

Professional Statement of Qualifications

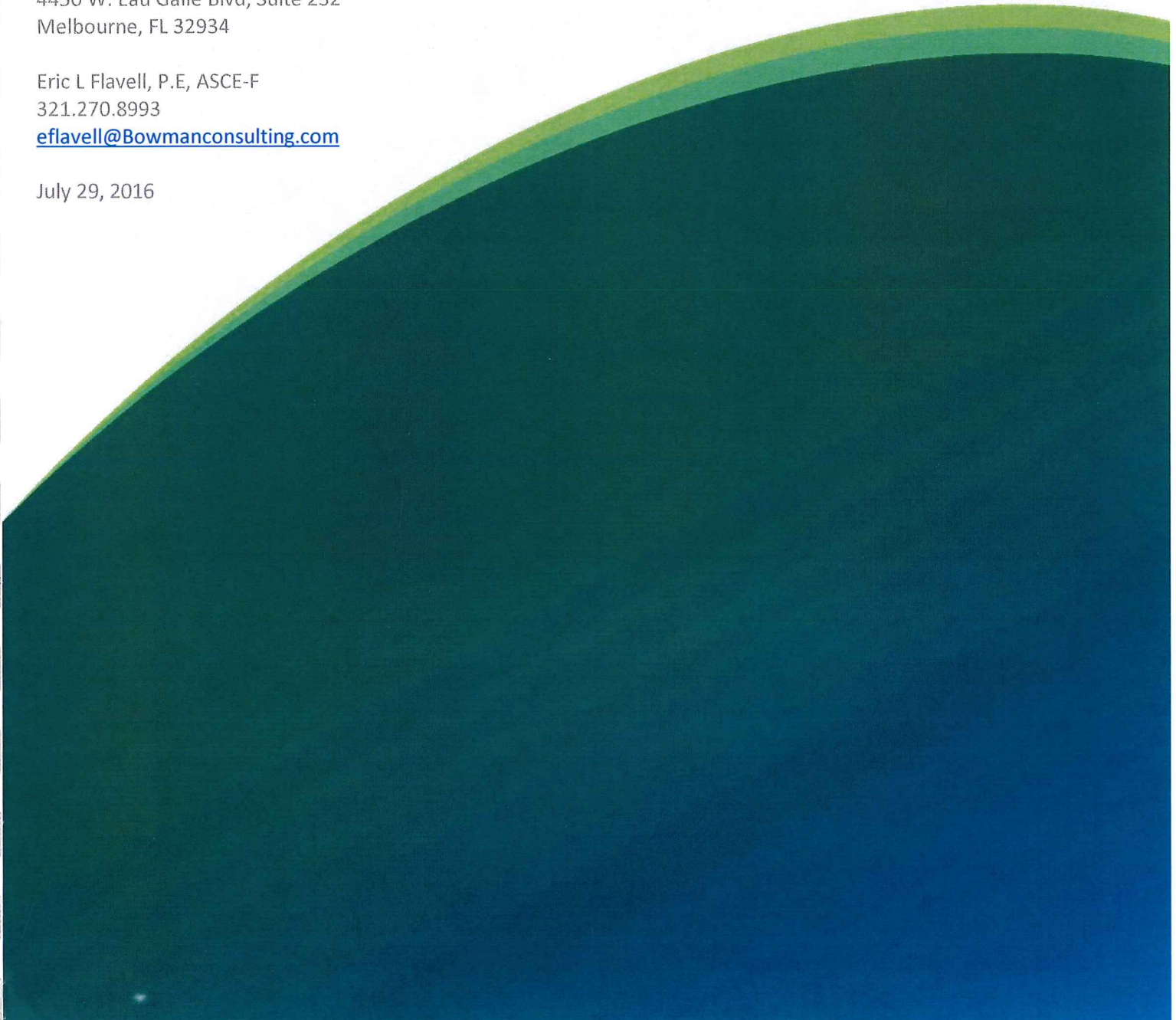
**58th Avenue Pavement Reclamation & Resurfacing Project -
57th Street to CR-510 (FDOT SCOP FM No. 436416-1) (IRC Project No 1325)**

Indian River County

Bowman Consulting Group, Ltd.
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July 29, 2016





July 29, 2016

Ms. Jennifer Hyde, Purchasing Manager
Indian River County Purchasing Division
1800 27th Street
Vero Beach, FL 32960

**Subject: Statement of Qualifications for
58th Avenue Pavement Reclamation and Resurfacing Project – 57th Street to CR-510 (FDOT
SOP FM No. 436416-1) (IRC Project No. 1325)**

Dear Ms. Hyde,

Bowman Consulting Group is pleased to present our Statement of Qualifications (SOQ) for your review and to express our interest in this project. We are excited about the opportunity to work with the county on this state of the art street reclamation and improvement project.

Bowman has the professional qualifications to assist the county with proposed scope of services as listed in the RFQ. These qualifications include design experience performing street modification and reclamation, quality professional services, proven management ability, and integrated quality control procedures. We have a history of performing our services on time and within budget, and will require minimal direction from staff to perform these services.

The enclosed information describes our background and experience, and how knowledge gained from our performance with similar Projects will be applied to accomplish the county's road improvement project. Based on the scope of work listed in the RFQ, we are pleased to team with the following consultants:

Lassiter Transportation Group
Evers Infrastructure Group
Bechtol Engineering and Testing

Thank you for taking the time to review our qualifications. The undersigned have authority to make representations on behalf of the firm. This Statement of Qualifications has been made without collusion with any other person or entity submitting a response to this Request for Qualifications.

Sincerely,



Eric L. Flavell, PE
Project Manager
Bowman Consulting
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eflavell@bowmanconsulting.com



Erik Juliano, PE, PSM
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Encl.

One (1) hard-copy original (marked "ORIGINAL") and signed in blue ink

Five (5) hard-copies (marked "COPY")

Sworn statement on Disclosure of Relationships as per Section 105.08 of the Indian River County Code

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Firm Overview

Background

Bowman is a national firm with offices throughout the US and promotes personal development and professionalism which is reflected with the high number of registered professionals and professionals in training on our staff. Bowman provides civil engineering, planning, surveying, environmental, landscape architecture, pipeline design, water / wastewater engineering, and transportation services to a variety of public and private markets throughout the United States. The work of the firm includes commercial, industrial, educational, residential, retail, health care, recreational, utility, municipal, and federal projects.

In 2012, Bowman Consulting expanded their market into Florida by merging with Creech Engineers, Inc. Creech Engineers was a successful full service civil engineering and surveying firm focusing on the Space Coast and the Treasure Coast, and working throughout the State of Florida for 25 years. They grew an extensive client portfolio that encompasses municipal clients, residential developers, as well as big box corporate businesses. The Florida offices include Melbourne, Stuart, Port St. Lucie, Ft. Lauderdale, Orlando and Tallahassee. The Creech Melbourne Office was established in 1999 and we have been a local firm working in Melbourne Area for over 15 years.

Bowman Consulting Group will be the prime consultant with Eric L. Flavell, P.E. as project manager and the single point of contact for the county. This work will be performed out of our Melbourne office. The Melbourne office has 22 people, including six registered engineers.

Melbourne Office

Our Melbourne Office is located near the I-95 and Eau Gallie intersection, with easy access to the I-95, and we can respond and be at the county offices within 45 minutes. In addition to our key personnel at the Melbourne office, we have adequate staff to support and augment the team as required for the work. The Melbourne Office staff breakdown is as follows:

Melbourne Office Staff	
Position	Number
Registered Engineer	6
Registered Surveyor	1
Engineer in Training	5
Engineering Designer	3
Survey Field	4
Support Staff	4
Total	23

Other nearby Bowman offices include our Port St. Lucie and Stuart offices.

Subconsultants

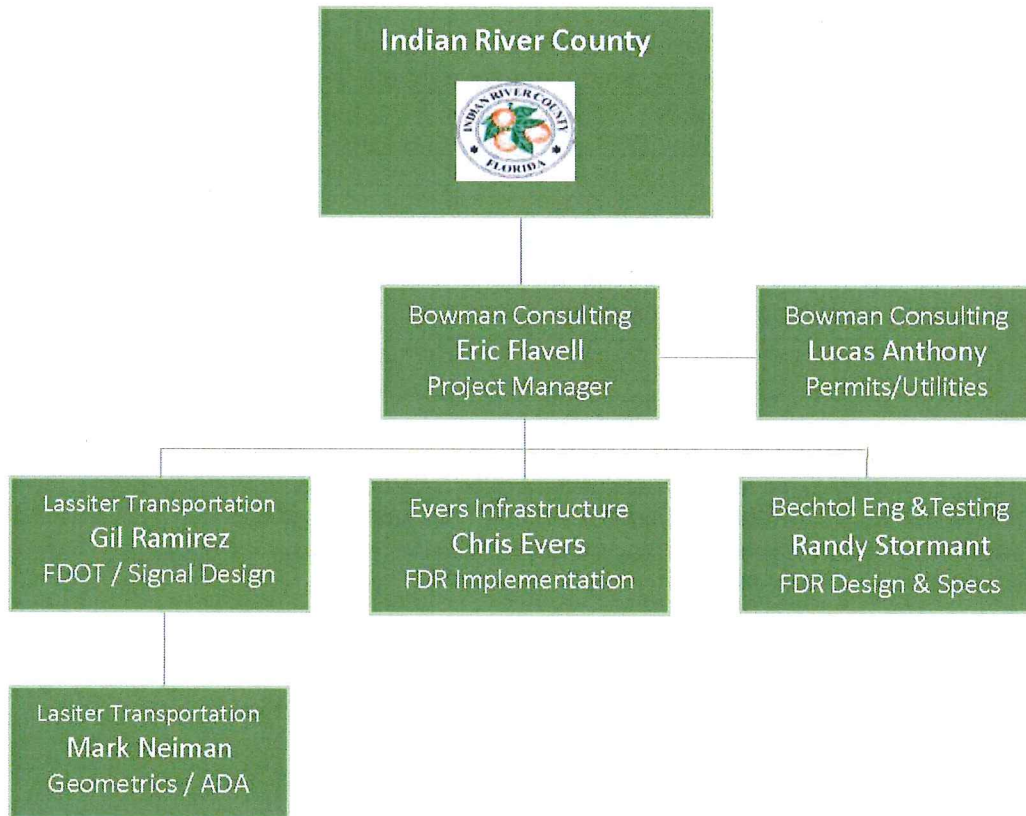
The Lassiter Transportation Group (LTG) will be performing their transportation engineering work out of their Melbourne Office. This office is managed by Mr. Gil Ramirez, PE, the designated transportation engineer for this contract and he was the former traffic operations manager for Brevard County. Evers Infrastructure Group is located in Vero Beach and Bechtol Engineering and Testing, Inc. is located in Deland.

Project Team

Bowman Consulting Group, teamed with Lassiter Transportation Group, Evers Infrastructure Group and Bechtol Engineering and Testing, Inc. has the diverse experience needed to provide the technical and engineering expertise to successfully plan and design the county's pavement reclamation and corridor improvement project.

Proposed Organizational Structure

The following organization chart illustrates how we propose to staff the design team. These key individuals will be assigned to the project and will follow it through fruition. They will be supported by the rest of our office staff as needed.



Organization Chart

Person:	Task:	Responsibilities:
Eric Flavell	Project Manager	Overall project manager and senior engineer for road design and specs
Lucas Anthony	Project Engineer	Permitting and utility coordination
Chris Evers	Pavement Specialist	FDR issues and project implementation
Gil Ramirez	Transportation Engr	Transportation manager, funding compliance and signal design
Mark Neiman	Transportation Engr	Geometric layout and design, ADA compliance
Randal Stormant	Geotechnical Engr	FDR testing, design and specifications

We have assemble a team of seasoned and accomplished professionals to provide these services. A benefit of selecting Bowman is we have multiple offices in this area and those resources are available, as needed. We

see this team as the core personnel performing the services and we will augment this group with other qualified staff, if and as needed arises.

