

Public-Private Transportation Act
Competing Proposal

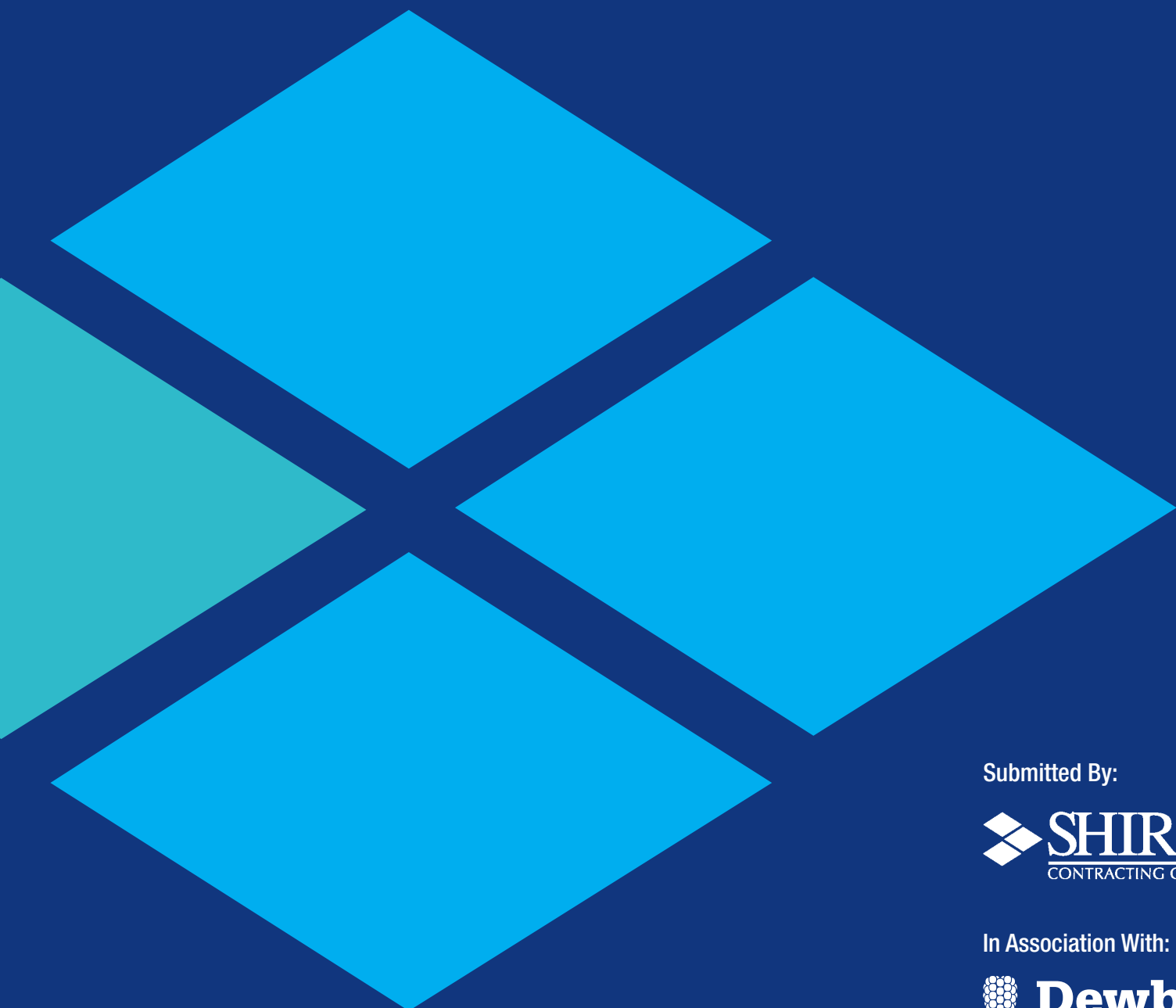
EXCLUDES SECTION 3 PROJECT FINANCING

ROUTE 234 - BRENTSVILLE ROAD INTERCHANGE

Prince William County, Virginia

Submitted To:
Finance Director
Prince William County, Virginia

April 1, 2019



Submitted By:



In Association With:





April 1, 2019

Ms. Michelle L. Attreed
Director of Finance
Prince William County
1 County Complex Court, MC455
Prince William County, Virginia 22192

RE: Public Private Transportation Act Competing Conceptual Proposal
Route 234 - Brentsville Road Interchange

Dear Ms. Attreed:

In accordance with the Prince William County Purchasing Regulations, Shirley Contracting Company, LLC (Shirley) is pleased to submit this Competing Conceptual Public Private Transportation Act (PPTA) Proposal to design and construct the Route 234 - Brentsville Road Interchange (Project). As set forth in the PPTA requirements, we are providing ten (10) copies of the proposal including Tab 3 confidential information, and ten (10) copies of the proposal without Tab 3 Project Financing information, and two CDs containing the electronic files.

Our Team, comprised of Shirley Contracting Company, LLC and Dewberry Engineers Inc., along with an experienced group of subcontractors and subconsultants, is prepared to partner with Prince William County (PWC) to delivery this important transportation project as envisioned by the PPTA.

Through our continuing success on numerous other PPTA and design-build projects, Shirley has developed an excellent track record of successfully managing design-build projects which enhances our ability to successfully deliver the proposed improvements to PWC. Our full-service approach to PPTA and design-build projects will allow us to design and construct the project for a firm fixed price and complete the work on a fast track basis with an expedited schedule.

Our Team brings to PWC:

- Experience working together to deliver over \$4 billion of PPTA and design-build projects with a proven approach and methodology;
- Prior PPTA experience working with PWC on the University Boulevard and Route 28 Phase III Projects;
- Proven key personnel to manage the delivery of the Project;
- A track record of delivering quality projects safely and ahead of schedule;
- Extensive resources of one of Virginia's largest road building contractors;
- Thorough understanding of the processes and procedures of both PWC and the Virginia Department of Transportation; and
- Unmatched design-build experience with proven quality assurance programs and the ability to manage the acquisition of right-of-way, relocation of utilities, coordination with stakeholders, obtain the required permits and clearances to successfully compete the project improvements.

We look forward to the review of our Competing Conceptual Proposal. Should you have any questions regarding the proposal, please contact me at 703-550-3579 or gpalleschi@shirleycontracting.com.

Sincerely,

A handwritten signature in blue ink that reads "Garry A. Palleschi".

Garry A. Palleschi
Vice President



April 1, 2019

Ms. Michelle L. Attreed
Director of Finance
Prince William County
1 County Complex Court, MC455
Prince William County, Virginia 22192

RE: Public Private Transportation Act Competing Conceptual Proposal
Route 234 - Brentsville Road Interchange Competing PPTA Proposal
Freedom of Information Act - Request for Confidentiality

Dear Ms. Attreed:

Shirley Contracting Company, LLC (Shirley) is pleased to submit our Competing Conceptual Proposal for the Route 234 - Brentsville Road Interchange (Project). In accordance with the Virginia Freedom of Information Act (FOIA) Section 2.2-3705 A 56, Shirley requests that Section 3, Project Financing be kept confidential in its entirety. It is our contention and belief that this section and the audited financial statements for Shirley Contracting Company, LLC accompanying Section 1, represent proprietary and confidential information to our business.

Thank you for your consideration in this matter. Should you have any questions, please feel free to contact me at 703-550-3579 or gpalleschi@shirleycontracting.com. We look forward to working with you in advancing this Project.

Sincerely,

A handwritten signature in blue ink, appearing to read "G. Palleschi", is written over a printed name and title.

Garry A. Palleschi
Vice President



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1 - Qualifications and Experience



Section 1 - Qualifications and Experience

Introduction

For Prince William County (PWC) to ensure the successful completion of the Route 234 - Brentsville Road Interchange Project (the Project), an experienced team with extensive design-build experience will need to be selected. Shirley Contracting Company, LLC (Shirley) has the experience and personnel to successfully manage all design-build elements of the Project. Shirley, along with Dewberry Engineers Inc. (Dewberry) as our Lead Designer, are one of the region's most experienced design-build teams having been awarded 41 design-build projects together. Our Team will provide PWC with an experienced team of professionals who will ensure completion on-time and on budget.

(a) Identify the legal structure of the firm or consortium of firms making the proposal. Identify the organizational structure for the project, the management approach and how each partner and major subcontractor in the structure fits into the overall team. All members of the offeror's team, including major subcontractors known to the proposer, must be identified at the time a proposal is submitted for the conceptual stage.

Legal Structure

Shirley Contracting Company, LLC, a Virginia limited liability company, is the Offeror, and will contract with engineers, consultants, subcontractors, and others, to complete the Project for PWC. Shirley will be the legal entity that will enter into a contract with the PWC.

Organizational Structure

Shirley has assembled an experienced and highly qualified team to develop, plan, design, and construct the Project. Each team member has clearly defined roles and responsibilities, as described in Table 1, Team Member Roles and Responsibilities, and as shown in Figure 1.A., Team Organizational Chart. Shirley will serve as the Project Manager and Lead Contractor, and will contract with Dewberry for design and engineering services. The members of this Team are known for the delivery of major design-build transportation projects in Virginia for the Virginia Department of Transportation (VDOT) and PWC. Our experience provides PWC with a Team that is highly accomplished, in-place and ready to go, along with an unmatched level of expertise to deliver this important transportation improvement project.

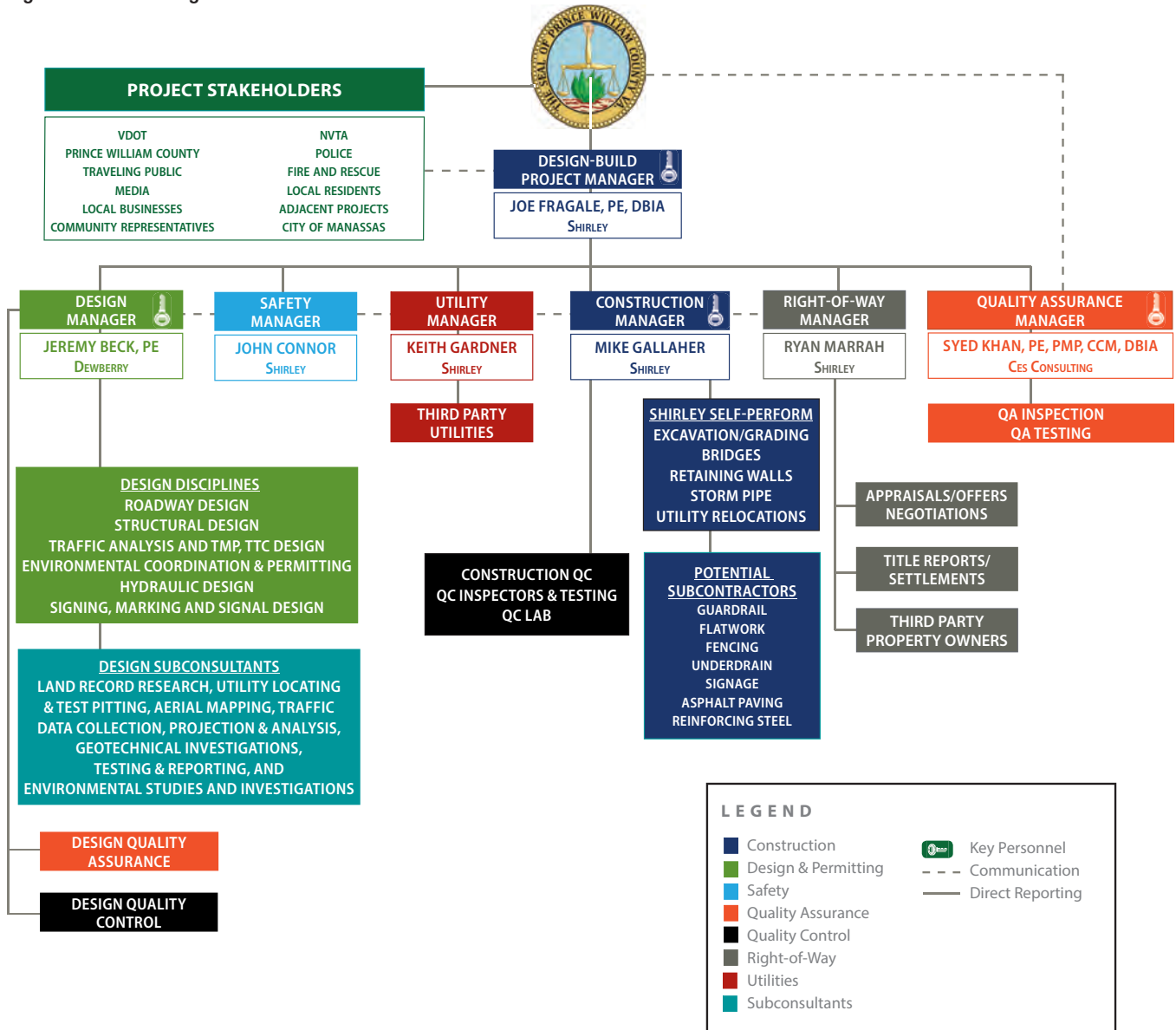
Table 1 - Team Members, Roles and Responsibilities

Firm	Role	Responsibilities
	Offeror, Project Manager, Lead Contractor	<ul style="list-style-type: none"> ▪ Design-Build Contractor ▪ Contractual Obligations with PWC ▪ Single Point of Contact with PWC ▪ Design Management ▪ Right-of-Way Acquisition ▪ Utility Relocation ▪ Public Relations ▪ QA/QC ▪ Construction
	Lead Designer	<ul style="list-style-type: none"> ▪ Design/Engineering ▪ Traffic Studies and Analysis ▪ Geotechnical Engineering ▪ Design QA/QC ▪ Permitting

Our organizational structure is shown Figure 1.A., other team members will be added as the Project progresses and the scope is more clearly defined.

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Figure 1.A - Team Organizational Chart



Management Approach

Utilizing an Integrated Project Management Approach, our Team will focus on delivering the Project in the minimum amount of time possible and with a partnering approach. Our Team is committed to working in partnership with staff members of PWC, project stakeholders, and coordinating agencies. Figure 1. B., on the next page, outlines our approach.

