Bowman

Town of Vienna

On-Call Civil Engineering Services

RFP 23-37

Submitted by:

Brad Glatfelter, Principal/Sr. Project Manager
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Submitted to:

Jerry Amacker, Procurement Officer
Town of Vienna, Department of Public Works
127 Center Street South
Vienna, VA 22180

June 16, 2023

bowman.com

ATTACHMENT 3

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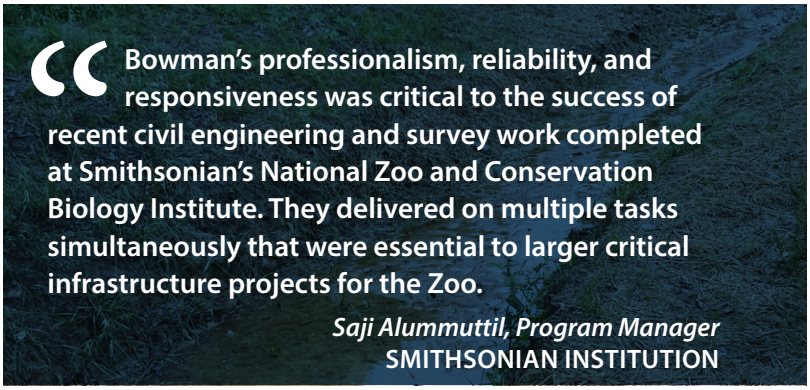
Executive Summary

Executive Summary

Bowman Consulting Group Ltd. (Bowman) is pleased to present our proposal to provide general engineering services, which include, but are not limited to, civil engineering services, water and sewer design, transportation design, structural engineering design and inspection services, review of development plans, preparation of designs and specifications, preparation of bid packages, peer review, engineering project management, construction administration/management, review of building plans, and building inspection services for the Town of Vienna ("the Town"). We welcome the opportunity to re-initiate a successful relationship with the Town and support Public Works in its overarching goal of providing the highest quality public works services in a safe, cost-effective manner. Furthermore, Bowman recognizes that the vision of the Town, to be "a safe, vibrant, and environmentally conscious community with small town character…," can only be achieved through close cooperation with the Town, diligence, and ingenuity. To further the implementation of the capital and non-capital improvement plans, Bowman and its partners have the experience, expertise, and character to responsibly ensure efficient and cost-effective task execution.

With our main production office located in Fairfax and supplemented by offices located in Leesburg and Manassas, we are geographically positioned to serve the Town effectively and efficiently. To supplement our core services and further deepen our resource pool, we have partnered with Alpha Corporation, CES Consulting, DMY Engineering Consultants, and Peck Peck & Associates. Collectively, our team has the technical expertise and similar experience to effectively manage such a contract. Additionally, Bowman and our team members have extensively managed similar on-call term contracts and working in the Town of Vienna.

In collaboration with Public Works, Bowman and our partners understand we will support projects of various type and scale, such as new construction of facilities, renovations of existing facilities, transportation and infrastructure improvements, and stormwater management projects. Bowman brings comprehensive technical abilities and proven experience in fulfilling the various engineering project types that the Town has noted in its FY 2022-2036 Capital Improvement Plan (CIP), including a variety of projects ranging from drainage improvements and street improvements to water/sewer projects and playground improvements. The proposed design team has extensive experience in designing and executing a broad array of local municipal task orders.



As with most comparable public programs and projects, the availability of funding and effective expenditure of funds are often the more challenging issues, in addition to documentation and reporting. We understand the need for cost-effective solutions, and that the costs of a program and/or project do not end with their approval or the completion of construction. Often, life-cycle costs far exceed initial costs. To that point, Bowman has the experience and expertise to provide the Town with the information necessary to make decisions with the benefit of foresight, so that solutions today do not become burdens in the future.

As an industry leader in Virginia for over 25 years, our experience is extremely comprehensive within all Northern Virginia cities, towns, and counties, but most importantly within the Town of Vienna. We have proudly worked in and for the Town since our inception and are honored to continue that relationship to this day. We know the standards, processes, and efforts required to complete tasks on time and within budget. As you have previously experienced and will see within our proposal, our commitment to our clients and to producing quality projects with respect to public agencies, community acceptance/ engagement, and innovative approaches to design has been recognized by various community and agency awards.

Executive Summary

The Bowman team has the resources and proficiency to support multiple tasks simultaneously. Each individual on our team has been selected for experience in their respective field, understanding of Town project requirements, depth of knowledge regarding implementation of program initiatives, attention to project objectives and details, cost consciousness, and responsiveness to client deadlines.

Bowman will bring the following notable benefits to the Town of Vienna:

- Local presence and local expertise coupled with national resources and experience
- Long-term familiarity with regulatory personnel, expectations, and practices
- A proven track record of delivering comprehensive engineering services in an efficient, code-compliant, and economical manner

> **Over the past 12 years, it has been my pleasure to work with Brad Glatfelter and his team at Bowman Consulting. I have found he and his team to be highly professional, very responsive, and extremely knowledgeable. The team has extensive familiarity with Town of Vienna protocol, policies, and procedures. The team at Bowman is creative and very competent. I believe they would be an asset to the Town of Vienna staff and their engineering needs.**
>
> *Rob Fisher*
> *Owner*
> **FISHER CUSTOM HOMES**

- A strong project team with in-depth technical knowledge and familiarity of local nuances
- A team structure that can provide turn-key solutions for all services—foreseeable and otherwise—that might be encountered under this basic ordering agreement
- Proven experience operating within an on-call service agreement with multiple local, state, and education agencies
- Recent and demonstrated success working in the Town of Vienna

In summary, Bowman is confident that your review of our proposal will reveal the unmatched experience of our team and the breadth of our technical qualifications and local resources. We look forward to your favorable response and the opportunity to serving the Town of Vienna for years to come.

Offeror's Experience with Public Works Type Projects

Offeror's Experience with Public Works Type Projects

EXAMPLE PROJECTS AND SCOPE OF SERVICES PROVIDED

Bowman brings a decades-long performance record providing engineering and construction consulting services for civil, transportation, and facility projects in the DMV region. For small and large-scale municipal, government agency, and private projects, we have delivered our full suite of professional services through task order contracts, standalone residential or commercial development projects, and teaming agreements with other architecture, engineering, and construction firms. Our role has included the full lifecycle of project development and delivery engagement, serving as an engineering consultant or in a staff-augmentation capacity embedded within the client. The following table summarizes the Bowman team's experience on a variety of project types—all similar to the types of projects that align with Vienna's potential needs. Furthermore, and as reflected in the table, we have provided a variety of services similar to the types of services required under this contract. We are also accustomed to performing these services in a multi-tasking and concurrent task environment to meet client needs for expedited project and service delivery. Detailed profiles of all projects listed in the table are presented in the following pages.

	Drainage & Stormwater Management	Feasibility Studies	Building Design	Surveying	Traffic/Transportation Design	Construction Cost Estimating	Water/Sewer Analysis & Design	Site Plan Preparation & Permitting	Flood Mitigation	ADA Compliance	Plan/Permit Review	Geotechnical Analysis	Landscape Architecture	Arborist Services	Construction Management & Inspections
Hayfield Farm Pipe Conveyance Storm Sewer Design, *Fairfax County, VA*	✓	✓		✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓
Lower Potomac Ballfield Pond Retrofit *Lorton, VA*	✓	✓		✓	✓	✓			✓	✓	✓	✓	✓	✓	✓
Nottoway Park Ballfield Retrofit, *Vienna, VA*	✓	✓			✓	✓		✓		✓	✓		✓	✓	
Burke Station Rd. Pedestrian and Roadway Improvements, *Fairfax, VA*	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Turf Replacement Projects Arlington Public Schools, *Arlington, VA*	✓	✓		✓			✓	✓			✓	✓		✓	✓
Maple Avenue, *Vienna, VA*	✓	✓		✓	✓	✓	✓			✓	✓	✓	✓		✓
Single-Family Development, *Vienna, VA*	✓		✓	✓		✓	✓				✓	✓	✓	✓	✓
Dry Utility Relocation, *Fairfax, VA*				✓		✓	✓	✓	✓	✓				✓	✓
Upper Kent Drive Reconstruction, *Manassas Park, VA*	✓	✓		✓		✓		✓		✓		✓			✓
Lower Kent Drive Drainage Study, *Manassas Park, VA*	✓	✓		✓		✓			✓						
Moseby Drive Culvert Replacement, *Manassas Park, VA*	✓	✓		✓		✓			✓						
George Mason University Nutrient Management Plans for MS4, *Fairfax, VA*	✓	✓		✓								✓			

Bowman

Hayfield Farm Pipe Conveyance Storm Sewer Design

Fairfax County, VA

Client

Emma Gutzler
Fairfax County DPWES
12000 Government Center Pkwy
Fairfax, VA 22035
p: 703.324.5500
e: emma.gutzler@fairfaxcounty.gov

Schedule

10/2014 - 6/2021 (On-time)

Firm Responsibilities

Arborist
As-built Verification
Construction Administration
Environmental Compliance
Geotechnical Services
Stormwater Management
Topographic Survey

Key Staff Participation

Brad Glatfelter, PE
Steve Liam, PE
Gregg Eberly, PLA, ISA
Brent Evans, LS

Description

Through our on-call contract with Fairfax County's Stormwater Planning Division (SWPD), Bowman helped resolve a flooding issue in the Hayfield Farm community. Due to excessive residential structure flooding over a long period of time, it was determined that new stormwater infrastructure would be necessary to alleviate this natural burden. The new pipe conveyance system is comprised of approximately 3,600 linear feet of 48" circular reinforced concrete pipe and a 7' x 4' box culvert. This system also included capacity to handle a 100-year capacity of stormwater.

This project was reviewed by VDOT, Fairfax County Sewer, Fairfax County Stormwater Planning, and Fairfax County Park Authority. Our community engagement approach started at the concept level of the design and was implemented throughout the design and construction phases, culminating with a ribbon cutting ceremony.

Additional aspects of the project included a new sanitary main and the relocation of individual water service lines for all homes for which the new stormwater system presented elevation conflicts. A stabilized and vegetated outfall was also designed at the southern end of Hayfield Road to dissipate water flow velocities to protect the soils and vegetation near Huntley Meadows Park. A level spreader was designed to not allow concentrated flows into the wood land area and provide an even flow.

Bowman

Lower Potomac Ballfield Pond Retrofit

Lorton, VA

Client

Fairfax County DPWES
12000 Government Center Pkwy
Fairfax, VA 22035
Ken Trinh, PE
p: 703.324.1016
e: kenneth.trinh@fairfaxcounty.gov

Schedule

8/2015 - 4/2020 (On-time)

Firm Responsibilities

Arborist
As-built Verification
Construction Administration
Environmental Compliance
Geotechnical Services
Stormwater Management
Topographic Survey

Key Staff Participation

Brad Glatfelter, PE
Joe Riley-Ryan, PE
Steve Liam, PE
Gregg Eberly, PLA, ISA
Jessica Fleming, PWD, QEP
Brent Evans, LS

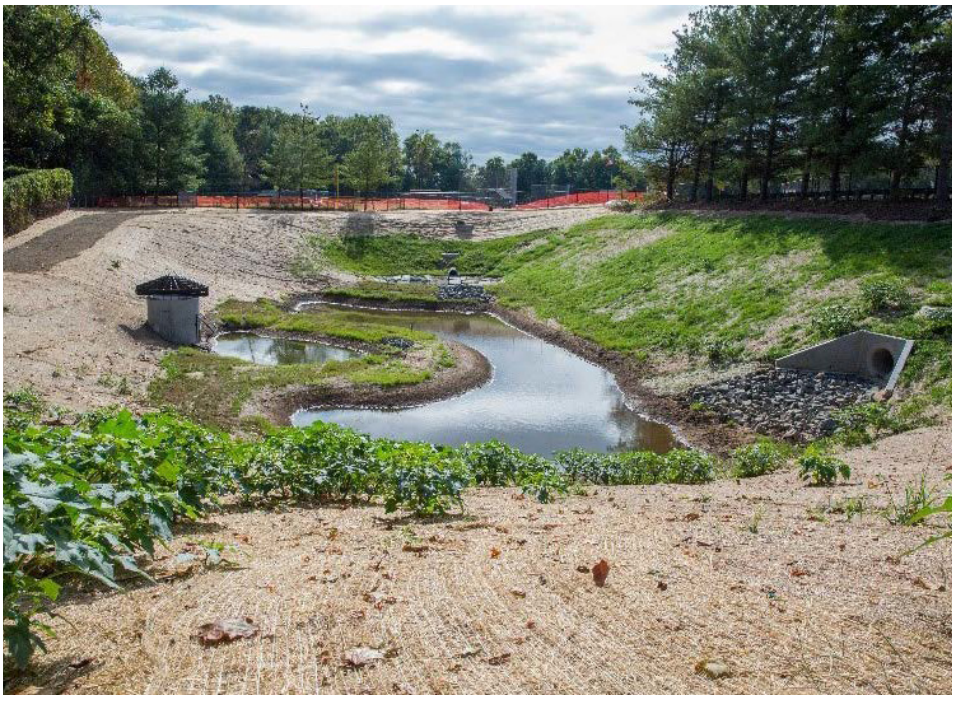
Description

This project included the development of design plans and construction documents for the installation of pond retrofits to the existing stormwater management facility at Lower Potomac Ballpark Facility, located in Lorton, VA. The facility has an overall contributing drainage area of approximately 30 acres.

The design retrofit provides enhanced water quality treatment for the drainage area to the subject facility. The retrofit design included Constructed Wetlands (High and Low Marsh), Cascading Micro-Pools, and a Reinforced Plunge Pool. While the design proposed the complete reconstruction of the principal spillway, it was able to retain the existing embankment and outfall pipe.

The existing facility was analyzed to determine the current water surface elevations of the pond during 2-, 10-, and 100-year hydrologic events. Bowman was able to maintain the same respective water surface elevations and increase the effective BMP volume of the facility. An Adequate Outfall Analysis for the 1-, 2-, 10-, and 100-year hydrologic events was performed per PFM § 6-0201.2. Bowman cooperated with the Maintenance and Stormwater Management Division to design a non-proprietary system to capture floatables prior to entering the facility.

Working closely with Fairfax Stormwater Planning Division, Bowman was able to identify additional water quality benefits for improving the degraded and eroded outfall channel using Natural Channel Design principals. The resulting outfall improvements incorporated a Reinforced Plunge Pool, Cross-Vanes, and Cascading Rock Steps.



Bowman

Nottoway Park Ballfield Retrofit

Vienna, VA

Client

Fairfax County Park Authority
12055 Government Center Pkwy
Fairfax, VA 22035
Som Govender
p: 703.324.2464
e: somanathan.govender@fairfaxcounty.gov

Schedule

2019 - 2019

Firm Responsibilities

Civil Engineering
Surveying
Environmental Services
Arboriculture
Permitting
Water/Wastewater

Key Staff Participation

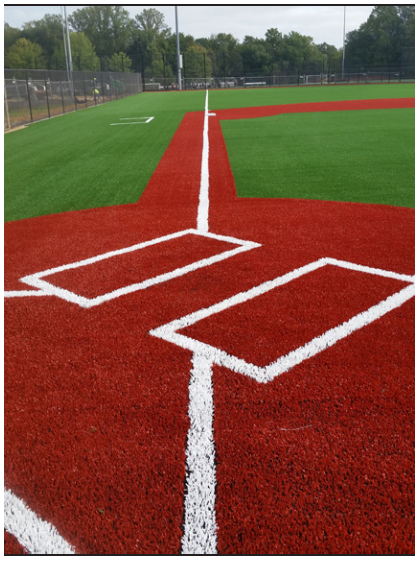
Brad Glatfelter, PE
Gregg Eberly, PLA, ISA
Brent Evans, LS

Description

Bowman provided survey and civil engineering services for the conversion of Diamond Field #1 from a natural turf to a synthetic turf field. The project included a stone galley stormwater management reservoir and structural controls as required to meet local and state regulations. Bowman also provided contract specifications, permitting and coordination of improvements, and construction inspection services. The project, from design to construction, was completed within ten months. All services were provided in accordance with Fairfax County, VDOT, and state environmental agencies.

Considerations that were made throughout the process included the preservation of existing field lighting poles and infrastructure, preservation of existing adjacent trails, and preservation of existing tree stands immediately adjacent to the field.

The project faced several challenges, including an aggressive timeline with an immovable delivery date, external stakeholders, stormwater management, and construction deficiencies. Bowman worked with the County and interested stakeholders to develop a permitted design within the compressed time limitations. Additionally, through regular communication with the County and Little League Stakeholders, Bowman ensured all expectations were not only met, but exceeded. By creatively designing the synthetic field to function as permeable pavement and aggregating the required treatment volume in a centralized stone galley, Bowman was able to meet the 2014 SWM Regulations within the field's footprint and simplify facility maintenance. Bowman also identified construction deficiencies and worked with the County and Contractor to satisfactorily rectify the issues while preserving the overall project schedule.



Bowman

Burke Station Rd. Pedestrian and Roadway Improvements

City of Fairfax, VA

Client

City of Fairfax
10455 Armstrong Street
Fairfax, VA 22030
Wendy Block Sanford
p: 703.385.7889
e: wendy.sanford@fairfaxva.gov

Schedule

2014 - 2017

Firm Responsibilities

Civil Engineering
Surveying
Landscape Architecture
Right-of-Way Services

Key Staff Participation

Brad Glatfelter, PE
Scott Delgado, PE
Gregg Eberly, LA

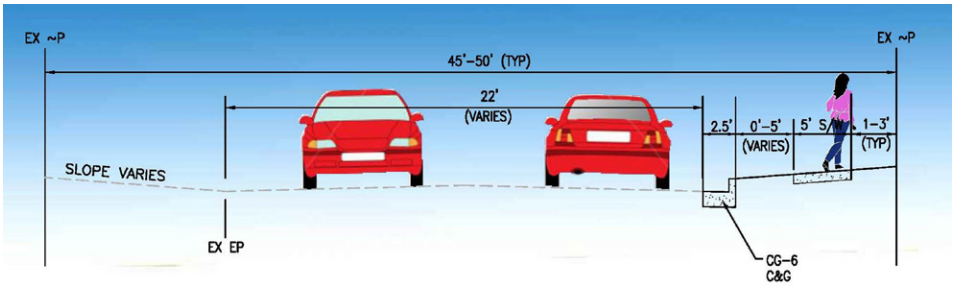
Description

Burke Station Road is located in the City of Fairfax, Virginia. Bowman designed a new sidewalk, curb and gutter, and drainage infrastructure on the west side of the roadway between Main Street and Stoughton Road (Phase 1 only). The City requested to introduce a sidewalk on the west side of Burke Station Road and remove the drainage ditch in order to improve pedestrian safety and enhance pedestrian connectivity to their residences. The addition of a new sidewalk and necessary roadway features will require easements from individual property owners.

Additionally, the project consisted of introducing a new sidewalk as described above to achieve a consistent typical section of two 11' travel lanes, 4' desired landscape strips, and a 5' minimum (6' desired) sidewalk. The existing shoulder along the west side will be removed and replaced with VDOT standard CG-6 concrete curb and gutter. Private driveways will be replaced with standard VDOT CG-9B or D and standard CG-11 will be used for street connections. idewalk materials are standard concrete.

Bowman provided engineering, surveying, landscape and right-of-way services for the project including:

- Topographic and Route Survey
- Tree Inventory and Analysis
- Tree Management/Landscape Plans
- Conceptual Design Evaluation
- Intermediate Plan Development
- Final Construction Plan Development
- Bid Assistance and Construction Administration
- Easement Acquisitions



BURKE STATION ROAD TYPICAL STREET SECTION–IMPROVED CONDITION
(NOT TO SCALE)

Bowman

Turf Replacement Projects, Arlington Public Schools

Various APS Elementary Schools, Arlington, VA

Client

Arlington Public Schools
Steve Stricker
Senior Project Manager
p: 703.228.7749
e: steven.stricker@apsva.us

Schedule

04/20198 - 01/2020

Firm Responsibilities

Boundary/Topographic Survey
Environmental Permitting
Grading/Drainage Plans
Site Inspections
Stormwater Management
Tree Survey
Utility As-Built Survey
Utility Plans

Key Staff Participation

Brad Glatfelter, PE
Scott Delgado, PE
Jessica Fleming, PWD, QEP
Roy Waugh, PE
Brent Evans, PE

Description

Arlington Public Schools retained Bowman for the conversion of two (2) playground fields from natural grass to synthetic turf at **Arlington Science Focus and Barrett Elementary Schools.**

Bowman's scope included field survey, synthetic turf field design and civil drawings for site and stormwater management plans, as well as ADA compliance, full construction documents and specifications, procurement assistance, permitting for grading and VSMP/ SWPPP, and construction administration services for the civil/site portion of construction. Bowman also provided facility post-construction certification coordination.

This project solved reoccurring erosion and safety issues that often plague overused natural turf fields. The challenge with this project was two-fold: meeting an aggressive project schedule and addressing the new 2014 stormwater management requirements. Bowman was able to work with the County to permit the project in record time. Additionally, by designing the synthetic turf to function as permeable pavement, thereby taking advantage of the inherent permeability of the underlying soil, Bowman was able to satisfy all stormwater requirements within the restricted confines of the project limits of construction.

The project involved stakeholders from Arlington Public Schools and the Department of Environmental Services.

Final design of site and adjacent improvements for permitting were completed in Summer 2018. Construction and its administration were completed Winter 2020.

Bowman

Maple Avenue

Town of Vienna, VA

Client

Town of Vienna
Vienna, VA
Dennis Johnson
p: 703.255.6380
e: djohnson@viennava.gov

Schedule

2009 - 2012

Firm Responsibilities

Surveying
SUE

Key Staff Participation

Scott Delgado, PE
Jessica Fleming, PWD, QEP
Gregg Eberly, PLA, ISA

Description

Bowman was hired in May 2009 by the Town of Vienna, Virginia for the Maple Avenue project. Bowman's scope of services includes over a mile of comprehensive streetscape enhancement and pedestrian improvements.