Introduction to Key Personnel:

To form a successful team requires management ability, qualified personnel and a common goal. We have worked with Lassiter Transportation Group for over four years and have an established relationship with them and they share the same approach to work and quality, and we have the ability to work together seamlessly. We have added Bechtol Engineering and Testing and Evers Infrastructure Group because of their extensive experience with Full Depth Reclamation (FDR) as well as other pavement recycling methods.

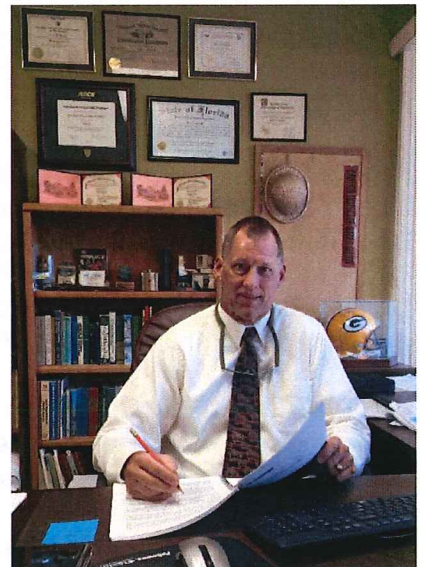
In this section we introduce each of our key team members and the skill sets that they have to apply to the design of the project. We also highlight the types of tasks that each team member will focus on. At the end of this section, we have included each team member's resume for your review.

Eric Flavell, P.E. – Project Manager & Senior Design Engineer

As project manager Mr. Flavell will be the single point of contact for the county and have overall responsibility of the project. He brings over 30 years of road design and construction experience to this project. He will oversee all aspects of the design teams work and is familiar with what each team member needs to produce for a complete and integrated design. He will draw on his road design and pavement maintenance experience to see that the project challenges are addressed during the course of the design process.

Mr. Flavell has worked on a variety of road settings including downtown, rural and neighborhood. Each has its own nuance and these considerations including how the work can be phased and the importance of project sequencing go a long way to reducing impacts to the traveling public.

Mr. Flavell is a registered professional engineer in four states, including Florida. He recently moved to Florida and is in the process of getting FDOT Pre-qualifications for Categories 3.1, 3.2, 10.1 and 13.6. Through his accomplishments, he has been elected to Fellow in the American Society of Civil Engineers, and Fellow in the Institute for the Advancement of Engineering.



Lucas Anthony, P.E. – Project Engineer (Permitting and Utility Coordination)



Mr. Anthony brings over 18 years of engineering and project management experience to the project. The bulk of this experience has been with land development projects focusing on big box projects such as Walmart. These types of projects are the most demanding from a permitting and utility coordination perspective.. Time is always critical to successful development, and permitting is typically the critical path to project delivery. The most reliable way to maintain an established project schedule and process permits in an expedient manner is to develop trusting relationships with the various overseeing agencies. Understanding the process, pre-submittal meetings, preparation of complete packages and candid discussions throughout the process, are what expedite permitting.

Mr. Anthony has significant experience with following functions:

- Due diligence research of existing conditions, permit requirements, concurrency, local land development regulations, drainage and environmental conditions

- Assessment of client requirements and objectives
- Utility Coordination
- Pre-application meetings with various municipal and regulatory agencies
- Coordination with various consultants (environmental, legal, geotechnical, traffic, architects, land planners)
- Conceptual and final site plan, engineering design and cost estimates
- Access management and offsite roadway improvements (traffic lights, road widening, turn lane, intersection improvements)
- Permitting through local, state and federal regulatory agencies
- Attendance and client representation at public meetings
- Construction observation and certification

Chris Evers – Infrastructure Specialist

Mr. Evers is the President of Evers Infrastructure Group LLC, a company he formed in 2012 after spending eleven years with E.J. Breneman a large project highway contractor specializing in alternative pavement rehabilitation. Chris has 20 years experience in the highway construction industry. Evers IG serves the highway industry in a number of capacities. The company works as a sub-consultant to Consulting Engineering firms providing specialized consulting services on alternative processes such as Full Depth Reclamation and Cold In-Place Recycling.



Mr. Evers is the Past President of the American Public Works Association Florida Chapter after having served as President-Elect, Vice President and as Chair of the 2012 Annual Meeting and Trade Show. Chris was also instrumental in the founding of the Florida Pavement Preservation Council and sat on the Cold In-Place Recycling Sub-Committee for the Asphalt Reclaiming and Recycling Association. He has been an active speaker for APWA, FACERS, FAC, ASCE, ARRA and the Florida Airports Council.

Mr. Evers has been very active in advancing the use of Full Depth Reclamation and Cold In-Place Recycling technologies here in Florida. He taught the Full Depth Reclamation Class for the Florida T2 LTAP Center from 2004 – 2007. He has been personally involved in FDR and CIR projects encompassing hundreds of lane miles. He was involved in Indian River County’s first Cold In-Place Recycling project on Oslo Road and CR 512 in 2004. Recognized as an expert in the processes he has worked on seven County projects of similar scope with varying engineering firms all of which were SCRAP and SCOP funded. As a sub-consultant on those projects his involvement helped insure the projects were a success. Mr. Evers will serve as liaison and advisor to Bowman Consulting Group for this project, primarily responsible for specification, mix design and pre-project advisory and oversight.

Gil Ramirez, P.E. – Transportation Engineer (Funding & Signals)



As the lead traffic engineer for this project, Mr. Ramirez will provide services related to traffic signal design, removal, and replacement. Throughout the course of his career Mr. Ramirez has served as a traffic signalization engineer for numerous projects. Since joining LTG in 2013, Mr. Ramirez has provided signalization services for at least 30 projects. Prior to joining LTG, Mr. Ramirez served as the Traffic Operations Manager for Brevard County for 7 years. This experience has provided Mr. Ramirez with an in-depth, hands-on knowledge and understanding of the workings and transportation related requirements of the public sector, allowing him to work seamlessly as an extension of Indian River County. In his previous position at Brevard County and as the Office Manager/Lead Engineer in LTG’s Melbourne office, Mr. Ramirez works directly with FDOT and FDOT funded projects on a consistent basis and is familiar with all expectations and requirements needed to ensure a smooth project from start to finish.

Mr. Mark P. Neiman, P.E. – Transportation Engineer (Geometrics and Road Design)

With over 40 years of experience, will provide left turn lane and signing and pavement marking engineering design services for this contract. Mr. Neiman's experience includes the design, permitting, and management of roadways and pedestrian facilities (minor and major) across the state. Mr. Neiman has consistently delivered quality projects to private, municipal and state entities throughout his career. His experience working with Florida Department of Transportation will ensure that this roadway project is completed according to accepted standards in Indian River County. In addition, Mr. Neiman is prequalified with the FDOT in workgroups 3.1-Minor Highway Design, 3.2-Major Highway Design, and 7.1-Signing, Pavement Marking and Channelization.



Compliance with the American's with Disabilities Act (ADA) has been an integral part of Mr. Neiman's career. Meeting ADA standards and requirements is an important part of each and every design project. Mr. Neiman is currently assisting the City of Daytona Beach with a multi-million dollar ADA transition plan for compliance.

Mr. Randal Stormant, – Geotechnical Engineer (FDR Mix Design and Specifications)

Bechtol Engineering and Testing, Inc. (BET) has performed mix design testing/development and/or in-field production testing for hundreds of successful roadway rehabilitation projects throughout Florida and the southeast. Project specifications, provided by the many different governing agencies, pertaining to mix design development and in-field production testing relative to Full Depth Reclamation (FDR) have varied dramatically. Cities, Counties, The State of Florida and other States have many conflicting ideas regarding FDR mix design, testing and structural coefficient methodology.

Project mix design sampling and testing must be preceded by a clear understanding of the owner's desired final outcome (traffic level, budget, life span, grade, etc.). An initial sampling plan must account for varying site conditions and roadway section parent materials. Typically cores or saw cut windows are removed from the existing roadway at intervals that will provide sufficient material quantity to perform the necessary analysis and testing. Multiple mix designs may be required for a single project if the variance in the structural performance and add mixture compatibility characteristics of the parent materials differ significantly throughout the project limits.

For FDR projects, BET recommends laboratory design test procedures that can be duplicated later in the field during production level testing. Testing may include gradation analysis, unconfined compressive strength, Marshall stability, maximum specific gravity, bulk specific gravity, proctor, in-place density and thickness.

Key Team Member Resumes:

The following resumes delve into specific project experience each team member brings to this project:

Eric Flavell, P.E., F-ASCE
Project Manager, Municipal Engineering

Mr. Flavell brings over 35 years of experience with municipal engineering projects to the team. The bulk of his experience was in California where he was an owner in a consulting firm for 27 years. This experience includes master planning, studies, design, and construction services of a variety of public improvements. Besides engineering (drawings and specifications) he is adept at preparing special reports, feasibility studies, capital improvement alternatives analysis, scheduling, schedule analysis, cost estimating, and developing budgets.

Academic Credentials

- BS Civil Engineering, Oregon State University, 1978
- BS Industrial Engineering, Oregon State University, 1978

Professional Registrations

Professional Engineer – Civil Engineering
California, 33000 (1981)
Nevada, 6506 (1983)
Oregon, 15394 (1991)
Florida, 76826 (2013)

Professional Achievements

- American Society of Civil Engineers, Fellow
- Institute for the Advancement of Engineers, Fellow

Professional Affiliations

- American Society of Civil Engineers
- American Public Works Association

Principal Areas of Expertise

- Program Management (multiple concurrent projects)
- Project Management
- Developing and Monitoring Budgets
- Quality Assurance/Quality Control
- Studies and Alternative Evaluations
- Master Planning
- Roadway / Parking Lot Design
- Pavement Maintenance Design
- Water Pumping, Distribution and Storage Design
- Wastewater Collection and Pumping Design
- Public Facilities Site Grading and Drainage Design
- Parks Design
- Construction Administration

(Specific experience with Roads, Public Site Development, WWTP, WTP, Pump Stations, Pipelines, Water Tanks, Pavement Maintenance Treatments)

Category 3.1: Minor Highway Design

Bus Stop - City of Stuart, FL

Mr. Flavell was the design engineer and engineer of record for ADA compliant Bus Stops. The bus stop was designed to accommodate sites without curbs and was developed as a standard so it can be replicated at other locations around the City. He prepared the design, specifications, bid schedule and opinion of construction cost.

Design Completed in 2015

Las Posas Road Reprofiting at Ventura Blvd – City of Camarillo, CA

Mr. Flavell served as the principal in charge, managed the project and was the engineer of record. The Las Posas Road and Ventura Boulevard intersection is the busiest intersection in the City of Camarillo, CA. The intersection started off as a rural farm road. Over the years, multiple commercial developments widened the intersection to the point that Las Posas Road is eight lanes and Ventura Boulevard is seven lanes at the intersection. Through the course of widenings the work was pieced in with existing portions of road and the result was pavement that did not properly drain. The project included 1,600 feet of Las Posas Road and three intersections. A grid analysis was performed to locate high and low spots on the road and this information was included on the drawings showing where leveling courses were required and profile milling required. Once the reprofiling was completed the entire project was overlaid with A.C. pavement.

Project completed in 2012

Miller & Cook Streets – City of Santa Maria, CA

Mr. Flavell served as principal in charge, project manager and engineer of record for this project. Miller and Cook Streets front two sides of the town center mall and city hall. This was a high profile project prompted by the deterioration of the street and over growth of poorly selected landscaping materials. The street landscaping was originally constructed in the 1980s and the trees selected were Pine and Liquid Amber which have aggressive root systems and caused substantial damage to the road, curbs and walkways. The project consisted of removing and replacing most of the landscaping, removing and replacing failed curb, replacing all the walkways and meandering sidewalk adjacent to the mall, correcting drainage problems, laning modifications, modifications to the signal and overlaying the streets. The project included wheel chair ramps, modifications to driveways to make them ADA compliant and repairs to sidewalks. Landscaping was a primary component of this project. To reduce the impact of removing mature trees, a number of the original trees that were having the least impact on the existing improvements were left. The approach is to remove these trees over 5 year increments as the new landscaping matures.