Utilizing best practices of design-build projects in Virginia and experience from successful PPTA projects, our Team manages the design, obtains the necessary permits, acquires right-of-way, relocates utilities in a phased and overlapping process, performs construction, and completes the Project in the quickest possible time frame. All of the design elements are carefully reviewed and critiqued by experienced field personnel to ensure a constructible and practical design. PWC and the Project Team will participate in reviews at intervals in a multi-staged process to ensure full compliance with the design intent and to facilitate fast-tracking the process.

Shirley will aggressively manage the project scope and all members of the Team to provide the “Best Value” to PWC. As a large and financially strong team, Shirley will expedite project delivery to complete the Project as quickly as possible. Our

Section 1 - Qualifications and Experience

approach will allow construction of the Project to begin as soon as possible, allowing citizens and businesses of PWC to benefit from the Project at the earliest possible date.

Stakeholder Involvement

To complement and facilitate the engagement of PWC staff and to build support and consensus, we advocate the direct involvement of various stakeholder groups for the duration of project delivery. We will provide PWC with quarterly Project status reports (or more frequent if desired) that document recent activities, critical issues, provide a projection of future work, and update the financial status. We will conduct regular progress meetings with Team members, including representatives of PWC, to allow for direct input and to keep everyone informed of Project progress. Appropriate PWC

representatives will be notified in advance of any actions needed on behalf of PWC to facilitate issue resolution. This enables the delivery of the Project to move forward in true collaborative partnership and streamlines the decision-making process.



Figure 1.B. - Integrated Project Team

Summary

The development process of any complex infrastructure project is a collaborative effort between many partners and stakeholders working together to achieve a common goal. Our Team has the experience and expertise to deliver the Project in an expedited and cost-effective basis for PWC. We will work closely with the PWC Staff, the County Board of Supervisors, community groups, and other stakeholders to deliver an outstanding Project in the minimum amount of time possible.

(b) Describe the experience of the firm or consortium of firms making the proposal, the key principals and project managers involved in the proposed project including experience with projects of comparable size and complexity, including prior experience bringing similar projects to completion on budget and in compliance with design, land use, service and other standards. Describe the length of time in business, business experience, public sector experience, and other engagements of the firm or consortium of firms. Include the identity of any firms that will provide design, construction, and completion guarantees and warranties, and a description of such guarantees and warranties.

Introduction

Our Team, with a proven track record and capability of performing all elements of the Project from concept to completion, along with an unparalleled level of expertise with VDOT and the PPTA design-build processes, will provide PWC with confidence that the Project will be successful. Our Team will leverage our local knowledge and experience with recent projects to mitigate risk and deliver the Project in an expedited manner. Below are firm overviews for key members of our Team.

Our Team has the experience and expertise to deliver the Project on an expedited and cost effective basis for PWC. We will work closely with the County Board of Supervisors, the local community, and other stakeholders to deliver the Project in the minimum amount of time possible.

Offeror, Project Manager and Lead Contractor



Shirley, as the Offeror, will be the Project Manager and Lead Contractor for the Team. Shirley provides high-quality, comprehensive design-build services to public transportation and highway authorities and private developers in the Washington, D.C. area. Shirley offers PWC a firm with the ability, experience, and resources to manage and perform all of the


Project elements including design management, acquisition of the right-of-way, relocation of utilities, obtaining the necessary permits and completing construction on-time and within budget. Shirley has extensive design-build experience,

Section 1 - Qualifications and Experience

unparalleled construction expertise, and proven quality assurance processes and procedures that will ensure the Project is a success.

Regarded as one of the area’s largest and most experienced civil general contractors, Shirley will lead the construction operations for the Team. For over 45 years, Shirley has constructed many of the area’s bridges, highways, railroads, tunnels, retaining and sound walls, roads, trails, and more.

Lead Designer

 Dewberry is a nationally recognized Architecture and Engineering (A/E) organization with principal offices in Fairfax, Virginia, and branch offices throughout the Mid-Atlantic and Northeast regions. Founded in 1956, the firm offers comprehensive services in architecture, engineering, planning and surveying and currently employs over 2,200 professionals in 53 branch offices. With its combined resources, Dewberry has 20 offices and more than 700 personnel dedicated to planning, design, and inspection of transportation facilities. These resources have placed Dewberry among Engineering News-Record’s Top 25 Highway Engineering firms and one of the nation’s leading specialists in infrastructure development.

Dewberry’s transportation experience spans a broad range of heavy civil engineering projects, from highways, bridges, and transit, to airports, railways, and marine structures. Dewberry’s presence throughout the major metropolitan areas of the eastern United States offers these regions a high level of proficiency in addressing complex challenges resulting from continued growth, high traffic volume, overworked transportation networks, and aging infrastructure. Headquartered in Fairfax, Virginia, Dewberry has designed some of the largest infrastructure improvement projects in the United States, while retaining strong community roots with a branch offices in many locations, including Gainesville, Virginia. Dewberry’s experts in transportation, civil, structural, and hydraulic engineering also have a strong record of successfully completing design-build and privatized projects.

Experience Working Together

Shirley, as the Lead Contractor, and Dewberry, as the Lead Designer, have worked together on over \$4 billion worth of design-build and PPTA projects, for multiple owners, providing PWC with an unmatched level of expertise and experience in the performance of all the Project’s elements. A list of the Team’s design-build experience is shown in Table 2. In addition to the Team’s design-build and PPTA experience, the relationship between Shirley and Dewberry extends back 36 years across multiple traditional design-bid-build projects for VDOT and other owners. We have the resources in-house and the Team in place to begin immediately. Having worked closely together for such an extended period of time, we know firsthand each other’s talents and we understand how to work together. The strength of our Team will ensure the success of the Project for PWC, VDOT and the public.

Table 2 - Shirley/Dewberry Design-Build Projects

Shirley/Dewberry Design-Build Projects		
<ul style="list-style-type: none"> ▪ ICC Contract C ▪ Battlefield Parkway ▪ Pacific Boulevard Over Broad Run ▪ Dulles Greenway Widening ▪ Route 625/Loudoun Parkway ▪ Dulles Rail - Phase 2 (Silver Line) ▪ Loudoun Water Access Road ▪ Route 29 over Little Rocky Run ▪ Gloucester Parkway Over Broad Run ▪ Route 28/Innovation Avenue Interchange ▪ Route 7/Ashburn Village Interchange ▪ Van Buren Street ▪ I-95/ Route 630 Interchange 	<ul style="list-style-type: none"> ▪ Route 7/River Creek Parkway Interchange ▪ Mt. Weather ▪ Spotsylvania County PPTA ▪ Route 50 Widening ▪ University Boulevard Extension PPTA ▪ Fairfax County Parkway - Phase III ▪ I-66 Widening ▪ Route 7 WB Truck Climbing Lanes ▪ Route 1/Telegraph Road ▪ Route 27/244 Interchange Modifications ▪ Eskridge Road ▪ Route 28/Steeplechase Drive Interchange ▪ Route 28 Phase III ▪ Route 606 Over I-95 	<ul style="list-style-type: none"> ▪ Pacific Boulevard Extension ▪ Ft. Lee A Gate Roundabout ▪ ICC Contract D/E ▪ I-64/Exit 91 Improvements ▪ Sycolin Road Overpass ▪ Route 606 Reconstruction ▪ Route 28 Corridor Improvements PPTA ▪ I-64 Capacity Improvements - Seg. I ▪ Route 659 (Belmont Ridge Road) Widening ▪ Innovation Avenue Realignment ▪ Willowsford Bridges ▪ Route 772 Transit Connector Bridge ▪ I-64 Capacity Improvements - Seg. III ▪ Warrenton Southern Interchange

Section 1 - Qualifications and Experience

Public-Private Partnership Experience

Our Team has extensive experience working on projects procured under PPTA legislation, specifically the Route 28 Corridor Improvements Project for VDOT in Loudoun and Fairfax Counties. Shirley and Dewberry are completing the \$475 million design-build project, which includes constructing ten grade separated interchanges, widening Route 28 from six to eight lanes, and widening and upgrading several secondary road improvements in Fairfax and Loudoun Counties. The project scope includes design, right-of-way acquisition, utility relocations, permitting, quality assurance and quality control, and construction.

Experience in Prince William County

In 2011, Shirley with Dewberry as the Lead Designer executed a Comprehensive Agreement with PWC to design and construct the University Boulevard Extension PPTA project. The Project included the design and construction of a 1.3-mile extension of University Boulevard as a 4-lane roadway from Sudley Manor Drive to the Prince William Parkway. The project scope also included the widening of Hornbaker Road from north of Sudley Manor Drive to Thomason Barn Road to a 4-lane divided roadway, an approximate distance of 1.3 miles.

In 2018, Shirley and Dewberry were awarded a contract with PWC to provide design-build services to complete the Route 28 Phase III Project. The project will widen 1.3 miles of Route 28 from Linton Hall Road to Pennsylvania Avenue and includes modifications to the Route 28 Bridge over Broad Run.

Our Team has completed various phases of what is one of the largest transportation projects in PWC, the improvements to I-66. In 1997, Dewberry began working on the design and engineering to widen I-66 to 8-lanes between Route 234 Business in Manassas and Route 29 in Gainesville. Additional phases of this work included a new interchange at Route 29 and Linton Hall Road in Gainesville and the creation of a connection between Wellington Road and Route 29 (now known as University Boulevard). In 2006, Shirley began constructing what was the third phase of this Project which included the widening of I-66 from the Route 234 Bypass in Manassas to the I-29 interchange in Gainesville. Shirley was also awarded the Linton Hall Interchange Project by VDOT, also designed by Dewberry. The \$74 million project is considered the last element of the overall Gainesville Interchange which improved the intersection of I-66, Route 29 and Linton Hall Road. In 2015, the Shirley-Dewberry Team was also awarded the I-66 Widening Design-Build Project by VDOT. The project included the widening of I-66 from the Route 29 interchange to Route 15, approximately 2.5 miles. The Team also replaced the existing bridges at Old Carolina Road and Catharpin Road.

PWC awarded Shirley a contract to construct the Rollins Ford Road Phase IV Project that completed in May 2014. Shirley recently completed the Minnieville Road Improvements Project and is currently under contract to deliver the Vint Hill Road Extension Project and the Discovery Boulevard Box Culvert Project for PWC.

Right-of-Way Acquisition and Management

A critical service that our Team brings to the Project is our in-house capability of managing the acquisition of the right-of-way and easements needed to clear the project for construction. We have a talented core group that has extensive experience in the right-of-way process under a design-build method of project delivery.

While most other firms must bring in an outside consultant for right-of-way acquisition management, Shirley provides this service and expertise in-house, eliminating any inefficiencies regarding the right-of-way needs of the Project. If the needs of the Project dictate changing the order of acquisitions, having this function in-house allows us to react quickly and maintain the goals and schedule for the Project. It also provides a much greater level of coordination between the design, utility, permitting, and construction disciplines. Our Right-of-Way Manager is involved throughout the design stage, providing feedback and recommendations regarding minimizing property impacts, researching proffers, and keeping landowners informed. As the Project progresses through the acquisition phase, our Right-of-Way Manager will manage our VDOT pre-qualified consultants to complete the appraisals, appraisal reviews, title reports, offers, negotiations, certificates, and settlements. Our Right-of-Way Acquisition team and the processes they have developed and utilized have proven to accurately estimate the costs of acquiring property for individual projects providing Owners with reduced risk.

Section 1 - Qualifications and Experience

Utility Relocation Management

The Project cannot be successful without effectively managing the utility impacts associated with the Project. Shirley is in an excellent position to expedite this work because of our experience and knowledge of the existing utilities and the potential for impacts. Shirley has cultivated close relationships with the representatives of over 25 public and private utilities, including all the known utilities located near the Project.

The keys to successful utility relocation management will be to have a Team that has performed this function on-time and on-budget on previous design-build projects, and to have a Team in place that has established positive relationships with the utility companies. Shirley exceeds both criteria resulting in reducing risks to the schedule and costs for utility relocations.

Relevant Project Experience

Table 3 shows a list of our relevant projects that are comparable in size and complexity, including prior experience bringing similar projects to completion on budget. Detailed project sheets of our relevant projects can be found in the Appendix.


Table 3 - Relevant Project Experience

Project	Description	Contract Amount	Delivery Method	Comp. Date	Designed by Dewberry
 Route 50 Widening	Design and construct the widening of Route 50 for 3.6 miles to a 6-lane divided highway with multiple signalized intersections, interchange modifications at Route 28, bridge widening over Cub Run, extensive watermain installations, utility relocations, and MOT. Project was completed on-time and within budget.	\$67.8M	D-B	11/2015	✓
 Route 27/244 Interchange Modifications	Replacement of the Route 27 Bridge over Route 244, improvements to ramps, 700 LF of 12'X 10' twin concrete box culverts, utility relocations, sound barrier and retaining walls, watermain and sanitary sewer relocations, quality assurance/quality control, and extensive maintenance of traffic. Project was completed on-time and within budget.	\$31.4M	D-B	6/2015	✓
 Rollins Ford Road - Phase IV	Construction of a 1 mile section of Rollins Ford Road as a 4-lane divided roadway from Hamill Run Drive to Vint Hill Road. Scope included new northbound lanes, two bridges over Broad Run, installation of erosion and sediment control devices, storm sewer pipes, drainage structures, watermain, and box culvert, as well as stormwater management facilities, curb and gutter, and shared use path. Project was completed on-time and within budget.	\$15.3M	D-B-B	5/2014	

