social and environmental resources) and inconveniences to the traveling public and surrounding communities. WM designs featured property, utility, and environmental resources avoidance/ minimization evaluations; all in coordination with the various stakeholders’ interests and concerns. Ultimately, our design reduced property, utility (avoided \$3M in underground relocations), and environmental impacts of the planning concept and even enhanced 1,500 LF of a waterway through relocation/restoration efforts consisting of the removal of a 78” RCP conveyance culvert, incorporating stabilization measures, and returning it closer to its original historical location.

Phase 1 served as the pilot project for the MDOT SHA initiatives/ policies for “Partnering in Planning and Design” and “Positive Barrier Protection for all Work Zones Along High-Speed Facilities.

Project Similarities

- ✓ SHA Safety & Capacity-Operations Project
- ✓ Access Improvements
- ✓ Continuous-Flow and Protected Left Intersections
- ✓ Interchange Modifications
- ✓ Compatible with Future Projects and Development
- ✓ New Bridge Overpasses

Proposed Staff Involvement

- Jason Kalasky, PE*
- Diane Durscher, PE*
- Eric Sender, PE, DBIA
- Dave Borusiewicz, PE, DBIA
- John Rectanus, PE, PTOE
- Robert Evans, PE, PTOE
- William Wallace, PE
- Eric Cooper, PLS
- * Proposed Key Staff



OWNER CONTACT

MD Transportation Authority
David Ferrara
410-537-7882
dferrara@mdta.state.md.us

CONTRACT/PROJECT NO.

25-201107

DELIVERY METHOD

Design-Bid-Build

CONSTRUCTION COST

Initial Contract Value:

\$52,477,777

Final Contract Value:

\$53,748,069

Reason for Difference:

Additional work requested by the owner.

SCHEDULE PERFORMANCE

Initial Completion Date:

October 2010

Final Completion Date:

October 2010

PROJECT DESCRIPTION

Allan Myers served as the Lead Contractor on this road capacity improvements project with reconstructing and widening the existing 8 lane divided highway to eight general purpose travel lanes and four express toll lanes separated by concrete barriers. The project widened I-95 for a total distance of 1.80 miles north from the I-695 interchange between Rossville Boulevard and Campbell Boulevard and included contingent remedial repairs to the existing MD 43 bridges over I-95. The work included extensive earthwork with over 243,500 CY of excavation and 87,000 CY of common borrow; full depth pavement construction, new non-public turn-around ramps; roadway resurfacing totaling 206,000 tons of asphalt; new storm drain systems with 41,500 LF of underground utilities; an arch culvert replacement under the entire width of I-95; new stormwater management (SWM) facilities; new wetland mitigation facilities; new retaining and noise wall structures; signing, paving markings; landscaping; and extensive erosion sediment control implementation and maintenance. Despite the high volumes of traffic and challenging weather conditions, Allan Myers completed this project ahead of MDTA’s advertised schedule and within their allocated budget.

SUCCESSFUL METHODS, APPROACHES, AND INNOVATIONS

Maximize Project Elements to Improve Operations and Safety – The ultimate Project added four free-flowing express toll lanes (ETLs) and the eight-reconstructed local servicing freeway travel lanes that improved traffic safety and capacity operations through the I-95 corridor. In addition, during construction, the Myers Construction Team focused on maximizing work zone safety and corridor traffic operations with an approach of performing the bulk of work operations at night. This approach reduced construction impacts for the traveling public and maximized production efficiencies by utilizing the allowed nighttime multiple and longer duration lane closures. The project had zero lost-time incidents during construction. In addition, the Myers Construction Team performed structural beam bearings and “shotcrete” sub and superstructure remedial repairs work of the existing MD 43 bridge over I-95 to extend its service life and allow for the eventual construction of the planned phased MDTA “Section 100” I-95/MD 43 Interchange reconstruction and the final I-95 ETLs improvements to East Joppa Road. The I-95 ETLs improvements from the MD 43 interchange to East Joppa Road were also constructed by Myers.

Minimize Inconvenience to the Community and Traveling Public – Construction of the project was completed with a focus on minimizing disruptions to the traveling public. Comprehensive MOT planning was conducted to ensure the existing traffic flow was uninterrupted. The project maintained the existing I-95 eight through travel lanes of traffic while widening to the outside of the existing roadway for future lanes. Once the outside lanes were completed, traffic was placed on the new lanes and the middle of the existing roadway was reconstructed. Also, with our approach to perform bulk of work operations at night, AM and PM peak periods delays were avoided. Finally, the project required the replacement of an existing deteriorated large diameter CMP culvert under I-95 with a precast concrete arch culvert. Our approach was to replace the culvert in phases while maintaining existing traffic operations as all times.

Minimize Overall Impacts and Provide Proactive Coordination – Through detailed operation planning and proactive coordination, Myers partnered with MDTA and project stakeholders to value-engineer solutions that minimized impacts and avoided potential schedule delays. With the phased replacement of the deteriorating I-95 CMP culvert with the concrete arch, stream flow was maintained through a temporary pipe within the existing culvert and work area. The stream was subject to drastic flow fluctuations which presented challenges with storm events during construction. The construction team implemented an innovative stream diversion/support of excavation approach to expedite the existing I-95 culvert replacement and minimize the duration of exposure. Myers value-engineered an alternate foundation for the culvert, changing the 98-36” diameter drilled shafts to 240-12” H-piles, that shortened the exposure time to storm events/washouts and soil erosion/sedimentation by several weeks. In addition, a sediment trap (basin) was called for on the southbound portion of I-95 to allow construction of an MSE wall to capture run off and dewatering operations for the wall. The basin occupied part of the roadway area that was to be reconstructed after the MSE wall was complete. However, requirements were that the basin remain in service until the newly constructed slopes have “vegetation established” prior to its removal. This provided a schedule challenge that was not foreseen in the original design. Myers worked with the corridor E&S QA manager and MDE to add controls for the basin to be removed and roadway construction to continue. Finally, the project interfaced with two other major projects to the north and south. Myers facilitated coordination with MDTA and the adjoining projects’ contractors for implementing short and long-term traffic control lane shifts; ensuring adequate tie-ins between proposed improvements; installing adjoining ESC measures; and testing and opening of the ETLs.

RELEVANCE OF WORK TO THE PROJECT

On the I-95 Express Toll Lanes project, Myers implemented elaborate, innovative construction approaches and MOT planning that maintained existing traffic operations-movements and minimized construction impacts for the I-95 widening/reconstruction. This project is relevant because of its similar work elements to the proposed MD 32 that include significant earthwork, cross culvert rehabilitations/replacements, pavement construction and rehabilitation, new storm drain systems/SWM facilities, bridge overpass structural work, lighting, ITS, signing, and markings. Myers’ partnering with MDTA, E&S inspectors and adjoining Projects’ contractors was the key to this successful project. Myers received an overall “A” rating on Environmental Management for the Project. Finally, Myers also coordinated and implemented additional and redundant erosion and sediment control measures due to close proximity to the Chesapeake Bay.