Project completed 2007

Old Town Sidewalks, City of Thousand Oaks, CA

Mr. Flavell served as principal in charge, project manager and engineer of record for this project. The issues on this project were drainage control as the current condition drains street water through the adjacent properties and drains to a natural drainage course at the back of the properties. The terrain is hilly and as such, one side of the street will have houses well above the road and the other side will have houses well below the road. This results in complicated conforms to existing driveways and walkways (steps) to accommodate the new sidewalk. Walls were required on a substantial portion of the project that are retaining or turndown to control grade differences. The City owns a 50' right-of-way and the road is typically centered in 30' of the right-of-way. This means that over time the residents have encroached into the right-of-way with private improvements. This obviously complicated the design and caused concerns with property owners. These issues along with pedestrian level lighting, preserving a heritage oak in the middle of the road, and working around neighborhood icons within the right-of-way were all included in the design.

Project Completed in 2013

Pancho Road Reconstruction Project – City of Camarillo

Mr. Flavell was principal in charge, project manager and engineer of record for this project. Pancho Road starts off as a five lane arterial and ends up as a two lane rural road. The project is one mile long. A portion of the road has been developed and the remaining portion is slated to be developed over the next 20 years. The road was in very poor shape with a lot of pavement failure. There are no bypass streets which means the street has to be kept open. Pulverization was selected to reconstruct the street. The much of the milled material was used to build up the road crown and improve drainage. The street grindings were mixed with the top 4" of base material and an A.C. section of 4" of ¾" and 2" of ½" mix finished the road. The work was done in sections and a phasing plan was developed to keep the road open to traffic at all times.

Project Completed in 2015

Category 3.2: Major Highway Design

Lower State Street Revitalization Project – City of Santa Barbara, CA

Award Winning Project – Concrete Industry Award of Excellence for Outstanding Paving Project

Mr. Flavell served as principal in charge, project manager and engineer of record. Lower State Street is a gateway to the City of Santa Barbara and was once HWY 1. This was a joint Public Works and Redevelopment Agency project. The existing streets were in poor condition and the soil in the area has an R-value of between 5 and 10. The value of 5 is the lowest value that can be calculated, meaning that these soils have very marginal support capacity. Because of the marginal soils, the decision was made to construct Portland Cement Concrete (PCC) streets that have the ability to bridge poor soils, with the benefits of longevity and low maintenance. One of the drawbacks is anytime utility repairs are made, the result is a substantial scar. Thought was given to protecting the longevity of the streets and all utilities (power, communications, and gas) and support infrastructure such as water and drainage were relocated to under the sidewalks. This project required coordination with businesses, meeting discretionary review board requirements and coordination with the utility companies. An extensive outreach program was implemented that continued through the construction of the project due to the number of stake holders involved.

Project completed 1991

Santa Barbara Airport North of Hollister Infrastructure Improvements – City of Santa Barbara, CA

Mr. Flavell was principal in charge, project manager of design, engineer of record and construction manager for this redevelopment of 25 acres that is zoned commercial and light industrial and still had the original infrastructure from the WWII Marine Air Base. A key component was master planning the lots and streets to take advantage of existing facilities and structures to remain and provide for future improvements. All utilities were replaced and upgraded including water, sewer, power, communications, gas and the streets and drainage facilities reconstructed. This project required a master planning effort to set the control grades and establish road vertical alignment that would provide drainage, most of the streets are designed at 0.20% slope, and conform to the existing driveways and building doorways, and comply with ADA. The master planning also allowed a more detailed fiscal analysis to be performed that resulted in the project being broken up into phases that could be constructed with available funding. The length of time from master plan to complete construction was eight years and included three construction contracts. We had to use elliptical pipe, and multiple pipe banks and specially design low head junction structures to move the water through the system. There was so little available head that all the junction structures had custom channel filleting to reduce the inlet and outlet headloss. There was so little cover that the pipes were put under the sidewalks to gain the 6" height of the curb to provide cover over the pipelines. This system has been tested with several significant rain events and received compliments from the City on how well the drainage system functions, compared to the condition before the improvements were made. The streets were dry despite heavy rain events.

At the time Planning was recommending small curb returns and narrowing of streets as a design philosophy. Due to the intended use, we were able to persuade the discretionary approval bodies to allow 48' wide streets and 25' curb returns. This design allowed for the free flow of truck traffic and adequate street width to provide on street truck parking and Class 3 bike lanes. The project also included the signalization of the Hollister / Lopez intersection, a previously non-signalized intersection. The project included development of two parks.

Project Completed in 2003

Category 10.1: Roadway CEI

Downtown Area Street Project – City of Santa Barbara, CA

Mr. Flavell was principal in charge and construction manager for this 1.8 million dollar street widening and beautification project with signals, medians, decorative sidewalks, landscaping. Carrillo Street is a primary gateway to downtown Santa Barbara from US 101. Overhead utilities were undergrounded and upgrades to existing utilities were made. The project was phased to reduce impacts to this mixed used neighborhood of high end hotels, high end commercial retail including Sax Fifth Avenue, and transportation hub. CEI included weekly meetings, testing and review of test results, schedule review, MOT review, coordination with residents and businesses, quantities confirmation, pay request evaluation, laydown inspection, punchlist and corrections.

Project Completed in 1992

Santa Barbara Airport North of Hollister Infrastructure Improvements – City of Santa Barbara, CA

Mr. Flavell was principal in charge, project manager of design, engineer of record and construction manager for this redevelopment of 25 acres that is zoned commercial and light industrial and still had the original infrastructure from the

WWII Marine Air Base. A key component was master planning the lots and streets to take advantage of existing facilities and structures to remain and provide for future improvements. All utilities were replaced and upgraded including water, sewer, power, communications, gas and the streets and drainage facilities reconstructed. The length of time from master plan to complete construction was eight years and included three construction contracts. Contract one included all utility upgrades for cable, telephone, power and gas. The second contract included replacement of the water distribution system and sewer collection system. The third contract was for streets, curb, gutter and sidewalks, drainage collection and conveyance and the signalized intersection. The project also included the signalization of the Hollister / Lopez intersection, a previously non-signalized intersection. CEI included weekly meetings, testing and review of test results, schedule review, MOT review, coordination with residents and businesses, quantities confirmation, pay request evaluation, underground inspection, drainage structures, box culvert, subgrade preparation, laydown inspection, punchlist and corrections. Project Completed in 2003

Annual Pavement Maintenance Projects – Various Cities

Mr. Flavell was principal in charge and project manager and engineer of record for these annual pavement maintenance projects. Full services included visual pavement evaluation, evaluation of alternative treatment methods, opinion of construction costs by treatment, scheduling, life cycle cost evaluation, design of pavement repairs and surface treatments, field marking of remove and replace locations, and full construction administration and inspection of the work. Projects typically included three separate construction contracts which were pavement point repairs, crack sealing with surface treatments and overlay. Surface treatments could include one or several of road slurry seal (Types I, II and III), Micro Surfacing, chip seal, cape seal, and rejuvenating cape seal. Overlay contracts could include mill and overlay and pulverization and overlay. Damaged concrete improvements such as curb and gutter, spandrels, cross gutters, tree root pruning and root barriers were often included. CEI included weekly meetings, testing and review of test results, schedule review, MOT review, coordination with residents and businesses, quantities confirmation, pay request evaluation, laydown inspection, punchlist and corrections. He performed these projects until he moved to Florida for the following agencies: City of Santa Barbara (1998-2013), City of Goleta (2006-2013), City of Camarillo (2008-2013), and City of Thousand Oaks (2013).

The following are the construction contracts for the last several years:

2007 Pavement Prep & Slurry Seal Program	City of Santa Barbara	6.0 Million S.F.
2007 Pavement Prep & Slurry Seal Program	City of Goleta	3.0 Million S.F.
2008 Pavement Prep & Slurry Seal Program	City of Santa Barbara	4 Million S.F.
2008 Pavement Prep & Slurry Seal Program	City of Goleta	4 Million S.F.
2008 Overlay	City of Goleta	800,000 S.F.
2009 Pavement Prep & Slurry Seal Program	City of Santa Barbara	6 M S.F.
2009 Pave Prep	City of Santa Barbara	70,000 SF
2009 Rejuvenating Cape Seal	City of Santa Barbara	450,000 SF
2009 Rejuvenating Cape Seal	City of Santa Barbara	1.8 Million S.F.
2011 Pavement Prep	City of Santa Barbara	300,000 S.F.
2011 Slurry Seal	City of Santa Barbara	2.0 Million S.F.
2012 Pavement Prep & Slurry Seal Program	City of Gilroy	300,000 S.F.
2013 Pavement Prep & Slurry Seal	City of Santa Barbara	400,000 S.F./ 4 M S.F.
2013 Overlay	City of Camarillo	500,000 S.F.

Category 13.6: Land Planning/Engineering

Santa Barbara Railroad Historic Redevelopment

Award Winning Project – California Preservation Foundation’s: Outstanding Achievement in the Field of Historic Preservation

Mr. Flavell served as principal in charge, project manager and engineer of record for site improvements. This project was a historic renovation of the railroad station for seismic upgrades, building restoration and upgrade of the site to current ADA standards. The project included station landings, walkways, lighting, parking lots, park, and landscaping all integrated to provide the user with a feel of the original train station. Strict Railroad guidelines had to be met on the loading platform and the large expanse of concrete needed to be designed with positive drainage for this critical passenger area. The site is located in the lower portion of town, is flat and subject to flooding. All the drainage in the area ultimately flows to Mission

Creek which runs adjacent to the site and crosses the site. During flood stage it is not uncommon for water to overflow the banks and inundate the site. The banks in fact are higher than a significant portion of the site. To protect the site from higher creek flows that are not overtopping the drainage system goes to a manhole and the storm drain is fitted with a check valve to prevent water from backing into the site. The system has been tested and functioned well in significant storms. Being a transportation hub, the site has to accommodate pedestrians, vehicles and busses. As many as five busses can be staged at the station.

Project Completed in 1995

Santa Paula Railroad Station, City of Santa Paula, CA

Award Winning Project – Santa Paula Chamber of Commerce Civic Beautification of the Year

Mr. Flavell served as principal in charge and project manager and engineer of record for site improvements. Santa Paula is a unique small community in that it has an airport and its own railroad line. The railroad station was built in the 1930s and is a historic landmark. The site was generally undeveloped, except for some warehouses and packing plants nearby. Its location near the heart of town made this site a candidate for restoration. This project required designing the station platform in accordance with railroad standards. The project included a gazebo and park. The architect selected brick for the accent pavement areas, which included sidewalks adjacent to the street. A key element of the design of this project was design of ADA compliance and addressing the grade difference across the site. We developed a unique mountable curb to provide access to the original loading ramp and accommodate the sidewalk requirements.

Project Completed in 2008

LUCAS ANTHONY, P.E.
Sr. Project Manager

Mr. Anthony has over 18 years of engineering and project management experience for private clients, including design of utility infrastructure, roadway, parking and stormwater elements for large scale retail projects. He is adept at preparing construction plans and specifications, permitting, scheduling, cost estimating and construction administration.

Academic Credentials

- BS Civil Engineering – University of Maine, 1997

Professional Registration

- Professional Engineer State of Florida License #58543

Professional Affiliations

- International Council of Shopping Centers

Principal Areas of Expertise

- Project Management
- Concept Planning
- Land Development
- Water and Wastewater Distribution Design
- Permitting and Construction Services
- Lift Station Design
- Stormwater Management
- Roadway/Parking Lot Design
- Cost Estimates

Experience

Group 3 – Highway Design – Roadway – Category 3.1: Minor Highway Design

Group 7 – Traffic Operations Design - Category 7.1: Signing, Pavement Marking and Channelization

- SE Pomeroy Street, Martin County, Florida: Mr. Anthony served as Project Manager for the design of approximately 5000 LF of new 2 lane roadway along with the addition of a traffic signal and associated intersection widening and modification at each end of the roadway. The project involved erosion control, roadway and signal design, turn lane design, utility relocation and stormwater management design and calculations. The project required driveway, drainage and utility connection permits from FDOT and Martin County. This project involved communication and coordination with property owners adjacent to the right-of-way during the design process.
- SE Market Place, Martin County, Florida: Mr. Anthony served as Project Manager for the design of approximately 2000 LF of roadway widening and modification to install new driveways and improve existing drainage. The project involved erosion control, roadway and signal design, turn lane design, utility relocation and stormwater management design and calculations. The project required driveway, drainage and utility connection permits from FDOT and Martin County.
- State Road 7 / US Route 441 Lauderdale Lakes, Broward County, Florida: Mr. Anthony served as project manager for the design and permitting of a right-turn lane and modification of an existing signalized intersection in connection with a new retail development. The project involved design and permitting of erosion control, horizontal and vertical roadway design, utility relocation, stormwater design and construction observation and

certification of the project. The project involved right-of-way dedication and both FDOT and County permitting of proposed improvements.