Section 1 - Qualifications and Experience

Project	Description	Contract Amount	Delivery Method	Comp. Date	Designed by Dewberry
 <p>University Boulevard Extension</p>	Design and construction of a new section of University Boulevard including a 4 lane divided roadway, 2 bridges, and a 60" pipe arch structure. Also included the upgrading of a section of Hornbaker Road from 2 to 4 lanes. 7,000 LF of 30" watermain, right-of-way acquisition and utility relocations. Project was completed on-time and within budget.	\$32M	D-B	12/2013	✓
 <p>Fairfax County Parkway - Phase III</p>	Construction of 0.7 miles of 6-lane divided, limited access highway within the existing right-of-way, improvements to the Franconia Springfield Parkway Interchange including a relocation of Hooes Road, widening of Ramp D to 2-lanes, and construction of three separate Noise Barrier Walls. The project included construction of a new bridge to carry "local" Rolling Road over the Parkway to connect multiple residential communities, as well as signing, lighting, landscaping, and stormwater management improvements. Project was completed on-time and within budget.	\$21.9M	D-B	7/2013	✓
 <p>Route 7/659 Interchange</p>	Construction of a grade separated interchange at the intersection of Route 7 and Belmont Ridge Road and the widening of Belmont Ridge Road from a two-lane roadway to a four-lane median divided roadway with associated facilities between Route 7 and Gloucester Parkway. Project scope included bicycle and pedestrian facilities on Route 659, a noise barrier along Route 659 just north of Gloucester Parkway, relocation of a 36" water main, a 26" gas transmission main, and overhead power and communication facilities. Project was completed on-time and within budget.	\$45.5M	D-B-B	3/2019	✓
 <p>I-66 Widening</p>	Widening of approximately 2.5-miles of I-66 in Gainesville, Virginia in each direction, replacement of two secondary overpass bridges, extensive maintenance of traffic operations for over 100,000 VPD, construction of 250,000 SF of noise barrier wall, construction/integration of an extensive Intelligent Transportation System consisting of cameras, detectors, digital message signs all running off a new fiber communication network, roadway lighting, utility relocation/installation, and traffic detours. Project was completed on-time and within budget.	\$56M	D-B	8/2016	✓

Section 1 - Qualifications and Experience

Project	Description	Contract Amount	Delivery Method	Comp. Date	Designed by Dewberry
 Minnieville Road	Widening and reconstruction of Minnieville Road from Route 234 to Spriggs Road, a distance of 10,900 feet. The new roadway section includes a 4-lane median divided roadway with a raised 16-foot median, a 5' sidewalk on the south side of the road, and a 10' shared use path on the north side. Project scope includes construction of a concrete arch crossing Powell Creek, a FEMA designated floodplain. The project Team was required to coordinate with multiple utility companies on the relocation of their facilities to include, power, telephone, communications, gas, and cable television providers. Project was completed on-time and within budget.	\$28.8M	D-B-B	12/2018	


(c) Provide the names, prior experience, addresses, telephone numbers and e-mail addresses of persons within the firm or consortium of firms who will be directly involved in the project or who may be contacted for further information.

Key Personnel

Shirley has selected a highly qualified team of professionals to deliver the Project. Comprised of development, design, and construction professionals, this Team has expertise with public-private partnerships and design-build transportation projects, and all proposed key personnel have worked together on past PPTA and design-build projects. This collaborative experience will be integral in ensuring that the development, design and construction process is not only interactive between the surrounding community and other stakeholders, but also results in a much-needed infrastructure improvement to PWC and its residents.

Resumes for key personnel assigned to the Project including their experience with projects of comparable size and complexity follow in the Appendix. Table 4 provides a brief synopsis of each Key Personnel's roles and relevant experience as well as a list of relevant projects worked on.

Table 4 - Key Personnel

Name	Role	Relevant Projects
 Joseph Fragale, PE, DBIA Design-Build Project Manager Shirley Contracting Company, LLC 45240 Business Court Dulles, VA 20166 703-537-2218 joe.fragale@shirleycontracting.com 13 Years Experience	Joe is the primary point-of-contact with the owner's of projects and is responsible for all aspects of the design-build team's responsibilities. In addition to being the primary point of contact after award of a Project, he has ultimate responsibility for Contract management, coordination, and integration of the various project disciplines, including design, construction, quality control, right-of-way, utilities, and safety. Joe serves as the primary support to client efforts to communicate with certain third-party stakeholders, and can take the lead in communicating and coordinating with these third parties if desired by the Client.	<ul style="list-style-type: none"> ▪ Warrenton Southern Interchange Design-Build ▪ Route 606 Bridge Replacement Over I-95 with 606 Improvements Design-Build ▪ Fairfax County Parkway Phase III Design-Build ▪ New Campus East- North Loop Road and Bridge ▪ New Campus East - South Loop and Bridge ▪ New Campus East - Central Motors Access Road ▪ Defense CEETA

Section 1 - Qualifications and Experience

Name	Role	Relevant Projects
 <p>Mike Gallaher Construction Manager Shirley Contracting Company, LLC</p> <p>8435 Backlick Road Lorton, VA 22079 703-550-8100 michael.gallaher@shirleycontracting.com</p> <p>10 Years Experience</p>	<p>As Construction Manager, Mike is responsible for managing manpower, equipment and materials, quality and budget control, and compliance with job specifications. He is also responsible for project scheduling, purchasing of major materials and subcontractors, writing subcontracts and purchase orders and managing cost control activities on the projects including: owner and subcontractor payment requisitions, daily shift costs for self-perform activities and monthly Job Status Reports. Responsibilities also include safety training and enforcement as well as equipment control and reporting.</p>	<ul style="list-style-type: none"> ▪ Minnieville Road Widening Project ▪ I-66 Widening Design-Build ▪ Rollins Ford Road Phase IV ▪ Fort Belvoir Main Post Infrastructure ▪ Willard Road Interchange Design-Build
 <p>Jeremy Beck, PE Design Manager Dewberry Engineers Inc.</p> <p>8401 Arlington Boulevard Fairfax, VA 22031 703-849-0168 Jbeck@dewberry.com</p> <p>17 Years Experience</p>	<p>Jeremy will manage the overall design and will serve as the point of contact for all design related activities. He will oversee the preparation and documentation of all design and permit related elements, manage subconsultants, monitor and adjust design related budgets and schedules, coordinate with other project managers, meet with the owners and other third parties, and will ensure compliance with project requirements.</p>	<ul style="list-style-type: none"> ▪ Warrenton Southern Interchange Design-Build ▪ Route 28 Corridor Transportation Improvement Program, Phase III Design-Build ▪ Route 606 Bridge Replacement Over I-95 with 606 Improvements Design-Build ▪ Dulles Corridor Metrorail - Silver Line Phase 2 Design-Build ▪ University Boulevard Extension Design-Build ▪ Dulles Greenway Route 606 Design-Build ▪ Route 7/Rivercreek Parkway Interchange Design-Build ▪ Harbor Station Parkway ▪ Pacific Boulevard Design-Build ▪ Route 606 Interchange ▪ I-66 Widening Design-Build ▪ Route 28/Willard Road Interchange Design-Build ▪ Mt. Weather
 <p>Seyd Khan, PE, PMP, CCM, DBIA Quality Assurance Manager CES Consulting</p> <p>23475 Rock Haven Way, Suite 255 Dulles, VA 20166 571-933-8476 SKhan@ces-consultingllc.com</p> <p>37 Years Experience</p>	<p>As the Quality Assurance Manager, Mr. Khan will have the overall responsibility for the development and adherence to the Design-Build QA/QC Plan. He will be responsible for certification of the project and compliance to the contract requirements. He is thoroughly familiar with VDOT's Design-Build QA/QC requirements and Road and Bridge Specifications and Standards.</p>	<ul style="list-style-type: none"> ▪ I-66 Spot Widening Inside the Beltway ▪ I-66 Spot 2 Improvements ▪ I-95 HOV Widening ▪ I-395 Reconstruction ▪ Yas Island Development

Section 1 - Qualifications and Experience

(d) Provide a current or most recently audited financial statement of the firm or firms and each partner with an equity interest of twenty percent (20%) or greater.

Financial Statements

Shirley Contracting Company, LLC as the Offeror, is providing their most recently audited financial statements in a separately sealed envelope. As a privately held firm, Shirley considers this information to be proprietary and confidential and requests that Prince William County maintain the confidentiality of this information.

(e) Identify any persons known to the proposer who would be obligated to disqualify themselves from participation in any transaction arising from or in connection to the project pursuant to the Virginia State and Local Government Conflict of Interests Act, §2.2-3100 et seq. of the Code of Virginia.

No members of the Shirley Design-Build Team has a conflict in accordance with the stated law.

(f) Identify the proposed plan for obtaining a sufficient number of qualified workers in all trades or crafts required for the project.

Shirley Contracting Company, LLC is committed to providing the skilled labor forces required for construction of the Route 234-Brentsville Road Interchange Project. As one of Virginia's largest contractors, we have a dedicated team of over 500 locally-based skilled craftsmen and women who will be available when the Project construction begins. In addition to our ability to self-perform a significant portion of the Project, we plan to utilize our deep pool of subcontractors to supplement our workforce. Our relationship with local subcontractors goes back years and we are confident that the Project will be of significant interest to the subcontracting community to supplement our Team in making the Project a success.

(g) For each firm or major subcontractor that will perform construction and/or design activities, provide a sworn certification by an authorized representative of the firm attesting to the fact that the firm is not currently debarred or suspended by any federal, state, or local governmental entity.

Shirley Contracting Company, LLC has not been debarred and is not currently debarred or suspended by any federal, state or local government entity.

By: 
Garry A. Palleschi, Vice President

Dewberry Engineers Inc. has not been debarred and is not currently debarred or suspended by any federal, state or local government entity.

By: 
David Mahoney, Executive Vice President

2 - Project Characteristics



Section 2 - Project Characteristics

Prince William County (PWC) has accepted an unsolicited proposal containing a conceptual plan to design and construct improvements at the existing intersections of Prince William Parkway (Route 234) with Dumfries Road (Route 234 Business) and with Prince William Parkway (Route 294)/Brentsville Road (Route 649). For the purposes of this Proposal, this location is referred to as the Project Area and is shown in Figure 2.A.

Our Team explored the existing conditions and relevant constraints within the Project Area and reviewed the Strategically Targeted and Affordable Roadway Solution (STARS) Concept, the unsolicited proposal, as well as the signed Standard Project Agreement (SPA) 2018-034-1 between the Northern Virginia Transportation Authority (NVTA) and PWC. Our Team is offering to provide the design and construction of the STARS Concept or to deliver an Alternative Technical Concept (ATC) which is superior to the STARS Concept. Our ATC, along with its significant benefits, is detailed within Section 3 - Project Financing. Our ATC honors the requirements of SPA 2018-034-1, and provides an innovative transportation solution for the Project Area to reduce congestion and address traffic and safety issues.

Figure 2.A - Project Area



(a) Provide a description of the project, including the conceptual design. Describe the proposed project in sufficient detail so that type and intent of the project, the location, and the communities that may be affected are clearly identified.

The Virginia Department of Transportation's (VDOT's) Strategically Targeted and Affordable Roadway Solution (STARS) Program Concept, presented in Exhibit 2.1., and included at the end of this section, provides partial grade-separation along Route 234, retains a three-phase signalized intersection on Route 234 at Business Route 234/Relocated Route 649, and removes the existing traffic signal on Route 234 at Route 294/Route 649. Brentsville Road left turning movements are displaced to adjacent intersections and a four-legged signalized intersection on Business Route 234 at Bradley Cemetery Way is provided. A Continuous Green-T signalized intersection is provided on Route 294 at Bradley Cemetery Way, which provides free-flow movement for vehicles traveling from Route 234 towards Liberia Avenue. Pedestrian connectivity between the existing Shared-Use Path (SUP) south of Route 234 and east of Route 294 is provided via a new SUP. Roadway Functional Criteria for the STARS Concept is provided in Table 5 on the following page.

With regard to the Project Area, as identified within PWC's Mapper, Dumfries Road (Route 234 Business and Route 234 east of Route 294) is located within a Highway Corridor Overlay District. The Project Area falls within the Manassas Regional Airport Safety Overlay District and the region south of Route 234 is located within the Rural Crescent. The Project Area is zoned Community Employment Center (CEC), Suburban Area, which is compatible with community employment centers, office space, and urban residential. The PWC Fairgrounds, various residential neighborhoods, public schools, numerous public and private businesses, and recreational facilities surround the Project Area, mostly north and west (within the City of Manassas limits).

Section 2 - Project Characteristics

Table 5 Roadway Functional Criteria

Criteria	Prince William Parkway / Dumfries Road (Route 234)	Prince William Parkway (Route 294)	Dumfries Road (Business Route 234)	Brentsville Road (Route 649)	Bradley Cemetery Way	Interchange Ramps
PWC Standard	PA-2	Functions as PA, but Represents MA	PA-3	N/A	N/A	N/A
PWC Designation	PA-10 (West of Route 294) PA-2a (East of Route 294)	MA-22	MA-1	N/A	N/A	N/A
VDOT Functional Classification	Freeway (West of Route 294) Other Principal Arterial (East of Route 294)	Other Principal Arterial	Minor Arterial	Major Collector	Local Street	Interchange Ramp
VDOT Geometric Standard	GS-5	GS-5	GS-6	GS-7	GS-8	GS-R
Posted Speed (mph)	55	50	45	40	25	N/A
Design Speed (mph)	60	55	45	40	25	25-50

Drainage and Stormwater Management

The Project Area is located within the Occoquan River Watershed Boundary and contains very few existing closed drainage systems. New roadways associated with the STARS Concept provide a mixture of open and closed sections. A Resource Protection Area (RPA) is present near the western limits of the STARS Concept which is encroached upon by the improvements.

Because of current regulations and timing of the Project, water quantity/adequate outfall must utilize the Virginia Stormwater Management Part IIB Technical Criteria (Runoff Reduction Methodology); 9VAC25-870-65 which requires that all post-construction out-flows are below the pre-construction out-flows. Our Team utilizes runoff reduction methods with detention of post-construction out-flows to meet the water quantity needs.

Several existing stormwater management (SWM) facilities are located within and/or adjacent to the Project Area. With the STARS Concept configuration, avoiding impacts to these SWM facilities, while implementing the Runoff Reduction Methodology utilizing Department of Environmental Quality (DEQ) Clearing-House BMP's, requires a unique approach. Our strategy, shown in Figure 2.B., is to provide 75% of the required treatment through a combination of existing and proposed SWM facilities and the remaining 25% through the purchase of nutrient credits.

Utilities

The STARS Concept is expected to have minimal utility impacts to existing utilities. Exhibit 3-2a provided at the end of Section 3 - Project Financing highlights the expected impacts.

Environmental Features

Our Team routinely investigates and acknowledges environmental constraints within project sites and works to provide important benefits by avoiding and minimizing disturbances to environmentally sensitive areas. A summary of the processes our Team has already completed for this Project, along with the resulting benefits to the natural environmental, are discussed below.