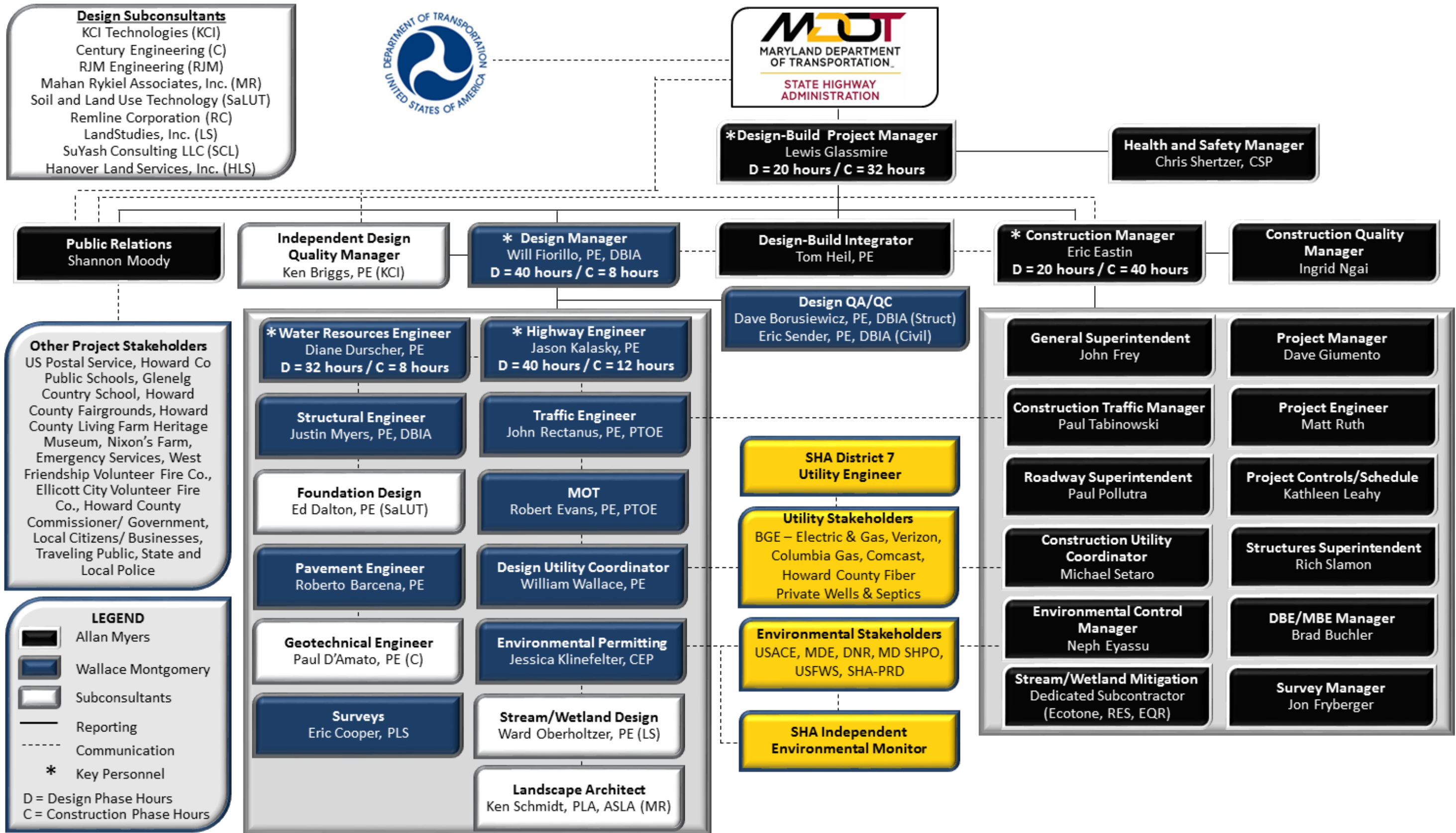
Project Similarities

- ✓ Safety & Capacity-Improvement Project
- ✓ Minimized Traffic Impacts
- ✓ Roadway Widening and Rehabilitation
- ✓ Box Culvert Crossing
- ✓ Sensitive Environmental Resources
- ✓ Drainage/SWM

Proposed Staff Involvement

- Low Glassmire*
 - John Frey
- Proposed Key Staff **







B.
**PROJECT UNDERSTANDING
AND DESIGN-BUILD APPROACH**



B.I. PROJECT UNDERSTANDING

The Project consists of the Phase 2 widening of MD 32 from a two-lane arterial to a four-lane divided highway from south of Linden Church Road to I-70, for a length of approximately 6.5 miles and fixed cost of \$85.25M. This continues MDOT SHA’s Phase 1 two-lane to four-lane widening from MD 108 through Linden Church Road which is under construction and the completed Burntwoods Road and Linden Church Road Interchanges. Future planned phases consist of MD 32 Interchange connections with the Dayton Maintenance Shops entrance, Rosemary Lane, and MD 144 along with I-70 interchange modifications to provide continuous traffic flow operations. MD 32 improvements have been phased due to funding limitations and prioritized based on addressing traffic collisions and operational issues.

The MD 32 improvements purpose and need is to improve safety and provide adequate capacity and efficient traffic operations corridor-wide with minimizing right-of-way and environmental impacts. The current MD 32 mainline would operate at LOS F by 2025 and rear-end collision rates along MD 32 are nearly double than the statewide average for similar highways. Individual projects’ are a continuation of MDOT SHA effort to implement recommended improvements listed in the approved MD 32 from MD 108 to I-70 Planning Study and Final Environmental Impact Statement (FEIS).

Building upon the MD 32 FEIS, the Myers/WM Team will develop design concepts that do not preclude future planned improvements at each of the listed interchanges while incorporating portions of the future planned improvements into the Project, as possible. In short, existing MD 32 lanes will be rehabilitated/reconstructed, becoming the future NB lanes and the new SB lanes will be constructed to create the dualized section. Further, the Triadelphia Road bridge over MD 32 and structures over the Middle Patuxent River and Terrapin Branch will be reconstructed with required stream relocations/ mitigations. Additional improvements include tie-ins with existing highways; culvert extensions/replacements; new drainage systems; SWM facilities; signal modifications; lighting, signing and markings; ITS devices; and landscaping. The Project may include additional auxiliary lanes along MD 32 from MD 144 to the I-70 ramps to ease congestion, “Maryland-T” and/or “J-Turns” for the Dayton Shops entrance and Parliament Place/ Rosemary Lane to eliminate unprotected left turns; and new service roads to consolidate access.

UNDERSTANDING OF THE PROJECT GOALS

The Myers/WM Team will ensure MDOT SHA’s project goals for MD 32 are met by applying lessons learned from our design-build delivery of nearly 12 miles of dualization on US 113 and MD 404 roadways over that past five years. We offer the following specific strategies that will help achieve each goal.

Goal #1 – Maximize Project Elements to Improve Operations and Safety:

Understanding the \$85.25M budget, we will maximize safe and efficient traffic flow and operations ensuring that they are compatible with future corridor improvements. We will select cost-effective design, materials, and construction methods; maximize the use of performance-based requirements; design intersections geometrics-layouts focused on safety and mobility; and incorporate added corridor traffic operation features and elements of future improvements as feasible. Potential ATCs that we will investigate to provide the maximize the project value include:

- Eliminating or shortening the EB Triadelphia Road Detour by using a temporary bridge crossing or a temporary MD 32 slip lane to the Burntwoods Road Interchange.
- Optimizing the Triadelphia Bridge median crossing to minimize bridge length/superstructure depth.

Designing for Future Corridor Improvements

WM successfully designed the I-95/I-495 flyover ramps entrance to MD 5 SB and a new Metro access road connection to MD 5 as not to preclude future MD 5 ETL and downstream MD 5 SB access improvements.