- State Road 60, Vero Beach, Indian River County, Florida: Mr. Anthony served as project manager for the design and permitting for the addition of a right-turn lane and driveway relocation to serve 2 properties in connection with a retail redevelopment project. The project involved design and permitting of erosion control, horizontal and vertical roadway design, signing and marking, overhead and underground utility relocation, stormwater design and construction observation and certification of the project. The project involved right-of-way dedication and both FDOT and County permitting of proposed improvements.
- SR 520 and Townsend Road, Cocoa, Brevard County, Florida: Mr. Anthony served as Project Manager for the design of approximately 2000 LF of new 2 lane roadway along with the addition of a traffic signal and associated intersection widening and modification at each end of the roadway. The project involved erosion control, roadway and signal design, turn lane design, utility relocation and stormwater management design and calculations. The project involved the relocation of Townsend Road but required the existing roadway remain open to traffic while construction of a new retail development was occurring on both sides of the road. The project required public outreach and negotiation with adjacent property owners to modify existing driveway connections. The project scope included design of a new traffic signal, modification of an existing signal and exit ramp at the intersection of I-95 and SR 520.
- State Road 7 / US Route 441 Coconut Creek, Broward County, Florida: Mr. Anthony served as project manager for the design and permitting of roadway improvements to support a new retail development. The scope of work involved 3 new right-turn lanes and driveway connections and extension of existing an existing left-turn lane. In order to provide access from the store to an existing bus route the scope also involved design of a pedestrian footbridge and culverting an existing canal. Design and permitting elements included signing and marking, erosion control, horizontal and vertical design of the turn lanes, utility relocation, stormwater design and construction observation and certification of the project. Due to City requirements the project also involved placing all overhead utilities along the project frontage underground. The project involved right-of-way dedication and both FDOT and County permitting of proposed improvements.

Group 10 – CEI – Category 10.1: Roadway CEI

Mr. Anthony served as Project Manager and Engineer of Record during construction of parking lots, driveway connections and drive aisles in a variety of commercial development projects. Mr. Anthony participated in pre-construction meetings, ensured that erosion control measures were installed, observed grading, preparation and string lining of sub-grade, base and pavement, reviewed density tests and certified projects to local municipalities. Mr. Anthony observed the construction of the following projects:

- Walmart Pompano Beach, Florida
- Walmart Stuart, Florida
- Walmart Lauderdale Lakes, Florida
- Walmart Jupiter, Florida
- Walmart Coconut Creek, Florida
- Walmart Boynton Beach, Florida
- Walmart Davie, Florida
- Sam's Club Cape Coral, Florida
- Sam's Club Vero Beach, Florida
- Sam's Club Cocoa, Florida

Group 13 – Planning – Category 13.6 – Land Planning / Engineering

Mr. Anthony has served as Project Manager and Engineer of Record on a variety of land development projects. These projects typically involve the following land planning and engineering functions:

- Due diligence research of existing conditions, permit requirements, concurrency, local land development regulations, drainage and environmental conditions
 - Assessment of client requirements and objectives
 - Pre-application meetings with various municipal and regulatory agencies
- Coordination with various consultants (environmental, legal, geotechnical, traffic, architects, land planners)
 - Conceptual and final site plan, engineering design and cost estimates
 - Traffic circulation within the site
- Access management and offsite roadway improvements (traffic lights, road widening, turn lane, intersection improvements)
 - Permitting through local, state and federal regulatory agencies
 - Attendance and client representation at public meetings
 - Construction observation and certification



EDUCATION

Bachelor of Science in Business Administration, Oklahoma State University – 1996

Marketing Major, President's Honor Roll, Dean's Honor Roll

CURRENT ROLE

President, Owner Evers Infrastructure Group LLC, Vero Beach, FL 2012 - Present

Represent multiple clients in the Heavy Highway Industry focused on improving the State's infrastructure. Responsibilities include leading and implementing all educational efforts for alternative processes in Florida. Deliver technical presentations to civil engineers and road administrators. Work with cities and counties to maximize their roadway budgets. Provide pavement management advice to key decision-makers within the public and private sector. Help introduce new technologies and processes across the State of Florida. Provide consultation services for in-place recycling technologies. Lead multi-association effort to increase infrastructure funding at the County Commission and Florida Legislature levels.

PROJECT EXPERIENCE

Principal, Full Depth Reclamation (FDR), Cold In-Place Recycling (CIR) - Construction Engineering Inspection

- Town of Lady Lake, Avenida Central CIR, 2014
- Nassau County, Blackrock Road FDR Phase 3, 2014
- Zephyrhills Airport, Runway Rehabilitation FDR, 2014
- Nassau County, Blackrock Road CIR Phase 2, 2014
- Hendry County, CR 835 Phase 2, 2014
- Nassau County, Blackrock Road CIR Phase 1, 2013
- Hendry County, CR 835 CIR Phase 1, 2012

ACHIEVEMENTS

- APWA Consultant of the Year – Transportation, 2015
- APWA Ben Pratt Award, 2014
- APWA Florida Chapter Past President Award, 2013
- Contractor of the Year, Florida Chapter APWA, 2010
- Contractor of the Year, West Coast Branch APWA, 2010
- Florida Association of Counties Excellence in Speaking Award, 2007, 2009
- APWA Florida Chapter Young Leader Award, 2008

PROFESSIONAL AFFILIATIONS

- Florida Chapter APWA PWX Exhibitor Co-Chair 2016
- Florida Chapter APWA Finance Chair 2015 - present
- Florida Chapter APWA President 2012
- Founded the Public Works Director Roundtable Initiative 2011
- Founding Board Member of Florida Pavement Preservation Council, 2010
- Florida Chapter APWA Legislative Affairs Committee Founder and Chair, 2008 - 2011
- Florida Association of County Engineers and Road Superintendents Sustaining Member, 2009 – Present
- Asphalt Reclaiming and Recycling Association CIR Committee, 2008 - 2012
- ASCE Infrastructure Committee Member, 2007 – 2012
- West Coast Branch APWA Nominating Committee, 2005 - 2008
- University of Florida Technology Transfer LTAP Faculty, 2004 – 2007
- Florida Airports Council Member 2004 – Present

PUBLICATIONS

- Author *How to Properly Budget Road Work*, Florida Journal August 2016
- Author, *Public Works Director Roundtable Article* APWA Florida Reporter April 2016
- Author, *Let's Fix Funding* APWA Florida Reporter April 2016
- Author, *Public Works Director Roundtable Article* APWA Reporter August 2014
- Contributing Author, *Preventative Maintenance*, a four-part series, Florida Technology Transfer Newsletter, 2007-2008

SPEAKING ENGAGEMENTS

- Moderator Florida Association of Counties Infrastructure Funding Panel, 2016
- Moderator ASCE/ASHE/APWA/FES/WTS Let's Fix Funding! Panel, 2015
- Moderator International Public Works Roundtable at APWA Congress, 2014 - Present
- APWA Gold Coast Branch, 2015
- NACE/APWA Public Works Expo, 2015
- Florida Association of County Engineers and Road Superintendents Conference, 2015
- APWA Treasure Coast Branch, 2015
- Florida Airports Council Facility Conference, 2014
- Moderator Central Florida Branch APWA Public Works Director Panel, 2014
- Florida Association of County Engineers and Road Superintendents Legislative Conference, 2014
- Moderator of North Florida Branch APWA Public Works Director Panel, 2013
- Moderator of Southwest Florida Branch APWA Public Works Director Panel, 2013
- Florida Association of County Engineers and Road Superintendents Annual Conference, 2013
- Moderator of Florida Chapter Public Works Director Roundtables, 2012 - Present
- Florida Association of County Engineers and Road Superintendents Legislative Conference, 2011

Gil A. Ramirez, P.E.
Project Manager



EDUCATION

Florida Institute of Technology, B.S.C.E., Civil Engineering (2000)

REGISTRATIONS

Registered Professional Engineer, Florida P.E. No. 62600
FDOT Intermediate MOT Certification
IMSA Traffic Signals Level II Technician

AFFILIATIONS

International Municipal Signal Association
ITS America

Mr. Ramirez has over 16 years of design, project management, and traffic operations experience on a variety of projects. Through various projects and his government background Mr. Ramirez has acquired a thorough knowledge of FDOT policies, procedures, and specifications and has become proficient in the use of various software packages, including: Highway Capacity Software, Synchro, TSPP, AutoCAD, Atlas, Mastarm, ArtPLAN, and many others.

Professional Design Experience

Engineer of Record, Lake Andrew Drive at Napolo Drive and Colonnade Avenue, Brevard County, FL: Mr. Ramirez designed, permitted, and provided bidding assistance at two new signals at the intersections of Lake Andrew Drive and Napolo Drive, and Lake Andrew Drive and Colonnade Avenue in Brevard County, FL. The project consisted of new mast-arm structures, pedestrian features, video detection, and fiber optic interconnect to create a new coordinated signal segment.

Engineer of Record, Maintenance Drive at Wickham Road, Brevard County, FL: Mr. Ramirez designed, permitted, and provided bidding assistance at a new signal at the intersection of Maintenance Drive and Wickham Road in Brevard County, FL. The project consisted of new mast-arm structures, video detection, interconnection of the signal into the County's fiber optic network, installation of wireless magnetometers for system detection, and incorporation of the signal into adaptive signal control.

Engineer of Record, Signalization Improvements, Kennedy Space Center, FL: Mr. Ramirez designed and provided bid assistance with a series of modifications to the signalization within the Kennedy Space Center. The project retrofitted back-plates at all signalized intersections and replaced existing heads with 4-section flashing yellow arrow heads.

Engineer of Record, Gateway Boulevard at Hibiscus Boulevard, Melbourne, FL: Mr. Ramirez designed, permitted, and provided bid assistance for a modification to the signalization at the intersection of Gateway Boulevard at Hibiscus Boulevard in Melbourne, FL. The project consisted of a mast-arm replacement of an existing span-wire intersection.

Engineer of Record, Hibiscus Boulevard at Hickory Street, Melbourne, FL: Mr. Ramirez designed, permitted, and provided bid assistance for a modification to the signalization at the intersection of Hickory Street at Hibiscus Boulevard in Melbourne, FL. The project consisted of a mast-arm replacement of an

existing span-wire intersection, rerouting of fiber optic cabling, and complete replacement of the detection with new loops.

Engineer of Record, Hibiscus Boulevard at Stewart Drive, Melbourne, FL: Mr. Ramirez designed, permitted, and bid a modification to the signalization at the intersection of Hickory Street at Hibiscus Boulevard in Melbourne, FL. The project consisted of a mast-arm replacement of an existing span-wire intersection and complete replacement of the detection with new loops.

Professional Intelligent Transportation Systems (ITS) and Lighting Experience

ITS & Lighting Design Engineer, I-95 at J.T. Butler Interchange Improvement, Jacksonville, FL: Mr. Ramirez was the EOR for the IMR update, ITS and lighting component plans for an interchange improvement project in Jacksonville, FL. The design-build project was let by FDOT District 2, and consisted of an IMR update reflecting modified ramp geometry as part of an ATC; relocation or replacement of all ITS devices, power, and fiber optic cabling; and the replacement or installation of new lighting within the interchange, including maintenance girder lighting within the new overpass ramp box girders.