Threatened and Endangered Species

To prepare for the Project, we reviewed the U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) database as well as the VDI guidance for the protection of wildlife resources. A focus is on times of the year during

Section 2 - Project Characteristics

which certain species may be most sensitive to human activities such as land clearing and construction which may result in a Time of Year Restriction (ToYR).

Our review indicates that the Project Area is not located within 150 feet of known federally threatened Northern Long Eared Bat (NLEB) (*Myotis septentrionalis*) maternity roost trees or within 0.25 miles of hibernacula. Therefore, a ToYR is not anticipated for tree clearing activities during NLEB pup season (June 1 – July 31). Furthermore, we work to minimize all clearing as a practical matter.

Our review also indicates that appropriate habitat for the federally endangered, *Harperella* (*Ptilimnium nodosum*) is not found within the Project Area. However, habitat assessments are conducted during final design to confirm. Additionally, there are no known or documented Bald Eagle nests with 3.0 miles of the Project Area nor does it fall within a Bald Eagle Concentration Area. Therefore, no Bald Eagle restrictions are anticipated.

Wetlands and Waters of the U.S.

A review of the USFWS National Wetlands Inventory (NWI) determined which preliminary jurisdictional boundaries to identify and avoid potential impacts at this early stage. Significant portions of the northwest quadrant contain existing wetland areas and it is anticipated that the work impacts these wetlands to a certain degree; however, our Team has already worked to minimize these impacts. Further identification as well as avoidance and impact minimization efforts will continue during final design.

Our Team conducts Wetland and Waters of the U.S. Delineation, in accordance with the regulations and requirements set forth by the U. S. Army Corps of Engineers (USACE), during the initial design stages. Delineated jurisdictional areas are then surveyed to provide accurate jurisdictional boundaries, which allows for proper avoidance and minimization efforts during the design and permitting processes. The results of our efforts is minimal Wetland and Waters of the U.S. impacts. Based on our research and field visits, the Project Area also contains portions of the Bradley Complex, considered a primary constraint due to its eligibility for listing on the National Register of Historic Places (NRHP). However, this resource is not anticipated to be impacted by the work.

Cultural and Historic Resources

Several other existing cultural and historic resources are located within the Project Area which are expected to remain in place – providing value to the community. The eastern and northern quadrants of the existing Route 234 with Route 294 intersection are encumbered by the Limstrong Historic District which contains various historic resources including dwellings, a destroyed barn, a destroyed farmstead, as well as a 21-grave cemetery and a 34-grave cemetery. Moreover, it appears a local community fence and trail enhancement near the 21-grave cemetery has been completed.

Figure 2.B. Observed Cemetery

Two resources located in the northeast quadrant (a 21-grave cemetery and a destroyed farmstead) have been deemed not eligible. During our field review, we noted that the current public mapping and not eligible finding of the 21-grave cemetery appears inaccurate and incomplete. Exhibit 2-1 and Figure 2.B. depict the publicly mapped as well as the observed cemetery locations. Figure 2 .B. shows part of the actual site, which in our opinion appears to be eligible. However, the 21-grave cemetery lies outside of the potential construction area and, therefore, is not anticipated to be impacted.



A field review of the 34-grave cemetery (publicly identified as unevaluated), which currently spans existing Route 234,

determined that this resource appears to be no longer present and, therefore, is not likely to be impacted. Additionally, the Clark and Jones Cemetery, noted in the VDHR data review, may have been moved by VDOT to Linton Hall Cemetery. This will be confirmed during final design.

Unevaluated sites that have not been previously surveyed will likely require Phase I Cultural Resource Survey and subsequent Phase II survey, if warranted. If a site is present our Team first works to avoid the impact and if that is not

Section 2 - Project Characteristics

possible, we relocate or otherwise mitigate the impact to the resource. Given the number of former residential structures within the Project Area, it is anticipated that County Health Department record research and potential field locating are required to assess whether wells or septic associated with those structures exist and/or were properly abandoned.

Hazardous Materials

According to VDEQ, there are six (6) known Pollution Complaints (PC's) for petroleum releases on properties adjacent to and within the Project Area, which have all been closed. The work is not expected to impact these PC's, thus, Phase I Environmental Site Assessments are not anticipated to be necessary.

Right-of-Way

The majority of the right-of-way needed to construct the STARS Concept is already owned by the Commonwealth of Virginia or PWC, with the exception of approximately 0.99 acres of fee simple right-of-way within GPIN 7794-76-1613 to accommodate the western leg of the signalized intersection on Business Route 234 at Bradley Cemetery Way. The STARS Concepts may also require minor temporary construction and/or permanent drainage and utility easements elsewhere within the Project Area. Exhibit 3-1 included in Section 3 - Project Financing provides our estimate of the costs to acquire right-of-way for the Project.

Impacts to adjacent property will be minimized by our Team during final design by adjusting project elements (where feasible). The existing right-of-way as well as the area of right-of-way necessary to construct the STARS Concept is depicted in Exhibit 2-1.

Limited Access and Interchange Justification Report

We anticipate that Limited Access (L/A) will be established upon completion of the interchange. Moreover, VDOT's IIM-LD-200.9 requires that all applicants requesting new interchanges on both interstate and non-interstate roadways complete an Interchange Justification Report (IJR). The IJR addresses the 8 Policy Point Requirements as shown in the Federal Highway Administration (FHWA) Interstate System Access Information Guide and are reviewed and approved by VDOT. FHWA approval is not required on non-interstate projects, thus we believe a limited IJR document commonly referred to as "IJR Light" is required.

While significant portions of right-of-way are available to implement the STARS Concept, it is believed that Limited Access has not been established for the Project Area. At all interchanges limited access lines are to encompass the entire periphery of the interchange - extending beyond the ramp terminals meeting Access Management Standards. Moreover, VDOT's IIM-LD-200.9 requires that all applicants requesting new interchanges on both interstate and non-interstate roadways complete an Interchange Justification Report (IJR).

(b) Identify and fully describe any work to be performed by the County or any other public entity.

The Project requires engagement from PWC, VDOT, as well as several state and federal agencies on various aspects of the work as summarized below:

- **Contract Administration and Oversight:** As the Owner, PWC will have primary responsibility for contract administration and oversight of the work. This will include meeting attendance, review of submittals and change orders (if any), and processing the monthly request for payment. In addition, PWC will act as the liaison with the NVTAs Program Coordinator.
- **Plan Review and Approval:** We expect PWC and VDOT to have plan review and approval responsibilities for all aspects of the work.
- **Project Acceptance:** As the interchange will be accepted by VDOT into their system upon completion, VDOT will have responsibility for final inspections.
- **Right-of-Way:** Our Team will perform all acquisition services to acquire any right-of-way and/or easements necessary. PWC will review and approve appraisals, offers and settlements, as well as make payments to landowners. We also expect that the Project will utilize eminent domain rights.
- **Virginia Stormwater Management Program (VSMP) Permit:** To ensure the timely start of construction, our

Section 2 - Project Characteristics

Team requests that PWC Environmental Services (Watershed) review Erosion and Sediment Control (ESC) Plans, Stormwater Pollution Prevention Plan (SWPPP), and Stormwater Management elements at the Right-of-Way, Final, and Released for Construction (RFC) development stages of the Roadway Plans so that necessary permits that control stormwater discharges are issued by PWC just after RFC approval of the roadway plans.

- Environmental Permitting:** Based on the Standard Project Agreement (SPA) 2018-034-1 between the NVTa and PWC, the use of Federal and/or State funds are not anticipated to be utilized. Therefore, a National Environmental Policy Act (NEPA) document or supplemental requirements are not required, minimizing the efforts needed from public agencies. However, since the improvements are turned over to VDOT once accepted, the State Environmental Review Process (SERP) is conducted, which results in the completion of a Preliminary Environmental Inventory (PEI). The PEI requires input and approval from VDOT as well as various federal agencies.

(c) Include a list of all federal, state and local permits and approvals required for the Project and a schedule for obtaining such permits and approvals.

The Project Schedule relies heavily on obtaining the appropriate federal, state, and county clearances, approvals, and permits in a timely manner. These considerations are thoroughly considered and integrated by our Team during the various phases of work. This approach ensures compliance with requirements while incorporating construction methodologies into planning and design - minimizing the potential for delay.

In our experience, the permits necessary for this Project, along with an anticipated timeframe for obtaining them, are identified in Table 6.

Table 6 Necessary Permits and Anticipated Timeframes to Acquire

Permit	Agency	Reason/Requirement	Anticipated Timeframe to Acquire
Prince William County			
VPDES/VSMP	PWC Environmental Services (Watershed)	Construction General Permit for Land Disturbing Activities (Stormwater Discharges)	5-10 Days after Roadway Plan Approval
Airport Conical Surface	Zoning Administrator, Manassas Regional Airport Board	Determination of Potential Obstruction Penetration (Conical Surface) Associated with the Proposed Construction	3-5 Months from Roadway Right-of-Way Submission
Commonwealth of Virginia			
VDOT Access Permit	VDOT	Access Public Right-of-Way for Investigations	5-10 Days from Permit Submission
N/A	VDHR	Section 106 Coordination	60-90 Days from Right-of-Entry
N/A	VDCR	Section 7 Coordination	60-90 Days from Right-of-Entry
N/A	VDGIF	Section 7 Coordination	60-90 Days from Right-of-Entry
VWP General Permit	VDEQ	Virginia Water Protection	3-5 Months from Roadway Right-of-Way Submission
N/A	VMRC	Confirm No Drainage Area for Stream Crossings Greater than 5 Square Miles	N/A
Airport Conical Surface	VDA, VDOT	Determination of Potential Obstruction Penetration (Conical Surface) Associated with the Proposed Construction	3-5 Months from Roadway Right-of-Way Submission

Section 2 - Project Characteristics

Permit	Agency	Reason/Requirement	Anticipated Timeframe to Acquire
VDOT Construction Permit	VDOT	Access Public Right-of-Way for Construction	5-10 Days after Plan Approval
Federal Agencies			
SPGP	USACE	Water Protection	3-5 Months from Roadway Right-of-Way Submission
N/A	USFWS	Section 7 Coordination	60-90 Days from Right-of-Entry
N/A	USEPA	Completed via Inter-agency Coordination	N/A
Airport Conical Surface	FAA	Determination of Potential Obstruction Penetration (Conical Surface) Associated with the Proposed Construction	3-5 Months from Roadway Right-of-Way Submission

(d) Identify any anticipated adverse social, economic, environmental and transportation impacts of the project measured against the County's comprehensive plan, and applicable County ordinances, design and construction standards, and policies. Specify the strategies or actions to mitigate known impacts of the project.

Our Team minimizes adverse impacts resulting from design and construction activities as a general practice. We accomplish this by thoroughly understanding the Project, working to address potential problems before they become issues, and following the applicable requirements that govern the work. Discussed below are the anticipated adverse social, economic, environmental, and transportation impacts associated with the STARS Concept.

Adverse Social Impacts

Adverse social impacts resulting from implementing the STARS Concept are anticipated to be minimal. While fee simple right-of-way is needed, residential and/or commercial relocations are not necessary, only minor temporary construction and/or permanent drainage and utility easements are anticipated, and impacts to the traveling public are expected to be minor.

Adverse Economic Impacts

No adverse economic impacts are anticipated.

Adverse Environmental Impacts

Adverse environmental impacts resulting from the improvement are anticipated to be minimal at this stage of the procurement and are limited to wetlands. As demonstrated within the STARS Concept, presented in Exhibit 2.1, our Team proactively conducts environmental screening and database reviews to assess and address potential issues during procurement. While many studies are required to determine the degree of environmental impacts, our assessment of the STARS Concept is that many sensitive historic, archaeological, and wetland areas are avoided.

During final design, adjustments are made whenever possible to further avoid and minimize impacts to environmentally sensitive areas. Elements that cannot be avoided are identified as early as possible, coordinated with the appropriate agency, and mitigated according to the applicable requirements.

Adverse Transportation Impacts

No adverse transportation impacts are anticipated from implementing the STARS Concept, other than typical traffic impacts resulting from construction. During design, our Team works to minimize traffic impacts during construction by devising temporary traffic control phasing that makes sense for the Project Area and that is in accordance with the applicable criteria

Section 2 - Project Characteristics

– always keeping the safety of the public and construction workers as top priority.

(e) Identify the projected positive social, economic, environmental and transportation impacts of the project measured against the County's comprehensive land use plan and applicable County ordinances, design and construction standards, and policies.

Implementing the STARS Concept positively effects social, economic, environmental, and transportation elements within and adjacent to the Project Area. These benefits are realized by adhering to the goals, policies, and action strategies presented within Prince William County's Comprehensive Plan when executing design and construction.

The STARS Concept provides mobility and safety improvements to the traveling public and supports increased development and traffic within the region. Local citizens, commuters, as well as business and government agencies will be provided with an improved roadway and pedestrian network helping to reduce congestion and improve safety and quality of life. A detailed description of the benefits and compatibility associated with the STARS Concept is presented in Section 4.

(f) Identify the proposed schedule for the work on the project, including sufficient time for the County's review , any State department or agency review, and the estimated time for completion.

Our proposed schedule for the work, including review times by PWC, VDOT and other agencies is provided in Section 3 - Project Financing as Exhibit 3-4.

(g) Propose allocation of risk and liability, and assurances for timely completion of the project.

The liability for the design and construction of the Project is the responsibility of Shirley. Design will meet or exceed applicable, current PWC and VDOT guidelines, will be conducted under the supervision of a Professional Engineer licensed in the Commonwealth of Virginia, and will be submitted to the PWC and VDOT for review and approval.

Subcontractors will bond their work and construction administration and inspection will be provided by our Team, with PWC in an oversight role. We assume PWC will provide their own construction quality assurance in addition to what is provided by our Team.

Shirley will provide assurances of timely completion of the Project to PWC in the form of performance and payment bonds for 100% of the value of the contract. In addition, as part of the ultimate contract, a provision for liquidated damages will be included.

(h) Clearly state all assumptions related to ownership, legal liability, law enforcement, and operation of the project, and the existence of any restrictions on the County's use of the project.

Ownership

Upon completion, the Project will be accepted by VDOT into their system for maintenance.

Legal Liability

During construction, Shirley Contracting Company, LLC assumes legal liability for the work in accordance with our Contract with PWC. Upon acceptance by VDOT, they assume legal liability.