- Incorporating improvements of the future phase MD 144 interchange such as the ramps to and from MD 32 SB with Access Road #4 and then MD 144 west of MD 32.
- Extending the weave/merge length from the I-70 EB ramp merge to reduce rear-end collisions on MD 32 SB by eliminating the existing MD 32/MD 144 signal and incorporating a new full signal with left turns to and from MD 32 NB with Access Road #4 and a J-turn movement for MD 32 SB to MD 144 EB.
- Minimizing stream impacts by using precast concrete elements, as possible, for waterway crossings.
- Minimizing Terrapin Branch resource impacts by using reinforced soil slopes along the dualized road.
- Incorporating F-Shape Barriers within the new bridge abutment slopes to shorten the overpass bridge.
- Optimize the Future Dayton Shops Interchange by reducing the MD 32 median width to minimize the proposed bridge overpass length and minimize/eliminate the retaining structure along MD 32 SB.

Goal #2 – Minimize Inconvenience to the Community and Traveling Public:

Our Team has identified the following strategies that will help minimize roadway user disruptions and expedite the project’s construction process:

- Maintaining driver expectations by limiting the number of traffic shifts while maximizing the construction areas/durations.
- Constructing the new dualized section away from the existing roadway.
- Providing continuity of traffic patterns by coordinating with adjacent construction projects such as the Phase 1 Widening Project.
- Minimizing vertical differentials between existing and new roads by optimizing proposed roadway geometrics.
- Expediting construction such as the bridge replacements at Triadelphia Road, Clydes Branch, Middle Patuxent River, and Terrapin Branch to minimize the duration of public impacts.
- Communicating construction impacts effectively and addressing user concerns promptly through early and continuous engagement of project stakeholders such as EMS, Howard County Schools, commuters.

Minimizing Inconvenience

On the US 113 Dualization projects, Myers limited traffic impacts during peak hours and utilized night temporary lane closure operations to minimize traffic impacts, increase safety, and optimize construction efficiency.

Goal #3 – Minimize Overall Impacts and Provide Proactive Coordination: Our Team will seek to minimize utility and environmental impacts through early, proactive, and continued coordination. We have identified the following strategies that will aid in impact minimization and coordination:

- Commence utility coordination early to confirm the extent of potential conflicts.
- Conduct regular utility coordination meetings to monitor avoidance measures and schedule progress.
- Prevent utility impacts through utility designation, field verifications, and review of as-built plans.
- Coordinate utility relocations with future planned corridor improvements through MDOT SHA.
- Hold monthly coordination meetings with MDOT SHA EPD, PRD, IDQM and environmental agencies to incorporate preferences into the design.
- Conduct a pre-application meeting with MDE and USACE to review impacts, wetland/stream mitigation plans, and special provisions.
- Minimize environmental impacts by evaluating secondary roadway typical sections with appropriate criteria, rehabilitation of existing structure crossings, median widths and roadside grading treatments.
- Evaluate wetland and waterway impact minimization early and often throughout the design process.
- Constructability and access evaluations of the LOD will be completed to avoid permit modifications.

Minimizing Impacts through Coordination

On the MD 404 project, WM facilitated the reduction of wetland/WUS and forest impacts by 33% and 11%. Concurrent utility relocations were coordinated/integrated while maintaining safe and effective traffic control.

B.ii. UNDERSTANDING OF THE MOST RELEVANT AND CRITICAL RISKS

In preparation of this SOQ, the Myers/WM Team conducted a detailed review, analysis, and assessment of the project corridor to understand the existing conditions as well as the project commitments. We assembled an inter-disciplinary team of project managers and technical staff in project brainstorming sessions. During these sessions, each discipline was discussed (Highway, Structures, Environmental, Water Resources, Traffic, and Utilities) to identify the aspects of the project that would adversely impact the project goals. Each discipline presented a summary of the existing conditions, studies, agency involvement, and permits currently known along with expected future needs/studies and risks. Conducting this analysis concurrently with design and construction staff, helps our Team to identify Project risks, fully optimize the design to mitigate the risk and deliver value to the State and the traveling public, and minimize and /or avoid impacts to resources and existing utilities.

ENVIRONMENTAL PERMITS, APPROVALS AND STREAM RESTORATION

WHY THE RISK IS CRITICAL – The project occurs in an area with many sensitive environmental and historic resources. There are two historic resources within the limits of work; the Enoch Shelby house and the Great Expectations site, though a “no adverse effects” determination has been made.

There will be unavoidable impacts to wetlands, streams, and forests. Although impacts will be minimized to ensure compliance with the approved Project permit, additional attention to sensitive environmental features during the design and avoidance during construction is of paramount importance. Specifically, the Myers/WM Team will design and construct stream and wetland mitigation and reforest a large area (cumulatively), as required, with the focus to reduce wildlife strikes on MD 32 within the project area.

The project includes proposed stream relocations, stabilization where driveway crossings over Terrapin Branch are being removed, possible straightening/realignment of Terrapin Branch to move it away from MD 32, mitigation for Rosemary Lane tributary, and possible TMDL credit-generating stabilization for Terrapin Branch. Some of the proposed stream relocation work is within the previously-permitted and constructed Nixon’s Farm wetland mitigation site. Stream realignments at two areas along Middle Patuxent River are limited by time-of-year restrictions and environmental commitments may require aquatic life passage even through existing culverts.

POTENTIAL IMPACT TO THE PROJECT GOALS – All stream work and reforestation must be completed in a manner that doesn’t impact future proposed work in the corridor. Permitting and time-of-year restrictions (TOYR) could impact the construction schedule if not properly managed. The wetlands/waterways permitting and approval process is typically a long-lead item that is critical to Project success and must begin upon notice to proceed. As this Project includes significant amounts of resources surrounding the Project and includes stream mitigation, relocation, and stabilization, proactive coordination and partnering with MDOT SHA-EPD, MDE, and other permitting agencies to prevent schedule delays is a must. Potential effects to the existing Nixon’s Farm mitigation need to be avoided. However, if unavoidable, coordination with MDOT SHA-EPD, MDE Mitigation Program representatives, and USACE is required and permitted changes included in the design and construction, if required.

MYERS/WM TEAM MITIGATION STRATEGIES – Myers/WM have partnered with MDOT SHA-EPD, MDE, and USACE on the US 113 Phase 4 Project to coordinate and obtain permit modifications and approvals without impacts to the project schedule. Our Team will utilize the same coordination approach on this Project and will communicate early and frequently with MDE and USACE through MDOT SHA’s EPD project manager to manage schedule risk and streamline the permitting/approval process.

To minimize potential construction schedule risk associated with the permitting and approval process, stream closure periods and TOYR will be incorporated into the baseline CPM schedule. The design will be managed to ensure appropriate schedule is allocated to complete designs and concurrently prepare, submit, and gain approval of required permits and /or permit modifications. Further, the schedule will allow for appropriate activities to complete MDOT SHA-EPD and regulatory agency reviews, approval processes, and authorizations.

To proactively address comments and incorporate design preferences, we will hold frequent coordination meetings with MDOT SHA-EPD, PRD, and the IDQM. Following coordination with MDOT SHA-EPD management, our Team will conduct a pre-application meeting with MDE and USACE to review impacts, wetland/stream mitigation plans, and special provisions. As discussed in the Design-Build approach section below, our Team will also sequence work to minimize the potential for schedule delays by segmenting the project and prioritizing Segment A (Sta. 217 to Sta. 387), maximizing the time to achieve the required approvals.