Bowman's Survey team coordinated and/or performed existing parcel, easement and right-of-way research and constructed the deed composite map for this highly developed retail and residential community corridor. We coordinated all SUE subsurface utility delineation and test pit services, and performed a wet utility as-built to capture top of structure, invert of pipe, pipe size, pipe material and percent of grade. There was a significant amount of above ground existing utilities located within the project corridor that Bowman located. Bowman supervised the low altitude aerial topographic survey to create an accurate topographic base map, and provided supplemental field run topography and ground truthing to complete the topographic mapping. Our survey crews performed property corner recovery and locations, and located the existing buildings as necessary to complete an accurate parcel and right-of-way base that would be used for design, future engineering, and right-of-way and dedication platting. Bowman prepared a certified topographic and design base sheet, and was responsible for the preparation of 43 right-of-way dedication/easement plats suitable for recordation amongst the Land Records of the Town of Vienna, Virginia. Our surveyors assisted in the Community Outreach and right-of-way acquisition process by preparing exhibit plats for each parcel.

Working with the Town of Vienna, Bowman prepared a streetscape plan and supporting engineering documents that will establish clear design alternatives for the West Maple Avenue corridor.

Bowman

Single-Family Development

Vienna, VA

Client

Rob Fisher, Owner
Fisher Custom Homes, LLC
131 Church St NW
Vienna VA 22180
rob@fishercustomhomesva.com
703-281-0009

Schedule

2012-On-going

Firm Responsibilities

Stormwater Facility Inspections
Facility Certification
Recertification

Key Staff Participation

Brad Glatfelter, PE
Jennifer Portillo, PE
Gregg Eberly, LA
Brent Evans, LS

Description

Bowman is proud to have supported Fisher Custom Homes over many years, especially in the town of Vienna. Bowman provides services over the lifetime of the project including surveying, arborist services, site/civil design (including utilities, streetscape, grading, and site improvements), stormwater management, construction stakeout, construction administration, as-built, and stormwater management facility certification.

Bowman provides stormwater management facility inspections for both newly constructed and existing facilities in compliance with the Town of Vienna stormwater ordinance. DEQ-Certified personnel work with Developers and Contractors to document the installation of new SWM facilities. These services include pre-construction meetings, material submittal review, construction oversight/ observation/inspections, post-construction/close-out inspections, and final facility certification. The Facility Certification is provided to the Town prior to issuance of the Certificate of Occupancy.

Additionally, Bowman is regularly contracted to provide recertification services for existing stormwater management facilities. The recertification services include review of the approved facility design, site inspections, and corrective directions. Bowman performs a final site inspection to confirm all deficiencies have been adequately addressed. Upon confirmation, Bowman prepares the recertification documentation for submission to the Town.

Our valued partnership with Fisher Custom Homes, along with other developers in Vienna, has afforded us the opportunity to regularly interact with town staff including DPW for plan submission, permitting, and project closeout. We have developed a unique understanding and perspective of the Town, it's processes and it's character. We understand the unique challenges encountered when a community grows while simultaneously trying to retain it's values and personality.

Bowman

Dry Utility Relocation

City of Fairfax, VA

Client

City of Fairfax, VA
10455 Armstrong Street
Fairfax, VA 22030
Wendy Block Sanford
p: 703.385.7889
e: wendy.sanford@fairfaxva.gov

Schedule

2004 - Ongoing

Firm Responsibilities

Utility Provider Coordination
Dry Utility Design

Key Staff Participation

Steve Richter, PE

Description

The Dry Utility Relocation Project was an integral component of the City of Fairfax's historic downtown redevelopment master plan. The project's goal was to relocate the existing overhead electric, telecommunication and traffic control cables and associated equipment infrastructure into a newly constructed underground conduit and manhole system. The ductbank serves the Virginia Power, Verizon Communications, Cox Communications, and City of Fairfax Traffic Control systems. Ultimately, removal of the poles from retail storefronts was the resulting goal of this project and the key component of the City's streetscape plan for the entire historic downtown area.

Richter & Associates, a Bowman Company, was responsible for the overall dry utility relocation design as well as assisting the City of Fairfax with preparing narratives of the project descriptions for use in obtaining funding. Specific design responsibilities included:

- Preparation of multi-phased construction plans and documents
- Preparation of an existing utility conditions plan
- Design of an overall dry utility dry relocation plan
- Assistance to the City with the bid process for installation of conduit & manhole system
- Cost estimates
- Evaluation of existing property owner's electrical service equipment
- Public Street Light Design
- Identification of utility easement descriptions and coordinate granting of such easements.
- Coordination with utility companies and government agencies

The focus of Richter & Associates, a Bowman Company, was to coordinate the time sensitive design and construction schedules of the City with the unique relocation execution mechanisms of each utility company

Bowman

Moseby Drive Culvert Replacement

Manassas Park, VA

Client

Calvin O'Dell
City of Manassas Park
9701 Manassas Drive
Manassas Park, VA 20111
p: 703.335.0019
e: codell@manassaspark.gov

Schedule

08/12/2012 - 09/24/2012

Firm Responsibilities

Civil Engineering
Surveying
Stormwater Management
Roadway/Pavement Design
Utility Design
Construction Administration
Environmental Permitting/
Compliance

Key Staff Participation

Brad Glatfelter

Description

On August 12, 2020, a dual culvert under Moseby Drive in the City of Manassas Park, Virginia became compromised during a storm and subsequently collapsed. As a result, a townhouse community of over 400 residents became inaccessible by vehicle. Also, the collapse severed the water and sanitary utilities. Bowman was called upon by the City to lead efforts to restore the vital connection.

A temporary access connection through the City of Manassas and temporary utilities were immediately planned and constructed. Fortunately, Bowman had prior experience with this crossing. In less than three weeks, resources were identified and assigned, and the team redesigned previous plans to utilize immediately available materials. The effort involved multiple disciplines including supplementary services from geotechnical, structural, and transportation partners. Extensive and constant coordination with the Virginia DOT, FEMA, and the USACE was required. Additionally, Bowman assisted with procurement of materials and advertisement/award of the construction contract.

On September 3rd, construction commenced, and on September 24th, Moseby Drive was reopened to traffic. In six weeks, the community went from disaster to recovery. Even with the accelerated delivery schedule and moving targets, the project was completed ahead of schedule and under budget. After completion of construction, Bowman gained approval of a Letter of Map Revision from FEMA for the Zone AE floodplain in the vicinity of the culvert.

While this situation was extreme, it is just one example where we were able to leverage our regional resources and local expertise to quickly provide the support and solutions needed. Our dedication and expedience was recognized with the **Heavy Construction Contractors Association (HCCA) "Excellence in Infrastructure Award (<$1M)"** in March 2021.

Bowman

Upper Kent Drive Reconstruction

Manasses Park VA

Client

City of Manasses Park, VA
331 Manassas Drive
Manassas Park, VA 20111
Calvin O'Dell
p: 703.335.0019
e: c.odell@manassasparkva.gov

Schedule

05/2021 - 05/2023

Firm Responsibilities

Roadway Design
Maintenance of Traffic Plan
Signage Plans
Surveying
Public Engagements

Key Staff Participation

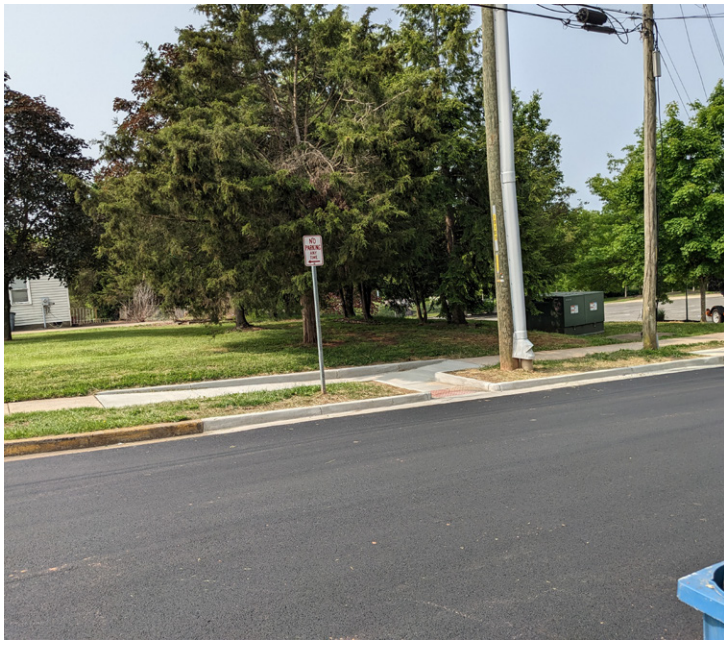
Joe Riley-Ryan, PE
Jacob Miller, PE
Brent Evans, LS

Description

Upper Kent Drive in the City of Manassas Park is a local street lined with single family residential homes built in the 1950s. The purpose of the Upper Kent Drive Reconstruction project was to upgrade aging infrastructure within the public right-of-way. The project scope consists of the following tasks:

- Public water service line replacements for 31 lots to move all water services to a recently upgraded water main;
- Public sewer lateral replacements for 30 lots;
- Replacement of the inadequate roadway section currently experiencing wide areas of failure with an adequate full depth pavement section;
- Upgrade of the pedestrian sidewalks from 4 feet wide to 5 feet wide;
- Replacement of driveway aprons with a detail that has an accessible cross slope for the pedestrian walkway; and
- Other ancillary site improvements.

Bowman's role on this project included field run topographic and utility designation survey; development of the site plan which includes details on demolition, utility layouts and details, detailed grading of accessible routes, maintenance of traffic plan, erosion and sediment control plans, and signage plans; public presentations to the City's governing body; bid phase support; and construction administration and inspection services. Geotechnical engineering and construction testing services were provided by subconsultants under Bowman's direction.



Bowman

George Mason University Nutrient Management Plans

Fairfax, VA

Client

Alex Iszard, PEAVP
Planning, Design, & Construction
Facilities Administration
George Mason University
e: aiszard@gmu.edu
p: 703-993-9220

Schedule

02/2021 - 08/2021

Firm Responsibilities

Stormwater Program Support
Environmental Services

Key Staff Participation

Brad Glatfelter, PE
Jennifer Portillo, PE

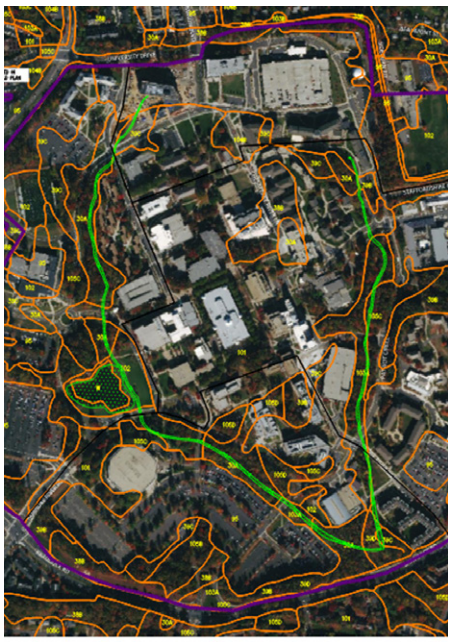
Description

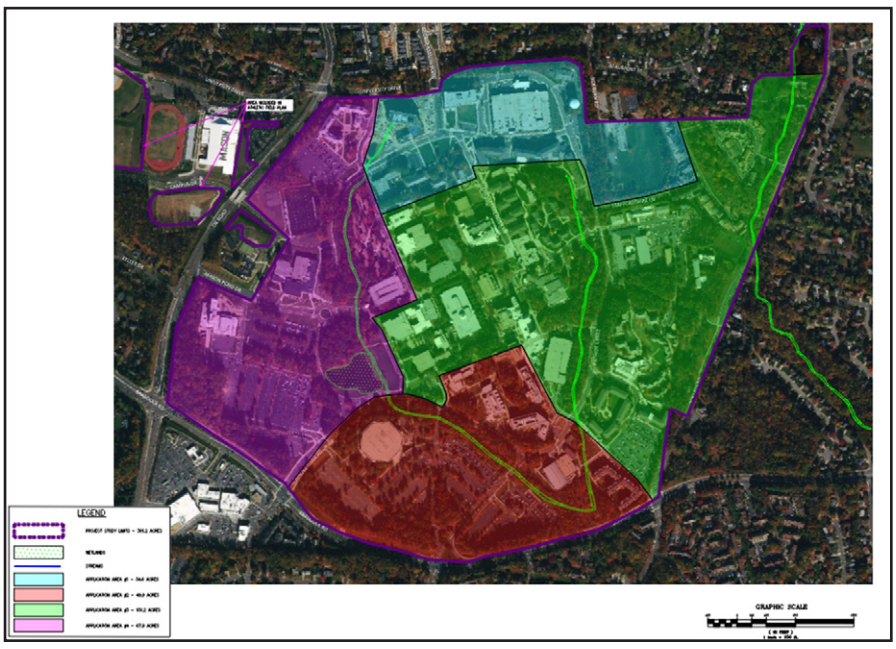
Through an On-Call Term Contract, Bowman provides stormwater management (SWM) program support services to George Mason University. Recently, Bowman developed Nutrient Management Plans as required by Mason's MS4 Program and State regulations.

Site Identification and Soil Testing. Across all Mason campuses, Bowman identified locations for testing based upon mapped soil type, land area, and land cover type (forested, manicure turf, athletic fields, and landscape/planting beds). This resulted in sampling 48 sites across four campuses in two counties. The soil samples were extracted and sent to a certified laboratory for testing. In addition to the soil samples, soil penetrometer readings were taken to determine compactness.

Nutrient Management Plan. Based upon the returned soil test results, Bowman developed soil amendment strategies to improve each of the respective tested areas. The recommended strategies included practices such as nutrient amendments and aeration. The Nutrient Management Plan included application rates and frequencies.

DCR Review and Approval. Bowman submitted the Nutrient Management Plan to the Department of Conservation and Recreation (DCR) for their review and approval.





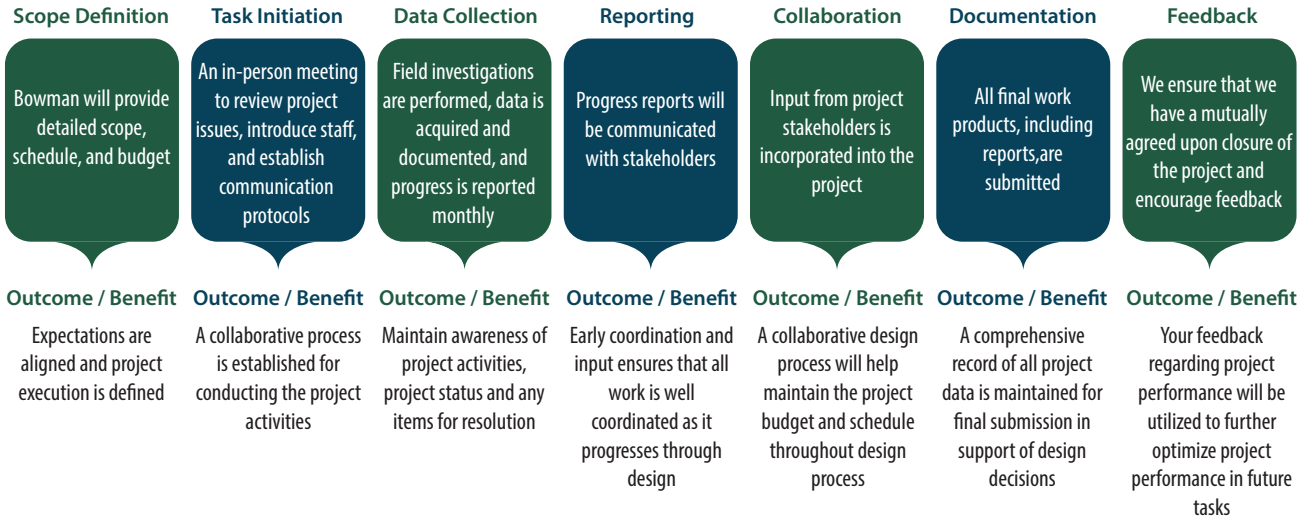
APPROACH TO FULFILLING PUBLIC WORKS PROJECTS

Bowman's experience with multi-discipline projects, coupled with our established presence in the greater Northern Virginia area, provides us with a unique perspective to planning, designing, permitting and providing engineering and construction phase support services for local projects within budgets and defined schedules. Bowman has extensive and proven engineering and construction consulting experience on projects of varying scope, scale, and complexity. Effective execution of task order contracts requires clear delineation of scope of work, streamlined communication and accountability of all stakeholders, as well as a team collaborative approach with both internal resources and subconsultants. We are accustomed to serving our clients both on stand-alone projects, as an engineering consultant, as well as staff augmentation roles supporting their internal resources.

Accordingly, Bowman's approach to delivering a successful task order within budget and on time begins with a clear understanding of the goals, scope, deliverables, budget, schedule, and involved stakeholders. On stand-alone projects, and based on this initial information, we develop a project-specific management plan that delineates organizational structure, staffing, deliverables, and associated schedule, including progress and review meetings. As part of our approach to the execution of individual assignments within a multi-task contract, it is important to understand several factors that may influence the project objectives, such as local site conditions, project-specific details and performance requirements, client-driven operational needs, community interface, seasonal restrictions, safety requirements, timelines, or legislatively mandated criteria. It is with this understanding that for each task, we evaluate the critical objectives and obstacles; implement best practice approaches, cost effective and practical solutions; and implement such through engagement in all phases of the project. If serving in a staff augmentation role, we again bring these insights and contributions as part of the client's integrated team of resources and support the tasks at hand as required.

Our project execution efforts are aimed at matching the right skill set to the project task, thereby ensuring effective and efficient use of resources. At Bowman, we instill a culture of consistency and high-quality performance through the preservation of personnel continuity on tasks through the life of the contract and the persistent pursuit of excellence through professional growth and innovation. Continuity of proven performers and preservation of project institutional knowledge yields quality performance and successful delivery metrics.

While we are prepared to work on portions of a project (ex. only a feasibility report or environmental assessment), our approach to developing our work product follows a total-project-lifecycle mentality, as reflected in the workflow graphic below.



Cost Control

When it comes to cost control we look at both controlling the project's construction costs as well as our own consultant costs for performing under a task. Regarding consultant costs, Bowman's approach to meeting required budgets for tasks begins with a clear understanding of the scope of work, deliverables, and stakeholders. Our efforts are aimed at matching the right skillset to the required work to ensure that we get the job done right from the start and we optimize our resources. In addition, we preserve staff continuity to avoid time spent in developing institutional knowledge by multiple staff and build on the efficiencies gained by well-performing teams of our assigned staff.

Regarding cost estimates for construction and monitoring such, we bring expertise from contractor-trained estimators that allows for reliable cost estimates that will be in line with the range of bids and avoid reprogramming due to bid escalation. Our estimates take into account market conditions for materials and labor, as well as project related risks in terms of site conditions, operations and contracting market to ensure appropriate markup factors are applied to estimated quantity pricing and to develop the engineer's estimate.

Schedule Management

Managing project schedules to achieve timely delivery of services requires both a streamlined approach to resource allocation to complete tasks within required timeframes as well as balancing the requirements of engaged outside stakeholders who interface with our projects to receive and integrate their input in a timely manner.

At the start of each task, we develop a Work Breakdown Structure of anticipated project activities, both internal and external to our team, and assign durations based on our projected resource allocation. We look for ways to achieve time management efficiencies by standardizing processes and identifying concurrent activities to compress overall project duration. With regard to external agency interface, our team's robust experience with various agencies in and around Vienna has allowed us to build strong local relationships and jurisdictional institutional knowledge that lead to effective engagement and timely incorporation of the Town's requirements. A critical strategy that we take early in a project's development is the proactive engagement with permitting agencies. By staying mindful of approval requirements and timelines, we can plan subsequent tasks accordingly to ensure no production delays. Our key personnel regularly interface with agencies that the Town can expect to coordinate with, including DEQ, VDOT, and others.

Resource Management

As reflected in our organizational chart later in this package, Bowman has assembled a full-service and well-rounded team of professionals to address every aspect of this contract. This team of professionals is led by the project manager, Brad Glatfelter, P.E.,who will be the Town's primary liaison executing the work. Brad has a varied resume of civil, transportation and utility engineering and construction consulting assignments on projects similar to the Town's CIP portfolio. He has experience working in Vienna and has worked with his key staff for years on similar work; thus, there is a strong foundation of team cohesion in executing this work. Bowman prides itself in not only committing the right staff to the job but also keeping them committed to the job for the duration of it; this preserves continuity of institutional knowledge and consistency of work product which in turn leads to success. Our resource plan is aligned with our schedule of performance; each team member is resource-loaded into the production schedule discussed above and aligned with deliverables. For staff augmentation positions embedded within the Town's departments, we ensure that staff placed have been with our firm a minimum of one year so they can be trained in our practices and represent us well with clients. Our staff combine strong technical knowledge with multi-tasking and communications skills which allows them to fill multiple roles under the contract.

A key management role is receiving feedback from the Town on staff performance and integrating that feedback as appropriate within the team. Based on this feedback, we plan future tasks and, if appropriate, propose maintaining proven performers to support the Town as needed.

Stakeholder Management

Streamlined communications and a collaborative working relationship among project stakeholders are key to Bowman's service delivery practice. Our project manager will work with the Town to develop a communication and distribution matrix to ensure information is shared with the right people in a timely manner. Ongoing project communications may be carried out via virtual meetings or in-person with appropriate protections and at established milestones through the evolution of each project. In parallel with in-person engagements to discuss project progress, Bowman is also prepared to implement an electronic platform to share project-related information using SharePoint or other Town-preferred web-based tools.

02 Team Identification and Organizational Chart

Team Identification and Organizational Chart

FIRM AND SUB-CONSULTANT IDENTIFICATION

Listed below are the primary representatives of our team, along with the company information requested in the RFP.

