



North Christiansburg Regional Park

RFP#: 19-0019

Volume I

EC PACE
COMPANY, INC.

General Contractors Since 1926
Utilities, Grading, Horizontal Boring, Pipe Bursting

& AMT

A. MORTON THOMAS AND ASSOCIATES, INC.

Town of Christiansburg

100 East Main Street

Christiansburg, Virginia 24073

Attn: Mr. Wayne Nelson

Due: January 22, 2019 at 3:00 P.M.



January 22, 2019

Town of Christiansburg
Mr. Wayne Nelson
100 East Main Street
Christiansburg, Virginia 24073

Re: Request for Competing proposals under the PPEA Former Truman Wilson Property Park (aka, North Christiansburg Regional Park), RFP #: 19-0019
AMT Project No.: P18-1131

Dear Mr. Nelson:

E. C. Pace Company, Inc. (E. C. Pace) in partnership with **A. Morton Thomas and Associates, Inc. (AMT)** is pleased to submit one (1) original and twelve (12) copies of our qualifications to provide professional services under the Public Private Education Facilities and Infrastructure Act (PPEA) for a new multi-purpose regional park, the North Christiansburg Regional Park. Our full service team offers vast, local relevant similar projects and a team of highly qualified professionals for the project.

Project Knowledge: The E.C. Pace/AMT Team have made site visits to the proposed North Christiansburg Regional Park proposed location and have studied the Preliminary Engineering Report dated Winter 2016 intensely. We have also met with Town representatives to identify the Town's goals and needs clearly. We are intimately familiar with the park project and believe we are the Team of choice to provide sound engineering and construction solutions to provide the Town and its residents with a desirable, safe park that will be utilized and enjoyed for many years.

Similar Experience: The E.C. Pace/AMT Team routinely provides similar services for parks and recreation clients throughout Virginia and the Mid-Atlantic region for active and passive facilities. Services the Team typically provides include planning, design, civil engineering, architecture, landscape architecture, surveying, environmental services, architectural design of park facilities, grade and utility construction, parking and roadway construction, and overall construction services for community and regional parks, community centers and sports fields.

Team Qualifications: Our Team possesses the necessary skill set to fulfill the requirements of this PPEA contract. In addition to the E.C. Pace and AMT staff, the Team also includes Spectrum Design, P.C. (Spectrum) for architectural design and mechanical, electrical and plumbing engineering. Schnabel Engineering, Inc. (Schnabel) is also on the E.C. Pace/AMT Team to provide geotechnical engineering. As a cohesive Team, we have provided professional services for nearly 250 years to municipal clients for park projects. All Team members are local to the New River Valley with offices in Christiansburg, Blacksburg, and Roanoke.

Through our technical expertise and dedication to successful project management, as well as our commitment to the Town of Christiansburg and this contract, we can assure the Town that we will meet or exceed all goals and expectations required under this contract as your prime PPEA consultant. We appreciate your consideration of our qualifications and look forward to the next stage of the Town's selection process.

Sincerely,

Frank Thomas, Jr.
PPEA Project Manager
E.C. Pace Company, Inc.

Michael Wiercinski, PE, PS
President
A. Morton Thomas and Associates, Inc.



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◆ *Includes information provided in Volume II - Redacted Proprietary Information*



TAB 1 - QUALIFICATIONS & EXPERIENCE



Qualifications & Experience

- 1 -

- (a) Structure
- (b) Design-Build Experience
- (c) Contacts Information
- (d) Financial Information
- (e) Conflict of Interest Statement
- (f) 10 Year Project Experience



TAB 1 - QUALIFICATIONS & EXPERIENCE

LEGAL & ORGANIZATIONAL STRUCTURE

1a. Identify the legal structure of the firm or consortium of firms making the proposal. Identify the organizational structure for the project, the management approach and how each partner and major subcontractor in the structure fits into the overall team.

This proposal submission is in response to the Town of Christiansburg’s Request for Competing Proposals under the PPEA for design and construction of the Former Truman Wilson Property Park (North Christiansburg Regional Park) is being made by E. C. Pace Company, Incorporated (E. C. Pace). E.C. Pace will be the primary point of contact and will hold all legal responsibility for the delivery of the project.

E. C. Pace is proud to present our team of local construction and design professionals who bring decades of experience, on both the design and construction fronts, successfully delivering projects in the region. The following organizational chart outlines our team of qualified professionals who have a reputation within our communities as being among the best in the industry and further shows our organizational structure for the project.

Summaries of our team members and how each partner and major subcontractor in the structure fits into the overall team are provided below:

E. C. Pace Company, Inc. (E. C. Pace) is a Roanoke based construction company that has been building and installing transportation and civil infrastructure throughout the region for 93 years. E. C. Pace has a strong local presence in the region and has recently built and completed a number of projects in and around the Town of Christiansburg. E. C. Pace brings an unmatched level of dedication toward successfully delivering projects on-time and on-budget with a common sense partnering approach. E. C. Pace will be the prime general contractor on this project and will self-perform a majority of the actual construction operations required to deliver this project.

A. Morton Thomas and Associates, Inc. (AMT) is a full-service engineering firm that has been delivering civil and transportation engineering and construction management and inspection services for over 60 years. AMT will service this project from our Christiansburg, VA office where

we have successfully delivered design and construction administration services to the Town of Christiansburg and region since 2016. AMT will lead the civil engineering and transportation design efforts needed for this project and will provide Quality Assurance services during construction .

Spectrum Design, P.C. (Spectrum) is a full-service architecture firm based in Roanoke, VA that specializes in the design of educational facilities, historic preservation of older buildings, museums and performing arts, residential and senior living communities, and municipal and government buildings. Spectrum will lead the architectural services and oversee the playground design efforts needed for this project.

Schnabel Engineering, Inc. (Schnabel) is a geotechnical engineering firm with an office in Blacksburg, VA that specializes in evaluating and characterizing subsurface conditions, as well as defining the design parameters necessary to accommodate those conditions. Schnabel helps mitigate one of the greatest risks associated with construction—those associated with unforeseen geotechnical issues. Schnabel will also provide Quality Control testing services during construction.

Our management approach for this project will be to function in a manner similar and consistent with the design-build delivery method. Approaching the project in this manner will allow for team collaboration at all stages of the process. E. C. Pace will, at all times, serve as the primary point of contact and will provide overall leadership for the duration of the project. During the design phases AMT, with support from Spectrum and Schnabel and collaboration with E.C. Pace, will oversee and provide leadership and administration of all aspects of the design process and will work hand in hand with the Town of Christiansburg to develop a realistic design that best meets the Town’s needs. During the construction phases E. C. Pace will assume leadership and provide administration and management of the project through completion, with support as needed from AMT, Spectrum, and Schnabel.

An organization chart for the E.C. Pace Team is included on the next page.



TAB 1 - QUALIFICATIONS & EXPERIENCE



EC PACE
 COMPANY, INC.
General Contractors Since 1926
 Utilities, Grading, Horizontal Boring, Pipe Bursting
DESIGN BUILDER

AMT
 A. MORTON THOMAS AND ASSOCIATES, INC.
LEAD DESIGNER & QUALITY ASSURANCE

EC PACE
 COMPANY, INC.
General Contractors Since 1926
 Utilities, Grading, Horizontal Boring, Pipe Bursting
SITE DEVELOPMENT

 **SPECTRUM DESIGN**
 architects | engineers
ARCHITECTURAL DESIGN

 **Schnabel**
 ENGINEERING
GEOTECHNICAL DESIGN & QUALITY CONTROL



TAB 1 - QUALIFICATIONS & EXPERIENCE

Design Build Experience

1b. Describe the experience of the firm or consortium of firms making the proposal and the key principals involved in the proposed project including experience with projects of comparable size and complexity. Describe the length of time in business, business experience, public sector experience and other engagements of the firm or consortium of firms. Include the identity of any firms that will provide design, construction and completion guarantees and warranties, and a description of such guarantees and warranties. Provide resumes of the key individuals who will be involved with the project.

E. C. Pace Company, Inc. (E. C. Pace) will serve as the Lead Contractor for this project. E. C. Pace has been constructing utility systems, water, sewer, storm drain, bores, tunnels, gas lines, grading and concrete work since 1925. E. C. Pace has been a family owned company for 93 years. Mark Pace represents the 4th generation of family ownership of this unique and well-respected construction company. E. C. Pace’s primary core value of safety and maintaining client satisfaction has created an unmatched reputation as the utility contractor of choice in Virginia. As an integrated design-build team member, E. C. Pace will provide the full benefit of local knowledge and expertise.

Throughout the years we have built an extensive portfolio, working with clients including VDOT, UVA, Virginia Tech, Western Virginia Water Authority, multiple private companies, Christiansburg and Blacksburg municipalities, among others. This has given us an incredible working relationship base to understand how to best serve our clients. We are always looking for valued engineering. Finishing a quality job on time, safely and within the budget is consistently our goal.

E. C. Pace has 11 crews and multiple layers of management including foremen, superintendents, project managers and vice presidents. We strive to prepare for each project well in advance to create the best outcome. All of our team is well trained and highly qualified to insure a quality job is completed. We consistently update our equipment, trucks and tools to stay ahead of the competition.

On a local level, E. C. Pace employees are encouraged to

give back. Many of our employees serve on local boards, coach kids sports, and we donate regularly to many local charities. We sincerely appreciate where we live and look forward to the opportunity to work on this project.

Summary of E.C. Pace Company, Inc. projects:

- 10th Street Reconstruction
- VTTI Virginia Automation Park
- RVRA Stormwater Improvements
- VTCRC Phase II Infrastructure
- VWCC Parking Lot #15
- Huckleberry Trail Extension
- VDOT Culvert Replacements

A. Morton Thomas and Associates, Inc. (AMT) will serve as the Lead Designer for this project. AMT has been providing surveying, planning, engineering design and construction administration/inspection services to a wide variety of clients since 1955, and to Commonwealth municipalities and VDOT since 1987. AMT has been involved in the design of more than 100 park projects involving athletic fields, dog parks, transportation facets, utilities, and amphitheaters for municipalities and state departments of transportation in recent years, with VDOT funded projects being our largest in those project assignments. As such, our team is thoroughly familiar with the federal design guidelines (AASHTO, ADAAG, etc.) and VDOT standards and specifications which will be applied to the Town of Christiansburg’s needs.

Our extensive portfolio of similar projects emphasizes built improvements involving sidewalks, as well as associated roadway improvements and bike lanes within the public rights-of-way, mostly along existing streets and roadways. It includes projects that are locally administered, as well as VDOT projects which involve drainage improvements as key elements. AMT has recently provided related services to the Town of Christiansburg, as well as numerous other municipal clients in Northern Virginia and throughout the Commonwealth.

With over 500 employees, AMT has 20 offices throughout the Mid-Atlantic Region, and the firm is prepared to provide services on any phase of project activity includ-



TAB 1 - QUALIFICATIONS & EXPERIENCE

ing project planning, the preparation of preliminary and final designs, contract drawings, specifications, and cost estimates and the provision of engineering plan review services, bidding, and construction administration support. AMT is an award-winning, Engineering News-Record ranked #204 Design Firm working entirely within the Mid-Atlantic region and focused on public sector clients in our local area, such as the Town of Christiansburg.

Summary of AMT projects:

- Witter Athletic Complex
- Shiloh Regional Park
- Gunston Park Diamond Field
- Fairlington Park
- Tyrol Hill Park
- Benjamin Banneker Park
- Dawson Terrace Park
- Madison Manor Park
- W&OD Trail
- Synthetic Turf Athletic Fields

Spectrum Design, P.C. (Spectrum) is a full-service, architecture and engineering design firm – exceeding expectations in innovation, practicality, and sustainability. For more than 35 years, Spectrum Design has been a recognized architectural and engineering leader throughout the Commonwealth of Virginia where our reputation continues to grow based upon the strength of our capabilities and high levels of customer satisfaction.

At Spectrum Design, we approach each project with a client-centered focus uniquely developed to benefit any need. Our goal is to establish and maintain a longterm relationship with each client because we strongly believe that personalized service is a crucial component to producing quality projects. At Spectrum once we understand the needs of a client, we are better suited and prepared to quickly meet future needs as they arise.

Located in Roanoke, Virginia, Spectrum's staff of 28 is comprised of experienced professionals who provide services in the areas of architectural design, interior design, structural engineering, mechanical engineering, electrical engineering, plumbing engineering and civil engineering. The firm focuses on practical, yet creative solutions to every project and their range of expertise extends to a va-

riety of market segments, encompassing both the public and private sector.

Summary of Spectrum projects:

- Countryside Park
- Fishburn & Huff Lane Parks- Park Improvements
- Eureka & Preston Parks Recreation Centers Feasibility Studies
- Tinker Creek Greenway
- Peaks of Otter- Abbott Lake Trail Improvements
- Elmwood Park Amphitheater
- First Baptist Child Development Center Playgrounds

Schnabel Engineering, Inc. (Schnabel) is a geotechnical engineering firm with an office in Blacksburg, VA that specializes in evaluating and characterizing subsurface conditions, as well as defining the design parameters necessary to accommodate those conditions. Schnabel helps mitigate one of the greatest risks associated with construction—those associated with unforeseen geotechnical issues.

Schnabel has performed geotechnical engineering consultation, subsurface explorations, soil laboratory testing, engineering analysis, design and foundation recommendations, site feasibility, and environmental services for more than in 40 projects in the Town of Christiansburg and hundreds within Montgomery County, Virginia. As a result, Schnabel is very familiar and knowledgeable about the local soil conditions, as well as the local contracting and regulatory requirements. Our experience and presence in the local area will allow us to use our vast resources to solve geotechnical related issues that may occur during the construction phase, and enable us to respond rapidly.

Summary of Schnabel projects:

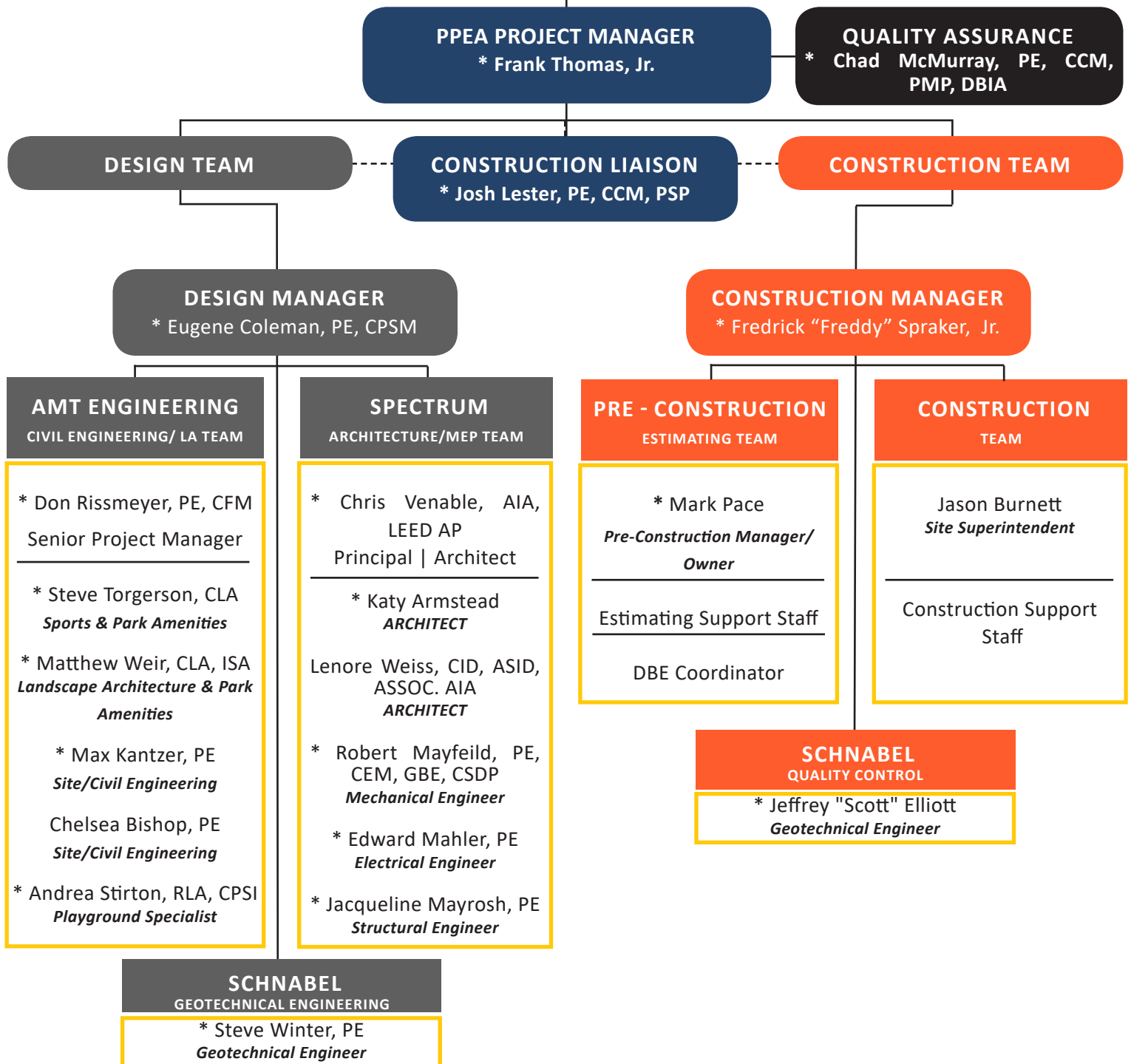
- Huckleberry Trail Phase IID
- Montgomery County Courthouse
- Christiansburg Middle School
- Chrisman Mill Road Realignment
- Walnut Creek- Phase V-A Project
- Park Street Sidewalk Improvements



TAB 1 - QUALIFICATIONS & EXPERIENCE

ORGANIZATIONAL CHART

Legend:
 * = Resume Included





Frank Thomas, Jr.