Our Team will be cognizant of historical resources in the area and will not alter the design to impact these resources beyond what has already been coordinated with the Maryland Historical Trust (MHT). We will also confirm that rare, threatened, or endangered species are not present within the Project area. Permitting special conditions will be incorporated into the design to avoid/minimize impacts to sensitive areas. We will minimize impacts to Clyde’s Branch, reduce impacts to adjacent resources where feasible, and submit a geomorphic analysis of proposed stream stabilization methods for Terrapin Branch.

Wetland/waterway impact minimization will be evaluated early and often throughout the design. Specific design analysis will include:

- Narrowing medians and using steeper side slopes or reinforced earth slopes near environmental resources;
- Optimizing the roadway profile to minimize earthwork which, in turn, will minimize impacts to wetlands and WUS crossings;
- Refining the SWM design features to reduce the project footprint; and
- Incorporating proposed impacts for future improvements in the Phase II plans to maximize and bank mitigation for MDOT SHA.

Construction sequencing will be developed to accommodate stream closure periods and FIDS clearing restriction timeframe. Stakeout of the approved ESC plans’ LOD will be in accordance with the Contract Provision and construction fence will be installed to protect resources outside the LOD. Additionally, our proposed maintenance of stream flow technique will not result in an increased risk of flooding to roads and adjacent properties.

EXPECTED ROLE OF MDOT SHA AND OTHERS – We do not expect any roles for MDOT SHA other than those of a typical MDOT SHA Project. We understand that MDOT SHA will retain a Designated Specialist and/or Independent Environmental Monitor to review and comment on the final design plans, oversee construction, and ensure the permit conditions are met. Further, MDOT SHA will follow a Quality

Experience Mitigating Permitting Risks

For the US 301/MD 304 project, WM engaged with EPD early to discuss stream mitigation design approach and provided wetland impact plates to MDOT SHA in advance of the agency meeting prior to final design. These methods accelerated the permitting process substantially.

Stream Restoration Expertise

Stream restoration designer, Ward Oberholtzer, PE, will design this element for our Team. His extensive experience with MDOT SHA will minimize the number of required plan re-submissions and shorten plan approval timeframe. During construction, our Team will utilize a specialty stream/wetland contractor (such as Ecotone, RES or EQR) to ensure the work performed meets all special conditions and requirements.

Assurance Program for compliance with the approved ESC plans, utilizing a checklist and rating system.

SAFETY AND MOBILITY DURING AND AFTER CONSTRUCTION

WHY THE RISK IS CRITICAL – The project need is supported by a high rate of rear-end collisions and overall crash rates which have occurred between MD 144 and I-70 at a rate that exceeds the statewide average. The MD 144 / I-70 interchange is an area of high crash rates due to vehicle speeds, excessive queues and intersection/ramp conflict points. Maintenance of traffic (MOT) through this area is a risk since the current geometry allows drivers to exit the I-70 ramp at high speeds to merge with the slower traffic on southbound MD 32. The Triadelphia Road Bridge over MD 32 will utilize a planned detour which maintains one westbound lane at all times during the construction of the new bridge.

Safety and mobility are a challenge for this Project because the existing and new roadway will have multiple “crossover shifts.” Furthermore, vertical changes in the profile are common. Combine these geometric factors with the new intersection designs, new service roads, existing side roads, bridges and entrances – and it becomes clear that a logical construction sequence and effective MOT design is necessary to ensure safety and mobility.



POTENTIAL IMPACT TO THE PROJECT GOALS – MOT and the overall traffic network are a critical aspect of the Project that require methodical design and execution. The amount of traffic switches in an already congested area with new traffic patterns could cause additional delays and inconvenience. Rear-end crashes are the most common type of work zone crash, added to the MD 144 crash rate it poses a significant risk. The planned detour at Triadelphia Road Bridge takes the traveling public off the pre-planned route, increases their travel time, and the detour will likely increase traffic in low volume roads through neighborhoods. MOT has the potential to delay the project if coordination with third party stakeholders, clearance and coordination of utilities and permits are not properly managed. In addition to these reasons, when a design package is not approved on time it causes additional submittals which creates a ripple effect that can impact the construction schedule.

MYERS/WM TEAM MITIGATION STRATEGIES – The Myers/WM Team will develop a comprehensive TMP to fully understand the existing traffic users, patterns and challenges, and analyze/develop a design that is sensitive to those existing traffic conditions. A staged construction approach coupled with easy to follow MOT practices will balance safety and mobility throughout the Project. Our approach to successful development and execution of the Traffic Management Plan (TMP) includes:

- Maintaining the existing 2-lane, 2-way traffic with shoulders along MD 32 and existing intersection operations throughout construction;
- Minimizing the number of traffic switches required to maintain driver expectations;
- Carefully analyzing sight distance, operations, and safety at J-Turns, Maryland ‘T’s, and service roads, and throughout the corridor.
- Carefully designing the geometrics/MOT to execute traffic control at the “crossover” areas and vertical differences in pavement tie-ins, where the existing road switches;

- Evaluating the use of a temporary two-way bridge for construction of the Triadelphia Bridge to maintain traffic in both directions;
- Constructing the new sections of dualized roadway offset and parallel to the existing roadway to minimize MOT impacts;
- Maintaining the existing signals at MD 144 and the I-70 ramps and deploying methods to reduce travel speeds;
- Establishing work area access points in areas that minimize the safety risk conflicts associated with construction vehicles entering/exiting the work area;
- Managing earthwork and grading to reduce trucks on the road;
- Utilizing advanced media, CCTV cameras to monitor work zone incidents, CHART notifications and VMS/temporary signage prior to all traffic shifts;
- Communicating construction impacts with emergency responders, law enforcement, Howard County Public Schools, DPW and other project stakeholders.

MOT Success on MD 404
MDOT SHA considered the MD 404 design-build project a success in part due to our integrated development of the TMP and staging/MOT phasing that minimized delays to the traveling public. During construction, Myers minimized daily closures on MD 404 during construction of pipe and culvert crossings and will utilize the same approach for MD 32.

EXPECTED ROLE OF MDOT SHA AND OTHERS – We anticipated that MDOT SHA will facilitate coordination meetings between the Myers/WM Team and third parties and will provide expeditious approvals once the design packages are submitted.

STORMWATER MANAGEMENT/EROSION AND SEDIMENT CONTROL PERMITTING

WHY THE RISK IS CRITICAL – The Design-Build Team is responsible for obtaining all necessary approvals from PRD and MDE. In this region, localized terrain and subsurface conditions create challenges that limit SWM and ESC design. Poor soils encountered close to the surface or rock outcroppings limit excavation for side ditches/swales; ponds or sediment traps; and micro-bioretenion and bio-swale facilities as well as establishing outfalls for spillways, underdrain systems, or infiltration.

Maintenance of stream flow through the project site is critical at several locations. The maintenance of stream flow design for new and extended culverts needs to be reviewed by both MDOT SHA PRD and MDE. Culvert installation design needs to be coordinated with the maintenance of traffic design and the time of year restrictions for construction in the WUS.

