RFP Title: Request for Proposals for Civil Engineering Services, Continuing Supply
Proposal Number: BC-03-17-11-25
Opening Date: Thursday, March 17, 2011 at 2:00 PM

PROPOSAL RESPONSE COVER SHEET

THIS PAGE IS TO BE COMPLETED AND INCLUDED AS THE COVER SHEET FOR YOUR RESPONSE TO THE REQUEST FOR PROPOSALS.

The Board of County Commissioners, Leon County, reserves the right to accept or reject any and/or all bids in the best interest of Leon County.

Keith M. Roberts, Purchasing Director

John Dailey, Chairman
Leon County Board of County Commissioners

This bid response is submitted by the below named firm/individual by the undersigned authorized representative.

Camp Dresser & McKee Inc. (CDM)
(Firm Name)

BY _____
(Authorized Representative)

Kart Vaith, P.E., BCEE
(Printed or Typed Name)

ADDRESS 3522 Thomasville Road, Suite 300

CITY, STATE, ZIP Tallahassee, FL 32309

TELEPHONE 850.386.9500

FAX 850.668.6745

ADDENDA ACKNOWLEDGMENTS: (IF APPLICABLE)

Addendum #1 dated 3-3-2011 Initials _____ Addendum #3 dated _____ Initials _____

Addendum #2 dated 3-8-2011 Initials _____ Addendum #4 dated _____ Initials _____

PLEASE MARK WHICH CATEGORIES FOR WHICH YOU WISH TO BE CONSIDERED:

- ✓ a. Stormwater Engineering
- ✓ b. Roadway Design
- ✓ c. Traffic and Intersection Engineering
- ____ d. Structural Engineering
- ____ e. Geotechnical Services
- ____ f. Environmental Support Services
- ____ g. Construction Engineering and Inspection Services
- ____ h. Surveying
- ____ i. Subdivision and Site Development Engineering
- ____ j. Parks and Recreational Facility Engineering
- ____ k. Utility Engineering

3522 Thomasville Road, Suite 300
Tallahassee, Florida 32309
tel: 850 386-9500
fax: 850 668-6745

March 17, 2011

Leon County
Purchasing Division
1800-3 Blair Stone Road
Tallahassee, FL 32308

Subject: ***Proposal Number: BC-03-17-11-25 Civil Engineering Services, Continuing Supply General Information Applicable to All Work Categories***

Dear Selection Committee Members:

Camp Dresser & McKee Inc. (CDM), on behalf of the entire CDM organization—along with our recently acquired wholly-owned subsidiary Wilbur Smith Associates—is pleased to submit our qualifications to serve as Leon County's (County) consultant for continuing civil engineering services. The integration of CDM and WSA brings together one of the engineering and construction industry's top water and environment firms with an industry leader in transportation, and we look forward to continuing to provide the County with quality engineering services. As indicated on the Proposer Response Cover Sheet, CDM is submitting our qualifications for the following services: stormwater engineering, roadway design, and traffic and intersection engineering. Overall, we believe the CDM team is best suited to perform all of the services required for each of these disciplines for the following reasons.

Continuity: The CDM team has a long history of successful project experience with the County—and County staff—that will help to address all projects *under this* contract. We value our relationship with the County and have provided a consistently high level of professional service and responsiveness since the 1980s. Our team has a tremendous understanding of the County's systems and procedures and will apply this knowledge in a cost-effective and efficient manner.

Structured to Serve Leon County: CDM understands that, to keep your business, we have to consistently deliver the small- to medium-sized projects like the ones contemplated by this contract with excellent client service. And the CDM team is structured to deliver just that. We have local staff dedicated to serving Leon County. In addition, our staff is supported by the worldwide resources of the CDM team, spanning the full complement of engineering services that may be called upon for this contract. The CDM team gives Leon County dedicated local service and world-class resources in a single firm that knows how you do business. Our client service-based business model means exceeding expectations by listening carefully to each unique concern, understanding project demands, and delivering a tailored solution.

Comprehensive Engineering Design Center: One of the distinct advantages of selecting the CDM team is our comprehensive engineering design center located in our Orlando office. With a staff of over 250 people covering all aspects of municipal utilities planning, design, operations, construction, and management, the design center will work collaboratively with local staff to produce the quality projects the County has come to expect from CDM. CDM has utilized the design center approach to deliver a wide range of successful projects to our Panhandle clients, from the $50,000 Fiesta Drive Waterline improvements for the Alligator Point Water Resources District to the $50,000,000 design-build of the Okaloosa County Arbennie Pritchett Water Reclamation Facility.

David W. Kozan, P.E.

Mr. Kozan will serve as client service manager for this engagement and will represent CDM as the firm's liaison to the County. A professional engineer, Mr. Kozan has a track record of successful projects, rapid problem solving, productive multi-discipline team organization, and long-term client relationships. His competencies include design project management, stormwater, civil, roadway, water treatment system analysis, water/wastewater transmission design, water treatment system design, and hydraulic analysis.

Committed Local Project Management: The CDM team offers the County a local project management team with a combination of relevant work experience and direct Leon County experience to deliver the full complement of services required for these contracts. Our team will be led by **David W. Kozan, P.E.,** who will serve as the client service manager for these contracts. He will be responsible for project scope and budget development, client management, staffing, administration, and coordination of the firm's planning, design, field, and construction management teams to ensure timely, high-quality and cost-effective project delivery to the County for every project performed as part of these contracts.

Technically-Superior Local and National Resources: The team of local and national experts supporting Mr. Kozan possess directly relevant expertise gained from similar projects performed for Leon, throughout Florida, and across the U.S. Our team will be backed by the full resources of our entire CDM Florida operations, comprised of 16 strategically located offices and staffed by multi-disciplinary professionals, as well as the combined knowledge and expertise of CDM staff from more than 170 offices around the world. Our domestic offices are linked by state-of-the-art communications networks, enabling us to provide our clients with personal services on a local basis, while allowing us to draw quickly upon the expertise of our staff members nationwide.

The CDM team has been successfully assisting clients nationally for over 60 years, and locally in Florida for 35 years, and is among the country's premier consulting engineering firms. **Of all the environmental firms in the country, CDM was ranked 4th in sewer/wastewater, 8th in water, and, of the top 500 Design Firms, CDM was ranked 21st by Engineering News Record 2010.** WSA's 2010 ENR industry rankings are as follows: 15th in transportation, 40th in "pure" designers, 64th in the top 500 Design Firms, and 43rd in the Top 50 Designers in International Markets.

CDM + WilburSmith ASSOCIATES

ENR 2010 RANKINGS

- **Top 20** — **Sewer/Wastewater • 4th**
- **Top 20** — **Transportation • 15th**
- **Top 20** — **Water • 8th**
- **Top 20** — **Hazardous Waste • 15th**
- **Top 50** — **Designers in International Markets • 28th *(CDM)* • 43rd *(WSA)***
- **Top 100** — **"Pure" Designers • 40th**
- **Top 500** — **Design Firms • 21st *(CDM)* • 64th *(WSA)***

Proven Experience Performing Similar Contracts in Florida: With extensive experience with similar continuing contracts and in the specific service areas you are requesting, the CDM team understands not only the technical needs of these types of projects but also the managerial, organizational, and logistical characteristics that must be carefully balanced to make such projects a success.

Over the course of the last year, CDM entered into contractual agreements with 775 regional, state, and municipal governments and utilities, as well as 10 different U.S. federal agencies. Additionally, over the last five years, CDM has maintained several hundred different continuing services contracts with 130 government entities throughout Florida. The services provided under these contracts vary by client and cover the full range of services offered by CDM.

David Kozan will act as the CDM team's client service manager for Leon County and will be responsible for your satisfaction with CDM's service. He will be your primary point of contact and has authority to structure design teams, set schedules, and oversee delivery. Kart Vaith, P.E., BCEE, Senior Vice President, will ensure that Mr. Kozan is fully resourced and provides CDM's corporate commitment to serving Leon County. As such, he will act as signer of this proposal and is authorized to make representations for CDM and bind the firm, and is responsible for execution on behalf of the CDM team. Should you have any questions, please contact Mr. Kozan at 850.386.9500 or via email at kozandw@cdm.com. We look forward to serving you and thank you for your kind consideration.

Very truly yours,

Kart Vaith, P.E., BCEE
Senior Vice President
Camp Dresser & McKee Inc.

David W. Kozan, P.E.
Client Service Manager
Camp Dresser & McKee Inc.

SECTION A: CONTRACTOR INFORMATION

General Information Applicable to All Work Categories

The CDM team's business addresses, office locations, and the addresses of the offices that will perform the work under this contract is as follows:

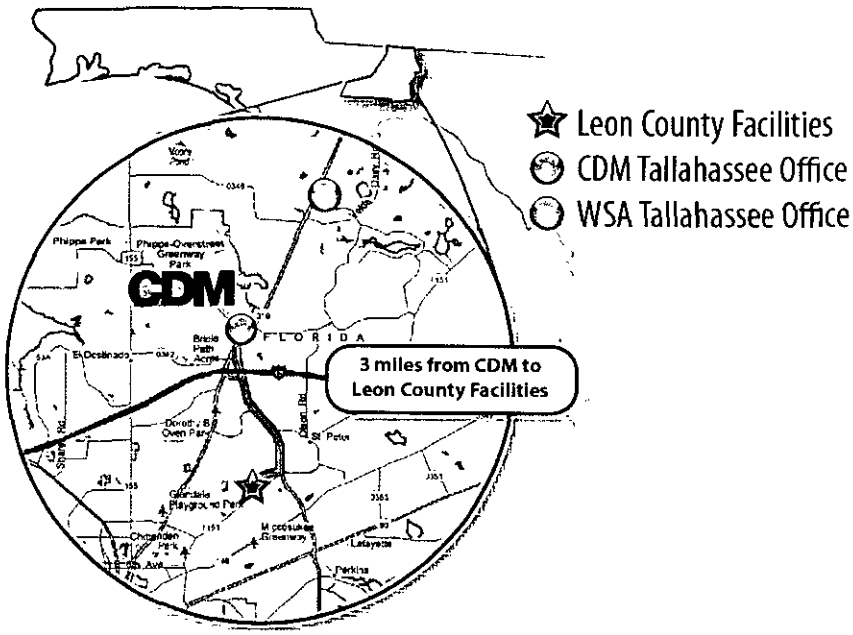
CDM
3522 Thomasville Road, Suite 300
Tallahassee, FL 32309
Tel: 850.386.9500
Fax: 850.668.6745
Email: KozanDW@cdm.com

WSA
2940 Kerry Forest Boulevard, Suite 201
Tallahassee, FL 32309
Tel: 850.309.0838
Fax: 850.309.0927

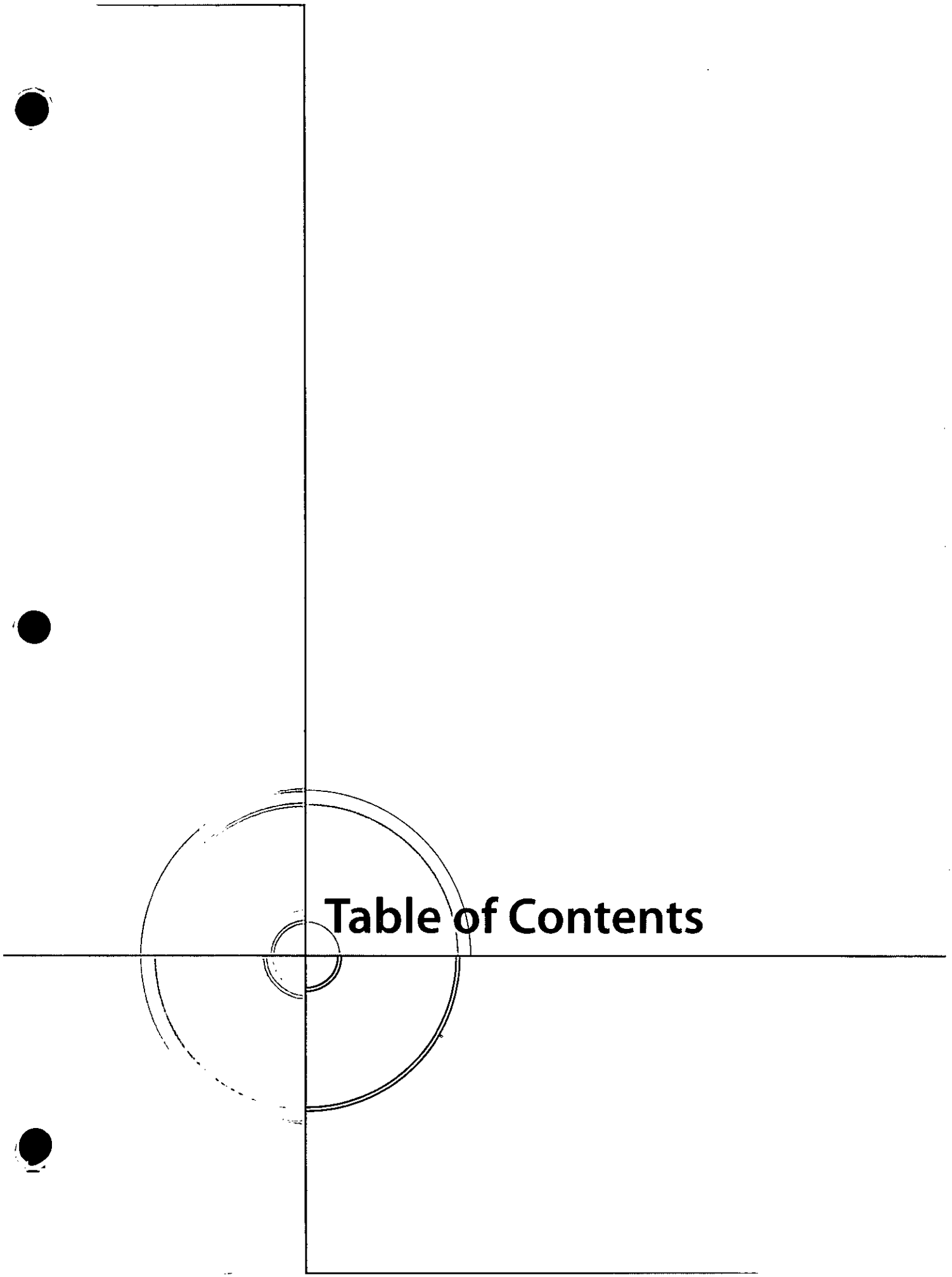
Although we are showing two offices, it should be noted that all work will flow through the CDM Tallahassee office under the direction of client service manager/ program manager David W. Kozan, P.E.

CDM is the respondent for all services under this contract, including stormwater and transportation services. WSA, as a wholly-owned subsidiary of CDM, will be providing the majority of the transportation-related services through the CDM Tallahassee office.

Our contact person for this project is David Kozan, and he can be reached through the telephone number and email addressed provided above.



CDM understands the County's preference for local firms. With our nearby location, less than 15 minutes from the County's facilities, the CDM team offers the rapid service and responsive deployment of resources the County is seeking.



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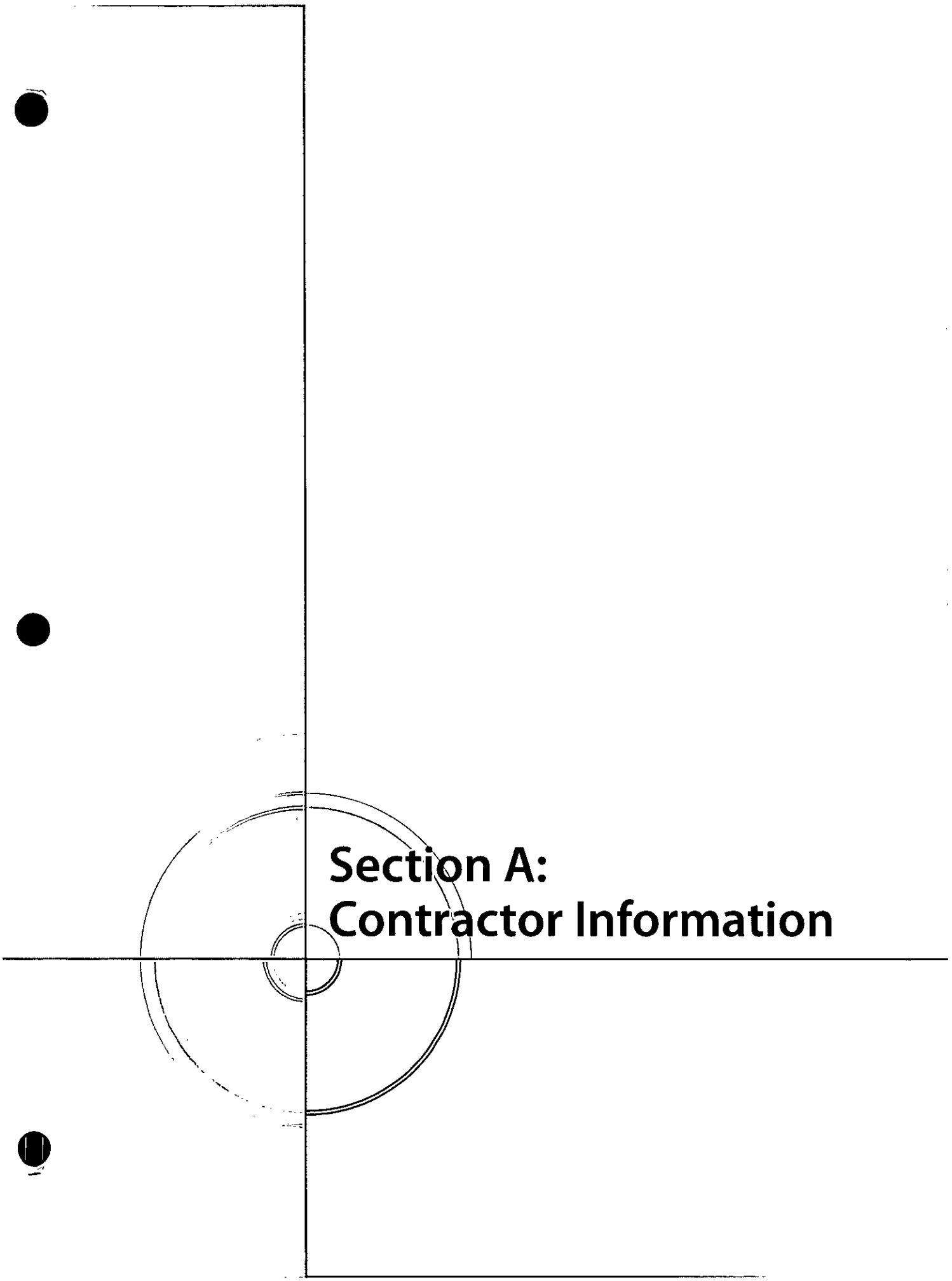
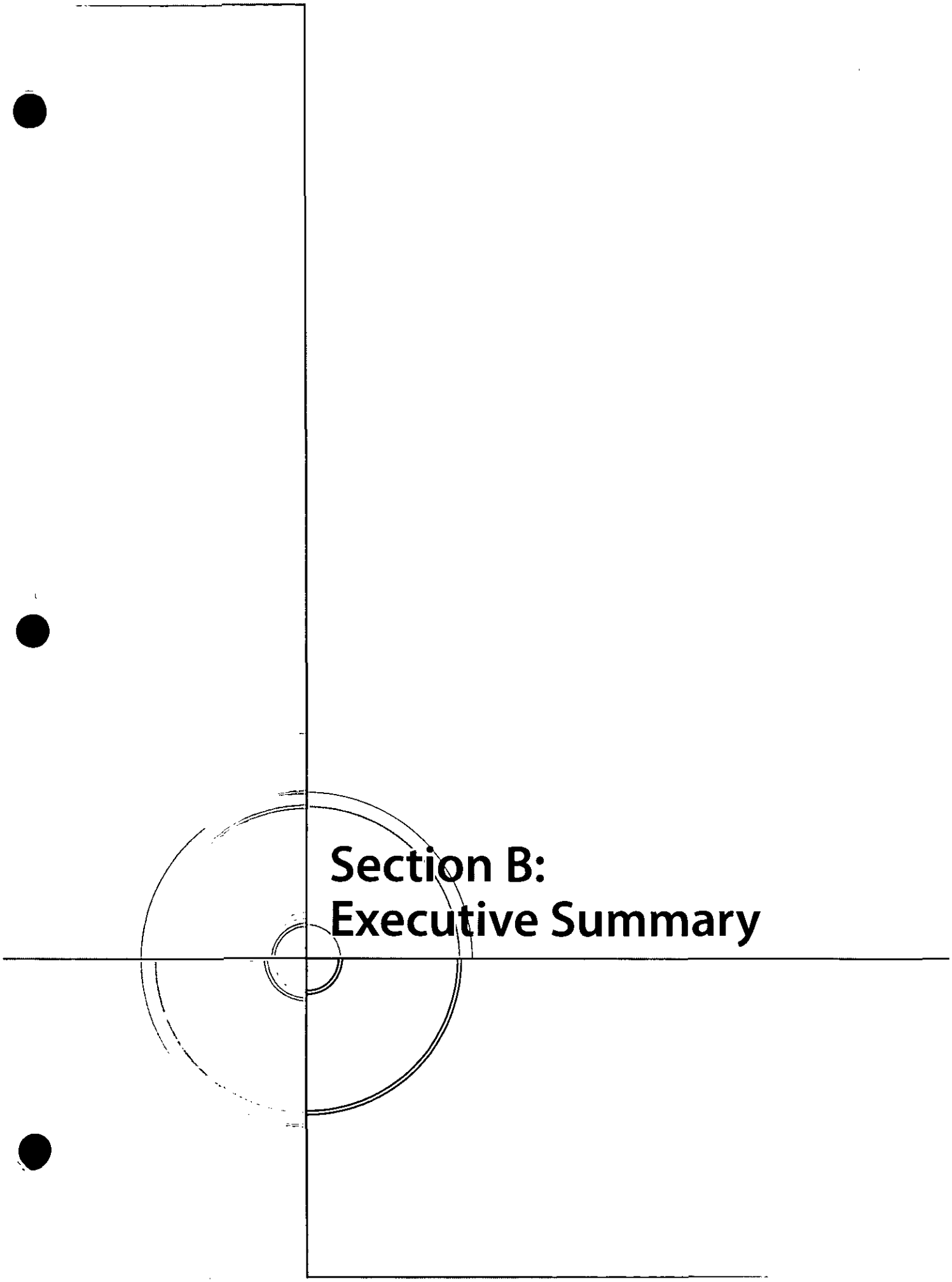


Section A:
Contractor Information



Section B:
Executive Summary

SECTION B: EXECUTIVE SUMMARY

General Information Applicable to All Work Categories

CDM is a consulting, engineering, construction, and operations firm delivering exceptional service to public and private clients worldwide. With headquarters in Cambridge, Massachusetts, CDM, together with our wholly owned subsidiary Wilbur Smith Associates, has 6,000 employees in 170 offices around the globe—offering a full range of services in water, environment, transportation, energy, and facilities. A progressive design-builder, CDM is successfully employing innovative technologies and approaches to develop customized, sustainable solutions that meet clients' needs.

In Florida, both CDM and WSA have been successfully assisting clients for more than 35 years. Our complete suite of services spans from program management, management consulting, and architectural and geotechnical engineering, to design-build, construction management, and operations. Our hand-picked project teams are backed by CDM's 15 Florida offices, which boast nearly 500 staff with a variety of specialties, covering all the engineering disciplines. Our Tallahassee offices—where the majority of work under this contract will be carried out—have over 20 professionals serving clients in the Leon County area. These professionals have more Leon County and local design and construction experience in the past five years than any other local consulting firm.

B.1 CAPABILITIES

The CDM team is intimately familiar with the services under this contract and has gained relevant knowledge through decades of experience in North Florida and throughout the U.S, including extensive experience implementing the small- and medium-sized projects anticipated under this contract. Since the firm's inception in 1947, CDM has been a leader in all aspects of stormwater and utility engineering, and WSA is a nationally recognized authority on roadway design and traffic and intersection engineering.

Our clients enjoy the benefit of a full-service firm, including the following services:

- Air Quality
- Biological Nutrient Removal
- Brownfield Redevelopment
- Construction Engineering & Inspection
- Constructed Wetlands
- Environmental Assessments
- Energy Management
- Freight
- Geospatial Technologies
- Greenhouse Gas Management
- Groundwater Management
- Hazardous Waste Management
- Highway
- High Speed Rail
- Intelligent Transportation Systems
- Landfill Closure and Redevelopment
- Landfill Permitting, Design, and Construction
- Operations and Maintenance
- Parking
- Permitting
- Power Generation and Renewable Energy
- Pilot System Fabrication, Rental, and Operation
- Process & Potable Water Systems
- Rail Systems
- RCRA Compliance
- Remediation
- Right-of-Way
- Risk Assessment
- Sampling and Analysis
- Signage and Wayfinding
- Stormwater Management
- Traffic
- Toll Services
- Trade & Transportation Studies
- Transit Systems
- Transportation
- Travel Demand Modeling
- Treatability Studies
- Waste Minimization/Reduction
- Wastewater and Stormwater Collection, Treatment, and Disposal
- Wastewater Treatment
- Water Quality Modeling and Monitoring
- Water Reuse
- Water System Security

One of our team's distinguishing features is our ability to pool project knowledge gained over 60 years of experience. Our employees can access experts in-house and the products of past projects within our state-of-the-art web-based knowledge system. From our past experience and our completed projects, we believe that our team has unparalleled knowledge and understanding of the regulatory environment in Florida with respect to transportation and stormwater facilities. Many of our projects impact and include work on public facilities and roadways, and CDM's services have expanded to manage all elements of these projects.

Our team offers a variety of services to regional, state, municipal, and federal agencies; industries; public and private organizations; and individuals. Our services have supported projects ranging from small pilot-scale studies and specialized consultation to complex national studies requiring a multi-disciplined approach. Our staff is thoroughly experienced in all phases of engineering and environmental studies related to surface/groundwater hydrology, supply development, and protection; water supply, transmission, treatment, and distribution; wastewater

and stormwater collection, treatment, and disposal; drainage, flood control, and irrigation; water resources planning; transportation and traffic engineering and planning; air pollution control; solid and hazardous waste management; environmental and community planning; management and financial consulting; geographic information systems; utilities benchmarking and optimization; and information management services.

Our staff has extensive experience in related fields such as systems analysis methodology, economic/financial management and planning, urban planning, regulatory implementation measures, computer applications, and environmental impact assessment. The firm is staffed and equipped to provide surveys, investigations, studies, and reports; engineering and architectural design; construction plans and specifications; environmental assessments; financial and management consulting; engineering services during construction and resident engineering; training/ educational programs for operations, management, and engineering staff; assistance in start-up and initial operation of new facilities; and geotechnical consultation.

B.2 DISTINCTIVE COMPETITIVE ATTRIBUTES

B.2.1 Specialized Understanding and Local Knowledge

CDM has been a trusted partner to Leon County since the mid-1980s when the County sought to develop a comprehensive stormwater management master plan and tasked CDM with the review of the existing master drainage plan, the preparation of a stormwater design procedures manual, and a financial feasibility study related to establishing a drainage utility. Our history of successfully delivering projects to the County is highlighted by our work on the award-winning Lake Munson Restoration Program, for which CDM received a Grand Award in the Florida Institute of Consulting Engineers (FICE) 2002 Engineering Excellence Awards competition. In addition, CDM served as the County's stormwater and utility engineering consultant from 2006 to 2008, providing us with an unmatched familiarity with your facilities, goals, and preferences and making us uniquely qualified for this work.

For over 20 years, CDM has continuously served the County, providing high-quality, responsive services for your water resources needs, including but not limited to drainage improvements, culvert replacements, dam rehabilitation, National Pollutant Discharge Elimination System (NPDES) permitting, watershed management planning, drainage studies, master planning assistance, ecological evaluations, map revisions, and floodplain enhancement design. Our extensive experience has provided us with unparalleled local experience and has demonstrated to the County that, both on an individual level and on a collective level, CDM possesses all the desirable attributes that the County requires in a consultant.

Furthermore, WSA provides a unique blend of planning, design, toll, economic, and construction-related services to clients. Their ability to offer a diverse and comprehensive spectrum of transportation and infrastructure services guarantees that our team can meet the County's needs for transportation and traffic engineering.

In summary, CDM has **local team dedicated to serving the County,** and familiar with delivering the **small to medium sized projects contemplated by this contract.** We have a track record of **delivering successful projects** to the County, and we look forward to further developing a relationship based on **integrated delivery, technical excellence, and local knowledge,** and one that is **focused on your needs and concerns.**

B.2.2 Added Benefit of the CDM Orlando 3D/4D Design Center

One of the distinct advantages of choosing CDM is our 3D/4D Orlando Design Center. The Design Center has all the engineering disciplines necessary to cost effectively produce 2D or 3D designs, and can support the local team serving Leon County as needed. The center is interconnected electronically and with video links to five other similar centers across the country. With this interconnection, CDM is able to offer national resources that are accustomed to working together. Key specialists in design centers can serve Leon County regardless of their location. CDM-standardized approaches and automated routine functions create an extremely efficient design process. Such efficiency, combined with our depth of experienced staff, allows CDM to meet the tight schedules often required by our clients while adhering to CDM's proven quality management processes.

B.3 AUTHORIZED REPRESENTATIVE

Client service is one of CDM's key distinguishing features. CDM recognizes the value of individual service by designating a particular job specifically for that function. David W. Kozan, P.E. will act as CDM's client service manager for Leon County and will be responsible for your satisfaction with CDM's service. He will be your primary point of contact and has authority to structure design teams, set schedules, and oversee delivery. He can be reached at 3522 Thomasville Road, Suite 300, Tallahassee, FL 32309; Tel: 850.386.9500; Fax: 850.668.6745. Kart Vaith, P.E., BCEE, Senior Vice President, will ensure that Mr. Kozan is fully resourced and provides CDM's corporate commitment to serving Leon County. As such, he will act as signer of this proposal and is authorized to make representations for CDM and bind the firm, and is responsible for execution on behalf of the CDM team. This proposal is in all respects fair and in good faith without collusion or fraud.

CDM
3522 Thomasville Road, Suite 300
Tallahassee, Florida 32309
tel: 850 386-9500
fax: 850 668-6745

March 17, 2011

Leon County
Purchasing Division
1800-3 Blair Stone Road
Tallahassee, FL 32308

Subject: Proposal Number: BC-03-17-11-25 Civil Engineering Services, Continuing Supply Work Category – Stormwater Engineering

Dear Selection Committee Members:

Camp Dresser & McKee Inc. (CDM) is pleased to submit one (1) original and three (3) copies of our proposal to provide continuing stormwater engineering services to Leon County (County). CDM has been fortunate to work with the County in the past, and we look forward to the opportunity to extend our working relationship under this contract.

Selection of CDM to serve as your engineering consultant provides the County with numerous advantages as you continue your efforts to ensure high-quality and cost-efficient service to your residents. CDM can provide seamless interfacing among the many disciplines required to perform the modeling, design, planning, and permitting services contemplated by this request for proposals (RFP), which is a major advantage. Because of the expertise and excellent track record of our staff in our service to you, CDM can also provide timely and cost-effective solutions tailored to the County's needs. We strongly believe that CDM brings unique characteristics to the County for evaluation and that these characteristics will make CDM the County's first choice for this contract.

Stormwater Expertise: CDM has maintained a leadership role in studying and designing stormwater systems for more than 30 years and has served in technical leadership roles on a multitude of stormwater planning projects across the nation. During this time, our Florida staff has developed into some of CDM's best resources in this arena, and we are proud to offer them to the County. As a result, we offer you not only a firm with strong stormwater qualifications, but also a strong local project team with stormwater experience at all levels of project execution. From our client service manager to our project engineers and support staff, we have assembled a team that has hands-on experience successfully addressing stormwater management issues for many local municipal clients. Building on our previous County experience, technical expertise, and knowledge of your systems, CDM can provide you with comprehensive stormwater engineering services to meet your stormwater and drainage needs.

Exceptional Client Service: The majority of CDM business is repeat business. We know that, to keep your business, we have to win your trust by consistently delivering the small- to medium sized projects like the ones contemplated by this contract with excellent client service and high-quality and tailored service. And CDM is structured to deliver just that. We have local staff dedicated to serving Leon County; in addition, our staff is supported by the worldwide resources of CDM.

Our local staff is here to meet your needs. We can meet with your staff on short notice, make field visits with your staff, contractors, and regulators, attend public meetings, and spend time listening to your needs for each unique project. Because we have decades-long history of working with Leon County, we know how you do business. We understand how important it is to Leon County to provide excellent service to its citizens, how complex the regulatory environment is, how interaction with other government entities is a never-ceasing challenge, and how budget concerns are more pressing than ever. Our experience of over 20 years working in Leon County provides us with unmatched local knowledge. We understand local technical issues such as soil and hydrology, we recognize the political and cultural dynamics that play a part in project decisions, we know and have good working relationships with local regulators and specialty subconsultants, and our institutional knowledge of engineering projects performed in the Leon County area helps us work with you to make appropriate and cost-effective engineering decisions.

CDM's structure as a matrix organization means we offer the experience of specialty disciplines from around the world for problem solving and technical support at any time. You have access to CDM's worldwide technical resources through our Tallahassee office, whenever you need them. Our project management approach, computer and telecommunications equipment, and our firm's structure are all organized to bring together the resources you need to solve a problem. This provides Leon County with the distinct advantage of our ability to provide the highest level of technical support to think through the most effective solution to the most challenging problems.

Design Center Capabilities: Once an approach is determined and it is time to produce a complex model, a report, large permit application, or plans and specifications, CDM's design center approach is ideal for quick and cost-effective delivery. The design center staff works together with the local project managers and client service managers to provide additional resources to meet your production needs. In Orlando, Florida, we have over 250 staff of almost every engineering discipline and support function who work in a collaborative environment with local staff, when needed, to produce the quality deliverables you expect from CDM. CDM has utilized the design center approach to deliver our Panhandle clients projects with construction costs ranging from less than $50,000 (Alligator Point Water Resources District Fiesta Drive Waterline) to nearly $50,000,000 (the Okaloosa County Arbennie Pritchett Water Reclamation Facility). This scalable, responsive resource is at Leon County's disposal.

One of the advantages of selecting the CDM team is our Orlando Design Center, which is a scalable, responsive resource that can provide quick and cost-effective delivery of projects.

Superior Technical Knowledge: Your current technical team, led by David W. Kozan, P.E. and Catherine E. Breland, P.E., CFM, and supported by CDM's Tallahassee, Panama City, and Maitland offices, has been and will continue to be the highest skilled and most experienced team any firm can bring to the County. One of the greatest advantages of continuing to work with our technical team is that we listen carefully to your preferences and desires, and then proceed to implement those preferences in the most efficient and cost-

effective manner. For this stormwater engineering contract, our proposed client service manager Mr. Kozan will be supported by Ms. Breland, who will act as Leon County Program Coordinator. She will be responsible for day-to-day project delivery and coordination with other CDM staff.

In summary, CDM provides the technical knowledge, local experience, and world-class expertise to address your stormwater issues. Even more importantly, CDM has the proven ability to work with the County to understand your vision for the future of the community. This shared vision and ongoing relationship will allow us to resolve issues before they become problems. We hope that you will again select CDM to become your engineering partner in providing a good quality of life for the County in the long term. Should you have any questions, please contact Mr. Kozan at 850.386.9500 or via email at kozandw@cdm.com. We look forward to serving you and thank you for your kind consideration.

Very truly yours,

Kart Vaith, P.E., BCEE
Senior Vice President
Camp Dresser & McKee Inc.

David W. Kozan, P.E.
Client Service Manager
Camp Dresser & McKee Inc.

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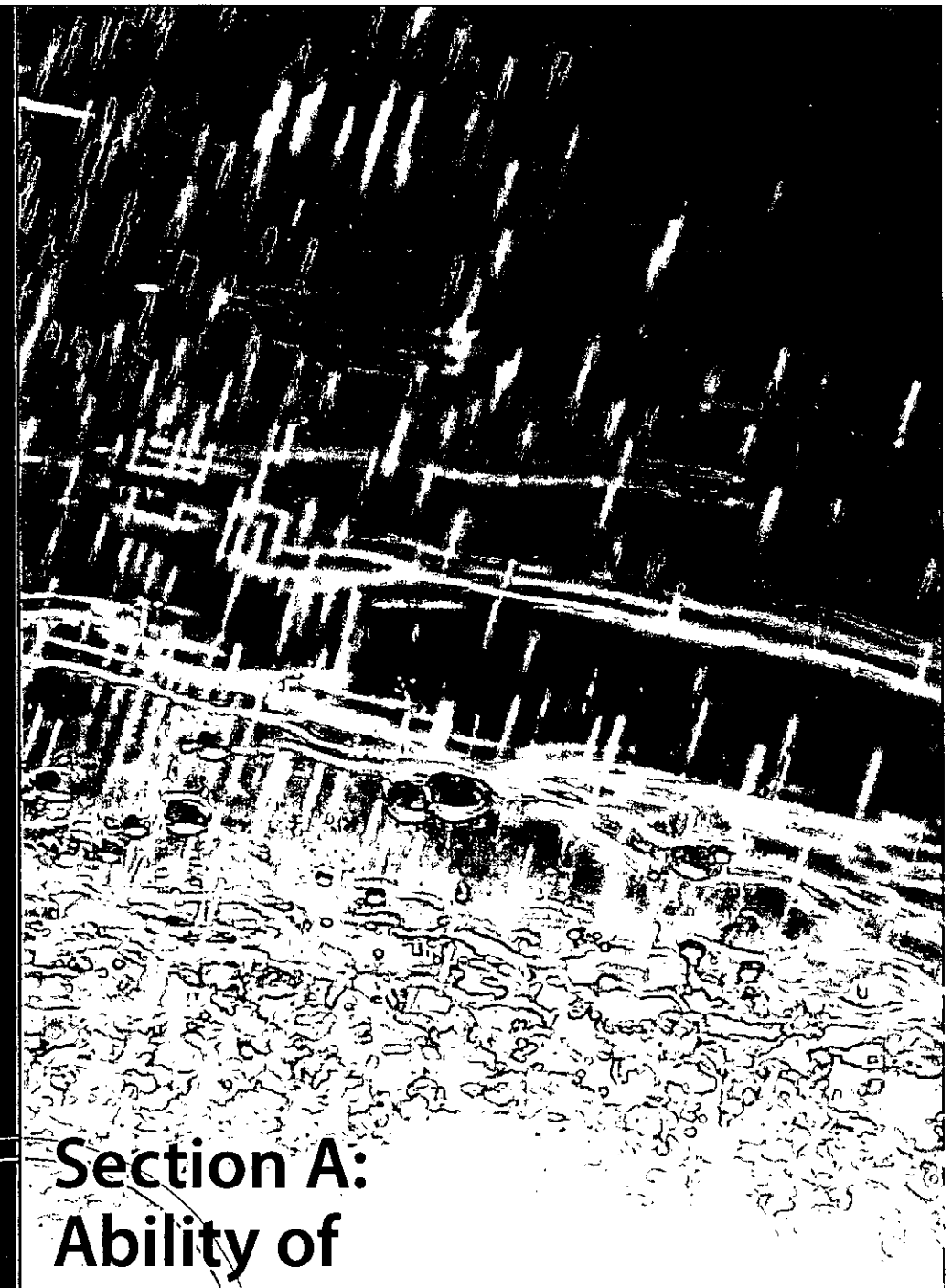
Work Category - Stormwater Engineering



Section A: Ability of Professional Personnel

SECTION A: ABILITY OF PROFESSIONAL PERSONNEL

A.1 TOTAL NUMBER OF PROFESSIONALS

CDM is a consulting, engineering, construction, and operations firm delivering exceptional service to public and private clients worldwide. With headquarters in Cambridge, Massachusetts, CDM, together with our recently acquired subsidiary WSA, has over ***6,000 employees in 170 offices around the globe***—offering a full range of services in water, environment, transportation, energy, and facilities.

In Florida, both CDM and WSA have been successfully assisting clients for more than 35 years. Our hand-picked project teams are backed by the CDM team's ***15 Florida offices, which boast nearly 500 staff*** with a variety of specialties, covering all the engineering disciplines. In addition, our Tallahassee offices are staffed with over 20 professionals ready to serve the County.

The CDM team recognizes the importance of balancing workload and staffing commitments to meeting the service expectations of our clients (**Figure A.1-1**). A local client service manager who will act as program manager and a dedicated local program coordinator will see to it that CDM's wealth of resources are available to Leon County whenever needed. With the majority of our work coming in the form of repeat business from clients with whom we have long-term working relationships, we recognize the value of maintaining the highest level of performance on all the work that we receive. We have continuously maintained a presence in Tallahassee since 1989 and continue to work with many of the same clients that we started with years ago, including Leon County. This success is built on continually providing service and work products that meet or exceed our clients' expectations for accuracy, quality, cost, and schedule.

We have assembled a strong group of professionals and support personnel in our Tallahassee offices to deliver work to our clients. CDM's project management system makes us effective at managing our workload and staff, and applying their expertise to multiple projects based on current requirements. We can also offer the County the reassurance that the CDM team has over 6,000 staff worldwide, and over 500 in Florida alone, including nearly 100 high-level professionals in core stormwater study and design disciplines, over 40 of whom are water resource engineers, that could contribute in the event we need to exert extra efforts to

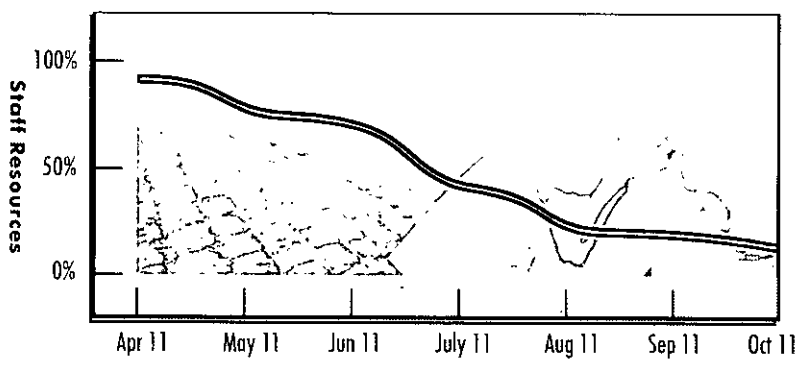


Figure A.1-1: CDM's current backlog of work and the need for additional work in the near future.

Florida Staffing

CDM will draw from our extensive pool of local resources to support this project.