PPEA Project Manager

Mr. Frank Thomas has 22 years of experience in estimating and managing site developments for both municipal and commercial projects in the Roanoke and New River Valleys. His experience includes a portfolio of various projects including athletic fields, residential subdivisions, road building, commercial and industrial projects. He is skilled in working with clients and engineers early on projects using his experience to study projects and have up front conversations to identify issues before they come up during construction. He brings a client centered approach with every project he is involved with. Frank's ultimate goal is finishing a project with the attention to detail that delivers a project that everyone involved is proud of.

Mr. Thomas began working for E.C. Pace Company, Inc. in 2010 adding his expertise with grading / excavation work to the company's resume. Since, then E.C. Pace has performed many turn-key site development projects in the area. His skills include project development, estimating and bidding, project set-up, contract negotiation, job costing, value engineering, project management, subcontract coordination and scheduling. Over the past two years, he has expanded gas service distribution opportunities, becoming qualified in Virginia to install gas facilities, and helping to grow the company's diverse capabilities.

EDUCATION

BS, 1996, Environmental Science, Virginia Tech

YEARS OF EXPERIENCE

Total: 22
 With E.C. Pace: 8

CERTIFICATIONS

Licensed Virginia Waste Management Facility Operator, Class I / II, #4605 001942

Virginia Gas Operators Association (VGOA) Certified Gas Installer, #407201

Virginia Responsible Land Disturber, #26760

VDOT Erosion & Sediment Control Contractor, #1-06372

VDOT Intermediate Work Zone Traffic Control Training, #120309756

OSHA 10-HR

OSHA Competent Person & Confined Space

Trained CPR & First Aid

MEMBERSHIPS

National Utility Contractors Association (NUCA): Board Member Central & Southwest Virginia Chapter, 2000-2010 – President 2008-2010

REPRESENTATIVE PROJECTS:

- **VTTI Automation Park**, Blacksburg, VA
- **Virginia Tech Corporate Research Center - Phase II Infrastructure**, Blacksburg, VA
- **Virginia Tech Corporate Research Center – RB1901**, Blacksburg, VA
- **Virginia Tech Corporate Research Center – RB1971**, Blacksburg, VA
- **Virginia Tech Corporate Research Center – RB1691**, Blacksburg, VA
- **Virginia Tech Advanced Power and Propulsion Lab**, Blacksburg, VA
- **Huckleberry Trail North Extension – Phase I**, Blacksburg, VA
- **Roanoke College Cregger Center**, Salem, VA
- **Roanoke College Elizabeth Campus Athletic Fields**, Salem, VA
- **Virginia Tech Corporate Research Center – Amphitheater**, Blacksburg, VA
- **VWCC Parking Lot #15**, Roanoke, VA
- **Montgomery County Animal Shelter**, Christiansburg, VA
- **Roanoke Valley Resource Authority Stormwater Improvements**, Roanoke, VA
- **TORC Robotics**, Blacksburg, VA
- **Virginia Tech Transportation Institute Expansion**, Blacksburg, VA
- **Woods Hill Subdivision – Phases 1 and 2**, Salem, VA
- **Fairways II Subdivision – Phases 1-4**, Salem, VA
- **Valley View Boulevard Extension**, Roanoke, VA
- **Valley View Crossing Development**, Roanoke, VA
- **Roanoke County Fleet Service Center**, Roanoke, VA
- **Home Depot-Route 220**, Roanoke, VA
- **Lowe's**, Salem, VA
- **Ordway Drive Extension**, Roanoke, VA
- **Patrick Henry High School**, Roanoke, VA
- **Rowe Furniture Manufacturing Plant**, Elliston, VA



Fredrick "Freddy" Spraker, Jr.

Construction Manager

Mr. Spraker has 36 years of experience in the construction industry. He started his career as a laborer and moved through all aspects of the field, equipment operator, crew leader, foreman, superintendent, project manager. He served as President/CEO of his own construction firm for 17 years. He is experienced in all phases of heavy construction from layout, clearing, erosion and sediment control, water, sewer, storm drainage systems, mass excavation, grading, installation of curb and gutter, sidewalks, building pads and road construction. Projects have included highway/road construction, commercial/ industrial sitework, residential subdivisions, golf course and sports field construction. Golf Course work included the installation of all feature construction (tees, green, bunkers), irrigation systems, concrete/asphalt cart paths and concrete all weather tees. Freddy has had the opportunity to work with owner/developers, golf course architects and engineers to take projects from the drawing board to reality. He takes a lot of pride in a job well done and bringing a project to completion, on time and on budget.

EDUCATION

AS, 1989, Specialized Degree in Engineering Drafting and Design, New England Institute of Technology

YEARS OF EXPERIENCE

Total: 36
 With E. C. Pace: 6

CERTIFICATIONS

CPR / First Aid
 OSHA Competent Person – Excavation Safety
 DCR Responsible Land Disturber
 30 Hr. Safety Training – OSHA Subpart P.
 OSHA Silica in Construction
 VDOT Intermediate Work Zone Training
 MSHA Certification
 VDOT Erosions and Sediment Control

REPRESENTATIVE PROJECTS:

- **Auburn High School – Baseball Field – Renovation**, Riner, VA
- **Glenvar High School – Football Field – Irrigation System**, Salem, VA
- **Glenvar High School – Practice Field – Renovation**, Salem, VA
- **Blacksburg High School – Soccer/Practice Fields (3) – New Construction**, Blacksburg, VA
- **River Course at VT Turf Care Center**, Pulaski County, VA
- **Celco Wellness Center**, Pearisburg, VA
- **Wanchese Fish Co. – Entrance Road**, Suffolk, VA
- **The Meadows Golf Club – Renovation (Multiple Phases)**, Christiansburg, VA
- **The River Course at Heron’s Landing – New Construction**, Pulaski County, VA
- **Roanoke Country Club – Renovation (Multiple Phases)**, Roanoke, VA
- **The River Course at Va. Tech – Golf Team Practice Facility**, Pulaski County, VA
- **The First Tee of Roanoke Valley – New Construction**, Roanoke, VA
- **Bristow Manor Golf Course – New Construction**, Manassas, VA
- **Chantilly National Golf and Country Club – Renovation**, Centreville, VA
- **Brambleton Golf Course – New Construction**, Leesburg, VA
- **Southmont Subdivision**, Roanoke, VA
- **Cherry Hill Townhomes**, Roanoke, VA
- **Heron’s Landing**, Pulaski County, VA
- **Cedar Ridge Townhomes**, Radford, VA
- **Pleasant Hill Pointe Patio Homes**, Pulaski, VA



EDUCATION

BS, 1992, Business Administration, Radford University

YEARS OF EXPERIENCE

Total: 35

With E. C. Pace: 35

Mark Pace

Pre- Construction Manager | Chief Estimator

Mr. Pace has over 35 years of experience in construction cost estimating and scheduling with E.C. Pace Company. Mark started with the family company during summers while in high school. After college, he worked in the field as a Superintendent for 10 years. Mark purchased the company from his father in 2005 and is now the President and 4th generation family member to run the company. He has knowledge of contract administration policies and procedures and has the knowledge of construction contract drawings and specifications. He has extensive experience in preparing estimates, cost analysis, and negotiations relative to change orders involving civil, architectural, structural, mechanical, and electrical renovations and other specialized construction work. Mr. Pace is also familiar with the preparation of final estimates. He has worked as the project estimator/negotiator for major design teams and major federal, state, and private building renovations and new facilities. He is also familiar with the preparation and updating of project schedules and has performed productivity improvement studies on field operations. Mark is currently working on a development project restoring a 100,000 Sq Ft historical building to re-purpose it for indoor soccer, lacrosse fields. Carillion Sports Med / PT, Coffee Shop (run by special needs personal), Serious Steel and other athletic training, to create a sports complex helping to serve the needs for Roanoke and the surrounding areas.

Mark has served on many local boards. Roanoke Country Club (2004 – 2007), NUCA Board and President (2005-2009). Radford University Board of Visitors (2004-2012) Vice Rector (2010-2012), Taubman Museum Board (2015-2018), VACO Insurance Board and current President (2010-current). Virginia Western Community College Board of Directors (2018-current).

REPRESENTATIVE PROJECTS:

- **10th Street, VDOT, Roanoke, VA:** All utilities, road building, bridge, sidewalks, landscaping
- **Culpeper PSA, Culpeper, VA:** Bore under railroad for waterline replacement
- **Jefferson Street, VDOT, Radford, VA:** Underground utilities, tunneling, boring, road building
- **Roanoke Regional Airport, Roanoke, VA:** 72” Storm Drain realignment and Sewer
- **Rocky Mount Streetscape, Franklin County, VA:** Water, sewer, storm drain, sidewalk
- **Bedford County PSA, Bedford, VA:** Smith Mountain Lake Waterline
- **University of Virginia, Charlottesville, VA:** Sewer replacement, pipe bursting
- **VMI – Old Barracks Renovation, Lexington, VA:** Utilities and excavation
- **Troutville PSA, Troutville, VA:** Waterline replacement
- **City of Roanoke, VA:** Trout Run Storm Drain Tunnel
- **Roanoke Gas Company:** New gas line installation and replacement, Roanoke and surrounding Counties



Josh Lester, PE, CCM, PSP

Design/Construction Liaison

EDUCATION

MS, 2005, Construction Engineering & Management

BS, 2004, Civil Engineering, Virginia Tech

REGISTRATIONS

Professional Engineer: Virginia (#046404)
 Certified Construction Manager (CCM) # A2330

Planning and Scheduling Professional (PSP)

YEARS OF EXPERIENCE

Total: 13
 With AMT: 8

CERTIFICATIONS

VDOT Intermediate Work Zone Traffic Control (Exp: 01/31/2018)

OSHA 10 Hour (Completed)

ATTSA – Traffic Control Supervisor

VDOT SiteManager Training (Completed)

DEQ Erosion and Sediment Control Inspector

Mr. Lester offers 13 years of experience providing engineering support and managing various projects for VDOT and Commonwealth municipalities. Mr. Lester is local to the New River Valley and manages AMT's Christiansburg, Virginia operations. His experience includes engineering support of projects of various size and complexity during planning, design and construction for both consulting firms and the public sector. Mr. Lester's experience includes constructability reviews, bidability reviews, contract administration, construction management, project management, design oversight, planning, and claims analysis. Mr. Lester's career has included working with clients during site selection, evaluation, and planning stages of projects of all shapes and sizes and these experiences have provided him a well-rounded view of project delivery methods, project controls techniques, and project management methods. Dedicated to the delivery of AMT's projects in the region, Mr. Lester works in conjunction with AMT's multidisciplinary staff on our LAP projects during both the design and construction phases to help ensure our projects are completed successfully.

REPRESENTATIVE PROJECTS:

Hans Meadows Drive Drainage Improvements, Town of Christiansburg, VA: Providing engineering support and constructability review services for this Town of Christiansburg LAP design project to eliminate chronic flooding problems along Hans Meadow Drive and Sherwood Drive. The project included installation of 1,100 feet of 42" storm drain and associated inlets and manholes. Mr. Lester provided constructability review in support of our design team during the plan development stage.

North Franklin / Independence Blvd Intersection Improvements CEI, Town of Christiansburg, VA: Construction Manager for this Tier 1, \$670,000 Locally Administered Project (LAP) intersection improvement project. The project consists of roadway and pedestrian safety improvements on approximately 0.20 miles of N. Franklin St and Independence Boulevard in the Town of Christiansburg. Mr. Lester is responsible for engineering review of project contract documents, plans, special provisions, specifications, shop drawings, and contractors' schedules and cost estimates; providing liaison with client project personnel, permitting agencies, utility companies, contractors, local agencies, and the general public. He also oversees on-site inspection and materials testing, reviews project daily work reports, and the processing of monthly pay requests.

Church, Rigby, Ellett Drainage Improvements Project CEI, Town of Christiansburg, VA: Construction Manager for this Tier 1 \$1.19 Million Locally Administered Project (LAP) storm drainage improvement project. The Church, Rigby, Ellett Storm Drain Project is designed to add drainage infrastructure improvements along the residential areas of Church Street, Rigby Street, and Ellett Road. Mr. Lester is responsible for engineering review of project contract documents, plans, special provisions, specifications, shop drawings, and contractors' schedules and cost estimates; providing liaison with client project personnel, permitting agencies, utility companies, contractors, local agencies, and the general public. He also oversees on-site inspection and materials testing, reviews project daily work reports, and the processing of monthly pay requests.

I-81 NB & SB Bridges over Route 8 (VDOT), Montgomery County, VA: Assistant Quality Assurance Manager for this \$21 million design-build project to replace the two existing I-81 bridges over Route 8, realignment of I-81, raising of the grade at the bridges and approaches, and modification of the Exit 114 ramps. Mr. Lester providing constructability review engineering support during the design stage.



Chad McMurray, PE, PMP, CCM, DBIA

Quality Assurance

Mr. McMurray has over 25 years of experience in design-build, civil, construction, geotechnical, and municipal engineering projects. His experience includes quality assurance management (QAM) and overall management of projects of various size and complexity during planning, design and construction for consulting firms, construction contractors, and the public sector. On numerous Design-Build projects, Mr. McMurray has provided QA/QC services as the Owner's representative and has been in charge of QA/QC compliance as an employee of the builder. Having spent the past 10 years working as an Area Construction Engineer and Consultant Responsible Charge Engineer for the Virginia Department of Transportation, Mr. McMurray has been responsible for monitoring and documenting contractor QA/QC compliance and schedule performance utilizing SiteManager, ProjectWise, and Primavera P6 software among others. In addition, Mr. McMurray has been responsible for ensuring projects were environmentally compliant. He has extensive experience with schedule reviews, schedule status updates, constructability reviews, plan revisions during construction, work order changes, field survey layout and verification, work order development, pay estimate reviews, as-built drawing development, and conducting weekly progress meetings.

EDUCATION

BS, 1993, Civil Engineering,
University of Tennessee

REGISTRATIONS

Professional Engineer: VA
(#039985), WV, TN, NC, OH,
KY

Certified Construction
Manager (CCM) # A2397

Certified Project
Management Professional
(PMP)# 1405995

Design-Build Associate
(DBIA) Proficient in Site
Manager

YEARS OF EXPERIENCE

Total: 25
With AMT: 8

CERTIFICATIONS

VDOT Asphalt Levels I & II
VDOT Certified Flagger
VDOT Concrete Field
VDOT Guardrail Installation
Training (GRIT)
VDOT Pavement Parking
VDOT Slurry Surfacing
VDOT Soils and Aggregate
VDOT Surface Treatment
VDOT Workzone Traffic
Control- Intermediate
DEQ Stormwater Manage-
ment Inspector
OSHA 10-Hour

REPRESENTATIVE PROJECTS:

I-81 Exit 114 Improvements and Bridge Replacement, Christiansburg, VA: Quality Assurance Manager, Mr. McMurray is currently overseeing the \$22M design-build of I-81 interchange improvements in Christiansburg, His responsibilities include the development, updating, and implementing of a Quality Assurance plan for both design and construction. Mr. McMurray's responsibilities also include coordination of QA/QC testing. As the QAM, he is responsible for the acceptance testing and documentation of all materials used on the generation of the VDOT Materials Book. He verifies that the QC staff is following the QC Inspection and Testing Plans in the approved QA/QC Manual for this Contract. He is also responsible for ensuring environmental compliance is met and performing environmental reviews on the project and that design reviews are performed in accordance with the QA/QC Plan.