Construction cannot commence until SWM Concepts are established and ESC approvals for the imminent phase of work are in hand. In addition, prudent selection of BMPs results in construction and maintenance cost saving as well as more effective water quality enhancement. The project area contains two stream closure periods, one for use IV-P streams (March 1 through May 31, inclusive in any year) from MDE and the other from March 1 through June 15 from USACE.

POTENTIAL IMPACTS TO THE PROJECT GOALS – SWM and ESC permitting for the Project requires balancing the project goals to maintain compatibility with future planned phases of work with minimizing the overall project impacts. Proactive coordination and a partnership between the designer-builder, PRD, MDE, and MDOT SHA, is crucial to meeting these project goals. Timely approval of SWM and/or ESC is needed to prevent construction schedule delays.

The inclusion of future planned improvements into this Phase will require additional SWM and ESC design and construction. As more roadway construction is planned, there are more SWM requirements, and less

available right-of-way to meet those requirements. SWM design may need to incorporate excess capacity so additional SWM facilities are not required for future improvements.

After approval of the initial construction package, any LOD increase over one acre requires a permit modification and an additional public notice period of 14 days. MDOT SHA is preparing H&H design for certain proposed cross culverts which will be incorporated into the roadway design. To meet the peak discharge management requirements, SWM design may require the MD 378 pond review.

MYERS/WM TEAM MITIGATION STRATEGIES – The Myers/WM Team is committed to continuing MDOT SHA’s environmentally sensitive approach and philosophy during the preparation of final design plans and throughout the project implementation. We will evaluate the environmental resource permits and identify temporary and permanent impacts, TOYR, and special conditions to allow limited work within, or a reduction of, the LOD to maintain compliance with environmental permits including the WUS/wetland permit, SWM/ESC approvals, and reforestation site review permit.

Mitigating Environmental Risks

WM has successfully completed the Magothy Bridge Road widening and superstructure replacement over the Magothy River in Anne Arundel County. This project required construction within tidal wetlands and critical areas that were mitigated for the project.

The Myers/WM Team has had a positive experience with the IDQM process on design-build projects. On the MD 404 project, we incorporated the IDQM process seamlessly into the schedule to allow time for review. Our IDQM team performed peer reviews of SWM/ESC plans and computations to ensure compliance with the contract documents and agency requirements. The result was a reduction in errors and omissions prior to submittal to MDE and PRD and quicker approvals.

To prevent potential schedule delays associated with permitting while supporting the project goals to accommodate future corridor improvements, our Team will:

- Ensure that all design package submissions, and specifically SWM/ESC, contain and address the latest guidelines as defined by MDOT SHA and MDE;
- Provide advanced planning of the available right-of-way space to accommodate future planned improvements for the SWM design elements;
- Hold pre-submission meetings with MDE and PRD for each design package to ensure our Team has fully addressed all comments and concerns;
- Accurately track the LOD changes with each package submittal to prevent the need for permit modifications associated with increases in LOD;
- Identify if the design requires MD 378 pond review early in the design process and proactively coordinate with MDE for approvals;
- Carefully sequence approval of packages and construction to avoid forest habitat disturbance during April to August, the breeding season for most FIDS;
- Sequence culvert construction and stream restoration work around time-of-year restrictions; and
- Stakeout the LOD and install orange construction fence to protect unimpacted natural resources;

EXPECTED ROLE OF MDOT SHA AND OTHERS – We anticipate that MDOT SHA will retain a qualified, independent, Designated Specialist and/or Independent Environmental Monitor, independent from the design-build team, to participate in the development of the final design and to oversee construction and ensure permit conditions are met. The Administration will also apply a Quality Assurance Program for compliance with the approved ESC plans, utilizing a checklist and rating system.

UTILITIES AND THIRD PARTY APPROVALS

WHY THE RISK IS CRITICAL – The role of third-party stakeholders for utility clearance presents a critical path schedule risk. Utility clearance and permit acquisition are two examples. The anticipated NTP has been defined as November 2018 and the anticipated ROW clearance is expected to be December 2018. It is critical to effectively plan design packages, plan early coordination, and obtain timely approvals. Utility relocations will occur concurrently with construction. If the Line & Grade package is not approved on time, our Team will not be able to provide the utility designers with the roadway elevations and SWM/drainage footprint needed to attain proper clearance. Utilities within the project corridor include:

- Existing overhead utility lines that require relocation
- Howard County Fiber Optics along the northbound roadway from Dayton Shop to MD 144
- 30" Columbia Gas transmission crossing at Station 220+00 which is not anticipated to be impacted
- 20" BGE Gas transmission crossing at Station 271+20 which is not anticipated to be impacted

POTENTIAL IMPACTS TO THE PROJECT GOALS – Utility relocations within the LOD of future planned projects could create delays and unnecessary costs for those projects. Utility work must be planned to maintain service for public users and limit downtimes to Howard County maintained aerial and underground lines that provide connectivity to public safety, first responders, public schools, and County government. Utility relocations have been broken down into three Utility Construction Phases (UCP) as stated in the Draft RFP. Conceptual plans have been used to illustrate the relocation work to the utility companies. The relocations for two of the UCPs will be performed concurrently with this project, and any changes to the concept design will require additional coordination which will impact the project schedule.

MYERS/WM TEAM MITIGATION STRATEGIES – Our Team's main strategy will be to design/develop construction phased packages for approval, proceeding from the Southern project limit towards the Northern project limit. This approach allows time in the schedule to provide third-party stakeholders, such as the utility companies, with the required information needed to finalize their relocation plans.

The Myers/WM Team will initiate coordination with the utility companies as soon as NTP is given to set common goals that will expedite the approval of the design packages. Utility relocations will be performed one time for all Phases (present and future). Revisions of the utility locations must be compatible with future improvements and as previously agreed between the utility companies and MDOT SHA. We will develop a roll plot of the entire corridor along with cross sections showing the SWM facilities, utilities, and drainage network to be used in the pre-design coordination meeting to develop an efficient design that will benefit all aspects of the Project.

During construction, Myers staff will coordinate with utility field representatives to coordinate locating efforts, ensure service is not disrupted, and monitor operations. Construction staff will confirm the location of utilities in the work area prior to each operation through test pitting, marking, as-built plan reviews. Any work within the Columbia Gas transmission easement will be coordinated with Columbia Gas to meet their review and inspection requirements, including submission of equipment specifications for 30-day review and providing 72-hour notice before work begins.

EXPECTED ROLE OF MDOT SHA AND OTHERS – We anticipate the Administration will facilitate the exchange of information between our Team and utility designers. Myers/WM will coordinate with MDOT SHA to ensure design packages are in sync with utilities and third-party stakeholders.

Mitigating Utility Risks

On US 113 Phase 4 project, the Myers/WM Team engaged a Maryland Broadband Cooperative (MDBC) approved designer and relocater to assist with fiber optic design and relocations.

B.iii. APPROACH TO DESIGN-BUILD

The Myers/WM Team presents MDOT SHA with an integrated, collaborative project team with the experience and expertise to deliver quality with maximized scope on the MD 32 from Linden Church Road to I-70 Project. Our Team’s recent similar experience includes four MDOT SHA design-build projects, including the MD 404 Dualization from East of MD 480 to East of Holly Road (3.6 Miles) and US 113 from North of Massey Brand to MD 365 (8.3 Miles). Through this joint experience, our firms continue to refine a structured approach to Design-Build (DB) project delivery which includes:

- Teaming with the right project partners based on capabilities and a successful work history;
- Partnering with MDOT SHA and project stakeholders to achieve the project objectives;
- Implementing practical design solutions to minimize impacts to environmental resources, utilities, adjacent properties/ communities, and the traveling public;
- Integrating design and construction development to limit risk and expedite construction; and
- Providing public outreach support to MDOT SHA.