Law Enforcement

PWC Police and Virginia State Police will be responsible for law enforcement at all times.

Operation and Restrictions

During construction, for portions of the work not opened to traffic, Shirley will be responsible for maintaining the work. Once opened to traffic, VDOT assumes responsibility, while Shirley remains responsible for operations and maintenance of remaining areas. Upon acceptance by VDOT, all responsibility for operations and maintenance is transferred to VDOT. There will be no restrictions on PWC's use of the Project.

Section 2 - Project Characteristics

(i) Provide information relative to any phased opening(s) of the proposed project.

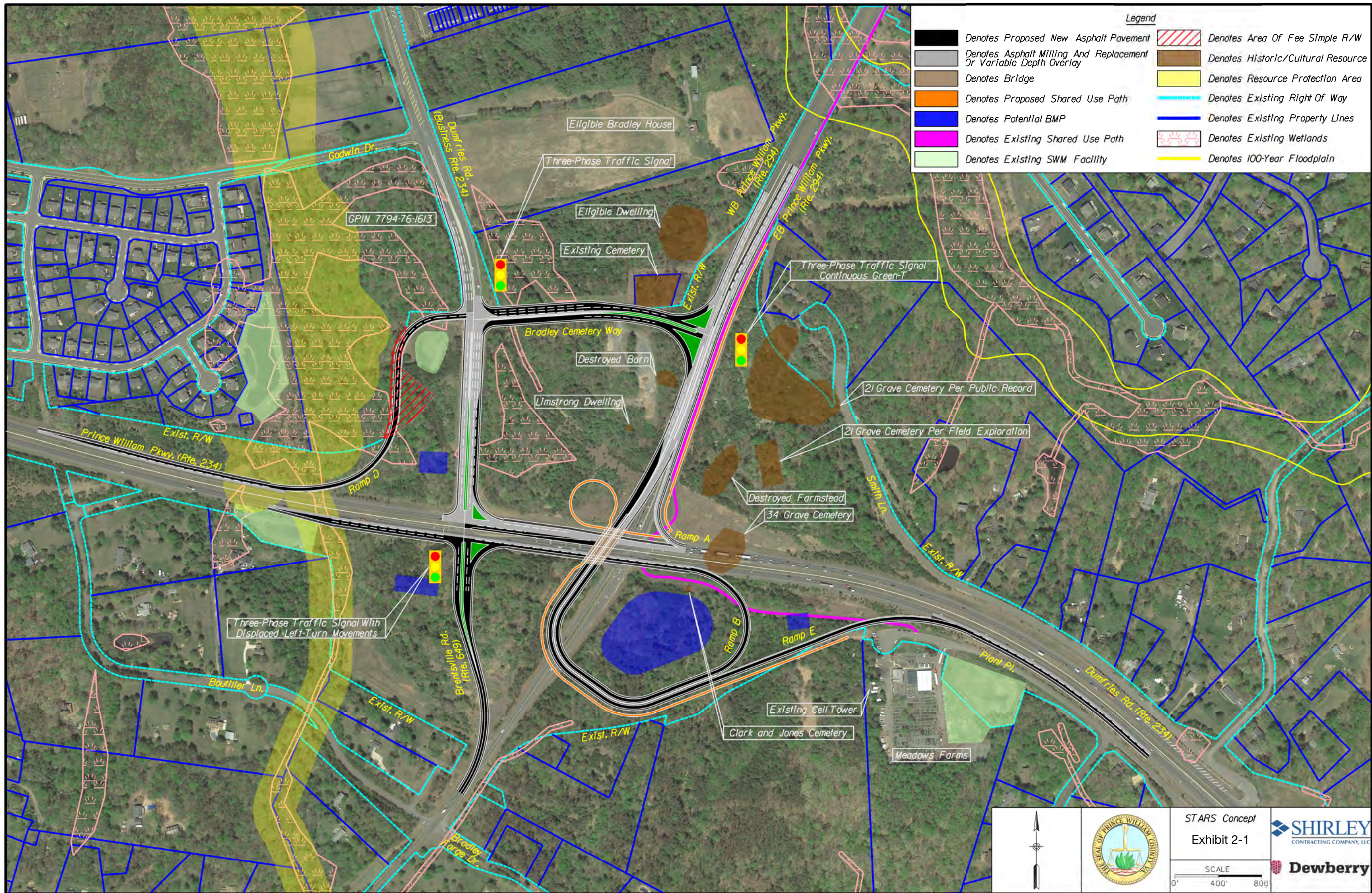
No phased openings are anticipated at this time.

(j) List any other assumption(s) relied on for the project to be successful.

The Shirley led team will be responsible for all design and construction of the Project which will be in accordance with all PWC and VDOT specifications and standards. Our Team will be responsible for permitting, right-of-way acquisition, utility relocations, quality assurance and quality control that are typical to a design-build project format.

(k) List any contingency(ies) that must occur for the project to be successful.

Our Team will carry adequate contingencies for design and construction to ensure that the Project is completed successfully. Contingencies for PWC are described in Section 3 - Project Financing.



STARS Concept
Exhibit 2-1

SCALE
0' 400' 800'

SHIRLEY
CONTRACTING COMPANY, LLC

Dewberry

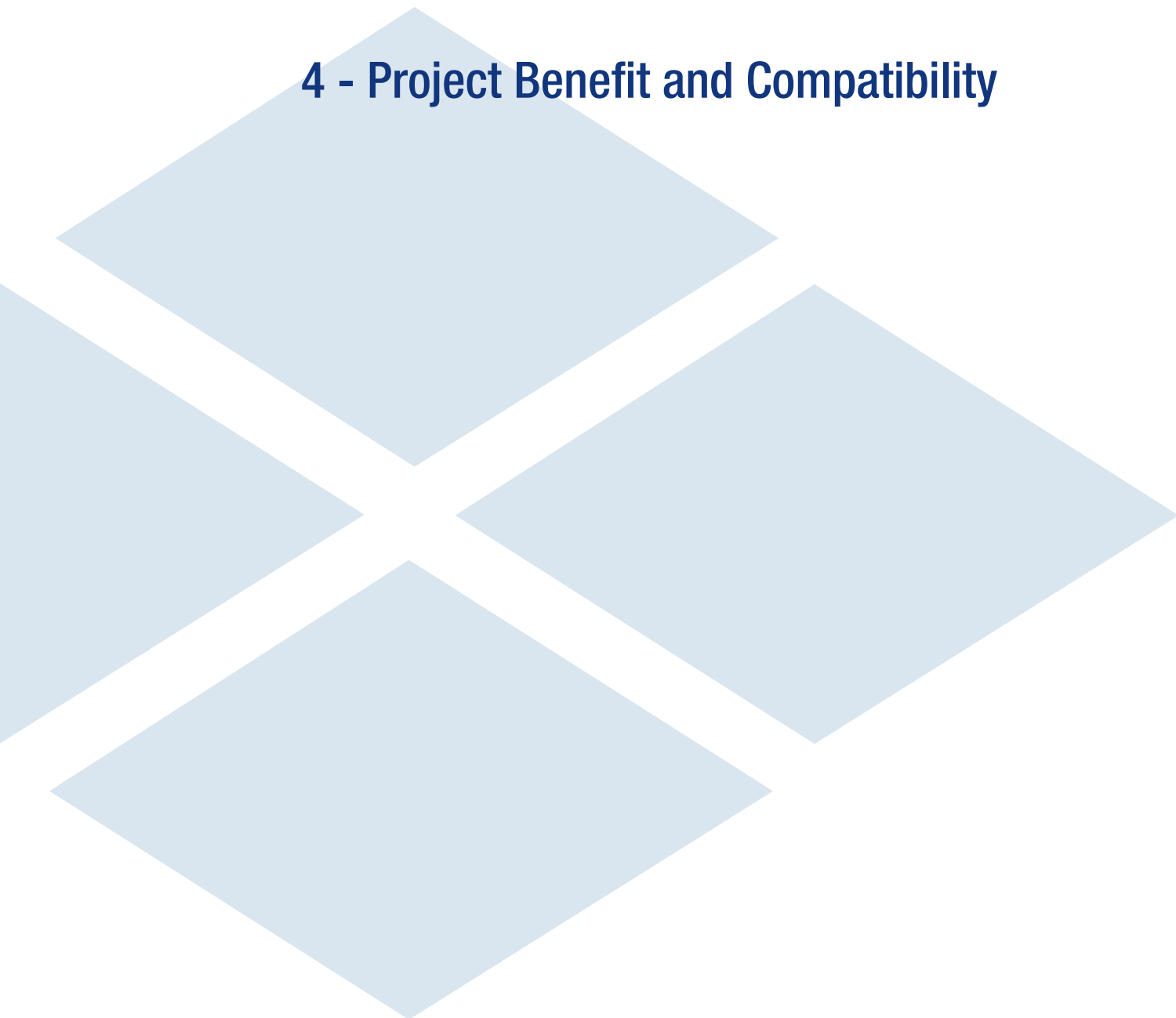
3 - Project Financing



Section 3 - Project Financing

The information contained in this Section 3 - Project Financing is proprietary and confidential. Pages 20-33 are excluded from this copy.

4 - Project Benefit and Compatibility





Section 4 - Project Benefit and Compatibility

(a) Identify who will benefit from the project, how they will benefit, and how the project will benefit the County and the overall community. Describe any anticipated significant benefits to the community and the County, including anticipated benefits to the economic, social, environmental, transportation, etc., condition of the County and whether the project is critical to attracting or maintaining competitive industries and businesses to the County.

The Strategically Targeted Affordable Roadway Solution (STARS) Concept benefits the local and regional commuters, businesses, and residential areas. It also aligns with the economic development, transportation, and public safety components of the Strategic Plan and is consistent with PWC's Comprehensive Plan. The STARS Concept provides traffic enhancements to the local community and minimizes impacts to the natural environment, helping to enhance quality of life. We believe these benefits of the Project are critical to attracting and maintaining competitive industries and businesses within PWC.

(b) Identify any anticipated public support or opposition, as well as any anticipated federal, state, and/or local government support or opposition (including that in any affected jurisdiction), for the project.

Public Support or Opposition

It is anticipated that the citizens of PWC will support the STARS Concept as it provides traffic congestion relief, safety improvements, and pedestrian connectivity without tax and/or bond implications. Most of the right-of-way needed to construct the STARS Concept is already owned by the Commonwealth of Virginia and PWC and minimal impacts to adjacent property owners are anticipated. Construction disturbances are anticipated to be nominal and pedestrian facilities are provided helping to achieve local community support.

Federal, State, and County Support or Opposition

The improvement for the Project Area is included in Northern Virginia's updated long-range transportation plan (TransAction) which guides decisions and investments for transportation projects. The Northern Virginia Transportation Authority (NVTA) adopted the inaugural FY2018-2023 Six Year Program and eventually signed a Standard Project Agreement (SPA) with PWC for the improvement - intending to reduce congestion, improve quality of life, and deliver a sound transportation upgrade for the Project Area.

In accordance with the PWC Comprehensive Plan, the STARS Concept assists PWC in its goal of providing necessary roadway infrastructure to satisfy future traffic demands and to provide facilities which allow for the safe and efficient movement of goods and people throughout the County and into surrounding jurisdictions. When complete, the STARS Concept helps to connect the eastern end of PWC to the western end, providing access to both I-66 and I-95.

The intersection was reviewed under the Virginia Department of Transportation (VDOT) Strategically Targeted Affordable Roadway Solution (STARS) Program. Moreover, VDOT invested \$400,000 in studying the Prince William Parkway corridor for potential improvements to major intersections. Our Team will develop the design in accordance with VDOT's previous work as well as all applicable requirements. Therefore, while our Team fully expects to navigate the normal review and approval process, VDOT support for the STARS Concept is anticipated.

(c) Explain the strategy and plans, including the anticipated timeline that will be carried out to involve and inform the general public, business community, and governmental agencies in areas affected by the project.

Our Team understands that participation of citizens, the business community, and government agencies is an integral part of a transportation improvement. Public processes help to ensure decisions are made in consideration of and to the benefit of public needs and preferences. Public participation provides the best value when opportunities for two-way communication are made open and often.

Because of the funding source (NVTA), typical VDOT and NEPA public processes are not required to deliver the improvements. However, our Team knows that early and continuous public involvement allows diverse viewpoints to enter the decision making process, builds mutual trust between the agencies and the public they serve, and allows for the review of Project Documents such that optimal enhancements are provided.

Section 4 - Project Benefit and Compatibility

To ensure open and timely public interaction, our Team is committing to inform the adjacent land owners and the community at-large of the Project by holding a Public Information Meeting early in the design process. Information regarding the scope, conceptual layout, potential impacts, and timing of the improvement will be shared, input from the community will be gathered, and appropriate modifications will be considered in coordination with PWC and VDOT. As the design develops, our Team will continue to coordinate with the public through PWC. Prior to construction, we will hold Public Information Meetings as needed to inform citizens of the upcoming construction activities and major traffic switches.

As discussed in Section 2, Part (b), the Project requires engagement from and interaction with PWC, VDOT, as well as several state and federal agencies. Our Team continuously works with these agencies to ensure they remain informed at all times. As may become necessary throughout design and construction, we invite impacted land owners, businesses, and other third parties such as public and private utility owners to attend regular coordination meetings where specific items of concern are discussed and addressed. Our Team offers to act as an extension of PWC's staff, helping to address issues and constantly move the Project forward.