U.S. Route 460 Connector Phase I Design Build QAM, Breaks, VA: Quality Assurance Manager (QAM) and QA Geotechnical Engineer for this \$90 million Design Build highway / bridge project in Buchanan County. The design-build project includes 1 mile of new roadway and .56 miles of widening and realignment, twin 1,733 foot long cast-in-place hollow box concrete structures crossing, and a 300 foot long bulb-T girder bridge. Roadway work includes major excavation and filling of roadway embankments in steep, mountainous terrain. Duties include coordination of QA/QC testing of embankment, drainage structures, subgrade, asphalt and incidental items. He was responsible for the acceptance testing and documentation of all materials used on the Contract as well as the generation of the VDOT Materials Book and constructability reviews. He verifies that the QC staff is following the QC Inspection Plan/Materials Testing Requirements in the approved QA/QC Manual for this Contract. He is also responsible for ensuring environmental compliance is met and performing environmental reviews on the project. Duties include oversight of all construction activities and analysis and interpretation of project plans and specifications to insure constructability as well as providing oversight and management of QA inspection and testing staff.



Eugene Coleman, PE, CPSM

Design Manager

Mr. Coleman has 25 years of civil engineering experience with projects involving site development, stormwater infrastructure, transportation improvements and utilities. His projects include municipal facilities and associated infrastructure improvements for parks and site development. Many of these projects entail civil engineering design, project permitting, construction cost estimates, and preparation of bid documents and specifications. He routinely works as an extension of the clients' staff, assisting with all aspects of project management, engineering design, public outreach, and environmental permitting, bidding and construction administration. He is highly competent in the design of Low- Impact Development (LID) and Green Infrastructure including designs for bioretention facilities, permeable pavement, water quality basins, and more.

EDUCATION

BS, 1993, Civil Engineering,
Virginia Tech

REGISTRATIONS

Professional Engineer:
Virginia (#53234)

Construction and Profes-
sional Services Manual
(CPSM) Professional

DEQ Stormwater
Management Combined
Administrator

YEARS OF EXPERIENCE

Total: 25

With AMT: 5

REPRESENTATIVE PROJECTS:

Citywide Stormwater and Environmental Services, Town of Christiansburg, VA: Civil Engineer for services related to stormwater and environmental projects. Our first task order involves using VDOT revenue sharing funds to address drainage concerns at Hans Meadow Drive. The first task is a watershed study to assess upstream storm water management and peak discharges for sizing storm drainage improvements along Hans Meadow Drive. A rolled curb and open section alternative were developed for comparison and formation of a recommended plan. Engineering design is currently underway with construction phase support planned this fall.

Virginia Creeper Trail Trestle #7, Town of Abingdon, VA: Project Designer for the reconstruction of timber trestle demolished by a tornado on April 27, 2011. Project includes 450-foot timber trestle, approximately 500 foot of bridge approaches, and approximately 1,000 foot of temporary trail. Engineering services include environmental permitting (SWPPP), trail design, structural design, cost estimates, and bid documents and specifications. Project costs estimated at \$1.5M.

Southgate Drive/US 460 Bypass and Trail, Blacksburg, VA: QA/QC for the design of 3+ miles of roadway improvements for improved access to the Virginia Tech campus and eliminating a signalized intersection at US 460. Services include roadway drainage design and stormwater management with high expectations for aesthetic appeal, as well as managing an interagency drainage team involving VDOT, Virginia Tech, the Corporate Research Center, and the airport's expansion team. Efforts included addressing utility conflicts, developing UFI plans, relocation design for wet utilities (sanitary sewer and water) and dry utility coordination (electric, telephone, cable television, communications).

Ridgeview Park, City of Waynesboro, VA: Civil Engineer for site improvements to an existing parking lot in Ridgeview Park. These improvements included accessible parking, drainage, and water quality utilizing bioretention facilities. Prepared construction documents consisting of a site dimensional plan, site grading plan, stormwater management plan, erosion and sediment control plans, and site details. Project also included preparation of bid documents, permitting, cost estimating and construction support services.

Walnut Creek Park, Albemarle County, VA: Project Designer for improvements to the beach pavilion at Walnut Creek Park. These included improving access to the pavilion with new sidewalks and steps, grading and storm sewer system for f pavilion. Prepared construction documents including a demolition plan, site dimensional plan, site grading and drainage plan, erosion and sediment control plan and site details.



Don Rissmeyer, PE, CFM

Senior Project Manager

Mr. Rissmeyer offers 28 years of experience with municipal planning and engineering designs for city and county recreational facilities. He is well-versed in the design of a wide variety of recreational facilities including athletic fields, trails and accessible pathways, access and parking, lighting and security systems, grading and drainage, stormwater management, utilities, and related bidding and construction related services. He has expert knowledge of county, state and federal regulations in Virginia.

REPRESENTATIVE PROJECTS:

Shiloh Park — King George County, VA: Project Manager for the planning and design of a new 33-acre County Park. Master planning and engineering design included a baseball field (with lighting and irrigation), two rectangular practice fields, a multi-purpose court, a concession/ restroom building, and 3-miles of trail systems. VDOT recreational access road funding, DCR trail funding, and a playground equipment grant were secured to supplement county funds, and to expand the completed work in the initial two phases.

Witter Athletic Complex – City of Alexandria, VA: Stormwater Engineer involved in the design of this city athletic complex, mostly for stormwater management evaluations of the downstream channel adequacy of Taylor Run and outfalls through the railroad maintenance facilities to Cameron Run. SWMM modeling was involved.

Pleasant Grove Park – Fluvanna County, VA: Provided engineering services for a 65-acre master plan involving new and improved active sports facilities with a transportation element, utility infrastructure, stormwater management and related master planning including cost estimates and board presentations. Mr. Rissmeyer also prepared rough grading plans for two new baseball fields. These tasks were performed through a countywide term contract.

Walnut Creek Park – Albemarle County, VA: Project Manager for surveying and engineering design services for removal and replacement of failing concrete walkways and stairwells around the beach pavilion, as well as a new storm drain collection system for roof downspouts. The project was designed, permitting and built within nine (9) months through our countywide term contract.

Forest Hill Park – City of Charlottesville, VA: Project Manager for surveying, planning and engineering design services for the retrofit of the existing Bioretention Basin at Forest Hill Park. Through a citywide term contract. Design is currently underway.

Ridgeview Park — City of Waynesboro, VA: Provided engineering services for the planning and design of stormwater retrofits in an existing parking lot to include stream buffers for the South River and bio-retention basins in the parking lot islands. Design and construction was through a stormwater grant under the citywide stormwater engineering term contract. On-Call Civil and Ancillary Services Contract – Fairfax County, VA: Provided countywide stormwater engineering services to DPWES SWPD for several tasks under a term contract, including Dam Upgrades at Lake Royal Park, Dam Upgrades at Woodglen Lake Park, Cub Run sub-watershed studies, the Timberly BMP Retrofit, the Mazewood Lane BMP Retrofit, and the Lake Mercer Flood Inundation Mapping. Close coordination with the Braddock District, the FCPA, and affected neighborhoods was required including betterments to FCPA trails at Lake Royal and Woodglen Lake Park, as well as nearly 10-acres of forest mitigation plans including Hatch’s Lake.

EDUCATION

BS, 1990, Civil Engineering,
 University of Virginia

REGISTRATIONS

Professional Engineer: VA
 (#26104), DC, DE, MD, NC,
 PA and TN

Certified Floodplain
 Manager: (#US-10-05536)

YEARS OF EXPERIENCE

Total: 28
 With AMT: 12



Steven Torgerson, CLA

Sports & Park Amenities

Mr. Torgerson has over 17 years of experience managing planning and design services for parks, recreation facilities, and multi-use trails. He is experienced in landscape architectural planning and design for regional parks, trail head and trail design, multi-purpose athletic fields, skate parks, and various other passive and active recreation facilities.

He brings nationwide experience in planning and design within a sustainable framework. He is passionate about developing designs that are catalyst for people to interact with their environment, and community. He is experienced in landscape architectural planning and design for public facilities, trail head and trail design, pedestrian amenities, streetscapes, ADA accessibility, public spaced design, and sustainable planting design. Mr. Torgerson is skilled in numerous areas including project management, conceptual/schematic planning and design skills, site and environmental analysis, multidisciplinary collaboration, hand and computer-generated renderings, engaging public presentations, wayfinding and interpretive sign planning, ecological integration, construction detailing expertise, and government and private sector networking.

REPRESENTATIVE PROJECTS:

Huckleberry Trail Relocation, Blacksburg, VA: Planner and Landscape Architect for aesthetics and tree impact avoidance on the project. Tasks included trail grading recommendations to minimize disturbance to critical root zones, and overall land forming and planting design throughout the new roadway and trail re-alignments throughout Virginia Tech Campus. Collaborated with VT planners to create a parkway-like campus entrance.

Witter Recreational Complex, City of Alexandria, VA: Lead Landscape Architect and Irrigation Designer for the master plan, programming, and design of an active recreational park with elements of passive recreation. The program includes a natural turf baseball field, 2 synthetic multi-purpose fields. The overall site design included pedestrian and vehicular circulation, restrooms, pavilions and the integration of a historic cemetery into a modern sports facility. The parking lot was designed to accommodate 125 to 145 cars. Stormwater management design for this park incorporated low impact development techniques.

Arlington County On-Call Engineering Services for Park and Recreation Facilities, Arlington, VA: Landscape Architecture Task Manager for on-call contract park and recreation facilities in the County. Projects include new streetscapes, town center, public art, athletic fields, playgrounds, and other park amenities. Task order assignments include Nauck Town Square and the following parks: Gunston, Fairlington, Chestnut Hills, Tyrol Hill, and Benjamin Banneker.

Shiloh Park and Trail Loop, King George County, VA: Trail design / landscape architecture for the planning and design of a new 33-acre community park site including active recreational facilities and athletic fields, a multi-purpose trail loop, wildlife viewing areas, and mulch trail connections with boardwalks to the adjacent government center complex. Designs also involves an access road, parking lots, lighting, water, irrigation, SWM and utilities.

EDUCATION

MLA, 2005, Landscape Architecture, Penn State University

BLA, 1999, Landscape Architecture, Utah State University

REGISTRATIONS

Certified Landscape Architect: Virginia (#1542), MD, DE, DC, NC, TN

YEARS OF EXPERIENCE

Total: 17

With AMT: 12



EDUCATION

BLA, 2011, Landscape Architecture, Pennsylvania State University

REGISTRATIONS

Certified Landscape Architect: Virginia (#001961), MD

YEARS OF EXPERIENCE

Total: 8
 With AMT: 7

Matthew Weir, RLA, ISA
Landscape Architecture & Park Amenities

Mr. Weir is a registered landscape architect with wide-ranging design experience in park and recreation projects. His past projects (including passive recreation facilities, sport fields, ADA design, trails, parking lots, roadways, playgrounds, interpretive signage, lighting design) demonstrate an ability to work across various scales, scopes, clients and programs. This diverse project experience contributes to his ever-growing professional experience. Mr. Weir’s ability to analyze past uses, current needs and future demands enable him to develop projects from site inventory/analysis, planning and concept development through schematic design, design development and construction administration. This experience provides the foundation for the various professional services desired in this RFP, including feasibility studies, cost estimates, wetland delineation, ADA-compliant design, sport field design, and sport field lighting. Mr. Weir also executes permits, coordinates with appropriate jurisdictional agencies, prepares 100% plans/specifications/estimates, provides bidding assistance, and participates in public meetings/presentations.

REPRESENTATIVE PROJECTS:

Arlington County On-Call Engineering and Landscape Services – Arlington, VA:

Landscape Architect for on-call contract providing engineering and landscape architecture services for county park and recreation facilities. Planning and design services are being provided for projects involving pavilions, benches, seat walls, ADA accessibility, signage, tree preservation, planting and permeable pavement. Projects included:

- **Tyrol Hill Park – Arlington, VA:** Landscape Architect for park project involving a pavilion, trail, benches, seat walls, ADA accessibility signage, tree preservation, planting, and permeable pavement.
- **Dawson Terrace Park – Arlington, VA:** Landscape Architect for park project involving stormwater management, storm sewer and erosion and sediment control design for park, playground and parking lot improvements. Additional improvements include walkway improvements, ADA access and ESD design including permeable playground area and a structural facility to treat existing parking lot drainage.

Shiloh Park, King George’s County, VA: Landscape Architect providing irrigation design services for a new 33-acre county park that includes a playground, trails, and various recreational facilities.

City of Falls Church Howard E. Herman Stream Valley Park Trail, Falls Church, VA:

Landscape Architect for the renovation of ~1,800 linear feet of existing stone dust trail, as well as the design of new connections to other trails and public areas. The project, still under design/review, may also include a public/private dog park. Stormwater improvements, ADA design, seating, enhanced access to Tripps Run Stream and signage are also considered. Finally, the project explores several design concepts (signage, seating, paving, planting) for an entry plaza at Route 7/trail intersection and cost estimates for each alternative.

City of Falls Church South Maple Avenue and South Washington Street, Falls Church, VA:

Landscape Architect for the redesign of the acute-angle intersection, including traffic calming measures (curb bump-outs, ADA ramps, parking, sidewalks, native plants, driveway closures, special paving, lighting, bus shelter, crosswalks, curb/driving lane modifications, signage/stripping). Improvements to driveways, traffic signals and utilities are also proposed. Annotated and colored illustrative plans, typical section renderings and 3D model photo-simulations clearly and effectively communicated property lines, construction limits and the streetscape improvements.



Max Kantzer, PE, LEED AP

Site/Civil Engineering

Mr. Kantzer is a registered professional engineer and LEED Accredited Professional with 42 years of experience providing and managing professional services for parks and recreational facilities for local government and parks and recreation districts. Mr. Kantzer's experience includes a substantial portfolio of regional and community parks, sports complexes, community centers, trails and open spaces. His projects have included a variety of site improvements such as entrance roads, parking, ADA accessibility, utilities, storm drainage, storm water management, forest conservation and erosion stabilization.

REPRESENTATIVE PROJECTS:

- **Witter Recreational Fields**, Alexandria, VA
- **Shiloh Park**, King George County, VA
- **City of Fairfax Parks and Recreation On-Call Contract**, Fairfax County, VA
- **Gunston Park Diamond Field Replacement**, Arlington County, VA
- **Nauck Town Center**, Arlington County, VA
- **Fairlington Park**, Arlington County, VA
- **Chestnut Hills Park Frontage**, Arlington County, VA
- **Dawson Terrace**, Arlington County, VA
- **Benjamin Banneker Park**, Arlington County, VA
- **Oakland Park, Madison Manor Park**, Arlington County, VA

EDUCATION

BS, 1975, Civil Engineering,
Columbia University

REGISTRATIONS

Professional Engineer: VA
(#041017), CO, DC, and MD

LEED Accredited Professional

YEARS OF EXPERIENCE

Total: 42

With AMT: 16



Andrea Stirton, RLA, CPSI

Playground Specialist

Mrs. Stirton is experienced in landscape architecture and environmental design including transportation facilities, park and recreational facilities, hiker/biker trails, environmental assessment, and natural resource plans. She has also worked on trail designs in accordance with SHA, AASHTO, and ADA guidelines. She has worked to implement environmental site design (ESD) and Low Impact Development (LID) for stormwater management in urban and natural sites. She has experience applying for permits with DNR, MDE, and various county agencies. Her skills include interpretive panel graphic design, plan renderings, illustrative sections, photo-realistic perspective renderings, and digital models.