ITS & Lighting Engineer, Widening of Homestead Ext. to the Florida Turnpike, Miami-Dade County, FL: Mr. Ramirez was the EOR for the ITS and lighting component plans for a widening of the Florida Turnpike to accommodate express lanes along 5 miles in Miami-Dade County, FL. The design-build project was let by the Florida Turnpike Enterprise, and consisted of replacement of all ITS devices, power, and fiber optic cabling; and the replacement of impacted conventional lighting along the segment.

ITS Design Engineer, Barnes Boulevard Widening, Rockledge, FL: Mr. Ramirez designed the ITS components necessary to add five traffic signals to the Brevard County ITS network as part of the Barnes Boulevard Widening project in Rockledge, FL. The project consisted of the modification of FDOT network infrastructure along SR 520, replacement of FDOT fiber optic infrastructure along Barnes Boulevard, and addition of five new intersections into the ITS.

Traffic Operations Manager, Brevard County Advanced Traffic Management System Expansion (ATMS) and Wickham Intelligent Transportation System (ITS) Phase II, Brevard County, FL: Provided support and technical assistance with the deployment, integration, validation, and final testing of an ITS expansion project which deployed CCTV, travel-time, vehicle detection, and adaptive traffic signal control technologies to 112 intersections on 11 corridors in Brevard County, and interconnected them through fiber-optic cabling and Ethernet compliant network devices to two Brevard County management centers, and the City of Melbourne management center. The project included:

- Underground and overhead 72 SM fiber-optic trunk cabling and 12 SM drop cabling
- Juniper and ITS Express layer 2 and layer 3 networking devices
- Bosch Closed Circuit Television (CCTV) Cameras
- Sensys Networks wireless Vehicle Detection Systems
- Sensys Networks Archive, Proxy, and Statistics (SNAPS) server
- BlueTOAD Travel Time System
- Naztec, Inc. Advanced Traffic Control (ATC) traffic signal controllers
- Trafficware, Inc. SynchroGreen traffic adaptive server software



EDUCATION

University of Central Florida, B.S.C.E., Civil Engineering (1990)
Summa Cum Laude

REGISTRATIONS

Registered Professional Engineer, Florida P.E. No. 44077

AFFILIATIONS

American Society of Civil Engineers
Florida Engineer Society

Mr. Mark P. Neiman, P.E., has 40 years of professional experience. He began his career as a drafter for District Five of the Florida Department of Transportation (FDOT). Mr. Neiman has extensive experience in the planning, design and project management of transportation and drainage-related projects in Florida. This includes highways and roadways, pedestrian and bicycle facilities, urban storm sewer, rural drainage systems, retention ponds, large- and small-basin studies, horizontal and vertical geometrics, water, sewer, traffic and traffic signal design, preparation of construction plans and related bid documents, cost estimates, utility planning and coordination and construction supervision and inspection. He has directed public involvement and public meetings, determined and assisted with right of way acquisition, prepared specifications, related bid documents and cost estimates.

RELEVANT EXPERIENCE

Project Manager and Engineer of Record, Group 99-8 Roadway Widening and Resurfacing Projects FDOT, District 3 Chipley, FL: Served as Project Manager and Engineer of Record (4 Projects in contract) for final construction plans, for widening, milling & resurfacing, pavement design, intersection and safety improvements, including turn lanes, drainage improvements and permitting on four separate 2-lane rural roadways in District 3.

Project Manager, Engineer of Record, and Utility Coordinator SR 816 (Oakland Park Blvd.), Turnpike Overpass to SR 7, FDOT District 4 Broward County FL: Mr. Neiman directed the design of a one-mile widening and resurfacing project. The project was located within a medical facilities district including a laser eye surgery center and a hospital. Extensive coordination was necessary to develop special conditions that were required to limit vibrations and noise. Special pavement design analysis was also required to eliminate vibratory compaction. Special consideration was necessary during development of the Maintenance of Traffic plan to ensure that emergency services access to the hospital would not be impeded. Transit facilities along the route required coordination with several agencies to accommodate relocation of bus shelters and improvements necessary to comply with current ADA requirements. Curb returns and cross walks also required upgrading to meet current ADA requirements. Seven traffic signal locations were upgraded to Mast Arm installations. Coordination with local permitting agencies resulted in the need to design innovative shallow onsite stormwater treatment areas in order to meet local County stormwater regulations. Existing storm sewers were evaluated for de-silting and capacity and the roadway widening areas were evaluated for spread. Several special structures were necessary to accommodate the widening of the roadway. Special profiles were developed to provide proper gutter grades and meet spread requirements. Existing conditions at the Turnpike overpass required special guardrail design in order to upgrade and replace existing guardrail installations on the bridge ends and approaches.

Project Manager Engineer of Record and Utility Coordinator, SR A1A, Old Dixie Highway to East of the North Causeway Bridge, FDOT District 4, Ft Pierce, FL: Mr. Neiman directed the design of this one-half-mile widening and resurfacing project. The project included design and preparation of construction plans for improvements on both sides of the North Causeway Bridge in Ft. Pierce, FL. The improvements included adding left turns on the west approach to Old Dixie Highway and a right turn lane and raised median on the west approach then tapering down to two lanes at the bridge. Sidewalk and curb ramp improvements to meet ADA requirements were also included. Drainage design included a closed storm sewer system with numerous inlets due to flat grades prior to the bridge and the steep grades coming off

the bridge. A shallow retention area was provided adjacent to the bridge and required extensive coordination with the Permitting agencies due to its proximity to the Intercoastal Waterway. Special attention toward protection of seagrass was required and limitations to construction within the tidal zone were imposed by the agencies. Extensive utility coordination by Mr. Neiman was required because all major utilities to Hutchinson Island developments to the east crossed the waterway via this causeway. Utility coordination was a part of the contract scope. Special drainage structures were designed to accommodate conflicts between these utilities and the large pipes required for the storm sewer. Due to limited R/W and bridge embankments, retaining walls were necessary in some areas adjacent to the bridge. Bridge embankment guardrail systems were upgraded as part of the project. A railroad crossing adjacent to Old Dixie Highway required extensive coordination with the Railroad company for both the design team and the utility companies doing relocations. The railroad crossings proximity to the intersection also required special analysis and design. Traffic signal preemption was included for the crossing. Roadway work on the east side of the bridge included milling and resurfacing, striping to accommodate the new lane configurations, signing and guardrail replacements.

Project Manager and Engineer of Record, US 27 Roadway Design, Polk County, FL: Mr. Neiman directed the design of four- to six- lane widening and resurfacing on 4.5 miles of major arterial roadway in the rapidly growing Disney World area near Kissimmee. The project included design of the roadway widening, resurfacing, and cross slope analysis, pavement design and drainage improvements, safety improvements, traffic control plans, pavement marking and signing, traffic analysis and design of three new traffic signals. The project also required traffic volume studies and projections for design year traffic volumes and pavement designs as well as stormwater system design, roadway cross slopes analysis and environmental considerations.

Project Manager and Engineer of Record, Old Kings Road Roadway Widening, Milling and Resurfacing and Sidewalk Improvements, Flagler County, FL: Mr. Neiman directed the design, specifications, and construction plans for widening, milling and resurfacing of a three lane rural section of Old Kings Road to provide dedicated turn lanes for busses and parent vehicles into the Old Kings Elementary School located adjacent to the roadway. The project included the addition of 8' and 10' wide sidewalks, meeting ADA requirements, along both sides of Old Kings Road for 2,800 feet from its intersection with SR 100 as part of a Flagler County Safe Routes to School improvement project. This included reviews and approvals at phase submittals by FDOT and Flagler County. Drainage improvements and modifications to accommodate the widening and construction of the wide sidewalks were included, as well as permitting coordination and exemptions with the St. John's River Water Management District. Roadway and sidewalk plans and details, grading plans, cross sections, drainage structure details, erosion control and signing and pavement marking plans were included in this contract. Additionally, a 10' sidewalk was added on the east side of the road to provide schoolchildren with safe access to and from the school to SR 100. Eight-foot-wide sidewalks were constructed on the west side to complete the sidewalk system on that side of the roadway within the limits of the project.

Project Manager, Design Oversight, and QA/QC Engineer, SR 552 Curry Ford Road, Orange County, FDOT District 5, Orange County, FL: Mr. Neiman was responsible for the project, maintaining the project budgets and schedules, and provided design supervision and oversight as well as detailed QA/ QC reviews. This 1.24-mile project on this high-volume segment of SR 552 located north of the Orlando International Airport included resurfacing, cross slope correction, access management and turn lane modifications and restriping to accommodate new bike lanes. Safety improvements along the corridor include upgrading the curb ramps to meet ADA requirements, realigning high-emphasis crosswalks, and median modifications to address crash reductions and detailed Temporary Traffic Control plans. The project included signing and pavement markings design to retrofit the existing roadway with new bike lanes and narrowed through lanes as well as new median markings and signs for the revised median openings and closures. New high emphasis cross walks were added to improve safety at the school crossing on the project and cross walks were relocated to improve pedestrian safety. Signalization plans were included to upgrade existing signals with new pedestrian detectors systems and replace loops with video detection systems tied into the County wide ATMS system. Mr. Neiman oversaw a team of Subconsultants including Survey, Subsurface Utility Engineering (SUE), Traffic Signal design and Utility Coordination.

Project Manager and Engineer of Record, Design Services, US 41 Venice Bypass, Florida Department of Transportation, District 1, Sarasota County, FL: Mr. Neiman prepared the construction plans for the widening of the US 41 Venice Bypass. His design included realignment and reconstruction of the existing four-lane with six-lane urban typical sections. Design of a closed stormsewer system, and five stormwater treatment facilities, community involvement, traffic volume studies and projections, roundabout feasibility studies, coordination with utility owners and wetland impacts and mitigation were an integral part of the project. Maintenance of traffic plans, signing and marking plans and traffic signal plans for five signalized intersections with left turn phasing were also included in the scope of work.

RANDAL W. STORMANT, JR.
Materials Testing Manager
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Deland, FL32720
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SUMMARY OF CAPABILITIES

- _ Most Aspects of Construction Materials Testing
- _ Geotechnical Investigation
- _ Project Development and Management

ENGINEERING SEMINARS

FDOT Piling Placement Inspection
Troxler Radiation Safety Officer Training

CERTIFICATIONS

CTQP/FDOT Asphalt Plant Technician Level 1 and Level 2
CTQP/FDOT Asphalt Paving Technician Level 1 and Level 2
CTQP/FDOT Quality Control Manager
CTQP/FDOT Earthwork/Density Inspector Level 1 and Level 2
CTQP/FDOT Concrete Lab Technician Level 1
NICET Level III Soils
NICET Level II Asphalt
NICET Level II Concrete
Troxler Radiation Safety Officer, Nuclear Gauge Operator

PROFESSIONAL EXPERIENCE

Mr. Stormant has been Materials Testing Manager for Bechtol Engineering and Testing, Inc. since June, 1992. He is responsible for Project Management and coordination of all Materials Testing Projects. He began his materials testing career in September, 1987.

Mr. Stormant has managed thousands of Materials Testing Projects throughout the State of Florida. Some of the municipalities and private companies he has associated with are: Florida Department of Transportation, Counties of Volusia, Flagler and Seminole, Cities of Ormond Beach, Deland and Sanford, and P & S Paving, Rinker Materials, Asphalt Recyclers, Steelmaster Industries, Ranger Construction, Halifax Paving, Asphalt Paving Systems and many more.

PAVEMENT REHABILITATION EXPERIENCE

Mr. Stormant has supervised the development of laboratory mix designs and performance of in-field production testing for hundreds of pavement rehabilitation projects throughout Florida.

Project Approach & Management

APPROACH

Introduction:

The county's primary objective in hiring a firm experienced in road modification design is to obtain knowledge gained from the consultant's experience on similar projects, under various conditions and settings, in order to lower total project cost, reduce problems during design and construction, and anticipate problems during the course of the project to avoid them. The reason for evaluating several companies is to select the firm that most closely shares the county's philosophy and desired approach to the work. This gives the county confidence that the project will be accomplished to meet the county's goal. This section will describe in detail how we will approach our work over the course of the entire project, why we will do it in a particular way, and what the benefits of our methods are.