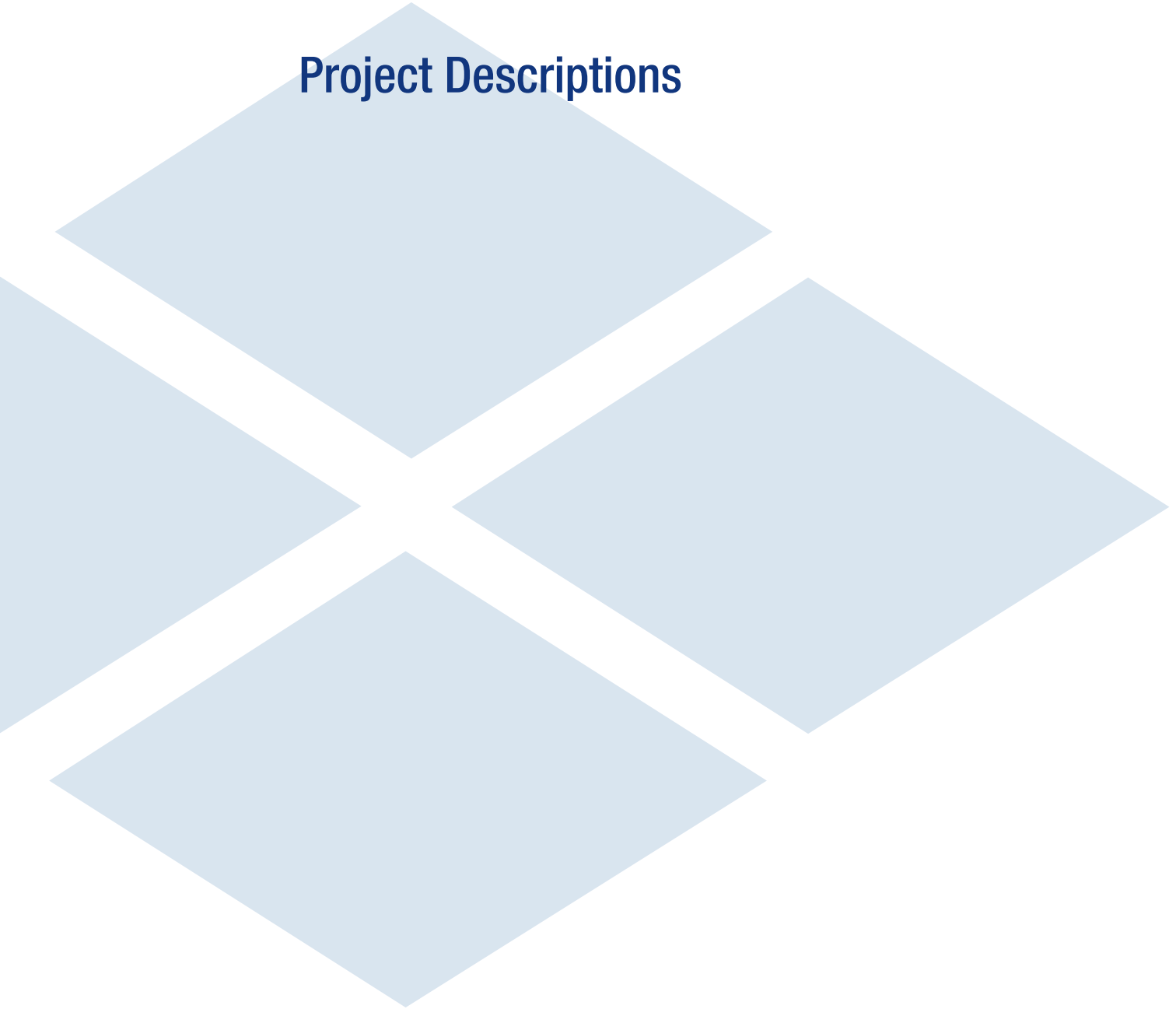
(d) Compatibility with the County's and/or affected jurisdiction's local comprehensive plan (including applicable environmental, land use, and facility standards ordinances), infrastructure development plans, transportation plans, the capital improvements plan, and capital budget or other government spending plan.

The improvements associated with STARS Concept are in accordance with the Transportation Chapter of the PWC Comprehensive Plan and are included in PWC's Comprehensive Improvement Program (Proposed FY2020 Budget). PWC utilized the STARS Concept to request and receive Northern Virginia Transportation Authority (NVTA) funds totaling \$54,900,000 to improve congestion and solve traffic and safety challenges. A signed Standard Project Agreement (SPA) 2018-034-1 between the NVTA and PWC is in place. The STARS Concept can be implemented within this budget.

Appendix

Appendix

Project Descriptions



ROUTE 50 WIDENING

CHANTILLY, VIRGINIA



CLIENT:

Virginia Department of Transportation (VDOT)

CONTRACT AMOUNT:

\$67.8 million

DELIVERY METHOD:

Design-Build

CONTRACTOR:

Shirley Contracting Company

DESIGNER:

Dewberry Consultants LLC

COMPLETION DATE:

November 2015

In March 2011, Shirley Contracting Company, LLC was awarded the Route 50 Widening Design-Build Project by the Virginia Department of Transportation. The \$67.8 million project included the widening of Route 50 from 4 to 6-lanes for 3.7 miles from Poland Road (Route 742) to Sulley Road (Route 28). The design-build team was responsible for acquisition of right-of-way; 68 parcels including one relocation; extensive coordination and relocation of facilities owned by 15 different utility companies; acquisition of environmental permits, improvements to eight signalized intersections, four new storm water management facilities; widening and reconstruction of the existing bridges over Cub Run; a new 10' wide shared use path on each side of Route 50; contractor administered quality assurance and quality control, coordination of public involvement; and coordination of waterline relocations with Fairfax Water Authority.

The Route 50 widening project required the management of several challenging issues. One of the largest issues was the coordination of utility relocations and right-of-way acquisition in a linear transportation corridor where the majority of the widening resulted in direct utility conflicts. The Design-Build Team overcame this challenge by closely coordinating the Transportation Management Plan with the right-of-way and utility relocation priorities to ensure that we provided adequate float to third party controlled utility relocations without compromising an aggressive schedule. A key element was creating a sequence that optimized the amount of ultimate roadway that could be constructed concurrent with the acquisition of right-of-way, permits, and the relocation of the utilities. The Team accomplished this by reversing VDOT's original sequence of construction and utilizing the median. Additionally, we constructed detours that allowed us to start reconstruction of the existing pavement within the existing right-of-way. This sequence allows the right-of-way acquisition and utility relocation phases of the project to run parallel with the early phases of construction and decrease the risk of utility delays that would ultimately impact the final completion date.

ROUTE 27/244 INTERCHANGE MODIFICATIONS

ARLINGTON, VIRGINIA



CLIENT:

Virginia Department of Transportation (VDOT)

CONTRACT AMOUNT:

\$31.4 million

DELIVERY METHOD:

Design-Build

CONTRACTOR:

Shirley Contracting Company

DESIGNER:

Dewberry Consultants LLC

COMPLETION DATE:

September 2015

In August 2011, the Shirley Contracting Company, LLC was awarded the Route 27/244 Interchange Modifications Design-Build Project (Project) by the Virginia Department of Transportation (VDOT). The \$31.4 million project replaced the existing Washington Boulevard concrete arch bridge over Columbia Pike in Arlington. The new bridge is wider, longer and includes significant aesthetic features including decorative parapets and abutment walls, memorial pylons at the bridge corners, and hunched girders with a two-tone paint scheme to mimic the arch structure of the old bridge. A light well separates the westbound and eastbound lanes.

A significant element of the project was the replacement of an existing 10' x 7.5' box culvert that conveys Long Branch through the center of the project and was integral with the substructure of the existing bridge. The Team developed a culvert and bridge design concept with a new double 10' x 10' culvert aligned through the new bridges while maintaining structural independence between the design elements. This alignment optimized the culvert length, eliminated the need to tunnel large diameter pipes under Washington Boulevard, and minimized the impacts to the Long Branch Flood Plan. This concept also modified the location of the culvert outfall to minimize erosion that has been a maintenance concern for VDOT and Arlington County for many years.

The Project scope included modifications to the interchange ramps to improve safety and address multi-modal transportation issues. The Team worked closely with VDOT to optimize the ramp alignment, while balancing the need to upgrade the existing interchange to current design standards and the need to minimize the right-of-way impacts outside of the current tight urban footprint. Through this effort, the Team was able to eliminate design exceptions and 21 of the 32 design waivers that VDOT's Request For Proposal indicated would be required.

ROLLINS FORD ROAD PHASE IV

PRINCE WILLIAM COUNTY, VIRGINIA



CLIENT:

Prince William County

CONTRACT AMOUNT:

\$15.3 million

DELIVERY METHOD:

Design-Bid-Build

CONTRACTOR

Shirley Contracting Company

COMPLETION DATE:

May 2014

Shirley Contracting Company, LLC was awarded a \$15.3 million contract for the Rollins Ford Road Phase IV Project by the Prince William County Board of Supervisors. The project included converting a 1-mile stretch of 2-lane roadway to a 4-lane median divided roadway, construction of twin 365' bridges spanning Broad Run Church Road. In addition, the Shirley Team constructed a new .45 mile section of northbound Rollins Ford Road between Yellow Hammer Drive and Estate Manor Drive, and a reconstruction and widening of Vint Hill Road. The construction of the twin bridges provides local residents with a new way to travel from Linton Hall Road to Vint Hill Road. All work on the project was constructed in accordance with VDOT standards.

In addition to the scope of work described above, additional project elements included clearing and grubbing, erosion and sediment control devices, grading, excavation, installation of storm sewer and drainage structures, construction of a cast-in-place box culvert, stormwater management facilities, curb and gutter, installation of aggregate base material, asphalt paving, pedestrian facilities including sidewalk and shared use path, traffic signage, pavement marking, waterline relocation, and maintenance of traffic during construction. The project was completed on schedule.

UNIVERSITY BOULEVARD EXTENSION

PRINCE WILLIAM COUNTY, VIRGINIA



CLIENT:

Prince William County

CONTRACT AMOUNT:

\$32 million

DELIVERY METHOD:

Design-Build

CONTRACTOR:

Shirley Contracting Company

DESIGNER:

Dewberry Consultants LLC

COMPLETION DATE:

December 2013

As Prince William County’s PPTA Design-Build Team, Shirley provided comprehensive preliminary planning as well as final engineering design and coordination services for University Boulevard (new, urban four-lane divided roadway) and Hornbaker Road (two to four lane roadway improvement) as well as numerous connecting roadways. The work consisted of all-inclusive roadway and structural design, utility relocation coordination and design, hydraulic and hydrologic as well as floodplain and stormwater management studies, comprehensive environmental investigations and permitting, permit monitoring, right-of-way acquisition as well as construction inspection services.

The improvements to extend University Boulevard and widen Hornbaker Road provided numerous benefits to Prince William County, VDOT and the Commonwealth of Virginia. Local and regional citizens, businesses and government agencies were provided with an enhanced roadway and pedestrian network in and around Innovation Center’s Regional Employment Center as well as the surrounding industrial, flexible employment and residential land uses.

The constructed improvements will reduce congestion and improve safety on adjacent roadways such as Route 234 Bypass, Sudley Manor Drive, Linton Hall Road and Wellington Road thus improving overall Level-of-Service while providing for economic growth. The implementation of the roadways was in accordance with the economic development, transportation and public safety elements of the Strategic Plan for Prince William County and was consistent with the Capital Improvement Program (CIP) and the Comprehensive plan.

FAIRFAX COUNTY PARKWAY, PHASE III

FAIRFAX COUNTY, VIRGINIA



CLIENT:

Federal Highway Administration

CONTRACT AMOUNT:

\$21 million

DELIVERY METHOD:

Design-Build

CONTRACTOR:

Shirley Contracting Company

DESIGNER:

Dewberry Consultants LLC

COMPLETION DATE:

August 2013

Shirley Contracting Company, LLC (Shirley) was selected by the Federal Highway Administration- Eastern Federal Lands Division to design and construct the Fairfax County Parkway Phase III Project. Key features of this \$21 million design-build contract consisted of the construction of 0.7 miles of six lane divided, limited access highway within the existing right-of-way, improvements to the Franconia Springfield Parkway Interchange including a relocation of Hooes Road, widening of Ramp D to 2-lanes, and construction of three separate noise barrier walls. Additionally, the project included construction of a new bridge to carry “local” Rolling Road over the Parkway to connect multiple residential communities, as well as signing, lighting, landscaping, and stormwater management improvements.

The Project Team updated the NEPA re-evaluation to address changes in design standards and maintenance of traffic operational improvements. This portion of the Parkway, identified as “Phase III”, is located between the Franconia-Springfield Parkway Interchange and the Barta Road Interchange, provides the final 0.7 mile segment to complete the Parkway between Route 7 and I-95.

The Team utilized efforts to reduce environmental impacts with elements of low impact design. The team reconfigured the Fairfax County Parkway to use the existing alignment and completely eliminated one stormwater management pond avoiding the disturbance of over five acres of forested land. As part of the Saratoga Park and Ride Lot which was added to the project scope, the Team converted an extended detention basin to an extended detention enhanced pond and grass berms were used to provide noise protection.

Shirley provided permitting services, including completion of a NEPA re-evaluation document which was approved by Fairfax County, the Virginia Department of Transportation (VDOT) and Federal Highway Administration (FHWA). The Project was administered by FHWA Eastern Federal Lands Highway Division on behalf of VDOT. It involved coordination with Fairfax County, the U.S. Department of the Army, and several permitting agencies including the Department of Environmental Quality and U.S. Army Corps of Engineers.

8435 Backlick Road
Lorton, Virginia 22079
www.shirleycontracting.com



ROUTE 7 / 659 INTERCHANGE

LOUDOUN COUNTY, VIRGINIA



CLIENT:

Loudoun County

CONTRACT AMOUNT:

\$48.3 million

DELIVERY METHOD:

Design-Bid-Build

CONTRACTOR:

Shirley Contracting Company

DESIGNER:

Dewberry Engineers Inc.

SUBSTANTIAL COMPLETION DATE:

March 2019

Shirley Contracting Company, LLC was awarded the Route 7/659 Interchange Project (Project) by Loudoun County in February 2015. The Project included constructing a grade separated interchange at the intersection of Route 7 and Belmont Ridge Road and the widening of Belmont Ridge Road, from a two-lane roadway to a four-lane median divided roadway with associated facilities between Route 7 and Gloucester Parkway. The Project scope included bicycle and pedestrian facilities on Route 659, a noise barrier along Route 659 just north of Gloucester Parkway, and the relocation of a 36" water main. The Project removed the last signalized intersection on Route 7 between Lexington Drive and Battlefield Parkway, transforming Route 7 into a limited access facility. The new interchange improves roadway safety and mobility.

The Project is located adjacent to an existing known slave cemetery which was required access to be maintained for the local community church who retains access to the important cultural resource. The Project Team worked closely with the community to maintain access for their activities during construction and worked with County staff to modify the plans to construct permanent access as part of a change to the original contract.