Staff	Job Classification
43	Administrative
6	Architects
1	Biologists
6	Chemical Engineers
28	Civil Engineers
31	Construction Inspector
15	Construction Manager
11	Cost Estimators
19	Drafters/Designers/CADD
2	Ecologist
4	Economists
24	Electrical Engineers
53	Environmental Engineers
4	Environmental Scientists
9	Geographical Information Specialists
14	Geologists
5	Geotechnical Engineers
19	Hydraulic Engineer
28	Hydrologists
10	Info Mgmt. Specialists/Programmers
9	Mechanical Engineers
56	Other
10	Planners
2	Risk Assessor
3	Safety/Occupational Health Engineer
10	Sanitary Engineer
2	Scheduler
4	Specifications Writer
10	Structural Engineer
32	Technician
14	Transportation Engineer
7	Transportation Planner
16	Water Resources Engineer
497	**TOTAL**

complete the assigned project work. In summary, we have resource availability to handle acute short-term spikes in workload, and our past track record indicates that we have been successful in effectively handling multiple projects concurrently. Our local staff, in constant touch with Leon County Staff, will make sure these resources are available when needed to meet the County's expectations.

A.1.1 Proposed Project Team

The CDM team is comprised of highly qualified specialists and locally-based subconsultants to meet the needs of the County's continuing services contract. The project managers, engineers, and support staff assigned to this project are well-qualified personnel who are familiar with the issues important to the County. At both a company and individual level, our key personnel will be committed and available at whatever level of effort is needed to get the job done. Expertise, experience, and anticipated availability were all considered in selecting team members.

The organization chart (**Figure A.1.1-1**) illustrates the personnel and principal elements required to complete work assignments. The CDM team represents all disciplines necessary to successfully implement the County's stormwater engineering projects. CDM understands the County's desire to have a consultant who is able to provide services on relatively short notice; CDM has experience responding to needs for rapid project delivery. Because of our size and available

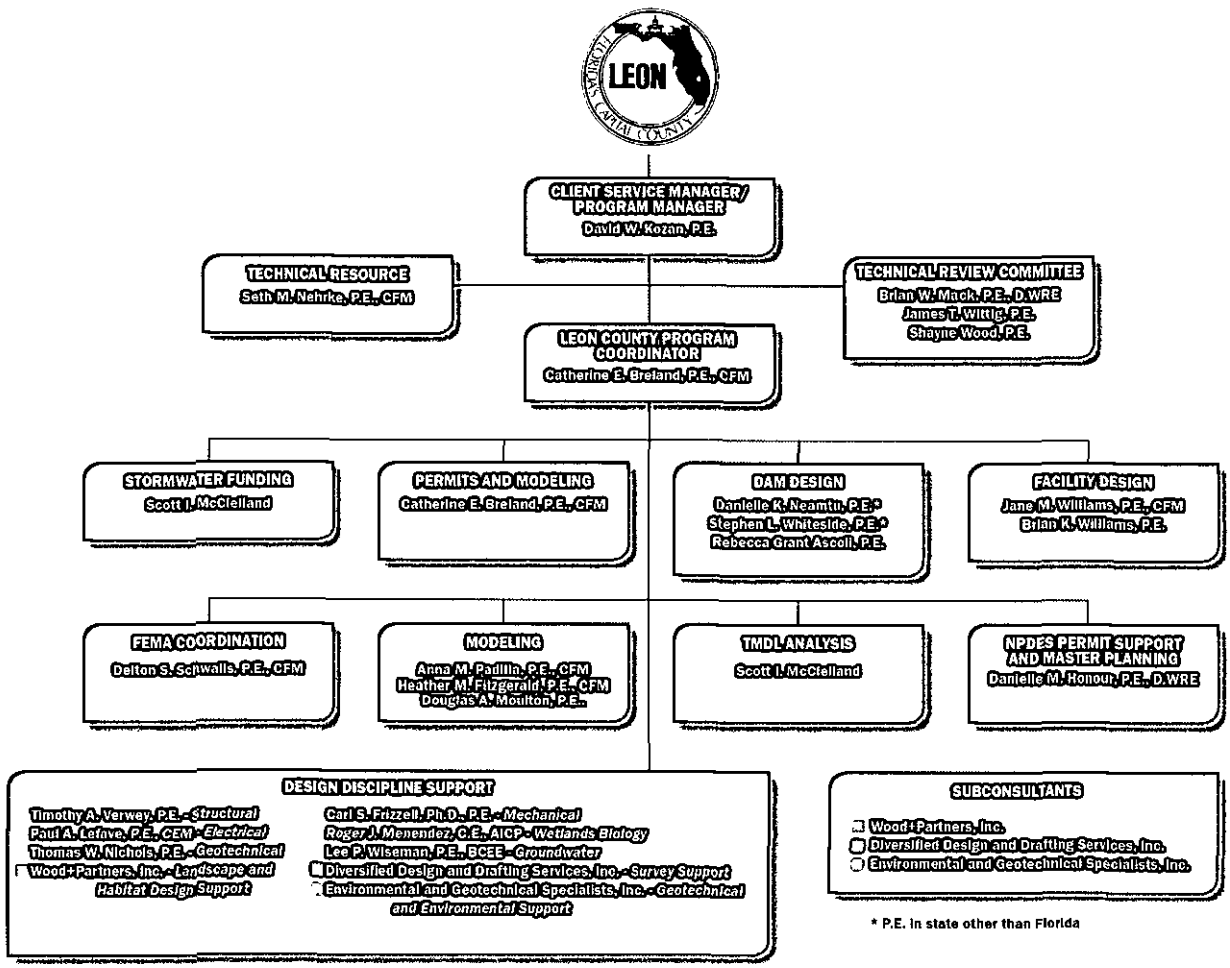


Figure A.1.1-1: CDM has assembled a local team that is highly qualified and familiar to the County to implement stormwater projects under this continuing services contract.

resources, CDM is better equipped than many firms to respond with a fast approach that meets our client's objectives and provides the required level of responsiveness.

A.2 RESUMES

Included at the end of this section are the resumes of the identified project team members. We encourage the review of each individual's experience and qualifications to perform the services of this potential scope of services. Many of our project team members are recognized experts who are supported by personnel with diverse experience who contribute to the accomplishments of these individuals and CDM.

A.3 OUTSIDE CONSULTANTS

In addition to the highly qualified CDM personnel proposed for this project, CDM has included three outstanding local companies that are abundantly qualified in services related to stormwater engineering and drainage services. Ours is a team of recognized leaders with the creative energies, technical know-how, management expertise, and financial resources that are essential to the successful delivery of professional engineering services required by the County.

Environmental and Geotechnical Specialists, Inc. | Geotechnical and Environmental Support

Environmental and Geotechnical Specialists, Inc. (EGS), a certified M/DBE firm, provides specialty services associated with environmental and geotechnical engineering. EGS is highly qualified and has outstanding work experience in North Florida. The staff at EGS has been providing professional services in this area since 1992. EGS is a full-service geotechnical consulting firm, which provides subsurface drilling, soil sampling, laboratory testing, engineering evaluations, and recommendations for a wide range of projects. EGS's professional staff has extensive experience in working with clients to facilitate the cost-effective investigation, engineering design, and construction of all aspects of a project requiring these services. All subsurface investigations and recommendations are coordinated with the project manager to ensure an investigation is focused on the project issues. All team members are familiar with the requirements for geotechnical evaluations and report submittals.

Diversified Design and Drafting Services, Inc. | Survey Support

3DS is a professional surveying and mapping firm with offices in Tallahassee and Pensacola, Florida. Since 1998, 3DS has developed innovative surveying and mapping solutions for professionals seeking quality design surveys, digital mapping, image scanning, and ortho photos. The firm marries a variety of conventional and cutting-edge technologies to fulfill each client's needs, and, whether utilizing traditional surveying techniques, photogrammetry, or a combination of methods, finds the right solution. 3DS offers a wide range of professional surveying and mapping services, including photogrammetry, route surveying, boundary surveys, as-built surveys, right-of-way surveying, ALTA surveys, geodetic control surveys, construction layout, CEI surveys, and wetland jurisdiction surveys. 3DS currently maintains MBE status in Florida and holds MBE/DBE certifications with the FDOT, South Florida Water Management District, Leon County, and the City of Tallahassee.

Wood+Partners, Inc. | Landscape and Habitat Design Support

Wood+Partners, Inc. (WPi), founded in 1988, is an award-winning land planning and landscape architecture firm that provides planning and design services for communities, resorts, institutions, downtowns and urban centers, parks and recreation, and commercial centers and villages. WPi's professional staff excels in providing services in all phases of landscape architecture, utilizing the latest technologies, graphic design, and planning techniques across multiple disciplines. Through the years, the firm has developed strong and lasting relationships with professionals consultants, state, and federal resource agencies to provide all the necessary services that result in a successful project. Specialities include comprehensive master planning, environmental analysis, site feasibility studies/ redevelopment assessment, site-specific design, construction services, project management/administration, community consensus building, college and university master planning, parks and recreation planning, recreation needs assessments, architectural design-related discipline coordination, perspective renderings and photo enhancements, design guidelines, character studies, context analysis, capacity studies, and raster/vector imaging overlay and presentation.

DAVID W. KOZAN, P.E.

CLIENT SERVICE MANAGER; PROGRAM MANAGER

Education: ***B.S. – Civil Engineering;*** **Registration:** ***P.E. – FL, LA (1999);***
Years with CDM: ***5;*** **Years with Other Firms:** ***9.5***

Project Engineer, Stormwater Outfall Design Enhancements, Panama City Beach, FL. For this project, the CDM team developed a multi-phased response plan for 51 beach outfalls that were damaged by Hurricane Dennis. The project consisted of the following six phases: (1) hurricane damage assessment, (2) outfall design enhancements, (3) coordination with the Federal Emergency Management Agency (FEMA), (4) preparation of bid documents, (5) construction services, and (6) outfall maintenance plan. Starting in September 2006, Mr. Kozan participated in this effort, which included providing documented results of the damage assessment of each outfall, a technical memorandum summarizing design improvement concepts, and construction plans and specifications. ***($950K)***

Project Manager, Design of 2.0-MG Ground Storage Tank and Booster Station, Panama City, FL. The City of Panama City retained CDM to provide design, permitting, and services during construction for a ground storage tank, booster pumping station, and water lines. Mr. Kozan was responsible for managing design and contract coordination of a new ground storage tank on a challenging, reclaimed site. ***($3.1M)***

Engineering Services During Construction Project Manager and Resident Engineer, 10-mgd Arbennie Pritchett Water Reclamation Facility Design-Build, Okaloosa County, FL. Okaloosa County contracted CDM to provide design, bidding, and engineering services during construction for a $48M design-build water reclamation facility. The project consisted of a dual train 10-mgd water reclamation facility with headworks, oxidation ditches, clarifiers, ultraviolet (UV) disinfection, and effluent pump station. It also included septage receiving, digester, and various internal pump stations and chemical feed systems. CDM implemented the project with a 3D/4D design approach. The project was modeled in 3D and the 4th dimension, information associated with the equipment, was from the 3D model to the Maintenance Management System. Mr. Kozan's responsibilities included assisting with design coordination, field engineering, and coordination of information systems. ***($49M)***

Project Manager, Engineering Services During Construction – Water Distribution Improvements, Callaway, FL. In 2005, the City of Callaway retained CDM to design a new 5.0-MG ground storage tank and booster pumping station, an 18-inch water transmission main (dedicated fill line), and distribution mains from the booster pumping station to provide adequate volume and pressure to the City and the surrounding communities. CDM also provided permitting and bid assistance services. For the final portion of this project, Mr. Kozan provided project management services and limited engineering assistance, including construction monitoring and supervision during construction of the water distribution system improvements. He also attended pre-construction meetings, prepared conformed contract documents, reviewed shop drawings, and prepared and submitted record drawings. ***($4.2M)***

Project Manager, 3.5-mgd Expansion to Port St. Joe Water Treatment Plant, Port St. Joe, FL. In 2004, CDM was hired by Preble-Rish, Inc. (PRI), the prime consultant, to perform the membrane and raw water pump station design for a 2.5-mgd surface water treatment plant (WTP). CDM completed the design, the project was bid, and construction began in late August 2006. In 2006, PRI hired CDM to design an expansion of the plant to 6.0-mgd capacity. The expansion was planned for in the original design. For this project, Mr. Kozan was responsible for permitting and implementing an expansion of the membrane and disinfection portions of the City's WTP while construction of the original 2.5-mgd portion was under construction. ***($21M)***

Project Manager, Disinfection By-products Water Treatment Improvements, Carrabelle, FL. The City of Carrabelle had negotiated a consent order with the FDEP concerning its disinfection by-products (DBP) exceptions. For this project, Mr. Kozan prepared a conceptual design report, including CDM's recommendations of alternatives for a solution to the DBP problem. ***($141K)***

Project Engineer, Water Treatment Plant Process Evaluation, Bay County, FL. For an expansion project to the 48-mgd Bay County Water Treatment Plant, a review of the plant as an operating unit was necessary. The scope of this review was to identify any opportunities that might exist to re-rate the plant to a higher operating capacity. For this project, Mr. Kozan prepared a technical memorandum to determine maximum hydraulic flow-through the individual process units and calculate filter loading scenarios for the existing 8 filters, 10 filters, and 12 filters, and compare to the target flow rates of 48 mgd, 53 mgd, and build-out of 60 mgd. ***($25K)***

Project Manager, Development of Callaway Water and Wastewater Standards, Callaway, FL. Due to rapid development of some areas within the city, the City of Callaway desired to establish standard specifications and details to facilitate the installation of quality water and wastewater infrastructure that will be owned or maintained by the City. For this project, Mr. Kozan provided professional services related to the development of these water and wastewater standards. The specifications included standards for water and wastewater system materials, electrical specifications, standard requirements and details for water and wastewater system design, and utility placement guidelines. ***($22K)***

Project Manager, Water and Wastewater Plan Review and Modeling Assistance, Callaway, FL. Mr. Kozan was responsible for providing modeling services to update the City's water and wastewater models. The project also included an analysis of the impacts of additional new development on the city's water and wastewater system. ***($50K)***

Project Engineer, FIRM Re-Map, Bossier Parish (County), LA. Mr. Kozan planned and executed a GPS control study to coordinate the work of survey subcontractors working on a FIRM re-map of Bossier Parish (County). Mr. Kozan also performed an analysis of the re-map. ***($350K)***

Project Engineer, Tall Timbers Subdivision, Bossier Parish (County), LA. Mr. Kozan created the preliminary design of an impoundment/levee and drainage pump system for the Tall Timbers subdivision in Bossier Parish (County). ***($1.5M)***

Project Manager, Wyandotte Tower and Pump Station, Morgan City, LA. Mr. Kozan served as project manager for the automation of the Wyandotte Tower and Pump Station. ***($50K)***

Project Manager, Planned Development for the St. Joe Company, Port St. Joe, FL. Mr. Kozan was the project manager for the civil work on a 2,000-acre, 1,600-unit planned development for the St. Joe Company. Mr. Kozan was responsible for client relations, surveying, design, and consultant coordination. ***($12M)***

Project Engineer, Ground Storage Tank and Booster Pump Station, East Baton Rouge Parish, LA. Mr. Kozan served as the project engineer for a 500,000-gallon ground storage tank and 1,000 GPM booster pump station for Parish Water Company. ***($1.5M)***

Project Engineer, Potable Water System Analysis, Houston, TX. Mr. Kozan composed a potable water system analysis for an industrial complex in the Houston area. The report outlined system deficiencies and recommended improvements required to achieve consistent regulatory compliance and safer operation. Mr. Kozan also wrote an enterprise-wide potable water system standard for the same multinational petrochemical company. ***($40K)***

Project Engineer, Water Treatment Plant, Morgan City, LA. Mr. Kozan composed an evaluation for the City of Morgan City water treatment plant, identifying means of complying with new water quality regulations, providing budgetary estimates, and prioritizing work required. ***($75K)***

Project Manager, Surface Water Treatment Plant Upgrade, Morgan City, LA. For this $3.3M surface water treatment plant upgrade, Mr. Kozan coordinated in-house design and electrical and structural consultants. Mr. Kozan brought this project with a "hands-on" owner and numerous unknown sub-surface conditions to a successful conclusion. ***($3.3M)***

Project Engineer, Rehabilitation of Staring Lane Pump Station, Baton Rouge, LA. Mr. Kozan contributed to the rehabilitation of the Staring Lane Pump Station by designing a 42-inch HDPE submarine crossing to replace a deteriorating aerial stream crossing. ***($450K)***

Project Manager, Design-Build Surface Water Treatment Plant, McAdams, MS. Mr. Kozan served as project manager for the design portion of a fast-tracked $15M, 6.5-mgd design-build surface water treatment plant for a merchant power station. Mr. Kozan was responsible for coordinating in-house design, consultants, and client interface. ***($15M)***

Project Manager, Filter Automation Project, New Iberia, LA. Mr. Kozan was the project manager for a $1.1M filter automation project at an aging 12-mgd groundwater plant. Mr. Kozan wrote a detailed filter control narrative and performance-based specifications. Mr. Kozan coordinated in-house design with the electrical consultant. Mr. Kozan proposed a unique project solution of soliciting a proposal from an oil field contractor who could do piping and I&E in-house. The solution significantly reduced overall project costs. ***($1.1M)***

CATHERINE ("KATEY") E. BRELAND, P.E., CFM

LEON COUNTY PROGRAM COORDINATOR; PERMITS AND MODELING

Education: ***B.S. – Industrial and Systems Engineering;*** **Registration:** ***P.E. – FL (2010);***
Years with CDM: ***3;*** **Years with Other Firms:** ***1***

Project Engineer, Joe Cotton Trail Drainage Improvements, Tallahassee, FL. Ms. Breland performed the stormwater modeling efforts for the Joe Cotton drainage improvements to eliminate structural flooding and improve the overall system function. Ms. Breland also acquired the federal, state, and local permits required to construct the project. ***($70K)***

Project Engineer, Lake Munson Dam, Tallahassee, FL. Ms. Breland coordinated the federal, state, and local permits required to rehabilitate the Lake Munson Dam. Ms. Breland also assisted with stormwater modeling efforts and project coordination for the project. ***($245K)***

Project Engineer, Gum Creek Stormwater Master Plan, Tallahassee, FL. Ms. Breland performed field reconnaissance throughout the Gum Creek basin to assist with the stormwater modeling efforts necessary to perform floodplain mapping. Ms. Breland also assisted with project management and coordination. ***($29K)***

Project Engineer, Stormwater Management Facility No. 6, Tallahassee, FL. Ms. Breland performed the reuse system analysis, which served as the basis for the stormwater facility retrofit. Ms. Breland also assisted with project management and coordination. ***($71K)***

Project Engineer, Capital Cascades Trail Segments 3 and 4, BluePrint 2000, Tallahassee, FL. In this role, Ms. Breland assisted in the stormwater modeling of the Capital Cascades system in Tallahassee, Florida. This project involved coordinating the installation stormwater monitoring stations, field reconnaissance, and the collection and analysis of storm data for use in a hydrologic and hydraulic analysis of the existing system using XP-SWMM. ***($286K)***

Project Engineer, Carrabelle Water Treatment Plant Improvement Project, Carrabelle, FL. Ms. Breland designed and permitted a stormwater management facility to accommodate for the improvements to the Carrabelle Water Treatment Plant. This project included incorporation of the existing stormwater facility design with the new design and geographical constraints. Ms. Breland acquired an Environmental Resource Permit (ERP) for this design through the Florida Department of Environmental Protection. ***($3M)***

Permit Coordinator, Callaway, FL. Ms. Breland managed the permit coordination for a series of capital improvement projects undertaken by the City of Callaway, Florida. Permit coordination consisted of satisfying the requirements of the USACE, Florida Department of Environmental Protection: water, wastewater, stormwater and wetland section, the Northwest Florida Water Management District, and local county/city governments. ***(Various)***

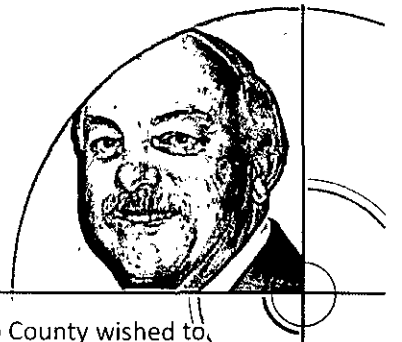
Construction Coordinator, General Aviation Service Road Improvements and Landside Directional Guidance Project, Tallahassee Regional Airport, Tallahassee, FL. Ms. Breland managed the construction administration for the General Aviation Service Road Improvements project and the Landside Directional Guidance project at the Tallahassee Regional Airport. Coordination consisted of shop drawing review, conducting weekly construction meetings and inspections, providing clarification and interpretations of the contract documents, approving pay requests, making change order recommendations, and providing general engineering support and guidance during the course of the projects. ***($372K)***

Engineering Specialist II, Florida Department of Environmental Protection, Tallahassee, FL. Ms. Breland was in responsible charge of the ERP program for the Northwest District Tallahassee Branch Office. Her responsibilities included evaluating stormwater permit applications, calculations, and construction plans to ensure compliance with water quality/quantity standards set forth in Chapter 62-346, Florida Administrative Code (FAC); organizing on-site preconstruction meetings and follow-up inspections to determine site compliance with permit conditions; and coordinating pre-application meetings with land developers, engineers, and local government officials to troubleshoot and offer technical engineering guidance on Rule 62-346, FAC. Additionally, Ms. Breland conducted enforcement meetings and authored non-compliance letters, warning letters, consent orders, and other agency correspondence for stormwater violations. ***(Various)***

SCOTT I. MCCLELLAND

STORMWATER FUNDING; TMDL ANALYSIS

Education: ***M.S. – Oceanography, B.A. – Mathematics;***
Years with CDM: ***23;*** **Years with Other Firms:** ***11***



Technical Advisor, Stormwater Management Funding Implementation, Pasco County, FL. Pasco County wished to provide the funding needed for an expanded stormwater management program. The expanded program is dictated by recent storm flooding events and potential pollution caused by stormwater runoff. The study was conducted in two phases. The first phase was to identify a comprehensive stormwater management program for the County and to consider associated funding mechanisms to support the program, focusing on a stormwater management assessment, although other funding alternatives such as taxes were considered. The second phase of the study implemented the stormwater management program and funding mechanism recommended in the first phase. Mr. McClelland provided technical expertise to this effort by developing the comprehensive stormwater management program with County staff, preparing the funding analysis, working with staff on ordinance development, facilitating stakeholder meetings, and helping to prepare the final billing database. ***($33K)***

Technical Expert, Stormwater Utility Implementation Program, Volusia County, FL. Mr. McClelland has been providing stormwater services to Volusia County since 1998. For this project, CDM assisted the County with evaluating their stormwater utility and rate structure. CDM participated in a kickoff meeting with the County to consider the project goals, deliverables, and schedule. The County provided CDM with data related to the stormwater program, current County budget, assessment database and associated digital data, and a list of contact names for staff associated with elements of the stormwater management programs in the areas of administration and engineering, operations and maintenance (O&M), and capital improvements (CIP). During the kickoff meeting, CDM discussed the existing Stormwater Management Program and stormwater utility rate structure. Mr. McClelland also helped assess their stormwater management program, provided technical support on the development of the non-ad valorem assessment role, and made presentations to the County Board of Commissioners. ***($83K)***

Technical Advisor, Stormwater Utility Feasibility Study, Plantation, FL. The City of Plantation, Florida, wished to study and potentially implement a stormwater utility program in multiple phases. The first phase was done in three parts in order to study the development of a comprehensive stormwater management program for the City and to consider associated funding mechanisms to support the program. Mr. McClelland was the technical expert on this project and assessed the existing stormwater program, defined a potential future program, developed options for funding of the existing and future program, presented to a specially convened focus group on stormwater management, and presented results to the City Council. ***($64K)***

Project Staff, Stormwater Utility, Tallahassee, FL. Mr. McClelland assisted with developing the first successful stormwater utility in Florida. Implemented in 1986, the Tallahassee stormwater utility was unique in a number of ways: It was the first in Florida, it billed the state government and multiple universities, and it has been uncontested. Since the initial adoption, Mr. McClelland helped the City re-evaluate the rate structure and provided ordinance support. ***($46K)***

Technical Expert, Stormwater Management Utility Program, Raleigh, NC. Mr. McClelland assisted the City in developing financial alternatives that would fund expansion of the current stormwater management program to meet future needs. CDM developed a mechanism to fund planning, administration, maintenance, and capital improvement costs. During the first phase of the project, CDM helped to develop a public information and education program; recommended a fee structure, billing system, and credit program appeals process for the utility; and helped to draft and adopt a stormwater utility ordinance. ***($423K)***

Technical Support, State Standards and Total Maximum Daily Load (TMDL) Activities, State of Florida. Mr. McClelland has provided technical support to the State of Florida on state standards and TMDL activities. From 2000 to 2002, he served on the Florida Impaired Waters Technical Advisory Committee (TAC). Currently, he serves on the Florida Nutrient Rule TAC and Designated Uses Policy Advisory Committee (PAC). ***(Various)***

Project Manager, NPDES MS4 Phase 1 Compliance, FDOT (Districts Three and Four), Florida. Mr. McClelland worked with two FDOT Districts to help with their NPDES MS4 permit compliance. Compliance support includes annual reports, dry weather screening, permit negotiation, development of the long-term sampling program, estimation of pollutant loads, and structure inventory. ***($1.2M)***

Project Director, Stormwater Master Plans, Various Locations. Mr. McClelland has directed a number of stormwater master plans or needs assessments, including those for Monroe, Escambia, Leon, Seminole, Volusia, Pasco, and Brevard Counties. Mr. McClelland is experienced in the study, assessment, and implementation of stormwater utilities. He has also worked on projects for Dunedin, Hillsborough County, Daytona Beach, Miami, Sarasota County, Clearwater, and Plant City in Florida; Raleigh, Wake County, and Concord in North Carolina; and Austin and Houston in Texas. ***(Various)***

Additional Skills and Experience

Mr. McClelland's experience includes nine years with the former Florida Department of Environmental Regulation (FDER). Mr. McClelland has worked on a number of MS4 Phase 1 and 2 NPDES permits, including those for Leon, Bay, Seminole, Pasco, Manatee, Escambia, Volusia, and Sarasota Counties; Plant City, Pensacola, Panama City Beach, and Callaway; and Atlanta Regional Commission (multiple community application). He has also worked with the Florida Department of Transportation District Three (Florida Panhandle) and District Four (Fort Lauderdale area), Leon County and Escambia County on NPDES MS4 Phase 1 compliance activities, and other clients on Phase 2 preparation (Bay County and Volusia County). He also directed a number of stormwater master plans or needs assessments, including Monroe, Escambia, Leon, Pasco, Brevard, and Bay Counties. Mr. McClelland is also experienced in the study, assessment, and implementation of stormwater utilities. He assisted with developing the first successful stormwater utility in Florida for the City of Tallahassee.

Mr. McClelland has provided technical support to the State of Florida on state standards and TMDL activities. From 2000 to 2002, he served on the Florida Impaired Waters Technical Advisory Committee (TAC). Currently, he serves on the Florida Nutrient Rule TAC. He worked through the Florida Atlantic University (FAU) Center for Environmental Studies (CES) on contracts to technically support the State of Florida on TMDL policy, technical tools, data collection, and model analysis. As a follow-on to this contract, he currently works directly for FDEP to provided TMDL technical support services in Florida, including work in the Florida Keys, Caloosahatchee River, and Kissimmee River.

SETH M. NEHRKE, P.E., CFM

TECHNICAL RESOURCE

Education: ***M.S. – Civil Engineering;*** **Registration:** ***P.E. – FL (2006), GA;***
Years with CDM: ***7;*** **Years with Other Firms:** ***4***

Project Engineer, Nova Canal Flood Control and Integrated Water Resource Program, Volusia County, FL. After the historic flooding experienced in Volusia County, Florida, during the unnamed storm of May 2009, the community stakeholders retained CDM's services to model, design, and permit three flood control structures to mitigate the effects of overland and tidal backflow during storm events. Mr. Nehrke worked as part of a multi-discipline team to successfully complete a Stormwater Modeling Preliminary Engineering Report that was used as the basis of design for the flood control infrastructure design and permitting. ***($959K)***

Project Manager, Stormwater Design and Permitting, Upper Deer Creek Regional Stormwater Treatment Facility Expansion, Jacksonville, FL. Mr. Nehrke acted as project manager and engineer-of-record for the construction design development and permitting of the Upper Deer Creek Regional Stormwater Treatment Facility. Also included was a hydraulic barrier around the east side of the facility to prevent contaminated groundwater intrusion from the adjacent industrial remediation site. The permitted facility provides retrofit treatment for 516 of the 710 highly developed acres in the basin. Chronic flood problems in the area are also reduced by the facility. He provided design, modeling, analysis, and permitting services to maximize the treatment potential while ensuring that the facility complies will all pertinent stormwater regulations. ***($307K)***

Project Engineer, Modeling to Update Master Stormwater Management Plan, Jacksonville, FL. Mr. Nehrke conducted SWMM stormwater modeling for the City of Jacksonville master stormwater management plan (MSMP), including model setup, calibration, and alternative evaluations for water quality and quantity improvements. Other duties included report writing and technical review of other team members' models. ***($7M)***

Project Engineer, Conceptual Flood Assessment, Orange County, FL. Mr. Nehrke provided design and stormwater modeling services that were utilized to provide aid in flood protection for Orange County, Florida. He used ICPR to update the County's models to the latest version, as well as utilizing both AutoCAD and ArcMap to create base maps for each major basin analyzed. The updated models were then analyzed to determine if there were any deficiencies present. All inaccuracies were corrected and the models were used to simulate hurricane conditions and determine the extent and duration of the resulting flooding. Conceptual pumping routes were then determined to help the county develop an emergency preparedness plan. ***($49K)***

Project Engineer, Independent Crop Production Cells Pilot UF/IFAS Research and Demonstration Project – Final Design, Gainesville, FL. Mr. Nehrke acted as the task manager for stormwater modeling as well as the engineer-of-record for the design of five hydraulically independent crop production cells for a pilot-scale project for University of Florida (UF)/Institute of Food and Agricultural Sciences (IFAS). He developed hydrologic and hydraulic models to simulate and evaluate the hydraulic impacts between adjacent test cells during irrigation and rainfall events. He also developed design plans and authored a technical memorandum summarizing the surface water modeling effort. ***($111K)***

Project Manager, Stormwater Design and Permitting, Brevard County, FL. Mr. Nehrke acted as project manager and engineer-of-record for both the conceptual and Phase 1 construction design development, permitting, and analysis of the stormwater system at the Brevard County U.S. 192 Landfill Facility. He developed hydrologic and hydraulic models to simulate existing and proposed conditions, ensuring that the facility complies will all pertinent stormwater regulations. ***($265K)***

Project Engineer, Fort Lauderdale Stormwater Master Plan, Fort Lauderdale, FL. Mr. Nehrke worked as part of a multi-discipline team to successfully complete a stormwater master plan assessing water quality and quantity, flood relief, wetlands, dredging, stormwater ordinances, and the existing stormwater utility, as well as regulatory issues for the City of Fort Lauderdale. He provided support for the SWMM stormwater modeling the entire City, and took the lead on development of one of four detailed local models. Mr. Nehrke assisted with data collection pertaining to topography, rainfall data, land use, soils, and stormwater infrastructure along with other project hydrogeometric properties. His responsibilities included assisting with model set-up, calibration, control measure evaluation, alternative investigation, statistical analysis, and report writing. ***($591K)***

Project Engineer, Stormwater Design and Permitting, Palm Beach County, FL. Mr. Nehrke acted as task manager and engineer-of-record for the conceptual design development, permitting, and analysis of the stormwater system at the Solid Waste Authority of Palm Beach County Western Landfill Facility. He developed hydrologic and hydraulic models to simulate existing and proposed conditions, as well ensuring that the facility complies will all pertinent stormwater regulations. ***($1.9M)***

Project Engineer, Stormwater Modeling, Fort Lauderdale, FL. Mr. Nehrke assisted with SWMM stormwater modeling of the River Oaks neighborhood in the City of Fort Lauderdale. The project involved the conceptual design of an outfall to the New River in order to provide flood mitigation on a local level. His responsibilities included project management, design, alternative analysis, technical review, control measure evaluation, and report writing. ***($53K)***

Project Engineer, SFWMD Lake Okeechobee Fast-Track (LOFT), Okeechobee, FL. Mr. Nehrke worked as part of a multi-disciplinary team to successfully complete a fast-tracked Basis of Design Report assessing both water quality and water quantity issues for the sensitive Lake Okeechobee system. He provided support for the SWMM stormwater modeling of the S-154, S-133, Taylor Creek, S-191, S-153, S-135, and C-44 basins in Okeechobee, Martin, and St. Lucie Counties (approximately 350 square miles). Mr. Nehrke assisted with data collection pertaining to topography, rainfall data, land use, soils, and stormwater infrastructure along with other project hydrogeometric properties. His responsibilities included assisting with model set-up, calibration, control measure evaluation, alternative investigation, statistical analysis, and report writing. ***($16M)***

Project Engineer, Stormwater Management Master Plan Update for the Broward County Aviation Department Fort Lauderdale International Airport, Fort Lauderdale, FL. Mr. Nehrke was responsible for aiding in development of a stormwater model based upon previous modeling efforts, survey and construction plans, identifying flooding problems as indicated by various design storm simulations ,and developing solutions to correct these problems. ***($52K)***

Project Engineer, Stormwater Management System Inventory, Inspections and Mapping, Florida. Mr. Nehrke assisted the Florida Department of Transportation's District Four with the inventorying, inspecting, and mapping of their stormwater systems in Broward, Palm Beach, Martin, St. Lucie, and Indian River Counties. This involved obtaining and reviewing plans, inspecting both ponds and outfalls, adding new system information to the existing inventory, and entering data into the Stormwater Management Information Database System for mapping the new systems. Field data was collected with GPS equipment to locate all of the storm sewer inlets, manholes, outlets, and stormwater management facilities. The map is a requirement for the Phase II NPDES stormwater regulations. ***($353K)***

Project Engineer, FDOT District IV NPDES Compliance, Florida. Mr. Nehrke is assisting with the advancement of the FDOT District IV NPDES municipal separate storm sewer (MS4) GIS database. He has performed stormwater pond and stormwater system outfall inventories and inspections, and helped develop stormwater facility inspection sheets. Additional responsibilities included aiding the client to meet both Phase I and Phase II NPDES permit requirements. ***($1.2M)***

Project Engineer, JEA Area II Landfill Closure Design and Permitting – St. Johns River Power Park, Jacksonville, FL. Mr. Nehrke acted as project engineer-of-record for the design, permitting, and analysis of the stormwater system for the closure of JEA's St. Johns River Power Park Area II coal ash landfill. He developed the hydrologic and hydraulic model, using ICPR, to simulate existing and proposed conditions, as well as ensuring that the facility complies will all pertinent stormwater regulations. ***($122K)***

Project Engineer, Western Landfill Alternative Site Assessment, Palm Beach County, FL. Mr. Nehrke provided task management oversight and acted as engineer-of-record for the conceptual design development, permitting, and analysis of the stormwater system at the Solid Waste Authority of Palm Beach County Western Landfill Facility. He developed hydrologic and hydraulic models to simulate existing and proposed conditions, ensuring that the facility complied with all pertinent stormwater regulations. He also provided stormwater modeling and technical oversight with respect to the alternative site assessment. ***($542K)***

Task Manager, Baling and Recycling Facility Design, Permitting, Bidding, and Construction Services for the Class I Landfill, Phase IIIA, St. Lucie County, FL. Mr. Nehrke acted as task manager for the conceptual design development, permitting, and analysis of the stormwater system at the St. Lucie County Baling and Recycling Facility. He developed hydrologic and hydraulic models to simulate existing and proposed conditions, ensuring that the facility complies will all pertinent stormwater regulations. ***($285K)***

BRIAN W. MACK, P.E., D.WRE

TECHNICAL REVIEW COMMITTEE

Education: ***B.S. – Civil Engineering, B.S. – Mining Engineering;*** **Registration:** ***P.E. – FL (1993), VA;***
Years with CDM: ***25;*** **Years with Other Firms:** ***0.5***

Project Engineer, Gum Swamp Restoration - Phases I and II, Leon County, FL. CDM assisted the Leon County Department of Public Works with a multi-phased project related to wetlands restoration. The initial phase provided the development of a stormwater model capable of representing stormwater flow control and diversion in the Gum Swamp area. Mr. Mack worked directly with the FDEP to obtain permitting. ***($76K)***

Project Engineer, Lake Munson Restoration Project, Leon County, FL. As the project engineer, Mr. Mack developed and calibrated a regional stormwater model for the Lake Munson basin using EPA-SWMM. The regional model was used to predict and route stormwater runoff within the 70-square-mile drainage basin. The stormwater model was used for flood control, sediment management, and wetland restoration alternative designs. ***($245K)***

Project Manager, McCracken Road Stormwater Improvement Project, Leon County, FL. Mr. Mack developed a stormwater model using EPA-SWMM and bridge replacement alternatives that would prevent the flooding of a primary road in rural Leon County during a 25-year design storm event. ***($271K)***

Project Manager, Robinson Bayou Basin Stormwater Master Plan, Panama City, FL. Mr. Mack served as the project manager for the development of a stormwater master plan for the Robinson Bayou Basin for the City of Panama City, Florida. Tasks included data collection and system inventory, stormwater system analysis using the EPA SWMM, conceptual improvements and associated costs for flood and water quality control, and automated floodplain mapping using GIS software. ***($160K)***

Project Manager, Stormwater Master Plan, Bay County, FL. Mr. Mack served as the project manager for the development of a stormwater master plan for the Watson Bayou Basin for Bay County, Florida. Tasks included data collection and system inventory, stormwater system analysis using the EPA SWMM, conceptual improvements and associated costs for flood and water quality control, and automated floodplain mapping using GIS software. ***($140K)***

Project Manager, Stormwater Master Plan, Panama City, FL. Mr. Mack served as the project manager for the development of a stormwater master plan for the downtown drainage basin for the City of Panama City, Florida. Tasks included data collection and system inventory, stormwater system analysis using the EPA SWMM, conceptual improvements, and associated costs for flooding. ***($328K)***

Project Engineer, Capital Cascade Trail - Stormwater Management Master Plan Assistance, Tallahassee, FL. The City of Tallahassee – Leon County Blueprint 2000 Intergovernmental Agency (client) retained CDM to develop the Capital Cascade Trail Stormwater Management Master Plan (SWMMP) for the St. Augustine Branch (SAB). Specifically, CDM was responsible for developing and calibrating a stormwater model for flood management in the study area, developing a conceptual water quality control plan, and participating in the alternatives analysis and public meeting elements of the master planning process. ***($235K)***

Program Manager, NPDES Phase II, Bay County, FL. Mr. Mack was the program manager for the development of the NPDES Phase II municipal separate storm sewer system stormwater management plan for Bay County, the City of Panama City, and the City of Callaway, Florida. This project included working with the governments within the County that were required to join the statewide general permit through a notice-of-intent by March 2003. Program elements included mapping waters of the United States, outfall inventory efforts, and identifying programs to meet the six minimum criteria of the program, including public education and outreach, public participation, illicit connection detection and elimination, construction discharge controls, stormwater runoff controls from new development, and municipal operations pollution prevention. ***($62K)***

Project Director, Bayou George Stormwater Management Master Plan, Panama City, FL. Mr. Mack served as project director for developing a stormwater management master plan (SMMP) for the Bayou George Basin. The City had annexed approximately 4,000 acres of woods, wetlands, and streams in the basin that are expected to be developed in the future. The SMMP built upon previous modeling work done in the basin by CDM in the late 1990s in order to develop a regional stormwater model using the U.S. EPA SWMM Version 5 that expanded into the annexed areas of the upstream portion of the basin. ***($132K)***

Project Director, Florida Derby Woods Stormwater Evaluation, Bay County, FL. Mr. Mack oversaw the development of a subdivision retrofit evaluation for chronic flooding problems. Project modeling was performed using SWMM Version 5. This evaluation consisted of hydrologic and hydraulic analysis of the existing system using EPA-SWMM, identifying deficiencies within the primary system, and developing three conceptual alternative improvement scenarios to alleviate flooding. ***($76K)***

Project Manager/Project Engineer, Florida Stormwater Management Programs, Various Counties in Florida, Various Dates. Mr. Mack served as project manager/engineer for various clients, including Bay County, Orange County, Seminole County, Leon County, Brevard County, Volusia County, and the incorporated cities within those counties. Mr. Mack's experience includes the development of municipal National Pollutant Discharge Elimination System (NPDES) stormwater permit and management programs, stormwater runoff projections, and the evaluation of stormwater runoff impacts on open channel hydraulics. He has developed regional detention basin designs, berm designs, channelization designs, and applied best management practices (BMPs) as part of stormwater management planning. His facility planning experience includes the evaluation of sewerage needs, sanitary flow analysis, combined sewer overflow analysis, and the development of alternatives to address sanitary sewer capacity problems. He has worked with SWMM/RUNOFF, SWMM/EXTRAN, ADICPR, HEC-1, HEC-2, HEC-STORM, and TR-20 computer models. ***(Various)***

Project Director, Phase II and III Howell Creek Watershed Management Plan, St. Johns River Water Management District, Florida. Mr. Mack served as the project director for this effort, which is a cooperative effort between the St. Johns River Water Management District (SJRWMD), Orange County, and Seminole County, and the Cities of Orlando, Winter Park, Maitland, Casselberry, Winter Springs, and Oviedo. This phase of the project included the development of a stormwater model using SWMM to evaluate the long-term effects of rainfall on the Winter Park Chain of Lakes under various gate control scenarios. Additionally, a regional design storm model was developed using the Interconnected Pond Routing Model (ICPR) model to assess the current level-of-service being provided within the 55-square-mile watershed, as well as recommended improvements to meet the desired level-of-service of the stakeholders. The project also considered existing water quality and Total Maximum Daily Load (TMDL) issues in a highly urbanized watershed. ***($45K)***

Project Director, Stormwater Conveyance Study, Oviedo, FL. Mr. Mack is serving as the project director for this effort, which includes the development of a water quality and flood control plan for the City. For this effort, CDM refined and expanded existing regional stormwater models to be representative of the City's existing infrastructure. The stormwater modeling was completed using the Interconnected Pond Routing Model (ICPR) model. The project also considered existing water quality and Total Maximum Daily Load (TMDL) issues within the city limits. ***($124K)***

Project Director, Deep Creek Basin Management Plan, Volusia County, FL. Mr. Mack served as the project director for this cooperative effort, which includes the development of a hydrologic and hydraulic evaluation of the 164-square-mile basin using the EPA Stormwater Management Model (SWMM) for the purpose of floodplain management within the basin. The project included refinement of the 100-year floodplain as well as developing conceptual improvements to identify stormwater conveyance deficiencies. The County uses the plan to manage urbanization pressures placed upon the existing natural systems. ***($325K)***

Program Manager, Wekiva Area Protection Act Stormwater Master Plan, St. Johns River Water Management District, Florida. Mr. Mack oversaw the development of a regional stormwater master plan needs assessment for the Wekiva Protection Area. This effort included coordination and documentation of issues affecting the quality and quantity of stormwater for a 476–square mile area located within Central Florida. The master plan examined flooding, water quality, water conservation, stormwater reuse, and groundwater-related issues that influence water bodies and springs. ***($217K)***

JAMES T. WITTIG, P.E.