TEAMING WITH THE RIGHT PROJECT PARTNERS

Myers and WM have a successful and long-term partnership delivering design-build projects for MDOT SHA. Our firms have worked together on nine design-build project and pursuits, including the I-95/Contee Road Interchange, US 113 Phase 3, US 113 Phase 4, and the MD 404 Dualization projects. Our Team’s long-term partnership promotes a shared approach to risk management, transparent collaboration with MDOT SHA and project stakeholder, and process efficiency through standard operating procedures.

PARTNERING WITH MDOT SHA AND PROJECT STAKEHOLDERS

Our Team maintains a culture that embraces partnering and works collaboratively with MDOT SHA, project stakeholders, property owners, and other third-party stakeholders. Early initiation of the partnering process establishes relationships that will continue throughout the life of the Project. Involving project management, safety representatives, field managers, and project stakeholders will foster open communication at all levels, facilitate prompt issue resolution, and clearly delineate responsibilities.

IMPLEMENTING PRACTICAL DESIGN SOLUTIONS TO MINIMIZE IMPACTS

As a Designer of Record, WM has an impressive resume and work history with MDOT SHA. We will fully understand the commitments made within the project’s environmental permitting documents and the proposed utility relocation corridors, and maximize the use of the performance-based requirements to meet or exceed SHA’s expectations to minimize impacts through creative and practical design solutions.

INTEGRATING DESIGN AND CONSTRUCTION TEAMS

Our approach to fully integrating design and construction staff will develop an optimized design that prioritizes the planned construction sequence and provides maximum value to MDOT SHA. Discipline-focused task teams with both design and construction experts will streamline constructability reviews and promptly resolve field issues during construction.

PROVIDING PUBLIC OUTREACH SUPPORT TO MDOT SHA

Our Team will partner with MDOT SHA to develop and implement a Public Outreach Plan which provides timely information, support, and community outreach assistance throughout the Project. On the MD 404 project, PR Manager Shannon Moody supported SHA in one-on-one stakeholder meetings to address specific concerns and the team provided weekly traffic/construction website updates.

Implementing Practical Design Solutions

For the US 113 crossing of Five Mile Branch, our Team rehabilitated the existing upstream box culvert, provided an open channel through the new median, and used triple 60” RCP downstream under the new roadway.

DESIGN AND CONSTRUCTION DEVELOPMENT

Our Team’s approach to design and construction development is focused on optimizing the design to maximize the project value, providing compatibility with planned future improvements, reducing the project impacts and maximizing safety during and post-construction. Key staff will be engaged throughout the proposal, design, and construction phases to effectively implement lessons learned from previous similar projects. During preparation of this SOQ, our key staff have collaborated to develop a design and construction approach for the Project which includes:

- Completing the Triadelphia Road Bridge overpass within the established detour window and reducing/avoiding the detour if feasible;
- Segmenting the Project to expedite roadway construction south of Burntwoods Road;
- Sequencing the work for right-of-way clearing and utility corridor establishment north of Burntwoods Rd.;
- Securing all approvals of the proposed waterway relocations/restorations and Phase II Mitigations along the Terrapin Branch and Middle Patuxent River; and
- Maintaining existing MD 32 traffic movements and access for adjoining properties/communities.

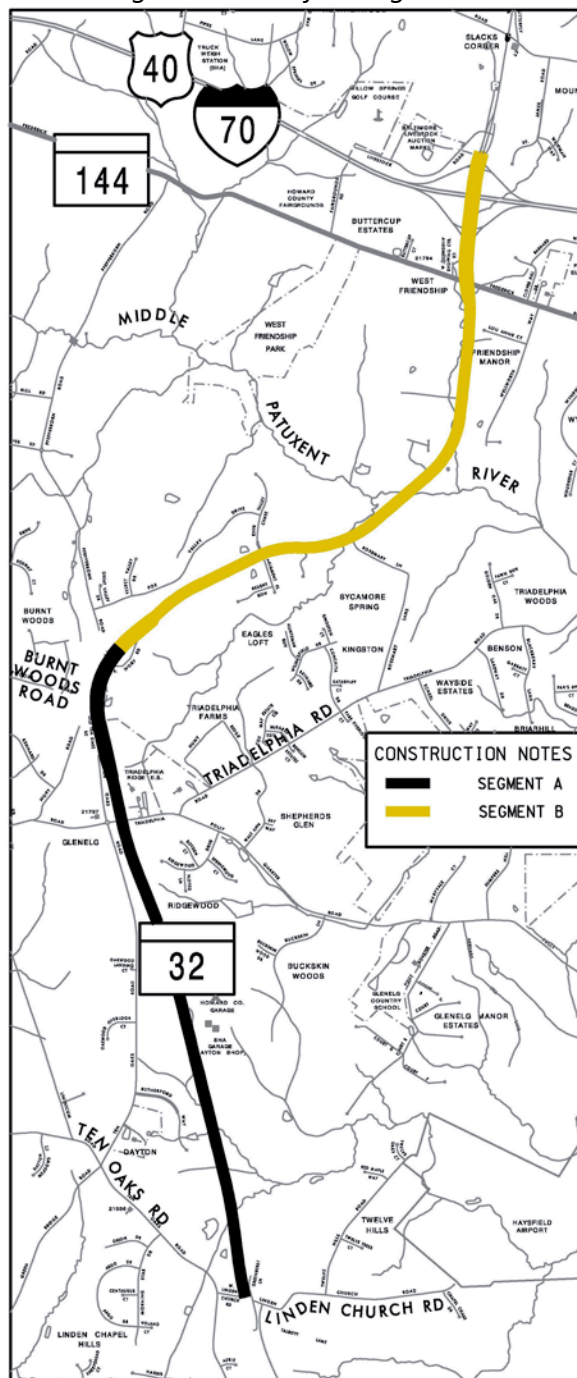
PROJECT SEGMENTS

Segmenting the Project will expedite the schedule while accounting for the unique project constraints at Triadelphia Road; right-of-way and utility status North of Burnt Woods Road; and environmental resources at the Terrapin Branch, Middle Patuxent River, and its tributary.

Segment A – MD 32 (Southern Half) roadway dualization construction from south of Linden Church Road (Sta. 217) to north of Burntwoods Road (Sta. 387) for a distance of 3.2 Miles. Segment A also includes the MD 32 access improvements with the Dayton Shop entrance, the replacement of the Triadelphia Road Bridge overpass of MD 32, and the MD 32 crossings of Clydes Branch. Constructed during the first (2019) and second (2020) construction seasons.

Segment B – MD 32 (Northern Half) roadway dualization construction from north of Burntwoods Road (Sta. 387) to I70 (Sta. 560) for a distance of 3.3 Miles. Segment B also includes the MD 32 access improvements with Rosemary Lane/Parliament Place, MD 144 and I70; Access Road #4 connecting to MD 144, and the MD 32 crossings of the Terrapin Branch and Middle Patuxent River; during the second (2020) and third (2021) construction seasons.