REPRESENTATIVE PROJECTS:

Arlington County On-Call Landscape Architecture and Engineering Services – Arlington, VA: Landscape Architect for on-call contract providing engineering and landscape architecture services for county park and recreation facilities. Planning and design services are currently being provided for projects involving pavilions, benches, seat walls, ADA accessibility, signage, tree preservation, planting, and permeable pavement. Task order assignments have included Tyrol Hill Park, Dawson Terrace, Banneker Park Master Plan, and Madison Park Renovations.

Valley Mill Recreational Park – Colesville, MD: Landscape Designer for new interpretive panels to be placed throughout the existing park. This project included the graphic design of four interpretive panels using historic photos and images of historic paintings or prints. The goal for each panel was to rely on the images to tell the story of the site. This was achieved by succinctly explaining the significance of each historic area in the park and selecting the most suitable photos.

EDUCATION

BLA, 2011, Landscape
Architecture, Pennsylvania
State University

REGISTRATIONS

Registered Landscape Ar-
chitect: MD #3956

Certified Playground Safety
Inspector: #42270-0621

YEARS OF EXPERIENCE

Total: 6

With AMT: 6



Chris Venable, AIA, LEED AP

Principal | Architect

Mr. Venable has been responsible for the architectural design and project management of many major projects during his 30-year career. He has also prepared construction documents and provided construction administration on a variety of municipal and educational projects.

REPRESENTATIVE PROJECTS:

City of Roanoke (Roanoke, VA)

- Facility assessments of two indoor recreation centers for expansion at Eureka and Preston Parks
- Huff Lane & Fishburn Parks- pavilion and restrooms

First Baptist Church (Roanoke, VA)

- Playground
- Infill addition

Shenandoah River State Park (Warren County, VA)

- New 4,600 square foot visitors center

Roanoke County (Roanoke, VA)

New Fleet Services Facility – maintenance facility with administrative offices for County’s entire fleet of vehicles

Roanoke County Administration Center (Roanoke, VA)

- Board Room Renovation
- Re-roofing
- 4th Floor Board Conference Room
- Commissioner of Revenue

Town of Rocky Mount (Rocky Mount, VA)

- Municipal Building security modifications

City of Charlottesville (Charlottesville, VA)

- Roof framing studies for photovoltaic arrays

Blacksburg Municipal Building Annex (Blacksburg, VA)

- Historic preservation and LEED certification of building for additional municipal offices

Roanoke County Schools (Roanoke, VA)

- Glenvar High School- renovation / addition
- Cave Spring High School- renovation / addition
- Cave Spring Middle school- renovation / addition

EDUCATION

BA, 1988, Virginia Tech

REGISTRATIONS

Registered Architect: VA, NC

NCARB, 2000

LEED Accredited Professional, 2002

YEARS OF EXPERIENCE

Total: 30

With Spectrum: 14



Katy Armstead

Architect

Ms. Armstead has participated in variety of architectural and interior design projects for over 20 years. She has prepared construction documents and provided construction administration on a variety of educational, hospitality, retail, housing, institutional, and healthcare projects.

REPRESENTATIVE PROJECTS:

City of Roanoke (Roanoke, VA)

- Huff Lane & Fishburn Parks- pavilion and restrooms
- Countryside Park- Pavilion

First Baptist Church (Roanoke, VA)

- Playground
- Infill addition

Shenandoah River State Park (Warren County, VA)

- New 4,600 square foot visitors center

EDUCATION

BA, 1996, Virginia Tech

YEARS OF EXPERIENCE

Total: 20

With Spectrum: 19



Robert Mayfield, PE, CEM, GBE, CSDP

Mechanical Engineer

Mr. Mayfield has been a mechanical engineer for 22 years. He has significant Program/Project Management and design experience including security clearance, HVAC/plumbing systems; expert witness analysis; boiler/chiller plants, waste to energy facilities, steam systems, laboratories, and building automation/energy management control systems; design-build; performance contracting, possess significant energy analysis experience for central plants and commercial/institutional/healthcare facilities. Also Mechanical Engineering, Project Management, Program Management, Commercial and Industrial Design, Laboratory and Industrial Ventilation, Energy Management, Building Automation Systems and Direct Digital Controls.

REPRESENTATIVE PROJECTS:

City of Roanoke (Roanoke, VA)

- Facility assessments of two indoor recreation centers for expansion at Eureka and Preston Parks

American Electric Power (Roanoke Main Office)

- Electrical Service Upgrade

Blue Ridge Community College (Weyers Cave, VA)

- Building A- Campus Chiller Replacement and Cooling Tower upgrades

Botetourt County Courthouse (Fincastle, VA)

- Facility needs assessment

Botetourt County Public Schools (Buchanan, VA)

- James River High School boiler replacement
- Facilities Assessment of 14 buildings

EDUCATION

MS, 2002, Engineering Management, Old Dominion University

BS, 1994, Mechanical Engineering, Ohio State University

REGISTRATIONS

Professional Engineer: VA (#032935), NC, SC, and MS

Certified Energy Manager (CEM) Green Building Engineer (GBE)

Certified Sustainable Design Professional (CSDP)

YEARS OF EXPERIENCE

Total: 22

With Spectrum: 5



Edward Mahler, PE

Electrical Engineer

Mr. Mahler has 38 years of experience as an electrical and mechanical engineer. He is experienced in lighting and power design and construction administration for many construction projects incorporating green building practices into the designs for commercial and institutional sector projects.

REPRESENTATIVE PROJECTS:

Piedmont Community Services (Rocky Mount, VA)

- Assessment and programming of office building for expansion

ValleyStar Credit Union (Franklin County, VA)

- New 15,000 square foot administration complex

AEP (Salem, VA)

- Vaughn Center- photovoltaic system

Botetourt County Courthouse (Fincastle, VA)

- Facility needs assessment

Roanoke County Public Schools (Roanoke, VA)

- Cave Spring High School renovations / addition

Wilson Workforce Rehabilitation Center (Fishersville, VA)

- Anderson Vocational Training Center renovations
- Watson Activities Building renovations

EDUCATION

BS, 1979, Virginia Tech

REGISTRATIONS

Professional Engineer: VA (#022356) and PA
 Certified Indoor Air Quality Professional
 Certified Energy Manager
 Certified Green Building Engineer

YEARS OF EXPERIENCE

Total: 39
 With Spectrum: 5



Jacqueline Mayrosh, PE

Structural Engineer

Ms. Mayrosh is a structural engineer and project manager with 15 years' experience in the design, construction, and renovation of facilities. Her experience includes analysis and design using reinforced concrete, steel, timber, and masonry. She also is familiar with common building codes.

REPRESENTATIVE PROJECTS:

City of Roanoke (Roanoke, VA)

- Eureka Park and Preston Park Physical Needs Assessment
- Elmwood Park Improvements

Carver-Piedmont Agricultural Institute (Culpeper, VA)

- Facility Assessment of 70,000 SF former school to be re- purposed for food processing, agricultural research and education

Town of Boones Mill (Boones Mill, VA)

- Assessment of building for potential rental space for tenants

Botetourt County Public Schools (Fincastle, VA)

- Facilities assessment master plan of all County-owned school facilities

Danville Public Schools (Danville, VA)

- Langston Focus School Facilities Assessment

EDUCATION

MS, 2002, Civil Engineering, Lehigh University

BS, 1999, Civil Engineering, Lehigh University

REGISTRATIONS

Professional Engineer: VA (#043345) and PA

YEARS OF EXPERIENCE

Total: 15
 With Spectrum: 15



Steven Winter, PE

Geotechnical Engineer & QA/QC

Steve Winter has project engineering and project management expertise in geotechnical and materials engineering, and construction monitoring. Field engineering responsibilities have included subgrade evaluations for caissons, compacted structural fills, spread footings and structural mats on soil and rock, compacted structural fill testing, and observation of rock fills. As project manager, responsibilities have involved coordination, supervision, and review of field personnel on large earthwork, pavement, and transportation/building construction projects, including warehouses, prisons, office buildings, and academic facilities.

EDUCATION

MS, Geotechnical Engineering, Virginia Tech

BS, Civil Engineering, Virginia Tech

REGISTRATIONS

Professional Engineer: VA (#024320)

YEARS OF EXPERIENCE

Total: 30

With Schnabel: 30

CERTIFICATIONS

FOPP- Fundamentals of Professional Practice (ASFE)

REPRESENTATIVE PROJECTS:

Town of Christiansburg Huckleberry Trail Phase IID, Christiansburg, VA: Project Manager for the Huckleberry Trail expansion towards downtown Christiansburg. Provided QA services during pavement construction and forensic engineering to evaluate embankment and subgrade quality after portions of the new trail experienced settlement and consequent trail damage. Performed a subsurface exploration consisting of test borings and laboratory testing, and prepared a geotechnical engineering report. The geotechnical engineering forensic report summarized the findings and provided recommendations for mitigation of non-compliant existing fill.

Town of Christiansburg Park Street Sidewalk Improvements, Christiansburg, VA: Project Manager overseeing quality assurance testing services for hardscape improvements along Park Street in Christiansburg. Work included earthwork, retaining walls, new underground utilities, paving and curb and gutter. Services included soil laboratory testing, quality assurance testing of concrete, pavements, and sidewalk upgrades.

Montgomery County On-Call Geotechnical/Construction Services Contract, Montgomery County, VA: Contract Manager responsible for overseeing Schnabel's personnel as they provided geotechnical engineering/construction services such as foundation investigations, studies, reports, environmental testing, construction testing, and building code testing on various projects.

Montgomery County Courthouse, Christiansburg, VA: Project Manager. Responsibilities on this project included geotechnical engineering design and management of field staff performing Special Inspections during construction of a new courthouse facility in downtown Christiansburg. Responsibilities included coordination of subsurface exploration; consultation with client; technical analyses of foundation, earth retaining structures, and pavements; and preparation of geotechnical engineering report. Performed project management duties during construction, including coordinating field staff performing special inspections, attending progress meetings, maintaining action logs, and providing consultation services as necessary to address issues arising during construction.

Montgomery County Solid Waste Transfer Station Slope Failure Study, Montgomery County, VA: Project Engineer. Responsibilities on this project included evaluating causes and preparing mitigation recommendations for a slope failure at the existing transfer station in Christiansburg. Responsible for developing and implementing a subsurface exploration program to evaluate the slope failure, performing slope stability analyses using the Slope/W computer software, and preparing a geotechnical engineering study with mitigation recommendations for the slope.



Jeffrey "Scott" Elliott

Quality Control

Mr. Elliott has experience performing field observation and testing of construction materials. Scott has worked on a variety of construction projects with the responsibility of observing and testing the construction to evaluate compliance with plans and specifications. He has experience performing field density testing by sand cone, drive cylinder, and nuclear methods. Scott also has experience in observing and testing concrete, grout, mortar, reinforcing steel, and masonry for building construction.

REPRESENTATIVE PROJECTS:

Town of Christiansburg Park Street Sidewalk Improvements, Christiansburg, VA: Quality Assurance Technician. Responsible for the quality assurance testing services for the hardscape improvements along Park Street including new underground utilities, paving and curb and gutter.

Town of Christiansburg Huckleberry Trail Phase IID, Christiansburg, VA: Quality Assurance Technician. Responsible for Quality Assurance testing services for the Huckleberry Trail extension. Provided observation and testing of trail subgrades and asphalt pavement.

Montgomery County Courthouse, Christiansburg, VA: Construction Technician. For this new four-story, 109,000 square foot structural steel and masonry courthouse, responsible for observing tieback installation, utility and tunnel construction, reinforced steel placement, structural steel connections, fireproofing, and metal decking to evaluate conformance with the plans and specifications. Scott also performed field density testing of soil and aggregate materials and concrete.

Virginia Tech, Rector Field House Additions and Modifications, Blacksburg, VA: Construction Technician. Observed reinforcing steel placement, structural steel erection, and earthwork construction; and performed concrete testing.

Virginia Tech, Union Park and English Field and Weaver Hitting Center, Additions and Modifications, Blacksburg, VA: Technician. Responsible for performing testing and Special Inspections for a major expansion of the University's baseball team facilities and stadium on the Virginia Tech campus. Responsibilities included field density testing of soil and aggregate materials, sampling of concrete, and observation of footing subgrades, reinforcing steel placement, masonry construction, sprayed-on fireproofing, and roofing materials to evaluate conformance with the plans and specifications. Also responsible for completing Special Inspection reports for review by the University Building Official.

Montgomery-Virginia Tech Executive Airport, Hangar Pad preparation, Blacksburg, VA: Technician. Responsible for providing Construction Quality Assurance (CQA) testing of compacted soil fill and asphalt materials during site grading and apron construction in advance of future hangar construction. Responsible for providing on-site representation for the Owner's architect on-site and for performing CQA observation and testing services to evaluate the contractor's and QC firms conformance with the project documents.

EDUCATION

AS, New River Community College

YEARS OF EXPERIENCE

Total: 12
 With Schnabel: 12

CERTIFICATIONS

- ACI Concrete Field Testing
- Allen Face and Company – Certified F-Meter Operator
- CPR
- DOT- Hazardous Materials – Portable Nuclear Gauge
- First Aid
- OCHS Nuclear Moisture-Density Gauge Certification
- VDOT Aggregate Compaction
- VDOT Asphalt Field Technician
- VDOT Concrete Field Technician
- VDOT Soils Compaction Technician



TAB 1 - QUALIFICATIONS & EXPERIENCE



Project Experience (continued)

E. C. PACE COMPANY, INC. HIGHLIGHTED PROJECT EXPERIENCE

1. 10th Street Reconstruction
2. VTTI Virginia Automation Park
3. RVRA Stormwater Improvements
4. VTCRC Phase II Infrastructure
5. VWCC Parking Lot #15
6. Huckleberry Trail Extension
7. VDOT Culvert Replacements



10TH STREET RECONSTRUCTION

Roanoke, Virginia

DETAILS

Owner: Virginia Department of Transportation

Completed: 2018

Cost: \$12,700,00



The 10th Street Reconstruction project consisted of rebuilding approximately 0.7 mile of 10th Street NW between Fairfax Avenue and Andrews Road. E. C. Pace worked closely with both VDOT and Roanoke City officials to build the project in multiple phases, working in and out of city traffic while maintaining access for local residents.

Other project highlights include:

- Replace an existing bridge with a precast arch structure to create a grade separated crossing for the Lick Run Greenway
- Realignment of the Lick Run Greenway with new trailhead parking area including a ride-share bicycle station
- Stream mitigation of Lick Run (impaired waterway) including 1,500 wetland plantings, stream bank stabilization and boulder revetments
- Installation of 2 precast underground stormwater detention structures each consisting of twin 12'x8' chambers and 110' in length
- Project completed ahead of schedule



VTTI VIRGINIA AUTOMATION PARK

Blacksburg, Virginia

DETAILS

Owner: ExpandTran, LLC
 Completed: 2017
 Cost: \$2,100,00



E. C. Pace was awarded the contract to construct a new test facility at Virginia Tech’s Transportation Institute otherwise known as the “Smart Road”. The 10 acre facility provides researchers the ability to safely simulate real-world scenarios in both urban and residential environments. It is a key asset to advance their work with Autonomous Vehicle Technology.

This project consisted of site clearing, erosion and sediment control, mass grading operations, storm drainage, installation of 3 stormwater ponds, 10,500 tons of stone base, and 190,000 SF of pavement. All of which were performed by E. C. Pace personnel with the exception of the paving. The site construction proved challenging as the site had previously been filled with shot rock mixed with other material when the Smart Road was constructed in the early 2000’s.

Dealing with an already stretched budget and with 45% of the material deemed unsuitable, there were serious concerns about the financial impacts involved with removing and replacing such a large amount of material. The E. C. Pace team came up with a solution to crush the large rock material on-site creating 11,800 tons of usable fill providing an excellent base for the over 4 acres of asphalt installed at the facility. This approach reduced the cost impact to the project by over \$500,000 and allowed the project to stay on schedule.

This project provides a great example of how E. C. Pace Company, Inc. sets itself apart from others by developing a partnership with their customers finding the most sensible and economical solutions to the unexpected challenges.



VTCRC PHASE II INFRASTRUCTURE

Blacksburg, Virginia

DETAILS

Owner: Virginia Tech Foundation
 Completed: 2012
 Cost: \$3,500,000



In 2010, E. C. Pace was selected to build Phase II at the Virginia Tech Corporate Research Center (VTCRC). The 47 acre project was situated on approximately 98 acres between the Virginia Tech Airport and Route US460 Bypass.