TECHNICAL REVIEW COMMITTEE

Education: ***M.E. – Environmental Engineering, M.E. – Industrial and Systems Engineering;***
Registration: ***P.E. – FL (1994);*** **Years with CDM:** ***21.5;*** **Years with Other Firms:** ***1.5***

Lead Practitioner, Emergency Drainage System Repair, Clay County, FL. Clay County contracted with CDM to provide emergency design-build services to repair an existing, failing, drainage system. The drainage system was located within a parking lot and directly adjacent to existing commercial businesses. The collapsing pipe system threatened to damage several existing structures and endanger public safety. Mr. Wittig facilitated the multiple, expedited efforts of the CDM team to analyze, design, repair, and construct the $2.4M drainage system. The repair was needed during the Florida wet season and required detailed planning and phasing of the construction effort. ***($2.4M)***

Project Manager and/or Lead Design Engineer for Design of Drainage Improvement Projects, Various Locations in Florida. Mr. Wittig directly oversaw or performed design, permitting, and analysis for various drainage improvement projects, including the Orange County Riverside Pond, City of Tampa Ybor City 6th Avenue drainage improvements, City of Plant City Paradise Fruit and Grant Hunter projects, the PPWMD Channel 5 Phase II drainage improvements, Tampa Bay Water Mid-Pinellas Desalination Water Treatment Plant Stormwater Management System, Leon County Lake Munson restoration and Gum Swamp restoration projects, City of Cape Coral Multi-Use Sports Complex Soccer Field drainage improvements, Orange County Park Ridge stormwater improvements, City of Boynton Beach 7th Avenue Pump Station and stormwater improvements, and the Universal Studios Ponds 9 and 10 relocation project. ***(Various)***

Lead Practitioner and Project Engineer, Orange Blossom Trail Stormwater Improvements, Orlando, FL. The City of Orlando contracted with CDM to provide permitting and design services to modify and construct a drainage system to serve City businesses that are subject to chronic structural flooding. The project required extensive modeling of the existing and proposed system to confirm the source of the flooding and evaluate appropriate alternatives to eliminate the flooding. ***($217K)***

Project Engineer, Mariposa Street Drainage Improvements, Orlando, FL. The City of Orlando contracted with CDM to design and permit drainage improvements within a 15-acre urban residential area. Bidding services and construction management were also included in the contract. Mr. Wittig was involved in developing a stormwater model of the drainage area and designed drainage improvements along the residential streets. The drainage improvements included approximately 2,400 linear feet of concrete stormwater pipe, 24 curb inlets, 14 stormwater manhole structures, and 2 pond outfall structures. ***($85K)***

Project Manager and/or Lead Project Engineer for FEMA-Related Flood Studies, Various Locations. Mr. Wittig provided analysis and technical direction for flood studies performed in support of FEMA applications for Letters of Map Revision (LOMR) for the Hartsfield-Jackson Atlanta International Airport and Pinellas Park Water Management District (PPWMD) Channels 1, 2, 3, and 4. ***(Various)***

Project Manager and/or Lead Project Engineer for Conceptual Design and Master Planning Projects, Various Locations in Florida. Mr. Wittig directly oversaw or performed conceptual design development, permitting, and analysis for various projects, including the City of Orlando and SJRWMD Little Lake Fairview restoration, the Greater Orlando Aviation Authority's South Terminal Development and South Access Road projects, Orange County Little Lake Bryan drainage improvements, Orange County Conway Gardens Outfall evaluation, and the Universal Studios Sand Lake Road Complex Conceptual Plan. Many of these projects required consensus building efforts with stakeholders, including public meeting presentations. ***(Various)***

Lead Practitioner and Project Engineer, Lincoln Heights Stormwater Improvements, Seminole County, FL. Seminole County contracted with CDM to provide analysis, permitting, and design services to significantly modify the drainage system serving two residential communities in the County. Significant analysis, including field verification during Tropical Storm Fay, was needed to confirm the source of the flooding and to evaluate appropriate alternatives to eliminate the flooding. Due to elevated tailwater elevations in the downstream receiving waters, the proposed stormwater improvements include two large pump stations and stormwater ponds. ***($287K)***

Lead Practitioner, Anniversary Stormwater Park at Lake Concord, Casselberry, FL. The City of Casselberry contracted with CDM to provide permitting and design services for this retrofit project on City property adjacent to Lake Concord. The project included an amphitheatre, park facilities, and a boardwalk along Lake Concord. The project required

innovative approaches to treat and convey existing stormwater flows within the stormwater park. The project construction schedule was expedited in order to ensure project funding. ***($2.5M)***

Project Manager, Little Lake Fairview Restoration and Dubsdread Golf Course Renovation, Orlando, FL. The City of Orlando retained CDM to design, permit, and oversee construction of the Little Lake Fairview Restoration and Dubsdread Golf Course Renovation Project. Constructed improvements included renovations of the entire golf course with several new water features to be used to provide water quality retrofit for stormwater runoff from onsite and offsite areas that flow through the project area. Furthermore, the project provides rehydration of onsite wetland areas that were degraded in part by direct connection to an existing onsite drainage well. The project also included retrofitting the golf course irrigation system to use stormwater reuse from the constructed ponds rather than the groundwater well previously used. Mr. Wittig led the CDM team in modeling existing and proposed conditions and performing final design for the construction of ten new wet detention ponds and expansion of five existing ponds. The golf course reopened for play in June 2008. ***($1.3M)***

Project Manager, North College Park Flood Study, Orlando, FL. To establish the base flood elevations in areas classified as being in Flood Zone A by the Federal Emergency Management Agency (FEMA), the City of Orlando contracted with CDM to establish base flood elevations for Little Lake Fairview, Lake Sarah, Lake Daniel, and Lake Silver, collectively known as the North College Park Study Area (NCPSA). Mr. Wittig led the CDM team in performing data collection and analysis of the existing stormwater management system in the NCPSA. A stormwater model was also developed to estimate the base flood elevations associated with the 100-year/24-hour design storm event within the effective floodplain areas. ***($25K)***

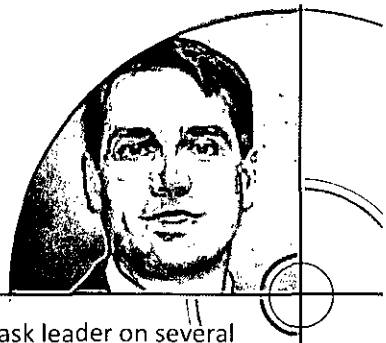
Project Manager, Southport Flood Study, Orlando, FL. The City of Orlando contracted with CDM to establish base flood elevations for three depressional areas located northeast of Boggy Creek Road, south of the BeeLine Expressway, and west of the Orlando International Airport, collectively referred to as the Southport Study Area. These areas had been classified as being in Flood Zone A by FEMA. Mr. Wittig coordinated the data collection and analysis of the existing stormwater management system in the study area. He also developed a stormwater model to estimate the base flood elevations associated with the 100-year/24-hour design storm event within the effective floodplain areas. ***($25K)***

Project Manager and/or Lead Project Engineer for Data Collection and Evaluation Projects, Various Locations in Florida. Mr. Wittig directly oversaw or performed data collection, monitoring plan development, data evaluation, statistical analysis, and report documentation for various projects, including the Orange County Eastern Service Area Wetland Treatment System, the Orange County Landfill's Water Quality Based Effluent Limitation (WQBEL) Study, Seminole County NPDES Stormwater Sampling, Seminole County Lake Jesup Stormwater Sampling, City of Ormond Beach Stormwater Sampling and BMP Evaluation, the Escambia County Utility Authority Bayou Marcus Wetlands Effluent Disposal Project, and the St. Johns River Water Management District (SJRWMD) Upper St. Johns River Basin Flow Measurements and Analysis at Structures S96C and S96D. Mr. Wittig has also provided field support and training in areas of water quality sampling, digital data collection, and stream flow measurements at various sites throughout Florida. ***(Various)***

SHAYNE WOOD, P.E.

TECHNICAL REVIEW COMMITTEE

Education: ***B.S. – Environmental Engineering;*** **Registration:** ***P.E. – FL (2003)***
Years with CDM: ***12;*** **Years with Other Firms:** ***0.5***



Project Engineer, Master Stormwater Management Plan, Jacksonville, FL. Mr. Wood serves as task leader on several tasks on this $5.6M program for the City of Jacksonville, which includes updating the City's Digital Flood Insurance Rate Maps (DFIRMs). He is the task manager for the data collection task, which includes collecting LIDAR (Light Detection and Ranging) data for all of Duval County (918 square miles). In addition, Mr. Wood serves as the task manager for developing alternative evaluations and recommendations for the City's Capital Improvement Plan (CIP). He will also oversee the web-based application development task, which will provide the framework for integrating the updated/ upgraded H&H models, flood plain maps, and water quality models to the City's website, including updating the City's web-based GIS platform JaxGIS. ***($7M)***

Project Engineer, City of Atlantic Beach Stormwater Master Plan Update, Atlantic Beach, FL. Mr. Wood led the stormwater system GIS development team for this project, which included the conversion of the City's CAD-based system into a stormwater system GIS. Additionally, Mr. Wood developed the City's 10-year capital improvement plan (CIP), which outlined and prioritized stormwater system infrastructure improvements required to meet the City's level of service (LOS). ***($95K)***

Project Engineer, Cedar River Regional Wet Detention Pond Design, Jacksonville, FL. Mr. Wood served as a project engineer for this project and led the preliminary design team, including developing the conceptual design, modeling the existing and proposed conditions using SWMM, and serving as the primary author of the preliminary design report (PDR). As the project transitioned to the 30, 60, 90, and 100 percent design phases, Mr. Wood continued to serve as a project engineer by interfacing with the designers, providing SWMM support, and leading the environmental resource permitting (ERP) phase. Mr. Wood is currently assisting the City of Jacksonville during construction of this project by providing services during construction. ***($251K)***

Project Engineer, Cecil Commerce Center Master Stormwater Management Plan, Jacksonville, FL. Mr. Wood has provided technical support for the development of the Cecil Field Commerce Center Stormwater Management Model. Specifically, Mr. Wood processed soils, land-use, and survey data using ArcView to generate input parameters for RUNOFF and EXTRAN for pre- and post-development. ***($250K)***

Project Engineer, Clay County Loch Rane and Bel Med Stormwater Management Plan, Clay County, FL. Mr. Wood was responsible for developing the Stormwater Water Management Model (SWMM) to address flooding problems and evaluate alternatives to provide solutions. Mr. Wood was also responsible for linking the Loch Rane and Bel Med model to the existing Ortega River and Little Black Creek models. He also conducted the calibration and verification of the Loch Rane and Bel Med model. In addition, he was instrumental in encouraging the local residents to become involved in the Loch Rane and Bel Med project. ***($125K)***

Task Manager, St. Johns River Water Management District (SJRWMD) Hydrology, Hydrodynamics, and Hydraulics Continuing Services Contract, Florida. Mr. Wood continues to serve as the task order manager on several work orders on this continuing services contract, including the Deep Creek Southwest (Masters) Regional Stormwater Treatment system conceptual design, TCAA Phase II PLSM model update, and the Cowpen Branch IFAS Farm Re-Engineering conceptual design. ***(Various)***

Project Engineer, Regional Facility Treatment Decision Matrix, SJRWMD, Florida. Mr. Wood developed the regional facility treatment decision matrix, which is used by the SJRWMD to analyze and evaluate stormwater best management practices (BMPs). This expert system analyzes site conditions, water quality goals, and watershed characteristics, and determines which BMP is best suited for implementation to meet the desired water quality goals in the most cost-effective manner. ***($60K)***

Project Engineer, Preliminary Design of Regional Water Quality Treatment Facilities for Yarborough Tract and Edgefield Tract, St. Johns River Water Management District (SJRWMD), Florida. Mr. Wood served as the lead project engineer for this project. His duties included analyzing three regional treatment facility types, Wetland, Wet Detention, and Chemical Treatment, to provide water quality treatment for agricultural runoff. The regional facility analysis included SWMM modeling, long-term simulations using STORM, conceptual cost estimate formulations for each of the alternatives analyzed, and producing a preliminary design of the recommended regional facility. ***($170K)***

Project Manager, Southwest Florida Feasibility Study (SWFFS) Water Quality Model Development for the U.S. Army Corps of Engineers - Jacksonville District, Jacksonville, FL. Mr. Wood serves as the project manager on this $180,000 project that includes developing Watershed Management Models (WMM) for the Big Cypress Basin (BCB), Estero Basin (EB), the Freshwater Caloosahatchee River Basin (FCRB), and the Tidal Caloosahatchee River Basin (TCRB). The purpose of the project is to evaluate existing and future water quality (WQ) and Best Management Practices (BMPs) within BCB, EB, FCRB, and TCRB. ***($180K)***

Project Manager, EPA Grant Application Assistance for the College Park Drainage Improvements, St. Johns County Engineering Division, St. Johns County, FL. Mr. Wood is assisting the St. Johns County Engineering Division to facilitate acquisition of project funding ($481,000) that was awarded through a Special Appropriations Projects Grant by the EPA. The grant assistance provided by CDM includes coordination with EPA, completion of the grant applications, and development of a compliance report and project work plan. ***($14K)***

Project Manager, Southwest Florida Feasibility Study (SWFFS) Hydrologic Model Development for the U.S. Army Corps of Engineers - Jacksonville District, Jacksonville, FL. Mr. Wood served as the project manager on this $330,000 project that included a modeling team from both CDM and DHI to update MIKE-SHE and MIKE-11 models for three watersheds within the SWFFS. The project includes coordination with team subconsultant DHI to complete a work plan, technical design document, acceptance test plan, modification of existing models, calibration and validation, and final basin reports and model documentation. ***($330K)***

Project Manager, Cerrillos Dam and Reservoir Separable Costs Remaining Benefits (SCRB) Cost Allocation Reassessment for the U.S. Army Corps of Engineers - Jacksonville District, Jacksonville, FL. Mr. Wood served as the project manager on this $300,000 project that included an economics team and engineering/cost estimating team. The two teams collaborated to analyze six different benefit scenarios (single purpose/multipurpose – for flood control, recreation, and water supply) and cost allocations for the Cerrillos Dam in Puerto Rico. The objective of the project was to determine the appropriate cost share of the project for the federal government and the Commonwealth of Puerto Rico. ***($300K)***

Project Engineer, Harris Chain of Lakes High Water Evaluation, SJRWMD, Florida. Mr. Wood assisted in evaluating the potential for existing stormwater systems to cause flooding during high water levels predicted by a proposed increase in water level regulation schedules by the SJRWMD. Further analysis included determining the potential impacts of the elevated water levels on operation of infrastructure such as roads, wells, septic tanks, sanitary sewers, package wastewater plants, and utilities consisting of telephone, electric, and cable. ***($256K)***

Project Engineer, City of Jacksonville and SJRWMD Cedar and Ortega River Sediment Source Identification and Control, Jacksonville, FL. Mr. Wood developed the GIS for this project and used the system to analyze and identify potential sediment contamination source sites. Once the initial desktop screening was completed, he assisted in developing the field sampling program and supervised its implementation. Additionally, Mr. Wood provided assistance in the water quality modeling and conceptual stormwater treatment system design. ***($189K)***

Project Manager, South Florida Regional Simulation Model (RSM) Development Assistance for the Lake Okeechobee Service Area (LOSA) U.S. Army Corps of Engineers – Jacksonville District, Jacksonville, FL. Mr. Wood serves as the project manager on this $210,000 project that includes modeling assistance with CDM's team sub-contractor HydroLogics. The modeling team is providing assistance to the South Florida Water Management District including C++ code review, calibration assistance, and linking the Hydrologic Simulation Engine (HSE) and the Management Simulation Engine (MSE). ***($210K)***

DANIELLE K. NEAMTU, P.E.

DAM DESIGN

Education: ***M.S.E. – Civil Engineering, B.S.E. – Civil & Environmental Engineering;***
Registration: ***P.E. – NC, SC, TN, MA (2003);*** **Years with CDM:** ***6;*** **Years with Other Firms:** ***5***

Geotechnical Engineer, Dam Feasibility Study, Tallahassee, FL. Ms. Neamtu is the project manager for the Lake Heritage Dam Feasibility Study. The existing earthen dam is overgrown with trees, and the outlet facilities are no longer functioning. The project will include a subsurface investigation and inspection of the dam and development of conceptual design and cost estimates for rehabilitation. ***($144K)***

Project Manager, Dam Feasibility Study and Design Services, Tallahassee, FL. Ms. Neamtu is the project manager for the Lake Munson Dam Feasibility Study. The existing dam is a low head sheetpile structure with radial (tainter) gates that impounds Lake Munson. The project is located in a karst region and Lake Munson captures approximately 60 percent of the drainage from the Tallahassee. ***($245K)***

Geotechnical Engineer, Feasibility Study for Raising Operating Level in Existing Cooling Pond, Martin County, FL. Ms. Neamtu performed seepage and wave run-up analyses for raising operating pool elevation in an existing cooling pond. She also assisted in preparation of the draft and final reports presenting the results of the analyses. This feasibility study was performed to evaluate the Shared Use of storage at this private facility by the South Florida Water Management District (SFWMD) as part of the ACCELER8 component of the Comprehensive Everglades Restoration Program. ***($112K)***

Geotechnical Engineer, Water Storage Feasibility Study, Lake Okeechobee, FL. Ms. Neamtu performed seepage and stability analyses for the feasibility study of the proposed Lemkin Creek Water Storage and Treatment project. The project would impound and store stormwater and run-off along an existing canal upstream of Lake Okeechobee. ***($873K)***

Geotechnical Engineer, Reservoir and STA Feasibility Study, Lake Okeechobee, FL. Ms. Neamtu performed geotechnical analyses and prepared the geotechnical report for the feasibility study for the proposed Taylor Creek Reservoir and Lakeside Ranch Stormwater Treatment Area (STA) in Lake Okeechobee. The reservoir and STA are components of the Comprehensive Everglades Restoration Program. ***($2M)***

Geotechnical Engineer, Reservoir and STA Feasibility Study, Martin County, FL. Ms. Neamtu performed geotechnical analyses and prepared the geotechnical report for the feasibility study for the proposed C-44 Reservoir and Stormwater Treatment Area (STA). The reservoir and STA are components of the Comprehensive Everglades Restoration Program. The proposed reservoir would be impounded by a 20-mile-long, 20-foot-high embankment dam. ***($4.4M)***

Project Manager, Dam Feasibility Study, Raleigh, NC. Ms. Neamtu is the project manager for the Brockton Lake and Dam Study. The existing earthen dam has been overtopped several times resulting in severe erosion to the downstream toe. The project included a subsurface investigation and inspection of the existing dam and development of conceptual design and cost estimates for rehabilitation. ***($123K)***

Geotechnical Engineer, Earthen Dam Study, Fayetteville, NC. Ms. Neamtu was the project geotechnical engineer for the study of an existing earthen dam at a water supply reservoir. The study included a geotechnical exploration, preliminary seepage and stability analyses, and a report detailing the findings and providing recommendations to maintain the integrity of the existing dam. ***($50K)***

Geotechnical Engineer, RCC Dam Design and Construction, Franklin, KY. Ms. Neamtu was the geotechnical engineer for the design and construction of a new RCC dam. She prepared plans and specifications for the dam and coordinated engineering services during construction of the dam. ***($104K)***

Geotechnical Engineer, Reservoir Design and Construction, Portland, TN. Ms. Neamtu was the project geotechnical engineer for the design of a new water supply reservoir. The reservoir was located in a karst geology area. The dam was a combination of roller compacted concrete (RCC) and non-overtopping earthen dam with a cast-in-place concrete spillway. ***($352K)***

Project Engineer, Phase I Dam Inspections and Emergency Action Plans, Various Locations, Massachusetts. Ms. Neamtu was the project engineer for two (of 40) Phase I dam inspections reports prepared for various municipalities in Massachusetts. Recommendations for repair, improvements, or further evaluations for each dam were made as part of the dam evaluations. ***(Various)***

Project Manager, Replacement of Steam Tunnel, Chapel Hill, NC. Ms. Neamtu is CDM's project manager for the design and construction of a walkable replacement steam tunnel on the University of North Carolina at Chapel Hill (UNC-CH) campus. She supervised the subsurface investigation, prepared the geotechnical report, and prepared design documents for the cut and cover tunnel. The first bid package (of two) is complete and the second bid package is currently under construction. Ms. Neamtu attends weekly construction meetings and is CDM's primary contact for construction issues. She reviews shop drawings related to geotechnical aspects of construction, including the excavations support systems. ***($232K)***

Geotechnical Engineer, Replacement of Steam Tunnel, Chapel Hill, NC. Ms. Neamtu was the project geotechnical engineer for the feasibility study of an existing steam tunnel on the UNC-CH campus. She supervised the subsurface investigation, prepared the geotechnical data report, and assisted in the development and cost estimating of tunnel replacement alternatives. ***($232K)***

Geotechnical Engineer, Replacement Sewer, Charlotte, NC. Ms. Neamtu is the geotechnical task manager/engineer for the design of Briar Creek Phase II drainage project. She was responsible for the subsurface investigation, prepared a geotechnical design report, provided contract documents, and assisted with permitting. This project includes at least six trenchless crossings, including two North Carolina Department of Transportation (NCDOT) roadways and one railroad. ***($1.1M)***

Geotechnical Engineer, New Water Treatment Plant, Kinston, NC. Ms. Neamtu was the geotechnical engineer for the design and general services during construction of a new raw water treatment plant facility. She developed the subsurface exploration program, prepared the geotechnical design report for the proposed structures, and provided input for development of details and specifications, including the design of a preload program to reduce the potential settlement of the treatment basins. She reviewed submittals related to the excavation support systems, dewatering, and subgrade/backfilling materials, and visited the site and attended meetings as geotechnical issues arose. ***($5.8M)***

Geotechnical Engineer, Water Treatment Plant and Force Main, Pender County, NC. Ms. Neamtu was the geotechnical task manager/engineer for design of a new water treatment plant and forcemain. She managed the geotechnical subconsultant and provided developed geotechnical-related contract documents including six horizontal directional drills and four jack and bore road crossings for the force main. ***($369K)***

STEPHEN L. WHITESIDE, P.E.

DAM DESIGN

Education: ***Engineer and Master's Degree – Geotechnical Engineering, B.S. – Civil Engineering;***
Registration: ***P.E. – NC, SC, VA, GA, FL, AL, TN, KY, LA, AR, MA (1980);*** **Years with CDM:** ***11;***
Years with Other Firms: ***23.5***

Technical Consultant, Lake Heritage Dam, Tallahassee, FL. Mr. Whiteside is the technical consultant for the feasibility study and conceptual design for rehabilitation measures for the 15-foot-high embankment in Tallahassee, Florida. The rehabilitation measures include modifications to the embankment and spillways while keeping flood stage levels the same downstream. ***($144K)***

Project Director, Lake Munson Dam, Tallahassee, FL. Mr. Whiteside was the project director for the feasibility study for Lake Munson Dam in Tallahassee, Florida. The purpose of the feasibility study was to evaluate potential rehabilitation of the existing dam or replacing the existing dam with a new dam downstream. The project included a geotechnical investigation, hydrologic/hydraulic analyses, and conceptual designs for alternatives. CDM prepared final design documents for the replacement alternative. ***($245K)***

Lead Engineer, Portland Dam, Portland, TN. Mr. Whiteside was the lead engineer for the feasibility study and preliminary design for a new water supply dam in Portland, Tennessee. The dam will be located in a karst geology area. The project included a hydrogeological and geotechnical investigation and development of conceptual designs for a new dam. CDM evaluated new dam alternatives, including an embankment dam and a roller compacted concrete (RCC) dam. CDM has prepared the preliminary design of the selected alternative which is a combination RCC and embankment dam. ***($352K)***

Lead Design Engineer, Cerrillos Dam, Puerto Rico. Mr. Whiteside was the lead design engineer for the cost reallocation evaluation for Cerrillos Dam in Puerto Rico. The purpose of the evaluation was to determine the cost allocation between the United States and Puerto Rico for the new dam. As part of the evaluation, Mr. Whiteside led the evaluation of alternative dam designs. ***($50K)***

Project Manager, Hester Lake Dam, Greensboro, NC. Mr. Whiteside was the project manager for the design and construction of a new dam to replace the existing dam at the Oka T. Hester Park in Greensboro, North Carolina. The new dam is an earth embankment dam constructed adjacent to a proposed NCDOT outer loop embankment. Project included geotechnical investigation, hydrologic/hydraulic analyses, permitting services, preparation of final design documents, and full-time services during construction. ***($911K)***

Technical Consultant, Ben Hill Reservoir Dam, East Point, GA. Mr. Whiteside was the technical consultant for the independent review of another consultant's design of rehabilitation measures for the 40-foot-high Ben Hill Reservoir Dam in East Point, Georgia. ***($10K)***

Project Manager, Franklin Dam, Franklin, KY. Mr. Whiteside was the project manager for the design and construction of a new roller compacted concrete (RCC) dam to replace an existing dam in Franklin, Kentucky. The existing dam impounded the sole source of water supply for the City and was in poor condition. The new dam was constructed immediately downstream of the existing dam. The dam includes a 500-foot-long RCC section and an 80-foot-long conventional concrete ogee spillway. ***($780K)***

Technical Consultant, Brockton Drive Dam, Raleigh, NC. Mr. Whiteside was the technical consultant for the preliminary design of rehabilitation measures for Brockton Drive Dam in Raleigh, North Carolina. The measures include construction of RCC overtopping protection and replacement of the existing drop-inlet spillway. CDM is currently developing the final design documents. ***($323K)***

Project Manager, Talecris Dam, Clayton, NC. Mr. Whiteside was the project manager for the evaluation and rehabilitation conceptual design for Talecris Dam in Clayton, North Carolina. The riser-barrel spillway in the existing dam had failed. CDM performed a geotechnical and hydrologic/hydraulic evaluation for new spillway alternatives and developed conceptual designs and cost estimates for the alternatives. ***($19K)***

Project Manager, Glenville Lake Dam, Fayetteville, NC. Mr. Whiteside was the project manager for the seepage and stability evaluation for the 20-foot-high Glenville Lake Dam in Fayetteville, North Carolina. The project included a field and laboratory investigation, seepage and stability analyses, structural evaluation of the concrete spillway, and recommendations for seepage control measures. CDM is currently designing the rehabilitation measures and evaluation of alternative spillways. ***($660)***

Geotechnical Engineer, Table Rock Reservoir Intake, Table Rock, SC. Mr. Whiteside was the geotechnical engineer for the design and construction of a new intake and outlet pipe for the existing 120-foot-high dam in Table Rock, South Carolina. The project involved the installation of a new intake at a lower elevation in the reservoir and a new outlet pipe through the abutment, both constructed under full reservoir conditions. The outlet pipe was installed in a 5-foot-diameter rock tunnel, and the intake was installed in an 8.5-foot-diameter shaft drilled into rock from a barge. ***($8.45M)***

Project Manager, Hartwell/Clemson Diversion Dams, Clemson, SC. As project manager for the seismic evaluation of the 80-foot-high Hartwell/Clemson Diversion Dams in Clemson, South Carolina, for the U.S. Army Corps of Engineers Savannah District, Mr. Whiteside developed conceptual designs of remedial measures to prevent a liquefaction failure. Remedial measures included deep soil mixing, jet grouting, stone columns, and excavation and replacement. The evaluation included finite-element analyses of the modified dams. ***($200K)***

Design Consultant, Randleman Lake Dam, Randolph County, NC. Mr. Whiteside was the design consultant for the design of Randleman Lake Dam, a new water supply dam in Randolph County, North Carolina. The dam consists of a 102-foot-high roller compacted concrete (RCC) section with an overflow emergency spillway and adjacent earth embankments. ***($650K)***

Design Consultant, Durant Nature Park Lower Dam, Raleigh, NC. Mr. Whiteside was a design consultant for rehabilitation design for damage caused by Hurricane Fran to the lower dam at Durant Nature Park in Raleigh, North Carolina. Runoff from Hurricane Fran overtopped the Lower Dam and eroded away the entire downstream slope. The rehabilitation design included an innovative fuse plug emergency spillway to increase the spillway discharge capacity for an upgraded spillway design flood. ***($110K)***

Project Manager, Pinopolis West Dam, Moncks Corner, SC. Mr. Whiteside served as project manager for the seismic evaluation of the 80-foot-high, 6600-foot-long Pinopolis West Dam in Moncks Corner, South Carolina, for the U.S. Army Corps of Engineers, Savannah District. The studies included a liquefaction evaluation of the existing dam sections including undisturbed sampling of four different loose foundation sands in borings and 6-foot-diameter exploratory shafts, seismic deformation analyses for proposed modified dam sections, and evaluation of a compaction grouting test section based on measurement of steady-state (residual) strengths in one of the loose sand layers before and after compaction grouting. ***($400K)***

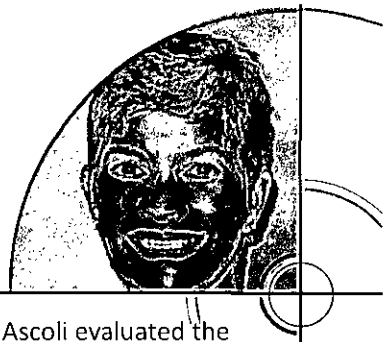
Project Manager, Walnut Creek Watershed Regional Stormwater Facility Study, Raleigh, NC. Mr. Whiteside was the project manager for the evaluation of eight dams in Raleigh, North Carolina. He inspected the dams and developed conceptual designs for upgrading the dams to meet state dam safety requirements. ***($20K)***

Technical Consultant, Fayetteville Dams, Fayetteville, NC. Mr. Whiteside provided consultation for the preparation of emergency action plans for four dams in Fayetteville, North Carolina – Bonnie Doone Lake, Kornbow Lake, Mintz Pond, and Glenville Lake Dams. ***($110K))***

REBECCA GRANT ASCOLI, P.E.

DAM DESIGN

Education: ***Civil Engineer Degree – Geotechnical Engineering, B.S. – Civil Engineering;***
Registration: ***P.E. – FL (1997), IA;*** **Years with CDM:** ***2.5;*** **Years with Other Firms:** ***32.5***



Co-Project Manager, Lake Heritage Dam, Leon County, FL. For the conceptual design study, Ms. Ascoli evaluated the rehabilitation and abandonment options for this aging 14-foot earthfill dam with failed outflow system. This involved working extensively with permitting agencies and designing for negligible alteration of the existing H/H conditions. ***($144K)***

Co-Project Manager, Lake Munson Dam, Leon County, FL. Lake Munson Dam, constructed in 1968, has experienced underseepage/uplift problems and downstream bank erosion. Ms. Ascoli coordinated the rehabilitation design for the low concrete dam, including geotechnical, hydrologic/hydraulic, structural, environmental, and permitting aspects. The project is expected to be bid in early 2011. ***($245K)***

Senior Geotechnical Engineer, Newcastle Drive Wetland Restoration and Flood Control, Clay County, FL. Ms. Ascoli was the senior geotechnical engineer for the geotechnical engineering design report for refurbishment of this stormwater retention pond, which stores excess runoff from an adjacent ditch and channels it through a wetland area into a new outlet structure below the adjacent street. ***($35K)***

Expert Witness, Ten Mile Creek Water Preserve Area, St. Lucie County, FL. The 550-acre aboveground Ten Mile Creek impoundment has not been filled to design capacity since completion in 2006 due to slope stability, seepage, and erosion issues. The USACE is in litigation with the design engineer. CDM was contracted by the U.S. Department of Justice to provide expert witness services regarding the adequacy of the embankment design. As an expert witness, Ms. Ascoli has organized a group of support staff, reviewed project documents, overseen seepage and stability analyses, and participated in review and settlement meetings. ***($700K)***

Senior Geotechnical Engineer, Stormwater Treatment Area – North, Martin County, FL. For the Lake Okeechobee Fast-Track (LOFT) Project, Ms. Ascoli was the senior geotechnical engineer for the embankment design in the Final Design Report for the north stormwater treatment area (STA-N). The 2,700-acre site is divided into two STAs, each of which is surrounded by a perimeter embankment and seepage collection ditches. The interior of STA-N is divided into three cells by internal embankments. CDM prepared analyses of the freeboard, seepage, slope stability, settlement and liquefaction potential for the proposed design, and presented foundation and construction recommendations. Ms. Ascoli is currently involved in CDM's engineering during construction oversight for STA-N. ***($16M)***

Senior Geotechnical Engineer, Stormwater Treatment Area – South, Martin County, FL. For the Lake Okeechobee Fast-Track (LOFT) Project, Ms. Ascoli reviewed the Geotechnical Data Report for the south stormwater treatment area (STA-S), and she was the senior geotechnical engineer for the embankment design of STA-S. STA-S is surrounded by a perimeter embankment and seepage collection ditches, and is divided into five cells by internal embankments. CDM prepared analyses of the freeboard, seepage, slope stability, settlement, and liquefaction potential for the proposed design, and presented foundation and construction recommendations. ***($16M)***

Project Manager, Surge Protection, Vero Beach, Indian River County, FL. Ms. Ascoli oversaw the geotechnical exploration and prepared foundation recommendations for a tilting weir and a pump station to be installed in existing canals. ***($10K)***

Project Manager, Stormwater Pollution Control Structures at North, Main and South Relief Canals, Indian River County, FL. Ms. Ascoli oversaw the geotechnical exploration for the caissons to house Vortex Units at each of the three canals. She was also responsible for providing design and construction recommendations for the associated weirs, diversion channels, and retaining walls. ***($15K)***

Project Geotechnical Engineer, Rockfill Dam Design, Guatemala, Central America. Ms. Ascoli conducted field investigations and organized laboratory testing of core materials and concrete aggregates for the proposed 160+ meter high rockfill dam for the Chulac Hydroelectric Project. She participated in grout tests for dam abutments, blasting tests for rockfill, and geological exploration for abutment stability, including two exploration audits. Work progress was reviewed periodically by World Bank Consultants. ***($300K)***

Engineer in Charge of QC Laboratory, Aguacapa Hydroelectric Project, Instituto Nacional De Electrificacion (INDE), Guatemala, Central America. Ms. Ascoli organized and managed QC laboratory for the owner, INDE. The project included a concrete gravity dam, an earthfill, asphalt lined retention reservoir, a 13.3-kilometer low pressure power tunnel and a 4 kilometer high pressure tunnel plus penstock, a 90-MW power house, a quarry, and a classifying plant for river run aggregates. She managed 40 employees working around the clock at 7 fronts and an onsite laboratory to test the concretes, aggregates, and fill incorporated in the project. Concrete aggregates included both crushed stone from an onsite quarry, and river run sands and gravel from a classifying plant. Ms. Ascoli submitted monthly reports to project consultants and to special World Bank Consultants. ***($100M)***

Senior Geotechnical Engineer, Alternatives Study for Replacement of Subaqueous Force Main, Sunset Isles, Miami Beach, FL. Ms. Ascoli performed geotechnical engineering investigations and evaluated alternatives, including open cut, microtunneling, jack and bore, pipe bursting, and horizontal directional drilling (HDD) to replace an aging force main between two islands in Biscayne Bay. Design considerations included high water table, loose pervious soils, highly congested work area, and environmental/permitting issues regarding the bay bottom. ***($43K)***

Lead Geotechnical Engineer, Storage Tanks and Pump House, Arawak Cay Port Development, Nassau, Bahamas. Ms. Ascoli oversaw the subsurface investigation and preparation of shallow foundation recommendations for two 160-foot diameter, 40-foot high, aboveground water storage tanks on a spoil island. ***($50K)***

Senior Geotechnical Engineer, Aboveground Storage Tank, Skyco Water Treatment Plant, Roanoke Island, NC. Ms. Ascoli provided shallow foundation recommendations for the 2MG, 120-foot diameter storage tank. ***($2.3M)***

Senior Technical Reviewer/Senior Geotechnical Engineer, Toytown Landfill Underdrain System, Pinellas County, FL. The underdrain system for the 235-acre Toytown landfill, completed in 1989, was designed to maintain water levels inside the perimeter slurry wall below the levels beyond the wall. After occasional outward gradients were observed, CDM evaluated the existing underdrain system and prepared recommendations for construction of a new underdrain. Ms. Ascoli reviewed the Geotechnical Data Report that included SPT borings, CPT soundings, and four aquifer performance tests. She then managed the seepage analyses for development of the underdrain design for the 10 percent design report. ***($417K)***

Lead Geotechnical Engineer, Renaissance on the River, Fort Pierce, St. Lucie County, FL. Ms. Ascoli oversaw a multiple phase geotechnical exploration and prepared deep foundation recommendations for the four- and five-story up-scale commercial/residential development occupying a city block on the Indian River. Use of shorter piles beneath one end of the building resulted in substantial cost savings to the owner. Statnamic loads tests were used to accelerate the start of construction. Ms. Ascoli also supervised inspection of the production pile installation. ***($60K)***

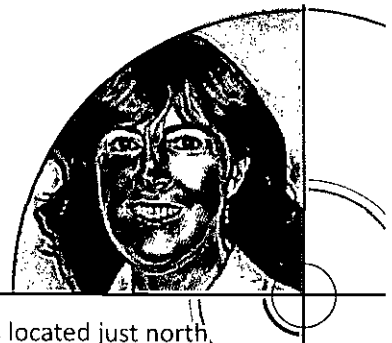
Lead Geotechnical Engineer, St. Lucie County Clerk of Court Office, Fort Pierce, FL. Ms. Ascoli oversaw the geotechnical exploration for the five-story structure with 450-kip column loads. After installing stone columns to improve bearing capacity of the underlying soils, the building was supported on a shallow foundation system. She coordinated inspection of the stone column installation and the subsequent verification of the ground improvement with Cone Penetrometer soundings. ***($40K)***

Lead Geotechnical Engineer, Ocean Bay Townhomes, Hutchinson Island, St. Lucie County, FL. The site of the 24 three-story, rigid, heavy structures was underlain by a thick layer of organic soils, which had been filled over during the construction of an adjacent oceanfront condominium building. Ms. Ascoli was responsible for the geotechnical exploration and subsequent monitoring of the replacement of the organic soils with compacted fill allowing use of shallow foundations. Dewatering issues due to the proximity of the ocean and the high permeability of the beach sand made compaction difficult. Cone Penetrometer soundings were used to verify the soil density. ***($50K)***

JANE M. WILLIAMS, P.E., CFM

FACILITY DESIGN

Education: ***B.S. – Civil Engineering;*** **Registration:** ***P.E. – FL (2006);***
Years with CDM: ***22;*** **Years with Other Firms:** ***8***



Project Manager, Harbinwood Estates Drainage Improvements, Leon County, FL. This project is located just north of I-10 in Tallahassee, Florida, within the Lake Jackson Basin. This area has experienced significant flooding problems (flooding of houses and roads) that have been associated with deficiencies in the existing stormwater management system. The improvements consisted of road reconstruction, permanent sheet pile channel improvements, storm sewer construction, stormwater force main, and all associated FDEP and Leon County permitting. ***($366K)***

Project Engineer, Faulk Closed Basin Drainage Improvements, Leon County, FL. This project is located just north of I-10 in Tallahassee, Florida within the Lake Jackson Basin. This area experienced significant flooding problems (flooding of houses and roads) that were associated with deficiencies in the existing stormwater management system. The improvements consisted of road reconstruction, channel improvements, storm sewer construction, stormwater force main, and all associated FDEP and Leon County permitting. ***($1M)***

Project Engineer, Loch Rane Drainage Improvements, Clay County, FL. This stormwater facility was designed to alleviate flooding on Loch Rane Boulevard and to improve stormwater quality. Ms. Williams was the engineer-of-record for this project, which included two new wet detention ponds, one dry detention pond, jack and bore of three stormwater pipes, and a gabion lined channel. ***($185K)***

Designer, Riverside Baffle Boxes, Jacksonville, FL. The project included preparation of design drawings and specifications for four baffle boxes servicing two different tributary areas in downtown Jacksonville. The purpose of the project was to provide water quality retrofit treatment in the Riverside area. The first two boxes were designed off line from an existing 60-inch RCP storm sewer and connected through a diversion weir to the baffle box. The other two boxes were designed online along an existing 24-inch RCP and 36-inch RCP storm sewers, respectively. ***($447K)***

Designer, McGirts Creek Realignment, Jacksonville, FL. The existing waste pit berms have ruptured in the past, spilling contaminated sludge into the tributary of the McGirts Creek and surrounding wetlands. One of the components of this multidiscipline project consists of realignment of approximately 1,500 feet of the tributary; as part of the remedial design, the old creek bed will be capped. In addition to the realignment, wetlands reforestation with surface water controls is proposed along the creek. The proposed control structures are weirs constructed with gabions. The project includes the preparation of design drawings and specifications for the construction of the entire required stormwater infrastructure. ***($449K)***

Project Manager, C-7 Canal Pond at Lake Lawne, Orange County, FL. This project is designed to provide water quality treatment for Lake Lawne, which is the headwaters of the Little Wekiva River. The project includes construction of a five-acre pond located at the north end of Barnett Park and relocation of a sanitary force main to accommodate the new pond. ***($641K)***

Project Engineer, Elder Creek Regional Pond, Seminole County, FL. Ms. Williams performed modeling, prepared the permits, and prepared design drawings and specifications for a 17-acre regional stormwater wet detention pond. The purpose of the project is to provide flood relief and water quality treatment for the stormwater runoff. ***($2.25M)***

Project Manager, Lockhart-Smith Canal, Seminole County, FL. The project is part of the Monroe Basin, Lockhart-Smith Canal sub-basin, and its tributary area is approximately 7.2 square miles. The design assignment consisted of channel improvements for maintenance purposes of a portion of the canal. The design also included a pedestrian bridge over the canal. The project included the preparation of design drawings and specifications for the construction of the entire required stormwater infrastructure. ***($130K)***

Project Manager, Lincoln Heights/Ravenna Park Stormwater Improvements, Seminole County, FL. This project is a stormwater management system designed to provide flood relief in a residential area. The project includes the installation of two 30-cfs pump stations, new stormwater pipe and inlets, and the installation of two lined stormwater ponds. The project also includes the relocation of a sanitary force main and installation of electrical service for the pump stations. ***($287K)***

Project Engineer, Little Lake Fairview Restoration and Dubsdread Golf Course Renovation, Orlando, FL. Ms. Williams was the engineer-of-record for this project, which provided for the renovation of Dubsdread Golf Course along with the construction of a closed conveyance system, wetland restoration, and multiple interconnected wet detention ponds. Additional improvements included parking lot construction, new restrooms, irrigation pump stations, landscape design, and limited utility adjustment. ***($1.3M)***

Designer, Barton Park Regional Pond, Rockledge, FL. Ms. Williams prepared design drawings and specifications for a 70-acre regional stormwater wet detention pond. The purpose of the project was to provide flood relief and water quality treatment for the stormwater runoff. ***($58K)***

Designer, Stormwater Improvements Downtown Regional Facility Design, Boynton Beach, FL. Ms. Williams was responsible for preparing design drawings for 5,500 feet of storm sewers, ranging from 24 to 72 inches in diameter, including concrete box culvert and a regional stormwater regional park and wet detention pond. The purpose of the project was to provide flood relief and water quality treatment for the stormwater runoff from the downtown area of the city to encourage redevelopment in the area. ***($4.95M)***

Project Engineer, Homeland Basin Improvements, Pinellas Park, FL. This project is designed to reduce flooding within the Homeland Basin and to improve the water quality of its discharge. Ms. Williams was the engineer-of-record for this project, which included 7,400 linear feet of stormwater pipe, roadway improvements, a baffle box, and a redesigned stormwater pond. The project also included horizontal directional drilling of approximately 1,100 linear feet of 8-inch pipe. ***($558K)***

Project Engineer, Channel 4 and 4E, Pinellas Park Water Management District, Florida. This project is designed to stabilize and realign a portion of Channel 4 and to replace five culvert crossings in Channel 4E. Ms. Williams is the engineer-of-record for this project, which includes 150 linear feet of concrete lined channel and 160 linear feet of gabions. The culvert upgrades include installing new concrete box culverts and headwalls to reduce flooding in the basin. ***($236K)***

Project Manager, Pine Street/Orange Blossom Trail Corridor Stormwater Improvements, Orlando, FL. This project is designed to alleviate chronic flooding in an industrial section of downtown Orlando. The project includes construction of 2,000 linear feet of 42-inch stormwater pipe including an open cut of a major Florida Department of Transportation (FDOT) roadway. The project also included the installation of a baffle box, a concrete weir structure, and sanitary sewer relocation. ***($217K)***

Project Engineer, Orange Boulevard Bridge Repairs, Seminole County, FL. After the 2004 hurricane season passed through Central Florida, a series of flooding problems occurred in Seminole County. As a result of the flooding, the Orange Boulevard Bridge was damaged, which created a safety hazard to the public, precluding the use of the bridge for vehicular traffic and emergency response. Final design improvements included canal stabilization, minor structural repairs, weir construction, and substantial erosion control. The project was completely evaluated, designed, permitted, bid out, and constructed in less than six months. ***($119K)***

Project Engineer, Various Florida Projects. Ms. Williams has been involved in the modeling, permitting, and design for various stormwater projects in Florida. Projects include the City of Orlando Lehigh Avenue Stormwater Improvements; the City of Sebastian Twin Ditches Stormwater Improvements; and the City of Jacksonville Cedar River Outfall Improvements. Ms. Williams has also assisted on water and wastewater projects, including the Orange County Master Pump Stations Replacement. ***(Various)***

BRIAN K. WILLIAMS, P.E.