Bowman Consulting Group Ltd. (Bowman)
Primary Representative: Brad Glatfelter, PE, Principal/Sr. Project Manager
Address: 13461 Sunrise Valley Drive, Suite 500, Herndon, VA 20171
Phone: 703.464.1000 | *Fax:* 703.481.9720 | *Email:* bglatfelter@bowman.com
Local Office Locations: Reston, VA (Headquarters), Herndon, VA (two office locations), Leesburg, VA, Manassas, VA
Business Type: Corporation

Alpha Corporation
Primary Representative: Sara Power, Structural Operations Manager
Address: 21000 Atlantic Boulevard, Suite 400, Dulles, VA 20166
Phone: 703.450.0800 | *Fax:* N/A | *Email:* sara.power@alphacorporation.com
Local Office Locations: Dulles, VA
Business Type: Corporation

CES Consulting LLC
Primary Representative: Chowdhary Gondy, PSP, PMP, CCP, DBIA, Executive Vice President
Address: 4245 Sigler Road, Warrenton, Virginia 20187
Phone: 571.402.9162 | *Fax:* N/A | *Email:* cgondy@ces-consultingllc.com
Local Office Locations: Warrenton, VA, Dulles, VA
Business Type: Corporation

DMY Engineering Consultants
Primary Representative: Peng "Paul" Zhang, PE, Vice President
Address: 4170 Lafayette Center Drive, Suite 500, Chantilly, VA 20151
Phone: 703.665.0586 | *Fax:* 301.768.4169 | *Email:* pzhang@dmyec.com
Local Office Locations: Chantilly, VA, Gaithersburg, MD
Business Type: Corporation

Peck Peck & Associates
Primary Representative: Alexis Peck, AIA, Vice President
Address: 12506 Lake Ridge Drive, Suite C, Woodbridge, VA 22192
Phone: 703.690.3121 | *Fax:* 703.494.0592 | *Email:* apeck@peckpeck.com
Local Office Locations: Woodbridge, VA
Business Type: Corporation

PROJECT MANAGER AND KEY STAFF

Bowman values the importance of committing seasoned and highly qualified staff, as well as maintaining key staff continuity for on-call contracts to both achieve quality of service and also preserve institutional knowledge with the client and projects. For this contract, we are prepared to commit our key staff members who bring both proven performance credibility and deep regional knowledge. Leading our team will be **Brad Glatfelter, PE,** contract/project manager, who has over 15 years of experience leading or supporting infrastructure projects in Northern Virginia. Below are brief introductions to our key team leaders and members. Together with our supporting staff and sub-consultants, the Bowman team possesses the skills, expertise, and experience necessary to successfully execute projects for the Town of Vienna.

Brad Glatfelter, PE | *Project Manager*

Brad is an experienced manager in Bowman's Fairfax office and has over15 years of civil and transportation infrastructure experience for local, state and federal agencies, institutions, and private entities. Many of his assignments have been performed within traffic and utility-congested urban environments involving multiple stakeholders, both public and private, and similar in scope to those anticipated by the Town of Vienna. He has extensive knowledge of all stages of design, construction, and program management. Brad combines strong technical and management skills with extensive construction knowledge, having supported constructability reviews and construction quality oversight for multiple projects. Another important area of qualification for Brad is his extensive experience managing similar task order type contracts in Fairfax County, Arlington, Manassas Park, and other localities in Northern Virginia. He has worked for years with all our sub-consultants, and the staff we are proposing for this contract, and he brings strong leadership skills to execute the work. Brad is industry-recognized locally in related subject matter areas; he has previously been accepted by the District of Columbia Zoning Commission (ZC) as an expert witness for Planned Unit Development (PUD) applications, and he also assists the Virginia Department of Environmental Quality (DEQ) as a subject matter expert in regard to erosion and sediment control and stormwater management.

Scott Delgado, PE

Principal-in-Charge

Scott will oversee the execution of this contract and conduct quality control measures as the principal-in-charge. Scott has over 30 years of extensive experience designing and managing civil engineering projects for municipal, state, and federal clients, with emphasis on urban projects in Northern Virginia and the Washington, DC area. He is responsible for ensuring quality design while meeting all time constraints. Scott has served in this capacity for our recent/ongoing on-call contracts with Fairfax County DPWES and Park Authority, City of Manassas Park, and Arlington Public Schools, all for whom Bowman has completed related projects.

Roy Waugh, PE

QA/QC Advisor

Roy will serve as the QA/QC advisor and value engineering supervisor for the various civil engineering and related task orders and project assignments. As a principal in the firm, Roy focuses on the area of risk management, and he was instrumental in developing Bowman's Quality Assurance/Quality Control Plan, Safety Program, and CAD Standards. His responsibilities will include ensuring that all deliverables are compliant with these protocols and are of the highest quality. Roy also provides construction phase assistance, as necessary to troubleshoot problems in the field and ensure that the project schedule and budget are upheld.

Joe Riley-Ryan, PE

Lead Civil Engineer

Joe is a water resources engineer with more than nine years of stormwater management experience in Fairfax County, including six years designing and managing projects for the Stormwater Planning Division. Additionally, Joe has a strong background in land development design, hydrologic and hydraulic analysis and design, stormwater management issues and approaches, public capital project management, governing regulations and policies, coordinating utility relocations, community relations, coordination with a wide array of stakeholders to garner support for projects and land rights acquisition, and construction administration and inspections. For the Fairfax County Stormwater Planning Division, Joe helped develop the stream assessment parameters and scoping form and participated in annual stream restoration scoping efforts to prioritize restoration projects. He identified degraded outfalls that fell more in the scope of MSMD and recommended them for new outfall restoration projects.

Brent Evans, LS
Survey Manager

Brent has over 20 years of experience in the land survey industry. He is skilled in the preparation of topographic and boundary surveys, ALTA/NSPS surveys, subdivision plats, as-built drawings, easement plats, and legal descriptions. Brent has provided his trusted survey and management services for various public facilities, including those maintained by Fairfax County. For the Town, Brent will oversee all survey efforts, coordinating with Bowman's large roster of local surveyors and technicians.

Jessica Fleming, PWD, QEP
Lead Environmental Scientist

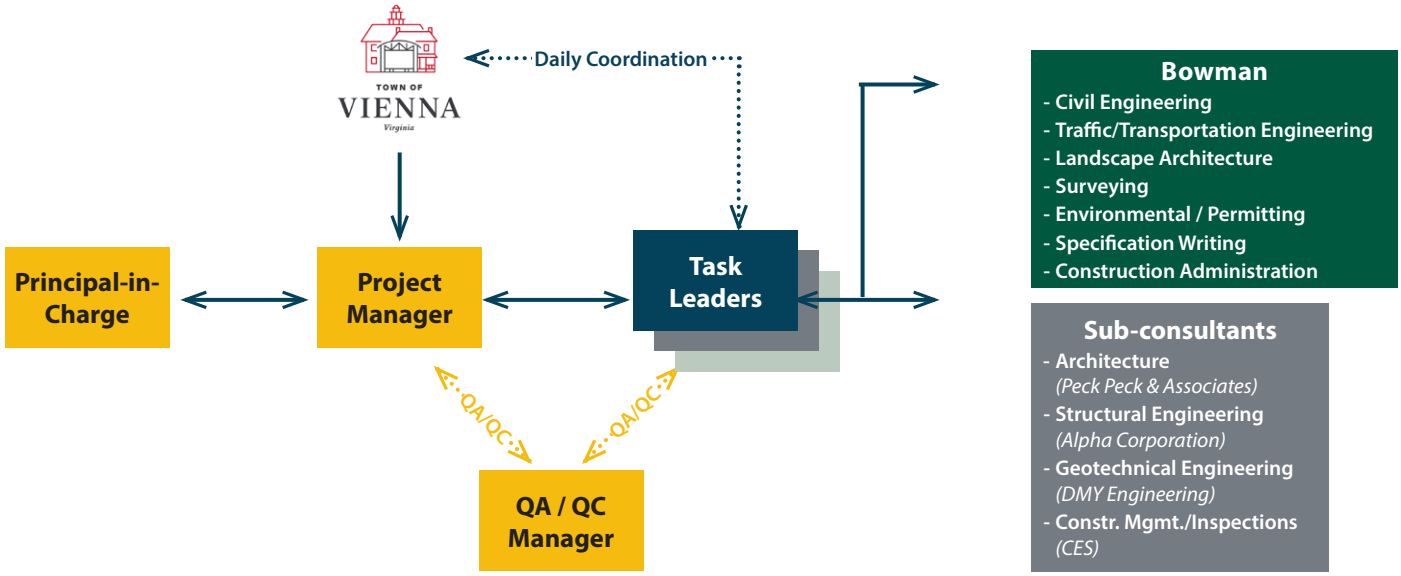
Jessica is responsible for managing Bowman's environmental department, and has over 20 years of experience related to wetlands, streams, natural resources, and the environment. She manages both public and private sector projects throughout Virginia, from small to large scale and for recreational, educational, residential, commercial, industrial, municipal, military, utility, and transportation clients. She also has ample experience coordinating projects with the U.S. Army Corps of Engineers (USACE), state environmental agencies, and local jurisdictions.

TEAM REPORTING STRUCTURE

As reflected in our organizational chart on the following page, Bowman has assembled a full-service and well-rounded team of professionals to address every aspect of this contract. This team of professionals is led by the project manager, **Brad Glatfelter, PE**, who will also be the Town's primary point of contact. For each task, he will assign a **task leader** whose qualifications and experience will align with task requirements and who will be coordinating with other Bowman staff and sub-consultants as necessary. This **task leader** will serve as a liaison with the Town's project manager for daily project task coordination and status updates. **Brad** and the **task leaders** will work with the Town to develop a communications protocol among stakeholders, as well as a distribution matrix for all task-related documents (correspondence, reports, plans, specs, reference guides, other information).

Work products will be aligned with personnel in their respective disciplines and executed under the oversight of a **task leader** who will review the deliverables using a formal QC process. Throughout each task, QA reviews will be conducted by **our Principal-in-Charge, QA/QC Manager, and Brad.** They will perform sample reviews of work products from all disciplines, including verifying the basis of design, content, and deliverables, as well as the qualifications of the staff preparing and reviewing the work. Task-related deliverables will be issued as the design progresses at regular intervals (generally, 30%, 60%, 90%, pre/post bid, and 100%). This will ensure that dated copies of each document are recorded, eliminating duplication and inadvertent release of incorrect material, outdated versions, or release to unauthorized individuals.

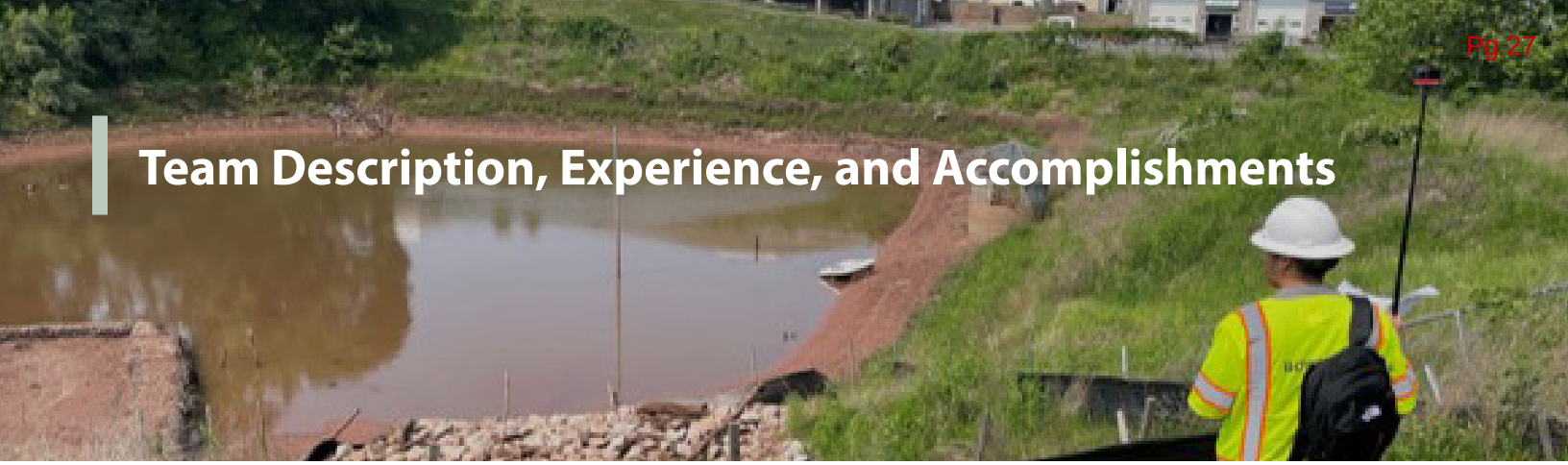
The diagram below demonstrates how the Bowman team is organized in a streamlined way that promotes communication, collaboration, and accountability at all levels.



ORGANIZATIONAL CHART

As reflected in our organizational chart below, Bowman has assembled a full-service and well-rounded team of professionals to address every scope item listed in **4. Scope of Work** in the RFP. Resumes of these key personnel are presented in the next section of this proposal. For ease of navigation, clicking on a team member's name will direct you to their resume.

Team Description, Experience, and Accomplishments



Team Description, Experience, and Accomplishments

RESUMES OF KEY STAFF

Presented on the following pages are resumes of our key staff listed on the organizational chart in the previous section. These demonstrate the professional qualifications, capabilities, experience, and education/training of the personnel that we anticipate engaging on projects for the Town of Vienna.

CURRENT WORKLOAD

Even though Bowman is currently engaged as a prime holder of a number of on-call contracts and also regularly serves as a consultant to other architects, developers, or contractors on a wide variety of projects, we are fully capable of committing our proposed team to any project need that may arise through this contract. Additionally, with **over 150 staff in the Northern Virginia area**, we are able to supplement our team with additional resources as necessary, should the need arise. Under the supervision of our project manager, our lead civil engineer, **Joe Riley-Ryan, PE**, will be the primary task fulfiller, supported by his team of staff engineers whom he directly oversees. Including himself, his team is generally comprised of 5 full-time team members consisting of 2 licensed professional engineers, 2 staff engineers, and 1 draftsman/designer. **Table A** below lists the main contracts/projects in which our primary design team, based in our Fairfax office, is currently involved.

Table A: Current Foreseeable Workload for Primary Design Team

Project/Contract Name, *Client*	**Est. Annual Value**	**Scope of Work**	**Compl. Date**
Civil Engineering & Related Services Open-End Contract, *Fairfax County Park Authority*	$250,000	Arborist, Civil Eng., Environmental, Land Planning, Landscape Arch., Surveying, SWM	2025
On-Call Civil Engineering Services, *City of Manassas Park*	$500,000	Arborist, Civil Eng., Environmental, Surveying, SWM	2026
Various Private Mixed-Use/Commercial/ Residential Developements, *Various Clients*	$4+ Million	Arborist, Civil Eng., Environmental, Land Planning, Landscape Arch., Surveying, SWM	Various

Bowman

Brad Glatfelter, PE

Project Manager

Office Location

Bowman - Fairfax

Education

B.S., Civil, Environmental, and Infrastructure Engineering, George Mason University, 2008

Licenses/Certifications

Professional Engineer:
- Virginia (#0402050992)
- Maryland (#46134)
- Washington, DC (#PE907970)

VA Construction Contracting Officer

DEQ Erosion & Sediment Control Combined Administrator (DCA 0108)

DEQ Stormwater Combined Administrator, Virginia (DCA 0108)

DCR Certified Nutrient Management Planner (CN 802)

ENVISION SP

Brad is an experienced manager with 15 years of civil and transportation infrastructure experience for local, state and federal agencies, institutions and private entities. Many of his assignments have been performed within traffic and utility congested urban environments involving multiple stakeholders, both public and private, and similar in scope to the Town of Vienna contract. Brad combines strong technical and management skills with extensive construction knowledge. Brad has extensive experience managing similar task order type contracts in localities including Manassas Park, Fairfax County, Arlington County, and Alexandria. Locally, Brad is industry-recognized in related subject matter areas, and he also assists the Virginia Department of Environmental Quality as a subject matter expert in regard to E&S control and SWM.

Experience

Civil Engineering Services, Fairfax County Public Schools | *Fairfax County, VA*
Project manager. Bowman is currently providing survey, engineering, and landscape/arborist services on an as-needed basis. Anticipated projects might include security upgrades, ADA improvements, drainage improvements, and playground improvements.

Comprehensive Civil Engineering Basic Ordering Agreement | *Manassas Park, VA*
Project manager. Oversees roadway design, grading and drainage studies, various surveys, feasibility studies, streetscape planning, landscape plans, specifications, and construction administration services. Projects include culvert replacements, the extension of Conner Drive, plans for supplemental safety measures for railroad quiet zones, and reviews of final site and subdivision plans and other infrastructure improvements.

Open Term Contract, Fairfax County Park Authority | *Fairfax County, VA*
Civil project manager. Oversees multiple task order contracts with the FCPA. Projects have consisted of various civil engineering, surveying, landscape architecture, and environmental services for multiple facilities owned by the Park Authority, including naturalized, athletic, active and/or passive recreational facilities. Bowman has managed over 100 projects under these contracts with values ranging from $15,000 to $450,000.

Various Civil Engineering Tasks, Smithsonian Institution | *Front Royal, VA & Washington, DC*
Civil project manager. Manages infrastructure upgrades at the Smithsonian Conservation Biology Institute and National Zoological Park. Services provided have included civil engineering and survey services including topographic survey, utility designation, tree inventory, and geotechnical consultant coordination. Acts with delegated authority from DEQ to manage and implement the ESC and SWM Programs including authorship of the Annual Standards and Specifications.

George Mason University Nutrient Management Plans | *Fairfax, VA*
Bowman developed Nutrient Management Plans as required by Mason's MS4 Program and State regulations. Bowman identified locations for testing based upon mapped soil type, land area, and land cover type (forested, manicure turf, athletic fields, and landscape/planting beds). Based upon the returned soil test results, Bowman developed soil amendment strategies to improve each of the respective tested areas Bowman submitted the Nutrient Management Plan to the Department of Conservation and Recreation (DCR) for their review and approval.

Bowman

Scott Delgado, PE

Principal-in-Charge

Office Location

Bowman - Fairfax

Education

M.S., Construction Engineering, Illinois Institute of Technology, 1996

B.S., Civil Engineering, Syracuse University, 1992

Licenses/Certifications

Professional Engineer:
Virginia (#0402032661);
Maryland (#31542);
Washington, DC (#PE901159);
Illinois (#062051641)

Scott is an Executive Vice President managing Bowman's Washington, DC Region. He has more than 30 years of extensive experience designing and managing civil engineering projects for VDOT, federal, state, and municipal clients, with emphasis on urban projects in Northern Virginia and the Washington, DC area. He is responsible for ensuring quality design while meeting all time constraints.

Experience

Stormwater Management Basic Ordering Agreement | *Fairfax County, VA*
Principal-in-charge for this basic ordering agreement since 2012. He has continuously worked with the County managing over 150 stormwater tasks of various size. More specifically, Bowman's assistance has involved projects designing and implementing water quality and quantity control measures, conducting inspection and maintenance programs, and providing technical support to the county and residents.

Comprehensive Civil Engineering Basic Ordering Agreement | *Manassas Park, VA*
Principal-in-charge for this BOA since 2015, overseeing more than 30 tasks of varying size and complexity including the recent emergency Moseby Drive Culvert Replacement project. Bowman's services have included roadway design, grading and drainage studies, various surveys, feasibility studies, streetscape planning, landscape plans, construction drawings, specifications, and construction administration services.

Open Term Contract, Fairfax County Park Authority | *Fairfax County, VA*
Principal-in-charge for multiple task order contracts since 2012, having overseen more than 60 tasks of varying size and complexity. Projects have consisted of various civil engineering, surveying, landscape architecture, and environmental services for multiple facilities owned by the Park Authority, including naturalized, athletic, active and/or passive recreational facilities. Bowman has managed over 100 projects under these contracts with values ranging from $15,000 to $450,000.

Various Civil Engineering Tasks, Smithsonian Institution | *Washington, DC*
Principal-in-charge for these task order projects since 2014, having overseen more than 25 projects involving infrastructure upgrades at the Smithsonian National Zoological Park. Services provided have included civil design, survey, utility designation, tree inventory, and geotechnical consultant coordination. Bowman acts with delegated authority from DEQ to manage and implement the ESC and SWM Programs including authorship of the Annual Standards and Specifications.

On-Call Engineering Services Contract, Arlington Public Schools | *Arlington, VA*
Principal-in-charge for this on-call contract since 2011, having overseen more than 25 projects involving civil design, land survey, and environmental services. Projects have included drainage improvements, CIP planning/budgeting, design of bus parking facilities, and installation of relocatable facilities at numerous schools in the county. More specifically, services include SWM, drainage improvements, construction phasing plans, dry utility design, and ADA compliance.

Maple Avenue| *Vienna, VA*
Bowman's scope of services included over a mile of comprehensive streetscape enhancement and pedestrian improvements. Bowman coordinated and/or performed existing parcel, easement and right-of-way research and constructed the deed composite map for this highly developed retail and residential community corridor.

Bowman

Roy Waugh, PE

QA / QC Advisor / Plan Reviewer

Office Location

Bowman - Fairfax

Education

B.S., Civil Engineering, Virginia Tech, 1983

Licenses/Certifications

Professional Engineer:
Virginia (#0402018683)

With more than 36 years of experience in civil engineering, land planning, zoning, site planning, subdivision design and roadway and infrastructure design, Roy manages the strategic direction of engineering services for Bowman. He has established strong partnerships with representatives of the political arena and is well versed in state and county standards and regulations governing all aspects of civil engineering design. Roy focuses on the area of risk management and developed Bowman's QA/QC plan.

Experience

Engineering Plans Review | *Various Locations, VA & DC*
As a Quality Control Professional, Roy provides in-house plan review services required by Bowman's Quality By Design program. This includes plans for projects/ sites in: Fairfax County, VA; Prince William County, VA; Arlington County, VA; Loudoun County, VA; Stafford County, VA; Spotsylvania County, VA; the City of Alexandria, VA; the Town of Leesburg, VA; the City of Manassas Park, VA; the City of Manassas, VA; the City of Fredericksburg, VA; and Washington, DC. In addition, Roy provides plan reviews as a virtual extension of the engineering staff for the City of Manassas Park and the Town of Leesburg under on-call municipal engineering contracts that Bowman holds with these jurisdictions.

Stormwater Management Basic Ordering Agreement | *Fairfax County, VA*
QA/QC Advisor. Project is an annual task order contract to provide engineering analyses for house flood mitigation, stormwater management pond retrofit design, LID design, and stream restoration. LID strategies have included the design of bio-retention facilities, constructed wetlands, vegetated swales, porous pavers and manufactured stormwater filtration systems to catch and treat stormwater runoff from impervious areas before release into the storm drain system. All projects included an evaluation of existing stormwater management facilities, utilities, topography, vegetation, and the site layout to determine the most effective design parameters of each project. This project was in support of the MS4 Compliance Permitting Program.