The work consisted of construction of a new road allowing access to the new park along with associated infrastructure aspects including mass grading for future parcels, storm drainage, water distribution, sanitary sewer, site concrete, paving, infrastructure for future communication and data systems, as well as seeding & landscaping.

Other highlights of the project include:

- Two regional extended detention stormwater ponds, one including wetland plantings
- Widening of existing Research Center Drive to incorporate new turn lane
- Sewer pump station and associated force main system
- Beach volleyball court with drainage system
- Culvert installation in a live stream
- Natural turf soccer and lacrosse fields
- Approximately 4,300' of multi-use trail

E. C. Pace approached the project working close with the design engineer to identify problems ahead of time and diligently working to maximize the owners value within the project budget. E. C. Pace's relationship with the management team at the VTCRC still continues today as a trusted partner being selected to perform all 4 site development projects in Phase II, along with several smaller projects within the VTCRC.

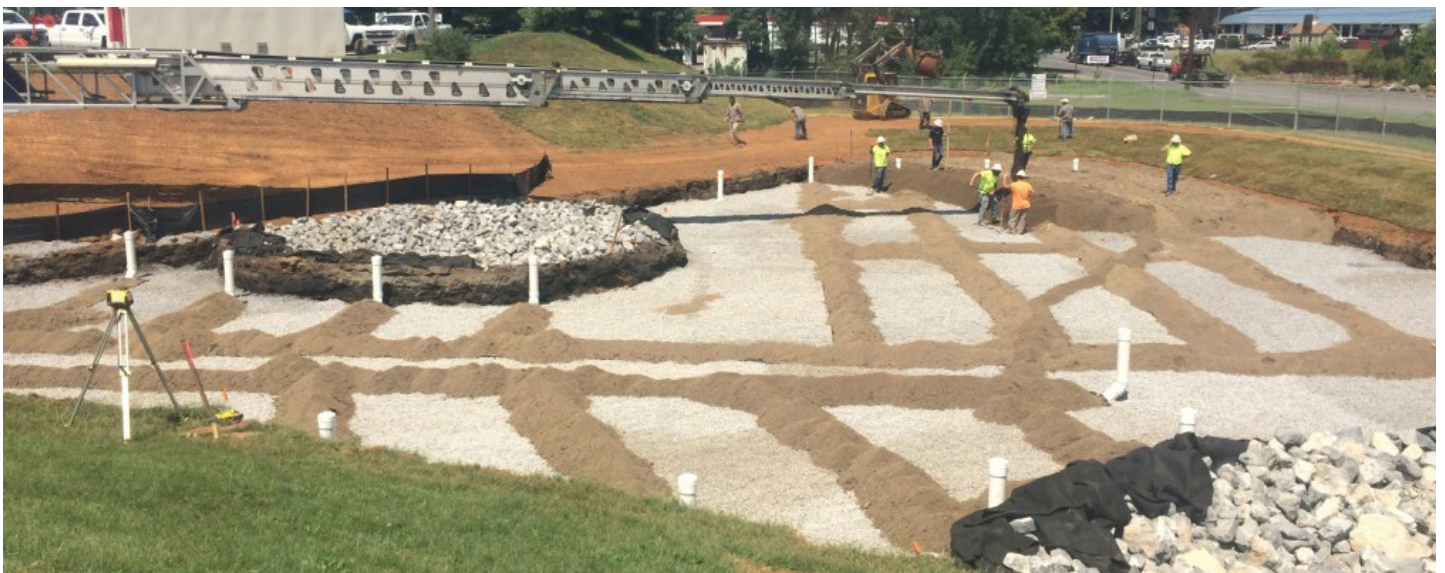


RVRA STORMWATER IMPROVEMENTS

Roanoke, Virginia

DETAILS

Owner: Roanoke Valley Resource Authority
 Completed: 2015
 Cost: \$235,000



E. C. Pace was awarded a project to make stormwater control and quality improvements at the Roanoke Valley Resource Authority's Tinker Creek Transfer Station on Hollins Road. The project consisted off excavating and installing a new stormwater quality facility along with some other storm drainage structures.

On the second day of the project, it was discovered that most of the site was covered by an existing concrete slab foundation which had been left in place and covered with topsoil during initial construction of the transfer station. E. C. Pace worked with the owner to negotiate the most economical solution to remove and dispose of the concrete debris and avoiding a budgetary issue for the project.

The delays associated with the unexpected issues early on were conquered and the project was completed on schedule.

Other highlights of the project include:

- 1,800 Tons of drainage stone
- 1,100 Tons of blended bio-retention media material
- 13,000 SF of sod installation



VWCC PARKING LOT #15

Roanoke, Virginia

DETAILS

Owner: Virginia Western Community College
 Completed: 2013
 Cost: \$770,000



With the explosive growth at Virginia Western Community College, they were looking for additional parking facilities on campus. In 2013, E. C. Pace was the low bidder on the new Parking Lot #15 project adjacent to Colonial Avenue. The project included clearing, erosion & sediment control, mass grading, storm drainage, stone base, site concrete, paving, site lighting, and landscaping.

The storm drainage items were by far the largest aspects of this project. With space at a premium, the large stormwater detention system was installed under the parking lot. To achieve this, cuts of 12'-18' were made over an area of 40' x 160'. The system included 992' of 48" pipe with 4 riser structures and required 2,100 Tons of stone backfill. Water quality requirements were met by installing 2 precast water quality structures.

To convey the stormwater off the site, E. C. Pace installed 24" and 36" Reinforced Concrete Pipe (RCP) across and along Colonial Avenue while maintaining the busy traffic around the College. Several challenges were encountered with several utilities including gas, water, sewer, and electric. The E. C. Pace team worked closely with the project engineer, Spectrum Design, PC, and College officials on a daily basis to minimize impacts to the College, both logistically and financially. In the end, the project was successful for all parties involved and a project E. C. Pace is proud of.



HUCKLEBERRY TRAIL EXTENSION

Blacksburg, Virginia

DETAILS

Owner: Town of Blacksburg
 Completed: 2012
 Cost: \$660,000



An extension to the Huckleberry Trail was awarded to E. C. Pace in 2012. The project located off Price’s Fork Road behind Blacksburg Fire Station #2 added approximately 4,920’ of 10’ wide paved trail to the multi-use Huckleberry Trail system. Site access proved to be the first challenge. The linear trail extension was very remote and not easily accessible via standard Town Right -of-Ways (ROW) as the closest road was over 1/2 mile away. Working within the narrow easements also limited access. E. C. Pace worked with neighboring land owners to build staging areas and construct access roads through their properties while containing livestock throughout the project.

Another challenge was crossing a delineated wetland with an 8” water line as part of the project. E. C. Pace was concerned about the environmental impact with open cutting the permitted crossing as it risked damaging the wetland and posed a possible maintenance issue for the Town. The E. C. Pace team proposed directional drilling underneath the wetlands, thus eliminating damage risk as well as providing the owner a joint-less waterline reducing chances of future maintenance issues.

Other project highlights include:

- 6,325 LF of 8” Ductile Iron Waterline
- 3,600 Tons of Full Stone Backfill
- 5,720 LF of High-Tensile American Wire Farm Fencing
- 5,460 SY of Asphalt Multi-use Trail
- Project completed on schedule



VDOT CULVERT REPLACEMENTS

Carroll and Franklin Counties, Virginia

DETAILS

Owner: Virginia Department of Transportation

Completed: 2017

Cost: \$1,700,000



In 2016, E. C. Pace was the successful bidder to replace and upgrade 5 different culverts in various locations throughout Carroll and Franklin Counties. All of the culvert replacement projects involved replacement of failing corrugated metal pipe (CMP) with precast concrete box culverts. The work included working in live streams and required stream diversions through each site.

With the work requiring complete road closures, VDOT enforced tight 30 day time frames to perform the work at each location and time extensions were not an option. There were many challenges during the various projects, including limited access, time of year restriction, heavy rock excavation, unexpected utility conflicts, and periodic flooding. E. C. Pace tackled each obstacle presented and was able to successfully open each road closure on time and finished entire project ahead of schedule.



TAB 1 - QUALIFICATIONS & EXPERIENCE



Project Experience (continued)

A. MORTON THOMAS AND ASSOCIATES, INC. HIGHLIGHTED PROJECT EXPERIENCE

1. Witter Athletic Complex
2. Shiloh Regional Park
3. On-Call Park Engineering & Landscape Architecture
4. RFK Athletic & Recreation Complex
5. Synthetic Turf Athletic Fields
6. Green Branch Regional Park
7. Additional Projects



WITTER ATHLETIC COMPLEX

Alexandria, Virginia

DETAILS

Owner: City of Alexandria
Completed: 2013
Cost: \$6,500,000 (construction value)



AMT prepared the master plan and construction documents for a 14-acre regional park. As part of the Woodrow Wilson Bridge project, the Federal Highway Administration and the City of Alexandria agreed to acquire a Brownfield site containing a cemetery dating back to the 1700s and two prehistoric sites. The design transformed an eyesore and public liability into an attractive and much-needed community asset. The park includes two multi-purpose synthetic turf athletic fields with Brock shock pads to reduce injuries, a state-of-the-art natural turf softball/baseball field with underdrains, scoreboard, light fixtures with hoods to nearly eliminate spillover, 140 on-site parking spaces, a solar powered 2,500 SF maintenance/restroom building, and picnic pavilions.

Associated improvements included the design of additional on-street parking, turn lanes and a signalized intersection at Duke Street; coordinated streetscape / landscape for distinctive pedestrian and vehicular access routes, stormwater management design utilizing LID techniques (rain gardens) and adequate conveyance analysis for the downstream channel; site utilities, irrigation system designs using the existing water main in the public right-of-way, dugouts, backstop, bleachers, and fencing.



SHILOH REGIONAL PARK

King George County, Virginia

DETAILS

Owner: King George County
 Completed: 2015
 Cost: \$138,000 (design fee)



AMT provided site master planning, civil engineering design, and landscape architecture services for a new county park totaling 33-acres. The conceptual phase included the layouts for multi-purpose fields, a playground, picnic shelters, concessions building, parking and a recreational access road. The site also includes a fitness loop trail, and native trails with boardwalks connecting to the adjacent government center complex (and YMCA).

The conceptual design was developed in sufficient detail to accommodate overall budgeting and to present the plan to the community through the board of supervisors meetings. As a result of the successful completion of our master plan, AMT was authorized to provide the first phase of design, including the athletic fields, parking lots, loop fitness trail and associated site drainage and utilities (including irrigation systems). Bids were within budget and the project construction was completed by W.C. Spratt.

Funding limitations were a significant challenge for this park. AMT started with a detailed master plan with associated budgetary costs. We then worked with the county to separate the project into multiple phases with bid alternates. The paved access road for the new park was designed and built using VDOT recreational access funds (100% state funding). AMT provided coordination with VDOT during the grant application process and a second set of bid documents for the access road design, which was then awarded to the same contractor (W.C. Spratt) on a fast track schedule. The County has also utilized grant monies for a neighborhood-build of the new playground and surfacing for the loop fitness trail, and has plans to work with community groups on the primitive trail systems.



ON-CALL PARK ENGINEERING & LANDSCAPE ARCHITECTURE

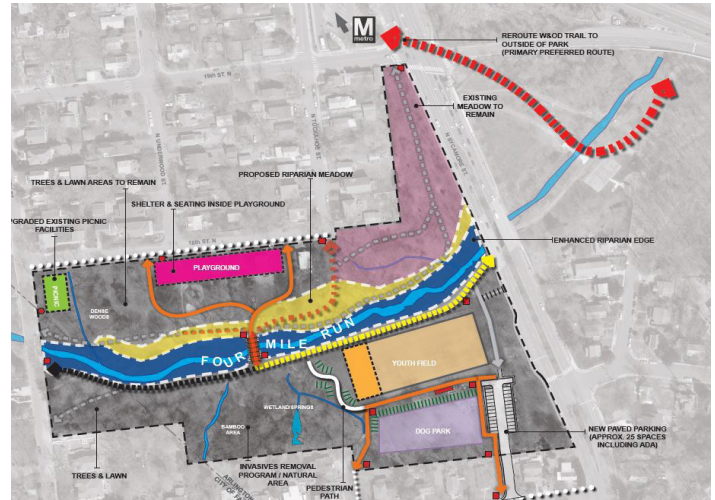
Arlington County, Virginia

DETAILS

Owner: Arlington County
 Completed: 2020
 Cost: Varies by Task Order



Bluement Park Improvements



Benjamin Banneker Park

AMT is providing comprehensive engineering, landscape architecture, and surveying services for on-call task order assignments for Arlington County park and recreation facilities. Tasks include feasibility studies, facility assessments, design services for renovations and new construction and maintenance and repair projects. Engineering scope includes civil, structural, mechanical, electrical plumbing and geotechnical engineering. To date, AMT has provided services for 13 task order assignments ranging in size from minor facility upgrades to master planning efforts. Tasks assignments include:

Bluement Park Improvements: Provided civil engineering services for park improvements for active and passive park features. Services included stormwater management, grading, storm sewer and erosion and sediment control design for park and trail renovations including a playground, parking lot, sports field and dog park. Additional improvements include re-grading of N Sycamore Street for site and drainage improvements, ESD design including permeable pavement, bioretention and structural controls. Trail improvements include update alignments, widening, resurfacing and signage.

Nauck Town Center: Providing engineering consulting services for the development of a town square that will serve as a community gathering place. We are coordinating with County staff and landscape architect for development of the master concept plan, providing consulting on utilities, storm water management and civil design aspects of the design.

Fairlington Park: Providing civil engineering and landscape architecture services for the renovations at Fairlington Park. Renovations include the replacement of playground, exercise equipment, circuit trail, site circulation, site furnishings, landscape, irrigation, and the demolition of an existing stage. Other improvements include landscape planting at the South Utah Street entrance, ADA compliance, drainage, stormwater management, fencing, and signage.

Tyrol Hill Park Phase IV: Providing civil engineering for improvements at Tyrol Hill Park. Proposed improvements include renovations to the existing athletic courts and walking paths and new picnic shelter, main plaza, site furnishings, and comfort station. Improvements will also include grading, drainage and stormwater management. We are also evaluating the main park entrance and developing concepts and costs for improvements/renovations.

Benjamin Banneker Park: Providing site surveying services for a 37-acre park. Surveying efforts include a boundary survey, topographic survey, utility designating and tree survey/inventory of the park site between N. Van Buren Street and N. Sycamore Street. Park features include playgrounds, multi-use athletic field, dog exercise ears, open lawn, shared-use path, parking lot, furnishings, fencing, and landscaping.



SYNTHETIC TURF ATHLETIC FIELDS

Baltimore County, Maryland

DETAILS

Owner: Baltimore County Department of Property Management
 Completed: 2009
 Cost: \$8,000,000



AMT provided design, construction and surveying services associated with the concurrent design and construction of six (6) new synthetic turf fields at two high schools, three regional parks, and Dundalk Community College in Baltimore County. All six fields required the conversion of natural turf to synthetic turf as part of the new construction and in each case the existing storm drain infrastructure was maintained and utilized as part of the final field design. As part of the design, AMT consulted with Baltimore County staff on typical design elements associated with synthetic turf fields including G-max testing for hardness, drainage, maintenance, and controlling high temperatures. All six fields were designed, permitted and constructed in less than one year between July 2008 and June 2009.

Among the specific services provided are:

- Synthetic turf field design
- Site layout and grading coordination
- Erosion and sediment control design
- Construction phase services
- Field lighting design
- Stormwater management waiver request
- SWM & erosion control permitting
- Topographic survey
- Sub-surface utility designation
- Construction stake-out

Project locations include:

- Lansdowne High School
- Hereford High School
- Reisterstown Regional Park
- Eastern Regional Park
- Honeygo Regional Park
- Dundalk Community College



GREEN BRANCH REGIONAL PARK

Prince George's County, Maryland

DETAILS

Owner: Maryland-National Capital Park and Planning Commission

Completed: 2012

Cost: \$7,000,000



AMT provided civil engineering and surveying services to renovate and replace the existing synthetic turf surface at the existing outdoor recreation fields. AMT conducted a detailed topographic survey with greater accuracy to generate 0.2' contours. This increased survey detail was required in order to identify undulations in the existing field surface. Since the project only involved the replacement of the turf and infill material, the project was considered "maintenance" and did not require earth disturbance. Therefore, the project was exempt from stormwater management and erosion control permitting.