FACILITY DESIGN

Education: ***B.S. – Civil Engineering;*** **Registration:** ***P.E. – FL (2006);***
Years with CDM: ***22.5;*** **Years with Other Firms:** ***3.5***

Project Engineer, Navy Canal Regional Stormwater Facility, Seminole County, FL. As project engineer, Mr. Williams was part of the project team for the construction of an off-line wet detention pond, as well as the construction of a water impoundment along the historical flow path of Navy Canal with the purpose of reducing the pollutant load to Lake Jesup. The off-line pond also included the installation of a double barrel box culvert cross drain at the canal to provide access from one side of the canal to the other side and a sheet pile and gabion weir on the canal. The tributary area for the proposed improvements was approximately 820 acres. Mr. Williams was responsible for permitting through the St. Johns River Water Management District (SJRWMD), wetland remediation, development of the ICPR model, design, and cost estimating. ***($10K)***

Project Engineer, Cameron Ditch Regional Facility, Seminole County, FL. Mr. Williams was a project engineer for the construction of two cascading ponds, a plunge pool, connecting open channels, drainage structures, wetland creation, and stormwater park in the general area of Cameron Avenue with Kentucky Street, and the enhancement of downstream wetlands along the historical flow path of Cameron Ditch. The project reduced the pollutant load to Lake Jesup. Mr. Williams assisted with the design and development of a cost estimate. ***($277K)***

Project Engineer, Lockhart-Smith Regional Stormwater Facility, Seminole County, FL. Mr. Williams' role involved updating an existing ICPR model, developing a design with no impact to existing flora or fauna, submitting permits, and developing the engineer's estimate of probable cost. While no roadway was involved, the project adhered to FDOT standards wherever possible. The project consisted of converting the existing Interstate 4 (I-4) borrow pit No. 2 into a regional stormwater treatment facility. ***($130K)***

Project Manager, Riverside Pond Improvements, Orange County, FL. Mr. Williams is responsible for the design, permitting, and development of construction documents of an off-line stormwater treatment pond along the Little Wekiva River. The goal of the project is to create a pond that has three treatment trains to meet future total maximum daily load (TMDL) requirements. The first train is a deep settling basin to reduce total suspended solids (TSS). Water enters the second train over a weir where an aerator assists with biochemical oxygen demand (BOD). The final train involves wetland planting for nutrient uptake. ***($155K)***

Assistant Project Manager, Anniversary Park/Lake Concord Stormwater Park, Casselberry, FL. Mr. Williams' role as assistant project manager placed him in direct charge of the design and production of construction documents, as well as permitting assistance for a stormwater park within the City of Casselberry. Park amenities included a boardwalk with educational kiosks; an amphitheater with open seating; BMPs to include a detention pond, exfiltration trench, supplemental irrigation reuse water from an existing stormwater pond, bio-retention areas; and various forms of impervious pavement design within a new parking area. Design elements included slip lining 200 lineal feet of 42-inch CMP, and directional drilling 100 lineal feet of 4-inch irrigation line. ***($2.5M)***

Project Manager, Little Wekiva River Slope Stabilization (Area 1), Orange County, FL. The Little Wekiva River is an outstanding Florida water body that has experienced extensive development pressure. As a result, areas of the river experience severe slope erosion. After Hurricane Faye, the National Resources Conservation Service (NRCS) identified areas of the river that qualified for grant funding to protect public safety and private property. Mr. Williams' task for this project is to identify the proper method of slope stabilization that will be economically feasible and fit within the limited space available. The final design involves installing sheet pile using the hydraulic push-in method. Mr. Williams is responsible for the design, permitting, and bidding services for this project. ***($65K)***

Project Manager, Stormwater Gravity Injection Wells, Key West, FL. Mr. Williams is responsible for the design and permitting of three gravity injection wells. The purpose of the wells is to lessen flooding in areas identified by the City. To assist in removing pollutants from the stormwater, the injection wells are placed with a chambered baffle box to trap sediments and oils. ***($19K)***

Project Engineer, Channel 1B-5, Pinellas Park Water Management District, Pinellas Park, FL. Mr. Williams' role involved inspecting an existing channel lining that had suffered catastrophic failure, determining what areas required replacement, and developing the design and construction documents. ***($113K)***

Project Engineer, Ormond Beach Water Treatment Plant Expansion, Ormond Beach, FL. Mr. Williams' responsibilities included hydraulics and selection of the feed and transfer pumps, site layout, stormwater permitting, bidding services, and construction management. The Ormond Beach Water Treatment Plant Expansion entailed combining a new 4-mgd low pressure reverse osmosis plant with an existing 8-mgd lime softening plant. ***($16.9M)***

Project Engineer, Tram Road Reclaimed Water Facility, Tallahassee, FL. Mr. Williams was tasked with completing the hydraulic calculation through the plant, developing the site plan and stormwater plan, and designing the chlorine contact chamber. Additionally, Mr. Williams designed the 60 lineal feet of jack and bore. ***($144K)***

Project Engineer, Lake Region Water Treatment Plant, Palm Beach County, FL. For this project, Mr. Williams' tasks included running the hydraulics for the feed pumps; layout and design of the process building, clearwell, and degasifier system; engineer's estimate of cost; development of specifications and drawings; and overseeing the production of the contract documents. The Lake Region Water Treatment Plant project involved design of a 10-mgd low pressure reverse osmosis facility, the wellfields to supply the raw water, and the pipelines for distribution. ***($21M)***

Task Manager, South Walton Utility Company, Inc., Wetlands Application System, Miramar Beach, FL. Mr. Williams provides technical advice and oversees the design and permitting of reclaimed water mains for wetland applications. The project includes open cut, over 30 direction drills varying in size from 4 inches to 24 inches totaling 2.5 miles (11,000 lineal feet of 18-, 20-, and 24-inch pipe), and Florida Department of Transportation (FDOT) permitting. There are two major FDOT road crossings. The total amount of pipe to be installed under this project is 22,300 feet. ***($55K)***

Task Manager, Tampa Reclaimed Water Expansion Phase 2, Tampa International Airport, Tampa, FL. Mr. Williams was the project team leader responsible for design and permitting of the reclaimed water pipeline expansion along State Road 589 adjacent to Tampa International Airport. This project encompasses several techniques for pipeline installation for a total pipe length of 5,000 lineal feet, including 2,500 lineal feet of horizontal directional drilling of 18-inch HDPE pipe, and requires coordination and permitting with FDOT, the Federal Aviation Administration (FAA), and the Southwest Florida Water Management District (SWFWMD). ***($318K)***

Project Manager, Long Pond Road Water Main Extension, Seminole County, FL. For the design of 4,100 lineal feet of 6-inch ductile iron pipe water main, Mr. Williams was responsible for preparing the preliminary design report (PDR) outlining pipe routes and strategy; preparing and managing the scope, schedule, and budget; and preparing construction drawings and construction specifications. Mr. Williams also provided bidding assistance and prepared the FDOT and Florida Department of Environmental Protection (FDEP) permits while coordinating the Fish and Wildlife Conservation Commission (FWC) permit. Additionally, Mr. Williams confirmed the pipe hydraulics. Points of interest for the project include maintaining bike trails and the park while the pipe is installed; jack and bore three sections of 16-inch pipe, approximately 200 lineal feet; to prevent local traffic flow disruptions; and maintaining a current design on a site that was under development by a separate entity. ***($165K)***

Project Manager, Yankee Lake Road Reclaimed Water Main Extension, Seminole County, FL. Mr. Williams was tasked with the preparation of the PDR outlining pipe routes and strategy; preparation and management of scope, schedule, and budget; and preparation of construction drawings and specifications. Mr. Williams was also tasked with permitting services, which included preparing the FDOT permit, following up on the existing FDEP permit, and coordinating the FWC permit. He provided bidding assistance, including responding to bidder's questions and assisting with contractor qualifications, and construction services, including responding to Requests for Information (RFIs), preparing change orders, and conflict resolution. Challenges of the project included designing around future highway expansion, which has not been finalized, and coordinating with the FDOT for jack and bore activities concerning the future expansion. The jack and bore installations included 210 lineal feet of 30-inch reclaimed water main, 210 lineal feet of 12-inch water main, and 50 lineal feet of 24-inch reclaimed water main. ***($172K)***

Project Engineer, South Pointe Booster Pump Station, Miami Beach, FL. Mr. Williams' responsibilities include site layout, utility conflict resolution, drainage, and mechanical design of the pump room. Tapping into and rerouting of 54-inch reinforced-concrete pipe force main. ***($1.3M)***

DELTON S. SCHWALLS, P.E., CFM

FEMA COORDINATION

Education: ***B.S. – Environmental Engineering;*** **Registration:** ***P.E. – FL (2006), GA, AL, SC;***
Years with CDM: ***6;*** **Years with Other Firms:** ***3***

Project Manager, Gum Creek Flood Study, Leon County, FL. Mr. Schwalls is the project manager for this watershed-wide flood study, which involves performing XP-SWMM modeling and preparing a LOMR application for FEMA. ***($29K)***

Project Manager and Engineer, Capital Cascade Trail – Segment 2 Modeling, Blueprint 2000, Tallahassee, FL. Mr. Schwalls was the project manager and lead engineer for this H&H modeling and FEMA map revision project. The effort included refining an existing XP-SWMM stormwater model, calibrating that model to recorded storm events, and preparing a LOMR application for FEMA. ***($183K)***

Project Manager, Gulf Highlands Study and LOMR, Panama City Beach, FL. Mr. Schwalls was the project manager for this project, which involved preparing a LOMR for the primary stormwater system, including XP-SWMM modeling, Geographic Information System (GIS) mapping, and preparing a LOMR application for FEMA. Additional modeling is currently being performed prior to submitting the LOMR application. ***($35K)***

Project Manager, Colony Club Study and LOMR, Panama City Beach, FL. Mr. Schwalls was the project manager for this project, which involved preparing a LOMR for the primary stormwater system, including XP-SWMM modeling and GIS mapping, and preparing a LOMR application for FEMA. The LOMR was successfully obtained. ***($26K)***

Project Manager, Calypso Alternatives Evaluation, Panama City Beach, FL. Mr. Schwalls was the project manager for this project, which involved performing an alternatives analysis for alleviating a flooding problem within the City. CDM delivered a final recommendation of alternatives to eliminate flooding. ***($7K)***

Project Manager and Lead Engineer, Farmton Property LOMR Review, Miami Corporation/Volusia County, FL. Mr. Schwalls was the project manager and lead engineer for this project, which involved performing a detailed technical review of a SWMM5 model and a FEMA-compliance review of the LOMR application as an extension of Volusia County staff. CDM provided a technical memorandum summarizing the issues with the modeling and application. ***($15K)***

Project Engineer, Black Creek Restoration Project, Leon County, FL. This project involved relocating an existing roadway and restoring the old roadbed to wetlands. Mr. Schwalls prepared the Environmental Management Permit Application for submittal to the County and the General Stormwater Permit Application for submittal to the FDEP. ***($271K)***

Project Engineer, Fifth Runway Phase 1, Sullivan Creek Flood Study, Hartsfield-Jackson Atlanta International Airport, Atlanta, GA. Mr. Schwalls performed an existing and proposed conditions HEC-2 hydraulic analysis of the impacts of the proposed project on the 100- and 500-year floodplains and floodway to obtain a CLOMR. He also prepared the topographic work map in a combination of CAD and GIS environments, delineating the flood hazard boundaries. The CLOMR was obtained without receiving any technical comments from FEMA and only one regulatory comment. ***($29K)***

Project Engineer, Fifth Runway Phase 1 and Sullivan Road Relocation, Hartsfield-Jackson Atlanta International Airport, Atlanta, GA. As a follow up to the Conditional Letter of Map Revision (CLOMR) obtained for this project, Mr. Schwalls prepared a LOMR application representing as-built conditions of the airport's new runway. At the request of the client, Mr. Schwalls also incorporated the as-built conditions for a road relocation project into this LOMR, even though the firm originally contracted to obtain a CLOMR for the roadway project did not do so. ***($61K)***

Project Manager, Capital Cascade Trail – Segment 3 & 4 Modeling, Blueprint2000, Tallahassee, FL. Mr. Schwalls is serving as the project manager for this $1M stormwater modeling project, supporting stream restoration and stormwater park design. The analysis will include simulating the primary stormwater management system in XP-SWMM, calibrating the modeling, and performing alternative analysis of the design components. ***($286K)***

Project Engineer, Ground Storage Tank/Booster Pump Station, Callaway, FL. Mr. Schwalls designed the stormwater treatment and management facilities for the site and completed the General Stormwater Permit package for submittal to the Florida Department of Environmental Protection (FDEP). He used ICRP to perform the H&H analysis. ***($371K)***

Project Engineer, Tram Road Public Access Water Reuse Facility, Tallahassee, FL. Mr. Schwalls designed the stormwater treatment and management facilities for the site and completed the Environmental Management Permit package for submittal to the City of Tallahassee. He used ICRP to perform the H&H analysis. ***($144K)***

Project Manager and Engineer, North and Mark Stormwater Improvements, Daytona Beach, FL. Mr. Schwalls evaluated various alternatives for constructing a stormwater management and treatment facility for the basin. Using SWMM 4, he modeled the improvements and alternatives in order to eliminate house, yard, and street flooding for residents, as well as improve stormwater quality. Mr. Schwalls also designed the stormwater management facilities based on this design and is preparing final bid documents. ***($209K)***

Project Manager, North Street Pond Pump Evaluation, Daytona Beach, FL. Mr. Schwalls was the project manager for this stormwater retrofit project. The project involved evaluating options to expand the capacity of an existing stormwater system to mitigate local flooding problems and modeling the system using SWMM5. Alternatives being evaluated include pumping down the pond prior to large storm events, enlarging the existing stormwater pipes, and connecting the pond to other stormwater systems. ***($59K)***

Project Engineer, Stormwater Master Plan Update, Daytona Beach, FL. Mr. Schwalls assisted in updating the stormwater master plan for the City to incorporate development and project implementation over the previous 14 years. In addition, this project evaluated and proposed new alternatives to improve water quality and reduce flooding conditions within the City. ***($199K)***

Project Engineer, Lake Orlando/Horseshoe Lake Interconnection Feasibility Study, Orange County, FL. Mr. Schwalls helped develop design alternatives for Orange County for increasing recharge to the Floridan aquifer, utilizing existing and proposed infrastructure. This project involved diverting water from an area with minimal recharge potential to an area with very high recharge potential. He used SWMM5 to perform the H&H analysis. ***($46K)***

Lead Engineer/Task Manager, Lake Okeechobee Fast-Track Project (LOFT) Dam Failure Analyses, South Florida Water Management District, Florida. Mr. Schwalls was the lead engineer and task manager of the dam failure analyses for the Lake Okeechobee Fast-Track (LOFT) Basis of Design Review (BODR) Project for the South Florida Water Management District (SFWMD). As the lead engineer, Mr. Schwalls developed HEC-RAS dam failure models to simulate embankment breaches for the Taylor Creek Reservoir and to ascertain the impact these breaches would have on the surrounding areas. In addition, he developed flood inundation mapping for the affected areas and Hazard Potential Classifications for the impoundments. This analysis was prepared in accordance with Design Criteria Memorandum 1 (DCM-1) and Federal Guidelines for Dam Safety. ***($16M)***

Review Engineer, Map Coordination Contractor (MCC), FEMA. Mr. Schwalls reviewed CLOMRs and LOMRs for FEMA as an MCC within Regions 5, 6, 7, and 9. During this time, he reviewed more than 130 CLOMRs and LOMRs for compliance with FEMA technical standards, policies, and regulations. He also reviewed Physical Map Revisions (PMRs), Studies, and Restudies, including both countywide and non-countywide formats. These reviews included the analyses and mapping of Riverine, Lacustrine, levee, coastal, and dam-controlled systems. The models utilized in the reviewed analyses include, but are not limited to, HEC-1, HEC-HMS, TR-20, HEC-2, HEC-RAS, WSP-2, and XP-SWMM. The topographic mapping and flood hazard delineation review included hard-copy, AutoCAD, and Geographic Information Systems (GIS) formats. His responsibilities required constant coordination and mediation between local, state, and federal public agencies and private clients. ***(Various)***

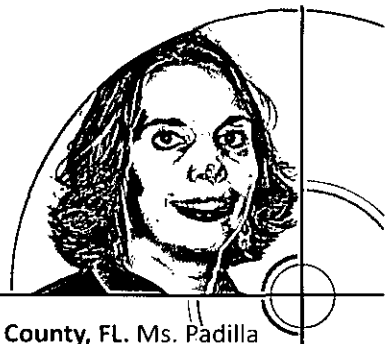
Review Engineer, Pogues Run FEMA Flood Study, Indianapolis, IN. As a FEMA MCC, Mr. Schwalls reviewed the analysis and mapping for a LOMR of Pogues Run, a 10-mile river through the center of Indianapolis composed of both open-channel and pipe-enclosed conveyance reaches, for compliance with FEMA technical standards, policies, and regulations. This involved the review of both HEC-RAS and FEQ models, digital and hard copy topographic mapping, and floodplain and floodway delineations. ***($8K)***

Review Engineer, South Fork Crow River, Carver County, MN. As a FEMA MCC, Mr. Schwalls reviewed the analysis and mapping for a LOMR of a 23-mile reach of the South Fork Crow River for compliance with FEMA technical standards, policies, and regulations. The project involved reviewing H&H analyses, which utilized HEC-1 and HEC-2, and floodplain and floodway mapping using a combination of CAD and GIS data. This study, although not within the normal scope of a LOMR due to size, was reviewed, processed, and completed by Mr. Schwalls in accordance with FEMA's stringent regulatory requirements and timeframes. ***($10K)***

ANNA M. PADILLA, P.E., CFM

MODELING

Education: ***M.S. – Water Resources in Civil Engineering;*** **Registration:** ***P.E. – FL (2009);***
Years with CDM: ***6;*** **Years with Other Firms:** ***0***



Project Manager and Engineer, Southbrook Floodplain Enhancement Conceptual Design, Leon County, FL. Ms. Padilla evaluated various conceptual design alternatives for improving the existing stormwater management system of a residential area. Using EPA SWMM5, Ms. Padilla modeled the improvements and alternatives in order to minimize structural and yard flooding for residents, as well as improve stormwater quality and system functionality. Ms. Padilla prepared a Technical Memorandum summarizing the results of the modeling and the conceptual design alternatives. ***($73K)***

Project Manager and Engineer, Joe Cotton Trail Retrofit Design and Permitting, Leon County, FL. Ms. Padilla was the project manager for this stormwater retrofit project. The project involved evaluating options to improve the efficiency and aesthetics of an existing stormwater system, to mitigate local flooding problems. This project included modeling the system using EPA SWMM5 and design and permitting of the improvements. ***($70K)***

Project Engineer, Lake Munson Dam Rehabilitation Design, Leon County, FL. Ms. Padilla is assisting on this dam rehabilitation design project by completing the hydrologic and hydraulic modeling using XP-SWMM to support the rehabilitation design and construction. This project includes the installation of stream gauge for model calibration and routine maintenance of the stream gauges. ***($245K)***

Project Engineer, Lake Heritage Dam Conceptual Design Study, Leon County, FL. Ms. Padilla assisted on this project, including inspection of the dam and modeling of the existing primary stormwater management system using XP-SWMM. ***($144K)***

Project Manager and Engineer, Coral Drive Stormwater Improvements, Panama City Beach, FL. Ms. Padilla is project manager for a stormwater retrofit design project to eliminate roadway flooding. This project includes XP-SWMM stormwater modeling to evaluate design alternatives, pipe replacement design, and federal and state permitting. ***($55K)***

Project Engineer, Capital Cascade Trail – Segment 3 & 4 Modeling (Phase IA), Blueprint2000, Tallahassee, FL. Ms. Padilla assisted on this stormwater modeling project, supporting stream restoration and stormwater park design. In addition, she has coordinated with other project stakeholders during installation and maintenance of stream gauge stations and staff gauges. ***($286K)***

Project Engineer, Gulf Highlands FEMA Letter of Map Revision, Panama City Beach, FL. Ms. Padilla developed the existing conditions model to meet FEMA requirements using a previously developed XP-SWMM stormwater model. Additionally, she prepared the topographic work using Geographic Information System (GIS) and prepared letters notifying property owners of the impacts this Letter of Map Revision (LOMR) would have on their property. Ms. Padilla also prepared the LOMR package, including a report, completed LOMR application forms and all relevant documentation meeting FEMA regulations and policies. ***($35K)***

Project Manager, South Glades Trail Stormwater Improvements, Panama City Beach, FL. Ms. Padilla is the project manager for this stormwater retrofit project that involves stormwater modeling, design, and permitting, all completed by a subconsultant. She is acting as the liaison between the client and the subconsultant and is coordinating CDM's review of all subconsultant work prior to submittal to the client. ***($39K)***

Project Engineer, Panama City Beach Stormwater Management Master Plan, Panama City Beach, FL. Ms. Padilla prepared a stormwater management master plan for Panama City Beach. Tasks for this project included developing an inventory of drainage structures within the study area, delineating subbasins, creating the stormwater model, performing the hydrologic and hydraulic analysis of the existing system using XP-SWMM, identifying deficiencies within the primary system, and developing two conceptual alternative improvement scenarios to alleviate flooding. Following this analysis, Ms. Padilla prepared the master plan report describing the findings of the project. Additionally, she assisted with the delineation of the 25- and 100-year floodplains within the study area and preparation and submittal of a Federal Emergency Management Agency Letter of Map Revision using the MT-2 process. ***($328K)***

Project Engineer, Bayou George Stormwater Management Master Plan, Panama City, FL. Ms. Padilla assisted in preparing a stormwater management master plan for the Bayou George Drainage Basin. This project consisted of conducting field surveys of drainage structures within the study area, creating the regional stormwater model for the Bayou George Basin, and performing the hydrologic and hydraulic analysis of the existing system using EPA SWMM5. Additionally, this project included delineation of the 25- and 100-year floodplains within the limits of the study area. Following this analysis, Ms. Padilla assisted in preparation of the project report detailing the findings of the project. ***($132K)***

Project Manager and Engineer, Eagle Drive Stormwater Improvements, Panama City Beach, FL. Ms. Padilla modified an existing XP-SWMM stormwater model of the study area and evaluated proposed conceptual design alternatives to eliminate roadway and yard flooding. She prepared a Technical Memorandum presenting the modeling results. The recommended conceptual design alternative included installing drop inlets along the roadway and installing a bleed-down pipe to lower initial lake elevations, thus increasing storage capacity of the lake. ***($36K***)

Project Engineer, West Bay 1000 Acres Study and LOMR, The St. Joe Company, Bay County, FL. Ms. Padilla is lead engineer for this basin-wide flood study, which involves a FEMA Letter of Map Revision (LOMR) for a portion of the primary stormwater system, including XP-SWMM modeling, Geographic Information System (GIS) mapping, and preparing the LOMR application. ***($89K)***

Project Engineer, Capital Circle Southwest Corridor Expansion Project, Tallahassee, FL. Ms. Padilla assisted in roadway pond siting analysis and XP-SWMM modeling to determine stormwater management alternatives in the project area. In addition, she assisted with the preparation of the Hydrology/Hydraulics White Paper and the Pond Siting Report. ***($198K)***

Project Engineer, Beach Outfall Stormwater Management Master Plan, Bay County, FL. Ms. Padilla prepared a stormwater management master plan for portions of Panama City Beach within unincorporated Bay County. Tasks for this project included developing an inventory of drainage structures within the study area, identifying problem areas, delineating subbasins, hydrologic and hydraulic analysis of the existing system using XP-SWMM, and developing two conceptual alternative improvement plans. Following these tasks, Ms. Padilla also prepared the modeling report explaining the findings of this study. ***($86K)***

Project Engineer, Derby Woods Stormwater Management Master Plan, Bay County, FL. Ms. Padilla prepared a stormwater management master plan for the Derby Woods subdivision, which experienced chronic flooding problems. This evaluation consisted of hydrologic and hydraulic analysis of the existing system using EPA SWMM5, identifying deficiencies within the primary system, and developing three conceptual alternative improvement scenarios to alleviate flooding. Following this analysis, Ms. Padilla prepared the master plan report detailing the findings of this study. ***($76K)***

Project Engineer, St. Andrew Bay Watershed Stormwater Master Plan, Bay Environmental Study Team, Florida. Ms. Padilla provided assistance for this project, which is a cooperative effort between the Bay Environmental Study Team (BEST) and the local governments within Bay County. Ms. Padilla assisted in the collection and summarization of data from all the local governments within the watershed. Ms. Padilla used WMM to develop a watershed model that was used to identify stormwater management options and prioritize activities. This plan also identified stormwater management options and prioritized activities so that the Stakeholders could prepare and plan accordingly for the development of Total Maximum Daily Loads (TMDL) in the St. Andrew Bay watershed which were developed in 2009. ***($446K)***

Project Manager and Engineer, Tallahassee Regional Airport Stormwater Pollution Prevention Plan Update, Tallahassee, FL. Ms. Padilla completed the third annual update of the TLH Stormwater Pollution Prevention Plan (SWPPP) by conducting site inspections and preparing documentation of industrial activities for tenant facilities on airport property. In addition, Ms. Padilla summarized the findings in a database and updated the SWPPP report. ***($34K)***

HEATHER M. FITZGERALD, P.E., CFM

MODELING

Education: ***B.S. – Environmental Engineering;*** **Registration:** ***P.E. – FL (2009);***
Years with CDM: ***9;*** **Years with Other Firms:** ***0***

Project Engineer, Stormwater Master Planning, Design, and Permitting, Leon County, FL. Ms. Fitzgerald assisted in developing numerous hydrologic and hydraulic stormwater models using EPA-SWMM v4.4, ArcView/ArcGIS, and Excel spreadsheets for Leon County. Following the master plans, several projects went through design and permitting. Tasks completed by her for design included updates to the previously developed model data sets, development of summary of pay items and associated construction cost estimates following FDOT guidelines, preparation of construction details, and preparation of supplemental specifications. In addition, Ms. Fitzgerald prepared the local and state permits for these projects. ***($657K)***

Project Engineer, Lincoln Heights/Ravenna Park Improvements Stormwater Modeling, Seminole County, FL. Ms. Fitzgerald revised and refined an existing stormwater hydrologic and hydraulic model for the Lake Monroe Basin in Seminole County. Tasks included revising and inputting hydrologic and hydraulic data for Lincoln Heights and Ravenna Park Subdivisions based on data from completed construction since the model was originally developed. To aid in the hydrology revisions, Ms. Fitzgerald developed an Access database that computes runoff curve numbers from GIS data. ***($287K)***

Project Engineer, Lake Apopka Basin Stormwater Master Plan, Orange County, FL. Ms. Fitzgerald was responsible for the development of the Lake Apopka Basin Stormwater Management Master Plan. This included developing the hydraulic and hydrologic model using ICPR, generating 100-year flood plains with GIS, developing alternative stormwater improvements for identified flooding problem areas, reporting, and coordinating with the client, subconsultant, and other municipalities. ***($324K)***

Project Engineer, Hurricane Assessment, Orange County, FL. Ms. Fitzgerald worked on a project team updating eight existing ICPR models for Orange County. The modification consisted of updating the models to a common platform of Version 3.1, modifying the hydrology to represent a wet antecedent condition, and simulating a 20-inch/24-hour design storm. With the stage results, polygons representing the flooded areas were delineated. Conceptual pumping routes for land locked lakes were developed. Based upon the results of the study, capital acquisition of pump equipment was recommended. In addition, Ms. Fitzgerald developed a comprehensive ArcGIS Geodatabase of the client's spatial data and subsequent a wall map using ArcMap presenting this information. ***($90K)***

Project Engineer, MikeSHE/11 Modeling, Kissimmee, FL. Ms. Fitzgerald worked on a project team that was tasked with developing the conceptual approach for the use of high resolution MIKE SHE/11 in a city-wide stormwater quantity and quality model. The high resolution MKE SHE/11 model was applied at a conceptual scale and in a pilot area, and the results were compared with parallel effort using ICPR. Tasks included refining the model, setting up batch files for numerous simulations, modification of the water budget templates and comparison of these results. ***($48K)***

Project Engineer, Stormwater Modeling, Naples, FL. Ms. Fitzgerald assisted with the development of two hydraulic stormwater models for the Gordon River extension and Basin V Stormwater Master Plans using EPA-SWMM v4.4, ArcView GIS, and Excel spreadsheets. ***($337K)***

Project Engineer, Fountains MIKE SHE/11 Groundwater Study, SouthStar Development, Florida. Ms. Fitzgerald worked on a project team developing a MIKE SHE/11 model for the Fountains development, a 50-square-mile mixed land use development. Three scenarios were modeled: Natural Systems Model (pre-development), existing conditions, and proposed conditions. The model scenarios were used to investigate the relative groundwater and surface water levels in the project site. Results from the model were used to assure County staff that the effects of the development would not negatively impact groundwater levels. Tasks for this included GIS update and analysis of land use, extraction of modeling inputs using GIS, and assisting with model development and simulations. ***($72K)***

Project Engineer, Stormwater Master Plan Update, Ormond Beach, FL. Ms. Fitzgerald was responsible for updating the City's original stormwater master plan. Her responsibilities included field investigation of identified flooding problems; developing, ranking, and reporting conceptual flooding alternatives for existing flooding and maintenance problems within the city; and applying for the State Revolving Fund (SRF), which involved coordination with Florida Department of Environmental Protection. This project also included the development of a 5- and 10-year stormwater capital improvement plan (CIP). ***($96K)***

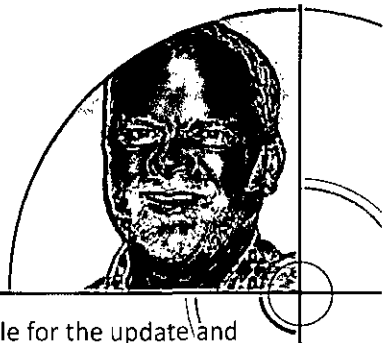
Project Engineer, Master Facilities Plan, Water Authority of Volusia, Volusia County, FL. The project involved evaluating the existing water production for the County and developing a master plan to serve the projected water demand for the year 2025. Ms. Fitzgerald assisted in several tasks on this project, including the existing water treatment facilities evaluation, the wellfield optimization modeling, and preparation of consumptive use permitting background documentation. ***($666K)***

Project Engineer, Sewer Modeling, Jacksonville, FL. Ms. Fitzgerald worked on a project team developing sewer models using InfoWorks for JEA service area. This project includes data collection, model development, and support. Ms. Fitzgerald worked in the client's office for the duration of this project serving as a liaison between the client and CDM, as well as mentoring junior engineers and interns. ***($544K)***

DOUGLAS A. MOULTON, P.E.

MODELING

Education: ***M.S. – Civil and Environmental Engineering;*** **Registration:** ***P.E. – FL (2002);***
Years with CDM: ***11.5;*** **Years with Other Firms:** ***11.5***



Project Engineer, Stormwater Master Plan Update, Jacksonville, FL. Mr. Moulton was responsible for the update and refinement of a SWMM of the City of Jacksonville. The update required the use of ArcHydro in the generation of the new basin, generating new hydrological parameters, and updating the hydraulic components by including new survey of culverts and bridges, as well as conversion of remnant SWMM Version 3 components. In addition, Mr. Moulton also documented the update and developed alternatives to provide relief from estimated flooding. ***($7M)***

Project Manager, Stormwater Master Plan Update, Ormond Beach, FL. Mr. Moulton was responsible for the review of Land Development Code, field investigation, and documentation of existing problem areas. He developed conceptual improvements for these problem areas, developed cost estimates for the improvements, and developed a capital improvements program (CIP) schedule and budget for project implementation. ***($96K)***

Project Engineer, Elder Creek Regional Stormwater Facility, Seminole County, FL. Mr. Moulton was the project engineer for the design level updating of a portion of the Lake Monroe stormwater model, refinement of a flood correction solution developed during the master planning stage, and preparation of a St. Johns River Water Management District (SJRWMD) Environmental Resource Permit Application. ***($2.25M)***

Project Engineer, Stormwater Management Master Plan for the Lake Jesup Basin, Seminole County, FL. Mr. Moulton was responsible for developing a stormwater model based upon previous modeling efforts and survey and construction plans. He also identified flooding problems as indicated by various design storm simulations and developed solutions to correct these problems. ***($880K)***

Project Engineer, Lockhart-Smith Canal Improvements, Phase I, St. Johns River Water Management District Environmental Resource Permit Application, Seminole County, FL. Mr. Moulton assisted with preparing this permit application by supplying stormwater modeling and GIS support. ***($130K)***

Project Manager/Engineer, Ormond Crossing Development Review, Ormond Beach, FL. Mr. Moulton was responsible for the review of a development of regional impact project for the City of Ormond Beach. This project included the review of an ICPR stormwater model (existing and proposed conditions), Federal Emergency Management Agency (FEMA) floodplain delineations, and supporting documentation. ***($10K)***

Task Manager, Integrated Water Resources Management Plan, Lee County, FL. Mr. Moulton is responsible for the review and recalibration of an existing MIKE SHE/11 integrated groundwater/surface water model of Southwest Florida. The management plan will consist of characterizing various water supply sources and ultimately developing alternative water supply options. Various modeling tools will be used to determine the feasibility of the alternative water supply options. ***($688K)***

Project Manager, Conceptual Flood Study, Orange County, FL. Mr. Moulton was responsible for obtaining and modifying eight existing ICPR models for Orange County. The modification consisted of updating the models to a common platform of Version 3.1, modifying the hydrology to represent a wet antecedent condition, and simulating a 20-inch/24-hour design storm. With the stage results, polygons representing the flooded areas were delineated. Conceptual pumping routes for landlocked lakes were developed. Based upon the results of the study, capital acquisition of pump equipment was recommended. ***($49K)***

Project Manager, Emergency Engineering Services – Lincoln Heights Analysis, Seminole County, FL. Mr. Moulton was responsible for updating an existing ICPR stormwater model based upon site development modeling efforts and survey and construction plans. This model was used to assist in the development of solutions to extensive flooding resulting from the 2004 hurricane season. The recommended solution was the construction of a pump station. ***($287K)***

Project Manager, Lake Apopka Basin Stormwater Master Plan, Orange County, FL. Mr. Moulton was responsible for developing a stormwater model based upon previous modeling efforts and survey and construction plans. He also identified flooding problems as indicated by various design storm simulations and developed solutions to correct these problems. ***($324K)***

Project Engineer, Big Econlockhatchee River Basin Stormwater Master Plan, Orange County, FL. Mr. Moulton was responsible for developing a stormwater model based upon previous modeling efforts and survey and construction plans. In addition, he identified flooding problems as indicated by various design storm simulations and developed solutions to correct these problems. ***($13K)***

Project Engineer, Tiger Bay/Bennett Swamp Integrated Surface/Groundwater Model and Report – Phase 3, Volusia County, FL. Mr. Moulton was responsible for converting four EPA SWMMs of urbanized Volusia County to MIKE 11 format. These data were incorporated into an enlarged MIKE SHE/11 model. Mr. Moulton was also responsible for interaction with the subconsultant and preparation of the draft report. ***($331K)***

Project Engineer, Master Stormwater Management Plan, Sebastian, FL. Mr. Moulton was responsible for modifying existing ICPR models, including combining several standalone models, incorporating approximately 90 culverts and bridges, identifying flooding concerns, and developing alternatives. Mr. Moulton also developed a water quality model of the city and proposed various water quality treatment alternatives to improve the mass loading of total suspended solids and nutrients. Mr. Moulton was also responsible for development of an EPA 319 grant application, which resulted in the awarding of a $300,000 grant. ***($220K)***

Project Manager, ISWMM, R&D Development, Florida. Mr. Moulton is responsible for the development of an interface between EPA's SWMM and the USGS' MODFLOW programs. This interface will ultimately provide a public domain groundwater/surface water model. ***($25K)***

Project Manager, Fountains MIKE SHE/11 Groundwater Study, SouthStar Development, Lee County, FL. Mr. Moulton was responsible for developing a hybrid MIKE SHE/11 model of a 50-square mile mixed land use development. Three scenarios were modeled: Natural Systems Model (pre-development), existing conditions, and proposed conditions. The model scenarios were used to investigate the relative groundwater and surface water levels in the project site. Results from the model were used to assure county staff that the effects of the development would not negatively impact groundwater levels. ***($72K)***

Project Engineer, Picayune Strand MIKE SHE/11 Consumptive Use Permit, Collier County, FL. Mr. Moulton modified an existing MIKE SHE/11 model (SWFFS Big Cypress Basin) to document the effects of increasing the wellfield allocation on adjacent surface water features. ***($5K)***

Project Manager, Butler and Big Sand Chain of Lakes Reconnaissance Study, South Florida Water Management District, Florida. Mr. Moulton was responsible for data collection and evaluation, development of a water budget, and regression analysis of two chains of lakes in Western Orange County. ***($62K)***

Project Manager, Kissimmee MIKE SHE/11 Model Development, Kissimmee, FL. Mr. Moulton was responsible for developing the conceptual approach to the use of high resolution MIKE SHE/11 in a city-wide stormwater quantity and quality model. The high resolution MKE SHE/11 model was applied at a conceptual scale and in a pilot area, and the results were compared with parallel effort using ICPR. In addition, Mr. Moulton trained city staff in the use of MIKE SHE/11 and Arcmap. ***($48K)***

Project Manager, Modification of Southwest Florida Hydrologic Models, Lee, Collier, Hendry, Glades, Charlotte, and Monroe Counties, FL. Mr. Moulton was responsible for modifying an extensive MIKE SHE/11 model of the southwest portion of Florida. This model was being used by the South Florida Water Management District (SFWMD) and the U.S. Army Corps of Engineers (USACE) to support the Comprehensive Everglades Restoration Plan (CERP). The modifications included incorporating newly acquired LiDAR data and newly acquired representation of the saturated zone, modifying cross sections and control structures, and recalibrating the model. ***($330K)***

Project Engineer, Hartsfield-Jackson Atlanta International Airport, Letter of Map Revision (LOMR) Atlanta, GA. Mr. Moulton's responsibilities included updating an existing conditions ICPR model based upon a comparison with Flood Insurance Studies (FIS) model (HEC2), including a proposed alternative conveyance/storage system for airport expansion, simulating design storms, and preparing an LOMR for submittal to FEMA. ***($150K)***

DANIELLE M. HONOUR, P.E., D.WRE

NPDES PERMIT SUPPORT AND MASTER PLANNING

***Education:** M.E. – Environmental Engineering Sciences, B.S. – Civil and Environmental Engineering;* **Registration:** *P.E. – FL (2001);* **Years with CDM:** *12;* **Years with Other Firms:** *0*