Loudoun Water Basic Ordering Agreement Contract | *Loudoun County, VA*
Principal-in-Charge. Roy was responsible for the contract administration including scoping, preparation of contract documents, negotiations, and scheduling. He was intimately invloved in the preliminary alignment studies including coordination with other utility companies and communications with adjacent and impacted property owners. Roy was responsible for the design review and quality control of all documents and deliverables.

Fairfax Village Neighborhood Center | *Fort Belvoir, VA*
Principal-in-charge for civil engineering and surveying services provided for the development of this 3,770-sf, LEED Platinum neighborhood center at Fort Belvoir. Innovative low impact development (LID) and SWM techniques were implemented in the site design, such as maintaining open green space, planting native, drought-tolerant plant species, and collecting rain water in rain gardens and other BMP devices. The building also utilizes photovoltaic panels, energy-efficient HVAC and controls systems, and geothermal energy.

Joint Base Anacostia-Bolling Parking Garage Demolition/Replacement | *Washington, DC*
QA/QC professional for the demolition of an existing multi-story parking garage and the design of a replacement parking lot and associated stormwater and utility infrastructure and landscaping at JBAB. Services included topographic and utility surveys, utility designation, and preparation of a comprehensive civil/site plan set. Bowman also prepared landscape plans for the perimeter parking lot trees/shrubs and general plantings of the integrated SWM facility.

Bowman

Joe Riley-Ryan, PE

Lead Civil Engineer

Office Location

Bowman - Fairfax

Education

M.S., Environmental & Water Resources Engineering, Virginia Tech, 2019

B.S., Civil and Environmental Engineering, Virginia Tech, 2013

Licenses/Certifications

Professional Engineer:
Virginia (#0402058773)
Maryland (#58106)

DEQ Certified Erosion and Sediment Control Combined Administrator

DEQ Stormwater Combined Administrator Certification

** indicates project was completed while employed at a different firm*

Joe is a proven civil engineer and project manager with ten years of extensive experience in stormwater management in Northern Virginia. He has a strong background in design and project management for municipal public works projects, community relations and coordination with a wide array of stakeholders.

Experience

Lower Potomac Ballfield Pond Retrofit | *Lorton, VA*
Lead civil engineer for the construction oversight and design revisions for an approximately 250-linear-foot step pool restoration of a pond outfall. Provided daily construction inspections and reports to the Fairfax County DPWES Staff to document the entire construction process, designed an extension of the outfall restoration to better tie in the project downstream, and performed as-built survey review to ensure the outfall channel was built per plan.

Moseby Drive Culvert Emergency Replacement | *Manassas Park, VA*
Lead project engineer. Following the collapse of a dual culvert under Moseby Drive, Bowman was called upon to lead efforts to restore the vital roadway connection to a townhouse community, as well as severed water and sanitary utilities. In less than six weeks from the collapse, the roadway was reopened to traffic. As the culvert crossing is located in a FEMA mapped floodplain, HECRAS modelling and FEMA coordination was required.

Lower Kent Drive Drainage Study | *Manassas Park, VA*
Lead project engineer for a detailed H&H study within a 60-acre area in Manassas Park. Bowman was tasked to quantify flooding and illustrate the extents of overland flow within residential neighborhoods using PCSWMM modeling software. Bowman also performed an existing floodplain analysis using HEC-RAS software. Additionally, the team provided several concept plans with the intent of minimizing flooding risk to homes and other property.

Upper Kent Drive Reconstruction | *Manassas Park, VA*
Lead engineer for a project to upgrade aging infrastructure within the right-of-way including replacement of public water service lines and sewer laterals for 31 lots, rebuild the roadway with a heavier duty asphalt section to withstand anticipated traffic levels, and make various pedestrian upgrades to meet current accessibility requirements. Presented the plan to the governing body for approval and provided construction administrative services including weekly progress inspection reports to the City and developed punch list.

Stormwater Capital Project Manager* | *Fairfax County, VA*
Civil engineer responsible for implementing Fairfax County Stormwater Planning Division's Watershed Management Plan projects in the northern watersheds of the County from 2013 through 2019. Projects included stream and outfall restoration, pond retrofits, retrofits to install new green infrastructure at County parks, schools, and government buildings, and lake dredging and restoration. Duties included developing scopes of work for design services, managing design task orders, performing in-house green infrastructure design, performing DEQ Stormwater Management and Erosion and Sediment Control plan reviews, leading public meetings, design charettes, and field visits with community members, coordinating with various County and State stakeholders, assisting with SLAF grant applications, managing construction, tracking TMDL project benefits, and conducting post-construction monitoring.

Bowman

Steve Liam, PE

Senior Civil Engineer

Office Location

Bowman - Fairfax

Education

B.S., Civil Engineering, Virginia Tech, 2000

Licenses/Certifications

Professional Engineer:
Virginia (#0402040224);
Maryland (#34211);
Washington, DC (#PE901521)

Steve has more than 20 years of comprehensive experience, Steve has comprehensive experience working in all facets of land development. Steve oversees projects from onset to completion, working with the client on proposals, scheduling, cost estimates, and budgeting. Additionally, he coordinates with local jurisdictions in obtaining approval of the plans in a timely manner, and he addresses RFIs, submittals, and inspections during construction.

Experience

Difficult Run Watershed Improvements | *Fairfax County, VA*
Senior civil engineer for the SWM improvements at three locations. Three Level 1 bioretention basins were designed and constructed on the grounds of the Oakton Swim and Racquet Club. Approximately 400 feet of stream channel in the Oakton Estates community was stabilized and protected using rock vanes, cross vanes, log sills, and imbricated rock walls. Additionally, an existing pond in the Penderbrook community was converted to a Level 1 Wetland pond to improve pollutant removal.

Hayfield Farm Pipe Conveyance | *Fairfax County, VA*
Senior civil engineer for this project which began with an investigation on periodic flooding in the Hayfield Community. An analysis was performed on the entire watershed to understand the existing HGL line along the existing infrastructure. Options that could eliminate or decrease the HGL line were developed. Bowman provided a cost basis analysis to determine the best option, which was to develop a new conveyance pipe to handle the 10-year and 100-year water discharge.

Lyles Crouch Traditional Academy Drainage Improvements | *Alexandria, VA*
Senior civil engineer for drainage improvements at Lyles Crouch Traditional Academy. Oversaw detailed site inspections and asset assessment, and developed a strategy to address the recurring flooding at the school. LID/Green infrastructure elements were incorporated into the parking lot to reduce the peak flow and provide stormwater quality treatment. Geotechnical consultants were engaged to conduct pavement stability and integrity assessments.

Lower Potomac Ballfield Pond Retrofit | *Lorton, VA*
Senior civil engineer for the design and construction of pond retrofits to the existing SWM facility at this ballpark. The design retrofit provides enhanced water quality treatment for the drainage area to the subject facility. The retrofit design included Constructed Wetlands (High and Low Marsh), Cascading Micro-Pools, and a Reinforced Plunge Pool. An Adequate Outfall Analysis for the 1-, 2-, 10-, and 100-year hydrologic events was performed per PFM § 6-0201.2.

Joint Base Anacostia-Bolling Facilities Operations Center | *Washington, DC*
Senior civil engineer for the site design for a 22,000 sq. ft. office building. Work included erosion control measures, design of a 111-space parking lot, new electrical and equipment pads, a new chiller pad and chiller supply and return lines, high-temperature-hot-water supply, and other utility relocations. Additionally, designs included underground water quality facilities to serve the newly created impervious areas, as well as a landscape plan for adjacent paths and a courtyard.

Centreville Green Ponds Retrofit | *Clifton, VA*
Senior civil engineer for the design and construction of the installation of pond retrofits to the existing SWM facilities at two ponds located in the Union Mills subdivision in Clifton. The facilities are located within the Little Rocky Run Watershed in Fairfax County. The design retrofits provide enhanced water quality treatment for the drainage area to the subject facility. The retrofit design included Constructed Wetlands (High and Low Marsh) and Cascading Micro-Pools.

Bowman

Jennifer Portillo, PE

Senior Civil Engineer

Office Location

Bowman - Fairfax

Education

M.S., Civil, Env. & Infrastructure Eng., George Mason University, 2019

B.S., Civil, Env. & Infrastructure Eng., George Mason University, 2017

Licenses/Certifications

Professional Engineer:
- Virginia (#0402062352)
- Washington DC (PE40000117)
- Maryland (#57811)

DEQ Stormwater/ Erosion & Sediment Control Dual Combined Administrator (DCA0400)

Jennifer is a project manager and design engineer with more than 5 years of extensive experience designing and managing civil engineering projects in Northern Virginia with an emphasis on urban redevelopment, stormwater management solutions, and Erosion and Sediment Control inspections. Additionally, Jennifer is responsible for coordinating with project consultants and county reviewers, developing design documents, and conducting construction/post-construction inspections.

Experience

Town of Vienna Single-Family Development| *Vienna, VA*
Project engineer for the redevelopment of multiple single-family homes in the Town of Vienna. Services provided include civil engineering services, pre-development and post-development soil sample collection, and development of nutrient management plans. Civil engineering services include site visits, construction documents, and coordination with Town of Vienna reviewers.

Various Civil Engineering Tasks, Smithsonian Institution | *Front Royal, VA & Washington, DC*
Project engineer for multiple projects involving infrastructure upgrades at the Smithsonian Conservation Biology Institute and National Zoological Park. Services provided have included civil engineering and survey services including topographic survey, utility designation, tree inventory, and geotechnical consultant coordination. Performed E&S Control Inspections due to the land disturbance from the on-site utility upgrades at the Smithsonian Conservation Biology Institute located in Front Royal. Site inspections included the assessment of temporary and permanent stabilization, inlet protection maintenance, silt fence replacement, etc. Each inspection was documented in an environmental compliance report to indicate the violations, corrective actions required, and the corrective action deadline.

Clemyjontri Park Improvements | *McLean, VA*
Design engineer for a parking lot expansion with associated bioretention basin at this FCPA site. Provided daily inspections during the construction of the bioretention basin to ensure the facility was properly installed, that the design specifications of the approved plan were followed, and that all E&S control devices where installed and functioning properly. Additionally, reviewed and approved submittals for construction materials and conducted post-construction inspections.

City of Manassas Park - TMDL Action Plan | *Manasses Park, VA*
Lead engineer for the development of the TMDL Action Plan in accordance with the MS4 General Permit. Using available VEGIS imagery, the City's total pollutants of concern reductions were quantified based upon the impervious and pervious acreages within the MS4 area and the required reduction loading rates for the Potomac River Basin. A study was completed to develop a cost-effective strategy to meet the City's pollutant reduction requirement. A supplemental Local TMDL Action Plan addressed bacteria and benthic impairments

Town of Vienna Stormwater Inspections | *Vienna, VA*
Inspector of stormwater facilities installed in residential single-family homes in the Town of Vienna. Services include site visits, certification package development, and submission and coordination with Town of Vienna staff. Site visits are conducted to determine the site is in compliance with the approved plans and to ensure the stormwater facility are functioning properly.

Bowman

Jacob Miller, PE

Water Resources Specialist

Office Location

Bowman - Fairfax

Education

B.S., Civil Engineering, Virginia Tech, 2016

Licenses/Certifications

Professional Engineer:
Virginia (#0402063929)

DEQ Certified Stormwater Inspector and Program Administrator

Rosgen Level 1: Applied Fluvial Geomorphology

** indicates project was completed while employed at a different firm*

Jacob is a water resources project engineer with more than 5 years of site development and stormwater management experience. He works on a professional design team that specializes in water resources projects, including FEMA floodplain modeling and compliance, hydrologic studies, dam breach analyses, and scour analyses for bridges and retaining walls.

Experience

Courtney Drive Drainage Studies | *Manassas Park, Virginia*
Project engineer for a detailed H&H study within a 140+ acre area in Manassas Park. Quantified flooding and illustrated the extents of overland flow within residential neighborhoods using PCSWMM modeling software. Performed an existing floodplain analysis using HEC-RAS software and provided several concept plans with the intent of minimizing flooding risk to homes and other property.

Laurel Hill Regional Park | *Lorton, VA*
Water resources project engineer for continued development of the "Central Green" facility and the new development of Areas E and F at Laurel Hill Park. Performed stormwater management design and computations in compliance with Fairfax County water quality and quantity regulations.

Lower Kent Drive Drainage Study | *Manassas Park, VA*
Project engineer for a detailed H&H study within a 60-acre area in Manassas Park. Quantified flooding and illustrated the extents of overland flow within residential neighborhoods using PCSWMM modeling software. Also performed an existing floodplain analysis using HEC-RAS software and provided several concept plans for minimizing flooding risk to homes and other properties.

NIH Building 15 Drainage Study* | *Bethesda, MD*
Project engineer for a drainage study performed to address stormwater management and flooding concerns for the entire north side of the NIH campus. Delineated drainage areas and field-verified stormwater as-built information. Modeled the campus stormwater network using Civil3D pipe design tools and computed flow through each pipe. Used computed flows to identify undersized stormwater structures and pipes and to analyze overland flow. Compiled a comprehensive drainage study report to discuss findings and methods of flood mitigation for the site.

City of Fairfax TMDL Action Plans and MS4 Annual Report* | *Fairfax, VA*
Wrote and contributed to reports for City of Fairfax's Chesapeake Bay TMDL Action Plan, Local TMDL Action Plans, and MS4 Annual Report. Assisted in conceptual designs for BMP retrofits and stormwater master plan in order to meet the City's pollutant reduction goals. Challenges included aiding the City with revising their pollutant load reductions as a result of updates to overall reductions claimed by street sweeping. All reports were approved by the DEQ and are posted on the City's Stormwater webpage.

Stormwater BMP and Outfall Inspections* | *Fairfax, VA*
Lead inspections of stormwater BMPs and outfalls throughout all of Loudoun County and the City of Fairfax, VA. Created GIS databases and mapping for all inspected BMPs and outfalls, detailing outstanding maintenance requirements.

Smithsonian Institution Stormwater Management and E&S Control Program | *Washington, DC*
Updated the Smithsonian Institution's Annual Standards and Specifications document for compliance with the Virginia ESC and VSMP Law and Regulations. The updated 2021 Annual Standards and Specifications were completed with Delegated Authority from Virginia Department of Environmental Quality.

Bowman

Robert Krallinger, PE

Wastewater Engineer

Office Location

Bowman - Williamsburg

Education

M.S., Civil Engineering, Virginia Tech, 1992

B.S., Civil Engineering, Pennsylvania State University, 1985

Registrations

Professional Engineer:
- Virginia (#0402022915)
- West Virginia (#106226)
- Maryland (#31577)

Associations

American Council of Engineering Companies

American Water Works Association

Water Environment Federation

Robert (Bob) has over 35 years of experience providing planning, design, and project management for numerous government agencies and water/wastewater utility agencies, including managing a prior annual consulting services contract with the City of Alexandria. He specializes in implementing public water supply and sanitation projects including pumping stations, water and sewer pipelines, groundwater supply systems, and water treatment plants. Bob has also conducted numerous water supply and sanitation studies and managed public outreach programs to enhance community understanding and acceptance. He also has extensive experience working with selecting alignments in or adjacent to VDOT roadways to obtain approval and effectively address maintenance of traffic issues during construction.

Experience

Basic Ordering Agreement Contract | *Alexandria, VA*
Program manager for an annual engineering contract which has included the development of a hydraulic model of the City's wastewater collection system and capacity evaluation services for the system as part of redevelopment planning projects thought the City. Also managed numerous stormwater drainage projects within the City including the historic Old Town waterfront area.

Byrd Drive Wastewater Pumping Station | *Fairfax, VA*
Project manager for the replacement of an existing wastewater pumping station with a new pump station and force main system which included controls, instrumentation and a diesel generator for emergency power.

Sanitary Sewer Model Development | *Prince William County, VA*
Project manager for the development of an all-new calibrated sewer model which included all of the PWC Service Authority's sewage pumping stations, force mains, and gravity sewers 12-inch and larger. The model included calibration and hydraulic analysis of the system for base flow conditions and wet weather events.

Pohick Trunk Sewer System Project | *Fairfax County, VA*
Project manager for a hydraulic analysis, final design, and permitting for a 60-inch sanitary trunk sewer that conveys flows to the Noman Cole WWTP in Fairfax County. The project included environmental permitting, alignment selection and easement acquisition, sewer condition assessments and rehabilitation of existing adjacent sewers and full design services for a new section of 60-inch diameter reinforced concrete sewer with a PVC lining system for corrosion protection.

Stafford County Utilities Basic Ordering Contract | *Stafford County, VA*
Contract manager and project engineer for an annual contract that included water and wastewater design for three elevated water storage tanks; water and wastewater pumping stations up to 2.5 MGD in capacity; and over 10 miles of water and wastewater force mains, gravity sewers, and transmission mains.

Bowman

Carlos Garcia, PE

Traffic / Transportation Engineer

Office Location

Bowman - Richmond

Education

Transportation Engineering Certificate, University of Pittsburgh

B.S. Civil and Environmental Engineering, University of Pittsburgh

B.S. Civil Engineering, University of Quindio, Columbia, South America

Registrations

Professional Engineer:
Virginia (#0402049766)
Registered in 10 other states

** Experience prior to joining Bowman*

Carlos has over 25 years of progressive transportation engineering experience through the U.S. His experience includes the preparation of traffic impact studies, and roadway and traffic signal plans to support commercial and residential land development. Carlos's experience in the public and private sectors has allowed him to navigate the permitting approval process from local and state reviewing agencies. Carlos is a "hands-on" leader who both manages but is also involved in business development, project management/coordination, client maintenance/liaison, invoicing, scheduling, staff supervision/mentoring, traffic engineering analysis, peer reviews, roadway design, and expert testimony.

Experience

Lakeview Avenue Modernization | *City of Colonial Heights, VA*
Lead traffic engineer responsible for preparation of traffic studies and design of traffic signal and bicycle/pedestrian facilities to support the proposed roadway improvements. The project included widening a current two-lane roadway to a three-lane section, adding bike lanes, and providing sidewalk improvements per VDOT standards. Project also included drainage improvements, replacement of water and sanitary sewer mains, utility relocations, and right-of-way negotiations/acquisitions.

Route 1 (Jefferson Davis Highway) Roadway Widening Project | *Stafford County, VA*
Project manager responsible for design of two traffic signals for the intersections of Route 1/Hope Road and Route 1/Courthouse Road. Additional responsibilities included pedestrian and bicycle accommodation and reconfiguration of traffic signal phasing to provide protected/permissive phasing for all approaches.

Claiborne Parkway Extension | *Loudoun County, VA*
Project manager responsible for the preparation of traffic studies to support the 4,000-foot extension of Claiborne Parkway from Ryan Road to Croson Lane. Tasks included the preparation of signal warrant studies, clearance times, left turn phase assessments, traffic forecast, pedestrian access, etc. This project also included the design and inspection of two traffic signals at the intersections of Claiborne Parkway with Ryan Road and Croson Lane.

Witchduck Road Phase II (Roadway Widening)* | *Virginia Beach, VA*
Project manager responsible for developing construction plans to widen Witchduck Road from a four-lane roadway to a six-lane divided roadway. The $22M project also included installation of a duct bank, relocation of underground utilities, relocation of overhead utilities to the duct bank, installation of a multi-purpose trail to accommodate bicycle and pedestrian traffic, and installation of bus shelters for local transit. Also responsible for the design and preparation of traffic engineering evaluation, traffic signal design at four intersections (permanent and temporary), maintenance of traffic, bicycle and pedestrian accommodation, signing and pavement markings, and QA/QC review for horizontal and vertical roadway design elements.

Traffic Township Engineer* | *Various Municipalities, PA*
Township traffic engineer for the following municipalities: Silver Spring Township in Cumberland County, West Manchester Township in York County and Washington Township in Dauphin County. Provided a full range of traffic engineering services that included traffic studies, signing and pavement marking installation, preparation of highway occupancy permits, traffic calming and traffic signal design. Also performed peer reviews related to land development applications, traffic impact studies, and highway occupancy permits.

Bowman

Michael Young, PE

Traffic / Transportation Engineer

Office Location

Bowman - Richmond

Education

B.S., Civil Engineering, Pennsylvania State University, 2014

Registrations

Professional Engineer:
- Virginia (#0402060103)
- Florida (#88244)

Associations

American Society of Highway Engineers

Institute of Transportation Engineers

** Experience prior to joining Bowman*

Michael has over eight years of transportation engineering experience and is responsible for project engineering tasks. These tasks include traffic impact studies, traffic signal design, parking studies, ITS and Tolling design, pedestrian and bicycle facilities planning, circulation studies, and multi-modal transportation planning. He has extensive experience with both commercial development and institutional facilities, including analysis, project coordination, and public involvement.

Experience

Claiborne Parkway Extension | *Loudon County, VA*
Project engineer for the traffic signal design of the intersections of Claiborne Parkway/Ryan Road and Claiborne Parkway/Croson Lane. Traffic signal design responsibilities included traffic signal timing calculations, flashing yellow arrow calculations, clearance timings calculations, pole and sign placement, and pedestrian accommodation and interconnection.

Rappahannock Landing Traffic Signal Design | *Stafford County, VA*
Project engineer for the design of a proposed traffic signal at the intersection of Olde Forge Road with US Route 17, in conjuncture with the Rappahannock Landing Development. Performed traffic signal design with tasks including pole placement, conduit layout, summary of quantities, and drafting proposed guide signs.

LIDL Transportation Impact Study | *Millcreek Township, Erie County, PA*
Conducted a transportation impact study for a proposed 36,170 square foot supermarket located along Edinboro Road and Interchange Road in Millcreek Township. The study included traffic impact analysis, traffic modeling, and development of transportation mitigation measures to accommodate the proposed development while adhering to PennDOT policy.

UPMC Mercy Institutional Master Plan Transportation Impact Study* | *City of Pittsburgh, Allegheny County, PA*
Project engineer for UPMC Mercy 10-year Institutional Master Plan, with projects including the new Vision and Rehabilitation Hospital. Assisted in a campus-wide parking demand study, with focus on patient/visitor convenience and accessibility in the new 1,100-space garage. Performed a traffic impact analysis and proposed several mitigation measures, including the retiming of the high-volume Forbes Ave/Fifth Ave one-way corridors in the study area. Developed several transportation demand management strategies to promote multi-modalism in the existing hospital and all other new developments in the 10-year envelope.