With the survey completed, AMT collaborated with the University Athletic Staff to develop grading options to remediate the uneven field while minimizing impacts to the adjacent areas. Given the age of the existing field, while not part of the original project, AMT suggested the University conduct infiltration tests on the existing aggregate base to determine if adequate flow is provided. The test indicated that the top layer of stone was compacted and restricted the flow of runoff into the underdrain system. To ensure the longevity of the field, AMT suggested that the top of layer be removed and replaced to allow for proper field drainage.

AMT also developed field striping plans, details for concrete walkway and storage areas as well all necessary field renovation details and project specifications. AMT completed the project within the University's tight deadline to ensure the opening of the field for the respective University use and events.



ADDITIONAL PROJECTS

UNIVERSITY OF MARYLAND ATHLETIC FIELDS COLLEGE PARK, MARYLAND

AMT provided comprehensive engineering design of athletic fields on the University of Maryland, College Park campus. Projects included:

Field Hockey and Lacrosse Field: The field hockey facility included approximately 1,000 seat bleacher seating, lighted competition field, electronic scoreboard, seating areas for home and away teams, perimeter fencing around the playing field surface and fencing around the entire site. A sprinkler system was also provided to allow the field to be wetted down before and during play.

Football Practice Fields: Provided design services associated with the renovation/reconstruction of the three existing football practice fields (two natural turf fields and one artificial turf field). The fields had an integrated underdrain system to remove run off from the playing surfaces. Each field had individual sports lighting and an irrigation system was provided for the two natural turf fields



WESTERN ALBEMARLE HIGH SCHOOL FIELD & COURT IMPROVEMENTS ALBEMARLE COUNTY, VIRGINIA

As part of an on-call contract, AMT provided engineering and surveying for several tasks including improvements at Western Albemarle High School. Provided surveying and site design for the renovation of the existing running track, D-zones, field events, and six tennis courts.



MARTIN LUTHER KING JR. SPORTS FIELD MONTGOMERY COUNTY, MD

AMT provided full comprehensive civil engineering, surveying and permitting services for the turf conversion of a natural turf football field to a synthetic turf multipurpose football/soccer field including replacement of the existing sports field lighting with new upgraded sports field lighting. AMT prepared full construction documents, specifications and project manual. Specific services included the preparation of site survey, subsurface utility designating, and existing conditions plans, site clearing and demolition plans, erosion control plans, site grading and drainage plans, storm drain profiles and details, athletic field layout plans, athletic field cross sections; athletic field details, site layout plan, site detail, stormwater management plans and site lighting. AMT also prepared project specifications, project manual and cost estimates. Project submissions included a preliminary design, a final design and bid set.





ADDITIONAL PROJECTS

ADA Improvements for Park Facilities Montgomery County, Maryland

AMT provided civil engineering, surveying, landscape architecture, and geotechnical engineering services for improvements to nine (9) parks and recreation facilities. The project was conducted in separate phases. The first phase involved site assessments at nine (9) existing parks to confirm the Department of Justice’s (DOJ) citations under the Project Civil Access (PCA) review. The second phase of the project consisted of preparing detailed construction documents to address the required ADA corrective actions outlined in the Assessment Report.

Spring Grove Turf Fields Baltimore, Maryland

AMT provided engineering services for the construction of a natural turf field, a synthetic turf field, field lighting and associated walkway and parking lot improvements on the site of the recently demolished Hamilton Building. AMT provided design, permitting, bidding, and construction phase services for the fields and related site improvements including grading, storm drainage, ADA site improvements, stormwater management, forest conservation, and erosion and sediment control. Additional services managed by AMT included structural engineering, geotechnical engineering, electrical engineering, and cost estimating.

Whitemarsh Park Bowie, Maryland

AMT is providing design services for the construction of a multi-phase, Multi-Sports Complex. Whitemarsh Park is located to the west of Crain Highway (MD Route 3) and south of Annapolis Road (MD Route 450) in the City of Bowie in Prince George’s County, Maryland. The park is approximately 195 acres and is comprised of three (3) parcels including the five-acre historic Williams Plains house property. The property is primarily undeveloped, natural woodland with the exception of the intensely developed active use area located in the center of the property. The project requires a four-year phased design to implement elements of the park master plan.

The scope of work includes a new concession/restroom building, athletic fields, irrigation, parking lots, vehicular & pedestrian lighting, athletic field lighting, artful bioretention, pedestrian plaza, multi-aged playground, ADA accessibility and utility upgrades. The design process includes concept design development, public meetings, construction documents, permitting, cost estimating, and construction phase services.

Wheaton-Claridge Local Park Improvements Montgomery County, Maryland

AMT provided landscape architectural and civil engineering services to Montgomery Parks for site access, parking lot, hardscape, basketball court, lighting and electrical, and stormwater management improvements to Wheaton-Claridge Local Park. This project was completed as a task assignment under AMT’s on-call contract with the Montgomery Parks to provide services for park and recreation projects. AMT provided landscape and hardscape design, site design, site detailing, grading design, environmental and sediment control permitting, natural resource inventory, forest conservation, tree protection design, and stormwater management.





TAB 1 - QUALIFICATIONS & EXPERIENCE



Project Experience (continued)

SPECTRUM DESIGN, P.C. HIGHLIGHTED PROJECT EXPERIENCE

1. Countryside Park
2. Fishburn & Huff Lane Parks- Park Improvements
3. Eureka & Preston Parks Recreation Centers Feasibility Studies
4. Tinker Creek Greenway
5. Peaks of Otter- Abbott Lake Trail Improvements
6. Elmwood Park Amphitheater
7. First Baptist Child Development Center Playgrounds



COUNTRYSIDE PARK

Roanoke, Virginia

DETAILS

Owner: Roanoke Parks and Recreation
Completed: 2014
Cost: \$898,027



As an extension of the Lick Run Greenway, Spectrum Design provided design and construction documents as well as construction administration for a 10' wide paved greenway approximately 2,650-feet in length. The first 1,500 feet of this greenway starts in an urban/street setting, but quickly descends into a forested parcel on the eastern edge of what was previously the Countryside Golf Course (formerly Arrowood Country Club). Untouched for decades, this forested section of greenway reveals lush understory vegetation with a majestic canopy of old growth pines and hardwoods. Users emerge into a splash of sun and open space previously the golf fairway Hole No. 12 now reshaped into a 2-acre playground and park area. Design of the park includes a spacious handicapped accessible, multi-use and multi-ability community playground, picnic pavilion and 600 square foot comfort station and bathhouse. Reshaping the east hillside offers a spacious multi-purpose play field suitable for recreational soccer, football or other sports.

Two significant trail extensions were designed both to encourage personal physical fitness and increase neighborhood connectivity. A 6-foot wide paved fitness loop 3,835 feet in length provides fitness stations in intervals and provides a measured 1-mile trek all within the bounds of the park. Paved and unimproved trails were planned in several locations for future neighborhood connections, some with pedestrian bridge projects over Lick Run creek.

Users of the greenway and park can arrive by the multiple street connections or park in the newly provided 18 parking spaces in the day use parking area for those on a destination. Destined to be a spark for community activity and fitness, this leg of greenway ends virtually a stone's throw from acres of potential development and is poised to extend and set the standard for the remaining development of the Countryside property.



FISHBURN & HUFF LANE PARK

Roanoke, Virginia

DETAILS

Owner: Roanoke Parks and Recreation
Completed: 2016
Cost: \$399,000



Spectrum Design provided design services for improvements at two separate parks with the City of Roanoke. A prototypical “small” public toilet facility was developed and site adapted to both Fishburn Park and at Huff Lane Park. The prototype was designed for handicapped and family accessibility as well as ease of maintenance including vandal and tamper-proof fixtures, epoxy paint and abuse resistant drywall and tile.

Both locations also had pre-manufactured picnic pavilions, now a City Standard, site adapted with ADA accessibility. The design included all utility connections, grading, parking improvements, and ADA accessible sidewalk and trail connections within the Parks.



EUREKA & PRESTON PARKS RECREATION CENTERS FEASIBILITY STUDIES

Roanoke, Virginia

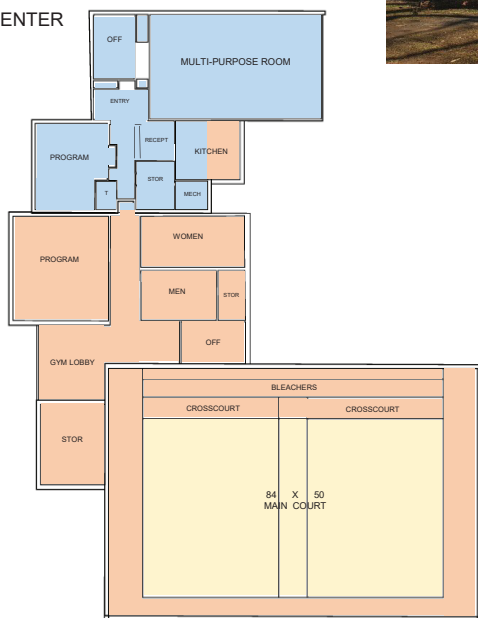
DETAILS

Owner: Roanoke Parks and Recreation
 Completed: 2016
 Cost: \$5,355,245 (proposed budget)



PRESTON PARK RECREATION CENTER
 OPTION A

3,281 SF RENOVATION
 11,092 SF NEW CONSTRUCTION
 14,373 SF TOTAL



Eureka & Preston Park Recreation Centers Feasibility Studies

SPECTRUM DESIGN, PC

Roanoke Parks and Recreation Department serves the City of Roanoke by providing recreational activities and managing the City's 70 parks and plazas, greenways, blueways, and seven recreation facilities. Spectrum Design was commissioned by Roanoke Parks and Recreation to provide Feasibility Studies for its recreation centers at Preston Park and Eureka Park. The Feasibility Study is structured to allow the City of Roanoke to address the needs of their aging facilities and plan for future capital needs to meet the evolving indoor recreational needs of the community. The studies include assessments of each the building and site amenities at each site, as well as the suitability of each site for an expanded recreation center and improved park facilities.

Architects and Engineers from Spectrum Design visited each recreation center and met with Parks Staff to observe the existing facilities and determine the remaining useful life of each building system. Cost estimates were generated to allow Roanoke Parks and Recreation to plan for maintenance costs. Recommended Repairs were prioritized. Priority 1 items require immediate repair. These include ADA violations and deficiencies that continue to degrade the condition of the building, such as roof leaks. Priority 2 items require repair or replacement within the next 2-5 years. Priority 3 applies to items that will require repair or replacement within the next five to ten years. This allows Roanoke Parks and Recreation to make a deferred maintenance plan for the facilities.

In order to plan for the future, Spectrum Design worked with staff from Roanoke Parks and Recreation to evaluate their current and future planned program needs and compare those with the facilities in their current configurations. Spectrum created concept plans and associated cost estimates for multiple renovation and expansion options for each facility that is used to budget for upcoming capital projects.



TINKER CREEK GREENWAY

Roanoke, Virginia

DETAILS

Owner: Roanoke Parks and Recreation
Completed: 2000
Cost: \$285,000



Spectrum Design provided professional architecture services for the Tinker Creek Greenway. The greenway consists of an asphalt trail (12' width with 2' stabilized shoulders) in the flood plain along 5,300 LF of Tinker Creek from Wise Avenue across Dale Avenue (Route 24 - 4 lane divided) to within 250 feet of the creeks confluence with the Roanoke River. The trail is designed to handle maintenance and emergency vehicles and have handicapped accessibility throughout meeting grade, cross slope and sight distance requirements of the Greenway Commission. Three trail heads were planned with ten parking spaces each (asphalt with decorative timber guardrail access restriction). The project was coordinated with a major trunk sanitary sewer project as its final stabilization allowing for shared budgets.

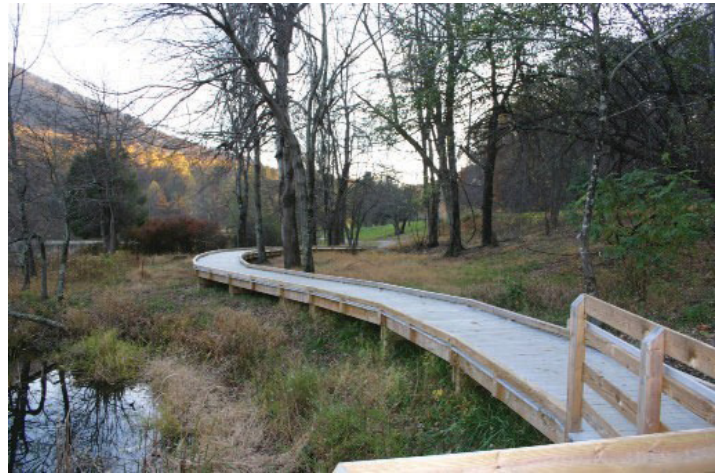


PEAKS OF OTTER - ABBOTT LAKE TRAIL IMPROVEMENTS

Blue Ridge Parkway, Virginia

DETAILS

Owner: Roanoke Parks and Recreation
 Completed: 2002
 Cost: \$318,000



Spectrum Design provided architectural design services for the Peaks of Otter - Abbott Lake Trail Improvements Project. The project was completed in two phases. Services included:

Phase I: Improvements to Parking Areas and Trail around Abbott Lake – Rework travel lanes and provide 8 parking spaces for Buses and RVs. Add 20 auto parking spaces including 6 ADA spaces. Replace all sidewalks. Replace or rework existing trail around lake to meet ADA standards (width and grade, includes one small overlook).

Phase II: Design boardwalk section of trail (approx. 350 LF) across wetland area (includes one small overlook), a 30’ bridge across a stream, and a large trail terminus overlook/fishing deck. Extend ADA accessible trail approximately 2,000 LF, including terminus at far end of earthen dam.



ELMOOD PARK AMPHITHEATER

Roanoke, Virginia

DETAILS

Owner: Roanoke Parks and Recreation

Completed: 2013

Cost: \$6,000,000



Spectrum Design joined the others to take the lead in designing the amphitheater stage for Elmwood Park. This facility is to fit appropriately into the park setting and is to provide for a wide variety of performances. The seating capacity is approximately 4,500 with a dance area. Backstage support is provided by having a loading dock, restrooms, and staging areas. Careful study has been given to make sure of the best location, size and proportions and overall quality of the park.

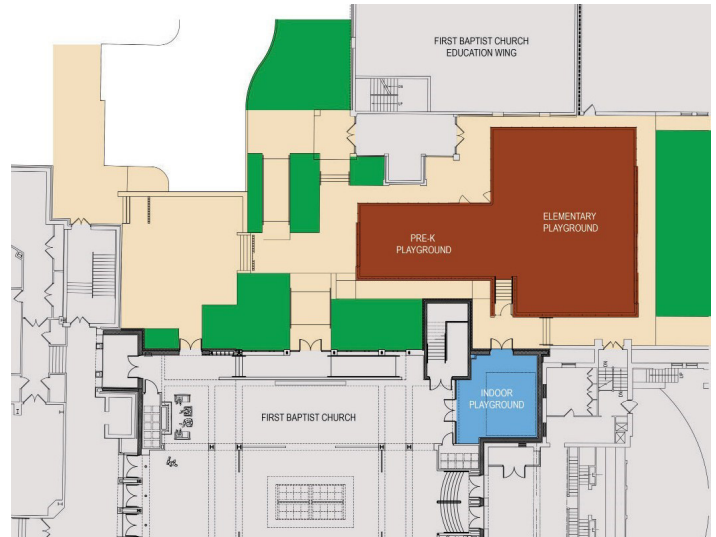


FIRST BAPTIST CHILD DEVELOPMENT CENTER PLAYGROUNDS

Roanoke, Virginia

DETAILS

Owner: First Baptist Church
 Completed: 2015
 Cost: \$5,939,928



Spectrum Design developed new outdoor and indoor playgrounds for the First Baptist Child Development Center as part of their Infill Addition project.

The Child Development Center provides child care for ages 18 months through 5 years, a licensed Kindergarten, and summer programs for children through 3rd Grade. The new building addition created a courtyard enclosed on three sides. This allowed a well-protected and easily supervised outdoor play space. Two separate play areas were designed for two age groups.