Project Manager, Goose Bayou Stormwater Management Master Plan, Panama City, FL. Ms. Honour serves as project manager for developing a Stormwater Management Master Plan (SMMP) for the Goose Bayou Basin. CDM is developing a hydrologic and hydraulic model using U.S. EPA Stormwater Management Model (SWMM) Version 5. The SMMP will address level of service (LOS) deficiencies and recommend alternative solutions to mitigate flooding. ***($190K)***

Project Manager, St. Andrew Bay Watershed Stormwater Master Plan, Bay Environmental Study Team, Bay County, FL. Ms. Honour served as project manager for a cooperative effort between the Bay Environmental Study Team (BEST) and the local governments within Bay County. Under this plan, CDM developed a geodatabase tool so that stakeholders can access and use watershed related data. This plan also identified stormwater management options and prioritized activities so that the stakeholders can prepare and plan accordingly for the development of TMDLs in the St. Andrew Bay watershed. ***($446K)***

Project Manager, Bayou George Stormwater Management Master Plan, Panama City, FL. Ms. Honour served as project manager for developing a SMMP for the Bayou George Basin. The City had annexed approximately 4,000 acres of woods, wetlands, and streams in the basin that are expected to be developed in the future. The SMMP built upon previous modeling work done in the basin by CDM in the late 1990s in order to develop a regional stormwater model using the U.S. EPA SWMM Version 5 that expanded into the annexed areas of the upstream portion of the basin. ***($132K)***

Project Engineer, Nonpoint Pollutant Loading Analyses, Various Locations. Ms. Honour has performed nonpoint source pollutant loading analyses for several clients, including the Florida Department of Transportation (FDOT), Orange County, Seminole County, the City of Sebastian, Leon County, and the Reedy Creek Improvement District. These analyses, a requirement for NPDES reporting, consisted of using the Watershed Management Model to estimate the relative pollutant loads generated due to factors such as land use, BMPs, event mean concentrations, and hydrologic conditions. ***(Various)***

Project Manager, Deep Creek Basin Stormwater Master Plan, Volusia County, FL. Ms. Honour served as the project manager for this effort, which included developing a SWMM model for a 164-square mile watershed in south central Volusia County. Additional tasks included 100-year floodplain mapping, alternatives for deficiencies, and water quality pollutant load analyses. ***($325K)***

Project Manager, Howell Creek Watershed Management Plan, St. Johns River Water Management District, Florida. Ms. Honour served as the project manager for this cooperative effort between the St. Johns River Water Management District (SJRWMD) and eight local governments in Seminole and Orange Counties. This was a three-phase plan that addressed flooding issues, as well as water quality and TMDL issues in a highly urbanized watershed. ***($300K)***

Project Manager, Wekiva Parkway and Protection Act Master Stormwater Management Plan Support, St. Johns River Water Management District, Florida. Ms. Honour served as the project manager for this cooperative effort between the SJRWMD and 14 local governments. This intergovernmental cooperation led to the development of a Master Stormwater Management Plan (MSMP) required by recently passed legislation; tasks included data collection and review, developing long-term management strategies, establishing priorities to assess existing deficiencies, identifying needs for redevelopment, and developing a schedule and stakeholder coordination with 14 local governments. ***($217K)***

Project Manager, Little Wekiva River Watershed Management Plan, St. Johns River Water Management District, Florida. Ms. Honour was project manager for this cooperative effort among the SJRWMD and the governments of Orange and Seminole Counties, the City of Orlando, and the City of Altamonte Springs. Due to this intergovernmental cooperation, a holistic approach was used for this project; tasks included data collection and analysis, updating existing stormwater models, pollutant load analysis, identifying water quality retrofit opportunities, and coordination with the aforementioned government agencies. ***($114K)***

Project Manager, National Pollutant Discharge Elimination System Services, Seminole County, FL. Ms. Honour served as project manager for the preparation of Seminole County's Annual NPDES reports. She assisted the County with re-application for its renewed NPDES permit and negotiations with the FDEP. Tasks included evaluating satisfaction of the NPDES permit requirements, as well as coordinating with the co-permittees on the permit to keep them informed of reporting requirements and expectations. ***($100K)***

Project Manager*, National Pollutant Discharge Elimination System Services, Volusia County, FL.** Ms. Honour served as project manager for the preparation of Volusia County's Annual National Pollutant Discharge Elimination System (NPDES) reports. As the County is a Phase II permittee, she assisted the County in becoming familiar with the requirements of the NPDES program and preparing the annual report for compliance with the permit, as well as providing support to the County during regulatory inspections. ***($100K)

Project Manager, National Pollutant Discharge Elimination System Services, Reedy Creek Improvement District, Florida. Ms. Honour served as project manager for this project and prepared the annual NPDES reports for the Reedy Creek Improvement District (RCID) since 1999. She also assisted the RCID with renewing its NPDES permit for continued coverage. Tasks included becoming familiar with NPDES requirements, evaluating satisfaction of the NPDES permit requirements, and negotiations with the FDEP. ***($35K)***

Project Engineer, Stormwater Master Plans, Monroe and Lake Jesup Basins, Seminole County, FL. Ms. Honour assisted in creating the regional stormwater models for the Monroe and Lake Jesup Basins located in Seminole County, as well as developing the stormwater master plans. Tasks included developing the inventory of drainage structures contained within the basin, identifying flooding problems, delineating subbasins, and performing a pollutant load analysis. As part of the engineering analysis effort, she developed the existing stormwater model using Advanced ICPR Version 2.2. Once updated, she identified deficiencies within the primary system and developed conceptual alternatives to alleviate flooding and provide water quality treatment. ***($880K)***

Project Engineer, Stormwater Master Plan, Village of Royal Palm Beach, Palm Beach County, FL. For the Village of Royal Palm Beach in Palm Beach County, Ms. Honour assisted in preparing a stormwater master plan. This project involved delineating sub-basins, identifying flooding problems, and modeling the stormwater system using EPA-SWMM. ***($190K)***

Project Engineer, Stormwater Needs Assessment, Melbourne and West Melbourne, FL. Ms. Honour was responsible for developing a stormwater needs assessment for the City of Melbourne and the City of West Melbourne. A structure facilities inventory for each City was created by developing a stormwater inventory GIS. Additionally, she was responsible for identifying problem areas and conceptual solutions for flooding and/or water quality problems and developing a set of stormwater standards and criteria for each city. ***($178K)***

Project Manager, Community Rating System Floodplain Management Plan, Volusia County, FL. Ms. Honour served as project manager for developing a community rating system (CRS) floodplain management plan to satisfy the requirements of a Floodplain Mitigation Assistance (FMA) Program Planning grant received by Volusia County. Tasks included risk assessment of repetitive loss structures, development mitigation strategies, conducting public meetings, and coordinating with FEMA. ***($66K)***

Project Manager, Lake Sylvan Subbasin Engineering Analysis and Drainage Inventory, Seminole County, FL. Ms. Honour served as the project manager for this effort, which involved identifying potential solutions to the flooding in this limited-discharge subbasin. Tasks included data collection and review, development of a stormwater model using ICPR for Windows Version 3.02, overseeing subconsultant development of a long-term continuous simulation model identifying potential alternatives, and public involvement. ***($149K)***

Project Manager, Astor Flood Study, Lake County, FL. Ms. Honour served as the project manager for the development of a flood study for the community of Astor in Lake County. Tasks included developing a stormwater facilities inventory, identification of alternatives to alleviate flooding, pollutant load analysis, floodplain mapping, and public participation and coordination. ***($144K)***

Project Manager, Anniversary Park/Lake Concord Stormwater Park, Casselberry, FL. Ms. Honour oversaw the design and permitting of a stormwater park as part of the City's urban revitalization program. This project utilized current city property to construct an educational stormwater park and incorporated multiple best management practices (BMPs) to treat both on-site and off-site stormwater runoff. This park showcases various BMP treatment alternatives, including detention, exfiltration trench, baffle boxes, pervious pavement, Flexi-Pave™, bio-retention, environmental swales, stormwater reuse, and native vegetation plantings. ***($270K)***

TIMOTHY A. VERWEY, P.E.

STRUCTURAL

Education: ***B.S. – Civil Engineering;*** **Registration;** ***P.E. – FL (1996), GA, KY, MS, NC, TN, TX, VA;***
Years with CDM: ***21;*** **Years with Other Firms:** ***2***

Project Structural Engineer, Stormwater Management Facility No. 6, Leon County, FL. CDM was responsible for analyzing the issues with an existing stormwater submersible pump station and irrigation system and subsequently provided design drawings to modify the facility as needed. Mr. Verwey served as the project structural engineer for the structural design for a floating intake platform and access walkway. ***($71K)***

Project Structural Engineer, Arbennie Pritchett Water Reclamation Facility, Okaloosa County, FL. CDM was selected to design, construct, outfit, start up, performance test, and obtain permits for the new Arbennie Pritchett Water Reclamation Facility, which has been designed to initially treat 10 mgd with flexibility for future expansion. Mr. Verwey served as the project structural engineer for this $49 million design-build (DB) project. His services include design of cast in place concrete structures, as well as several CMU buildings. ***($49M)***

Structural Engineer, Allanton Peninsula Water and Wastewater Extension, Callaway, FL. Mr. Verwey provided structural analysis and design for a 12-foot diameter reinforced concrete wastewater wetwell. He also provided structural analysis and design of a cast in place, reinforced concrete meter vault. ***($189K)***

Structural Engineer, Lake Okeechobee Fast Track Basis of Design Report and Reservoir Test Cell Project, Okeechobee, FL. This $230M, fast-track project includes the design of approximately 7,000 acres of storage and stormwater treatment reservoirs, three 500-cubic feet per second (cfs) pump stations, multiple hydraulic control structures, and over four miles of canal conveyance improvements. Mr. Verwey prepared the structural basis of design criteria. The criteria included the governing codes, loading requirements, load combinations, construction materials, and material properties to be used in the final design. ***($16M)***

Project Structural Engineer, Multiple Hydrogeologic Services Projects: Wellfield/Water Supply Development, Deep Injection Well Design and Construction Observation, Aquifer Storage and Recovery, Deep Injection Well Design and Construction Observation, Collier County, FL. Mr. Verwey serves as structural engineer for various projects under this contract. This program was initiated to ensure that the potable water system always meets concurrency requirements. The program included land acquisition, facility design and construction, startup, and improved utility operations with respect to raw water supply. ***($10M)***

Structural Engineer, Storage Tank and Pump Stations, Various Locations. Mr. Verwey served as the structural engineer of record for the Mansker Creek Wastewater Treatment Plant Flow Equalization Tank and Pump Station, Goodletsville, Tennessee; Orange County, Florida stormwater pump station electrical control panel canopies; Jacksonville Electric Authority Scott Mill Hill, Oakwood Villas, and Lakeforest vacuum sewer pump station design; and City of Miami Beach, Florida South Pointe Booster Pump Station. He also served as structural engineer for the Rockdale County, Georgia Hightower storage tank and pump station, and the inspection and evaluation of elevated water storage tanks in Lee County, Florida. Previously, he served as staff engineer in the structural design of the chemical feed building for the Wading River pump station in Attleboro, Massachusetts. ***(Various)***

Structural Engineer, FEMA Projects. Mr. Verwey served as lead structural engineer for Nashville Metro Water Services' Omohundro WTP emergency repair to pedestrian elevated walkways. The project involved the design of two elevated walkways at the WTP. He also served as structural engineer for the Garfield Ladner Memorial Pier, Waveland, Mississippi, and design of concrete fishing pier to replace a timber pier destroyed by Hurricane Katrina. ***(Various)***

Project Structural Engineer, Microfiltration Plant, Port St. Joe, FL. In 2004, CDM was hired by Preble-Rish, Inc. (PRI), the prime consultant, to perform the membrane and raw water pump station design for a 2.5-mgd surface WTP. CDM completed the design, the project was bid, and construction began in late August 2006. In 2006, PRI hired CDM to design an expansion of the plant to 6.0-mgd capacity. The expansion was planned for in the original design. For this project, Mr. Verwey served as project structural engineer. ***($21M)***

Project Structural Engineer, Master Pump Stations Replacement and Rehabilitation; Final Design and Construction, Orange County, FL. Orange County identified 14 master pump stations within the County's three wastewater service areas that required evaluation and upgrades as necessary to maintain reliable service and meet changes to the conditions of service. Subsequently, Orange County wished to implement rehabilitation of 8 of the 14 pump stations.

The master pump station replacement/rehabilitation project included an additional hydraulic analysis, final design, and bidding and construction services related to the eight pump stations. The final design was based on constructing new submersible pump stations at four pump stations. Total pumping capacity of the new submersible stations ranged from 560 gpm to 6,900 gpm. Mr. Verwey provided structural design services and construction services for this project. ***($2.4M)***

Structural Engineer-of-Record, Water and Wastewater Pump Station Upgrades, Miami Beach, FL. Mr. Verwey was the structural engineer-of-record for the City of Miami Beach's water and wastewater system improvements program consisting of the construction of two 4-MG ground storage water tanks, upgrades and modifications to 23 wastewater pump stations and 5 water pump stations, and the construction of one new water booster pump station and one new wastewater booster pump station. ***($22M)***

Structural Engineer, Pump Station Rehabilitation, Fort Lauderdale, FL. This project consisted of the rehabilitation of five wastewater pump stations, including the replacement of existing piping, valves, and ventilation system; installation of new pumps with variable frequency drives; an above-grade service entrance rated electrical equipment; and bypass pumping during construction. Mr. Verwey was responsible for the structural design component of this project. ***($4M)***

Project Structural Engineer, Wastewater Treatment Plant Upgrades, Kingsport, TN. Mr. Verwey is providing services as the structural engineer-of-record for improvements to the 12.5-mgd ADF (30-mgd peak) wastewater treatment plant project. CDM is providing design and construction management at-risk services on this $22M project. His tasks include design of new cast in place concrete tanks, as well as modifications and repairs to existing structures. ***($89M)***

Project Structural Engineer, Navy Water Treatment Plant Upgrade, Orlando, FL. Mr. Verwey served as project structural engineer for the DB expansion and upgrade of an existing 5-mgd facility to a new 10-mgd facility. CDM, teaming with Vogel Bros. Building Co., served as the single point of responsibility for delivery of the $18M project. The project consisted of replacing the existing activated carbon reactors with high concentration ozone treatment to remove hydrogen sulfide. The project also included a new 1,400-foot deep raw water supply well; skid mounted ozone generation and destruct equipment; two new 5-mgd ozone contactors; liquid oxygen (LOX) storage facilities; chlorine, caustic, and fluoride storage and feed facilities; control room; demolition of existing facilities; an electrical yard with an emergency generator for backup power; and overall site improvements. ***($18M)***

Project Structural Engineer, OUC Conway Water Treatment Plant (WTP) Upgrade and Expansion, Orlando, FL. OUC implemented an upgrade of its Conway WTP as one part of the comprehensive Water Project 2000 program. The project, delivered using the innovative EPCM approach, upgraded the plant from 15 to 32 mgd. CDM, teaming with Vogel Bros. Building Co., served as the single point of responsibility for delivery of the $18.6M project. Mr. Verwey served as the lead project structural engineer for the project. Tasks included structural and precast concrete structures, preparation of material takeoffs, and construction cost estimates. ***($18.6M)***

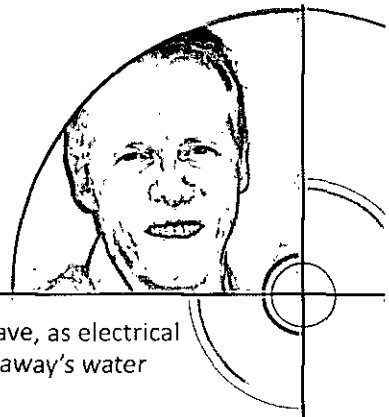
Structural Engineer, Water Treatment Plants, Various Locations. Mr. Verwey was the structural engineer-of-record for the Hillsborough County, Florida Central Hillsborough Water Treatment Facility; Florida Keys Aqueduct Authority Stock Island Water Treatment Plant (WTP) seawall replacement; City of St. Augustine WTP upgrades; City of Ormond Beach 2000 water treatment plant improvements; the Tampa Bay Water 72 mgd to 120 mgd Expansion of the Tampa Bay Regional Surface Water Treatment Plant; and the Valdosta, Georgia Water Treatment Plant Design-Build Expansion. He served as lead structural engineer for the Orlando Utilities Commission Navy water treatment plant upgrades and modifications; Greenville water treatment plant expansion; Orlando Utilities Commission's Conway water treatment plant expansion, and for the design of the 37th Street water treatment plant solids handling improvements project in Norfolk, Virginia. He served as engineer-of-record for the City of Boca Raton's Glades Road water treatment plant membrane softening process addition involving multiple masonry and concrete buildings. ***(Various)***

Structural Engineer, Water Reclamation Facilities, Various Locations. Mr. Verwey served as the structural engineer of record for the Okaloosa County, Florida Arbennie Pritchett Water Reclamation Facility. He also served as lead structural engineer for the Cobb County, Georgia R.L. Sutton water reclamation facility and as structural engineer on Charlotte County, Florida's Eastport water reclamation facility Phase 1B upgrade and expansion project, and as staff engineer in the structural design of the Bee Ridge water reclamation facility in Sarasota County, Florida. He also completed the structural design of the City of St. Petersburg Southwest water reclamation facility headwork's and flow splitter box modifications. ***(Various)***

PAUL A. LEFAVE, P.E., CEM

ELECTRICAL

Education: ***B.S. – Electrical Engineering;*** **Registration:** ***P.E. – FL (1995);***
Years with CDM: ***20.5;*** **Years with Other Firms:** ***2***



Electrical Engineer, Allanton Peninsula Water and Wastewater Extension, Callaway, FL. Mr. Lefave, as electrical engineer, assisted the City in providing planned capital improvements to connect the City of Callaway's water distribution and wastewater collection system to the Allanton Peninsula. ***($189K)***

Lead Electrical Engineer, Ground Storage Tank and Booster Pump Station, Millville, FL. Mr. Lefave worked with the project manager closely on the electrical design for the 2.0-MG ground storage tank and booster pumping station to provide water storage and pumping to solve some existing low pressure problems and meet the forecasted need for service due to proposed development being constructed in Panama City, Florida. ***($351K)***

Lead Electrical Engineer, Ground Storage Tank, Booster Pump Station, and Infill and Transmission System Design, Callaway, FL. In March 2005, the City contracted with CDM to perform the design, permitting, and bidding for the ground storage tank, booster pump station, and infill and transmission system design project, which was separated into three phases. Mr. Lefave served as the lead electrical engineer for the projects. ***($371K)***

Electrical Engineer, Collier County Wellfield Reliability and Improvements Program Management, Collier County, FL. Mr. Lefave served as an electrical engineer for the Collier County Wellfield Reliability and Expansion Program to manage the planning and development of new wellfields in Collier County and to ensure that the potable water system met concurrency requirements. The program included land acquisition, facility design and construction, startup, and improved utility operations with respect to raw water supply. Mr. Lefave assisted with the design of the irrigation quality water booster station. ***($10M)***

Project Engineer, Aquifer Storage and Recovery Feasibility and Testing Program, Seminole County and Sanford, FL. The St. Johns River Water Management District (SJRWMD) has sponsored an ASR program to explore alternative water supply sources. The ultimate use of these ASR wells will be to facilitate the County's/City's ability to store and recover potable water when a surface water treatment plant is developed on the St. Johns River. In the near-term, the ASR systems will be used for seasonal demand management, such as excess wet-season surface water flows. Mr. Lefave provided deliverables support during the Sanford ASR test well effort. ***($2M)***

Electrical Engineer, Lake Okeechobee Fast-Track Project (LOFT) Basis of Design and Preliminary Design Reports, Okeechobee and Martin Counties, FL. As part of the Comprehensive Everglades Restoration Program, Mr. Lefave provided various services during the Lakeside Ranch Stormwater Treatment Area component of this project, including technical review and design of the S-191A Pump station and STA South. ***($2M)***

Electrical Engineer-of-Record, Professional Design Services, Maintenance and Public Services Administration Building, Dania Beach, FL. Mr. Lefave provided peer review and QA/QC for this project. Electrical design included a 1,200-amp, 480-volt, three-phase electrical service for the building; installation of a backup emergency generator; coordination with the maintenance staff for equipment preferences; and to establish locations for maintenance, data, and security equipment. Office electrical systems include designing power distribution for HVAC and lighting systems, fire alarm system, and requirements for general offices. ***($243K)***

Project Electrical Engineer, Engineer-of-Record, Tampa Bay Water, Surface Water Pump Stations, Tampa, FL. Mr. Lefave was the project electrical engineer and engineer-of-record for the Bypass Canal Pump Station, Alafia River Pump Station, and Repump Pump Station for Tampa Bay Water's surface water production facility and reservoir. The project included design and construction services for the design-build-operate (DBO) surface water treatment plant (WTP). The pump stations featured 5kV electrical distribution and medium-voltage variable frequency drives (VFDs) to control the pump speed. The design criteria included consideration for canal and river water levels and distribution to the surface WTP. ***(Various)***

Electrical Design Engineer, Town of Belleair Wastewater System Acquisition, Pinellas County, FL. Mr. Lefave served as the electrical design engineer to assist Pinellas County in acquiring the Town of Belleair's wastewater system. The electrical design included a 480-volt power distribution for the pump station, backup generator, and electrical power coordination with process mechanical and building mechanical/HVAC systems. The project also included integrated electrical power monitoring and control with a tie to a county-wide supervisory control and data acquisition (SCADA) system. ***($358K)***

Senior Project Electrical Engineer, District of Columbia Water and Sewer Authority Potomac Pump Station, Washington, D.C. Mr. Lefave was the project electrical engineer for the Potomac Pump station for District of Columbia Water and Sewer Authority (DCWASA). The 400-mgd pump station electrical distribution was completely upgraded to provide capacity for additional pumping needs at the pump station. The electrical upgrades included new 15kV incoming main switchgear with distribution transformers and upgrades to the existing 5kV medium-voltage pump station distribution switchgear. The project electrical design also included the addition of three new 2,000-horsepower (hp) medium-voltage variable frequency drives (VFDs) for pump speed control. ***($11M)***

Project Electrical Engineer, Engineer-of-Record, Eastern Water Reclamation Facility Phase IV Expansion, Orange County Utilities, Orange County, FL. Mr. Lefave was the project electrical engineer and engineer-of-record for the Orange County Utilities Eastern Water Reclamation Facility (EWRF) Phase IV expansion. Phase IV included a complete upgrade of the existing 5kV secondary selective electrical distribution system. The electrical design included conversion to a looped primary and secondary selective secondary for the new and existing equipment. New and existing standby emergency generators were utilized for the upgrades and plant expansion. The project design included a new generator-electrical building and new 5kV primary service from the local power utility. ***($805K)***

Project Electrical Engineer, Engineer-of-Record, Lake Region Water Treatment Plant, Palm Beach County Water Utilities Department, Belle Glade, FL. Mr. Lefave was the project electrical engineer and engineer-of-record for the Lake Region membrane softening water treatment plant (WTP) in Belle Glade, Florida. The project electrical design included 480-volt distribution and emergency backup power from diesel engine generators. The electrical distribution criteria focused on a cost-effective and efficient use of space, electrical distribution equipment, and backup power needs. The project also focused on combining the new WTP production capacity with the existing water resources and water distribution needs of several municipalities in the area, including the Cities of Belle Glade, South Bay, and Pahokee. ***($21M)***

Project Electrical Engineer, Engineer-of-Record, George T. Lohmeyer Wastewater Treatment Plant, Fort Lauderdale, FL. Mr. Lefave is the project electrical engineer and engineer-of-record for the George T. Lohmeyer WWTP various improvements. The project electrical design includes replacing the standby emergency generator, new generator controls, new 5kV-480 volt unit substation transformers, and improvement to the pre-treatment, sludge dewatering, and plant water facilities. Generator modifications include integration into the existing 5kV switchgear. ***($2.3M)***

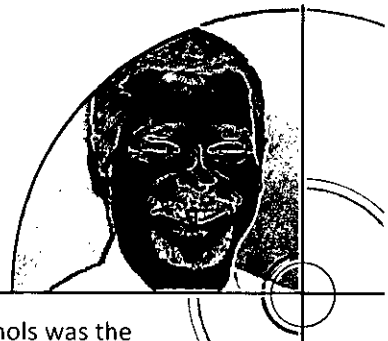
Project Electrical Engineer, Engineer-of-Record, Membrane Softening Water Treatment Plant, Clewiston, FL. Mr. Lefave was the project electrical engineer and engineer-of-record for the City of Clewiston membrane softening water treatment plant (WTP) in Clewiston, Florida. The design was expedited to ensure that the water needs of the community would be met as existing water resources were lost. The fast-track project design also included a new raw water production wellfield. The electrical design included close coordination with process engineers to keep the project within the City's schedule and budget. ***($1.9M)***

Project Electrical Engineer, Engineer-of-Record, South Miami Heights Water Treatment Plant, Miami-Dade Water and Sewer Authority, Miami, FL. Mr. Lefave was the project electrical engineer and engineer-of-record for the South Miami Heights membrane softening water treatment plant. The project's electrical design included 5kV distribution, extensive coordination with Florida Power and Light to obtain new utility distribution feeders into and on the water treatment plant (WTP) site, coordination with emergency standby power for the plant facility and wellfield equipment, and coordination with Miami-Dade WASA for integration of the electrical distribution system with the high-service pump station designed by Miami-Dade WASA. ***($53M)***

THOMAS W. NICHOLS, P.E.

GEOTECHNICAL

Education: ***M.E. – Civil Engineering;*** **Registration;** ***P.E. – FL (1987);***
Years with CDM: ***30.5;*** **Years with Other Firms:** ***24.5***



Geotechnical Engineer, Harbinwood Estates Drainage Improvements, Leon County, FL. Mr. Nichols was the geotechnical engineer who provided the preliminary design assumptions and sheet pile analysis for the design of the proposed Harbinwood Estates Stormwater Improvements project. ***($366K)***

Geotechnical Engineer, Lake Munson Dam, Feasibility Study, Leon County, FL. Mr. Nichols was responsible for the geotechnical aspects of the feasibility study to replace or rehabilitate Munson Dam. The dam is owned and operated by Leon County for the purpose of flood control. The purpose of this study was to assess the condition of the existing concrete dam and gate structure and develop conceptual design alternatives for rehabilitation of the existing dam or replacement with a new dam located 170 feet downstream of the existing dam. The scope of work included a geophysical investigation and field exploration program. The field investigation consisted of a geophysical study, a method that is effective in mapping sands, clays, limestone units, and buried karst features, four piezocone soundings, six soil borings, and installation of three temporary piezometers to monitor water levels in specific hydrogeological zones at depths ranging from 20 to 50 feet below ground surface. ***($245K)***

Geotechnical Engineer, Arbennie Pritchett Water Reclamation Facility, Okaloosa County, FL. CDM was selected to design, construct, outfit, startup, performance test, and obtain permits for the new Arbennie Pritchett Water Reclamation Facility, which has been designed to initially treat 10 mgd with flexibility for future expansion. Mr. Nichols' responsibilities included civil and geotechnical design, as well as quality technical review. ***($49M)***

Task Manager, Collier Canal Seawall Assessment, Design, Rehabilitation, and Stormwater Retrofit, Sebastian, FL. Mr. Nichols prepared the preliminary dredging design for 6,000 feet of canal. The purpose of the dredging the canal bottom was to improve water quality. Dredged material was placed alongside the canal in mobile containers using empty residential properties and dewatered by gravity prior to hauling to the landfill. Alternate dewatering techniques were also evaluated. Mr. Nichols also prepared the sheet pile wall design criteria for the design-build bid documents. ***($433K)***

Geotechnical Engineer, Arbennie Pritchett Water Reclamation Facility, Okaloosa County, FL. CDM was selected to design, construct, outfit, startup, performance test, and obtain permits for the new Arbennie Pritchett Water Reclamation Facility, which has been designed to initially treat 10 mgd with flexibility for future expansion. Mr. Nichols' responsibilities included civil and geotechnical design, as well as quality technical review. ***($49M)***

Geotechnical Task Manager, Embankment Design, Martin County, FL. For the Lake Okeechobee Fast-Track (LOFT) Project, Mr. Nichols was responsible for planning and executing the geotechnical exploration for the north and south portion of the stormwater treatment area (STA-N and STA S). The 2,700-acre site is divided into two STAs, each of which is surrounded by a low perimeter embankment and seepage ditches. The interiors of the STAs are divided into cells by internal embankments. Mr. Nichols prepared the embankment settlement analysis and foundation and construction recommendations for the design of the STAs and prepared the earthwork specifications. ***($16M)***

Geotechnical Engineer, Lake Okeechobee Fast-Track (LOFT) Basis of Design Report and Test Cell Program, Okeechobee, FL. Mr. Nichols was responsible for coordinating the subsurface investigations consisting of drilling/sampling of geotechnical soil borings with Standard Penetration Tests, rotosonic borings, piezocone soundings, test pits, auger probes, installation of well/piezometers, geophysical explorations, field tests, laboratory tests, and groundwater and surface water monitoring. This work is in progress and includes a 35-foot high dam surrounding a water management reservoir and a 6-foot high dike surrounding a stormwater treatment area. This project is part of the Comprehensive Everglades Restoration Program (CERP). ***($16M)***

Geotechnical Engineer, Plant Cooling Pond, Shared Use Evaluation, Phase II Dam Safety Studies, Confidential Client. Mr. Nichols was responsible for evaluating the existing embankment (an 18-mile long earth embankment) for the potential of raising the water level above the current operating condition. The work included seepage analysis modeling, evaluation of the existing monitoring program, bathymetric survey, and underwater inspection at the emergency spillway. ***($122K)***

Geotechnical Engineer, C-44 Reservoir Phase II Preliminary Design and Permitting, Stuart, FL. Mr. Nichols was responsible for coordinating the Phase II subsurface investigation consisting of drilling/sampling of geotechnical soil borings with Standard Penetration Tests. Mr. Nichols participated in a geotechnical investigation to evaluate any concerns associated with constructing the basin at the site and provided data for developing design solutions to address these concerns. These concerns included seepage loss through the bottom of the basin and its impact on embankment stability; availability and suitability of on-site borrow materials for use during construction of embankments and dam design and performance. Results of the geotechnical investigation were used in the fatal-flaw evaluation. ***($4.4M)***

Project Engineer, Emerald Coast Utilities Authority (ECUA) Bayou Marcus Wetlands Application System Expansion, Pensacola, FL. CDM provided the preliminary design for the Bayou Marcus Northern Wetland Application System in the mid-1990s. The Bayou Marcus Reclamation Facility (BMRWF) provides reclaimed water treated to Advanced Wastewater Treatment (AWT) levels and the Northern Wetland Application System has provided excellent polishing treatment performance prior to discharge to Bayou Marcus Creek. Mr. Nichols provided engineering services during the duration of this project. ***($213K)***

Task Manager, Collier County Wellfield Reliability Improvements and Expansion Program, Collier County, FL. Mr. Nichols was the task manager for the geotechnical exploration for the project. To provide the best information available for locating a variable subsurface rock surface, the methods of exploration included ground penetrating radar, piezocone soundings, and soil borings. Both the well sites and the connecting force main alignments were explored. ***($10M)***

Geotechnical Engineer, Re-assessment of Cost Allocation for the Cerrillos Dam and Reservoir, Ponce, Puerto Rico. Mr. Nichols was responsible for developing an alternate low dam cross section. The dam, intake structure, and spillway were hypothetically lowered by producing drawings and sketches required to calculate the reduced costs for comparison with other alternative water supply solutions for the municipality of Ponce, Puerto Rico. ***($175K)***

Geotechnical Engineer, Effluent Treatment Project, Brevard County, FL. Mr. Nichols was responsible for the preliminary geotechnical design of a 4-foot high dam surrounding the effluent treatment pond. This included seepage, settlement, and stability analysis. ***($25K)***

Geotechnical Engineer, Culvert Replacement at Carpet N' Drapes, Clay County, FL. Mr. Nichols was the geotechnical engineer who conducted the site subsurface exploration and provided geotechnical engineering recommendations for the design and construction of the proposed culvert replacement and side slope repair at Carpet N' Drapes. ***($4M)***

Geotechnical Engineer, Lockhart-Smith Canal, Seminole County, FL. Mr. Nichols was the geotechnical engineer who provided the geotechnical recommendations for the design and construction related to the installation of the articulating block slope protection in the Lockhart-Smith Canal. ***($60K)***

Engineer of Record, Chiquita Parallel Boat Lock Exfiltration Trench, Lee County, FL. Mr. Nichols was the engineer-of-record who prepared the civil design drawings for the design and construction of the new Chiquita Parallel Boat Lock Exfiltration Trench. ***($20K)***

Geotechnical Engineer, Town of Longboat Key Water Main Interconnect and Pump Station Rehabilitation, Manatee County, FL. Mr. Nichols was the geotechnical engineer who provided the geotechnical investigations and recommendations for the design and construction of the proposed Water Main Interconnect and Pump Station Rehabilitation. The 1,600 lineal feet undercrossing at New Pass was an 18-inch diameter Horizontal Directional Drilling (HDD) design. ***($10M)***

Geotechnical Engineer, Proposed Water Treatment Plant, Clewiston, FL. Mr. Nichols was the geotechnical engineer who provided the geotechnical engineering recommendations for the design and construction of the proposed Water Treatment Plant located in Clewiston, Florida. ***($1.9M)***

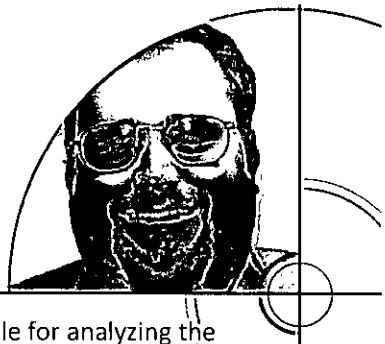
Geotechnical Engineer, Lake Region Water Treatment Plant, Palm Beach County, FL. Mr. Nichols was the geotechnical engineer who provided the geotechnical engineering recommendations for the design and construction of the new Lake Region Water Treatment Facility. ***($21M)***

Geotechnical Engineer, Water Treatment Plant No. 8 Expansion, Palm Beach County, FL. Mr. Nichols was the geotechnical engineer who provided the geotechnical engineering recommendations for the design and construction of the proposed expansion of the existing Water Treatment Plant No. 8. ***($4.7M)***

CARL S. FRIZZELL, PH.D., P.E.

MECHANICAL

Education: Ph.D. – Civil Engineering; Registration: *P.E. – FL (2008);*
Years with CDM: *6;* Years with Other Firms: *0*



Project Manager, Stormwater Management Facility No. 6, Leon County, FL. CDM was responsible for analyzing the issues with an existing stormwater submersible pump station and irrigation system and subsequently provided design drawings to modify the facility as needed. Dr. Frizzell performed project management duties for this project. ***($71K)***

Project Engineer, Millville Ground Storage Tank and Booster Pump Station, Panama City, FL. Dr. Frizzell has worked with the project manager closely on the design of the 2.0-MG ground storage tank and booster pumping station to provide water storage and pumping to solve some existing low pressure problems and meet the newly forecasted need for service due to proposed development that is being constructed in Panama City, Florida. ***($351K)***

Project Manager, Quincy Wellfield Transmission Main Pressure Sustaining Valve, Gretna, FL. Dr. Frizzell performed project management for both the design and construction phase of this project. He also aided in the design, permitting, and bidding of the pressure sustaining valve on the Quincy Wellfield Transmission Main, which is operated by the City of Quincy, Florida. Initially, Dr. Frizzell and other project team members directly worked with Quincy's consulting engineer to determine the best methodology for both municipalities to allow a fully-utilized Quincy Wellfield Transmission Main interconnection and BPS. ***($37K)***

Dr. Frizzell led the initial analysis and proposed the design involving the installation of a 10-inch Pressure Sustaining Valve (PSV) on a 20-inch line downstream of the Quincy Interconnect. Dr. Frizzell and other CDM team members designed the PSV to perform at 43 psi in accordance with the interlocal agreement between Gretna and Quincy. In addition, Dr. Frizzell performed limited engineering services during construction, including shop drawing reviews, pay requests, change orders, site visits, and substantial/final completion inspections at the project site.

Project Engineer, Ground Storage Tank and Booster Pump Station, Callaway, FL. Dr. Frizzell modified the existing master plan to determine flow and pressure ranges for the pump station. He then designed vertical turbine can pumps and yard piping associated with the operation of the ground storage tank and booster pumping station. Dr. Frizzell has also been the project manager overseeing the engineering service during construction. ***($371K)***

Process Engineer, Arbennie Pritchett Water Reclamation Facility Design-Build, Okaloosa County, FL. Dr. Frizzell designed the WAS and RAS pumping systems and preformed numerous other hydraulic calculations and or reviews of hydraulic calculations including the plant hydraulic grade line, effluent pump station, and on site reuse system. **($49M)**

Technical Reviewer, South Walton Utility Company, Inc. Wetlands Application System, Miramar Beach, FL. South Walton Utility Co., Inc. (SWUCI) has been in the process of upgrading their wastewater treatment facilities in response to growth in their service area. As with all wastewater facilities, there was a need to maximize reuse, provide environmentally acceptable discharge of reclaimed water, and provide appropriate wet weather disposal. CDM evaluated all reuse and disposal options for the SWUCI facility and determined that the combination of continued reuse and wetlands application was the best approach to meet SWUCI's needs. Dr. Frizzell provided technical review services for construction services and redesign areas. He also attended project meetings as required by the client. ***($55K)***

Project Manager, Final Design for the Bayou Marcus Southern Wetland Application System, Pensacola, FL. Dr. Frizzell managed and competed the final design of the 8,000 linear feet southern wetland application system at the Bayou Marcus Water Reclamation facility. He performed the hydraulic calculations to produce uniform flow out of each of the four distribution zones along the system. The analysis include sizing the distribution pipe serving the four zones, sizing the pipe in each zone, and sizing the discharge office for each discharge. He also oversaw the stormwater and accuse roadway designs. ***($203K)***

Project Engineer, Emerald Coast Utilities Authority (ECUA) Northern Wellfield Conceptual Design, Pensacola, FL. Dr. Frizzell served as project manager for this project He also completed the conceptual hydraulic analysis for the wellfield piping, transmission piping, high service pump station, booster pump stations, and well pumps for the three sites considered in the report. He was also responsible for coordination with the conceptual ground water modeling and the overall conceptual cost estimates for the three alternate well field sites. ***($49K)***

Project Manager, Allanton Peninsula Water and Wastewater Extension, Callaway, FL. Dr. Frizzell is the lead design engineer for the construction of a force main and a water main along Highway 2297 to Halter Marine Road in Callaway, Florida. The 12-inch force main will run for approximately 13,500 linear feet (lf) along Highway 2297 to Hauser Road before being reduced to a 10-inch force main along Highway 2297 to Halter Marine Road for approximately 26,600 lf. The 16-inch water main will be constructed south of Old Bicycle Road on Highway 2297 to Halter Marine Road for approximately 40,100 lf. ***($189K)***

Project Manager, Chipewa Street Wastewater , Callaway, FL. Dr. Frizzell is the lead engineer for the design and construction of this project, which will consist of extending the Old Bicycle Road force main currently connected to the discharge of LF CA-17 to the Callaway Master Lift Station. A new 10-inch force main will be routed along Star Avenue, Chipewa Street, Jan Drive, and Cherry Street for approximately 8,100 lf. ***($77K)***

Project Engineer, Fiesta Drive Water Line Improvements, Franklin County, FL. The Alligator Point Water Resources District (APWRD) operates a water system in the Alligator Point/Bald Point area of Franklin County, Florida. APWRD contracted CDM to design and permit new mains, services, and fire hydrants along Fiesta Drive as a replacement of the aging waterlines. Dr. Frizzell performed project management for the Fiesta Drive Waterline Improvements project and also aided in the design, permitting, bidding, and limited engineering services for the project. ***($23K)***

Project Manager, Lanier Street Sewer Replacement, Gretna, FL. Dr. Frizzell performed project management for the design and construction phase of this project. The previous gravity sewer line underneath Lanier Street and Lanier Court was not correctly constructed when it was installed in the early 1970s. The pipe was broken at several of the joints and had been repaired multiple times. Recurring failures in the sewer main caused multiple sewage back-up problems in residences along Lanier Street and Lanier Court. Dr. Frizzell aided in the design, permitting, and bidding of the Lanier Street project, which is located within the city limits of the City of Gretna and is approximately 2,200 linear feet in length and provides access to 34 homes and a church. In addition, Dr. Frizzell performed limited engineering services during construction, including shop drawing reviews, pay requests, change orders, site visits, and substantial/final completion inspections at the project site. ***($46K)***

Project Engineer, Port St. Joe Water Treatment Plant, Port St. Joe, FL. Dr. Frizzell performed the hydraulic analysis and design of the raw water (vertical turbine solids handling pumps), transfer (vertical turbine pumps), master sump (submersible wastewater pumps), and finished water (vertical turbine can pumps) pump systems. The pump systems were designed for a 3-mgd plant design that could be expanded up to a 6 mgd plant design. ***($21M)***

Project Engineer, Neuse Regional Water Treatment Plant, LaGrange, NC. Dr. Frizzell performed the hydraulic analysis and design of the raw water (vertical turbine can pumps), transfer (dry pit submersible wastewater pumps), equalization (submersible wastewater pumps), recirculation (submersible wastewater pumps), and finished water (vertical turbine can pumps) pump systems. The pump systems were designed for current conditions of service with the ability to be expanded for future demands. ***($5.8M)***

Project Engineer, Corbalis Water Treatment Plant Expansion, Herndon, VA. Dr. Frizzell aided in the selection and reviewed the hydraulic model study for the new 60-mgd Raw Water Pump No. 4 and Raw Water Pump No. 1 that expanded the capacity of the existing raw water intake to 225 mgd. ***($8.2M)***

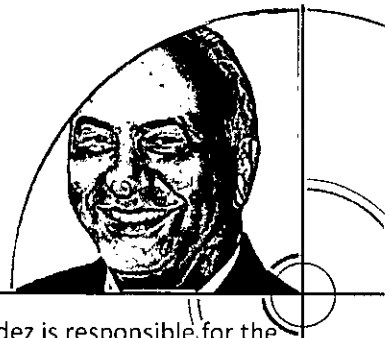
Project Engineer, Shell North Pond, Houston, TX. Dr. Frizzell conducted a hydraulic analysis and review of three existing 72-mgd vertically mounted double suction stormwater pumps at a refinery. The results of the analysis led to modifications to the existing intake, the design of a backup intake used during remediation phases of the pond and a pneumatically actuated control valve design and selection. ***($66M)***