Waterview Marketplace Corridor Study | *Morris County, NJ*
Project engineer for a traffic signal optimization study to support the Waterview Marketplace development. Evaluated traffic signal timings at 10 intersections along US 46 to optimize the traffic signal coordination. The study included developing new cycle lengths, splits, and offsets in the corridor to promote and maintain traffic flow progression along with adequate levels of service.

Greensburg Healthcare District Smart Transportation Improvement Study* | *City of Greensburg, Westmoreland County, PA*
Project engineer for the design and layout of an extensive bicycle network in the downtown Greensburg area – including a protected bike lane on the congested Pittsburgh St/Otterman St one-way couple in the downtown network. Performed traffic data collection and evaluated roadway geometry across the entire City of Greensburg downtown network. Completed a total retiming of the traffic signal network across downtown Greensburg in order to mitigate the realignment of vehicular travel lanes with the implementation of the protected bike lane. Proposed several traffic calming measures to reduce the vehicular speed in the corridor in order to further protect bicyclists.

Bowman

Jessica Fleming, PWD, QEP

Lead Environmental Scientist

Office Location

Bowman - Fairfax

Education

M.S., Environmental Sciences and Engineering, Virginia Tech, 2005

B.S., Environmental Science, Virginia Tech, 1999

Licenses/Certifications

Professional Wetland Delineator: Virginia (#34020000115)

Qualified Environmental Professional: #05100013

Jessica is responsible for managing Bowman's Environmental Department and has over 20 years of experience related to wetlands, streams, natural resources, and the environment. She manages both public and private sector projects throughout Virginia, from small to large scale and for residential, commercial, industrial, municipal, recreational, military, utility, and transportation uses.

Experience

Fairfax County Stormwater Management Task Order Contract | *Fairfax County, VA*
Environmental project manager for wetland delineations, Jurisdictional Determinations from USACE, Section 404/401 wetland permitting, CBPA studies (RPA boundary delineations and Water Quality Impact Assessments), and VSMP Permitting and Stormwater Pollution Prevention Plan (SWPPP) preparations in support of SWM pond retrofit, LID design, and stream stabilization and restoration projects.

City of Manassas Park Comprehensive Civil Engineering Basic Ordering Agreement | *Manassas Park, VA*
Environmental project manager for wetland delineations, USACE JDs, Section 404/401 permitting, T&E Species evaluation, Section 106 historic resources review through DHR, SERP documentation, and VSMP permitting and SWPPP preparation in support of roadway design, grading and drainage studies and improvements, culvert replacements, and the extension of Conner Drive.

Lower Potomac Ballfield Pond Retrofit | *Lorton, VA*
Wetlands/Environmental Specialist for the installation of pond retrofits to the existing stormwater management facility at this Fairfax County ballpark facility. Water quality benefits in improving the degraded and eroded outfall channel were identified using Natural Channel Design principles.

Hal & Berni Hanson Regional Park | *Loudoun County, VA*
Environmental project manager for wetland delineation, USACE JD, and threatened and endangered species review for Section 7 ESA compliance in support of a new 259-acre multi-use athletic and recreational regional park providing a track and field, athletic fields, baseball and softball fields, tennis courts, disc golf course, trails, nature center and equestrian center, including improvements to five existing ponds and several stream reaches. Prepared a Joint Permit Application/Pre-Construction Notification for authorization of work in waters of the U.S. and wetlands, assisted with Section 106 coordination, and coordinated Section 404/401 permit issuance with USACE under Nationwide Permits 42 and 43. Completed VSMP permitting and SWPPP, and assisted County with procurement of wetland and stream credits as compensatory mitigation and permit compliance.

Sugarland Run Stream Restoration | *Herndon, VA*
Environmental project manager for wetland delineation, JD through the USACE, Section 7 ESA and Coastal Zone Management Act (CZMA) compliance in support of stream restoration measures along 1,100 LF of Sugarland Run and 250 LF of unnamed tributaries. Prepared a Joint Permit Application/Pre-Construction Notification, developed a monitoring plan for restoration activities, and coordinated Sec. 106 review with USACE/DHR and authorization under USACE Nationwide Permit 27.

Bowman

Gregg Eberly, PLA, ISA

Arborist / Landscape Architect

Office Location

Bowman - Fairfax

Education

Bachelor of Landscape Architecture, Pennsylvania State University, 2004

Licenses/Certifications

Prof. Landscape Architect:
- Virginia (#0406001428)
- Maryland (#3609)
- Washington, DC (LAR000046)

ISA-Certified Arborist: #MA-4616A

Gregg is a Project Manager in Bowman's Fairfax office and has more than 15 years of landscape architecture, arboriculture, civil engineering, and construction experience. He has extensive knowledge of all stages of design, construction, and program management. Gregg oversees a professional design team that is responsible for landscape architectural, arboricultural, land planning, and coordination with various federal, state, and local governmental agencies.

Experience

Sully Woodland Stewardship Education Center | *Fairfax County, VA*
Arborist/Landscape Architect for the preparation of the site plan submission for an education center in Ellanor C. Lawrence Park. Construction will include an educational center building, surrounding ADA-accessible trails, and a new parking lot. To meet the requirements for *Living Building Challenge* certification, design elements include a permeable parking lot built with salvaged pavers, wet swale stormwater BMPs, photovoltaic panels for power supply, well, and septic system.

Hayfield Farm Pipe Conveyance | *Fairfax County, VA*
Arborist/Landscape Architect for the Hayfield Farm stormwater improvements. Responsibilities included existing vegetation mapping, tree inventory, condition/species analysis and tree preservation plans. Work also included the preparation of site landscape plans addressing proposed streetscape improvements, stormwater infrastructure and Resource Protection Areas.

Lower Potomac Ballfield Pond Retrofit | *Lorton, VA*
Landscape Architect for the installation of pond retrofits to the existing stormwater management facility. Services included preliminary and final site plans, survey, environmental planning, and landscape architecture. The design provides enhanced water quality treatment for the drainage area to the subject facility. Design includes constructed wetlands (high and low marsh), cascading micro-pools, and a reinforced plunge pool.

Smithsonian Institution NZP Cheetah Complex | *Washington, DC*
Arborist/Landscape Architect. Managed an arboriculture assessment in a site analysis of the cheetah conservation station and surrounding grounds. Results have been used to inform the next stage of the project which will include design and construction of remedial solutions.

Ken Lawrence Park Stream Valley | *Tysons, VA*
Arborist/Landscape Architect for development of a stream valley restoration. Project included 1,000 LF of stream valley nature trail (including pedestrian bridge installation), 800 LF of urban stream restoration, and parking. Responsibilities included preparation of schematic development plans, final site design & grading plans, landscape plan, E&S control plan, technical specifications, cost estimate, and construction administration.

Centreville Green Ponds Retrofit | *Clifton, VA*
Arborist/Landscape Architect for the design/construction plans for the installation of pond retrofit to the existing SWM facility. The design provides enhanced water quality treatment for the drainage area to the facility through constructed wetlands (high and low marsh) and cascading micro-pools. Responsibilities included existing vegetation mapping, tree inventory, condition/species analysis, tree preservation plans, and site landscape plans addressing proposed stormwater infrastructure.

Bowman

Richard Bennett

ROW Acquisition/Utility Coordination

Office Location

Bowman - Richmond

Education

Coursework in Real Estate and Appraisals, Virginia Commonwealth University 1980

Coursework in Engineering Technology, Old Dominion University, 1967

VDOT Executive Institute

** Experience prior to joining Bowman*

Richard Bennett has more than 52 years of experience in the transportation and utility sectors, 37 years of which he served in various capacities at the Virginia Department of Transportation (VDOT). He is responsible for Bowman's right of way acquisition efforts, utility relocation assistance consulting, and railroad coordination. He has extensive knowledge in federal and state laws, rules, regulations and procedures regarding right of way acquisition, relocation assistance and utility relocations and accommodation. His right of way experience includes project management, valuation, negotiation, relocation assistance and eminent domain.

Experience

I-66 Express Lane P3 Project | *Fairfax and Prince William Counties, VA*
Project Director for the team providing right of way advisory services to Cintra US for the preparation of the concessionaire proposal/bid for this 20+ mile project in Northern Virginia. Also directed the utility coordination team which prepared the utility conflict and relocation matrix and preliminary estimate for Ferrovial, the design-builder. The project provides managed toll lanes in both directions while making improvements to the overall transportation facilities.

Lakeview Avenue Modernization | *City of Colonial Heights, VA*
Project Director for the improvements project which includes widening a current two lane roadway to three lanes for a length of 1/2 mile, adding bike lanes and sidewalk improvements all designed to VDOT standards. Project also includes drainage improvements, replacement of water and sanitary sewer mains, traffic signal design, utility relocations, and right-of-way negotiations/acquisitions.

Rolling Road Widening & Old Keene Mill Road | *Fairfax County, VA*
Right of Way and Utility Project Director for this VDOT project to relieve congestion, improve operations, and improve safety for drivers, bicyclists, and pedestrians. ROW services have included valuations, negotiations, and relocation services, as well as BARs, appraisals, and reviews for 142 parcels. Documents were prepared for 89 parcels for negotiations and for 13 parcels for relocation services.

Route 10 from I-95 to Old Stage Rd* | *Chesterfield County, VA*
Project Manager and Negotiator for this county administered project widening Route 10 to a four-lane roadway including a replacement bridge over the CSX Railroad. The right of way team completed the required acquisitions of more than five commercial properties on schedule and in full compliance with the Uniform Act and VDOT procedures. Services included title reports, valuations and appraisals, appraisal reviews, negotiations, settlement and closings. Right of way issues included damages to septic systems and impacts to parking areas.

Route 495 Capital Beltway Hot Lanes Project* | *Fairfax County, VA*
Right of Way and Utility Project Director for this 14-miles widening project which added HOT lanes in the median of I-495. The Project included the reconstruction of seven interchanges and the accompanying crossroads. The Team provided Quality Assurance reviews of plans at the right of way approval stage, acquired right of way and easements for over 140 parcels, relocated six displaced families and coordinated the utility relocations with each project segment. This included multiple construction phases developed by the design-build contractor.

Bowman

Brent Evans, LS

Survey Manager

Office Location

Bowman - Fairfax

Education

B.S., Mapping and Land Information Science, Ohio State University, 1998

Licenses/Certifications

Licensed Land Surveyor:
Virginia (#0403002843)

Brent has over 20 years of experience in the land survey industry. He is skilled in the preparation of topographic and boundary surveys, ALTA/NSPS surveys, subdivision plats, as-built drawings, easement plats, and legal descriptions. In 2019, Brent won the first place prize in the Virginia Association of Surveyors (VAS) Plat Contest, Topographic Maps.

Experience

Courtney Drive Drainage Study | *Manassas Park, VA*
Survey manager. The project consists of all the components required for a drainage study within a local jurisdiction. The survey component of this project includes establishing a ground control network across residential neighborhoods, obtain elevations of lids/ inverts/throat openings of over 90 storm structures, as-builting road culverts at traffic intersections, compiling property ownership & utility information from available records, and surveying creek cross sections at 50' intervals upstream/downstream from each major culvert. The survey deliverable was a compilation of record data and field survey data depicting property, easements, and storm sewer as-builts.

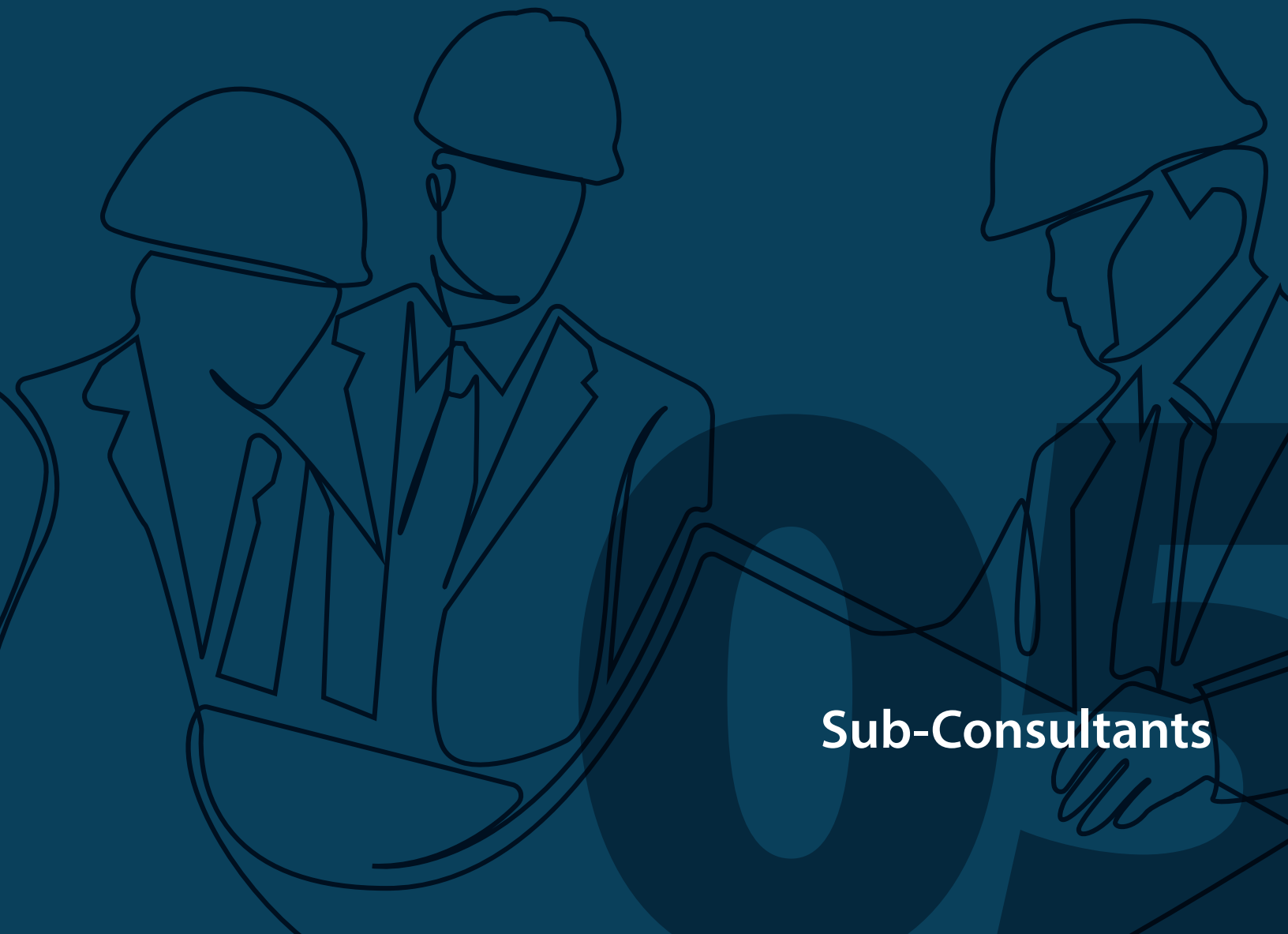
Hayfield Farm Pipe Conveyance | *Fairfax County, VA*
Survey manager in the design of a conveyance system within the roadway to alleviate the main trunk sewer system. As-built survey of Hayfield Road included infrastructure associated with the conveyance system, as well as data to ensure positive drainage away from the outfall and correct any errors in the installation of the box culvert.

Lower Potomac Ballfield Pond Retrofit | *Lorton, VA*
Survey manager for pond retrofits to the existing SWM facility at this ballpark, particularly the associated Natural Channel Design outfall. As-built surveys of the stream restoration as well as all features previously constructed at the facility were conducted. This included the channel profile from the outfall pipe invert to the downstream limits of the outfall restoration, horizontal and vertical location of key points on the imbricated stone structures, and three stream cross sections.

Moseby Drive Emergency Culvert Replacement | *Manassas Park, VA*
Survey manager for the restoration of a collapsed dual culvert under Moseby Drive which severed the roadway and water and sanitary utilities. This emergency response involved multiple disciplines including a preliminary survey of the affected area. Design and construction of this project was completed under an accelerated delivery schedule (less than two months).

Laurel Hill Regional Park | *Lorton, VA*
Survey Manager for this proposed park development project which includes a new picnic pavilion, new playgrounds, improved traffic flow, synthetic turf fields, access roads, and parking lots. Surveying services include aerial mapping and field survey of approximately 100 acres, preparing a record boundary delineation, base topographic survey, and tree survey.

Lubber Run Community Center | *Arlington, VA*
Survey manager for this project to construct a new community center on an existing recreation center site. Surveying services include the preparation of a survey of approximately 10.5 acres of topography on the existing Lubber Run Recreation Center site, including extending the topography to Lubber Run Creek. Additional surveys included a property corner recovery and boundary verification survey, as well as an additional topographic survey for off-site waterline extension.



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Sub-Consultants

Sub-consultants

SUB-CONSULTANTS

Given the diversity of project types and areas of expertise required under this contract, we propose to include the following sub-consultants on our team to provide additional expertise in the execution of various tasks. These firms are well-respected in their respective disciplines and will add pertinent value to this contract, as reflected in the capabilities narratives that follow.

Alpha Corporation

Structural Engineering

Alpha Corporation (Alpha), a structural engineering design and construction consulting services firm, brings a unique combination of technical and hands-on field experience related to facilities and transportation assets for towns, cities, counties, and state government agencies. Assignments have ranged from NBIS Inspections and Ratings for bridges, culverts, traffic signal and light poles and signs, to facility assessments and repair/rehab designs for schools, parks, government buildings and support facilities. Projects have ranged in cost from under $100k to over $10M in construction value and clients served include VDOT, Fairfax and Loudoun Counties, Town of Leesburg, and others. The firm's 44-year track record is strengthened by understanding of construction practices, means, methods and costs having supported both owners and contractors over the years – a record that allows for developing practical and cost-effective solutions.

CES Consulting LLC

Construction Management/Inspections & Cost Estimating

CES Consulting, LLC (CES) is an engineering and construction management firm focused on quality, safety, compliance, innovation, and value. Over the past 12 years, the firm has steadily grown into one of the region's most trusted go-to consulting firms with over 170 professional engineers, project controls specialists, utility coordinators, construction managers, and inspectors practicing from offices in Warrenton and Chesapeake, Virginia, and Millersville, Maryland. VDOT, Loudoun County, Town of Leesburg, Fairfax City, Arlington County, Town of Hillsboro, City of Alexandria, Fairfax County, and Prince William County have relied on CES to help achieve their quality, budget, and schedule goals for well over 300 projects with construction values ranging from $100K to over $3.8B.

DMY Engineering Consultants

Geotechnical Engineering

DMY Engineering Consultants Inc. (DMY) was founded in 2009 with the mission to provide cost effective engineering solutions to clients throughout the Mid-Atlantic region. DMY is a minority-owned firm (Certified DBE under the Virginia Unified Certification Program - #DB20259665), and is a Virginia SWaM enterprise - #684372. DMY's expertise lies in providing geotechnical site investigation, drilling, instrumentation, geotechnical design and analysis, laboratory testing, construction materials testing/inspection, facilities and building enclosure services, environmental services, construction management.

Peck Peck & Associates

Architecture/Building Design

Peck Peck & Associates, Inc. is an award-winning woman-owned Architectural and Interior Design firm known for personal service and design excellence. Located in Woodbridge, VA, they concentrate on the greater Washington, D.C. area, but have projects in virtually every state. They offer every design service from initial programming to post-occupancy evaluation. Their talented staff has deep experience in not only cutting-edge design, but historic restoration and adaptive re-use. In our 46-year history, we have successfully completed 261 building assessments comprising 46,333,817 square feet.

MANAGEMENT OF SUBCONSULTANTS

Bowman's project manager, Brad Glatfelter, will be responsible for the planning, execution, and closing of each assignment. He will serve as the liaison between the Town's project leadership and the Bowman production team and/or subconsultants. Upon receiving a task, Brad will work directly with the appropriate task manager to establish a clear approach and understanding of the assignment, required technical staffing, schedule, objectives, and deliverables. He will then communicate these items to any necessary subconsultants and coordinate the scheduling of those services. Bowman has had multi-year, successful relationship with all its subconsultants, so there is a component of effective prior collaboration that helps build confidence in our efforts under this contract.

As project manager, Brad will ensure that all subconsultants are appropriately integrated in task meetings, site visits, and other actions to ensure the entire project team is developing equal institutional knowledge of the project from the start and as the project develops. Continuity of subconsultant staff is also encouraged to achieve the same level of efficiency in work execution as we promote on the Bowman side. Records of meeting minutes or other project related conferences will be developed and shared with all appropriate stakeholders, and action items will be tracked to ensure accountability for completing task actions.

Another key part of subconsultant management and coordination is quality control review of their deliverables. Beyond the subconsultant's own expectation of quality review of their work, Bowman will perform quality assurance of subconsultants work product to ensure it adheres to the scope of work, it is well coordinated with other disciplines; and it free from errors and omissions.

CLIENT TESTIMONIAL

Alice West Fleet Elementary School

"I have worked on several projects with Bowman over the last 10 years. Most recently, Bowman was the Civil Engineer for the Fleet ES project, for which I served as Arlington Public Schools' (APS) Project Manager.

Bowman has been an excellent partner to work with. They are responsive and capable of handling simultaneous tasks. They have been especially helpful with providing cost-effective solutions to meet current stormwater challenges. Bowman understands the evolving challenges associated with development and maintenance in the education sector and have provided top-level service without disruption to the function of our schools.

I highly recommend Bowman. I know that APS will certainly be employing their services on future projects."

— **Steve Stricker**, Sr. Project Manager, Arlington Public Schools

TEAM CAPABILITIES AND DELINEATION OF RESPONSIBILITIES

Table B represents the capabilities of our carefully assembled project team and who will primarily fulfill which type of work resulting from this contract. It demonstrates our capacity to deliver all potential services and areas of expertise associated with this contract. Please note that for several of the required services we are showing redundancy of expertise to demonstrate both capacity and capability to multitask and respond in emergency situations requiring resource surge.