An indoor playground provides a 2-story climbing structure in a glass enclosed space. The apparatus features climbing elements, bridges and slides. The enclosure contains noise while allowing visual supervision from the cafe in the atrium space.



TAB 1 - QUALIFICATIONS & EXPERIENCE



Project Experience (continued)

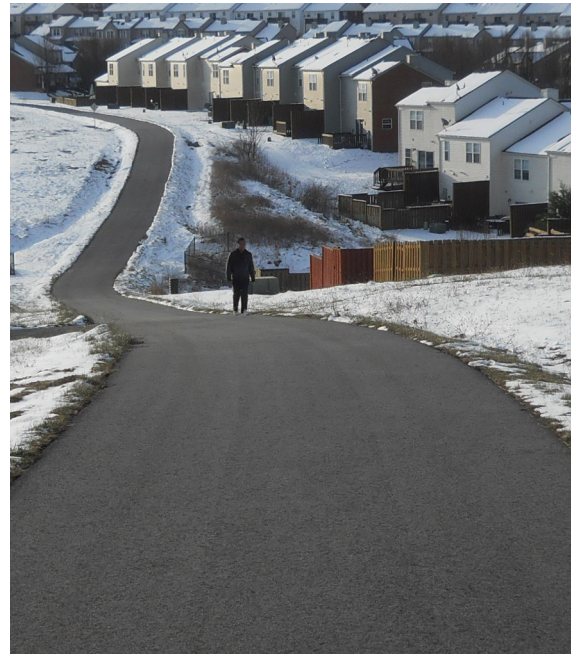
SCHNABEL ENGINEERING, INC. HIGHLIGHTED PROJECT EXPERIENCE

1. Huckleberry Trail Phase IID
2. Montgomery County Courthouse
3. Christiansburg Middle School
4. Chrisman Mill Road Realignment
5. Walnut Creek- Phase V-A Project
6. Park Street Sidewalk Improvements



**HUCKLEBERRY TRAIL PHASE IID
 TOWN OF CHRISTIANSBURG, VA**

Schnabel performed a subsurface exploration for the continuing expansion of the Huckleberry Trail toward the downtown area. The investigation consisted of test borings and laboratory testing, and preparation of the geotechnical engineering report. The geotechnical engineering forensic report summarized the findings and provided recommendations for mitigation of non-compliant existing fill. The most recent phase, Phase IID has been completed and extends the trail to the Food Lion Shopping Center on North Franklin Street. For the Phase IID Huckleberry Trail extension, Schnabel provided QA services during pavement construction and forensic engineering to evaluate embankment and subgrade quality after portions of the new trail experienced settlement and consequent trail damage.



**MONTGOMERY COUNTY COURTHOUSE
 CHRISTIANSBURG, VIRGINIA**

Schnabel provided geotechnical engineering services during design and construction of a new courthouse in downtown Christiansburg. Services included assessment of subsurface conditions, field engineering, soil laboratory testing, and preparation of a geotechnical engineering report. We performed lateral load analyses for the courthouse’s drilled shaft foundation system, considering both free and fixed head conditions. These analyses served to evaluate head deflections under the design load and to assess whether grade beams could be omitted. During construction, Schnabel conducted special inspections. We were responsible for observing tieback installation, utility and tunnel construction, caisson subgrades, footing subgrades, reinforced steel placement, structural steel connections, fireproofing, and metal decking to evaluate conformance with the plans and specifications. We also performed field density testing of soil and aggregate materials and concrete.



Other example project for Schnabel Engineering, Inc. include:

- Christiansburg Middle School
- Chrisman Mill Road Realignment
- Walnut Creek- Phase V-A Project
- Park Street Sidewalk Improvements



TAB 1 - QUALIFICATIONS & EXPERIENCE

Design Build Team Contacts

1c. Provide the names, addresses, and telephone numbers of persons within the firm or consortium of firms who may be contacted for further information.

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 Phone: 540-314-8552
 Email: cvenable@spectrumpc.com

Schnabel Engineering, Inc. (Schnabel):

1901 South Main Street
 Suite 11
 Blacksburg, VA 24060
 Phone: 540-953-1239
 Email: sconner@schnabel-eng.com

Financials

1d. Provide current or most recently audited financial statement of the firm or firms and each partner with an equity interest of twenty percent or greater.

Please reference Volume II, Redacted Proprietary Information, for an audited financial statement from E. C. Pace Company, Inc.

◆ Please refer to [Tab 2 Volume II, Redacted Proprietary Information](#), for more detailed information, including conceptual design documents.

Conflict of Interest Statement

1e. Identify any persons known to the proposer who would be obligated to disqualify themselves from participation in any transaction arising from or in connection to the project pursuant to the Virginia State and Local Government Conflict of Interest Act, Chapter 31 (§2.2-3100 et seq.) of Title 2.2.

After review of the Virginia State and Local Government Conflict of Interests Act, Chapter 31 of Title 2.2, E. C. Pace Company, Inc. is unaware of any persons associated with our team who would be obligated to disqualify themselves from participation in any transaction arising from or in connection to this project.

Previous 10 Years Experience

1f. A list of all projects in the past ten years in which the contractor served as prime contractor and the contract value of the project was within 25% more or less of the proposed contract price of this project. For each such project, state whether or not the contractor or owner submitted any claims against the other for damages or losses and whether or not there was settlement or litigation of such a claim. Describe each claim fully and the result.

E. C. Pace Company, Inc. (E. C. Pace) projects within 25% or less of the proposed contract price include:

Project	Cost	Date
Prices Fork Water Line Improvements	\$4.1 Million	2018
Summit View Water Line Project – Phase II	\$1.2 Million	2018
Melrose Avenue Water Line Replacement	\$1.5 Million	2018
Clifton Forge Sanitary Sewer Rehabilitation	\$1.1 Million	2018
10th Street Reconstruction	\$12.7 Million	2018



TAB 1 - QUALIFICATIONS & EXPERIENCE

VTTI Virginia Automation Park	\$2.1 Million	2017
WVWA Water Improvements	\$1.1 Million	2017
VDOT Culvert Replacements	\$1.7 Million	2017
WVWA Water Improvements	\$1.1 Million	2017
VDOT Culvert Replacements	\$1.7 Million	2017
Altavista Water Line Replacement	\$2.5 Million	2016
Trout Run Drainage Improvements	\$2.0 Million	2015
VA Medical Center Water Distribution System	\$1.5 Million	2014
Town of Troutville Water Line	\$2.0 Million	2014
Henry County CCBC Sewer Line Extension	\$2.2 Million	2012
Virginia Tech Corporate Research Center Phase II Infrastructure	\$3.5 Million	2012
Henry County Water Line	\$1.1 Million	2011
Boones Mill Water System Improvements	\$2.7 Million	2011
RFAAP Pulaski Water System Improvements	\$1.6 Million	2010
Scruggs Road	\$1.2 Million	2010
Orchard Hills Sewer System Phase II	\$1.2 Million	2010

**None of the projects resulted in any claim.*



TAB 2 - PROJECT CHARACTERISTICS



Project Characteristics

- 2-

- (a) Description of Project
- (b) Work by Town
- (c) Approvals & Permits
- (d) Impacts
- (e) Positive Impacts
- (f) Schedule
- (g) Risk & Liability
- (h) Assumptions & Restrictions
 - (i) Phasing
 - (j) Standards
 - (k) Assumptions
 - (l) Contingencies



TAB 2 - PROJECT CHARACTERISTICS

Description of Project

2a. Provide a description of the project, including the conceptual design. Describe the proposed project in sufficient detail so that type and intent of the project, the location, and the communities that may be affected are clearly identified.

The purchase of approximately 60 acres in 2013, was part of the Town of Christiansburg’s vision for a regional recreational park. The Truman Wilson property is situated between Peppers Ferry Road to the north, Norfolk Southern Railroad and Wal-Mart to the east, Peppers Crossing and Windsor Estates to the west, and Windmill Hills and Cambria Crossing to the south. This regional recreational park is anticipated to include playing fields, playgrounds, splash pad, picnic areas, dog parks, walking trails, amphitheater, and supporting facilities. To make this regional recreational park a complete success will include providing an adequate connection to the surrounding vehicular and pedestrian routes including the Huckleberry Trail to the east and Peppers Ferry Road to the north.

To progress this project the Town of Christiansburg solicited a Request for Proposals (RFP) in December of 2014 to provide a design for the Truman Wilson property with the intent of being used as a park for Town recreation. From this solicitation, a presentation to the Christiansburg Town Council and Parks & Recreation Advisory Commission was made on January 17, 2017 concerning the North Christiansburg Regional Park Master Plan. Another work session was held on December 12, 2017, where the Council was presented with master plan costs for options on development of the master plan.

At the request of Council, another work session was held on January 30, 2018, to discuss phasing options and projected costs for development that would give high priority to open space, rectangular ball fields, and an all access playground. Development Option 1 was estimated at \$16,120,000, Development Option 2 was estimated at \$14,880,000, and Development Option 3 was estimated at \$8,930,000. The net cost to Town finance would be approximately \$7,000,000 for Development Options 1 and 2. The session ended with no action taken on matters presented, however a majority of the Council members

supported proceeding with the park development process under Master Plan Cost Estimate – Option 1.

◆ Please refer to **Tab 2 Volume II, Redacted Proprietary Information**, for more detailed information, including conceptual design documents.

Work By Town

2b. Identify and fully describe any work to be performed by the Town or any other public entity.

Because the North Christiansburg Regional Park (Park) and the Connector Road between Peppers Ferry Road and North Franklin Street are dependent upon each other and the design could be handled by separate entities we suggest the Town appoint a capable project manager to be responsible for the coordination of both projects.

We would ask the Town of Christiansburg to provide background documents including GIS data, record drawings of developments and utilities, and traffic signal and highway plans.

The Town of Christiansburg will be responsible for the review and approval of building plans and site development plans, including water and sanitary sewer, associated with the Project. Also, since the Town administers the Virginia Stormwater Management Program (VSMP) they will be responsible for the review of the Erosion and Sediment Control Plans and Stormwater Management Plans for the Project.

With a portion of the Project’s sanitary sewer being collected by a gravity sanitary sewer main on the east side of Norfolk Southern (NS) Railroad there will need to be coordination with NS. NS has secured the services of AECOM to receive and review pipe and wire applications (www.nscorp.com), and prepare and execute license agreements. Typically, the owner of the pipe or wire application (Town) is the party to execute the license agreement with the consultant providing the plans for review and the contractor providing the necessary insurance during construction.



TAB 2 - PROJECT CHARACTERISTICS

It is our understanding most of the property needed for the Project is within the Town's control. However, the Connector Road and planned auxiliary lane along Peppers Ferry Road will clip the eastern portion of Parcel 034773. Furthermore, there is the need to provide sanitary sewer service and stormwater management to the maintenance and support facilities and planned outparcel. Considering these needs for the Project, the Town would handle the acquisition tasks to secure this parcel or a portion thereof.

Approvals & Permits

2c. Include a list of all federal, state and local permits and approvals required for the project and a schedule for obtaining such permits and approvals

- Selection and acceptance of the PPEA Design-Build Team by the Town of Christiansburg
- License agreement with Norfolk Southern for wire, pipeline, and fiber optics crossing from Norfolk Southern through AECOM
- Right of Entry permit from Norfolk Southern for conducting surveys, field inspections, and construction within their right of way
- Nationwide permit from the U.S. Army Corps of Engineers
- Abandonment permit for private water well from the Virginia Department of Health
- Site Plan Review and approval from the Town of Christiansburg
- Erosion and Sediment Control Plan review and land disturbing permit from the Town of Christiansburg
- Stormwater Management Plan review and approval from the Town of Christiansburg
- Building Plan review and approval from the Town of Christiansburg
- Approval of work upon, along, over, under or across the pipeline or pipeline right-of-way by Spectra Energy Transmission

Adverse Impacts

2d. Identify any anticipated adverse social, economic and environmental impacts of the project. Specify the

strategies or actions to mitigate known impacts of the project.

E.C. Pace anticipates that the recreational development benefits of the planned North Christiansburg Regional Park will be received by the Town of Christiansburg, its residents and businesses as a very positive benefit to the community. As such, we do not anticipate any significant adverse social, economic and environmental impacts as a result of the project. Any minor environmental impacts that result from the design and construction operations are expected to be mitigated through compliance with any applicable federal, state, or Town regulations.

Positive Impacts

2e. Identify the projected positive social, economic and environmental impacts of the project.

E.C. Pace anticipates that the planned North Christiansburg Regional Park will be received by the Town of Christiansburg, its residents and businesses as a very positive benefit to the community and its development will have lasting positive social, economic and environmental impacts. The following is a snapshot of some of the positive benefits:

Social Impacts:

- A showcase regional park within the town limits that has the ability to serve the Town of Christiansburg on many fronts – offering benefits to residents, businesses, and visitors alike
- A signature destination area within the town limits that can provide recreation and relaxation for all age groups
- Increased active recreation facilities and opportunities for the Town's recreation leagues and organized sport teams
- Increased passive recreation opportunities for all populations
- Increased opportunity for local residents to pursue health, fitness, and wellbeing activities through the active and passive recreation facilities
- Park will include a dedicated playground facility which



TAB 2 - PROJECT CHARACTERISTICS

will be a prominent feature catering to youth activity and health

- The planned facilities will provide the Town with a large open space that could be utilized as an event space for community celebrations or special events
- Community cohesion – parks offer opportunities for people of all ages to interact, learn and grow.

Economic Impacts:

- Increase in tourism and tournament activity for the Town as a result of recreational activities and sporting events
- Increase in residual money being spent within the town as a result of the recreational and tourism opportunities – meals, shopping, gas, overnight accommodations, etc.
- Positive impact on nearby residential property values.

Environmental Impacts:

- Dedicated green space within the Town limits for use by residents and the general public.
- Stormwater management improvements to address drainage area water quantity and water quality issues.
- Long term preservation improvements to the watershed as a result of implementing stormwater best management practices.

Schedule

2f. Identify the proposed schedule for the work on the project, including the estimated time for completion.

- ◆ Please find our schedule located in **Tab 2 Volume II, Redacted Proprietary Information**, as this is considered confidential or proprietary information.

Risk & Liability

2g. Propose allocation of risk and liability for work completed beyond the agreement's completion date, and assurances for timely completion of the project.

The completion dates presented in this proposal, will be a priority for our team. We have accounted for reasonable risk factors associated with a project of this nature

and willing to be held responsible for associated delays to a completed project. As with any construction project, there are always factors that are unforeseen and out of our control. Thus, the only liability to the Town would be delays associated to risk factors not within our control.

The E. C. Pace Team is prepared to assume traditional contractor risks associated with development, design, and timely delivery of construction through mutually agreed upon guarantees set forth in a negotiated Comprehensive Agreement. We will provide necessary performance and payment bonds if requested with an executed Agreement

Assumptions & Restrictions

2h. State assumptions related to ownership, legal liability, law enforcement and operation of the project and the existence of any restrictions on the Town's or any other entity's use of the project.

Ownership, legal liability, law enforcement, and operation of the facilities will remain the responsibility of the Town of Christiansburg.

During the construction phase of the project, we will assume legal liabilities normally and usually associated with our business practices while engaged in active construction operations on the site.

Our team will not impose any restrictions on the use of the park facility unless instructed to do so by the Town of Christiansburg under written direction.

Phasing

2i. Provide information relative to phased or partial openings of the proposed project prior to completion of the entire work.

To facilitate financing the Project construction will be completed in two phases. Phase I can be generally described to include the following features:

1. Construction of park access road from northern connection with Connector Road to soccer field access road;



TAB 2 - PROJECT CHARACTERISTICS

2. Construction of large and small dog park and associated parking;
3. Construction of maintenance and support building, pole barn and associated access;
4. Construction of destination playground and associated parking;
5. Construction of medium restroom facility;
6. Construction of three soccer fields and associated access road, parking, and concessions and restroom facilities;
7. Construction of medium picnic pavilion;
8. Construction of 80% of leisure trail;
9. Construction of interior sidewalks associated with destination playground and future playground and splash pad/building and future sand volleyball facility;
10. Construction of three stormwater management basins;
11. And rough grading of Phase II.