Philosophy:

Based on our experience, these projects require attention to detail. It starts with the accumulation of base information. We want to accumulate information on all facilities that can impact the proposed improvements. Utility research will be performed early in the design phase of the project. If the project does not get off to a good start, it is hard to achieve an integrated and comprehensive design. At this stage of the project the preparation of quality topographic mapping and compilation of existing utility information are the key pieces. Thorough research, review of available record information and compilation of base information is a part of our QA/QC procedures, which highlights another part of our philosophy—the integration of QA/QC procedures into our design process.

It begins with assembling a qualified team, proper planning and development of the project, clear communication, documentation of decisions made, and checks that include independent in-house and field review. The SOQ is the first step where we assemble the team, and perform a field review of the project, and generally define the work that will be performed.

Design Issues:

Full Depth Reclamation (FDR):

Full Depth Reclamation is a cost effective and environmentally friendly rehabilitation strategy when constructed correctly. As with any alternative rehabilitation processes, it is not without its pitfalls and challenges. That is why having an experienced consulting engineering team is so important. To that end we've compiled a few specific key areas of focus that we can help with to implement a successful project.

Specifications are always critical in road construction. With constant technology improvements, agencies often make the mistake of using outdated specifications. This is one of the most important factors in determining a positive outcome on the road. We have the expertise and unmatched prior experience to assemble the proper and most up to date

FDR specs. Evers IG and Bechtol have worked with numerous specifications and have been involved with the development of them.

FDR mix designs are another area many agencies are unfamiliar with. Industry advancements have brought new approaches to the forefront. Hybrid designs utilize multiple additives rather than just one thereby increasing early strength and lowering overall additive costs. Bechtol Materials and Testing brings this expertise to our team and has extensive project experience with hybrid designs both in the laboratory during the design phase, and in the field with inspection and testing.

Lastly quality control plays a large role in getting the kind of finished product the County envisions. Does the successful low bidder have the equipment required to perform the work as specified? Does the mix design provide the correct structural coefficient as required by the County? How do the soils vary over the project limits? Are the appropriate amount of working days allocated and has the contractor been made aware of the liquidated damages at the pre-construction meeting? Who will provide inspectors with adequate knowledge and training to anticipate construction problems and enforce the specifications? These are some of the questions we will respond to over the course of design to help guide the county to a successfully completed FDR project.

69th Street Left turn lane improvements:

The Scope calls for the addition of left-turn lanes on all approaches at the 69th St. intersection with 58th Ave. We anticipate widening six feet on both sides of the roadway on all approaches to minimize taper lengths, alignment shifts and impacts to utilities and other roadside features. We will design the intersection to provide proper turning radii for the left turning movements and accommodate the new signal. Tapers will be designed in accordance with FDOT index 301, Turn Lanes and index 526, Roadway Transitions.

There is a deep ditch along the south side of 69th St. that is approximately 20 feet from the edge of pavement allowing the additional 6 feet of pavement to be added. This will be carefully evaluated as the ditch maybe within the clear zone width of 18 feet, after the widening, and required shielding or pipe extensions to eliminate this unsafe condition. Also there is a large water main crossing the ditch at the intersection adjacent to the straight endwall that will require adjustment to allow the new return radius to be constructed. Alternatively, we will evaluate shifting the widening to the north on 69th to avoid this. However, we recommend removal of the endwall and replacement with a mitered end section for safety reasons. This would also require adjustment of the water main. We also recommend this for the U-endwall on the southeast side of the intersection as well since it would be impacted by the return radii also unless the roadway is shifted north. Since 69th street is straight for a long distance on each approach the roadway shift at the intersection could be troublesome to drivers. The installation of the new traffic signal may also impact the ditch depending on the location of the new poles. Unless there is significant benefit to shifting the roadway north to avoid these impacts we recommend the equal width widening on both sides.

Along 58th Ave there is a shallower swale along the east side approximately 22 feet from the edge of travel and another shallow swale on the west side just off the 8-foot shoulder. Adjustment to these will be required to maintain drainage at the intersection. However, there is adequate room available to widen equally on both sides along 58th Ave.

Signalization:

We propose to conduct an extensive research and coordination effort prior to the design of the signalization replacements at the intersections of 58th Avenue (Kings Highway/CR 613) with 69th Street and CR 510. We will complete a records search for the original traffic signal plans and inspect the existing signal equipment, observe the intersections, review the existing signal programming, and obtain the latest counts. We will use this information to evaluate potential operational issues, establish the optimal signal phasing, and design the supports and lane configurations at each intersection to accommodate any anticipated future demand. We have already begun this effort, reviewing a copy of the Indian River County capital improvement program and FDOT work program. Existing street lighting fixtures at each intersection will also be documented and recommendations provided for illumination of the intersections.

We will review the County survey data to ensure that all geometric components that may affect the design have been identified, including: above and below ground utilities, landscaping, and roadway elements. We will also obtain subsurface utility explorations to identify any unmarked utilities in the vicinity of the proposed pole foundations. The explorations will be completed after determination of the pole locations through discussions with the County, and coordination with all known Utility companies within the Right of Way.

Street lighting will be accommodated in the design of the supports for the intersection of 58th Avenue at 69th Street, which are currently attached to the strain poles. As the intersection of 58th Avenue at CR 510 already employs lighting mounted to the FP&L shared-use poles, therefore additional luminaires are not anticipated for that intersection.

A quality signal plan set does not stop with our final approved plan set. Post design items such as shop drawing reviews and approvals and responses to additional information requests by the contractor are frequently needed during the construction process. The team's familiarity and understanding of the FDOT and local agency procurement and construction process will also provide value for the County's construction team during the signal construction phase.

Signing and Pavement Markings:

We have a wealth of experience in providing widening, safety and rehabilitation design of rural roadways. All pavement markings and signing will be designed following the latest preferences of Indian River County, the MUTCD and the current FDOT indices. All existing signs and markings will be inventoried and evaluated for conformance with current standards. Roadway vertical and horizontal geometry will be reviewed to ensure that all turning movements have adequate sight distance to complete a turning maneuver safely. Such as at 62nd Ln where tree limbs block the view. We recommend these be trimmed back to the right of way line to eliminate this. Adequate signage will be designed to provide advance information for all signalized intersections, provide warning for any side street connections that may have limited visibility and to inform of any upcoming roadway changes. Existing signs that meet the design horizontal clearance criteria will be kept as long as they have proper reflectivity and are in good condition. Other signs in good

condition and proper reflectivity will be relocated to the required horizontal clearance. Signs in poor condition that are still necessary will be replaced. Existing signs that do not meet the minimum height clearance will be raised to seven feet above the edge of travel to ensure proper clearance above the paved shoulder bike lanes on both sides. All pavement markings will be replaced with thermoplastic paint once the resurfacing is completed. Where roadway modifications are necessary the new markings and signing will be designed for the new conditions.

Pedestrian crosswalks will be safely designated according to the latest standards noted above. All crosswalks will have adequate signage to provide advanced information to the motorists for safety and pedestrian landing pads will be installed on all corners that do not have sidewalk connections when sidewalk is present on the opposing side. It was noted that sidewalk alignments at 75th St and 81st St. do not meet ADA requirements and need to be realigned at the intersection to guide users into the crosswalk instead of into the intersection. We will see that the sidewalk realignments are incorporated in the construction plans. These two intersections will need the pedestrian landing pads as will all four corners of the CR-510 intersection due to the existing signal with Ped features and crosswalks and no sidewalks.

It was noted that GoLine Bus Route 9 serves this roadway segment. There are several bus stops located along the corridor such as the ones at 65th St, 69th St and 77th St.. These bus stops are not ADA compliant, having no boarding and alighting pads present. We will, at the direction of the County, coordinate with GoLine to advise them of this deficiency and determine their schedule for improvements to avoid conflicts with the contractor during construction. Bus stop ADA improvements are typically the responsibility of the bussing authority.

Design Approach:

Preliminary Engineering:

We propose the project be done in two phases, Preliminary Engineering and Final Design. We recommend this approach for several reasons. First, preliminary engineering gives us the opportunity to compile all the base information, set control grades, evaluate the extent of conforms (driveway and adjacent streets) required, confirm drainage patterns and ditch clearances, identify the key issues and impacts, develop an opinion of construction cost for the various elements, and perform a complete assessment the project. This can all be done for a fraction of the total cost of detailed final design, and if portions of the project are identified as too expensive, alternatives can be looked at prior to investing in the cost of detailed design. The preliminary design phase of this project will provide for proper project development and is consistent with our QA/QC procedures.

At this first stage of the project we will compile the base information and background information and set up the project. We will evaluate the budget to assess what is the realistic cost of improvements. We will work with the county to sort through the proposed improvements and recommend refinements to the project based our experience.

The first design-level step is to perform the development of the engineering control plan. This is where we work with the topographic mapping and start designing the road geometrics. Mapping is critical and we will rely on the mapping provided by the county.

We can then lay out proposed improvements to see what fits and where the conform issues are. The project will be designed to about the 20-25% complete milestone.

Street modification projects require the designer to spend time in the field, and we anticipate several field visits during the preliminary engineering portion of the project. The first will be at the beginning of the project to review and photograph the entire project. The second time will take place as the preliminary engineering process is being completed to compare the preliminary layout to the existing conditions. Conflicts will be noted and the plan modified to accommodate existing conditions. Site visits to correlate our design to existing conditions is part of our QA/QC procedures.

Once the preliminary engineering work is complete and the project elements and issues are identified, permitting and utility coordination can move forward. The FDR process will require that all utility and other interferences be lowered to a depth safely below where the mixing will take place. This work can advance on a parallel track with the design. Since both the design and project constraints will have been identified, the design can proceed with a minimum of interruptions. This approach significantly improves design efficiency, reduces back tracking, and reduces overall project cost. Proper project development is part of our QA/QC procedures.

Final Design:

As we move into detailed design, our design philosophy comes into play. Our design philosophy is that capital cost (the cost to construct the project) typically comes along once, whereas maintenance costs are forever. We design improvements to be durable and low maintenance. This means that the design and construction may cost a little more but the total life cycle cost (the cost the county pays over the life of the project including maintenance) is lower. The second part of our philosophy is that good design is in the details. A detailed design typically costs a little more to prepare than a basic design, but results in savings during construction through fewer change orders to adjust a design to conform to existing conditions. Design with consideration for how it is constructed and what is required to maintain the improvements will more than offset the higher cost of a thorough design.

Preparing the drawings starts with selecting a scale and sheet layout. This is also part of our QA/QC. If the scale that is selected is too small, there will not be adequate detail in the design. If it is too large it will increase the sheet count and increase the cost of the project. For this project we recommend working at 1" = 20' scale because of the level of detail needed to identify and properly design conforms to existing improvements. The specifications will need to address work sequencing and phasing as well as controlling the FDR work.

During the course of the project we will have regular progress meetings with the County. This allows us to bring attention to the issues we have identified and confirm how they should be addressed. It also allows mid-way corrections in the design process so we don't come to the end of the project and be faced with significant changes. Clear communication and documentation of the design process is part of our QA/QC procedures.

Once the drawings are complete (90% submittal) and delivered to the county for their final review, we perform our own independent review. Our review consists of an in-house review by those knowledgeable in construction and design, and independent of the design team. We also perform a field review, visually checking the drawings against the actual existing conditions in the field. This will be our third and final formal field review of the project. These final checks complete our QA/QC procedures for the design process. This information will be coupled with the county's review comments to complete the contract documents to bid-ready status.

The Tangible Intangibles:

Esthetics in street design comes from design simplicity and smooth curb or pavement edge lines. Well designed street improvements go unnoticed because they form a part of the viewscape. One of the problems with road modification projects is the lack of time spent properly designing transitions to existing improvements. This results in broken back curves, the unsightly angle points and the awkward transitions that bump or stick out like a sore thumb. If the base improvements, such as the curb line, the back of sidewalk line and the pavement edge horizontal and vertical alignment are not smooth lines they will forever detract from the visual continuity between the street, landscaping and other amenities. Design simplicity is realized through attention to detail, multiple iterations to achieve a better solution and confirmation of fit to existing conditions.