Table B: Team Member Assignments and Supplemental Expertise

Scope of Services as Indicated in RFP	Bowman	Alpha Corporation	CES Consulting	DMY Engineering	Peck Peck
Design/Evaluation of SWM Facilities including site drainage and stormwater detention	✓	✓	✓		
Design/Evaluation of Traffic Control and/or Circulation	✓				
Traffic Studies	✓				
Transportation Design	✓				
Minor and/or New Construction or Renovation Projects	✓	✓	✓	✓	✓
Studies and Audits for compliance with Federal, State, and Local Regulations	✓				
Building Design		✓			✓
Surveying	✓				
Easement Plats	✓				
Environmental Analysis	✓				
Geotechnical Analysis and Design				✓	
Construction Management and Inspections	✓		✓		
Construction Stakeouts	✓		✓		
Construction Cost Estimates	✓		✓		
Water and Sewer System Analysis and Design	✓				
Bridge and Existing Infrastructure Safety Inspections	✓	✓	✓		
Flood Proofing Design	✓				
ADA Compliance and Review	✓				
Landscape Plans and Renderings	✓				

✓ : Discipline Leader / Assigned Team Member ✓ : Supplemental Resources and Expertise

SUB-CONSULTANTS' KEY STAFF RESUMES AND PROJECT EXPERIENCE

Presented on the following pages are resumes of our sub-consultants' key staff that demonstrate their individual capabilities and experience that qualifies them to lead tasks in their respective disciplines that result from this contract. Following the resumes are representative projects that our sub-consultants have completed or are currently delivering that are similar to their intended scope on this contract with Vienna.

ANDREW UPDIKE, P.E.
Senior Structural Engineer

EDUCATION
B.S./2014/Civil Engineering

REGISTRATIONS
2018/Professional Engineer (VA #0402-059352)

EXPERIENCE SUMMARY
Andrew has more than nine years of experience in the design and analysis of office, educational, recreational, institutional, and industrial facilities. He has performed condition assessments, written technical reports, designed new construction as well as upgrades, modifications, and analyses of existing facilities for gravity and lateral forces. His designs include concrete, steel, wood, masonry, and cold-formed steel. Components he has designed include retaining walls, shallow and deep foundation systems, columns, beams, joists, trusses, shear walls, moment frames, and braced frames. Additionally, Andrew provides construction administration services and ample experience coordinating design throughout a project.

REPRESENTATIVE PROJECT EXPERIENCE

CIVIL ENGINEERING AND RELATED SERVICES BOA, FAIRFAX COUNTY PARK AUTHORITY, FAIRFAX, VA
Structural Engineer, as subconsultant to Bowman Consulting, for this contract that has involved providing structural engineering design services in support of the construction of park improvements at various park locations throughout Fairfax County. Tasks under this contract have included: ***Chessie's Trail, Alexandria, VA*** – Involved design for **a new bridge**, multiple boardwalks, **retaining walls**, railing, and sign support for the new trail; ***Lake Fairfax Park InLine Skate Rink, Fairfax, VA*** – Involved design for retaining walls and a penetration below grade for a storm line; and ***Gabrielson Gardens Bridge Replacement, Oakton, VA*** – Involved design of a **new bridge** over Difficult Run; ***Riverbend Park, Great Falls, VA*** – Involved design of new **retaining walls** to support parking lot and pre-engineered shelter; ***Carousel at Lee District Park, Alexandria, VA*** – Involved foundation design for the Carousel and picnic shelter; ***Sugarland Run Pedestrian Bridge, Fairfax, VA*** – Involved the design of a new pedestrian bridge to span across Sugarland Run providing a higher elevation bridge to avoid prior issues with washout and flood damage.

YMCA FAIRFAX COUNTY RESTON, RESTON, VA
Structural Engineer for the renovation and expansion of an existing 69,200 SF YMCA facility. Work includes a 25,700 SF renovation and 4,900 SF expansion. The project scope includes a wellness center and child watch area expansion; renovations to the locker rooms, lobby, and common area; reconfiguration of the administrative offices; MP room enhancements; and creation of a teen center//intergeneration center. Responsible for providing structural engineering design and analysis.

TASK ORDER CONTRACT FOR A/E & LANDSCAPE ARCHITECTURAL DESIGN SERVICES, STAFFORD COUNTY, VA
Structural Engineer responsible for providing structural engineering services for various projects required to construct, maintain, improve or expand the county's facilities and infrastructure. Task to date includes: **Fire and Rescue #14:** Includes a new 17-20,000 SF fire and rescue station located at 53 Shelton Shop Road in Stafford, VA. Responsible for providing structural design analyses, construction documents, specifications, and cost estimate support as needed to complete the project.

FAIRFAX COUNTY PUBLIC SCHOOLS, THOREAU MIDDLE SCHOOL, VIENNA, VA
Structural Engineer for the renovation and addition to the existing 124,000 SF facility to accommodate an additional 1,250 students. Multiple improvements were designed to include a multi-story addition housing multi-media centers and classrooms, as well as a one-story addition providing an expansion to the existing cafeteria, administrative space, classrooms, entry canopy, and improved main entrance. Structural Design included concrete foundations and retaining walls, masonry walls, steel beams, columns, and connections. Alpha provided review of original as-built construction drawings; analysis and evaluation of the existing conditions for renovation requirement and compliance with current building codes; and determining necessary structural updates to support the renovation and construction.

SPRINGFIELD RAMP, FAIRFAX COUNTY WAREHOUSE, SPRINGFIELD, VA
Structural Engineer for the design of a removable aluminum ramp at a loading dock. Designed to allow for forklift use for ease in deliveries in and out of the facility. The ramp was designed also to be removable in the case of inclement weather or conflict with larger deliveries, using only a standard forklift so that the facility could independently manipulate the install and removal.

IDIQ FOR MULTI-DISCIPLINARY DESIGN SERVICES, NATIONAL CAPITAL REGION
Structural Engineer for various tasks including memorials, maintenance facilities, trails, historic sites, national landmarks, utilities, pavements, security, visitor centers and stables. Specific tasks have included: repairs to Oxon Hill Farm Silo; Renovation of the Old Stone House in Washington, DC; and Four Locks Boat Ramp Improvements.

JASON WOLFE, P.E.

Senior Bridge Engineer/Inspection Team Leader

EDUCATION

B.S./1997/Civil Engineering

REGISTRATIONS/CERTIFICATIONS

2003/Professional Engineer (VA #0402-036214); 2005/FHWA-NHI-130055 Safety Inspection of In-Service Bridges; 2021/FHWA-NHI-130053 Bridge Inspection Refresher Training; 2016/FHWA-NHI-130078 Fracture Critical Inspection - Steel Bridges; 2015/FHWA-NHI-130087 Inspection & Maintenance of Ancillary Structures

EXPERIENCE SUMMARY

Jason Wolfe is a Senior Bridge Engineer and Inspection Team Leader with 25 years of experience managing and performing NBIS bridge/culvert inspections, NTIS tunnel inspections, and load ratings. He has personally inspected more than 3,700 bridges, culverts and tunnels. He has conducted routine bridge inspections, complex bridge inspections, and fracture critical inspections. He has used bucket trucks, snoopers, bucket boats, and confined space procedures, and has coordinated teams of inspectors and MOT vendors.

REPRESENTATIVE PROJECT EXPERIENCE

VDOT, SAFETY INSPECTION OF HIGHWAY STRUCTURES AND BRIDGES AND SUPPORT STRUCTURES FOR TRAFFIC CONTROL DEVICES - NORTHERN VA DISTRICT, VA

Program Manager, Sr. Team Leader and Internal QC Manager. Responsible for conducting and reviewing element-level routine safety inspections of over 150 structures (including fatigue-prone details and hands-on inspections of Category E details). Structure types included continuous curved steel multiple girders, prestressed-concrete girder, post-tensioned concrete girder, concrete and voided slabs and culverts. Inspected bridges on and over high-volume, high-speed interstates including I-66, I-495, and I-95 and within complex staged traffic control set-ups to maintain traffic. Coordinated work zones with the Regional Traffic Control Center. He also has QC/QA reviewed over 200 bridge and culvert inspection reports on the contract. He has performed safety inspection of nearly 200 ancillary structures in NOVA and Richmond districts. Structure types of inspection included cantilever and overhead sign structures, single and double mast-arm structures, and span wire signal structures. Bucket trucks with MOT, static and mobile closures were utilized to properly access all the ancillary structures inspected.

VDOT, SAFETY INSPECTION OF HIGHWAY BRIDGES AND STRUCTURES; STAUNTON, CULPEPER, FREDERICKSBURG, RICHMOND AND NOVA DISTRICTS, VA

Inspection Team Leader. Performed NBIS bridge safety inspections of 190 bridges in Staunton (38), Culpeper (26), Fredericksburg (8), Richmond (7) and NOVA (111) Districts as subconsultant on several contracts. Prepared inspection reports detailing all defects, and included sketches, clearance sheets, channel profiles, photographs, element data, SI&A data, and prioritized recommendations for repair. Bucket trucks and/or a snooper with MOT were utilized. The last contract (complete in 2018) was Staunton/Culpeper.

VDOT, REGION II, SAFETY INSPECTIONS OF HIGHWAY BRIDGES, NORTHERN VIRGINIA DISTRICT, VA

Deputy Program Manager and Inspection Team Leader. Managed and performed NBIS and Pontis bridge inspections for nearly 600 bridges from 2011-2014. The bridges assigned were typically large concrete or steel structures with fracture critical or fatigue prone details and which required special access equipment and MOT to inspect. In addition, a number of bridges contained steel box straddle bents which required confined space entry for inspection. Prepared inspection reports containing written descriptions of all defects, sketches, clearance sheets for roadways, channel profiles for waterways, photographs, element data, FHWA and VDOT SI&A data, and prioritized recommendations for repair.

NVRPA BRIDGE AND CULVERT INSPECTIONS, W&OD TRAIL, VA

Inspector for 27 bridges and culverts on W&OD Trail. He inspected 24 pedestrian bridges of various types as well as three stone masonry culverts. Prepared VDOT format reports for each structure with repair recommendations and assessment of remaining life expectancies.

BRIDGE SAFETY INSPECTIONS, CITY OF ALEXANDRIA, VA

Bridge Inspector responsible for providing structural safety inspections for 20 highway and pedestrian bridges. Various structure types were inspected, including steel multi-beam, prestressed concrete beams, and concrete and masonry arch culverts. Structural inspections also encompassed maintenance recommendations.

DISCOVERY SQUARE PEDESTRIAN BRIDGE, RESTON, VA

Bridge Inspector for the evaluation of potential cost issues for structure maintenance and, ultimately, structure removal. Evaluated the 136-foot-long weather steel truss pedestrian bridge. Conducted site visit to identify potential maintenance needs and removal costs. Critical issues included high tension power line proximity and crane accessibility.

Chowdhary Gondy, PSP, PMP, CCP, DBIA

Senior Cost Estimator

Education:
MS | 1991 | Civil Engineering; BS | 1988 | Civil Engineering

Certifications :
AACE Planning & Scheduling Professional #456 (2024); AACE Certified Cost Professional #3970 (2024); DBIA Design Build Professional (12/2023); PMI Project Management Professional #521937 (2024); OSHA 10-Hour Safety Training

Years of Relevant Experience: 32

Chowdhary Gondy is a certified Planning and Scheduling Professional and a Certified Cost Professional with 32 years of project controls experience focused on civil and transportation infrastructure for public agencies. Based on his extensive knowledge of construction materials, methods, risks, and durations, he conducts analyses to predict and understand time and cost outcomes and develops effective strategies for reducing costs, increasing efficiency, and mitigating schedule and cost impacts. Chowdhary tracks schedules and construction budgets; provides technical guidance; monitors performance and construction management staff; and solves cost and schedule issues.

Ballston Station Multi-Modal Improvements | Arlington, VA | Arlington County DOT and WMATA | Cost Specialist. This project promoted safer and smoother pedestrian and transit circulation by decreasing conflicts between buses and pedestrians; improving bike safety; and beautifying of the area. Chowdhary conducted an independent cost analysis entitlement for time extensions. During construction unmarked utilities conflicted with proposed construction. Chowdhary advised the contractor to move to another phase while the conflict issue was being resolved, which saved time and cost. As part of the savings, the project was able to keep the existing canopy without total replacement. He assisted with negotiations with the contractor on the time extension that included time and cost. Cost entitlement included validating the labor and equipment rates through tools such as RS Means, historic bid tabs and building bottoms-up crew-based costs. A global settlement was reached that was beneficial to the project as well as Metro.

9th Street Sidewalk Improvements | Richmond, VA | Department of General Services | Project Controls Manager. This $700K project updated a 12-foot-wide sidewalk along the 9th Street boundary of Capitol Square to the standard herringbone brick paver pattern with granite curbs. Chowdhary managed conceptual scheduling services, cost estimating, and constructability reviews. He determined the crew build up required for the various work activities using Heavy Bid software; finalized the cost estimate; and reported and produced back-up supporting calculation documents. As part of the cost estimate, Chowdhary visited the site and noted the as-built conditions; identified the risks; reviewed the site for staging areas and limitation of operations constraints due to proximity to the State Capital; and then established activity breakdowns that enabled ease in the development of the Engineer's estimate. Also, Chowdhary conducted high-level constructability reviews to identify risks related to mitigation options and used Primavera to develop the conceptual schedule to calculate the project duration.

Brooklyn Park Soccer Field | Anne Arundel County, MD | Anne Arundel County DPW | Certified Cost Estimator. Chowdhary managed cost estimating for this project that involves converting a grass soccer field to an artificial turf field. The project included the installation of bleachers; a 400-meter track; bioretention ponds; and an underground stormwater detention basin. The SWM facilities were key elements that could affect the overall cost and required careful detailed estimating. Chowdhary managed the development of a bottoms-up cost estimate prior to the submission of the contractor's bids. To ensure accuracy in the methodology of the estimate, a supplemental quantity survey was conducted, and quantity takeoffs were calculated. Unit costs were based on proprietary database historical costs, supplier quotes, and other sources. Market research was conducted into material pricing and subcontractor availability.

Route 606 Loudoun County Parkway / Old Ox Road Widening | Loudoun County | VDOT | Scheduling & Cost Specialist. Chowdhary managed cost estimating services to support the conversion of a 5.5-mile segment of a 2-lane rural collector road to a 4-lane, divided, urban minor arterial including a new signalized intersection and more than 5 miles of shared-use path. Chowdhary assisted with developing the financial plan of the project that included the addition of a Ramp costing $10M. Cost data included a realistic estimate of future costs based on the engineers' estimates, DB bid, and construction cost escalation factors. The plan provided detailed cost estimate to complete the project and estimates of financial resources to fully finance the project. He managed CTDR development and an independent cost estimate of $10M to determine impacts and cost of adding a major intersection project. The independent cost estimate used the Contractor's bid unit costs, historic bids, coordination with VDOT and Loudoun County officials and supported the item breakdown through detailed direct and indirect cost estimates using heavy-bid cost estimating software tool.

Gurkeerat "GK" Walia

Regular Construction Inspector | CES Consulting, LLC

GK Walia is an experienced construction inspector with a focus on road and bridge infrastructure, LAPs, and large DB projects. He possesses extensive knowledge of road and bridge construction methods, allowing him to identify non-compliant work and recommend plan modifications to align with field conditions. GK excels in coordinating and monitoring complex traffic control measures, conducting materials testing, and providing recommendations for contractor payments. Additionally, he is proficient in utilizing PlanGrid and Microsoft Office Software.

Experience

2 years

Office Location

Warrenton, VA

Education

Construction Management Diploma North Carolina State University

Bachelor in Finance Management, University of Toronto

Certifications

VDOT Soils and Compaction (08/2025); VDOT Asphalt Level I (09/2026); VDOT Asphalt Level II (01/2027); ACI Concrete Field Technician Level I (08/2025); DEQ Dual Inspector (06/2024); VDOT Intermediate Work Zone (06/2024); Nuclear Gauge (05/2023); OSHA 10-Hour Safety; Pavement Marking (12/2026); Slurry Surfacing (12/2026); Surface Treatment (12/2026); Soils & Aggregate Compaction (05/2025)

Relevant Projects

+ **Prince William Parkway Interchange at Realigned Balls Ford Road, Prince William County DOT**

QA Inspector. GK conducted QA inspection and testing services for a locally administered DB project that involves realigning a 1.9-mile segment of Balls Ford Road south of its existing intersection with Prince William County and constructing a diverging diamond interchange carrying Balls Ford Road over the Parkway. GK conducted materials testing such as soils, stone, and concrete; conducted C-107 inspections; performed daily inspections of construction operations ensuring conformance with VDOT standards and specifications; and prepared daily work reports.

+ **Albemarle County Intersection Improvements, VDOT**

Construction Inspector Trainee. GK conducted QA inspection of construction operations for 2 out of the 6 projects that were included in the Albemarle Bundle. This $28.5M DB project involved the construction of 6 projects including 2 new single-lane roundabouts to enhance safety; new connecting roads to enhance connectivity; a diverging diamond interchange to improve traffic flow and volume connecting to I-64; and entrance/exit ramp improvements to eliminate dangerous traffic weaving concerns. He conducted inspections and materials testing of the I-64 at Exit 118 Interchange Modifications and the Fontaine Avenue Ramp Improvements. Inspection activities at both projects included completion of work zone safety checklists; C-107 P.I and P.II inspections to monitor compliance with the Construction General Permit, USACE Nationwide Wetland Permits, and individual permits; as well as maintenance of SWPPP books to confirm compliance with the all permits and approved redline as-built E&S and SWM controls.

+ **Rogues Road Reconstruction, VDOT, Warrenton, VA**

VDOT Consultant Inspector. GK conducted inspection services for this $5M project involves adding a northbound left turn-lane from Rogues Road to Kennedy Road; signal modifications to provide pedestrian crossing at Academic Drive; and a 10-foot-wide shared use path from Grapewood Drive to Kennedy Road. He conducted daily inspections of environmental and erosion and sediment controls; signed off on C-107 forms; conducted materials testing; monitored MOT; documented measurements; and resolved pay item quantities..

+ **DC United Training Facility – Public Access Facilities, Loudoun County DTCI**

QC Inspector. GK conducted QA services for this $700K project involving the construction of a new access roadway and parking lot at the United Stadium in Philip Bolen Park. The roadway connects to an active park road and the parking lot serves the DC United training facility via an accessible path constructed by another project. GK conducted daily inspections of ESC; earthwork; and the construction of subbase, pavement, curb and gutter, and sidewalk. He also inspected the construction of a drainage system which included a SWM facility and fencing, site seeding, dumpster enclosure and planting. He conducted all materials testing; recorded daily activities and ensured all construction activities were in compliance with work plans as well as VDOT standards and specifications.

+ **VDOT Paving Schedule, VDOT Culpeper District**

Construction Inspector. GK conducted inspection services for a project involving overlaying and milling of state routes and residential streets throughout Culpeper County. Work elements include the placements of asphalt and thermoplastic pavement markings and shoulder stone replacement. The project was part of a regular maintenance contract overseen by VDOT Culpeper District. GK coordinated inspection phases; measured pay items; reported production rates; maintained project records; conducted materials testing; and resolved field issues. He also communicated with business and property owners; addressed questions and concerns; made adjustments to resolve discrepancies; coordinated with the contractor for paving schedules; communicated with flaggers and roller operators; and ensured high-quality results with minimal public interference or complaints.

Jimmy Zayas, LS, DBIA

Construction Manager | CES Consulting, LLC

Jimmy has 15 years of construction management and inspection experience focused on the on-time delivery of transportation infrastructure. He is a problem solver with experience supervising and mentoring inspectors and proactively identifying and resolving field issues in congested urban / suburban environments. Jimmy supervises the inspection of all components and operations of construction; reconciles daily pay estimates; recommends cost effective solutions to field issues and non-conforming work while avoiding schedule impacts; conducts and attends preconstruction and progress meetings; recommends monthly estimates and partial and final contractor payments; reviews cost estimates; and monitors schedule and budget.

Experience

15 years

Office Location

Warrenton, VA

Education

Bachelor of Science
University of Puerto Rico

Registrations

Land Surveyor: VA #0403003210

Certifications

Design-Build Professional #D-2984 (10/2023); Remote Drone Pilot License (02/2024); Soil and Aggregate Field Compaction (12/2026); Asphalt Field Levels I & II (12/2026); ACI Concrete Field (03/2024); Pavement Marking (12/2026); Surface Treatment (12/2026); Slurry Surface (12/2026); DEQ Dual Inspector (03/2024); Guardrail Installation Training (03/2024); Intermediate Work Zone Traffic Control (01/2025); Nuclear Gauge Safety (08/2024); OSHA 10-Hour Safety

Relevant Projects

+ **Prince William Parkway Interchange at Realigned Balls Ford Road, Prince William County DOT**

Senior QA Inspector. Jimmy manages QA inspection, testing and documentation services for a locally administered DB project that involves realigning a 1.9-mile segment of Balls Ford Road south of its existing intersection with Prince William County and constructing a diverging diamond interchange carrying Balls Ford Road over the Parkway. He coordinates inspection with construction operations; recommends solutions to field issues; and confirms compliance with environmental permits and ESC requirements. He analyzes plans and identifies noncompliance issues and confirms resolution. For example, early in the project, he recognized that the utility subcontractor was using the wrong size conduit based on outdated plans, which prevented a re-do of most of the conduit installation.

+ **Route 606 Loudoun County Parkway / Old Ox Road Reconstruction and Widening, VDOT**

Lead OIA Construction Inspector. As VDOT's representative in the field, Jimmy supervised daily OIA/IV inspections and testing for converting 5.5 miles of a 2-lane rural collector road to a 4 lane, divided, urban minor arterial. This DB project included shared-use path and sidewalks; 8 SWM ponds; and side street and intersection improvements. Jimmy supervised inspectors; reviewed the TMP and recommended changes; reconciled daily pay quantities; recommended contractor payments; and conducted pre-construction and progress meetings.

+ **Northstar Boulevard Extension from Evergreen Mill Road to Route 50, Loudoun County DTCI/VDOT**

Deputy QA Manager. Jimmy manages QA services for this $48M project involving the construction of a new 4-lane, median-divided segment of Northstar Boulevard;10-foot-wide shared use path; and a traffic signal at Evergreen Mills Road. He manages inspection personnel; processes pay applications; reviews daily reports; and conducts bi-monthly QA/QC progress and monthly preparatory inspection meetings. He creates deficiency and NCR logs; manages office engineer and materials notebook tasks; and approves C-25's. He also inspects daily activities such as bridge and embankment construction, drainage and waterline installation, ESCs, and utility relocations.