The Phase II Park development would occur upon the completion of the Connector Road or at some other time determined by the Town and would be generally described to include the following features:

1. Construction of the remainder of the park access road;
2. Construction of the softball field and associated parking, press box, restroom, and storage building;
3. Construction of the amphitheater with multi-purpose pavilion;
4. Construction of small pavilion and parking for trailhead;
5. Construction of sand volleyball facility;
6. Construction of playground and splash pad/building;
7. Construction of iconic hilltop pavilion;
8. Construction of remainder sidewalks and leisure trail;
9. And construction of two small pavilions.

During Phase I of the Park development a portion of the Connector Road from Peppers Ferry Road to the northern park access road will be constructed. This portion of the Connector Road will be constructed final standards with four traffic lanes and a raised median. From the northern park access road to a point just north of the southern park access road the Connector Road will be rough graded. There will also be project phasing associated with the development of off-site features including the Connector

Road and proposed utilities.

The majority of the proposed utilities would be installed with Phase I. However, the proposed utilities in the vicinity of the southern park access may be installed in a temporary manner until the Connector Road is to final grade through the limits of the Park.

Standards

2j. Describe any architectural, building engineering, or other applicable standards that the proposed project will meet.

Civil design for the Park will utilize several resources: the Town's Development Handbook, Americans with Disabilities Act (ADA) regulations, Steve Torgerson, Virginia Stormwater Management Handbook, Virginia Erosion and Sediment Control Handbook, Virginia Stormwater BMP Clearinghouse, Town of Christiansburg Minimum Standards and Specifications for Waterline Design and Construction, Town of Christiansburg Local Standards & Review Program for Water & Sewer Line Extensions, Virginia Department of Transportation 2016 Road and Bridge Standards and Specifications, the American Association of State Highway and Transportation Officials (AASHTO), Virginia Work Area Protection Manual- 2014 Edition, and Virginia Erosion and Sediment Control Handbook- 1992 Edition and Specifications for Pipeline Occupancy of Norfolk Southern Corporation Property.

The design of the buildings and structures will comply with all applicable state and local codes and ordinances, including:

- Virginia Uniform Statewide Building Code (USBC)
- Virginia Energy Conservation Code
- ADA Standards for Accessible Design
- State and Federal Playground safety regulations.
- Local and State Storm Water Management regulations
- Local zoning ordinances
- Local Building Department permitting and Fire Marshall approvals
- Health Department review and approval of food concession facilities



TAB 2 - PROJECT CHARACTERISTICS

Assumptions

2k. List any other assumptions relied on for the project to be successful.

In order for this project to be successful, we assume that the Town of Christiansburg will work closely with the development team to expedite plan reviews, approvals, site disturbance permits and building permits.

- ◆ Additional assumptions have been made in the project financing and are reflected in [Tab 2 Volume II, Redacted Proprietary Information](#).

Contingencies

2l. List any contingencies that must occur for the project to be successful.

- ◆ Contingencies for design and construction have been included [Tab 2 Volume II, Redacted Proprietary Information](#).



TAB 3 - PROJECT FINANCING



Project Financing

- 3 -

- (a) Preliminary Estimate & Method
- (b) Development, Financing, & Operation Plan
 - (c) Assumptions & Fees
 - (d) Financial Risk Factors
 - (e) Government Resources
 - (f) Third Party Financing
- (g) Revenue Source Terms and Conditions
- (h) Tax-Exempt Considerations

◆ Please refer to **Volume II, Redacted Proprietary Information**, for our responses to sections 3a-3h.



TAB 3 - PROJECT FINANCING

Preliminary Estimate & Method

3a. Provide a preliminary estimate and estimating methodology of the cost of the work by phase, segment, or both.

- ◆ Please refer to [Volume II, Redacted Proprietary Information](#), for our responses to sections 3a.

Development, Financing, & Operation Plan

3b. Submit a plan for the development, financing and operation of the project showing the anticipated schedule on which funds will be required. Describe the anticipated costs of and proposed sources and uses for such funds. The operational plan should include appropriate staffing levels and associated costs. Include supporting due diligence studies, analyses, or reports.

- ◆ Please refer to [Volume II, Redacted Proprietary Information](#), for our responses to sections 3b.

Assumptions & Fees

3c. Include a list and discussion of assumptions underlying all major elements of the plan. Assumptions should include all significant fees associated with financing given the recommended financing approach. In addition complete disclosure of interest rate assumptions should be included. Any ongoing operational fees, if applicable, should also be disclosed as well as any assumptions with regard to increases in such fees.

- ◆ Please refer to [Volume II, Redacted Proprietary Information](#), for our responses to sections 3c.

Financial Risk Factors

3d. Identify all anticipated risk factors and methods for dealing with these factors.

- ◆ Please refer to [Volume II, Redacted Proprietary Information](#), for our responses to sections 3d.

Government Resources

3e. Identify any local, state or federal resources that the

private entity contemplates requesting for the project. Describe the total commitment, if any, expected from governmental sources (and identify each such source) and the timing of any anticipated commitment. Such disclosure should include any direct or indirect guarantees or pledges of the Town's credit or revenue.

- ◆ Please refer to [Volume II, Redacted Proprietary Information](#), for our responses to sections 3f.

Third Party Financing

3f. Identify any third parties that the private entity contemplates will provide financing for the project and describe the nature and timing of each such commitment.

- ◆ Please refer to [Volume II, Redacted Proprietary Information](#), for our responses to sections 3f.

Revenue Source Terms and Conditions

3g. Identify the amounts and the terms and conditions for any revenue sources.

- ◆ Please refer to [Volume II, Redacted Proprietary Information](#), for our responses to sections 3g.

Tax-Exempt Considerations

3h. Identify any aspect of the project that could disqualify the project from obtaining tax-exempt financing.

- ◆ Please refer to [Volume II, Redacted Proprietary Information](#), for our responses to sections 3h.



TAB 2 - PROJECT CHARACTERISTICS



Project Benefit & Compatibility

- 4 -

- (a) Beneficiaries
- (b) Support/Opposition
- (c) Involvement & Communications
- (d) Attracting Businesses
- (e) Project Compatibility
- (f) MBE, WBE and Small Businesses Participation Plan



TAB 4 - PROJECT BENEFIT & COMPATIBILITY

Beneficiaries

4a. Describe the anticipated benefits to the community, region or state, including anticipated benefits to the economic condition of the Town, and identify who will benefit from the project and how they will benefit.

E.C. Pace anticipates that the planned North Christiansburg Regional Park will be received by the Town of Christiansburg, it's residents and businesses as a very positive benefit to the community, region or state, and provide economic benefits to the town. The following is a highlight summary of the positive benefits:

Benefits to the Community, Region or State:

- A showcase regional park within the town limits that has the ability to serve the Town of Christiansburg on many fronts – offering benefits to residents, businesses, and visitors alike
- A signature destination area within the town limits that can provide recreation and relaxation for all age groups locally and regionally
- Increased active recreation facilities and opportunities for the Town's recreation leagues and organized sport teams
- Increased passive recreation opportunities for all populations both locally and regionally
- Increased opportunity for local residents to pursue health, fitness, and well-being activities through the active and passive recreation facilities
- Park will include a dedicated playground facility which will be a prominent feature catering to youth activity and health
- The planned facilities will provide the Town with a large open space that could be utilized as an event space for community celebrations or special events for local and regional groups
- Community cohesion – parks offer opportunities for people of all ages to interact, learn and grow.
- Dedicated green space within the Town limits for use by residents and the general public.
- Stormwater management improvements to address drainage area water quantity and water quality issues
- Long term preservation improvements to the watershed as a result of implementing stormwater best management practices

Economic Benefits:

- Increase in tourism and tournament play for the Town and region as a result of recreational activities and sporting events
- Increase in residual money being spent within the town and region as a result of the recreational and tourism opportunities – meals, shopping, gas, over-night accommodations, etc.
- Positive impact on nearby residential property values.

Support/Opposition

4b. Identify any anticipated public support or opposition, as well as any anticipated government support or opposition, for the project.

The North Christiansburg Regional Park has been identified as a priority for the Town of Christiansburg, filling a void in recreational opportunities within the Town and the New River Valley.

Local and regional residents will be supportive of the park and the active and passive recreational opportunities that will be available whether it be for using the playground facility, picnicking, resting or relaxation, or participating in an organized sports league.

Local business owners throughout the Town and region will be in support of the park and the opportunities for increased business and customer traffic that come with additional recreational activities and sports tourism that a regional park can produce.

Although it is anticipated that a majority of the population will be in support of the new park, there is always potential for opposition when public taxpayer monies are involved. Some could perceive the development of the park to not be a priority at this time or that other there are other focus areas in need of attention or have concerns about impacts to adjacent pedestrian areas. We understand and respect the fact that there could be some opposition to this project and we pledge to work diligently with the Town of Christiansburg to design and construct the park, amenities, and facilities in a manner that affords recreational opportunities for all populations in the most cost-effective way possible.



TAB 4 - PROJECT BENEFIT & COMPATIBILITY

Involvement & Communications Plan

4c. Explain the strategy and plans that will be carried out to involve and inform the general public, business community and governmental agencies in areas affected by the project.

We understand the importance of garnering support along with involving and informing the general public, business community and governmental agencies in areas affected by the project. Often there are issues that arise on projects that can cause public concern or opposition, which ultimately can jeopardize the project schedule, and possibly the funding. Concerns about residential and business impacts, environmental impacts, and the notion of increased traffic caused by a development project are examples of community objections. Our team has found that transparency and effective communication of project design can go far in explaining key safety issues, project benefits, and constraints. Our tool box has a number of techniques for this purpose. For this contract, we have identified the following tools to help achieve stakeholder and public consensus:

Public Outreach:

Our team will partner with the Town of Christiansburg to develop and implement a public outreach strategy to ensure that any state and federal public involvement requirements are met. The team's goal will be to not just to meet a checkbox requirement, but to achieve true community buy-in and address their concerns to the maximum extent possible with the project constraints. Outreach programs proven successful on many other projects have included:

- Review and build upon prior outreach/community involvement activities
- Design workshop or charrettes, "task forces," and tours to elected officials, HOA's or business organizations
- Development of a "storyboard" approach at the public hearing to show community steps that have been taken in the process to develop the preliminary design.
- Engagement of community and business leaders, and elected officials to achieve buy-in and support for design.
- Use of sophisticated visualization techniques (e.g. VIS-SIM) to communicate need and proposed improvements.

ments.

How outreach activities can help with consensus:

Sharing project benefits, safety issues, and constraints is a way to communicate purpose and need and inform the community of how the project will help improve their everyday lives.

Aesthetic Design:

To the extent that the project budget and scope allow, our design team strives to include aesthetic elements in projects when they impact communities. Our team appreciates partnering with our clients to create signature projects, where appropriate to context. Our designers also look for opportunities for context sensitive designs in stormwater facilities, roundabout aprons, landscape plantings, and retaining walls.

How aesthetic design can help with consensus:

Civil engineering and architectural development projects designed with aesthetics in mind are more likely to receive public support, often seen as an asset to the community or a gateway feature.

Attracting/Maintaining Businesses

4d. Explain whether and, if so, how the project is critical to attracting or maintaining competitive industries and businesses to the Town or the surrounding region.

Studies indicate that outdoor recreation is the key to health and wellness. The continued growth of outdoor recreational options in this area is a positive indicator that the public agrees. In a report issued by the National Recreation and Park Association, in conjunction with the Center for Regional Analysis at George Mason University it demonstrates the economic impact of local parks nationwide. In regards to the highest economic impact of local parks by state, Virginia ranks as having the 8th largest local economic impact in the nation.

Current ongoing discussions known as the Valley to Valley initiative are working towards connecting the Huckleberry Trail system with the Roanoke Greenway and possibly even the New River Trail and Virginia Creeper Trail systems ultimately connecting Galax to Roanoke through Christiansburg. Building a destination park located in the middle of



TAB 4 - PROJECT BENEFIT & COMPATIBILITY

this initiative can only be a positive for the Town, providing a place for travelers to rest, enjoy the outdoor facilities, and check out the local amenities in Town.

Businesses and competitive industries need employees that are a part of healthy and resilient communities which local parks help build. With 85% of Americans seeking high-quality park recreation amenities when choosing a new place to live, having such a park provides some incentive to businesses looking to relocate giving them advantages in recruiting new talent. Established local businesses benefit from the quality of life enhancements conducive for both employee retention and overall well-being.

Project Compatibility

4e. Explain whether and, if so, how the project is compatible with the Town's comprehensive plan, local infrastructure development plans, the capital improvements budget or other government spending plan.

Prepared by the New River Valley Planning District Commission, with contributions from the Town of Christiansburg, the Town of Christiansburg Parks and Recreation Master Plan (Plan) was adopted by the Christiansburg Town Council on August 26, 2014. Within this Plan goals and objectives were established in four key areas, including Parks and facilities, open space and interconnectivity, marketing and communication, and operations and programs. The relation between these four key areas and the Project are discussed below.

Parks and Facilities

The goal from the Plan is to maintain existing parks and facilities while supporting newer parks and facilities as the Town grows. The objectives related to the Project include:

- Create handicap accessible signature park for the Town,
- Construct multipurpose fields to maximize space,
- Develop a softball complex to serve residents and bring tournaments to the Town of Christiansburg,
- Develop playgrounds and parks with respect to special populations (people that are disabled).

Open Space and Interconnectivity

The goal from the Plan is to provide ease of access for Town residents to enjoy the outdoors. The objectives related to the Project include:

- Preserve and plan for open space.
- With completion of the Connector Road the objective of connecting businesses and residential areas with recreational assets would be achieved.

Marketing and Communication

One of the goals from the Plan is to promote coordination with businesses, schools, New River Valley communities, and support beneficial partnerships elsewhere. The Project would could possibly facilitate the following objectives:

- Partner with parks and recreation departments throughout the region to host events and tournaments that are beyond the capacity of one department.
- Develop public private partnerships through sponsorships of events, tournaments, and other community activities.
- Partner with Montgomery County Public Schools to use facilities for youth and adult sports.

Operations and Programs

One of the goals from the Plan is to ensure compliance with local, state, and national regulations while staying current on national recreation trends. The Project could provide learning opportunities within the design to reflect the measures implemented to satisfy the Virginia storm-water management regulations and provide a cleaner environment.

The Town of Christiansburg 2013 Comprehensive Plan is the Town's principal tool to guide growth and development in the community. Below are goals of the comprehensive plan which the Project plays a part to satisfy.

- Foster the Town's identity as a recreational, cultural, and entertainment mecca as stated in Vision 2020.
- Ensure new park space is designed for safety and accessibility.
- Develop a dog park and Include water access, separate areas for large and small dogs, benches, and waste



TAB 4 - PROJECT BENEFIT & COMPATIBILITY

cleanup.

- Develop a large central park for general use as well as events and festivals.
- Study constructing outdoor amphitheatres and/or other appropriate venues for large scale cultural events.
- Construct picnic shelters for community use at parks and facilities.
- Connect public sites including recreation centers and neighborhood parks through the use of bicycle and pedestrian facilities.
- Encourage development of softball/baseball fields and rectangular multi-purpose fields for football and soccer.
- Ensure indoor and outdoor facilities are aesthetically pleasing and maintained for residents and visitors.
- Provide adequate and accessible programs for the physically handicapped.
- Continue to attract local, state, and national athletic and aquatic events to the community to further develop tourism and increase economic impact.
- Incorporate pedestrian facilities into Town projects.

Per the Town of Christiansburg budget summary for fiscal year July 1, 2017 to June 30, 2018, funds for the Project are not included but are being set aside in assigned fund balances. The Town of Christiansburg budget for fiscal year July 1, 2018 to June 30, 2019 includes \$1,000,000 of funding for the Project.

MBE, WBE and Small Businesses Participation Plan

4f. Provide a statement setting forth participation efforts that are intended to be undertaken in connection with this project with regard to the following types of businesses: (i) minority-owned businesses, (ii) woman-owned businesses, and (iii) small businesses.

E.C. Pace Company, Inc. will use its experience with meeting DBE participation goals for VDOT bid-build projects taking necessary steps to assure minority-owned and women-owned businesses are given fair opportunities to compete for contracted work on the project.

We are a SWAM business (#0009521) and thus providing 100% SWAM participation by acting as the General Contractor for the work performed under this proposal.