Using our approach, and staffing the project with seasoned design professionals who also have substantial construction experience will allow the design process to flow smoothly. This flow will continually converge to the finished deliverables. We find that this approach reduces total project cost, helps eliminate unnecessary back tracking and prevents substantial redesign at the end of the project to correct design deficiencies due to inexperienced design staff.

This proposal was not prepared by a marketing department. The approach outlined above including the philosophy and QA/QC procedures were developed by the people who will be actively involved with the design of this project. This is the blueprint of our design process and this approach has been developed through the course of 30-plus years of street retrofit design projects, and is further refined with each project we do.

MANAGEMENT

QA/QC Procedures:

Our QA/QC procedures include: team qualifications and skill sets, a realistic project schedule, adequate budget, thorough research, proper work sequencing, continuous checks during design, proper records, fostering a collaborative environment, regular communications, and documenting decisions and why they were made. Bowman views QA/QC as a foundational aspect of the design process.

We have identified that work sequencing is a significant factor in both quality and cost control. This approach looks at what information is needed, and when it is needed in the design process. Proper work sequencing facilitates good decisions so the design process can converge on the

improvement the client wants. This approach can reduce design changes that arise from issues that could have been known earlier in the process, if the work was properly sequenced. Reducing design changes has a direct correlation in reducing errors and cost.

Meetings are a key element of the design process and are a primary component of our QA/QC procedures. For the design of a typical project, we would recommend meetings at the beginning of the project, 30%, 60% and 90% milestones. The issues we identify at each phase of the design are discussed and then resolved through the design process. The meetings are a convenient way to document decision making and meeting notes provide a living checklist of issues that need to be addressed to complete the design, and is another tool to prevent loose ends from being missed.

We will perform independent in-house review of the drawings and specifications. In addition to the office plan check, we perform a field review of the drawings to confirm that the drawings are consistent with field conditions.

Integration of our QA/QC procedures into the services process is a holistic approach. It is continually refined, adjusted for change with a focus on accuracy and completeness. Our QA/QC program is a result of our team's commitment to quality and thoroughness throughout a project's development and implementation.

Work Allocation:

We anticipate the work will generally breakdown as 10-15% managerial, 70-85% engineering and technical, and 5-10% administrative staff allocation with approximately 10-15% of the total effort devoted to quality control.

The team members listed on our Organization Chart are the personnel that will be assigned to the project. Mr. Flavell will be available up to 30% of his time for this project. Mr. Lucas will be available up to 25% of his time. This level of availability exceeds what is estimated to be required to perform the work.

Meeting Time and Budget Requirements:

The first level of meeting time commitments is to handle the work efficiently. This is best done by seasoned professionals who know what is required, know how to work efficiently, and know how to best triage a situation for successful conclusion. Mr. Flavell will be responsible for meeting schedules and budgets. He will be supported by Mr. Anthony, and both of us have been successfully meeting time and budget commitments for many years. We know what it takes and we will work the hours required to deliver the service. The benefit of selecting Bowman is if we need additional help beyond that supplied by our Melbourne office, we have the other offices to assist us. We regularly share resources and have excellent relationships between offices to address this very issue.

Indian River County would be a key client and our goal is to establish a long term relationship. We continually strive to have a proper balance of private and public work. At this time our work load is weighted toward private work. A lot of private work is one out projects. Stability is developed through long term clients relationships. In order to meet our company goals, we have

make the commitment to putting the resources where the long term relationships are, and that would be with our public sector clients.

Working within Project Budget Constraints:

Funding is almost always an issue on public improvement projects. We have developed several approaches to dealing with this challenge. As outlined in our approach we like to perform a detailed cost evaluation of a project somewhere around the 20-30% complete milestone to see where we are on the budget. The goal is to get a realistic appraisal of the project as early as possible, but far enough along in the design process so the major issues can be quantified. This approach limits the expense to get the project properly bracketed. At this point, with minimal investment, adjustments can be made to the scope of the project, the project can be phased, additional money can be set, or the project could be put on hold.

We have worked with agencies that know there is insufficient money to construct the project, but want to proceed with design and a phased approach. One example is a mile of sidewalk that had not been constructed due to the terrain and cost, but public pressure was calling for the sidewalk to be completed. We worked with the agency and designed the entire project and prepared the cost estimate by plan sheet. The bid schedule was set up by plan sheet as well. This approach allowed us to wait to the last moment to determine actual funding and adjust the project to the available budget for the first phase. The rest of the project could be constructed in phases, based on how the money became available, and the plan set and bid schedule could be assembled to the available budget by adding or deleting sheets. A similar approach was used for water distribution system upgrades. The system was master planned and designed to make it easy to implement in phases. Having substantial construction experience is essential to developing these types of approaches to balance flexibility and cost of improvements.

Constructability Reviews:

Mr. Flavell has experience performing independent constructability reviews for agencies for many engineering projects, including roads, water treatment plants and wastewater treatment plants. Design's that are well thought out will make it easier for the contractor to build, cost less, have fewer problems, and take less time to construct. All designs should be reviewed from the perspective of how will they be constructed. Mr. Flavell has specific experience being in responsible charge for providing full construction observation and testing services for the following types of projects:

- Roads – new construction, modifications to existing and pavement maintenance treatments
- Waterlines, booster pump stations and steel reservoirs
- Sewerlines, forcemains, and lift stations
- Water Treatment Plants
- Wastewater Treatment Plants
- Drainage facilities including large junction structures

This experience provides the foundation for how he approaches the design of his projects.

Consultant Capabilities

Full Depth Reclamation (FDR)

FDR is very site sensitive and can even vary over the course of a single project. The key to a successful FDR project is the amount of experience the designer has, and more experience working with this technology is very advantages to the project. There is no substitute for actual field experience. Bechtol Materials and Testing, and more specifically Mr. Stormant, brings the experience of working with many agencies, on numerous projects, at a variety of locations, with primary responsibility for mix design and lay-down testing and inspection, a partial list of projects is presented below:

Volusia County	Palm Beach County
Flagler County	Polk County
St. Johns County	City of Tampa
Duval County	City of Palm Bay
Lake County	City of Dunedin
Jackson County	City of Gulfport
Pasco County	City of Kissimmee
Martin County	City of Orlando
Bay County	City of Northport
Charlotte County	City of Tamarac
Glades County	City of Belleaire
Osceola County	United States Navy
Manatee County	NASA
Hendry County	...and many more.

Street Modifications and Signals

Lassiter Transportation Group, Inc. (LTG) is a small business enterprise, fully licensed engineering firm formed in 2002. LTG is proud to be **pre-qualified with the Florida Department of Transportation (FDOT)** in all traffic engineering and transportation planning work groups including studies, design, statistics, and planning.

FDOT Qualifications

3.1	Minor Highway Design	7.1	Signing, Pavement Marking, and Channelization
6.1	Traffic Engineering Studies	7.2	Lighting
6.2	Traffic Signal Timing	7.3	Signalization
6.3.1	ITS Analysis and Design	13.3	Policy Planning
6.3.2	ITS Systems Implementation	13.4	Systems Planning
6.3.3	ITS Traffic Engineering and Systems Communications	13.5	Subarea/Corridor Planning
6.3.4	ITS Software Development	13.6	Land Planning/Engineering
		13.7	Transportation Statistics

ITS – Intelligent Transportation Systems

LTG is backed by more than 35 years of experience providing traffic engineering and transportation planning services to public and private sector clients. LTG brings the needed expertise and commitment to excellence to manage even the most complex transportation systems on behalf of our clients. LTG emphasizes this commitment through:

- **Personal** Customer Service
- A **Quality** Product
- **Cost-Saving** Solutions
- Extensive Local and Statewide **Experience**
- A **Respected** Industry-Wide Reputation

LTG has proudly performed exceptionally well on continuing services contracts similar in nature to this one. Currently, LTG has **over 37 continuing service contracts** with various city, county, state, federal, and specialty agencies. Many of these are repeat contracts earned by consistently meeting schedules and budgets with quality work. Below is a sample listing of our current continuing services contracts in both sub-consultant and prime consultant capacities.

- ✓ Volusia County
- ✓ Brevard County
- ✓ St. Johns County
- ✓ Alachua County
- ✓ FDOT District 2 – Road Safety Audits
- ✓ FDOT District 5 – Modeling Support
- ✓ FDOT District 5 – Active Arterial Management Analysis
- ✓ Florida Turnpike Enterprise
- ✓ River to Sea Transportation Planning Organization
- ✓ Daytona Beach
- ✓ DeBary
- ✓ DeLand
- ✓ Crystal River
- ✓ Edgewater
- ✓ Haines City
- ✓ Howey-in-the-Hills
- ✓ Melbourne
- ✓ West Melbourne
- ✓ New Smyrna Beach
- ✓ Palm Coast
- ✓ Palm Bay

Project Management and Bid Document Preparation

These team member capabilities, coupled with Mr. Flavell's 30 years road improvement and pavement maintenance design and construction experience, is one of the capabilities that sets our team apart. Another is Mr. Flavell's significant project management experience as a prime consultant project manager, managing as many as 11 subconsultants and with experience over a variety of design and construction projects that include roads, utilities, drainage, water treatment plants and wastewater treatment plants.

Specific road modification and pavement recycling projects have taught us the importance of early utility coordination, because existing facilities will require lowering in order to perform the recycling and then adjusting to finish grade. We also need to find out about scheduled utility maintenance project so newly reconstructed roads are not cut up shortly after reconstruction. Construction projects have taught us the importance of detailed drawings and attention to the design of conform locations. It is these types of issues that our experience will anticipate and address through the course of this design.

Project Schedule

Scheduling is a very important aspect of delivery of services. We take our deadlines very seriously and deadlines are particularly important, because time is money. We will work with you at the beginning of the project to develop the scope, identify what the issues are, determine what the milestones are and with this information we will develop a project schedule. We typically include the project schedule with the preparation of the proposal, as this is part of the preparatory work we do for each project.

An updated schedule is typically presented at each meeting to show what has been accomplished and what work remains. Using this approach we have a running dialogue about the project, and if something occurs that can impact the project it can be discussed as soon as it is identified. Depending on the issue, mitigating action may be taken or the schedule could be adjusted. Whatever the action is, it will be discussed with you and agreed upon to be the best approach for the situation.

Projects are dynamic efforts on everyone's part. Schedules are put together based on the available information when they are created and past experience with similar projects. Schedule development is a key component of project development. If it is too short, the work will need to be accelerated and this leads to omissions and errors which can inhibit the development of good project solutions. A short schedule induces additional costs to accelerate it, as well. A long schedule can also be a problem. In this scenario work is done and then it is put down while something more important is attended to. Each time a project is put down and picked up, things are forgotten, momentum is lost, errors are made and cost goes up. As with most things there is an optimum time for performance that balances cost, momentum, allows for proper information development, information flow and overall project development. We will work with you to develop a realistic schedule at the beginning of the project and this promotes project success.

That said, each project is unique and will experience its own issues and circumstance. We stress open communications so that everyone involved with the project is well informed about the issues and the developments as they occur. As professionals we all know that things happen, sometimes beyond our control, during the course of a project. Our job is to work with you in a timely manner to develop solutions that are consistent with your desires for the proper development of the project and the use of a schedule promotes this higher level of communications, involvement and follow through.

We have prepared a preliminary schedule based on our current understanding of the project and as a starting place to develop an overall project schedule to guide us through the design and construction process.