+ **DC United Training Facility – Public Access Facilities, Loudoun County DTCI**

Construction Manager. Jimmy conducted construction management services for this this $700K project involving the construction of a new access roadway and parking lot at the United Stadium in Philip Bolen Park. The roadway connects to an active park road and the parking lot serves the DC United training facility via an accessible path constructed by another project. He reviewed all product submittals and C-25's to verify products and suppliers were on VDOT's approved lists and mix designs had current VDOT approvals. He verified the contractors' work; tested fill, sub grade, stone base and concrete; managed inspection personnel; reviewed IDRs; processed pay applications; and inspected BMP's dry swells. He inspected ESCs, landscape installations per approved architectural plans, storm drainage and SWM construction; and completed permit close out documentation.

+ **Route 644 Bridge Accotink Creek Rehabilitation, VDOT**

Lead Construction Inspector. Jimmy conducted inspection, materials testing, and project records management for this $1.7M project that involved the rehabilitation of a 3-span steel-girder bridge using the jacking system to raise the existing bridge. The existing condition of the bridge differed from the plans due to continued deterioration between the bridge safety inspection study and start of construction. He worked closely with the stakeholders to develop proactive solutions to address the differing site conditions. He also supervised the bridge jacking system to ensure structural integrity of the structure during repairs.

Peng "Paul" Zhang, PE

Principal Geotechnical Engineer

Education

MSCE / Geotechnical Engineering / Purdue University / 2003

MS / Structural Engineering / Beijing University of Technologies / 2001

BS / Hydraulic Engineering / Fuzhou University / 1995

Certifications

Virginia PE / 0402048994 / 2011

Maryland PE / 40303 / 2011

Ohio PE / 70538 / 2005

Georgia PE / 032521 / 2007

Mr. Paul Zhang serves as Vice President and Director of Geotechnical Engineering at DMY. Mr. Zhang has more than 18 years of experience in geotechnical engineering, construction materials testing, and inspection and construction management. He has extensive experience in the public sector, and is currently working on geotechnical engineering tasks under several on-call contracts throughout Northern Virginia. These include contracts with the Fairfax County Park Authority, Loudoun County Public Schools, Town of Purcellville, Town of Herndon, and the VDOT Northern Region.

Ayr Hill Avenue, Vienna, VA – Served as ***Principal Engineer.*** The project involved roadway improvements along both the eastbound and westbound lanes of Ayr Hill Avenue from Lawyers Road to Dominion Road. The total length of the roadway to be improved was approximately 750 feet. Proposed improvements included the widening the existing eastbound and westbound lanes of Ayr Hill Avenue with new pavement along both the eastbound and westbound lanes. The project also included new curb and gutter Mr. Zhang oversaw the geotechnical investigations that included site reconnaissance, drilling, pavement coring, and laboratory testing.

Marshall Road SW, Vienna, VA – Served as ***Principal Engineer.*** The project consisted of improving approximately 800 lineal feet of Marshall Road SW, beginning approximately 400 feet east of the intersection with Pickett Place SW and extending approximately 400 feet west of the same intersection. The existing roadway was realigned slightly east of Pickett Place SW. Roadway features included a new sidewalk and new curb and gutter along the south side of the roadway alignment, as well as new driveways for six (6) existing residences. Mr. Zhang oversaw the geotechnical investigations that included field investigation, drilling, and laboratory testing.

Mill Street, Vienna, VA – Served as ***Principal Engineer.*** The project involved improving approximately 1,100 lineal feet of Mill Street, beginning at the projected intersection with Albea Court NE and extending east to approximately 100 feet beyond the intersection with Ayr Hill Avenue. The roadway improvements also included stormwater drainage improvements. Mr. Zhang oversaw the geotechnical investigations for a potential retaining wall that included field investigation, drilling, and laboratory testing.

Town of Purcellville North Hatcher Avenue Pedestrian Bridge, Purcellville, VA – Served as ***Geotechnical Engineer***. This project constructed a sidewalk connection and a bridge/culvert over South Fork Catoctin Creek along North Hatcher Avenue between E. Skyline Drive and Hirst Road in Purcellville. Mr. Zhang managed all geotechnical engineering services, which included borings, soil test drilling and sampling, laboratory testing, and development of a geotechnical report. This project was completed in 2018.

Traffic Signal Design – Clubhouse Drive & South King Street, Leesburg, VA – Served as ***Geotechnical Engineer*** for the geotechnical analysis prior to the design and construction of a replacement traffic signal at Clubhouse Drive and South King Street in the Town Leesburg. Mr. Zhang oversaw the geotechnical analysis, which included Standard Penetration Test borings, geotechnical analysis that included axial capacity and lateral capacity analysis for the drilled shaft supporting the signal structure, a geotechnical analysis for an alternative foundation design, and a final geotechnical report. This project was completed in 2018.

Town of Purcellville Task Order Contract, Purcellville, VA - Serving as ***Geotechnical Engineer***. The geotechnical projects performed under this task order contract with the Town of Purcellville, Virginia. DMY holds this contract as the prime consultant, and provides both geotechnical and construction services under the terms of the contract. Typical projects involve geotechnical design for water/wastewater, transportation, park, trail, and public buildings projects in the Town. Mr. Zhang oversees all work on geotechnical tasks given under this contract.

Town of Herndon Task Order Contract, Herndon, VA - Serving as ***Geotechnical Engineer***. The geotechnical projects performed under this task order contract with the Town of Herndon, Virginia. DMY holds this contract as the prime consultant, and provides both geotechnical and construction services under the terms of the contract. Typical projects involve geotechnical design for transportation, park, trail, and public buildings projects in the Town. Mr. Zhang oversees all work on geotechnical tasks given under this contract.

Loudoun County Public Schools On-Call Contract, Loudoun County, VA - Serving as ***Principal Engineer.*** DMY was awarded an on-call contract to provide geotechnical and material testing & inspection services for the Loudoun County Public Schools. Mr. Zhang will be responsible for managing all geotechnical engineering services for school projects, which may include pavement coring, soil test drilling and sampling, infiltration testing, traffic control, laboratory testing, and analyses and recommendations for roadway embankments, pavements, SWM ponds, drainage structures and earth retaining structures, and slope stability.

Fairfax County Park Authority Task Order Contract, Fairfax County, VA - Serving as ***Geotechnical Engineer***. The geotechnical projects performed under this task order contract with the Fairfax County Park Authority. DMY holds this contract as the prime consultant, and provides both geotechnical and construction services under the terms of the contract. Typical projects involve geotechnical design for both new construction and renovations of park facilities managed by the Fairfax County Park Authority. Mr. Zhang oversees all work on geotechnical tasks given under this contract.

Fairfax County Department of Transportation Task Order Contract for Transportation Improvement Projects, Fairfax County, VA - Served as ***Project Manager.*** This Task Order contract issued by Fairfax County for the design of various types of transportation improvement projects throughout the County. DMY worked with prime engineering firm to provide geotechnical drilling, field and laboratory testing, and engineering design and report for retaining walls, pavement, stormwater management facilities, and other facilities on an as-needed, project-specific basis.

Town of Herndon Task Order Contract- Historic Herndon Phase III, Herndon, VA - Served as **Geotechnical Engineer**: The installation of new brick paver sidewalks along Elden St. from the Station St. intersection to near the Center St. intersection. Telecommunication conduits and electrical conduits for lighting shall be installed along the length of the project. Work shall include associated site work and grading, temporary traffic control, drainage, various streetscape amenities, and the installation of traffic signage. DMY was responsible for the quality assurance/control during construction. As such, we are responsible for adherence to VDOT and Town of Herndon requirements and specifications. DMY is providing onsite inspection and testing services of materials for foundation inspection, soils and aggregate, reinforcing steel, concrete, asphalt and pavement marking and installation of traffic signs. DMY is also responsible for maintaining the materials notebook in accordance with VDOT requirements.

Town of Herndon Task Order Contract- Elden & Monroe Street Intersection, Herndon, VA - Served as **Geotechnical Engineer** for the reconstruction of the existing intersection of Elden Street and Monroe Street. The improvements include a new traffic signal, brick crosswalk with ADA compliant curb ramps, brick sidewalks and revised curb return in the southeast quadrant of the intersection. The project also includes installation of concrete encased PVC conduits for Cox, Verizon, Zayo and Dominion Power.

Town of Purcellville North Hatcher Avenue Pedestrian Bridge, Purcellville, VA - Served as **Geotechnical Engineer**: This project constructed a sidewalk connection and a bridge/culvert over South Fork Catoctin Creek along North Hatcher Avenue between E. Skyline Drive and Hirst Road in Purcellville.. Mr. Zhang managed all geotechnical engineering services, which will includes borings, soil test drilling and sampling, laboratory testing, and development of a geotechnical report. This project was completed in 2018.

Scotts Run Trail, Fairfax, VA - Served as a **Principal Engineer.** This project consists of the design and construction of a half-mile long, 8-foot wide asph alt trail connecting Magarity Road to Chain Bridge Road (previously Colshire Meadow Drive) and provides the residential communities safe access to the McLean Metro Station. The project includes two (2) pedestrian bridges (50 feet and 90 feet long) over Scotts Run, storm drainage, asphalt paving, trail lighting, handrail, pavement markings and related signage.

Abdul Sameer Ghany, PE

Geotechnical Engineer

Education

MS / Civil Engineering / University of Delaware / 2015

BS / Civil Engineering / Balkh University, Afghanistan / 2009

Certifications

Virginia Professional Engineer / 2018 / 0402057959

WACEL Soils Level I Technician with Field Practical

Confined Space Entry Training (CSE)

Mr. Ghany has over nine years of experience as a Staff Engineer at DMY Engineering Consultants. He has successfully worked in a variety of projects ranging from small residential and commercial buildings to multibillion dollar transportation projects.

Ayr Hill Avenue, Vienna, VA – Served as ***Geotechnical Engineer.*** The project involved roadway improvements along both the eastbound and westbound lanes of Ayr Hill Avenue from Lawyers Road to Dominion Road. The total length of the roadway to be improved was approximately 750 feet. Proposed improvements included the widening the existing eastbound and westbound lanes of Ayr Hill Avenue with new pavement along both the eastbound and westbound lanes. The project also included new curb and gutter Mr. Ghany conducted the geotechnical investigations that included site reconnaissance, drilling, pavement coring, and laboratory testing.

Marshall Road SW, Vienna, VA – Served as ***Geotechnical Engineer.*** The project consisted of improving approximately 800 lineal feet of Marshall Road SW, beginning approximately 400 feet east of the intersection with Pickett Place SW and extending approximately 400 feet west of the same intersection. The existing roadway was realigned slightly east of Pickett Place SW. Roadway features included a new sidewalk and new curb and gutter along the south side of the roadway alignment, as well as new driveways for six (6) existing residences. Mr. Ghany conducted the geotechnical investigations that included field investigation, drilling, and laboratory testing.

Mill Street, Vienna, VA – Served as ***Geotechnical Engineer.*** The project involved improving approximately 1,100 lineal feet of Mill Street, beginning at the projected intersection with Albea Court NE and extending east to approximately 100 feet beyond the intersection with Ayr Hill Avenue. The roadway improvements also included stormwater drainage improvements. Mr. Ghany conducted the geotechnical investigations for a potential retaining wall that included field investigation, drilling, and laboratory testing.

Fairfax County Public Schools – McLean High School, Fairfax County, VA – Served as ***Geotechnical Engineer.*** DMY was asked to provide a limited geotechnical investigation when the Fairfax County Public Schools (FCPS) decided to add a modular classroom at McLean High School. Mr. Ghany was the primary geotechnical engineer during the project, involved in all geotechnical work, including a subsurface information regarding the existing soil conditions below the proposed modular classroom. In order to provide the requested geotechnical information, DMY drilled six (6) Standard Penetration Test (SPT) borings within the footprint of the proposed addition. The SPT borings were drilled to an average depth of 15 feet below existing grade or auger refusal, whichever occurred first. Soil samples were collected and analyzed in the DMY in-house lab for classification. Mr. Ghany was also involved in the drafting of the geotechnical report summarizing the exploration findings and recommendations.

Fairfax County Public Schools – Kilmer Middle School, Fairfax County, VA – Served as ***Geotechnical Engineer.*** DMY was asked to provide a limited geotechnical investigation when the Fairfax County Public Schools (FCPS) decided to add a modular classroom at Kilmer Middle School. Mr. Ghany was the primary geotechnical engineer during the project, involved in all geotechnical work, including a subsurface information regarding the existing soil conditions below the proposed modular classroom. In order to provide the requested geotechnical information, DMY drilled six (6) Standard Penetration Test (SPT) borings within the footprint of the proposed addition. The SPT borings were drilled to an average depth of 15 feet below existing grade or auger refusal, whichever

occurred first. Soil samples were collected and analyzed in the DMY in-house lab for classification. Mr. Ghany was also involved in the drafting of the geotechnical report summarizing the exploration findings and recommendations.

Town of Purcellville Task Order Contract, Purcellville, VA - Serving as ***Geotechnical Engineer*** for the geotechnical projects performed under this task order contract with the Town of Purcellville, Virginia. DMY holds this contract as the prime consultant, and provides both geotechnical and construction services under the terms of the contract. Typical projects involve geotechnical design for water/wastewater, transportation, park, trail, and public buildings projects in the Town. Mr. Ghany is the project engineer for all work on geotechnical tasks given under this contract.

Loudoun County Public Schools On-Call Contract, Loudoun County, VA - Serving as ***Principal Engineer.*** DMY was awarded an on-call contract to provide geotechnical and material testing & inspection services for the Loudoun County Public Schools. Mr. Ghany will be the project engineer for all geotechnical engineering services for school projects, which may include pavement coring, soil test drilling and sampling, infiltration testing, traffic control, laboratory testing, and analyses and recommendations for roadway embankments, pavements, SWM ponds, drainage structures and earth retaining structures, and slope stability.

Town of Herndon Task Order Contract, Herndon, VA - Serving as ***Geotechnical Engineer*** for the geotechnical projects performed under this task order contract with the Town of Herndon, Virginia. DMY holds this contract as the prime consultant, and provides both geotechnical and construction services under the terms of the contract. Typical projects involve geotechnical design for transportation, park, trail, and public buildings projects in the Town. Mr. Ghany is the project engineer for all work on geotechnical tasks given under this contract.

Town of Herndon Task Order Contract Historic Herndon Phase III, Herndon, VA - Served as ***Project Engineer.*** The installation of new brick paver sidewalks along Elden St. from the Station St. intersection to near the Center St. intersection. Telecommunication conduits and electrical conduits for lighting shall be installed along the length of the project. Work shall include associated site work and grading, temporary traffic control, drainage, various streetscape amenities, and the installation of traffic signage. DMY was responsible for the quality assurance/control during construction. As such, we are responsible for adherence to VDOT and Town of Herndon requirements and specifications. DMY is providing onsite inspection and testing services of materials for foundation inspection, soils and aggregate, reinforcing steel, concrete, asphalt and pavement marking and installation of traffic signs. DMY is also responsible for maintaining the materials notebook in accordance with VDOT requirements.

Fairfax County Park Authority Task Order Contract, Fairfax County, VA - Serving as ***Geotechnical Engineer*** for the geotechnical projects performed under this task order contract with the Fairfax County Park Authority. DMY holds this contract as the prime consultant, and provides both geotechnical and construction services under the terms of the contract. Typical projects involve geotechnical design for both new construction and renovations of park facilities managed by the Fairfax County Park Authority. Mr. Ghany is the project engineer for all work on geotechnical tasks given under this contract.

Fairfax County Department of Transportation Task Order Contract for Transportation Improvement Projects, Fairfax County, VA - Served as ***Project Manager*** for this Task Order contract issued by Fairfax County for the design of various types of transportation improvement projects throughout the County. DMY worked with prime engineering firm to provide geotechnical drilling, field and laboratory testing, and engineering design and report for retaining walls, pavement, stormwater management facilities, and other facilities on an as-needed, project-specific basis.

Loudoun County Public Schools Arcola Center Elementary School, Sterling, VA - Served as ***Project Engineer***: The Arcola Center Elementary School, or Loudoun County Public Schools ES-23, is a new elementary school project as part of the development of the Arcola Center. The new elementary school was designed in 2016 and will be located on the south side of Evergreen Mills Road between Trade W Road and Arcola Road. The proposed school will be built on 13 acres of undeveloped farm land and will be approximately 70,000 square feet. Mr. Ghany will be the project engineer for all geotechnical engineering services, which will include pavement coring, soil test drilling and sampling, infiltration testing, laboratory testing, and analyses and recommendations for SWM ponds, drainage structures and earth retaining structures, and slope stability.

Town of Purcellville North Hatcher Avenue Pedestrian Bridge, Purcellville, VA - Served as ***Project Engineer***: This project constructed a sidewalk connection and a bridge/culvert over South Fork Catoctin Creek along North Hatcher Avenue between E. Skyline Drive and Hirst Road in Purcellville.. Mr. Ghany was the project engineer for all geotechnical engineering services, which will includes borings, soil test drilling and sampling, laboratory testing, and development of a geotechnical report.

Scotts Run Trail, Fairfax, VA- Served as a ***Project Engineer.*** This project consists of the design and construction of a half-mile long, 8-foot wide asphalt trail connecting Magarity Road to Chain Bridge Road (previously Colshire Meadow Drive) and provides the residential communities safe access to the McLean Metro Station. The project includes two (2) pedestrian bridges (50 feet and 90 feet long) over Scotts Run, storm drainage, asphalt paving, trail lighting, handrail, pavement markings and related signage.

Alexis Peck
Lead Design + Project Oversight

YEARS OF SERVICE WITH FIRM:
Peck, Peck & Associates, Inc.
TOTAL YEARS EXPERIENCE: 20
TOTAL YEARS WITH FIRM: 19

EDUCATION
B. Architecture/2000/Savannah College of Art & Design
M. Architecture/2000/Savannah College of Art & Design

CERTIFICATIONS
Registered Architect: VA
LEED Accredited Professional - 2004
USGBC Member
International Code Council Member
IFMA
Virginia BCOM Accredited
Urban Land Institute Member

REFERENCES

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571-296-7407 cell
202-245-0267 work
Ronald.Molteni@stb.gov
Surface Transportation Board
Office of the General Counsel
395 E Street, SW
Washington, DC 20423

Jennie Bennett, CIDQ, LEED GA
Space Planning Manager
County of Fairfax, Virginia
Facilities Management Department
Design, Engineering and Construction
12000 Government Center Parkway, Suite 424
Fairfax, Virginia 22035-0011
Cell 571.585.7807
jennifer.bennett@fairfaxcounty.gov

(The) finished product was excellent...(you) marshalled a responsive and knowledgeable team and finished within our timelines.

- John Panarelli
Senior Design and Construction Manager, Fairfax County

PROFESSIONAL EXPERIENCE
Alexis Peck, AIA, LEED, has been with PPA for twenty years and has been project manager for numerous educational project including FCPS, Loudoun County, Ronald Reagan Presidential Learning Center and Stafford County Schools among others. Her projects have won both company awards and professional awards from organizations such as the Washington Building Congress and the AIA. She has received awards for professional advancement, outstanding and dedicated service and professional contributions, design excellence and outstanding leadership. Her projects have been profiled in Sound and Communications and Environmental Design and Construction magazines.

RELEVANT PROJECT EXPERIENCE
Fairfax County A/E Services Term Contract; Fairfax ,VA
Alexis' Role: Project Manager. Peck, Peck & Associates was contracted by Fairfax County to reconfigure and optimize their Governmental buildings. The first task was to provide space planning, architecture, interior design, infrastructure upgrade, tenant fit-out and relocation services for the 100,000 SF, 6 story Heritage Building. We began the design in November 2011 – building construction had to be finished by the first week of August 2012 to meet the County's needs.

Spotsylvania County Government Feasibility Study (Space Needs & Concept Design); Spotsylvania, VA
Alexis' Role: Architectural Support; Sustainable Lead; Graphics; Zoning Analysis
This two-part comprehensive space needs study and concept design for Spotsylvania County provided present, 5-year,10-year and 20-year needs projections for over 60 County agencies and departments. Costs were included with each design as well as a "shopping" list of design options. Design included phased construction at each 5 year mark to provide the most cost-effective approach in meeting the County needs. Funding to bring the project through construction is pending. *Completion Date: January 2013*

Surface Transportation Board; Washington, DC.
Alexis' Role: Project Manager. We are currently providing The Surface Transportation Board (STB) with architectural, space planning, furniture consultation and move management services. As a representative to this federal agency as a tenant during the design, construction and move phases of their relocation, our role is to assist the team in meeting the Board's requirements in the final design and construction. This relocation is associated with a General Services Administration lease with private sector building owner.

City of Richmond A/E Services Contract; Richmond, VA
Alexis' Role: Project Manager. Peck Peck and Associates is currently contracted with the City of Richmond in implementation of capital improvement program projects. The contract includes providing services on an as needed, quick response basis professional architectural services to numerous City agencies for a wide range of projects. Completion Date: Ongoing

Fairfax County ADA Assessments; Fairfax County ,VA
Alexis' Role: Project Manager
As part of an A/E Services term contract, Peck, Peck & Associates was contracted to perform ADA assessments for 19 properties owned and managed by Fairfax County within a 9 week period. These properties ranged from single structures, multi-story office buildings, to housing complexes to complete "neighborhoods" of affordable housing consisting of apartments and townhouses. In all, the properties consisted of well over 90 buildings. We used 2 tandem survey teams for 9 weeks.