Figure B1 – Project Segments



DESIGN APPROACH

Our design submission approach will be to implement a “rolling” design submission process to allow for a continuous construction flow independently within each segment, as summarized below in Table B1. Generally, a complete corridor wide perimeter ESC/preliminary clearing package will be submitted first to initiate a formal PRD and NPDES approval for the Project. Separate rough grading/drainage submissions (with MOT) will be developed for the two segments. Submittals for the new Triadelphia Bridge and the MD 32 waterway crossing structures will consist of separate individual TS&L/foundation submissions and then structural details design submissions for each structure. To expedite PRD/MDE maintenance of stream flow (MOSF), ESC and H&H analysis approvals of waterway crossings, we will develop as separate individual standalone-independent ESC and MOSF plans, however coordinated to the sequencing of the rough grading submissions. Separate Final Design Roadway Plans will then be developed for each segment.

Table B1 – Design Submission Packages

Initial Support Design Corridor-wide	Segment A (Southern Section)	Segment B (Northern Section)	Final Support Design Corridor-wide
<ul style="list-style-type: none"> • Design Quality Control Plan • Road Line & Grade • SWM Concept Plan • Phase II Wetland & Stream Mitigation Packages and JPA Amendment • Project Perimeter ESC/ Preliminary Clearing • Geotech-Pavement Planning • Transportation Management Plan 	<ul style="list-style-type: none"> • Rough Grading/Drainage w/ Initial ESC/MOT • Triadelphia Bridge TSL/Foundation • Triadelphia Bridge Structural-Final • Clydes Branch Bridge(s) TSL/Foundation • Clydes Branch Bridge(s) ESC/MOSF • Clydes Branch Bridge(s) Structural-Final • Final Road/Drainage-SWM/Traffic/Landscape w/ Final ESC/MOT 	<ul style="list-style-type: none"> • Rough Grading/ Drainage w/ Initial ESC/MOT • Middle Patuxent River Bridge(s) TSL/Foundation • Middle Patuxent Bridge(s) ESC/Stream Relocations • Terrapin Branch Bridge(s) TSL/Foundation • Terrapin Branch Bridge(s) ESC/Stream Relocations • Middle Patuxent River Bridge(s) Structural-Final • Terrapin Branch Bridge(s) Structural-Final • Final Road/Drainage-SWM/Traffic/Landscape w/ Final ESC/MOT 	<ul style="list-style-type: none"> • Geotech-Pavement Designs • Definitive Design Traffic Features (signals/lighting/ITS/signing/markings) • Preliminary Design Landscaping • Pre-Final Design Landscaping • Final Forest Impacts - Reforestation • Final Wetland/WUS Impact Plates • Final As-Built

CONSTRUCTION APPROACH

We will prioritize construction of the Triadelphia Road Bridge overpass of MD 32 and the new dualized MD 32 SB roadway south of Burntwoods Road. Construction will commence in the northern segment once right-of-way and utility corridors are established and approvals/permits are obtained for the proposed Phase II Mitigations and waterway relocations along Terrapin Branch, Mid Patuxent River and its tributary.

Construction inconveniences will be minimized, and ongoing information will be provided to the traveling public about travel impacts. The general construction/MOT sequence for each segment will be as follows:

- Maintain traffic on existing MD 32 and construct the new southbound roadway (SBR)
- Place traffic on the new MD 32 SBR and rehabilitate/construct the northbound roadway (NBR)
- Split traffic between the SBR and NBR (1-lane in each direction) and complete MD 32 median areas.

Our anticipated primary initial corridor-wide, then individual roadway segments and finally corridor-wide construction activities for the MD 32 dualization project are summarized in Table B2.

Table B2 – General Sequence of Construction Activities

Initial Corridor-Wide	Segment A (Southern Section)	Segment B (Northern Section)	Final Corridor-Wide
<ul style="list-style-type: none"> • Site Mobilization • Partnering Kickoff • Public Outreach • Utility Locations • Construction Stakeout • Install Traffic Control Measures • Clearing for Perimeter Controls • Install ESC Perimeter Measures 	<ul style="list-style-type: none"> • Install ESC Measures • Clearing & Grubbing • Earthwork/ Rough Grading/ Drainage • Phased MOT Controls • Stream ESC/ MOSF • Triadelphia and Clydes Br Bridges Foundations and Superstructures Erections • Roadway Cross Culverts • Fine Grade/ Subbase/ Base Pavement • MOT Crossover Shift • Pavement Rehab • Interim Stabilization 	<ul style="list-style-type: none"> • Install ESC Measures • Clearing & Grubbing • Earthwork/ Rough Grading/ Drainage • Phased MOT Controls • Stream ESC / MOSF • Middle Patuxent & Terrapin Branch Bridges Foundations & Superstructures Erections • Stream/Wetland Restorations • Roadway Cross Culverts • Fine Grade/ Subbase/ Base Pavement • MOT Crossover Shift • Pavement Rehab • Interim Stabilization 	<ul style="list-style-type: none"> • Median Swales • Construct SWM Facilities • Final Stabilization • Traffic Barrier • Signals Modifications • Lighting, ITS, and Signing • Final Paving • Pavement Markings • Roadway Opening • Final Landscaping • Final Punchlist/ Close-Out

COORDINATION AND DECISION MAKING

Our Team’s approach to project coordination and decision making emphasizes teamwork and partnering, both within the Design-Build Team and with MDOT SHA and the project stakeholders.

COORDINATION – Led by DBPM, Lew Glassmire, with support from Design-Build Integrator, Tom Heil, our Team will utilize a discipline-focused approach to coordination, with input from design and construction staff as well as MDOT SHA and key stakeholders. Working task groups will be established for traffic, environmental, structures, roadway, and utilities. This approach to integrating design and construction staff builds constructability and safety into the design and minimizes field changes during construction.

Coordination meetings will include constructability, over-the-shoulder, and comment resolution with stakeholders. Weekly progress meetings will address design status, construction progress, project schedule, ROW, utility relocations, contract administration, safety, and public outreach. During construction, WM design staff will attend progress meetings to resolve questions and field issues as they arise. Daily coordination and weekly look-ahead schedule updates will communicate progress and upcoming work with the entire team, including MDOT SHA’s onsite representatives.

DECISION MAKING – DBPM, Lew Glassmire, will be responsible for execution of the work under the contract, including ultimate oversight of all design and construction activities. He will be supported by Design-Build Integrator, Tom Heil, to maximize design efficiency and maximize the project scope within the project budget. DM, Will Fiorillo, PE, DBIA, will be responsible for management of the Design Team to ensure quality design submittals are completed on-time. He will integrate subconsultants as a seamless extension to the WM Design Team. Construction Manager (CM), Eric Eastin, will manage the construction process and will ensure that the materials used, and work performed meet the contractual requirements.