Project Engineer, Oakwood Combined Sewer Overflow Facility, Detroit, MI. Dr. Frizzell conducted the hydraulic analysis and reviewed pump selections of numerous pump suppliers to determine which suppliers could meet the hydraulic requirement of the project for the 1.2 billion gallon per day facility. The facility consisted of two variable speed 80 mgd pumps, two variable-speed 177 mgd pumps and six constant speed 177 mgd pumps. ***($13M)***

ROGER J. MENENDEZ, C.E., AICP

WETLANDS BIOLOGY

Education: ***M.S. – Biological Science;*** **Registration:** ***Certified Ecologist, Certified Planner;***
Years with CDM: ***4.5;*** **Years with Other Firms:** ***24.5***



Project Biologist, Munson Dam Rehabilitation, Tallahassee, FL. As project biologist, Mr. Menendez is responsible for the wetland delineation, protected species surveys, reporting writing and documentation. Currently, the project is the final permitting design and permitting phase. Mr. Menendez is assisting with the coordination and permitting of the project, which will involve the U.S. Army Corps of Engineers, Florida Department of Environmental Protection, Leon County Department of Growth and Environmental Management, and the Northwest Florida Water Management District. The environmental permitting will require the evaluation of the project's wetland impacts using the UMAM methodology, which facilitate the planning of the required wetland mitigation that will be implemented for the project. ***($500K)***

Project Biologist, Pinellas Park Water Management District (PPWMD) Projects, Pinellas Park, FL. The PPWMD is a special district that is tasked with managing the primary stormwater drainage system for a portion of central Pinellas County. Mr. Menendez helped with permitting, compliance, and best management practices (BMPs). The Channel 4 and 4E improvements project is ongoing and includes drainage improvements in the main reach and tributary of Channel 4. The project included modeling approximately 11 square miles to tie into the existing PPWMD Channel 4 and Channel 5 model for demonstration of negligible impact by proposed improvements. ***($250K)***

Project Biologist, Homeland Basin BMP Implementation, Pinellas Park, FL. Mr. Menendez assisted with permitting and BMPs for a stormwater BMPs implementation and flood relief project in Pinellas Park, Florida. The project consisted of roadway and drainage improvements, pond enhancements, and installation of stormwater treatment systems within an approximately 50-acre drainage basin adjacent to Sawgrass Lake, as well as three trenchless crossings of State highways in anticipation of an expansion to the city's reclaimed water system in the area. ***($250K)***

Project Biologist, Lake Worth Park of Commerce (POC) Infrastructure Needs Assessment and Preliminary Engineering Study, Lake Worth, FL. Mr. Menendez assisted with the environmental analysis portion of this project. He assisted with the preparation of an Environmental Plan, which will be comprised of Phase I Environmental Site Assessments (ESAs) conducted on five vacant parcels within the boundaries of the POC. Mr. Menendez led the effort to evaluate endangered and threatened species, wetlands and floodplains, prime/unique agricultural lands, and historic, cultural, and archaeological resources preservation. ***($200K)***

Project Biologist, Taylor Creek Reservoir, St. Johns River, Florida. Mr. Menendez assisted with National Environmental Policy Act of 1969 (NEPA) documentation and coordination for this project. He also assisted with the project review of wetlands, protected species, cultural resources, field reviews, and hazardous materials/contamination. In addition, Mr. Menendez attended project meetings and coordinated with other consultants. ***($550K)***

Project Biologist, South Walton Utility Company, Inc. (SWUC) Wetlands Application System, Miramar Beach, FL. Mr. Menendez provided water quality and vegetative sampling, biological monitoring, protected species surveys and agency coordination for permitting compliance on natural resources. These resources included wetlands, protected species, and historical and archeological resources. ***($750K)***

Project Scientist, Stormwater Management Retrofit, Collier County, FL. Mr. Menendez completed a comprehensive project for this stormwater management retrofit, including hydrologic and wetland assessment, water quality modeling, conceptual design, permitting, stormwater evaluation and flow ways, and wetland restoration. He prepared county and water management district conceptual plans and an Environmental Resource Permit (ERP) application to improve water quality and quantity and flow into Lake Trafford and adjacent water bodies within the City of Immokalee. ***($550K)***

Project Biologist, Water and Wastewater Improvements Projects, Bay County, FL. Mr. Menendez's responsibilities include wetland delineation, protected species review, and wetland permitting, as well as attending meetings and coordinating with the surveying subconsultant. ***($150K)***

Environmental Task Leader, Western Landfill, Palm Beach County, FL. For the Palm Beach County Solid Waste Authority, Mr. Menendez manages the effort on wetlands, protected species, cultural resources, and wetland permitting. He also coordinated and managed work with environmental subconsultants for the permitting of the Western Landfill. ***($3M)***

Project Biologist, Blind River/Convent Small Freshwater Restoration Project, Louisiana. For the U.S. Army Corps of Engineers and Louisiana Department of Natural Resources, Coastal Restoration Division, Mr. Menendez served as project biologist and assisted with environmental evaluations, ecological field surveys, and NEPA documentation. The project involved planning and developing preliminary concepts for a freshwater diversion into the Blind River from the Mississippi River in St. Johns Parish. A Feasibility Study and an EIS were developed. The EIS include all components of a large and complex NEPA study including environmental, engineering, public involvement and agency coordination. ***($4.5M)***

Lead Biologist, Mixed Use Development, Tallahassee, FL. Mr. Menendez was the lead biologist for Hopkins North, a 300-acre mixed-use development. He conducted protected species surveys, wetland delineation, impact analysis, environmental review, and environmental permitting. In addition, he assisted with local government coordination and concept planning. ***($200K)***

Lead Ecologist, Permitting for Mixed Development Acreage, Hudson, FL. As part of the Beacon Woods/Emerald Field Subdivision project, Mr. Menendez was the lead ecologist for field, documentation, and permitting of 200 acres of mixed development. His responsibilities included wetland delineation, protected species surveys, permitting analysis, and agency coordination. He conducted a gopher tortoise survey, prepared ecological and environmental reports for the site, and assisted with the Environmental Resource Permit analysis and lead agency coordination. ***($150K)***

Lead Biologist, Residential Study Project at a Former Dairy Farm, Brooksville, FL. Mr. Menendez was the lead biologist for the study of a 475-acre residential project at Milk-a-Way Farms. He performed a study of a former dairy farm and conducted wetland delineation, protected species survey, regulatory agency coordination, site evaluation, and concept planning. ***($250K)***

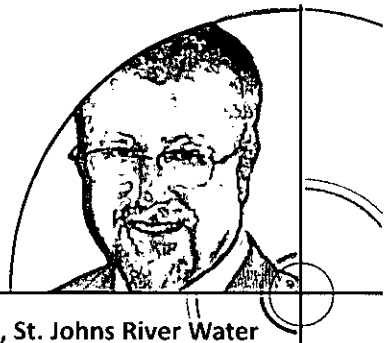
Environmental Task Manager, Three Road Improvements Projects, Freeport, FL. For US 331/SR 83 improvements, Mr. Menendez was the environmental task manager for three separate FDOT projects that included over 27 miles of roadway improvements, plus an additional six miles of a new roadway corridor. The study included wetland evaluation and delineation, permitting, protected species assessment, wetland mitigation, and coordination with state and federal agencies. The U.S. Army Corps of Engineers (USACE), FDEP, U.S. Fish and Wildlife Service (USFWS), Florida Fish and Wildlife Conservation Commission (FFWCC), United States Coast Guard (USCG), National Marine Fisheries Service (NMFS), and Northwest Florida Water Management District (NWFWMD) agencies were involved. The new re-aligned portion of the roadway required additional handling due to concerns regarding secondary and cumulative impacts, threatened and endangered species, water quality, and storm water. Wetland avoidance, minimization, and compensation required coordination and resolution between several regulatory and permitting agencies. ***($1.250M)***

Project Manager, General Environmental Services for Project Development and Environment Studies, Bartow, FL. Mr. Menendez was project manager for an FDOT project that specialized in completing environmental, engineering, and project development and environmental studies (PD&E) tasks for the FDOT on an as-needed basis. These tasks included protected species studies, wetland assessments, mitigation design, contamination assessment, permitting, Preliminary Engineering Report, public meetings and hearing preparation and execution, Pond Siting Reports, NEPA documentation, Section 4 (f), socio-economic studies, and cultural resource assessments. The contract was for the FDOT District 1 in Bartow, but the miscellaneous work orders covered the entire district. ***($750K)***

LEE P. WISEMAN, P.E., BCEE

GROUNDWATER

Education: ***M.S. – Environmental Engineering, B.S. – Microbiology;***
Registration: ***P.E. – FL (1990);*** **Years with CDM:** ***20.5;*** **Years with Other Firms:** ***5***



Project Director, Groundwater/Surface Water Interaction Model for Tiger Bay/Bennett Swamp, St. Johns River Water Management District, Volusia County, FL. This project involves the development, calibration, and use of the DHI MIKE integrated surface water/groundwater flow model for the Tiger Bay/Bennett Swamp area. This model was used to evaluate existing water management strategies in the Tiger Bay and Tomoka River Basins. The model was used for assessing the impacts of alternative water management strategies in meeting the desired goals of water supply, flood protection, and wetland function in the Tiger Bay/Bennett Swamp Area in Volusia County, Florida. Mr. Wiseman has provided project management oversight and technical direction. ***($351K)***

Project Director, Groundwater/Surface Water Interaction Model, Broward County Department of Planning and Environmental Protection, Central Broward County, FL. This project involved the development, calibration, and use of the DHI MIKE integrated surface water/groundwater flow model for central Broward County. The integrated hydrological surface water/groundwater model was developed to evaluate the means for more efficient water management practices that increase water supply in the region of central Broward County. The results of this modeling study identified structural and operational changes that maintained or improved the existing flood protection, increased the use of existing storage capacity within the stormwater management system, increased wellfield recharge, improved wetland sustainability, and reduced the threat of saltwater intrusion. Mr. Wiseman has provided project management oversight and technical direction. ***($615K)***

Senior Project Engineer, Wetlands Application System, South Walton Utility Company, Walton County, FL. Mr. Wiseman was the project engineer on the South Walton Utility Company's Wetlands Application System. Mr. Wiseman developed water and nutrient mass balances for a natural wetland treatment system that receives advanced wastewater treatment (AWT) quality reclaimed water. Wetland performance modeling and stormwater runoff modeling were also performed in support of the water and mass balances. He also prepared the groundwater and wetland monitoring plans for the project. ***($55K)***

Senior Project Engineer, Edwards Road Wetlands-Based Water Reclamation Project, Bay County, FL. Mr. Wiseman was the project engineer on the Edwards Road Wetlands-Based Water Reclamation Project. Mr. Wiseman developed water and nutrient mass balances for a natural wetland treatment system that receives advanced wastewater treatment (AWT) quality reclaimed water. Wetland performance modeling and stormwater runoff modeling were also performed in support of the water and mass balances. He was engineer-of-record for the wetland portion of the preliminary design report for this project. He also prepared the groundwater and wetland monitoring plans for the wetland treatment system. ***($100K)***

Senior Project Engineer, Bayou Marcus Wetland Restoration Program, Escambia County Utility Authority, Pensacola, FL. Mr. Wiseman developed the baseline hydrologic and water quality monitoring plan for the Escambia County Utility Authority's Bayou Marcus wetland restoration program in Pensacola. The data were used in combination with the detailed topographic survey, hydrologic monitoring data, and groundwater/surface water modeling analysis design for the effluent distribution system for the project. He also assisted with procuring the facility's dredge and fill permit and the construction permit. ***($203K)***

Project Engineer, AWT/Constructed Wetlands Demonstration Project, West Palm Beach, FL. Mr. Wiseman performed the groundwater modeling analysis for the design of the City of West Palm Beach's Advanced Wastewater Treatment (AWT)/constructed wetlands demonstration project. Following the modeling, he provided specifications for the monitoring wells, water level indicators, and rain gauges. After the construction of the demonstration facility, he managed the project's hydrologic and water quality monitoring programs. The data were used to develop water and mass balances for the constructed wetlands for the evaluation of the system's treatment performance and the fate of the applied nutrients. The results of this study were used to help design the wetlands-based water reclamation project. This project won the Grand Conceptor Award for Florida (1996) from the American Consulting Engineers Council. ***($1.8M)***

Senior Project Engineer, Lake Okeechobee Fast-Track Project (LOFT), SFWMD, Okeechobee and Martin Counties, FL. Mr. Wiseman was the task manager for the groundwater modeling in support of the proposed Taylor Creek Reservoir and Lakeside Ranch Stormwater Treatment Area (STA). A regional groundwater model (MODFLOW) was developed and calibrated for a 1,400-square-mile area, including the project sites. From the calibrated models, two local models were developed for the project sites. The model was used to evaluate possible seepage controls for the Taylor Creek Reservoir and the Lakeside Ranch STA. The modeling results were used in support of the geotechnical and hydraulic design of the proposed facilities. ***($16M)***

Project Engineer, C-44 Water Management Project, Aquacalma, Martin County, FL. Mr. Wiseman performed the groundwater/seepage modeling for the proposed large reservoir and wetland treatment system to be located along the St. Lucie (C-44) canal in Martin County, Florida. This project was important for overall nutrient reduction and flow equalization of surface water flows from Lake Okeechobee to the Atlantic Ocean. The project is part of the Comprehensive Everglades Restoration Project (CERP). Mr. Wiseman was one of the contributing authors to the project's preliminary design report. ***($2.1M)***

Senior Project Engineer, 20-year Water Use Permit Application for the City of Boca Raton, Palm Beach County, FL. This project consisted of preparing a 20-year Water Use Permit (WUP) application for the City. Mr. Wiseman worked very closely with the City and the South Florida Water Management District (SFWMD) in developing Boca Raton's population and demand projections for the next 20 years. He also led the groundwater modeling analysis for the project using an updated MODFLOW model for south Palm Beach County. The primary constraints for the proposed water use allocation were wetland impacts and no additional water from the regional system. Alternative water supply sources had to be identified to meet future water demands. ***($4.4M)***

Senior Project Engineer, Wetlands-Based Water Reclamation and Aquifer Recharge Program, West Palm Beach, FL. Mr. Wiseman was a senior project engineer managing the hydrologic, water quality, and wetland monitoring programs for the City of West Palm Beach Wetlands-Based Water Reclamation and Aquifer Recharge Program. The data were used in combination with site-specific topographic data and published data in developing an integrated surface water/ groundwater flow model of east-central Palm Beach County. This model was used to evaluate water level changes at the wetland reuse site and at the City of West Palm Beach Wellfield site that would result from pumping from all of the local wellfields and from aquifer recharge. The modeling was used to design the Wetlands-Based Water Reclamation Project and was submitted in support of the Florida Department of Environmental Protection (FDEP) operating permit and Environmental Resource Permit for the project. Mr. Wiseman also performed all of the modeling in support of the City's 20-year WUP. This modeling was used in combination with water budgets to quantify all of the sources of potable water, storage (ASR), and demands for the City. Mr. Wiseman ultimately helped negotiate the conditions of the WUP for the City. Mr. Wiseman was also the engineer-of-record for the final design and specifications for the Wetlands-Based Water Reclamation Project. This is one of the first indirect potable wastewater reuse programs in Florida. This project won the Florida Institute of Consulting Engineers Grand Award for Water Supply and Wastewater. The project also received an Honor Award from the American Council of Engineering Companies in the same category. ***($30M)***

Senior Remediation Engineer, Remediation and Development for Universal City Property Management III, LLC – South Campus, Orlando, FL. This project involves the source control and groundwater remediation of six known landfills, and three areas of concern within the Sand Lake Road Complex (SLRC). Mr. Wiseman was involved with developing the Interim Measures Work Plan (IMWP) for the excavation and groundwater remediation of Landfills 3, 4, 5, and 6. He was the engineer-of-record for the groundwater remediation systems at Landfills 3, 4, 5, and 6, for the Pershing Waste Conservation Area, the site-wide water treatment facility, and the effluent sprayfield. He provided all the necessary documentation to CDM's construction crews to implement the remediation activities identified in the IMWP. Within a one-year period, CDM obtained all of the necessary permits and prepared all of the plans to begin construction activities at Landfill 3 in December 1999. Construction activities at Landfill 4 started in October 2000 and ended in February 2002. The source material has been removed from both landfills, and the groundwater remediation systems are now operational. Mr. Wiseman also developed several Resource Conservation Recovery Act (RCRA) Facility Investigation Work Plans for other sites at the SLRC. He helped obtain a site-wide 20-year Water Use Permit for the SLRC groundwater extraction systems. ***($8.1M)***

Section B: Experience With Projects of a Similar Type and Size

SECTION B: EXPERIENCE WITH PROJECTS OF A SIMILAR TYPE AND SIZE

B.1 PROJECTS ILLUSTRATING THE EXPERIENCE OF THE FIRM AND CURRENT STAFF

CDM has a diverse range of relevant experience on similar projects in Florida and across the nation that will benefit the County on this project. Below we have highlighted ten projects showing relevant experience with projects of a similar size and scope. As proud as we are of our national and state-wide resume, we are even more proud of the track record and relationship we have maintained with Leon County for the past 20 years. As your stormwater and utilities engineering consultant, CDM has completed nearly 40 individual projects for the County in the last ten years alone. Our extensive local experience—several examples of which are included in the following pages—demonstrates our aptitude for this contract and our ability to hit the ground running.

As part of the Goose Bayou Stormwater Management Master Plan, CDM conducted stormwater modeling to develop alternative solutions to alleviate flooding.

Goose Bayou Stormwater Management Master Management Plan, Panama City, FL

Firm's Responsibility: ***Prime***
Project Owner's Representative: ***Neil Fravel, Public Works Director; 9 Harrison Avenue, Panama City, FL 32401; Tel: 850.872.3015***
Date Completed: ***2010***
Project Manager and Other Key Personnel: ***Client Service Manager - David Kozan; Project Manager - Danielle Honour; Key Staff - Brian Mack, Mike Schmidt, Anna Padilla, Katey Breland***

The City of Panama City (City) contracted with CDM in January 2010 to develop a Stormwater Management Master Plan (SMMP) for the Goose Bayou Basin. The Goose Bayou Basin is a 4.3-square mile basin that discharges into St. Andrew Bay in the Florida Panhandle. For planning purposes, the City desires to develop a regional stormwater model of the study area that will be used to identify flooding problems within the City and develop alternative solutions to alleviate flooding. The stormwater model will also be used to define the 100-year floodplain of the primary stormwater management system (PSMS) within the city limits.

Tasks included data collection, field reconnaissance, survey, development of a hydrologic and hydraulic model using SWMM Version 5.0, alternatives evaluation, and floodplain mapping. This project was completed in December 2010.

Deep Creek Stormwater Master Plan, Volusia, County, FL

Firm's Responsibility: ***Prime***
Project Owner's Representative: ***Judy Sloane, P.E., Road and Bridge Engineer; 123 West Indiana Avenue, DeLand, FL 32720; Tel: 386.822.6422***
Date Completed: ***2009***
Project Manager and Other Key Personnel: ***Client Service Manager - Brian Mack; Project Manager - Danielle Honour; Key Staff: Mike Schmidt***

In 2007, the Volusia County Public Works Department (the County) contracted with CDM to develop a stormwater master plan (SWMP) for the Deep Creek Basin (Basin), a 164-square-mile watershed in south-central Volusia County. Due to its

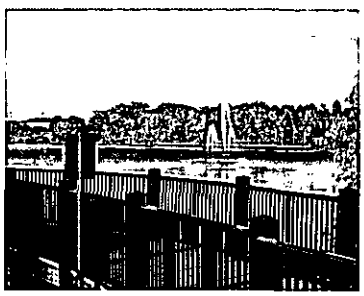
relatively undeveloped nature, the County identified this watershed as a target for study in order to plan for future developments. TMDLs are scheduled to be developed for several of the major receiving waters in the watershed. Major road and property flooding has been observed in the Basin during major storm events, the most recent event being Tropical Storm Fay in August 2008.

The primary objective of the master plan was to develop a regional hydrologic and hydraulic stormwater model for the watershed. CDM developed a hydrologic and hydraulic model of the Basin using U.S. EPA SWMM Version 5. The model was then used to predict level-of-service (LOS) deficiencies in the primary stormwater management system (PSMS) for which alternatives were proposed. This model results were also used to estimate the 100-year floodplain for the watershed's PSMS.

CDM performed an alternatives analysis to address the LOS deficiencies in the basin. As part of this analysis, CDM also developed a ranking matrix and conceptual cost estimates in order to prioritize recommended alternatives.

Assessments of wetlands and water quality were also performed as part of this master plan. Water quality issues were also addressed, and an inventory of water quality data associated with state-defined impaired water bodies was performed, as well as a pollutant load analysis using the WMM.

Public involvement was also another important aspect to this study because of the number of concerns expressed by the local community due to recent flooding experienced during Tropical Storm Fay in 2008. CDM worked closely with the County to develop a presentation documenting the intent of the study and conducted two public meetings heavily attended by local citizens.



CDM's facility design experience is highlighted by the award-winning Lake Concord Stormwater Park, which incorporates aesthetic features into a stormwater treatment facility.

Lake Concord Stormwater Park, Casselberry, FL

Firm's Responsibility: ***Prime***
Project Owner's Representative: ***Mark D. Gisclar, MPA, Public Works Director; 95 Triplet Lake Drive, Casselberry, FL 32707; Tel: 407.262.7725, ext. 1234***
Date Completed: ***2009***
Project Manager and Other Key Personnel: ***Client Service Manager - Brian Mack; Project Manager - Danielle Honour; Key Staff - Jim Wittig, Brian Williams, Daniel Buckland, Russ Savage***

As a major portion of the City of Casselberry's (City) revitalization of the downtown area, CDM designed a stormwater park to provide stormwater treatment to the previously untreated systems. The park is located immediately north of City Hall on the south shore of Lake Concord. The park now serves as a functional and educational gathering place for City-sponsored concerts and events, as well as a location for festivals and day-to-day recreation. Lake Concord Park, completed in October 2009, consists of 0.9 acres of sidewalk, stage, and café area; 0.4 acres of asphalt parking; and 0.1 acres of parking spaces made of pervious materials, which include pervious concrete, pavers, and recycled tire material. The boardwalk provides a pedestrian-friendly alternative to the otherwise traffic exposed sidewalks of U.S. 17-92.

The poorly functioning stormwater pond was replaced with a smaller pond and an exfiltration trench, giving the park more usable area. Two nutrient separation baffle boxes were installed as part of the Lake Concord Park project.

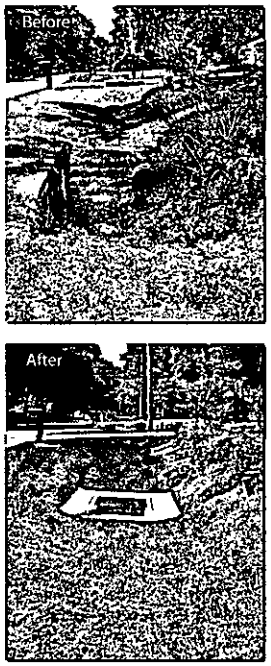
The park also incorporates several low-impact development (LID) practices. During design and construction, care was taken to preserve as many of the existing mature oak trees on the site as possible. Florida-friendly landscaping is used throughout the park and incorporated into the rain gardens that also act as stormwater

treatment areas. A 1,300-foot boardwalk was constructed of recycled composite materials and is equipped with LED lighting. Water conservation is a theme of Lake Concord Park, which is now irrigated using both reclaimed water and harvested stormwater.

The new parking lot has reduced runoff by incorporating three pervious areas—porous concrete, turf block, and a pavement system that uses recycled tires. The wetland along the lakeshore was also extensively re-planted with native species to improve native habitat, improve water quality and erosion control, and improve aesthetics, as well as to off-set minor wetland and surface water impacts created as a result of the design.

In addition to the pleasing views of Lake Concord, several focal points are located throughout the park. Amenities include a decorative fountain, several wood sculptures created from trees that were slated to be removed due to disease, and a mosaic-tiled, interactive water feature. Public education is incorporated into the park with a series of educational signage that describes each of the functioning stormwater best management practices (BMPs). Kiosks located next to each of the BMPs educate visitors on how the technology works and why it was installed.

The City received the 2010 Florida Stormwater Association Award for the Lake Concord Park project. The project also received the Best Community Project award by Landscape Contractor magazine and was featured in the September 2010 issue.



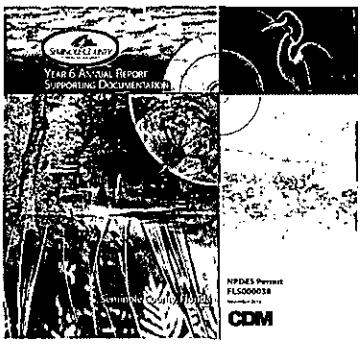
Joe Cotton Trail Retrofit Design and Permitting Services, Leon County, FL

Joe Cotton Trail Retrofit Design and Permitting Services, Leon County, FL

Firm's Responsibility: ***Prime***
Project Owner's Representative: ***Felton Ard, P.E., Senior Design Engineer; 2280 Miccosukee Road, Tallahassee, FL 32308; Tel: 850.606.1500***
Date Completed: ***2010***
Project Manager and Other Key Personnel: ***Client Service Manager - David Kozan; Project Manager - Anna Padilla; Key Staff - Brian Williams, Katey Breland***

The Joe Cotton Trail Retrofit Project addressed localized flooding along Joe Cotton Trail located in northeast Leon County, Florida. The project addressed reported flooding problems caused when the upstream ditch overflowed, resulting in flooding of Joe Cotton Trail. The project area included Venetian Court and portions of Montrose Trail, Joe Cotton Trail, and Alan Adale Trail.

CDM designed and permitted the retrofit of an existing stormwater management system at Joe Cotton Trail. This retrofit included the replacement of the existing driveway culvert near the Joe Cotton Trail crossing, replacement of the existing culvert under Joe Cotton Trail, and the installation of a box structure to connect the two existing culverts. The project included modeling, grading and culvert design, and permitting of this stormwater management system.



CDM has a proven record of successful past performance in developing models and analyses to support the Florida TMDL program—including our support of Seminole County—and the County will greatly benefit from this expertise.

Seminole County Phase I NPDES Permit, Seminole County, FL

Firm's Responsibility: ***Prime***
Project Owner's Representative: ***Mark Flomerfelt, 520 W. Lake Mary Boulevard, Suite 200, Sanford, FL 32773; Tel: 407.665.5709***
Date Completed: ***Ongoing***
Project Manager and Other Key Personnel: ***Client Service Manager - Brian Mack; Project Manager - Barika Poole; Key Staff - Scott McClelland, Danielle Honour***

CDM was selected by the Seminole County Public Works Department to provide NPDES related support services for the following tasks.

Seminole County TMDL Funding Investigation

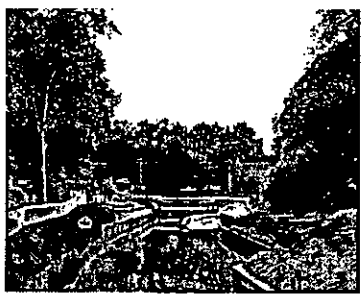
The FDEP has adopted a number of TMDLs for various water bodies within the County. These TMDLs will require a reduction of pollutant loading to the affected water bodies in order to meet state water quality standards. CDM is assisting the County with the first step in the development of supplemental funding for the stormwater management program, which is to conduct the Initial Assessment Formulation Study that focuses on developing the concept of a water quality improvement funding program to provide dedicated funding for the County's ongoing water quality management activities that are required by federal, state, and regional regulatory programs.

Seminole County TMDL Strategy Plan

The Lake Jesup Basin stakeholders are currently preparing a BMAP to identify activities to reduce the amount of nutrients contained within nonpoint sources that ultimately reach the lake. The County has requested assistance from CDM to develop a broad-based strategy that will establish methodologies to select pollutant reduction management actions and evaluate their costs and benefits. These may include the implementation of local projects, participation in regional projects, or the expansion of existing pollutant loading reduction activities. Once the strategy has been established and accepted by the County, CDM will then apply to the Lake Jesup Basin.

Seminole County NPDES Support Services

CDM has prepared the County's NPDES Annual Report since 2003. CDM recently completed the County's Year 5th Annual Report and currently working on the 6th Annual. CDM is currently working on the County's NPDES permit application for 2010 to 2011.



CDM's work on the Harbinwood Estates drainage improvement project demonstrates our innovative thinking and ability to provide our clients with cost savings, as we designed a portable pump for use during high-flow events..

Harbinwood Estates Drainage Improvements, Leon County, FL

Firm's Responsibility: ***Prime***
Project Owner's Representative: ***Theresa Heiker, P.E., Stormwater Management Coordinator; 2280 Miccosukee Road, Tallahassee, FL 32308; Tel: 850.606.1500***
Date Completed: ***2006***
Project Manager and Other Key Personnel: ***Client Service Manager - Skip Cook; Project Manager - Jane Williams***

The Harbinwood Estates subdivision in Tallahassee has a lengthy history of residential flooding problems. In March 1997, CDM was contracted by Leon County to evaluate flood reduction benefits of restoring Lake Charles, which discharges into the Harbinwood Estates Subdivision. As part of this effort, CDM and county staff met with property owners adjacent to the lake to listen and address their concerns to the extent possible regarding restoration efforts. In order to quantify the flood reduction benefits of restoring Lake Charles, CDM developed and

calibrated a stormwater model of the system using the Environmental Protection Agency's Stormwater Management Model.

In 2000 and 2001, three major storm events, Tropical Storms Helene, Allison, and Barry, caused significant flooding and property damage throughout the community. In addition, the flood waters, which were greater than 3 feet deep along some roadways and within some structures, required emergency evacuation of many residents.

In an effort to provide relief to the Harbinwood residents, Leon County and CDM partnered to evaluate the existing stormwater system and flood hazards and provide potential designs to mitigate flooding. In order to adequately address existing problems and concerns of the residents, CDM and the County engaged homeowners in the data collection and evaluation process. Gathering existing records of flood complaints and field verification, the project team identified and inventoried problem areas that included yard, roadway and structural flooding. This information was further supplemented through several public meetings with property owners, collecting input on the extent of flooding and providing community involvement in the design process.

A conceptual development plan was created to identify solutions for mitigating flood hazards. The plan included an evaluation and optimization of design alternatives utilizing SWMM4 modeling. Based on the conclusions of the plan, the County and CDM selected the most effective alternative and proceeded with full design, permitting, and construction.

The Harbinwood Estates Drainage Improvements were broken into two projects, the Faulk Drive Closed Basin and the Primary Conveyance System. The Faulk Drive Closed Basin project included approximately 2000 linear feet of stormwater pipe and the installation of an emergency relief stormwater force main with the use of a portable pump for maintenance of the Faulk Drive Pond. Alternatives considered included constructing a permanent pumping station to convey water during high flow events however the use of the portable pump provided significant cost savings for the County.

The Primary Conveyance System project included acquisition and removal of over 15 flood-prone homes, replacing them with restored green space and stormwater management facilities. The project included the installation of two wet detention ponds, 1100 linear feet of road improvements, 1600 linear feet of new stormwater pipes and box culverts, and approximately 1000 linear feet of channel lined with steel sheet piles.

Construction for the Faulk Drive Closed basin was completed in 2006 and construction on this Primary Conveyance system was completed in July 2008, just before Tropical Storm Fay hit Tallahassee, soaking the area with rainfall amounts in excess of the 100-year storm. This newly completed project completely mitigated potential impacts of Fay, with no reported flooding of roadways or buildings.

Total Maximum Daily Load and Basin Management Action Plan Support, Orange County, FL

Firm's Responsibility: ***Prime***
Project Owner's Representative: ***Ronald Novy, Environmental Program Supervisor; 800 Mercy Drive, Suite 4, Orlando, FL 32808; Tel: 407.836.1409***
Date Completed: ***2010***
Project Manager and Other Key Personnel: Client Service Manager - Brian Mack/ Mark Burgess; Project Manager - Danielle Honour; Key Staff - Scott McClelland

The Orange County (county) Stormwater Management Division has awarded CDM its Continuing Stormwater Management Engineering Services contract for three consecutive three-year terms, beginning in 2001. Under this contract, CDM performed a number of studies that provided Total Maximum Daily Load (TMDL) and Basin Management Action Plan (BMAP) support to the county.

Long Branch Water Quality Study

The purpose of this work order was to assist the county in meeting TMDLs established by the Florida Department of Environmental (FDEP) for Long Branch, located in the Big Econlockhatchee River Basin in eastern Orange County. The study included the following tasks: data collection and mapping, identification of major point and non-point source discharge, and developing the text that eventually became part of the Basin Management Action Plan For the Implementation of Fecal Coliform and Dissolved Oxygen Total Maximum Daily Loads in Long Branch (WBID 3030), one of the first BMAPs adopted by the FDEP in 2008.

Crane Strand Drain Water Quality Improvement Study

For this work order, CDM provided support for fecal coliform and dissolved oxygen TMDLs established by the FDEP for Crane Strand and Crane Strand Drain. The study included the following tasks: data collection and mapping, identification of pollutant sources, pollutant load analysis, best management practice (BMP) alternatives analysis, ranking and prioritization of matrix development, conceptual design, and cost estimation.

Little Econ River Water Quality Improvement Study

For this work order, CDM provided support for the fecal coliform TMDL established by the FDEP for Little Econ River. The study included the following tasks: data collection and mapping, identification of major point and non-point source discharge, BMP alternatives analysis, ranking and prioritization of matrix development, conceptual design, and cost estimation.

Lake Jesup TMDL Assistance

For this work order, CDM provided support for the nutrient TMDL established by the FDEP for Lake Jesup. The study included the following tasks: data collection and mapping, identification of major point and non-point source discharge, applying the FDEP's GIS-based pollutant load model, BMP alternatives analysis, ranking and prioritization matrix development, conceptual design, and cost estimation. CDM also attended BMAP stakeholder meetings in support of the county and was an active participant in the process.

Group 4 Impaired Waters Assessment

In April 2009, the FDEP released the Draft Verified, Draft Delist, Draft Assessment of 4d Status, Draft Period of Record Assessment, and the Draft Assessments of Criteria Expressed Relative to Natural Background lists for the Group 4 water bodies. CDM provided support in performing reviews, data confirmation, and data application for the listed Group 4 water bodies in Orange County. CDM also developed and summarized review comments for all these lists, which were submitted to the FDEP as part of the public comment process. CDM also attended the FDEP public meeting in support of the county and performed coordination with the FDEP as needed.

Southbrook Floodplain Enhancement Conceptual Design Services, Leon County, FL

Firm's Responsibility: ***Prime***
Project Owner's Representative: ***Felton Ard, P.E., Senior Design Engineer; 2280 Miccosukee Road, Tallahassee, FL 32308; Tel: 850.606.1500***
Date Completed: ***2009***
Project Manager and Other Key Personnel: ***Client Service Manager - David Kozan; Project Manager - Anna Padilla; Key Staff - Jim Wittig, Katey Breland***

CDM can put our experience conducting field investigations and performing local modeling evaluations, as was done for the Southbrook project, to use for the benefit of the County.

The Southbrook Floodplain Enhancement project, as part of the Killearn Lakes Plantation Stormwater Improvements project, examined potential solutions to eliminate home flooding. The existing drainage system collected stormwater from upstream tributary areas and conveyed it through an open swale that runs between Wildlife Trail and Copperfield Circle then north to a culvert crossing under Otter Creek Road. The swale abuts residential properties along Southbrook Court and discharges to an existing pond.

Identifying effective alternatives for this project was challenging, requiring creative thinking and close work with County staff because of the lack of available areas for storage and the sensitive nature of the green space through which the drainage system passes.

CDM evaluated the current system through field investigation, historical information, hydraulic and hydrologic evaluation, and review of available data to propose alternative design measures to mitigate the current flooding issues. Three recommended conceptual design alternatives were prepared, including plan and profile view and construction cost estimates.

Stormwater Management Master Plan and Letter of Map Revision, Panama City Beach, FL

Firm's Responsibility: ***Prime***
Project Owner's Representative: ***Al Shortt, City Engineer, Utilities Director; 110 South Arnold Road, Panama City Beach, FL 32413; Tel: 850.233.5100, ext. 2404***
Date Completed: ***Ongoing***
Project Manager and Other Key Personnel: ***Client Service Manager - David Kozan; Project Manager - Brian Mack/Del Schwalls; Key Staff - Anna Padilla, Jim Wittig, Katey Breland***

The County is seeking a consultant experienced in FIRM modifications, and CDM, along with project team member Del Schwalls, offers extensive experience in the process, ensuring the County of timely and accurate applications.

In order to fulfill the FDEP Joint Coastal Permit requirements, the City of Panama City Beach (City) contracted CDM to develop a SMMP for submittal to the FDEP. This SMMP included the detailed modeling evaluation of the hydrology and hydraulics of the City's primary stormwater management system (PSMS) in areas with known flooding problems and the non-detailed modeling evaluation of the hydrology of the stormwater outfalls along the beach without historical flooding problems. The following studies included submitting the detailed model results to

FEMA using the LOMR process. The areas are primarily located in the FEMA Zone A 100-year floodplain. The effective floodplain boundaries were based on historical, outdated information, and this process revised the floodplain boundaries based on current data.

Gulf Highlands Federal Emergency Management Agency Letter of Map Revision, Panama City Beach, FL

CDM prepared the LOMR package for submittal to FEMA using the detailed stormwater model developed for the SMMP. This process included developing the existing conditions model using XP SWMM, Version 10.6 (XP-SWMM) modeling software developed by XP Software Inc.; developing the topographic work map, including delineation of the 100-year floodplain using GIS mapping for the Gulf Highlands area; and developing a parcel map that identified property owners impacted by the map revision and preparing notification letters for affected property owners. In addition, CDM prepared the LOMR report describing the project, discussing the modeling efforts conducted, and the changes between the effective DFIRM and FIS and the proposed revisions based on CDM's analysis. The report also included completion of all LOMR application forms as required by FEMA and all documents relevant to the FEMA regulations and policies.

Colony Club Federal Emergency Management Agency Letter of Map Revision, Panama City Beach, FL

CDM prepared the LOMR package for submittal to FEMA using the detailed stormwater model developed for the SMMP. This process included developing the existing conditions model using XP-SWMM, Version 9.5 (XP-SWMM) modeling software developed by XP Software Inc.; developing the topographic work map, including delineation of the 100-year floodplain using GIS mapping; and developing a parcel map that identified property owners impacted by the map revision and preparing notification letters for affected property owners. In addition, CDM prepared the LOMR report describing the project, discussing the modeling efforts conducted, and the changes between the effective FIRM and FIS and the proposed revisions based on CDM's analysis.

The Glades Letter of Map Revision, Panama City Beach, FL

CDM prepared the LOMR package for submittal to FEMA using the detailed stormwater model developed for the SMMP. This process included developing the existing conditions model using XP-SWMM, Version 9.5 (XP-SWMM) modeling software developed by XP Software Inc.; developing the topographic work map, including delineation of the 100-year floodplain using Geographic Information System (GIS) mapping; and developing a parcel map that identified property owners impacted by the map revision and preparing notification letters for affected property owners. In addition, CDM prepared the LOMR report describing the project, discussing the modeling efforts conducted, and the changes between the effective FEMA Flood Insurance Rate Map (FIRM) and Flood Insurance Study (FIS) and the proposed revisions based on CDM's analysis. The report also included completion of all LOMR application forms as required by FEMA and all documents relevant to the FEMA regulations and policies.

CDM has extensive experience permitting projects in Leon County, and we recently worked with the Northwest Florida Water Management to permit the Okeeheepkee Stormwater Treatment Facility.

Okeeheepkee Stormwater Treatment Facility, Leon County, FL

Firm's Responsibility: ***Prime***
Project Owner's Representative: ***Linda D. Chaisson, P.E., Hydrologist; 81 Water Management Drive, Havana, FL 32333; Tel: 850.539.5999***
Date Completed: ***2009***
Project Manager and Other Key Personnel: ***Client Service Manager - David Kozan; Project Manager - Lynne Putnam; Key Staff - Tim Verwey, Katey Breland***

The Northwest Florida Water Management District (NWFWMD) prepared engineering plans and permit submittals for a new stormwater treatment facility on Okeeheepkee Road in Leon County, Florida. The purpose of this new stormwater pond is to provide enhanced treatment to stormwater prior to its discharge to Lake Jackson. At the NWFWMD's request, CDM provided additional assistance to respond to the County's written concerns regarding the permit submittal package and prepared documentation to request a variance.

CDM analyzed data and the permit request for the Okeeheepkee project and met with Leon County permit writers to focus their concerns in order to address them through further documentation. CDM prepared a modified permit application, which was granted by the County. This allowed the NWFWMD to advertise and award the project.

The NWFWMD also requested, by change order, that CDM provide limited structural engineering services during construction for two spillways.

CDM performed the following tasks over the course of the project:

- Initial field visit
- Permit review and data gathering to support permit request
- Meeting with County permit writers to negotiate path forward
- Preparation of response letter to County concerns
- Preparation of a modified permit application
- Preparation of 75% and 100% structural design documents
- Preparation of opinions of probable costs to evaluate contractor's cost estimate
- Review and approval of shop drawing submittals from the contractor.

B.2 PROJECTS PRESENTLY UNDER CONTRACT

In 2010, CDM entered into entered into contractual agreements with 775 regional, state, and municipal governments and utilities, as well as 10 different U.S. federal agencies. Additionally, over the last five years, CDM has maintained several hundred different continuing services contracts with 130 government entities throughout Florida, and, in Florida alone, CDM has more than 600 active projects and over 220 clients, many of these being municipal entities. Due to the length of this list and the County's express interest in keeping submittals as concise as possible, we have chosen to highlight several current projects, for which CDM is currently under contract, for your review. These projects, shown in **Table B.2-1**, demonstrate our capabilities and qualifications to perform stormwater engineering services. If the County wishes, CDM can provide further projects and references that can attest to our professionalism and the quality of our work.