Mike Stinnett, NCARB
Senior Project Manager

YEARS OF SERVICE WITH FIRM:
Peck, Peck & Associates, Inc.
Total Years Experience: 37
Total Years with Firm: 22

EDUCATION
Bachelor of Architecture, August, 1984, Louisiana Tech University
Bachelor of Arts, May 1984, Louisiana Tech University

CERTIFICATIONS/REGISTRATION
Registered Architect: VA, MD, DC, NC, NY, NH, OR

- Member, International Code Council
- International Code Council Certified Building Plans Examiner
- International Code Council Certified Accessibility Inspector/ Plans Examiner
- Fairfax County Certified Building Peer Reviewer, PR0104
- National Council of Architectural Registration Board (NCARB) Certified
- Member, American Institute of Architects
- Member U. S. Green Building Council
- Leadership in Energy and Environmental Design Accredited Professional

REFERENCES

Linda Winslow (703.792.7086)
Email: lwinslow@pwcgov.org
Prince William County Public Works, Facilities Planning & Property
9517 Innovation Drive
Manassas, VA 20109

Jeff Munekata
Department of Energy
202-586-0190
jeff.munekata@hq.doe.gov

PROFESSIONAL EXPERIENCE
Senior Project Manager with proven expertise in Project Management, Building Evaluation Surveys & investigations, programming, planning, design and construction management services on a variety of technically complex building types. Mike has served as the Senior Project Manager for numerous base building projects, major renovation projects including mission critical facilities, phased renovations, commercial and corporate interiors. He has extensive experience related to physical conditions assessments, design deficiency investigations and remedial work to correct identified deficiencies. Mr. Stinnett has strong technical detailing skills, the knowledge to prepare construction documents and specifications for new construction, renovation and restoration projects including experience as the project administrator for projects pursuing LEED Certification.

RELEVANT PROJECT EXPERIENCE

Prince William County A/E and Interior Design Services,
Prince William County, VA
Mike's Role: Project Manager
PPA is currently providing architectural/engineering design services under our third open-end contract for various facilities located in Prince William County. This is a full service, multi-discipline contract for architectural, mechanical engineering, electrical engineering, structural engineering, civil engineering, and fire protection design.

City of Richmond A/E Services Contract; Richmond, VA
Mike's Role: Project Support
Peck Peck and Associates is currently contracted with the City of Richmond in implementation of capital improvement program projects. The contract includes providing services on an as needed, quick response basis professional architectural services to numerous City agencies for a wide range of projects. *Mike's Role: Project Manager*.
Completion Date: Ongoing

Department of Energy Term Contract; Washington, DC
Mike's Role: Project Manager
Under an IDIQ contract, PPA is prime for several projects including restroom renovations, an emergency generator study and design services for a consolidation of agency departments which will strengthen the effectiveness of DOE's energy response capabilities. PPA is providing Emergency Architectural and Engineering Services on an as needed basis for emergency situations that may occur within DOE. Emergency situations adversely affect the DOE Complex, which could be natural or man-made.

National Park Service A/E Services Contract; Washington, DC.
Mike's Role: Project Manager
Peck, Peck & Associates currently holds the task order contract for A/E services with the National Park Service. Services provided include renovation, repair, planning, design, feasibility studies, building assessment reports, design programming, interior space planning, cost modeling/ analyses, code and owner's design review.

Valerie DeGennaro
Lead Interior Design; Space Planning

YEARS OF SERVICE WITH FIRM:
Peck, Peck & Associates, Inc.
TOTAL YEARS EXPERIENCE: 39
TOTAL YEARS WITH FIRM: 29

EDUCATION
B.S./University of Maryland/1982/ Interior Design

CERTIFICATIONS/REGISTRATION
Licensed and Certified Interior Designer - DC, MD, VA

RECOGNITION: Recently received an Award of Excellence from Fairfax County for her role on two projects.

REFERENCES

Ronald S. Molteni
571-296-7407 cell
202-245-0267 work
Ronald.Molteni@stb.gov
Surface Transportation Board
Office of the General Counsel
395 E Street, SW
Washington, DC 20423

Bonnie Jewell
Project Manager / Financial Analyst
Spotsylvania County
(540.507.7583)
BJewell@spotsylvania.va.us
PO Box 215, Spotsylvania, VA 22553

Valerie was always available to either answer a question or tackle a change of scope. Her responses and suggestions were consistently knowledgeable and always showed an eagerness of purpose.

- Genevieve Gilinger, Deputy Director Public Buildings Service, Asset Team

PROFESSIONAL EXPERIENCE
Mrs. DeGennaro has 39 years experience in Space Planning and Interior Design, including procurement, master planning, design intent drawings, and high-level presentations. In her 29 years with PPA, she has handled planning for over 20 million square feet of space. She has managed feasibility studies, space needs studies and future needs assessments for Prince William County, Spotsylvania County, Fairfax County Public Schools, the Department of State, Library of Congress, and National Archives, among others. Mrs. DeGennaro is thoroughly capable of handling any design challenge that comes her way in a professional, effective, and practical manner. She is extremely well versed and will be able to communicate in all aspects of the design process.

PERTINENT EXPERIENCE

Charles County Space Analysis Study For Government Services; La Plata, MD
Valerie's Role: Space Planning/Interior Design. Peck, Peck & Associates was contracted to analyze the Charles County's work space needs, services provided to citizens, and equipment storage for the future and develop a comprehensive governmental services center master plan space/layout assessment for the future of government services. The analysis includes current and future usage of County owned facilities as well as the possibility/feasibility of acquiring property and the construction of new facilities to meet the needs of Charles County.

Prince William County A/E and Interior Design Services, Prince William County, VA
Valerie's Role: Space Planning/Interior Design
PPA is currently providing architectural/engineering design services under our third open-end contract for various facilities located in Prince William County. This is a full service, multi-discipline contract for architectural, mechanical engineering, electrical engineering, structural engineering, civil engineering, and fire protection design.

Spotsylvania County Government Feasibility Study (Space Needs & Concept Design); Spotsylvania, VA
This two-part comprehensive space needs study and concept design for Spotsylvania County provided present, 5-year,10-year and 20-year needs projections for over 60 County agencies and departments. Costs were included with each design as well as a "shopping" list of design options. Design included phased construction at each 5 year mark to provide the most cost-effective approach in meeting the County needs. Funding to bring the project through construction is pending. *Valerie's Role: Space Planning and Analysis*
Completion Date: January 2013

Fairfax County A/E Services Term Contract; Fairfax ,VA
Alexis' Role: Project Manager
Peck, Peck & Associates was contracted by Fairfax County to reconfigure and optimize their Governmental buildings. The first task was to provide space planning, architecture, interior design, infrastructure upgrade, tenant fit-out and relocation services for the 100,000 SF, 6 story Heritage Building. We began the design in November 2011 – building construction had to be finished by the first week of August 2012 to meet the County's needs.

Surface Transportation Board; Washington, DC.
Valerie's Role: Interior Designer/Space Planner
We are currently providing The Surface Transportation Board (STB) with architectural, space planning, furniture consultation and move management services. As a representative to this federal agency as a tenant during the design, construction and move phases of their relocation, our role is to assist the team in meeting the Board's requirements in the final design and construction. This relocation is associated with a General Services Administration lease with private sector building owner.

Engineer's Record and Accomplishments

Engineer's Record and Accomplishments

LIST OF RECENT, SIMILAR PROJECTS/CONTRACTS

Table C below and on the following pages are sample of our team's most recent contracts/projects that are similar to the potential projects that Vienna may anticipates.

Table C: Recent, Similar Projects/Contracts

Project/Contract Name, Location (Design Completion Date)	Client/Owner	Summary of Scope of Work
Bowman		
Hayfield Farm Pipe Conveyance Storm Sewer Design | Fairfax County, VA (Completed 2021)	Fairfax County DPWES	Through our on-call contract with Fairfax County's Stormwater Planning Division (SWPD), Bowman helped resolve a flooding issue in the Hayfield Farm community. Due to excessive residential structure flooding over a long period of time, it was determined that new stormwater infrastructure would be necessary to alleviate this natural burden. This system also included capacity to handle a 100-year capacity of stormwater.
Lower Potomac Ballfield Pond Retrofit | Lorton, VA (Completed 2020)	Fairfax County DPWES	This project included the development of design plans and construction documents for the installation of pond retrofits to the existing stormwater management facility at Lower Potomac Ballpark Facility, located in Lorton, VA. The facility has an overall contributing drainage area of approximately 30 acres.
Turf Replacement Projects, Arlington Public Schools Various APS Elementary Schools, Arlington, VA (Completed 2020)	Arlington Public Schools	Bowman's scope included field survey, synthetic turf field design and civil drawings for site and stormwater management plans, as well as ADA compliance, full construction documents and specifications, procurement assistance, permitting for grading and VSMP/ SWPPP, and construction administration services for the civil/site portion of construction. Bowman also provided facility post-construction certification coordination. This project solved reoccurring erosion and safety issues that often

Upper Kent Drive Reconstruction | Manasses Park VA (Completed 2023)	City of Manasses Park, VA	Bowman's role on this project included field run topographic and utility designation survey; development of the site plan which includes details on demolition, utility layouts and details, detailed grading of accessible routes, maintenance of traffic plan, erosion and sediment control plans, and signage plans; public presentations to the City's governing body; bid phase support; and construction administration and inspection services. Geotechnical engineering and construction testing services were provided by subconsultants under Bowman's direction.
Alpha Corporation		
Lake Fairfax Dam Spillway Repair, Reston, VA (Completed: 2021)	Fairfax County Park Authority	Project entailed the structural assessment and subsequent design of repairs to the Lake Fairfax Dam Spillway. The repairs to the concrete dam were completed as part of the general upkeep and effort to preserve the longevity of the structure. Repairs included concrete crack repairs, both vertical and horizontal, concrete spall repairs, replacement of concrete caulk joints, as well as the replacement of the energy dissipators. Alpha provided the structural design of the repairs and took an active roll during construction to confirm the project was completed on time and to the highest standard to ensure the best outcome for the park.
Lee District Park - Chessie Trail, Reston, VA (Completed: 2016)	Fairfax County Park Authority	Project included the design the 2,650 linear feet of elevated wooden boardwalk that was subject to pedestrian and utility vehicle traffic. The boardwalk consisted of an elevated composite wood deck over wood beams/joists and was supported with helical piles. Responsible for designing custom wood joist to beam connections out of steel bent plates based on non-typical skew angles of framing members.
CES Consulting LLC		
Chestnut Street Sidewalk Improvements, Washington, DC (Completed: 2021)	District Department of Transportation	This project involved constructing 2,500 LF of new exposed aggregate concrete sidewalks. The corridor curbs and gutters were realigned inward to provide traffic-calming benefits as well as minimize community and resident property impacts. Other improvements to calm traffic and promote safe pedestrian movement included curb bulb-outs, ADA-compliant curb ramps, raised crosswalks, and directional median islands at 4 intersections; bus pads; drainage improvements; streetlight upgrades; retaining walls; tree protection and planting of new trees; pavement resurfacing and reconstruction; restoration of and improvements to driveway entrances; and utility upgrades / relocations.

ADA Bus Stop Compliance Transition Plan, Southeast Leesburg, VA (Completed: Ongoing)	Loudoun County Department of Transportation and Capital Infrastructure	As the County's Construction Manager, CES inspects bus stop upgrades throughout the County, To date, we have inspected upgrades at approximately 30 locations including concurrent inspections of up to 3 locations. CES' Construction Manager and Project Records Manager review all product submittals and C-25s to verify products and suppliers are on VDOT's approved lists and that mix designs were current VDOT approvals. CES Inspectors and Construction Manager visit each location with County and contractor representatives to verify field locations and conditions. Final bus stop placement is determined and laid out along with limits of existing sidewalk removals and replacements planned to meet ADA slope and detectable warning surface requirements.
DMY Engineering Consultants		
Lake Fairfax Dam Inspection, Fairfax, VA (Completed: 2022)	Fairfax County Park Authority	DMY staff performed the annual inspection for the dam in accordance with Department of Conservation and Recreation (DCR) regulations. DMY field personnel evaluated the dam embankment for signs of deterioration such as seepage, tension cracks, rodent burrows, and woody vegetation. DMY inspected the spillway and abutments for signs of seepage, deterioration of concrete, and obstructions to flow. DMY investigated the outlet pipe, stilling basin, and abutment contacts.
Little River Turnpike Walkway - Eastbound and Westbound, Annandale, VA (Completed: ongoing)	Fairfax County, VA	The project is located in Annandale, Fairfax County, Virginia and consists of new sidewalks along the eastbound and westbound of the Little River Turnpike from Hillbrook Drive to Little River Run Drive. The approximate length of the eastbound sidewalk connection is 1,800 feet, and the approximate length of the westbound sidewalk connection is 2,000 feet.
Peck Peck & Associates		
Fairfax County Interior Design Services Term Contract, Fairfax County, VA (Completed 2017)	Fairfax County, VA	Peck Peck & Associates recently performed a four-year, indefinite quantity contract for renovation, alteration, maintenance, and repair work to a variety of facilities for Fairfax County. Title I, Title II, and Title III Services were provided. (We currently hold our second IDIQ contract with the County).
Fairfax County Blair Building Renovation, Fairfax, VA (Completed: 2013)	Fairfax County, VA	Peck Peck & Associates completed the 2-story Blair Building renovation located at 10635 West Drive, Fairfax, Virginia. Services provided included architectural, structural, mechanical, electrical, plumbing, and fire protection engineering. The renovation included ADA upgrades, existing window replacement and new window installation (in new window openings), upgrades to the existing building mechanical systems, and systems furniture coordination.

Quality Assurance

Quality Assurance

Bowman's quality management practice is anchored first on the commitment and performance by highly trained and experienced staff, each well-aligned with their particular discipline of work. This staffing commitment is paired with a detailed and robust Quality Plan process that involves two actions: Quality Assurance and Quality Control (QA/QC).

Bowman operates with the understanding that quality is built in, not added on. In addition, Bowman continuously reviews its quality management practices, updating them to incorporate industry best practices as they evolve, as well as implementing lessons learned from past projects. This, coupled with ongoing training/mentoring of our staff and technical leadership of our practice leaders, forms a solid foundation for our quality delivery practice and mindset.

QUALITY ASSURANCE PROCEDURES

Depicted in the diagram to the right, the workflow of Bowman's Quality by Design (QBD) program will be implemented by the project quality assurance (QA) management team, composed of the Principal, Project Manager, and Bowman's regional QA/QC Manager. They will directly oversee a series of quality management reviews of the project at each designated milestone, ensuring that all the Town's needs and requirements are being met.

Specifically, QA will be led by the project manager, Brad Glatfelter, PE. It will involve a sample review of work products from all disciplines, including verifying work was per the scope of work, verifying the basis of design, content, and deliverables, as well as the qualifications of the staff preparing and reviewing the work. This will confirm that QC reviewers are independent of the production team.

QUALITY CONTROL PROCEDURES AND RESOURCES

Quality control (QC) will be led by discipline leaders appointed by the project manager, and it will involve a 100% review of all deliverable products such as surveys, reports, plans, specifications, calculations, cost estimates, and other work products. Standardized checklists of work items are established at the start of the project to develop a consistent metric of checking. Quality control includes review of basis of design and basis of cost estimates; interdisciplinary coordination and review of project and discipline interfaces to avoid conflicts; coordination and consistency of plans, sections, and details to ensure accuracy and clarity; coordination of plans with calculations and specifications; and constructability to ensure efficiency in construction and avoidance of conflicts.

Before final delivery, a technical and editorial review of each work product is performed to ensure that the standard set at the beginning of the project has been achieved, and the goals have been reached. The review comments are recorded in customized project review checklists and placed in the project record. Subcontractor work products are incorporated into our review process and comments related to subcontractor work product are reconciled via separate review sessions to ensure compliance with expectations.

TYPICAL QA / QC PROCESS

Bowman's quality control process begins upon initiation of the project and continues throughout the project delivery process in a deliberate and phased approach. The following summarizes activities that are part of this process:

Scoping Meeting with Client

- Determine scope and schedule
- Gain additional background
- Understand Client's goals
- Negotiate Task Order

Coordinate With Regulatory Agencies

- Confirm procedures, requirements, and preferences
- Discuss unique project features
- Initiate "Buy In" with Agencies

Internal Kick-Off Meeting

- Discuss overall project issues
- Discuss Client's scope/schedule/budget expectations
- Ensures continuity of project from start to finish
- Design staff gets benefit of senior staff's experience

30% Design Review

- Review horizontal design and conceptual grading
- Review project schedule & budget
- Conduct any additional discussions or updates with Client

60% Design Review

- Grading and utilities finalized
- Design computations complete
- Erosion & Sediment Control concept
- Constructability review
- Review project schedule & budget
- Any additional discussions or updates with Client

90% Design Review

- Grading and utilities finalized
- Plan substantially complete
- QC Officer performs a checklist review
- Staff addresses QC Officer's comments and submits the plan for agency review
- Comment Review Meeting
- Review comments with QA Reviewer
- Follow up meetings with review agencies.

100% Design Review

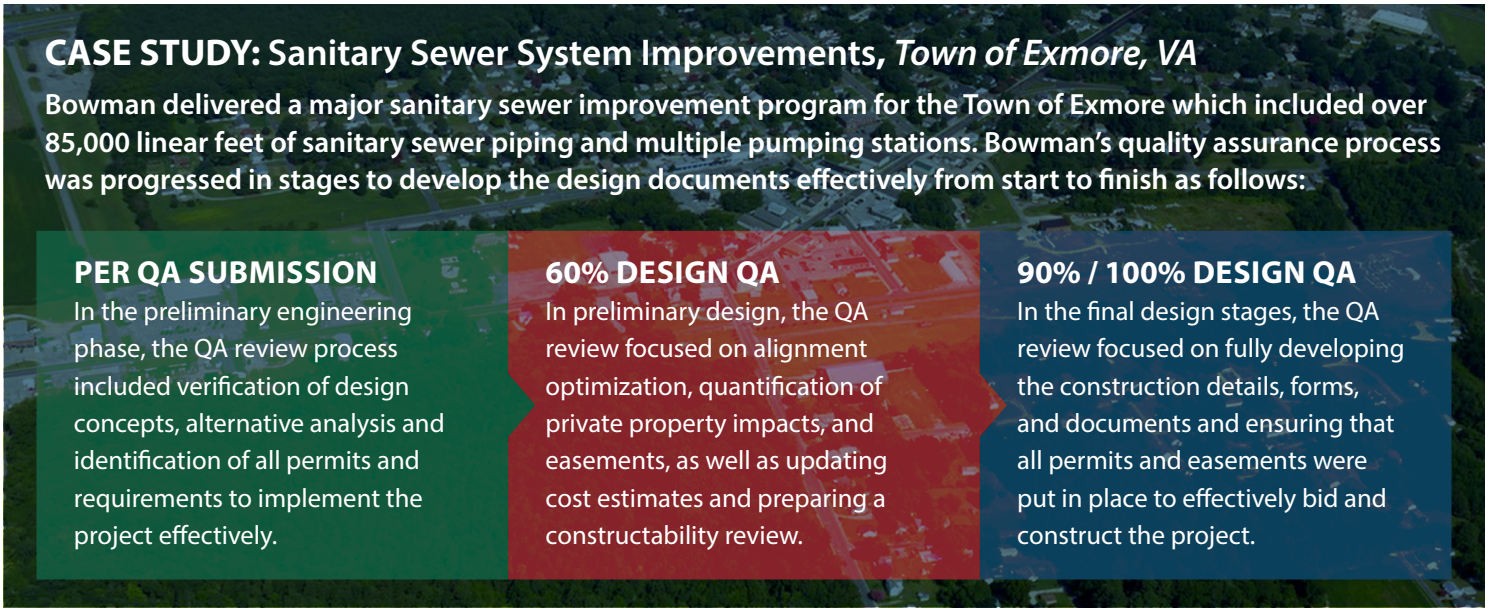
- Ensure that all agency comments have been addressed
- Final constructability and value engineering review

Comment Review Meetings Conducted after Each Review Stage

- Review comments with Director of Engineering
- Decide on strategy
- Contact Client to discuss strategy
- Follow up meetings with review agencies.

Lessons Learned

- Review project costs against budget
- Review major project issues
- Discuss what can be done better
- Meet with Client for input on performance



CASE STUDY: Sanitary Sewer System Improvements, *Town of Exmore, VA*

Bowman delivered a major sanitary sewer improvement program for the Town of Exmore which included over 85,000 linear feet of sanitary sewer piping and multiple pumping stations. Bowman's quality assurance process was progressed in stages to develop the design documents effectively from start to finish as follows:

PER QA SUBMISSION

In the preliminary engineering phase, the QA review process included verification of design concepts, alternative analysis and identification of all permits and requirements to implement the project effectively.

60% DESIGN QA

In preliminary design, the QA review focused on alignment optimization, quantification of private property impacts, and easements, as well as updating cost estimates and preparing a constructability review.

90% / 100% DESIGN QA

In the final design stages, the QA review focused on fully developing the construction details, forms, and documents and ensuring that all permits and easements were put in place to effectively bid and construct the project.

Professional References

Professional References

Our clients say it best! Listed below are several clients for whom we have provided similar stormwater engineering design services for public facilities in the past five years. We encourage you to reach out to these colleagues, who can attest to our successful relationships, professionalism, and technical proficiency.

Allan Rowley, PE
Engineering Services Manager
City of Manassas Park
p: 703.335.8840
e: a.rowley@manassasparkva.gov
Project Reference: Stormwater Program Support, Moseby Drive Emergency Culvert Replacement

Elizabeth L. Thurber, P.E.
Planner, Stormwater Infrastructure Program
Arlington County Department of Environmental Services
p: 703.228.3363
e: Ethurber@arlingtonva.us
Contract Reference: Regional Stormwater Management Facility at Cardinal Elementary School

Paul Shirey
Manager, Project Management Branch
Fairfax County Park Authority
p: 703.324.8738
e: paul.shirey@fairfaxcounty.gov
Contract Reference: On-Call Civil Engineering Services

Ken Trinh, PE
Stormwater Planning Project Manager
Fairfax County DPWES
p: 703.324.1016
e: kenneth.trinh@fairfaxcounty.gov
Project Reference: Hayfield Farm Pipe Conveyance, Lower Potomac Ballfield Pond Retrofit

Steve Stricker
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Arlington Public Schools
p: 703.228.7749
e: steven.stricker@apsva.us
Contract Reference: Regional Stormwater Management Facility at Cardinal Elementary School

Anne Geiger
George Mason University
p: 703.771.2742
e: ageiger@leesburgva.gov
Contract Reference: George Mason University Nutrient Management Plans

Saji Alummuttil
Program Manager
Smithsonian Institute
p: 202.465.0717
e: alummuttils@si.edu
Contract Reference: Smithsonian Stormwater Program Support Services

Bowman