The Project consisted of an extremely wide 2-span steel bridge over Route 7. The bridge deck was over one acre in area and had unique kicker girders to accommodate the ramp traffic on/off of the structure. Further complicating the Project was the steep, irregular and extremely hard rock in the area. This caused the foundations of the structure to vary from spread footers bearing on rock to pile supported spread footers within the area of the center pier. In addition, the Project required 386,000 CY of onsite cut-to-fill, 656,000 CY of import embankment, 31,000 SF of soundwall, 21,000 SF of MSE retaining wall, over 21,000 lineal feet of storm sewer (ranging from 15" to 60"), 4 water quality swales, 2 storm water management ponds, over 4700 lineal feet of 36" watermain, over 400 lineal feet of 20" watermain, over 900 feet of 16" watermain, numerous overhead signs, interchange lighting, and installation of 3 traffic signals.

I-66 WIDENING

PRINCE WILLIAM COUNTY, VIRGINIA



CLIENT:

Virginia Department of Transportation (VDOT)

CONTRACT AMOUNT:

\$56 million

DELIVERY METHOD:

Design-Build

CONTRACTOR:

Shirley Contracting Company

DESIGNER:

Dewberry Engineers Inc.

COMPLETION DATE:

August 2018

In August 2013 the Virginia Department of Transportation (VDOT) awarded Shirley Contracting Company LLC, (Shirley) the \$56 million Interstate 66 (I-66) Widening Design-Build contract. Our Team was chosen in large part because of our significant experience associated with construction of complex transportation projects on high volume, high speed roadways, excellent safety record, partnering approach, and abilities to work with adjacent concurrent construction under separate contracts. The Project entailed the widening of approximately 2.5-miles of I-66 in Gainesville, Virginia in each direction, replacement of two secondary overpass bridges, extensive maintenance of traffic operations for over 100,000 VPD, construction of 250,000 SF of noise barrier wall, construction/integration of an extensive Intelligent Transportation System consisting of cameras, detectors, digital message signs all running off a new fiber communication network, roadway lighting, utility relocation/installation, and traffic detours.

As the Design-Builder and Lead Contractor, Shirley was responsible for management and oversight of construction, including design and engineering, utility relocations, public outreach, overall Project administration and construction management, and QA / QC. All construction work was performed on a heavily traveled roadway and all lane restrictions were coordinated by Shirley with VDOT to allow for public notifications of impacts to traffic. Shirley was the primary point of contact with the Owner in public relations and getting notices out to traveling motorists, businesses, home-owners and local politicians. Shirley was also responsible for creating and monitoring the schedule throughout design and construction.

Utilizing our previous experiences working on I-66 and similar facilities Shirley was able to sequence work operations and phase the construction operations such that the overall impacts to the traveling public were minimized. Much of the phased construction took place behind temporary barrier keeping both the workers and the public safe during construction. In addition, the Team was able to maximize the existing alignment of I-66 so that with minimal additional efforts a paved shoulder was maintained in almost all areas of the Project.

MINNIEVILLE ROAD WIDENING

PRINCE WILLIAM COUNTY, VIRGINIA



CLIENT:

Prince William County

CONTRACT AMOUNT:

\$28.8 M

DELIVERY METHOD:

Design-Bid-Build

CONTRACTOR:

Shirley Contracting Company

DESIGNER:

Rinker Design Associates, LLC

SUBSTANTIAL COMPLETION DATE:

December 2018

Shirley Contracting Company, LLC was awarded a \$28.8 million contract for the construction of four lanes for the Minnieville Road Widening Project (Project) by Prince William County in September 2016. The Project consisted of constructing the ultimate 4-Lane divided Minnieville Road typical section from Route 234 to Spriggs Road and turn lane improvements on Route 234.

The existing corridor had a winding, rolling topography which caused the widenings to vary in location and elevation compared to the existing. This factor, along with the highly residential corridor, frequent pedestrian use of the existing road (no existing pedestrian facilities were present), and ongoing utility relocations, challenged the Project Team to coordinate heavily with the adjacent communities and local stakeholders. In an effort to minimize the overall impacts of the Project on the local community, the Project Team worked closely with County staff to modify and improve the proposed maintenance of traffic sequence, accommodating the ongoing utility relocations and reducing the overall amount of temporary pavement necessary for the Project.

The total length of the roadway improvements was 10,900 lineal feet and included the reconstruction of the road to provide a four-lane divided roadway with a raised 16' median, a 5' sidewalk on the south side of the road and a shared use path on the north side. The Project included 600 lineal feet of 30" & 36" Sanitary Sewer Relocation, 4800 lineal feet of 12" Watermain, a Conspan Arch over Powells Creek, 3 retaining walls, and installation of 3 traffic signals.



Resumes

JOSEPH FRAGALE, P.E., DBIA

DESIGN-BUILD PROJECT MANAGER, SHIRLEY CONTRACTING COMPANY, LLC



EDUCATION, CERTIFICATIONS & REGISTRATIONS

- B.S., Civil Engineering, West Virginia University
- 13 Years of Construction Experience
- 2011 Professional Engineer, VA - 0402 048576
- DBIA Certification

As Design-Build Project Manager (DBPM), Joe is the primary point-of-contact with the project owner and is responsible for all aspects of the design-build team's responsibilities. In addition to being the primary point of contact after award of a Project, he has ultimate responsibility for Contract management, coordination, and integration of the various project disciplines, including design, construction, quality control, right-of-way, utilities, and safety. Joe also serves as the primary support to client efforts to communicate with certain third-party stakeholders, and can take the lead in communicating and coordinating with these third parties if desired by the Client. Joe has over 13 years of design and construction experience, including two years of site development design experience before joining Shirley Contracting Company, LLC in 2008. He has eight years of continuous design-build experience.

PROJECT EXPERIENCE

Warrenton Southern Interchange Design-Build - Warrenton, Virginia

As the Design-Build Project Manager, Mr. Fragale is overseeing this \$19.5 million design-build project located on US Route 15 / 17 / 29 in Warrenton, VA. The project includes the design and construction of a grade separated interchange for US Route 15/17/29 Business and Lord Fairfax Road over Route 15/17/29 Bypass to replace an existing at-grade signalized intersection. The new interchange will be continuous flow with two roundabouts, one servicing the east and the other serving the west side of the intersection. The project also includes roundabout lighting, shared-use path, and a 20 space park and ride lot. Mr. Fragale is responsible all aspects of the design-build project and is the primary point of contact with the owner.

Route 606 Bridge Replacement Over I-95 with 606 Improvements Design-Build - Thornburg, Virginia

As the Design-Build Project Manager, Mr. Fragale is overseeing this \$16.4 million design-build project located on I-95 at Exit 118 in Thornburg, VA. The project replaces an existing structurally deficient and functionally obsolete bridge and reconfigures the interchange with Route 606 - Mudd Tavern Road to greatly improving function. The project includes design and construction of a four-lane bridge over I-95 including the width required to accommodate a sidewalk on the bridge. Roadway design and construction includes a four-lane divided limited access roadway, addition of sidewalk and lighting for pedestrian access to the newly constructed Dominion Raceway, addition of three signalized intersections, and upgraded guardrail throughout the project to new standards. The changes in project concept required the Project team to generate an Interchange Modification Report and pursue approval with FHWA while holding a public hearing to obtain community comments. Mr. Fragale is responsible all aspects of the design-build project and is the primary point of contact with the owner.

Fairfax County Parkway Phase III Design-Build - Fairfax County, Virginia

Mr. Fragale managed this \$26 million design-build project on the Franconia-Springfield Parkway, which runs for approximately 0.5 miles along existing Rolling Road and through the western portion of the Fort Belvoir North Area. The Project was the final segment required to complete the Franconia-Springfield Parkway and included construction of a six-lane divided, limited access highway within the Project right-of-way, Franconia-Springfield Parkway interchange improvements, a shared-use path, installation of sound barriers along relocated Rolling Road and Ramp D, a new bridge (B-692) over the Parkway connecting Rolling Road to the relocated Rolling Road, the design and construction of bridge B-692 over the Parkway including the width required to accommodate a shared-use path on the bridge. The Project entailed the design and construction of the storm water management facilities to meet current VDOT standards and the design and construction of the Saratoga Park and Ride to meet parking volumes established by VDOT. Mr. Fragale was responsible for the coordination of the design, the procurement and delivery of materials, scheduling of crews and subcontractors for construction of all features for the Project, maintaining the project CPM, and submitting applications for project payments.

New Campus East- North Loop Road and Bridge - Fairfax County, Virginia

Mr. Fragale was the Project Engineer for the North Loop Road and Bridge which included a one mile 4-lane roadway, with four signalized intersections, roadway lighting, shared-use path, a 450' long - three span bridge over Accotink Creek, approximately 2,100 LF of MSE Wall, installation of five wedge and grab perimeter control barriers, installation of two guard structures, 6,000+ LF of storm sewer ranging from 15" to 96" RCP, 5,400+ LF of 18" waterline with connection to a 36" main, 3,000+ LF of underground communications and electrical duct bank, and roadway lighting throughout the project. Mr. Fragale was responsible for coordinating all work with Shirley Contracting Company superintendents and project subcontractors for all construction activities including roadway, utility, MSE wall, and bridge.

New Campus East - South Loop and Bridge - Fairfax County, Virginia

Mr. Fragale was the Project Engineer overseeing the construction of a two-lane, five-span, and concrete girder bridge over the SL-4 wetland. The bridge was installed on the New Campus East - Fort Belvoir North Area and included a 12' shared-use path, bridge lighting, and security cameras. Mr. Fragale was responsible for managing all aspects of the project from the procurement of materials, engineering of the pier cap and overhang falsework, as well as the design of the beam erection plan. Mr. Fragale maintained daily records of project's quantities, submitted reports to the projects general contractor, and coordinated with field crews to maintain project productions.

New Campus East - Central Motors Access Road - Fairfax County, Virginia

Mr. Fragale was the Project Engineer for the Central Motor Access Road Project. The scope of the project included the construction and connection of a new access road from Fullerton Road into the New Campus East (Fort Belvoir North Area). The Central Motors Access included construction of a half-mile, two-lane roadway and the re-sequencing of an existing traffic signal. Mr. Fragale was responsible for the procurement and coordination of delivery of the project's materials, maintaining daily records of project's quantities, submitting reports to the projects general contractor, and coordinating with field crews to maintain project productions.

Defense CEETA - Fort Belvoir, Virginia

As Project Engineer, Mr. Fragale was responsible for the construction of the CEETA – Remote Inspection Facility (RIF) project located between Fort Belvoir and Telegraph Road. The project included the addition of a new remote inspection facility and access road into the overall Defense CEETA area as well as the installation of three new single story buildings, numerous retractable barriers, lift gates, slide gates, underground storage tanks, below grade security measure, perimeter lighting, motion and vibration monitoring devices, and reconstruction of the facility's perimeter road. The project required the installation of underground and overhead electrical and communications cabling, underground storm sewer, sanitary, and waterline, and constructed infrastructure to connect existing systems. Mr. Fragale coordinated with subcontractors to schedule their activities, track production quantities, drafting and submitting reports to the owner's representative, and submission of payment requests.

MICHAEL GALLAHER

CONSTRUCTION SUPERINTENDENT, SHIRLEY CONTRACTING COMPANY, LLC



EDUCATION, CERTIFICATIONS & REGISTRATIONS

- B.S., Civil Engineering, West Virginia University
- 10 Years of Construction Experience

As Superintendent, Michael's general responsibilities include coordination with the design and construction teams; performing constructability reviews of design drawings; daily project planning and scheduling of work; management of all aspects of daily field construction activities and self-perform work; and subcontractor coordination and management.

PROJECT EXPERIENCE

Minnieville Road Widening Project - Prince William County, Virginia

Michael's responsibilities included scheduling, management and oversight of all day-to-day field construction activities including: roadway construction, grading/earthwork, storm drainage installation, waterline installation, retaining wall construction, conspan construction, utility relocations, maintenance of traffic setup and subcontractor coordination and scheduling. The scope of this \$30 million project consisted of widening Minnieville Road for two miles from a 2-lane roadway to a 4-lane divided roadway from Route 234 to Spriggs Road in Prince William County. It also consisted of three retaining walls, four storm water management ponds, one additional and two modified signals and a conspan structure.

I-66 Widening Improvements Design-Build - Prince William County, Virginia

Michael's responsibilities included scheduling, management and oversight of all day-to-day field construction activities including: roadway construction, grading/earthwork, storm drainage installation, jack and bore operations, caisson drilling, sound barrier wall installation, bridge construction, MSE wall installation, utility duct bank installation and relocations, maintenance of traffic setup and subcontractor coordination and scheduling. The \$55 million project consisted of widening Interstate 66 from a 4-lane divided freeway, to an 8-lane divided freeway. It also added one high occupancy vehicle (HOV) and one general purpose lane to I-66 in each direction between Route 15 and Route 29 in Prince William County, bringing I-66 to a total of 4-lanes in each direction. Additionally, it included 12 foot paved shoulders, storm drainage, storm water management facilities, Intelligent Transportation System (ITS) components for managing traffic volumes, improving flow and enhanced incident response; overhead sign structures; utility relocations; and the reconstruction of the overpasses at Catharpin Road and Old Carolina Road to include 2-lanes and shared-use paths. It also included retaining walls, sound barriers, roadway lighting and 250,000 SF of architecturally treated and stained sound barrier wall.

Rollins Ford Road Phase IV - Prince William County, Virginia

Michael's responsibilities included scheduling and management of construction activities including: roadway construction, grading/earthwork, storm drainage installation, water main installation, bridge, MSE wall and box culvert construction, asphalt paving, pavement markings, signage and traffic signal installation and rock blasting. He managed the quantity and material ordering and tracking, owner payment requisition, CPM scheduling, subcontractor coordination, scheduling, tracking and payments, job status reporting and material tracking. This \$15.3 million project converted a 1-mile stretch and two 365 foot bridges spanning Rollins Ford Road from 2-lanes to a 4-lane divided roadway. In addition, the project team constructed .45-miles of new northbound lanes on Rollins Ford Road between Yellow Hammer Drive and Estate Manor Drive and reconstruction and widening of Vint Hill Road. The scope of work included installation of erosion and sediment control devices, storm sewer pipes, drainage structures, box culvert, as well as stormwater management facilities, curb and gutter, pedestrian sidewalks, and shared use paths. Additional work included the installation of erosion control devices, clearing and grubbing, grading, excavation, installing storm sewers pipes and drainage structures, box culvert installation, stormwater management facilities, curb and gutter, placing aggregate, asphalt paving, pedestrian facilities, installation of traffic signage and pavement markings, all measures required for the maintenance of traffic during construction, bridge construction, and waterline relocation.