DESIGN QUALITY MANAGEMENT

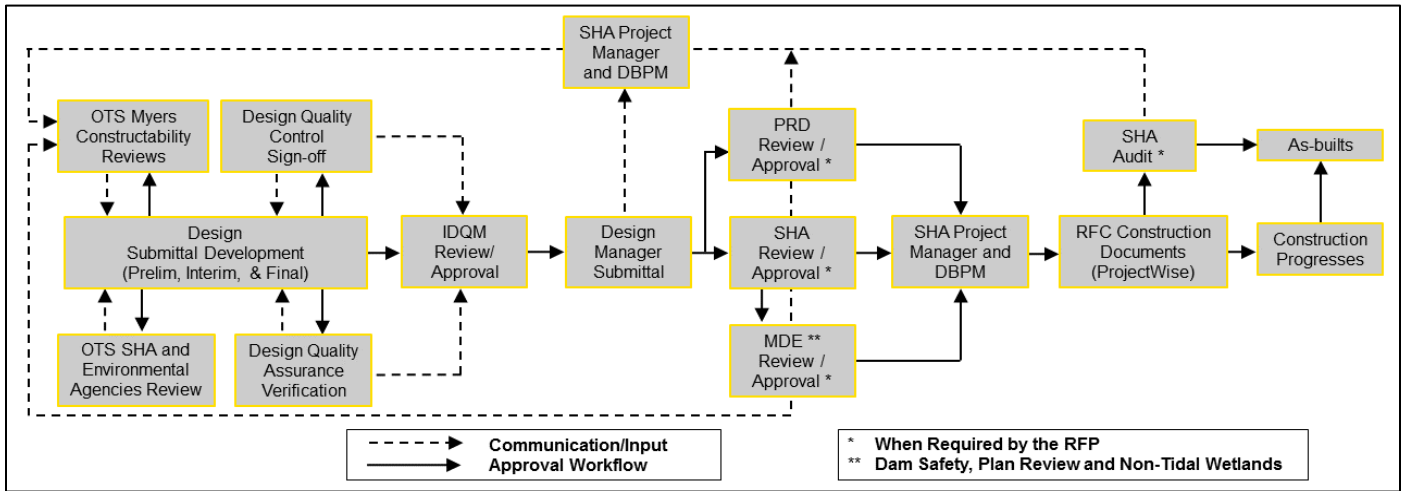
With over 43 years of local experience, WM designers have the expertise and resources to complete a quality design. Dave Borusiewicz, PE (Structural) and Eric Sender, PE (Civil) will lead the design quality

management process using proven methods from past DB projects. KCI Technologies, our Independent Design Quality Management (IDQM) firm provides over 60 years of multi-discipline design experience. Our approach to design quality management is focused on producing plans that are compliant with the RFP, constructible, permittable, and available to meet the construction schedule. To maintain a high-quality design while meeting the rolling construction schedule for the Project, our Team will utilize:

- **MDOT SHA input:** While the use of an IDQM may change the way that MDOT SHA has typically been involved in D-B projects, we believe that keeping MDOT SHA involved remains critical to achieving project goals. SHA involvement will be encouraged and requested throughout the design process.
- **Over-the-shoulder (OTS) reviews** with IDQM staff, MDOT SHA design divisions, PRD, MDE to ensure design solutions are acceptable, RFP compliant and constructible; and to resolve issues timely.
- **Advance notification of design submissions** to the IDQM, MDOT SHA, PRD and others will support resource planning that ensures the review and design schedule can be met.

To provide a high quality and efficient design, each design package ultimately released for construction will follow the design quality management and approval workflow shown in Figure B2 and described below.

Figure B2 – Design Quality Management and Approval Workflow



Constructability and Environmental Reviews: Key construction staff will review the design during every stage of development, making constructability reviews an integral part of the design quality process. OTS reviews with MDOT SHA-EPD, PRD, MDE, USACE, USFWS, DNR, and MDSHPO will ensure compliance with commitments and permit provisions and identify/obtain any permit modifications or additional approvals.

Design Quality Control/Assurance: Experienced and licensed design personnel will perform a complete check of all design, calculations, plans and specifications including overall concepts and element coordination. Design Quality Assurance will verify that all aspects of the Design Quality Control Plan (DQCP) have been followed.

Independent Design Quality Management: The IDQM will function in the role of MDOT SHA with respect to ensuring conformance with the RFP requirements. In addition, the IDQM firm will:

- Review and approve the DQCP prior to submission to MDOT SHA.
- Review all design elements for RFP and DQCP compliance.
- Sign, seal, and certify that design submittals meet the contract requirements prior to construction.
- Check all working/shop drawings and stamp with approval.
- Review and approve any revisions during construction.

PRD/MDE Review: Our Team will obtain approvals coordinated with SHA EPD from PRD and MDE - Dam Safety and/or Non-Tidal Wetlands Divisions for the required design elements. To expedite approvals, submissions will be peer reviewed by staff extensively familiar with PRD/MDE requirements. In addition, we will engage PRD/MDE early and often with monthly coordination meetings, specific issue/task meetings, and OTS reviews. In addition, the IDQM will provide an independent peer review of all design before submissions to PRD/MDE.

Design Quality Certifications: Before any package is released for construction, the applicable Professional Engineer, Landscape Architect, etc. of record will sign, seal, and certify that all calculations, plans, specifications, and technical documents were prepared in accordance with the DQCP. In addition, the IDQM will certify compliance with the RFP and Contract requirements.

Document Control: We will use file sharing/collaboration tools (i.e. ProjectWise) to ensure that our Team, SHA Divisions, PRD, MDE, etc. always have access to the latest designs and plans. During construction, we will ensure that the latest plans are easily identifiable and that any revisions are clearly logged. We utilize the latest version of the SHA workspace for CAD standardization. SHA’s Materials Management System (MMS) will be utilized for materials management to document and approve material source of supply. Submittals, shop drawings, and catalog cuts will be transmitted in accordance with the distribution protocols established by the appropriate parties. All correspondence/communications will be documented within our Team’s project management software systems including RFIs and meeting minutes.

Partnering with PRD/MDE

On the MD 404 Dualization DB project, we met monthly with PRD and MDE to coordinate/review comments, expedite approval and address all feedback fully. For 2 new SWM Ponds at wetland/stream resources, we successfully coordinated between PRD and MDE sufficient pond outfalls that also provided sustainable benefit to the resources.

CHANGE MANAGEMENT

Myers’ approach to change management is to expedite scheduling/planning efforts for mitigating/minimizing unexpected changes to the scope of work. Our Team will proactively coordinate with project stakeholders to prevent schedule delays associated with changes outside of the defined scope of work. However, changes in project’s scope may become necessary to address various needs, such as differing field conditions, or requests by various stakeholders through partnering. Should changes to the scope of work occur, the necessary authorizations will be secured prior to incorporating any scope change with respect to design or construction. Proposed changes in scope will be assessed by the DBPM to determine whether such changes warrant further evaluation and verification of cost-responsibility. If appropriate, the DBPM will initiate the development of a change order, fully coordinated with the DM and CM, so that permit, utility, and stakeholder considerations are understood. The Myers/WM Team will review the potential changes with SHA to collaboratively align through partnering the best solution for the project. Field changes to previously approved plans will be subject to the same level of review, quality checks and assurance as the original design to ensure that the project meets or exceeds the project requirements. When changes to the Releases for Construction (RFC) plans are required, Myers will prepare/submit a Request for Information (RFI). WM will review the RFI, analyze impacts to the RFC design, and prepare a response. If the RFI or change is acceptable, Myers/WM Team will update the RFC plans through a formal redline revision or “toolkit” modification and secure necessary approvals. If any aspect of the RFI or change is not in compliance with the RFP and permitting, the RFI or change will be rejected, and additional details obtained. All RFC plans revisions will be subject to the design quality management process as noted above.



ALLAN MYERS
P.O. BOX 278
2011 BEL AIR ROAD
FALLSTON, MD 21047
410.776.2000



WALLACE MONTGOMERY
10150 YORK ROAD
SUITE 200
HUNT VALLEY, MD 21030
410.494.9093