Table B.2-1

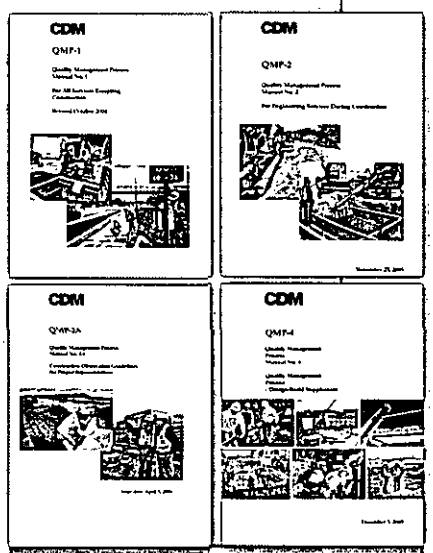
PROJECT NAME	DESCRIPTION
Gum Creek Letter of Map Revision, Leon County, FL	Under CDM's existing continuing services contract with Leon County, CDM is performing a flood study for the Gum Creek and Gum Swamp watersheds. CDM is currently updating and revising existing models and preparing a LOMR to revise the FEMA flood maps accordingly.
Stormwater Management Master Plan, Miami Beach, FL	CDM was selected to develop a new Citywide Comprehensive Stormwater Master Plan to create a comprehensive model that will evaluate the existing system to identify those basins that are experiencing reduced LOS. The scope of work includes three initial service orders: stormwater master plan development, initial evaluation and benchmark inventory of the existing stormwater infrastructure, and evaluation of cost-effective alternatives for improvements on current CIP projects to desired LOS and stormwater recommendations for upcoming project packages.
Continuing Stormwater Management Engineering Services, Orange County, FL	As part of this continuing services contract, CDM has completed work orders to address a variety of stormwater management related issues that included retrofit design, planning, stormwater needs assessments, and permitting. Each work order assignment was for projects valued at less than $50,000 in engineering fees.
Northwest Florida Water Management District Expert Witness Service, Florida	CDM is providing expert witness services to support the NWFWMD in support of the District's decision to issue a permit to Bay County. The District sought experts in economics and treatment plant restoration after a disaster, and CDM staff are providing their expertise.
Southbrook Floodplain Enhancement and Final Design Services, Leon County, FL	CDM is designing stormwater improvements to the current stormwater system in the Southbrook Lane area, which was experiencing home flooding. CDM evaluated the current system through field investigation, historical information, hydraulic and hydrologic evaluation, and review of available data, and proposed alternative conceptual design measures to mitigate the current flooding issues during the conceptual design phase of this project. Currently, CDM is designing the selected alternative, including enhancement of storage areas and natural channel section improvements.
Gulf Highlands Letter of Map Amendment, Panama City, FL	Under CDM's master services agreement with the City, CDM is preparing a Letter of Map Amendment for the Gulf Highlands area, as a follow up to the Gulf Highlands LOMR. CDM is also preparing resident notification letters, collecting data, submitting a report to FEMA, and notifying residents after approval by FEMA.
Hombre Circle Stormwater Improvements, Panama City, FL	The City has requested that CDM provide consulting engineering services for the design of stormwater improvement facilities at Hombre Circle. CDM is completing the following tasks for this project: coordination of geotechnical work, design services, permit assistance, and limited bidding and limited engineering services during construction. This project also includes design and permitting of a pipe crossing with concrete headwalls.
Moonlight Bay Stormwater Improvements, Panama City Beach, FL	CDM is providing consulting engineering services for the design of stormwater improvement facilities at Moonlight Bay. The City identified pipe integrity problems from south of Moonlight Bay Drive to the West Bay outfall, and CDM is completing the following tasks to assist the City: site visit and coordination for survey and geotechnical work, hydrologic and hydraulic evaluation, design services, permit assistance, and limited bidding and limited engineering services during construction.
South Glades Trail Stormwater Improvements, Panama City Beach, FL	To support the City of Panama City Beach in the design of stormwater improvements to the existing treatment facilities at South Glades Trail, CDM is providing services related to site visits and coordination for survey and geotechnical work, hydrologic and hydraulic evaluation, design services, permit assistance, and limited bidding and limited engineering services during construction.

Table B.2-1

PROJECT NAME	DESCRIPTION
Lullwater Drive Stormwater Improvements, Panama City Beach, FL	CDM is designing improvements to the stormwater treatment facilities located at Lullwater Drive. Tasks include site visit and coordination for survey and geotechnical work, hydrologic and hydraulic evaluation, design services, permit assistance, and limited bidding and limited engineering services during construction. Also included under this project is the design and permitting of a pipe crossing with retaining walls and inlets.
Beth & Gardenia Street Stormwater Improvements, Panama City Beach, FL	The City identified several yards with flooding along Gardenia Street and subsequently requested that CDM provide stormwater improvement design services. CDM is performing site visits and coordination for survey and geotechnical work, hydrologic and hydraulic evaluation, and alternatives analysis.
Coral Drive Stormwater Improvements, Panama City Beach, FL	CDM is assisting the City in obtaining a Florida Department of Transportation Drainage Connection Permit for a stormwater design improvements project along Coral Drive.
Bond Stormwater Management Facility Stormwater Monitoring, Tallahassee, FL	The Bond Stormwater Management Facility (SWMF) was selected by the FDEP to receive grant funding through the Section 319(h) Nonpoint Source Management Program, which requires stormwater quality monitoring. The City requested CDM to provide consulting engineering services to complete this project, which includes implementation of an effectiveness monitoring program for the SWMF, determination of the treatment efficiency of the SWMF, and preparation of the draft and final reports that summarize the data evaluation for the performance of the SWMF.
Killearn Acres Subdivision - Middle Basin Drainage Improvements, Leon County, FL	CDM was retained to provide engineering design services to improve the Killearn Acres Middle Basin drainage system. Services to date have included data collection, geotechnical investigation, environmental assessments, survey, preparation of construction documents, permitting, and bidding.
Lake Heritage Dam Phase I, Leon County, FL	CDM is assisting the County with a feasibility study and the conceptual design for the rehabilitation of the existing earthen dam and local drainage system. Tasks have included dam inspection and subsurface investigation for the existing earthen dam impounding Lake Heritage; the development of H&H models for the existing and proposed conditions; the development of alternatives for repair/rehabilitation of the dam; and conceptual design for a preferred alternative.

B.3 PROCESS AND PROCEDURES FOR ENSURING THAT CURRENT DESIGN STANDARDS, CODES, AND OTHER REGULATORY DIRECTION ARE UTILIZED

CDM has a formal procedure for managing the quality of a project and meeting client expectations. The CDM Quality Management Procedures (QMP) Manual No. 1 defines the requirements for maintaining a high-level of quality in all stages of a project, including project initiation (scope and budget development) activities, project start-up activities, project execution activities, and project closeout activities. CDM project managers are trained in correct procedures in our multilevel training program administered by CDM University (CDMU), based on Project Management Institute guidelines. Project managers must take the designated training and pass certification to enable them to manage the appropriate level of risk and complexity of projects. A separate training course is held for the specifics of design-build projects, large design projects, and large program management (multi-project) assignments.



Quality has been, and remains, the cornerstone of CDM's business for more than six decades. Achieving quality requires vigilance and scrupulous attention to the standards set forth by clients, professional associations, regulators, and CDM. To codify this commitment to quality, CDM has developed Quality Management Process Manuals to address project needs and specific phases.

Because of the diversity of the services we provide and the clients we serve, QMP manuals have been developed for engineering services during construction (QMP-2 and 2A), construction (QMP-3 and 3a), and alternative delivery (QMP 4) projects. CDM unit presidents are responsible for compliance with all the QMP requirements within their units, using their quality managers to develop auditing systems consistent with their specific operations and client requirements. As a corollary to these review requirements, CDM uses specialized project tracking software for schedule, budget, and staffing factors for each major component of the project, so that key staff have instantly available information to assist them in completing the project on time and within budget.

CDM believes that meeting our commitments for submittal of deliverables on schedule is of critical importance to project success. Thus, we take a sophisticated approach to project scheduling to measure actual progress against the project plan and provide deliverables to clients on time. We accomplish this by using powerful software programs (such as Primavera) capable of critical path method (CPM) schedule analysis, cost control analysis, and resource usage and leveling analyses.

These programs enable project managers to readily access scheduling and analysis system capabilities. Our proposed project managers are trained in the use of this scheduling software and will be able to provide the critical input needed to the project team for schedule refinement. Issues of quality management, cost control, and early identification and resolution of problems are addressed in every feature of our QMP. Through our careful selection of team members and key staff, to the application of principles and procedures described below, we can provide the County with project management that meets a rigorous standard of quality, cost control, and responsiveness.

Our approach to quality management has three overriding principles:

- **Quality Ethic.** Quality, excellence delivered, is embodied in CDM's core values of excellence, initiative, shared commitment, integrity, and teamwork. These are the fundamental principles that guide our collective and individual decisions, strategies, and actions at CDM. Our staff has been instrumental in effectively permitting, designing, and constructing numerous complex projects, and we will reinforce this ethic in our project start up kickoff meeting and adhere to it throughout project execution.

- **Quality Checkpoints.** These include ongoing direction and review by senior technical specialists during task/activity execution, in the definition of outcomes and measures, and during the production cycle. A technical review committee (TRC) consisting of distinguished and experienced practitioners that have not been heavily involved in the design will be assigned to perform reviews at the specified design milestones. For a design project, the main TRC checkpoints are at the 10%, 30%, and 60% design stages so as to minimize rework and schedule slippage. For projects anticipated for this contract, the standing TRC will consist of Brian Mack, Jim Wittig, and Shayne Wood, all of whom are experienced in working with the County and the CDM technical staff proposed for this assignment. Where specialized technical skills are required, other TRC members may be added. As projects approach completion, the project manager implements a checking procedure based on the type of project. As an example, QMP-1 calls for cross checking of plans and specifications by various disciplines so that "fresh eyes' check each aspect of the finished plans and specifications.
- **Quality Audits.** During the kickoff meeting, our project managers will identify opportunities for quality audits, ranging from a direct follow-up contact with the County project team on a specific task; for example, to a formal quality audit with senior CDM and County management staff.

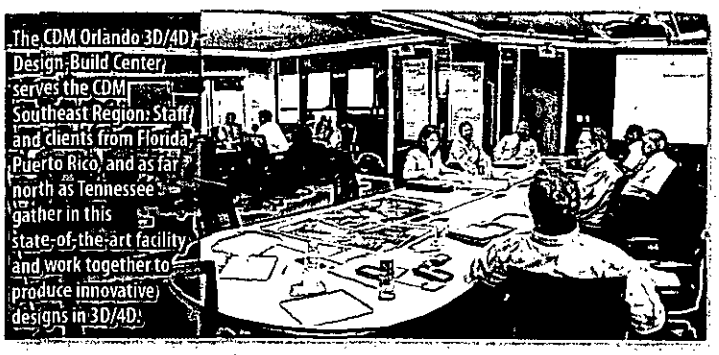
At the core of a sound quality management program is the early identification and resolution of potential problems. Our project managers will do so through:

- Regularly scheduled internal progress meetings to monitor performance against scope
- Regular monthly project status meetings with County staff
- Regular project status reports to County and follow-up on items needing attention.

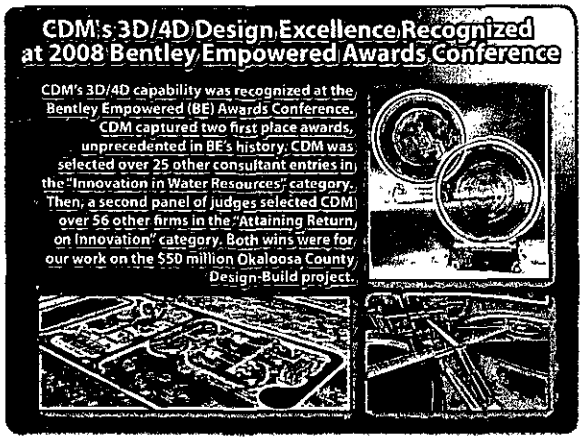
B.4 BASIC AND SPECIAL RESOURCES

CDM Orlando 3D/4D Design Center

One of the distinct advantages of choosing CDM is our ability to utilize our 3D/4D Orlando Design Center. The Design Center has all the architectural and engineering disciplines necessary to cost effectively produce 2D designs or 3D engineering models. The center is interconnected electronically with five other similar centers across the country and most have full video conferencing capabilities between them. This approach offers several advantages. First, CDM is able to offer an increased depth and breadth of experience backed by an experienced team that is accustomed to working together. The volume of work performed by these engineering centers gives the CDM staff constant exposure to new technologies and new design developments among the various engineering disciplines. Furthermore, the location of key specialists in design centers provides for specialty consulting needs on all projects regardless of the geographical location of the project site, thereby providing the best possible service and solutions for clients. Lastly, design technologies, such as application programming and computer-aided design (CAD), are applied across such a large number of projects that CDM-standardized



The CDM Orlando 3D/4D Design-Build Center serves the CDM Southeast Region: Staff and clients from Florida, Puerto Rico, and as far north as Tennessee gather in this state-of-the-art facility and work together to produce innovative designs in 3D/4D.

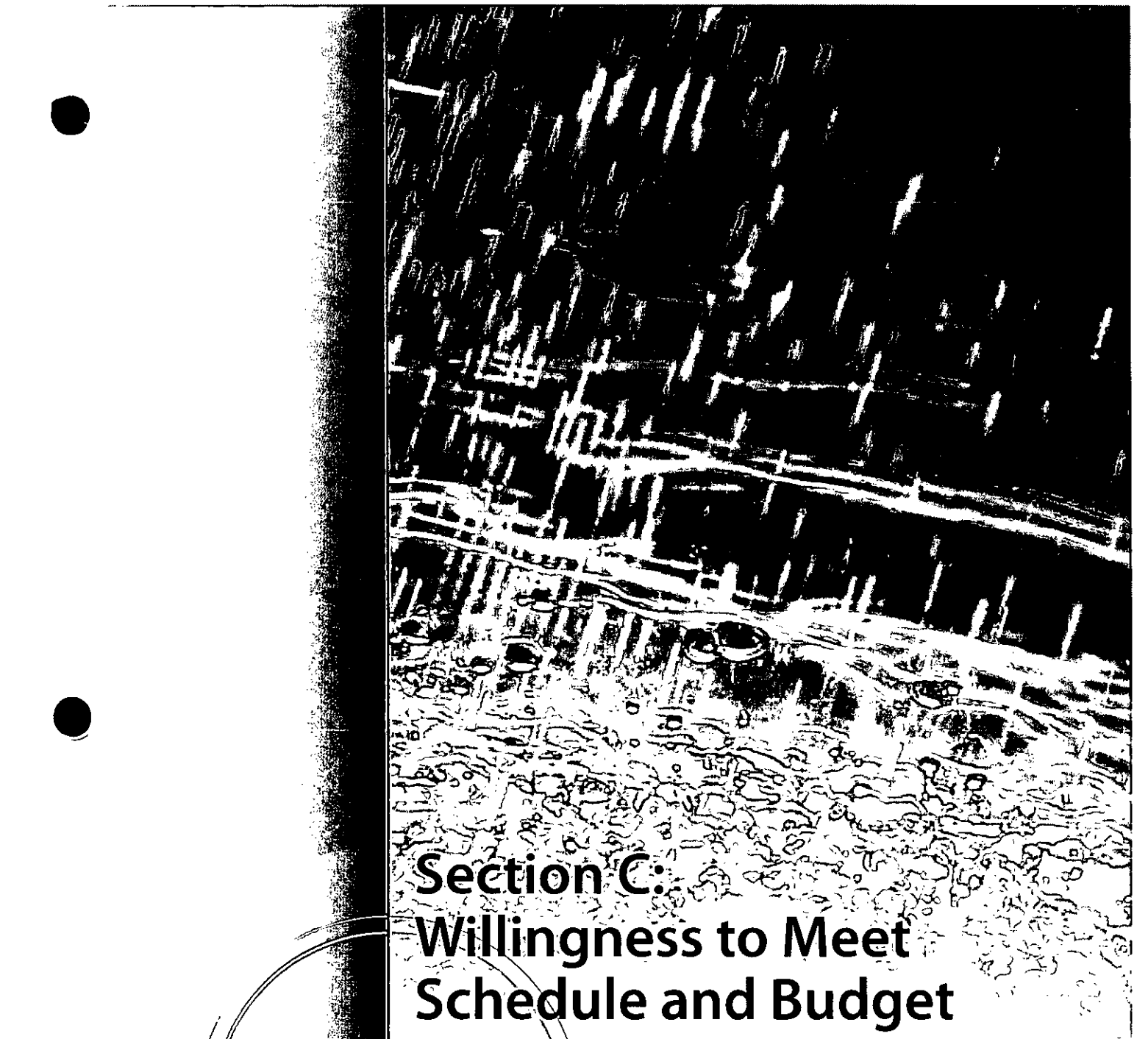


approaches and automated routine functions create an extremely efficient design and application engineering process. Such efficiency, combined with our depth of experienced staff, allows CDM to meet the tight schedules often required by our clients while adhering to CDM's proven quality management processes. When the scope of the project makes it beneficial, staff and clients from Florida gather in this state-of-the-art facility and work together to produce innovative designs in 3D/4D. 4D integrates a database into the 3D facility model, providing a consistent and lasting platform for efficient O&M and long-term asset management. Facilities designed using 3D/4D technology see significant improvements in the efficiency of the design and the quality of the construction drawings and specifications through graphical visualization of design decisions. CDM's 3D/4D design excellence was recognized at the 2008 Bentley Empowered Awards Conference with the capture of two first place awards. Both awards were for the Arbennie Pritchett WRF DB project.

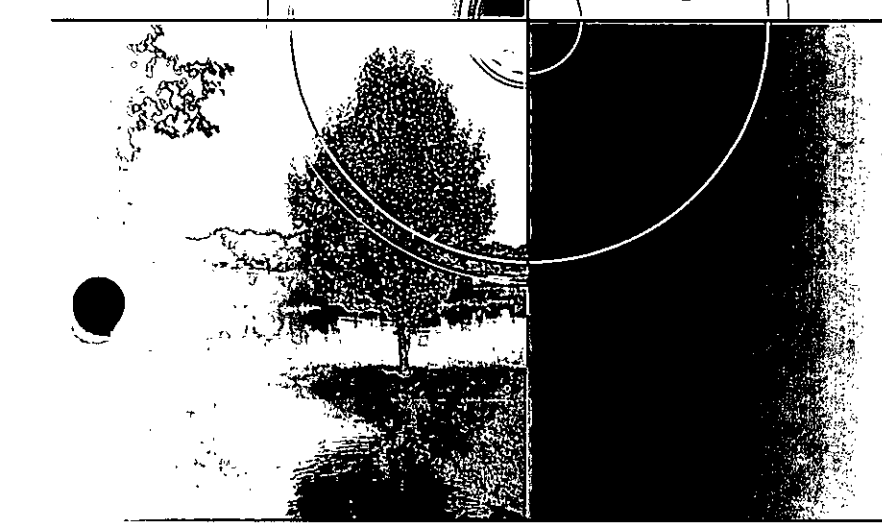
As one of the original developers of SWMM, CDM offers unparalled experience.

Computer Capabilities

CDM possesses all the necessary equipment and support facilities to analyze, research, report, display, and produce data and information collected for engineering and environmental designs and studies. CDM maintains licences for all major stormwater design and modeling software, including Bentley (StormCAD, PondPack, etc.), MWH Soft (InfoSewer, H2OMap Sewer), Hydraw, HydroCAD, Autodesk (SSA), Bentley (CivilSTORM), CHI (PCSWMM), DHI (MIKE URBAN), MWH Soft (InfoWorks, InfoSWMM, H2OMap SWMM), USACE (HEC-HMS, HEC-RAS, USEPA, XP Software (xpswmm), and ICPR. In addition, CDM was a co-developed of SWMM Version 5 and regularly conducts H&H training. CDM staff train to stay current in the use of this software and regularly share modeling lessons learned during internal technical reviews. CDM's engineering design specialists direct the development and use of computer-aided engineering tools throughout the firm. Powerful computer-aided design (CAD) stations, combined with sophisticated communications and reproduction tools, permit the accurate and timely production of engineering designs. These specialists also direct the company-wide development and use of technical specifications and coordinated details to maintain technical quality assurance in specification development for clients. Master specifications and standard design details being developed on an ongoing basis are accessible to all offices through an extensive computer and communications network.



Section C: Willingness to Meet Schedule and Budget Requirements



SECTION C: WILLINGNESS TO MEET SCHEDULE AND BUDGET REQUIREMENTS

Work Category - Stormwater Engineering

CDM has a formal procedure for managing the quality of a project and meeting client expectations. The CDM Quality Management Process Manual No. 1 details the requirements for maintaining a high level of quality in all stages of a project, including project initiation (scope and budget development) activities, project startup activities, project execution activities, and project closeout activities. At each stage of completion, the project manager and client service manager review the project to ensure quality requirements have been met. These requirements may include the review of calculations, the review of alternative analyses, the review of drafting standards, and the review between disciplines for design projects.

As a corollary to these review requirements, CDM utilizes specialized project tracking software for schedule, budget, and staffing factors for each major component of the project, so that key staff have instantly available information to assist them in completing the project on time and within budget.

CDM has consistently delivered projects for Leon County that meet schedule expectations. One of the key means of doing this is regular monthly meetings between CDM and Leon County project staff.

Leon County staff are familiar with CDM's commitment to maintaining schedule and budget. Public projects are notably difficult to schedule because of the need for input from various stakeholders, variability in the schedule of regulatory entities, and other external drivers. However, CDM has consistently delivered projects for Leon County that meet schedule expectations. One of the key means of doing this, as described in the "project approach," is ***regular monthly meetings between CDM and Leon County project staff.*** These meetings, in addition to meetings for specific topics, allow CDM and County staff to make certain that project schedules are coordinated and moving satisfactorily, and allows for adjustments as required.

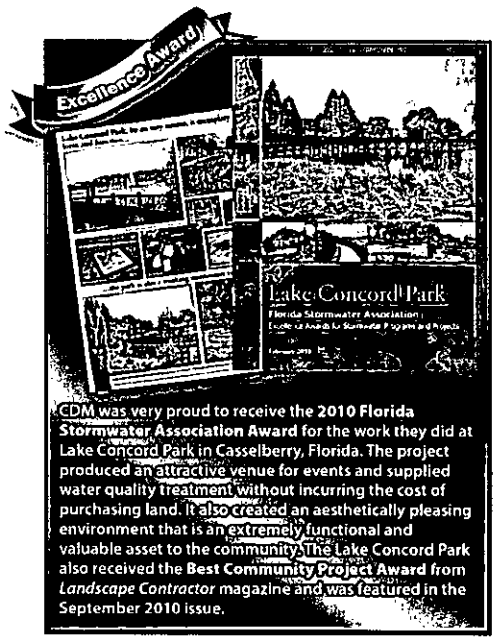
Often, regulatory requirements, funding requirements, or other circumstances require fast execution for project success. When a "short fuse" project comes along, CDM Panhandle staff delivers, as the examples below indicate.

- In the spring of 2010, the ***Emerald Coast Utility Authority (ECUA)*** needed a fast assessment of well head protection areas to support revisions to County regulations. They turned to CDM, who performed the groundwater modeling, met with ECUA staff, revised models as required, and delivered the required report in eight weeks, meeting the client's schedule expectations.
- The ***Alligator Point Water Resources District*** asked CDM to produce plans for a 3,000-foot 10-inch waterline project to meet permitting, funding, and construction cycle deadlines. CDM's Panhandle staff, supported by Orlando design center staff, delivered the project design in 30 days, meeting the client's schedule expectations.
- The ***City of Port St. Joe,*** experiencing red water problems in its drinking water distribution system, asked CDM to assess water quality and make recommendations. With five weeks of receiving water quality data from the City, CDM Panhandle staff, supported by Orlando design center staff and other CDM technical experts, delivered technical memoranda evaluating the water quality and making recommendations with cost opinions for improvement alternatives. This schedule met City and Water Management District expectations.

- In an effort to utilize available funding, the ***City of Callaway*** asked CDM to expedite a preliminary design report for lift station CA-31 expansion. CDM delivered the draft preliminary design in 30 days and the final, which addressed City comments and included cost estimates, within 60 days, again meeting client expectations.

Additional recent project examples that illustrate CDM's ability to closely and successfully monitor project costs and schedule include:

- The ***Arbennie Pritchett Water Reclamation Facility in Okaloosa County,*** for which CDM provided design, construction, outfit, start up, performance testing, and permitting services. The project was completed on schedule and on budget with zero unsolicited change orders.



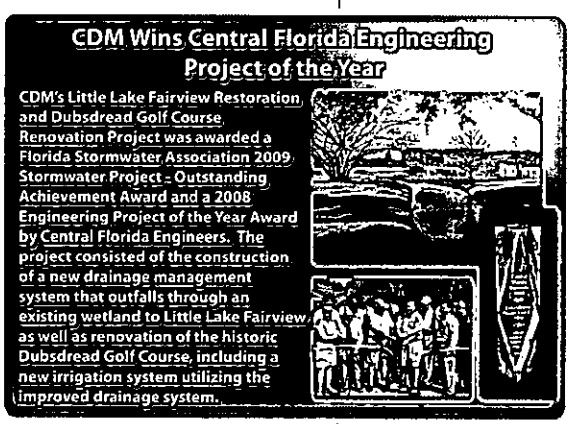
CDM was very proud to receive the **2010 Florida Stormwater Association Award** for the work they did at Lake Concord Park in Casselberry, Florida. The project produced an attractive venue for events and supplied water quality treatment without incurring the cost of purchasing land. It also created an aesthetically pleasing environment that is an extremely functional and valuable asset to the community. The Lake Concord Park also received the **Best Community Project Award** from *Landscape Contractor* magazine and was featured in the September 2010 issue.

- CDM designed an ***award-winning stormwater park for the City of Casselberry*** to provide stormwater treatment to previously untreated systems. The project, with a budget of $273,831, was completed on schedule.

- The ***award-winning Little Lake Fairview Restoration and Dubsdread Golf Course Renovation,*** which consisted of the construction of a new drainage management system that outfalls through an existing wetland to Little Lake Fairview and a new irrigation system for the golf course utilizing the improved drainage system. Throughout the project, CDM utilized a critical path method schedule to keep the project progressing, despite outside delays affecting certain aspects of the project. The project team also developed detailed cost estimates following each major design submittal package.

- For the ***Seminole County System Inventory and Engineering Analysis for the Lake Sylvan Subbasin,*** CDM provided the County with monthly schedule updates using Microsoft Project. Additionally, CDM provided monthly status reports and earned value reports based upon CDM project specific software to make sure defined project budgets were met.

- As part of the ***Astor Flood Study in Lake County,*** CDM provided the City with monthly schedule updates using Microsoft Project. Additionally, CDM provided monthly status reports and earned value reports based upon CDM project specific software to make sure defined project budgets were met.



- The ***Town of Fort Myers Beach Stormwater Master Plan,*** for which CDM developed a comprehensive plan to develop processes, systems, organizations, costs, and cost funding mechanisms to facilitate reliable and compliant stormwater management practices. This project was completed on time and on budget.

- Project schedule and control measures on the ***Dakin Avenue Box Culvert Improvements projects in Kissimmee*** were important because of grant funding requirements. The project had to be designed and constructed within 36 months. To track schedule and costs, CDM used Microsoft Project and its financial tracking system to monitor both schedule and costs incurred versus earned value. This information was used to adjust project resources and keep the City informed on progress.

CDM is committed to meeting the County's schedule and budget requirements for stormwater engineering services by providing appropriate levels of effort that will produce project savings. We will do this by assigning strong project managers with local experience, having the depth of personnel to properly allocate low cost resources, and by our firm commitment to maintain open channels of communication with County staff.

CDM's extensive experience in managing projects of this nature has shown that the key to successfully meeting schedule and budget is to utilize an experienced project manager who has a disciplined project planning approach. By developing a thorough work plan at the beginning of the project, updating the plan on a monthly basis, and regularly communicating project objectives to the project team, the County should realize benefits in terms of time and cost savings.

CDM has developed several computer programs to enhance our project managers' ability to monitor and control project schedules and budgets. Each project's schedule and budget is established through a Project Management Plan (PMP) at the time of enrollment. The PMP process establishes the initial tools for effective project and quality management. On a weekly basis, the project manager is provided information to compare actual expense to the budget and develop S-curves.

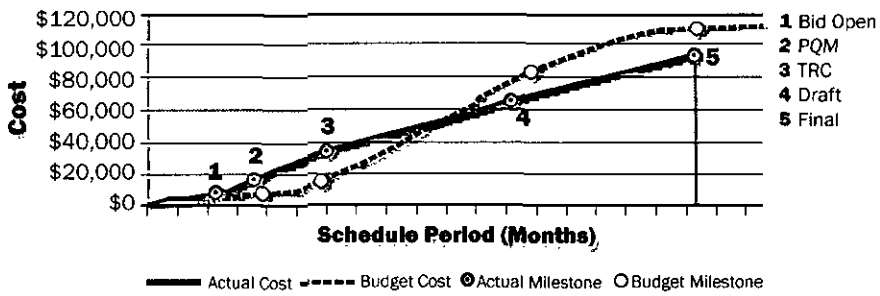


Figure C-1: In this example S-curve, the vertical axis represents costs, either budgeted or actual, and the horizontal axis represents project weeks.

As shown in **Figure C-1**, an example S-curve, the vertical axis represents the costs, either budgeted or actual, and the horizontal axis represents the project duration. The curve indicates the budget versus time, as well as the actual expenses versus time. A comparison of the two provides the project manager with a quick, yet accurate assessment of the project compared to time, budget, and deliverables.

CDM developed the Project Information System, or PRISM, to improve project management. PRISM is an integrated management information system centered on the Oracle Project Accounting system to improve efficiency. **Figure C-2** illustrates PRISM's functions. These are the basic tried and proven tools for effective project management at CDM that will benefit the County through delivery of CDM projects efficiently, on time, and within budget. CDM will continue to use these existing project controls throughout our involvement in the County's projects.

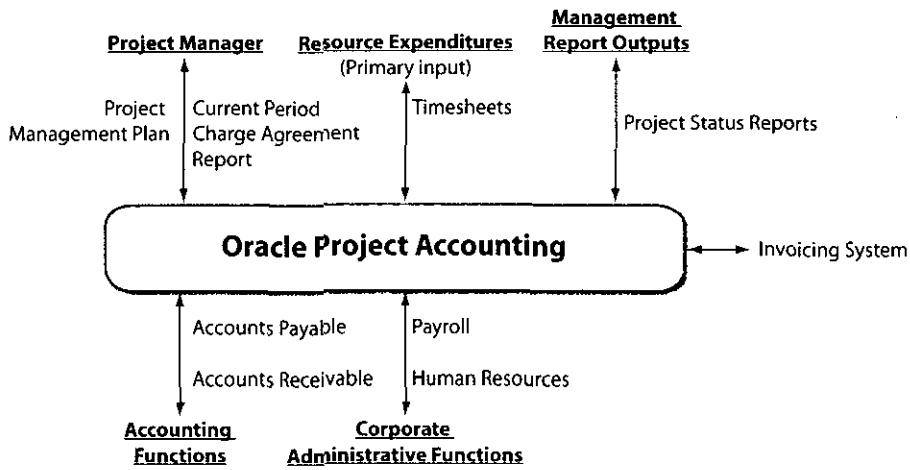


Figure C-2: PRISM project management functions.

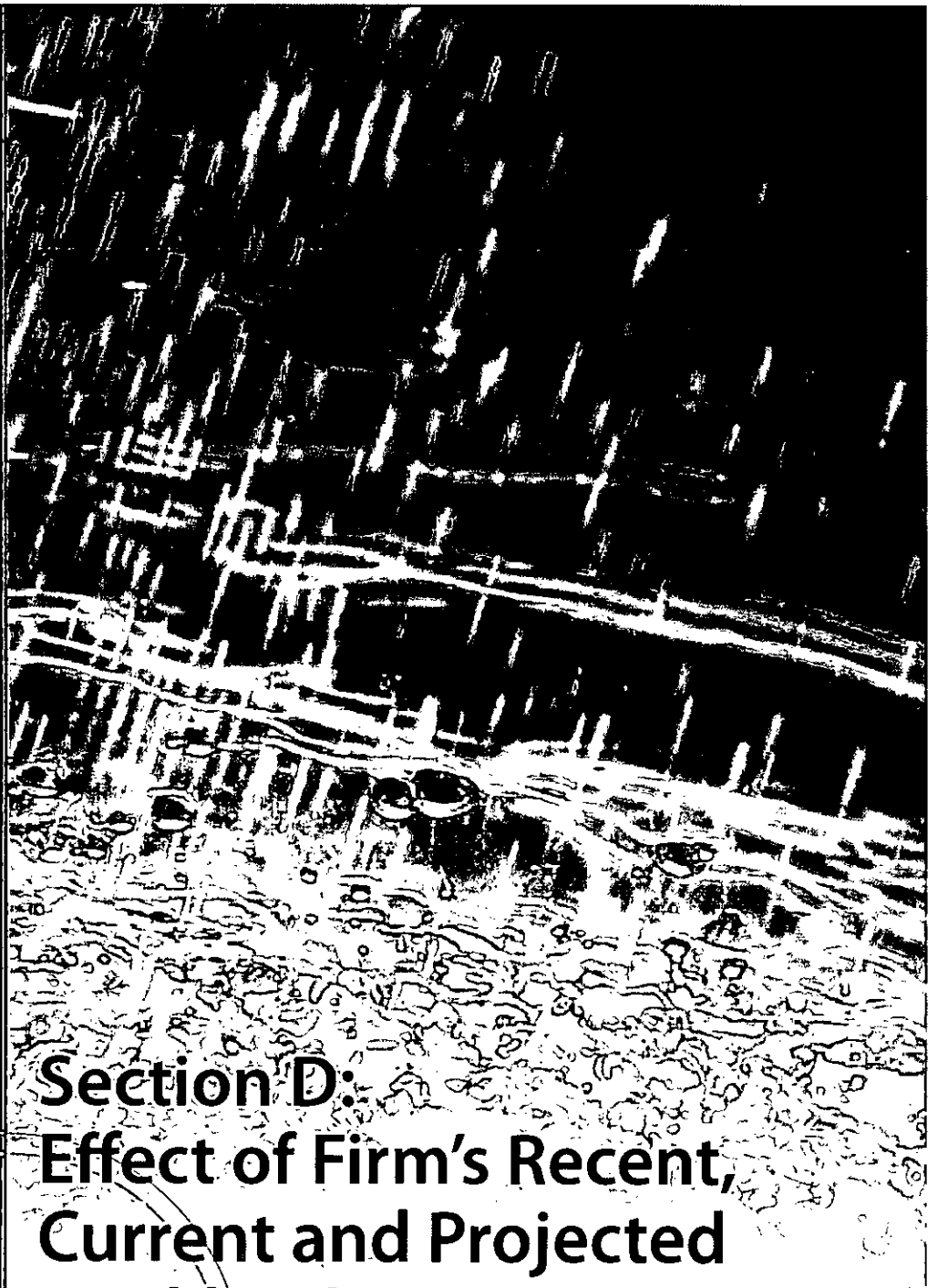
C.1 COST ESTIMATES VS. ACTUAL COSTS

While CDM is experienced in accurately estimating construction costs, a more critical issue is the project closeout cost as compared to the original bid amount. This information is an excellent indication of the engineer's thoroughness during the design phase and of cost control during the construction phase. With consideration that extenuating circumstances often result in significant increases or decreases in contract closeout prices, we have listed in **Table C.1-1** some of our closeout contract prices for some Florida projects. We believe this closeout cost data reflects favorably on our ability to control costs. In addition, Leon County is familiar with CDM's ability to deliver projects on budget through our extensive previous work.

Table C.1-1: Representative Florida Cost Estimates and Change Orders

Project Title	Final Design Estimate ($1,000)	Actual Award Amount ($1,000)	Actual Final Construction Amount ($1,000)
Stormwater Projects			
City of Panama City Beach Stormwater Outfall Repair	1,220	940	636
City of Jacksonville Cedar River Stormwater Improvements	3,686	3,319	3,319
City of Jacksonville Sandalwood Canal In-channel Improvements	6,093	7,315	—
Clay County Culvert Rehabilitation	2,380	2,380	2,380
SJRWMD TCAA Yarborough Regional SWTF	2,134	570[1]	601
SJRWMD TCAA Edgefield Regional SWTF	2,800	629[1]	631
Boynton Beach Downtown Watershed Regional Detention Facility	4,500	5,200	5,280
Daytona Beach 5th Avenue Stormwater Improvements	750	650	700
Daytona Beach Oleander Ave. Stormwater Improvements	575	365	405
Leon County Lake Munson Restoration Program	9,000	9,000	9,000
Ocala - Lake Tuscawilla Demonstration Project	800	880	880
Ormond Beach 1999 Stormwater Improvements	1,500	1,426	1,500
Ormond Beach Cypress Circle Stormwater Improvements	1,250	1,180	1,200
Ormond Beach Trails Stormwater Improvements	1,450	1,380	1,500
Pinellas Park WMD Channel 1A Improvements	1,400	1,300	1,300
Rockledge Barton Park Manor Regional Facility	10,625	-438[2]	-438
Rockledge Levitt Stormwater Park	649	683	757[3]
Little Lake Fairview and Dubsdread Golf Course	9,500	7,100	7,100
Seminole County Navy Canal Stormwater Improvements	1,412	1,741	2,194[4]
Seminole County Cameron Ditch Stormwater Improvements	918	1,134	2,194[4]
Daytona Beach B-5/B-6 Regional Detention Pond	4,600	3,566	3,560

[1] SJRWMD was paid for excavated fill; [2] City was paid for excavated fill; [3] To be modified lower pending client call; [4] City awarded these sites as one project for construction; SJRWMD = St. Johns River Water Management District; WMD = Water Management District; SWTF = Stormwater Treatment Facility



Section D: Effect of Firm's Recent, Current and Projected Workload

SECTION D: EFFECT OF FIRM'S RECENT, CURRENT AND PROJECTED WORKLOAD

Work Category - Stormwater Engineering

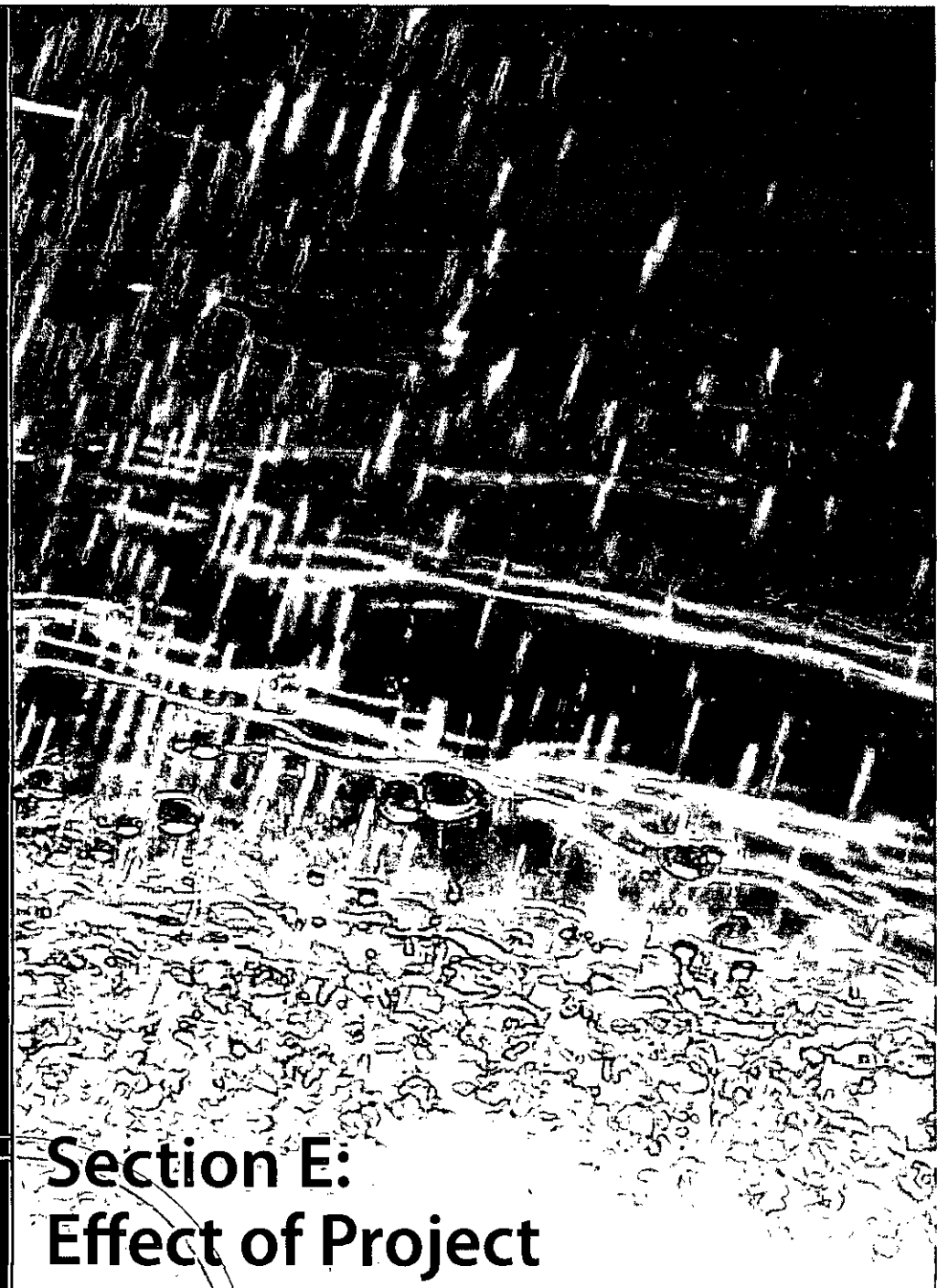
CDM's current and committed workload was taken into consideration in the development of this proposal. All project personnel will be available to initiate any work assignments immediately upon authorization by the County and will complete their assigned duties consistent with the project schedule for that work assignment.

Furthermore, CDM's Tallahassee office will serve as the center for all project work ensuring prompt, cost-effective service.

The RFP requests a listing of all projects currently under contract and the anticipated completion dates. As a company, CDM has thousands of projects underway worldwide. Therefore, we are providing the listing of the projects currently being supported by members of our Tallahassee-based team. The list that follows includes those projects and their anticipated completion date. CDM has the capacity to provide the resources needed to absorb any projects resulting from this contract.