Fort Belvoir Main Post Infrastructure - Phase I & II - Fort Belvoir, Virginia

Michael's responsibilities included scheduling and management of construction activities including: roadway construction, grading/earthwork, storm drainage installation, underground detention systems, sewer force main installation, utility relocations and duct bank installation, box culvert construction, asphalt paving, pavement markings, signage and traffic signal installations, maintenance of traffic design and implementation, final project inspections and closeout, and CPM scheduling. The \$35 million project included the widening and reconstruction of Belvoir Road (approximately 1.1 miles) from two to four lanes from U.S. Route 1 to 12th Street, the widening and reconstruction of Pohick Road (approximately 1.3 miles) from two to four lanes from U.S. Route 1 to 12th Street and Gunston Road and U.S. Route 1 associated improvements. Project scope included permitting, utility relocations, construction, maintenance of traffic, quality control, and coordination of public involvement for all project work. The project consisted of phased roadway construction/widening from 2-lanes to 4-lanes and a bike lane, storm drainage and utility relocations, one storm water management pond and one underground detention system, MSE Retaining Wall, curb and gutter, sidewalks, brick masonry entrance features, K-12 cable barriers and security upgrades, guardrail, signals and bus shelters.

Willard Road Interchange Design-Build - Chantilly, Virginia

Michael's responsibilities included production tracking and management, ordering of material, subcontractor scheduling, coordination and tracking, maintenance of traffic coordination, and project scheduling. The project scope included constructing a single point urban diamond interchange, detours of traffic, signals, roadway lighting, bridge with MSE retaining wall, one RW-3 and two concrete retaining walls, utility relocations, storm water management basins and drainage, as well as other typical roadway construction activities.

JEREMY BECK, PE

DESIGN MANAGER, DEWBERRY CONSULTANTS LLC



EDUCATION, CERTIFICATIONS & REGISTRATIONS

- B.S., Civil Engineering, The Pennsylvania State University
- Professional Engineer: Virginia, 2009
- Erosion & Sediment Control Inspector, DCR, Virginia, 2004
- 17 Years of Civil Engineering Experience

As a Project Manager for Dewberry's Mid-Atlantic Transportation Department, Jeremy has over 17 years of experience developing and managing numerous design-build and design-bid-build transportation related projects valued at over \$500 million. His general responsibilities include overseeing activities of multi-disciplined engineering project teams; interacting with local, state and federal agencies; formulating alternative technical concepts; leading geometric and hydraulic plan development; directing traffic studies and analysis; integrating structural components; coordinating environmental issues; guiding public information processes; facilitating constructability reviews; developing and assessing cost estimates as well as project budgets; coordinating land acquisition and utility relocation activities, performing quality control and quality assurance reviews and managing sub-consultants.

RELEVANT PROJECT EXPERIENCE

Warrenton Southern Interchange Design-Build - Fauquier County, Virginia

As Design Manager, Jeremy evaluated project requirements and formulated eight different interchange alternatives; vetted concepts with the Virginia Department of Transportation (VDOT); provided the lowest cost solution (double-roundabout interchange fully delivered for \$19.6M), managed all design disciplines to deliver approved plans and permits within seven months from contract award; reduced right-of-way impacts to two parcels, addressed traffic and safety concerns by placing the majority of the interchange outside of existing roadways while minimizing other impacts, coordinated NEPA concurrence, provided extensive landscaping in consensus with the Journey Through Hallowed Ground criteria; directed design quality control activities; and provided construction engineering support.

Route 28 Corridor Transportation Improvement Design-Build, Phase III - Prince William County, Virginia

As the Design Manager, Jeremy managed the delivery of all-inclusive construction plans and permits for the \$23.4M four-to six-lane widening project; coordinated adjacent land access and development issues; incorporated adjacent project concerns including an interchange and Virginia Rail Express (VRE) station expansion, resolved issues related to providing enhanced pedestrian facilities on an existing bridge; strategically avoided numerous existing utilities, provided waterline and sewer line adjustment plans, directed weekly coordination meetings; prepared for and attended public hearings; coordinated NEPA activities; maintained the design schedule and budget; and directed design quality control activities.

Route 606 Bridge Replacement Over I-95 with 606 Improvements Design-Build - Spotsylvania County, Virginia

As the Design Manager, Jeremy directed wide-ranging design activities for the \$16.5M interchange replacement project; prepared an Interchange Modification Report and several necessary Design Exceptions; coordinated with the VDOT and the Federal Highway Administration (FHWA) to obtain plan approval; resolved multifaceted geometric, traffic, environmental, and geotechnical issues including a unique interchange design, private access elements, two different stormwater management criteria, acidic soils and other unsuitable materials; interfaced with adjacent projects; prepared for and attended public hearings; directed weekly meetings; and delivered on-time permits and plans.

Prince William County On-Call (Part 3.1 Engineering Services – Civil and Transportation) - Prince William County, Virginia

As Technical Project Manager, Jeremy was responsible for the delivery of all task orders (TO) deliverables associated with civil and transportation related work. Task orders included Burwell Road/Fitzwater Drive intersection improvements, survey services related to Country Club Lake, improvements to the Occoquan/Woodbridge/Lorton Volunteer Fire Department Station 2, utility and survey work relating to the Food Lion Verizon Plat located near the intersection of

Spriggs Road and Minnieville Road, spillway capacity studies at the Silver Lake Dam, addressing conditions listed in the Conditional Operation and Maintenance Certificate for the Prince William Dam as well as Innovation Pond 3, rehabilitation design for Silver Lake Dam, redevelopment design services for Fairmont Park, and Featherbed Lane stakeholder studies. He directed and organized comprehensive civil design efforts with various departments within the County government, VDOT, as well as related third parties. In addition to managing TOs, Jeremy coordinated project issues such as design efforts, traffic analyses, environmental concerns, maintenance of traffic, geotechnical elements, and dam analyses. He also managed numerous sub-consultants, attended meetings with the County and ensured timely delivery of studies, reports, and project plans.

Dulles Corridor Metrorail Project – Silver Line Phase 2 Design-Build- Loudoun County, Virginia

As West Segment Design Manager, Jeremy was responsible for the delivery of plans (provided professional engineering seal to civil documents) for approximately \$325 million worth of design and construction. The project included 5.5-miles of roadway widening and reconstruction of the Dulles Greenway; several secondary road improvements; three track bridges; 11-miles of track retaining walls; roadway drainage elements as well as numerous stormwater management facilities; two new at-grade stations; pedestrian bridges; as well as wayside facilities including tie-breaker stations and traction power substations. He led and coordinated wide-ranging civil design efforts with MWAA, WMATA, VDOT, Loudoun County, Toll Road Investors Partnership II (TRIP II) in addition to numerous private developers, land owners and state agencies which included the transition from Part II-C to Part II-B Virginia Stormwater Management Program requirements. Jeremy attended weekly meetings with MWAA, VDOT and Loudoun County where numerous items were discussed, reviewed and resolved in order to continuously advance the project. He served as the point of contact between the design-build team and various public agencies on design related issues, managed numerous sub-consultants; ensured timely delivery of studies, reports and project plans; oversaw design quality control activities; and provided construction engineering support. The project included the study, design, coordination and construction of widening to existing roadway facilities; secondary road enhancements including intersection reconfigurations; drainage improvements; pedestrian and bicycle facilities; and structural items to include bridges and retaining walls. The project also required coordination with multiple stakeholders; plan development in accordance with VDOT requirements; Part II-B Virginia Stormwater Management Program requirements; and weekly coordination meetings.

University Boulevard Extension Design-Build, Prince William County, Virginia

As Design Manager, Jeremy was responsible for the delivery of plans (provided professional engineering seal to civil documents) for the \$32M project which encompassed 1.5-miles of University Blvd. (widening and new alignment) including the connections with and improvements to Route 234, Sudley Manor Drive, Robertson Drive and Discovery Blvd.; a bridge over a Tributary to Broad Run; the protection of three existing gas transmission lines; 5,400-feet of new 30-inch waterline (including cathodic protection); 1.3-miles of Hornbaker Road (widening and new alignment); drainage and stormwater management facilities; pedestrian features; significant overhead and underground private utility relocations; right of way acquisition coordination; and construction engineering support. He directed and organized comprehensive civil design efforts with Prince William County, VDOT, as well as adjacent commercial and industrial development (including the Innovation Sector Plan). In addition to leading the overall design effort, Jeremy coordinated wide-ranging project issues such as traffic analyses, environmental concerns, maintenance of traffic, geotechnical elements, and floodplain analyses. He managed numerous sub-consultants, attended weekly meeting with the County and ensured timely delivery of studies, reports and project plans, and provided construction engineering support. The design-build project included the study, design, coordination and construction of widening to existing roadway facilities; intersection re-configurations; secondary road improvements; drainage enhancements; pedestrian and bicycle facilities; structural items (bridges and retaining walls); existing gas transmission line coordination and protection; private utility relocation; as well as water and sewer betterments.

Route 7/ River Creek Parkway Interchange - Loudoun County and the Town of Leesburg, Virginia

As Project Manager/Project Engineer, Jeremy was in charge of interchange planning along with conceptual and final engineering design for the hybrid diamond interchange. Responsibilities included managing all aspects of project design; developing interchange geometry and drainage design; overseeing traffic impact analyses; representing the private developer throughout the projects development and construction; coordinating between homeowners associations, Loudoun County, Town of Leesburg, and VDOT; managing and performing extensive utility relocation design; coordinating environmental and stormwater management requirements; managing sub-consultants; coordinating noise studies and conducting sound wall design; coordinating landscape design; and coordinating with several engineering firms performing site development design work adjacent to the interchange.

SYED KHAN, PE, PMP, CCM, DBIA

SENIOR PROJECT MANAGER, CES CONSULTING LLC



EDUCATION, CERTIFICATIONS & REGISTRATIONS

- MS, Construction Management, State University of New York at Buffalo
- BS, Civil Engineering, N.E.D. University of Engineering and Technology, Karachi, Pakistan
- 25 Years of Construction Experience
- Professional Engineer, State of Virginia, # 31057
- VDOT Certifications: Pavement Marking (2018);
- Asphalt Field Levels I & II (2018);
- DCR/DEQ Erosion & Sediment Control (2017);
- Intermediate Work Zone Traffic Control (2017);
- Nuclear Gauge Safety (2016);
- ACI Concrete Field (2018);
- OSHA 10-hour

Mr. Khan has extensive experience in Quality Assurance (QA) and Quality Control (QC) on large regional infrastructure projects including the I-66 Spot Widening Projects in Arlington and Fairfax Counties, the I-95 HOV Widening in Fairfax and Prince William Counties, and he has large multi-disciplinary program management experience on a 10-mile freeway in the United Arab Emirates. Mr. Khan has managed highway and bridge construction projects in various capacities from developing project QA and QC plans, developing standardized documents to maintain auditable testing records, developing audit criteria and frequencies, creating ties between project schedule activities and quality documents, establishing longs to track and monitor testing requirements and directing staff in pursuing QA and QC duties. He is thoroughly familiar with VDOT's Design-Build QA/QC requirements and Road and bridge Specifications and Standards..

PROJECT EXPERIENCE

I-66 Spot Widening Inside the Beltway, Virginia

As Quality Assurance Manager for this \$87 Million project, Mr. Khan was responsible for overseeing all Quality Assurance Activities related to Design Development, Construction Inspection, Quality Control Services Audit and to assure Quality Assurance compliance with contract requirements. The Project entailed roadway and bridge widening, storm drainage, sound walls, in-plan utility relocations, overhead sign installation, and pavement construction. Extensive MOT work through multiple phases of construction, interstate corridor lighting, ITS communication equipment/duct bank installation and relocation, close coordination with WMATA representatives.

I-66 Spot 2 Improvements, Fairfax, Virginia

As Senior Construction Manager for this \$33 Million project, Mr. Khan was responsible for overseeing all of the office engineering and inspection efforts to assure contractor compliance with respect to VDOT Road & Bridge Specifications and Standards. The Project entailed roadway and bridge widening, storm drainage, sound walls, in-plan utility relocations, overhead sign installation, and pavement construction. Extensive MOT work through multiple phases of construction, Interstate corridor lighting, ITS communication equipment/duct bank installation and relocation, variable message boards and close coordination with WMATA representatives for compliance with their operations and procedures.

Yas Island Development and Roads and Drainage Improvement Projects - Abu Dhabi, United Arab Emirates

Mr. Khan was responsible for the Quality Assurance of a \$500 Million Design Build project to build fifteen miles of freeway that included several Interchanges, roads and construction of all internal roads, surface parking lots, and multilevel parking structures. He also managed the QA services for a \$400 Million Underwater Tunnel (0.8 Miles Long) connecting the mainland to the island. He managed multiple Construction QA Managers and provided leadership and guidance in developing QA plans and procedures, tracking and monitoring QC services for compliance with the contract and conducting QA Audits.

Other Experience

Mr. Khan served as a Consultant Project Manager for the following projects:

- \$70 Million I-395 Reconstruction project in Washington DC,

- \$55 Million I-95 HOV Widening project in Fairfax, Virginia,
- \$71 Million I-95 HOV Widening project in Prince William County, Virginia,
- \$50 Million Major Arterial Road widening in project in Abu Dhabi, and
- \$125 Million Major Highway Widening project in Abu Dhabi.

On all of these projects, Mr. Khan was responsible for overseeing and managing the office engineering and inspection efforts for Quality Assurance compliance with contract requirements. These projects entailed roadway and bridge widening, storm drainage, sound walls, in-plan utility relocations, overhead sign installation, and pavement construction. Some of the projects also included bridge substructure repairs, bridge bearing replacements, post tensioning of the existing girders, superstructure repairs, latex overlay on existing deck and cathodic protection.