Proposed Project Schedule		
Description	Time	Total Time
Preliminary Engineering		
Notice to Proceed	Start	
Survey and Topo Mapping	Completed	
Utility Research	4 wks	4 wks
Meeting (review Design Criteria)		
Layout proposed alignment	4 wks	4 wks
Meeting (confirm alignment)		
Identify constraints and cost estimate	4 wks	8 wks
Meeting (review constraints and costs, refine project, in-progress plans)		
Agency Review of In Progress Plans	4 wks	12 wks
Final Design		
Start Final Design		12 wks
Design to approximately 60% complete	8 wks	20 wks
Meet to review in progress design		
Agency Review of In Progress Plans	4 wks	24 wks
Design to approximately 90% complete	10 wks	34 wks
Meet to review design, specs and costs		
Plan checking (County, in-house and field)	4 wks	38 wks
Address comments and complete deliver final bid documents	2 wks	40 wks
Construction		
Advertise and Bid	4 wks	44 wks
Award and NTP	6 wks	50 wks
Construct Improvements	24 wks	74 wks
Punchlist Work and Accept Project	3 wks	77 wks
As-Built Drawings	3 wks	80 wks

References

Bowman Continuing Engineering Services

Bowman is pleased to have been selected for a number of on-going continuing engineering services contracts. We are currently providing services to the following agencies:

Agency	Services
City of West Melbourne	City Engineer
Saint Lucie County	Engineering and survey
City of Stuart	Engineering and survey
Martin County	Survey

Bowman Consulting References (Eric Flavell, P.E.)

City of West Melbourne, FL

Projects:

Adjunct City Engineer
Various as assigned

Chad Shoultz - Deputy City Manager
Phone: 321-837-7777
cshoultz@westmelbourne.org

Christy Fischer - Planning Director
Phone: 321-837-7778
cfischer@westmelbourne.org

City of Stuart, FL

Projects:

Pavement Maintenance Program
Bus Stop Project
Australian Street Drainage Improvements

Sam Amerson, Public Works Director
Office: (772) 288-5331
samerson@ci.stuart.fl.us

Tim Voelker, City Engineer
Office: (772) 288-5332
TVoelker@ci.stuart.fl.us

City Camarillo, CA

Projects:

Pancho Road Reconstruction Project
Annual Street Pavement Maintenance Projects

Ken Matsuoka, Principal Engineer
Office: (805) 383-5672
kmatsuoka@cityofcamarillo.org

Evers Infrastructure Group (Chris Evers)

Principal, Full Depth Reclamation (FDR), Cold In-Place Recycling (CIR), - Construction Engineering Inspection

Town of Lady Lake, Avenida Central CIR, 2014 - CT Eagle Sr., Public Works Director (352) 751-1526, cteagle@ladylake.org

Nassau County, Blackrock Road FDR Phase 3, 2014 Buckley Williams PE, Principal, V.P. ETM Inc. (904) 642-8990, williamsb@etminc.com

Zephyrhills Airport, Runway Rehabilitation FDR, 2014 Hilary Maull, Project Manager AVCON Inc. (407) 599-1122, hmaull@avconinc.com

Nassau County, Blackrock Road CIR Phase 2, 2014 Buckley Williams PE, ETM Inc.

Hendry County, CR 835 CIR Phase 2, 2014 Rock Aboujaoudé PE, President Rock Enterprises (863) 612-0011, rock@rockhendry.com

Nassau County, Blackrock Road CIR Phase 1, 2013 Dow Peters, PE President Peters and Yaffee Inc. (904) 265-0751, dpeters@petersandyaffee.com

Hendry County, CR 835 CIR Phase 1, 2012 Rock Aboujaoudé PE, President Rock Enterprises

Lassiter Transportation Group (Gil Ramirez)

Brevard County Public Works
John Denninghoff, PE
Office: (321) 617-7202
john.denninghoff@brevardcounty.us

City of Melbourne Engineering
Jenni Lamb
Office: (321) 608-7300
jlamb@melbourneflorida.org

City of Daytona Beach Technical Services
Frank Van Pelt
Office: (386) 671-8040
VanPeltF@codb.us

Volusia County Public Works
Scott Martin, PE
Office: (386) 736-2700
smartin@volusia.org

City of Palm Coast Project Manager
Carl Cote
Office: (386) 986-3748
ccote@palmcoast.gov

Bechtol Engineering & Testing (Randy Stormant)

Volusia County - Wayne Jackson (386) 561-8655 wjackson@volusia.org

Jackson County - Larry Alvarez (850) 573-7491 lalvarez@jacksoncountyfl.com

Polk County - Katia Delgado; (863) 688-1725 katia-delgado@polk-county.net

Pasco County - Efrain "Fig" Figueroa

Florida FDOT - Greg Sholar (352) 955-2920; cell (352)3176633
gregory.sholar@dot.state.fl.us

Asphalt Recyclers - Ted Bitomski (321) 632-6552

Asphalt Paving Systems - Tommy Donald (813) 455-2469, (813) 788-0010,
td.donald@hotmail.com

Note: It is worth contacting contractors to determine who knows how to properly design and implement FDR projects. They have a lot at stake, are in the high risk position and they are where the binder hits the dirt.

Additional Information / Forms

Statement on Litigation
Professional Engineering Certifications
Eric Flavell, P.E.
Lucas Anthony, P.E.
Corporate Florida Registration
Sworn statement of Disclosure of Relationship
Firm's Insurance Requirement Acknowledgement Form

Statement on Litigation

Bowman Consulting is proud of our ability to serve our clients well and perform quality work. We are pleased to state that we have had no litigation within the last 5 years.

Professional Engineering Certificates:



Corporate Florida Registration

State of Florida Department of State

I certify from the records of this office that BOWMAN CONSULTING GROUP, LTD., INC. is a Virginia corporation authorized to transact business in the State of Florida, qualified on November 30, 2012.

The document number of this corporation is F12000004832.

I further certify that said corporation has paid all fees due this office through December 31, 2015, that its most recent annual report/uniform business report was filed on January 8, 2015,, and that its status is active.

I further certify that said corporation has not filed a Certificate of Withdrawal.

*Given under my hand and the
Great Seal of the State of Florida
at Tallahassee, the Capital, this
the Thirtieth day of March, 2015*



Ken Detjmer
Secretary of State

Tracking Number: CU7932568972

To authenticate this certificate, visit the following site, enter this number, and then follow the instructions displayed.

<https://services.sunbiz.org/Filings/CertificateOfStatus/CertificateAuthentication>

**SWORN STATEMENT UNDER SECTION 105.08, INDIAN RIVER COUNTY CODE, ON DISCLOSURE OF
RELATIONSHIPS**

THIS FORM MUST BE SIGNED IN THE PRESENCE OF A NOTARY PUBLIC OR OTHER OFFICER AUTHORIZED TO ADMINISTER OATHS.

1. This sworn statement **MUST** be submitted with Bid, Proposal or Contract No. 2016026 for 58th Avenue Pavement Reclamation and Resurfacing Project – 57th Street to CR-510 (FDOT SCOP FM No. 434416-1) (IRC Project No. 1325)

2. This sworn statement is submitted by: Bowman Consulting Group, LTD

(Name of entity submitting Statement)

whose business address is:
4450 W. Eau Gallie Blvd. Suite 232 Melbourne, FL 32934
and its Federal Employer Identification Number (FEIN) is 54-1762351

3. My name is Erik Juliano

(Please print name of individual signing)

and my relationship to the entity named above is Branch Manager/V.P.

4. I understand that an "affiliate" as defined in Section 105.08, Indian River County Code, means:

The term "affiliate" includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in the management of the entity.

5. I understand that the relationship with a County Commissioner or County employee that must be disclosed as follows:


Father, mother, son, daughter, brother, sister, uncle, aunt, first cousin, nephew, niece, husband, wife, father-in-law, mother-in-law, daughter-in-law, son-in-law, brother-in-law, sister-in-law, stepfather, stepmother, stepson, stepdaughter, stepbrother, stepsister, half brother, half sister, grandparent, or grandchild.

6. Based on information and belief, the statement, which I have marked below, is true in relation to the entity submitting this sworn statement. [Please indicate which statement applies.]

 Neither the entity submitting this sworn statement, nor any officers, directors, executives, partners, shareholders, employees, members, or agents who are active in management of the entity, have any relationships as defined in section 105.08, Indian River County Code, with any County Commissioner or County employee.

_____ The entity submitting this sworn statement, or one or more of the officers, directors, executives, partners, shareholders, employees, members, or agents, who are active in management of the entity have the following relationships with a County Commissioner or County employee:

Name of Affiliate or entity	Name of County Commissioner or employee	Relationship
_____	_____	_____
_____	_____	_____
_____	_____	_____



(Signature)
7/25/16

(Date)

STATE OF FLORIDA
COUNTY OF BREVARD

The foregoing instrument was acknowledged before me this 25TH day of JULY, 2016, by ERIK JULIANO, who is personally known to me or who has produced SELF as identification.

NOTARY PUBLIC

SIGN: 

PRINT: NEIL SHARP

Notary Public, State at large
My Commission Expires:





CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)
11/9/2015

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Klein Agency, LLC. P.O. Box 219 Timonium MD 21094 INSURED Bowman Consulting Group, Ltd. 3863 Centerview Drive, Suite 300 Chantilly VA 20151-3287	CONTACT NAME: PHONE (A/C, No, Ext): (410) 832-7600 FAX (A/C, No): (410) 832-1849 E-MAIL ADDRESS: INSURER(S) AFFORDING COVERAGE NAIC # INSURER A Hartford Fire Insurance INSURER B Hartford Casualty Insurance Co INSURER C Hartford Underwriters Ins Co INSURER D RLI Insurance Company INSURER E: INSURER F:
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COVERAGES **CERTIFICATE NUMBER: 15-16 All NO Endts** **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL. SUBR INSD. WVR	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR <input checked="" type="checkbox"/> Contractual Liability GEN'L AGGREGATE LIMIT APPLIES PER: POLICY <input checked="" type="checkbox"/> PROJECT <input type="checkbox"/> LOC OTHER:		30UUNVJ9957	10/6/2015	10/6/2016	EACH OCCURRENCE \$ 1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 300,000 MED EXP (Any one person) \$ 10,000 PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 2,000,000 PRODUCTS - COM/OP AGG \$ 2,000,000
	AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> ANY AUTO <input type="checkbox"/> ALL OWNED AUTOS <input checked="" type="checkbox"/> HIRED AUTOS <input type="checkbox"/> SCHEDULED AUTOS <input checked="" type="checkbox"/> NON-OWNED AUTOS		30UENVJ9748	10/6/2015	10/6/2016	COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ \$
B	<input checked="" type="checkbox"/> UMBRELLA LIAB <input checked="" type="checkbox"/> OCCUR <input type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE DED RETENTION \$		30XHUVJ7593 Follows Form	10/6/2015	10/6/2016	EACH OCCURRENCE \$ 18,000,000 AGGREGATE \$ 18,000,000 \$
C	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N <input checked="" type="checkbox"/> N N/A	30WECR2870	10/6/2015	10/6/2016	<input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTH-ER E.L. EACH ACCIDENT \$ 1,000,000 E.L. DISEASE - EA EMPLOYEE \$ 1,000,000 E.L. DISEASE - POLICY LIMIT \$ 1,000,000
D	Professional Liability		RDP0021965	10/6/2015	10/6/2016	Each Claim \$5,000,000 Aggregate \$8,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
 See Attachment for specific additional insured wording.

CERTIFICATE HOLDER * Insured's Sample Certificate 1234 East Main Street Anytown 12345	CANCELLATION SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS. AUTHORIZED REPRESENTATIVE Justin Klein/MBOWER
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ACORD 25 (2014/01)
INS025 (201401)

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COMMENTS/REMARKS

If required under an insured written contract, executed prior to any loss, Certificate Holder is an Additional Insured under the General Liability Policy, but only with respects to liability arising from work performed by or on behalf of Bowman Consulting Group, Ltd.

If required under an insured written contract, executed prior to any loss, Certificate Holder is an Additional Insured under the Automobile Policy, but only with respects to liability arising from the operation of vehicles by employees of Bowman Consulting Group, Ltd.

If required under an insured written contract, executed prior to any loss, Waiver of Subrogation is provided for the certificate holder under the General Liability, Automobile Liability and Workers Compensation Policies.

It is further understood that coverage provided the Additional Insured under the General Liability and Automobile Liability shall be primary and non-contributory to any other coverage available to the Additional Insured.

OFREMARK

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