- City of Carrabelle Water System Extension Evaluation
  90% Complete
  Estimated Completion Date: May 2011
- City of Carrabelle Water and Wastewater Rate Study
  66% Complete
  Estimated Completion Date: May 2011
- City of Carrabelle Wastewater and Reuse System improvements
  63% Complete
  Estimated Completion Date: October 2011
- Northwest Florida Water Management District Expert Witness Service
  25% complete
  Estimated Completion Date: September 2011
- City of Panama City Beach Moonlight Bay Stormwater Improvements
  90% Complete
  Estimated Completion Date: June 2011, bidding and construction remaining
- City of Panama City Beach South Glades Trail Stormwater Improvements
  90% Complete
  Estimated Completion Date: June 2011, bidding and construction remaining
- City of Panama City Beach Lullwater Stormwater Improvements
  90% Complete
  Estimated Completion Date: June 2011, bidding and construction remaining
- City of Panama City Beach Beth & Gardenia Stormwater Improvements
  25% Complete
  Estimated Completion Date: May, 2011, bidding and construction remaining
- City of Panama City Beach Coral Drive Stormwater Improvements
  90% Complete
  Estimated Completion Date: June 2011, bidding and construction remaining

- City of Panama City Beach Hombre Circle Stormwater Improvements
  10% Complete
  Estimated Completion Date: December 2011
- City of Tallahassee Bond Pond Stormwater Facility Monitoring
  52% Complete
  Estimated Completion Date: January 2012
- Leon County Stormwater Pond 6
  90% Complete
  Estimated Completion Date: July 2011, only construction remaining
- Leon County Gum Creek LOMR
  90% Complete
  Estimated Completion Date: On hold by County until further notice
- Leon County Lake Heritage Phase I
  95% Complete
  Estimated Completion Date: May 2011
- Leon County Killearn Middle Basin Drainage Improvements Design
  65% Complete
  Estimated Completion Date: June 2011



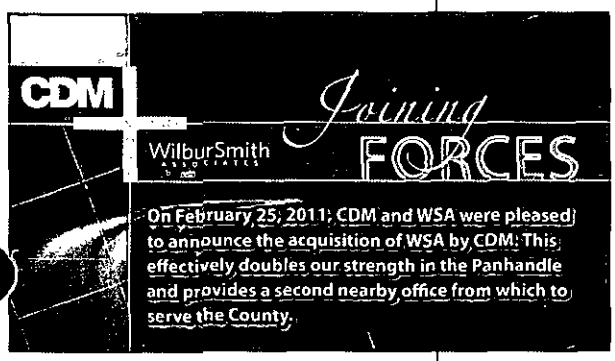
Section E: Effect of Project Team Location

SECTION E: EFFECT OF PROJECT TEAM LOCATION

Work Category - Stormwater Engineering

CDM fully recognizes the importance of local staff and local knowledge to the expeditious implementation of important projects and offers a local team to meet your needs. For easy access and close coordination, all projects under this contract will be managed from our Tallahassee office, located less than 15 minutes from the County's facilities, and supported by more than 500 CDM staff located throughout our 15 Florida offices (**Figure E-1**).

We are prepared to provide the County with a high level of interaction through the dedicated efforts of our project management team. Due to our close proximity, we can meet with your staff on short notice; make field visits with your staff, contractors, and regulators; attend public meetings; and spend time listening to your needs for each unique project. Because we have decades-long history of working with Leon County—delivering over 40 projects in the last ten years alone—we know how you do business. We understand how important it is to Leon County to provide excellent service to its citizens, how complex the regulatory environment is, how interaction with other government entities is a never-ceasing challenge, and how budget concerns are more pressing than ever. Our experience of over 20 years working in Leon County provides us with unmatched local knowledge. We understand local technical issues such as soil and hydrology, we recognize the political and cultural dynamics that play a part in project decisions, we know and have good working relationships with local regulators and specialty subconsultants, and our institutional knowledge of engineering projects performed in the Leon County area helps us work with you to make appropriate and cost-effective engineering decisions.



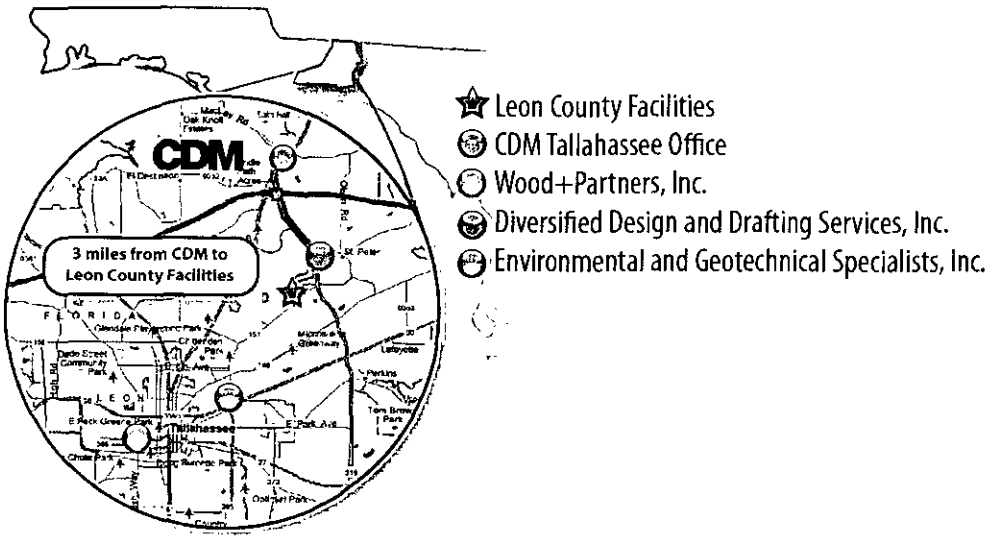
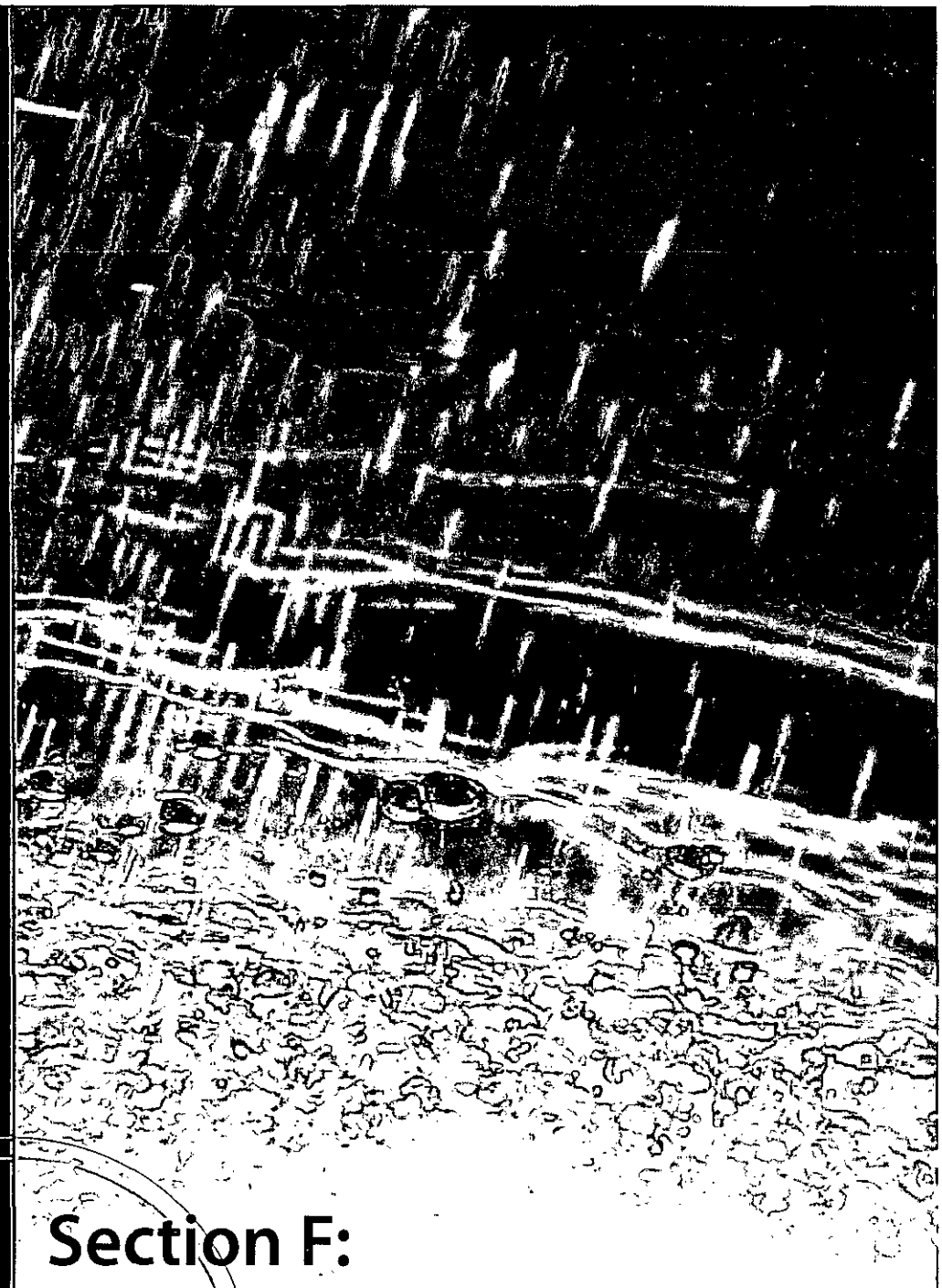
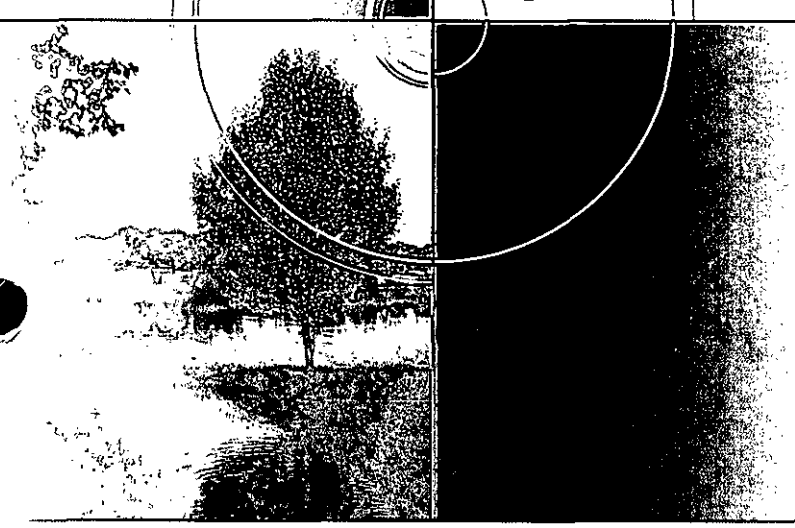
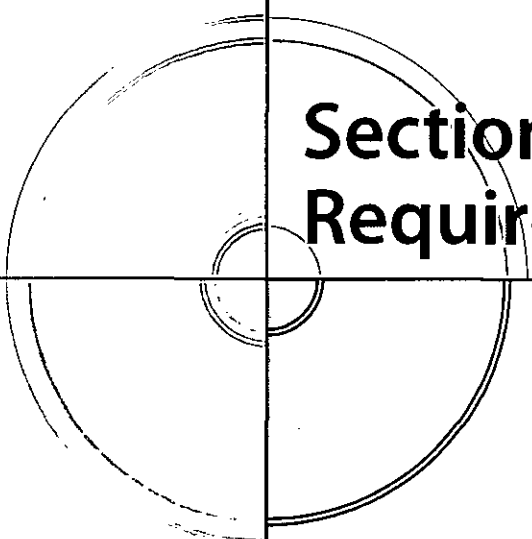


Figure E-1: CDM has continuously maintained an office in Tallahassee since 1989, and our geographic proximity ensures that the County will receive high-quality and efficient services.



Section F:
Approach to the Project





Section C:
Required Forms

SECTION C: REQUIRED FORMS

General Information Applicable to All Work Categories

As required by the County's RFP, CDM, as the respondent to this solicitation, has included completed standard forms as listed below in the following pages:

- Affidavit Certification Immigration Laws
- Equal Employment Policies
- Insurance Certification Form
- Certification Regarding Debarment, Suspension, and Other Responsibility Matters Primarily Covered Transactions
- Local Vendor Certification Form.

RFP Title: Request for Proposals for Civil Engineering Services, Continuing Supply
Proposal Number: BC-03-17-11-25
Opening Date: Thursday, March 17, 2011 at 2:00 PM

AFFIDAVIT CERTIFICATION
IMMIGRATION LAWS

Leon County will not intentionally award County contracts to any contractor who knowingly employs unauthorized alien workers, constituting a violation of the employment provisions contained in 8 U.S.C. Section 1324 A(e) {Section 274a(e) of the Immigration and Nationality Act ("INA").

Leon County may consider the employment by any Contractor of Unauthorized Aliens a violation of Section 274A(e) of the INA. **Such violation by the Recipient of the employment provision contained in Section 274A(e) of the INA shall be ground for unilateral cancellation of the contract by Leon County.**

BIDDER ATTESTS THAT THEY ARE FULLY COMPLIANT WITH ALL APPLICABLE IMMIGRATION LAWS (SPECIFICALLY TO THE 1986 IMMIGRATION ACT AND SUBSEQUENT AMENDMENTS).

Company Name: Camp Dresser & McKee Inc. (CDM)

Signature: _____ Title: Senior Vice President

STATE OF Florida
COUNTY OF Leon

Sworn to and subscribed before me this 15th day of March, 2011.

Personally known ✓

_____
NOTARY PUBLIC

OR Produced identification _____

Notary Public - State of Florida

_____
(Type of identification)

My commission expires: August 30, 2014

VIRGINIA O. BONOCORE
Notary Public, State of Florida
My Commission # DD 992063
EXPIRES: August 30, 2014
Bonded Thru Notary Public Underwriters

Printed, typed or stamped commissioned name of notary public

The signee of this Affidavit guarantees, as evidenced by the sworn affidavit required herein, the truth and accuracy of this affidavit to interrogatories hereinafter made.

LEON COUNTY RESERVES THE RIGHT TO REQUEST SUPPORTING DOCUMENTATION, AS EVIDENCE OF SERVICES PROVIDED, AT ANY TIME.

RFP Title: Request for Proposals for Civil Engineering Services, Continuing Supply
Proposal Number: BC-03-17-11-25
Opening Date: Thursday, March 17, 2011 at 2:00 PM

EQUAL OPPORTUNITY/AFFIRMATIVE ACTION STATEMENT

1. The contractors and all subcontractors hereby agree to a commitment to the principles and practices of equal opportunity in employment and to comply with the letter and spirit of federal, state, and local laws and regulations prohibiting discrimination based on race, color, religion, national region, sex, age, handicap, marital status, and political affiliation or belief.

2. The contractor agrees to comply with Executive Order 11246, as amended, and to comply with specific affirmative action obligations contained therein.

Signed: 

Title: Senior Vice President

Firm: Camp Dresser & McKee Inc. (CDM)

RFP Title: Request for Proposals for Civil Engineering Services, Continuing Supply
Proposal Number: BC-03-17-11-25
Opening Date: Thursday, March 17, 2011 at 2:00 PM

INSURANCE CERTIFICATION FORM

To indicate that Bidder/Respondent understands and is able to comply with the required insurance, as stated in the bid/RFP document, Bidder/Respondent shall submit this insurances sign-off form, signed by the company Risk Manager or authorized manager with risk authority.

A. Is/are the insurer(s) to be used for all required insurance (except Workers' Compensation) listed by Best with a rating of no less than A:VII?

☒ YES ☐ NO

Commercial General Liability:	Indicate Best Rating:	A+
	Indicate Best Financial Classification:	XV
Business Auto:	Indicate Best Rating:	A+
	Indicate Best Financial Classification:	XV
Professional Liability:	Indicate Best Rating:	A
	Indicate Best Financial Classification:	XV

1. Is the insurer to be used for Workers' Compensation insurance listed by Best with a rating of no less than A:VII?

☒ YES ☐ NO

Indicate Best Rating: A+
Indicate Best Financial Classification: XV

If answer is NO, provide name and address of insurer:

_____

_____

_____

2. Is the Respondent able to obtain insurance in the following limits (next page) for this professional services agreement?

☒ YES ☐ NO

Insurance will be placed with Florida admitted insurers unless otherwise accepted by Leon County. Insurers will have A.M. Best ratings of no less than A:VII unless otherwise accepted by Leon County.

Required Coverage and Limits

The required types and limits of coverage for this bid/request for proposals are contained within the solicitation package. Be sure to carefully review and ascertain that bidder/proposer either has coverage or will place coverage at these or higher levels.

RFP Title: Request for Proposals for Civil Engineering Services, Continuing Supply
Proposal Number: BC-03-17-11-25
Opening Date: Thursday, March 17, 2011 at 2:00 PM

Required Policy Endorsements and Documentation

Certificate of Insurance will be provided evidencing placement of each insurance policy responding to requirements of the contract.

Deductibles and Self-Insured Retentions

Any deductibles or self-insured retentions must be declared to and approved by the County. At the option of the County, either: the insurer shall reduce or eliminate such deductibles or self-insured retentions as respects the County, its officers, officials, employees and volunteers; or the Contractor shall procure a bond guaranteeing payment of losses and related investigations, claim administration and defense expenses.

Endorsements to insurance policies will be provided as follows:

Additional insured (Leon County, Florida, its Officers, employees and volunteers) - General Liability & Automobile Liability

Primary and not contributing coverage- General Liability & Automobile Liability

Waiver of Subrogation (Leon County, Florida, its officers, employees and volunteers)- General Liability, Automobile Liability, Workers' Compensation and Employer's Liability

Thirty days advance written notice of cancellation to County - General Liability, Automobile Liability, Worker's Compensation & Employer's Liability.

Professional Liability Policy Declaration sheet as well as claims procedures for each applicable policy to be provided

Please mark the appropriate box:

Coverage is in place ☒ Coverage will be placed, without exception ☐

The undersigned declares under penalty of perjury that all of the above insurer information is true and correct.

Name Kart Vaith, P.E., BCEE
Typed or Printed

Signature Kart Vaith

Date March 15, 2011

Title Senior Vice President
(Company Risk Manager or Manager with Risk Authority)

RFP Title: Request for Proposals for Civil Engineering Services, Continuing Supply
Proposal Number: BC-03-17-11-25
Opening Date: Thursday, March 17, 2011 at 2:00 PM

CERTIFICATION REGARDING DEBARMENT, SUSPENSION, And OTHER RESPONSIBILITY MATTERS PRIMARY COVERED TRANSACTIONS

1. The prospective primary participant certifies to the best of its knowledge and belief, that it and its principals:

   a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;

   b) Have not within a three-year period preceding this been convicted of or had a civil judgement rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statues or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

   c) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of these offenses enumerated in paragraph (1)(b) of this certification; and

   d) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

2. Where the prospective primary participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

3. No subcontract will be issued for this project to any party which is debarred or suspended from eligibility to receive federally funded contracts.

Mark Vaith
Signature

Senior Vice President
Title

Camp Dresser & McKee Inc. (CDM)
Contractor/Firm

3522 Thomasville Road, Suite 300, Tallahassee, FL 32309
Address

LOCAL VENDOR CERTIFICATION

The undersigned, as a duly authorized representative of the vendor listed herein, certifies to the best of his/her knowledge and belief, that the vendor meets the definition of a "Local Business." For purposes of this section, "local business" shall mean a business which:

a) Has had a fixed office or distribution point located in and having a street address within Leon, Gadsden, Wakulla, or Jefferson County for at least six (6) months immediately prior to the issuance of the request for competitive bids or request for proposals by the County; and

b) Holds any business license required by Leon County (or one of the other local counties), and, if applicable, the City of Tallahassee; and

c) Is the principal offeror who is a single offeror; a business which is the prime contractor and not a subcontractor; or a partner or joint venturer submitting an offer in conjunction with other businesses.

Please complete the following in support of the self-certification and submit copies of your County and City business licenses. Failure to provide the information requested will result in denial of certification as a local business.

Business Name: Camp Dresser & McKee Inc. (CDM)	
Current Local Address: 3522 Thomasville Road, Suite 300, Tallahassee, FL 32309	Phone: 850.386.9500 Fax: 850.668.6745
If the above address has been for less than six months, please provide the prior address. Length of time at this address: April 2009 to Present	
Home Office Address: One Cambridge Place, 50 Hampshire Street, Cambridge, MA 02139	Phone: 617.452.6000 Fax: 617.452.8000

Kurt Vaith
Signature of Authorized Representative

March 15, 2011
Date

STATE OF Florida
COUNTY OF Leon

The foregoing instrument was acknowledged before me this 15th day of March, 20 11.

By Kart Vaith, P.E., BCEE, of Camp Dresser & McKee Inc. (CDM),
(Name of officer or agent, title of officer or agent) (Name of corporation acknowledging)

a Massachusetts corporation, on behalf of the corporation. He/she is personally known to me
(State or place of incorporation)

or has produced _____ as identification.
(type of identification)

Signature of Notary

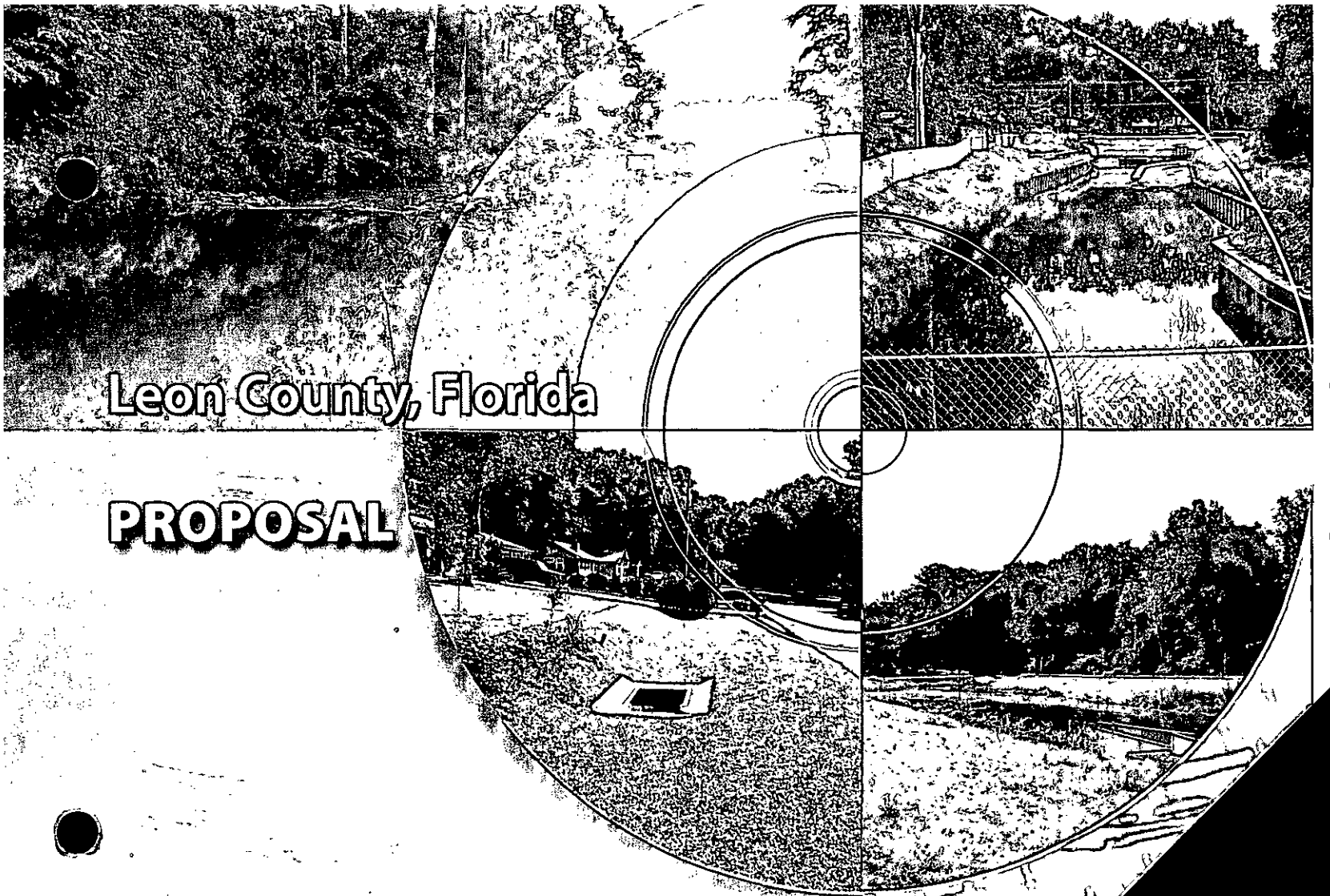
VIRGINIA O. BONOCORE
Print, Type or Stamp Name of Notary
MY COMMISSION # DD 992033
EXPIRES: August 30, 2014
Bonded Thru Notary Public Underwriters

Notary
Title or Rank

DD992033
Serial Number, If Any

Return Completed form with supporting documents to:

Leon County Purchasing Division
1800-3 Blair Stone Road
Tallahassee, Florida 32308



Stormwater Engineering

Leon County, Florida

PROPOSAL

Civil Engineering Services, Continuing Supply

Stormwater Engineering

Proposal Number BC-03-17-11-25

March 2011

CDM

SECTION F: APPROACH TO THE PROJECT

F.1 QUALITY CLIENT SERVICE: EXCELLENCE DELIVERED

Assignments under this agreement may take a variety of forms, but one aspect of the CDM approach will be the same for each: exceptional client service through close coordination with County staff to maximize value through our long association with the County and our wealth of knowledge about Leon County stormwater.

Our focus on exceptional client service, one of CDM's key differentiators, drives us to deliver quality projects to Leon County, consistent with our core values and our business philosophy of "listen. think. deliver."

What does that mean?

It means that we understand that each engineering assignment is unique. Today's regulatory environment is complex and in flux. Stakeholder input on every project has to be considered. Relationships between other governments and entities and Leon County must be managed. Yet, now more than ever, maintaining schedule and budget—while delivering quality work—is critical for project success.

CDM's service-based approach to engineering is specifically designed to meet budget and schedule demands, while helping Leon County manage the special demands of each individual project.

F.2 STAFF ORGANIZATION

To make sure that CDM is consistently listening to your needs, we have organized our project delivery team to meet monthly with Leon County staff to review ongoing projects to make sure we are meeting your expectations. The team is centered around a local client service manager, who is responsible for ensuring that your expectations are met; a local program coordinator dedicated to Leon County stormwater issues and responsible for day-to-day project delivery; and a technical resource dedicated to Leon County stormwater projects.

The entire CDM delivery team is made up of experienced specialists who understand CDM's long-standing relationship with Leon County and can leverage CDM's wealth of knowledge regarding the County's stormwater system.

Client service manager David Kozan, P.E., is available to County staff at any time to make sure their expectations are met. He is responsible for seeing that projects are adequately staffed, schedules and budgets are kept, and any issues that arise are resolved to the satisfaction of the County. His cell phone and home phone will be made available to Leon County staff so they can contact him whenever there is a need. Having a client service manager dedicated to the Leon County contract means having a manager with authority to see that adequate resources are devoted to Leon County projects to meet County schedule requirements.

CDM's Approach to Ensuring Projects Under this Contract are Completed on Time, on Budget, and with the Quality the County Expects Includes:

- An **effective staff organization** with **clear delineation** of **responsibilities**
- A **proven project management approach** with ***quality milestones***
- A **project execution format** that **follows** County **procedures**

Where appropriate, the local program coordinator, Katey Breland, will manage projects for CDM. Where specialized technical skills are needed for particular projects, one of the other CDM staff dedicated to this program will manage the technical aspects of the project. Either way, the local program coordinator will provide a local point of contact for the Leon County project manager, though all CDM staff involved on projects are available to the Leon County project manager as needed. The program coordinator will make sure:

- Projects are tacking on schedule and budget and that the client service manager is aware if corrective action is required
- County staff comments and requests are responded to in a timely manner
- CDM's extensive base of Leon County stormwater models and previous design work is available to the design team assembled for a particular project (allowing CDM to get a "head start" on many projects)
- Leon County procedures, such as project manual composition and billing procedures, are complied with
- Information is readily available to County staff as needed
- Other members of the CDM project delivery teams are available for meetings or teleconferences as needed
- CDM quality procedures are followed and documented
- Presentations for public meetings are consistently prepared
- Construction issues can be quickly addressed and resolved
- Ideas and concerns flow freely back and forth between CDM and the Leon County staff as they develop.

The entire CDM delivery team is made up of experienced specialists who understand CDM's long-standing relationship with Leon County and can leverage CDM's wealth of knowledge regarding the County's stormwater system.

Having a dedicated, local project coordinator will benefit the County by making sure that related parts of projects are coordinated, County procedures are followed for all CDM projects, CDM is in constant contact with the County to feed information back to CDM project teams, and knowledge gained on one project for the County benefits the County on other projects.

Ms. Breland will be supported by a dedicated technical resource, Seth M. Nehrke, P.E., CFM, an experienced stormwater designer. Mr. Nehrke will have access to CDM's worldwide technical resources and will be responsible for providing day-to-day technical support specifically for Leon County needs. Having a dedicated technical resource will benefit the County by providing consistent, day-to-day design coordination and support for Leon County projects.

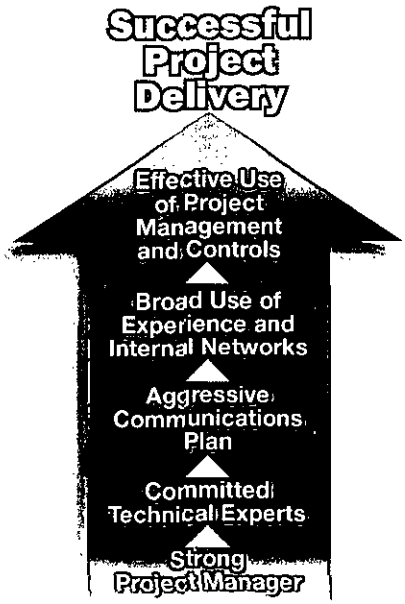
The entire project team is under the technical guidance of the technical review committee (TRC) established specifically for this contract. The committee as proposed will consist of Brain Mack, Jim Wittig, and Shayne Wood, all of whom are familiar with Leon County, Leon County projects, and the CDM staff to be utilized for this contract. For specific projects requiring specialized technical skills, additional members may be added. The TRC formally reviews design projects at the 10%, 30%, and 60% stages, and assists in final checking. The TRC members selected for this contract will benefit the County with their extensive technical experience and their background with Leon County.

After careful consultation with County staff to determine project needs and after coordination with the TRC, project managers will organize and oversee design teams that will be selected for each project based on their local knowledge and experience in the required field. As needed, the project team may be supported

by any our nearly 500 Florida staff and can draw on the resources of CDM's 6,000-strong worldwide organization through CDM's suite of communication tools. Whether it is real-time meetings over the internet, or enterprise-wide electronic document control and storage, or instant firm-wide teleconference capability, CDM is focused on working collaboratively to identify creative, cost-effective solutions while bringing world-class technical and production capability to bear in as needed to meet Leon County's needs.

F.3 PROJECT MANAGEMENT

CDM has a project management system, based on Project Management Institute principles, and supported by a suite of computerized project management tools, that is designed to produce projects on schedule and on budget. At the inception of a project (when it is still in the preliminary planning stages) the project manager is engaged to make sure there is continuity from planning, to staff selection, to execution.



When a scope is created and approved and a letter of authorization to proceed is issued, CDM project managers create an electronic Project Management Plan (ePMP) using specialized software. The ePMP documents how the project will be managed and reviewed. The ePMP itself is reviewed by a quality manager to make sure that adequate technical resources are assigned, that adequate budget is provided for quality reviews, and that adequate provisions are made for quality review in the schedule at various milestones.

The project manager closely tracks schedule to see that it is meeting Leon County expectations and alerts the client service manager to any needs for more resources.

Monthly, the project manager and client service manager discuss all aspects of each project and assess schedule and budget. If corrective action is required, a plan is created to address any issues.

At quality review milestones, the project manager coordinates with the TRC to see that their comments are adequately addressed by the project team.

F.4 EXAMPLE PROJECT EXECUTION

There is no "typical" engineering project, but an example project might proceed like this. Leon County staff would approach CDM with a problem.

Prior to developing a scope of work, the local client service manager and program coordinator (PC) would meet or hold a teleconference with County staff, along with whatever CDM technical experts knowledgeable in the subject matter at hand may be beneficial, to "brain storm" scope development. This would help make sure the development of scope is based on appropriate assumptions, technical parameters, and regulatory constraints and takes into account work done previously in the project area to maximize value.

CDM would then work to develop a draft detailed scope of work, including a time frame for completion and a computation of fees based on the approved hourly rates for County staff review. If we receive comments on the scope of work, we would meet or hold a teleconference with staff (at County staff's discretion) to discuss comments to make certain we understand what is driving the comments, and that both technical and non-technical (e.g., stakeholder or budget) issues are addressed. Once the comments are adequately addressed and a scope is agreed upon, CDM would send a signed task order to the County for execution.

Upon receiving a letter of authorization to proceed, CDM would initiate a kickoff meeting that recaps roles and responsibilities, schedules, and key project success factors. CDM would meet with County staff at agreed upon milestones to discuss or review particular items.

In addition to meetings for particular projects for scheduled milestones, CDM proposes to meet monthly, at the discretion of the County staff, to discuss all ongoing projects in general terms to review schedules, discuss and resolve potential issues, and agree upon next steps.

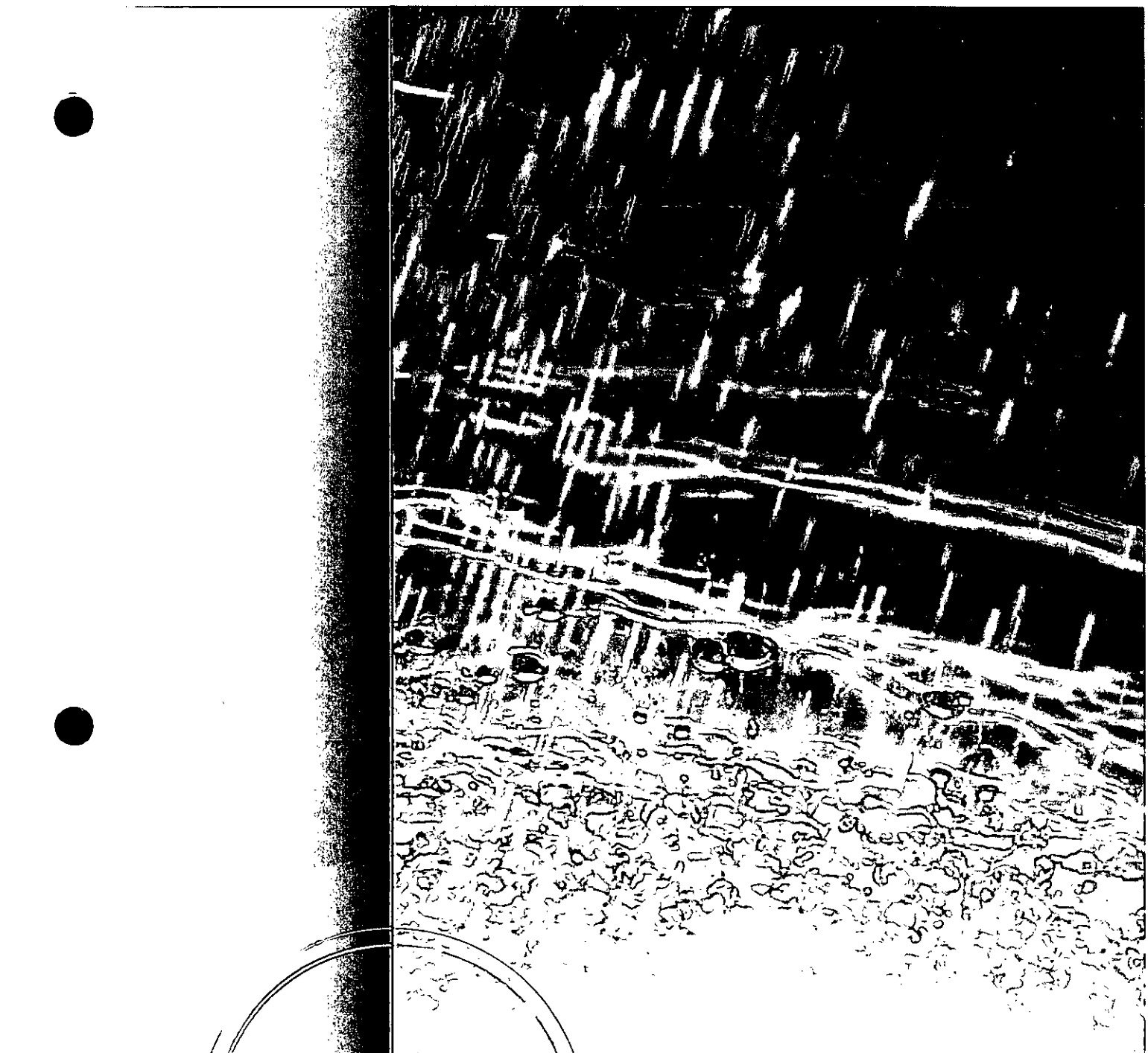
CDM would attend public meetings as required and provide project information as needed for the County web site.

When ready to provide final deliverables, CDM would review documents with the County and coordinate with the County format requirements.

Internally, as each project develops, CDM would follow CDM's Quality Management System (see Section B.3) quality review procedures prior to providing deliverables to the County, whether for review at intermediate stages, final versions of reports, or contract documents for bidding.

During construction, CDM would be available to support the County in any way they request, but such support typically would include project visits at milestones, shop drawing review, responses to requests for information by contractors, application for payment review support, or other services.

Upon project closeout, CDM is available to support the County staff in seeing that appropriate project closeout documents, such as record drawings, are provided.



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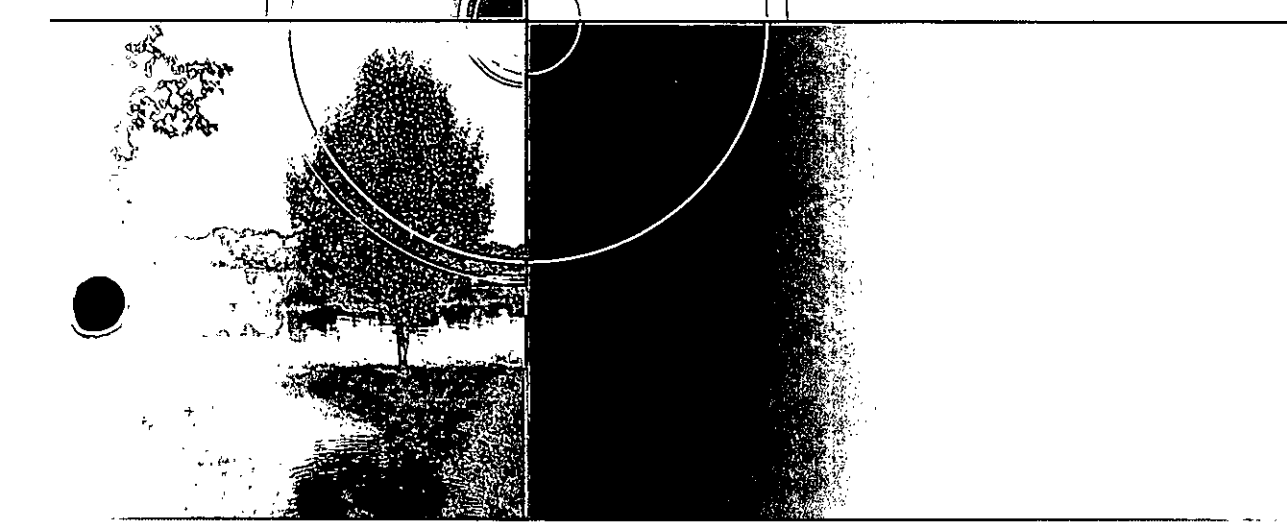


CDM
3522 Thomasville Road, Suite 300
Tallahassee, Florida 32309
tel: 850 386-9500
fax: 850 668-6745

March 17, 2011

Leon County
Purchasing Division
1800-3 Blair Stone Road
Tallahassee, FL 32308

Subject: Proposal Number: BC-03-17-11-25 Civil Engineering Services, Continuing Supply Work Category – Roadway Design

Dear Selection Committee Members:

Camp Dresser & McKee Inc. (CDM), on behalf of the entire CDM organization—along with our recently acquired wholly-owned subsidiary Wilbur Smith Associates—is pleased to submit one (1) original and three (3) copies of our proposal to provide continuing roadway design services to Leon County (County). CDM has been fortunate to work with the County in the past, and we look forward to the opportunity to extend our working relationship under this contract.

Selection of the CDM team to serve as your engineering consultant provides the County with numerous advantages as you continue your efforts to ensure high-quality and cost-efficient service to your residents. On February 25, 2011, CDM and WSA were pleased to announce the acquisition of WSA by CDM. WSA is recognized throughout the nation as a leader in transportation consulting, not only providing roadway design services for our clients but also providing innovative and efficient solutions to financial constraints, challenging design issues, and public perception. This acquisition also effectively doubles our strength in the Panhandle—WSA's Tallahassee office is located at 2490 Kerry Forest Parkway, Suite 201, Tallahassee, FL 32309—and provides a second nearby office from which to serve the County.

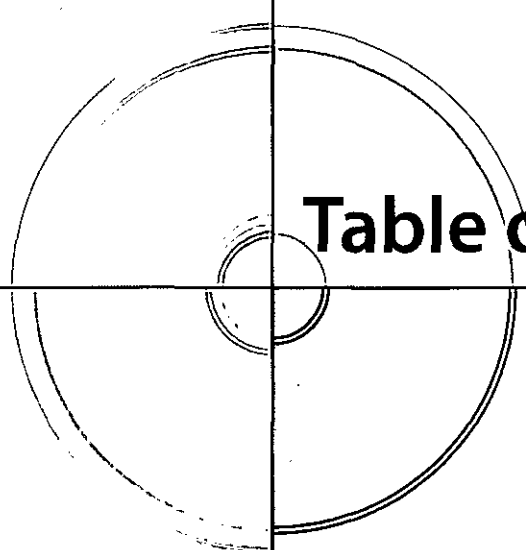
Nick Benedico, P.E., PMP, will serve as roadway design services manager for Leon County. Mr. Benedico is ideally suited to lead our roadway design team for this project and has a strong background in county-level roadway design projects. He is a registered professional engineer and certified Project Management Professional (PMP) and brings more than 21 years of experience designing and managing roadway design projects.

In summary, CDM provides the technical knowledge, local experience, and world-class expertise to address your roadway design issues. Even more *importantly*, CDM has the proven ability to work with the County to understand your vision for the future of the community. This shared vision and ongoing relationship will allow us to resolve issues before they become problems. We hope that you will again select CDM to become your engineering partner in providing a good quality of life for the County in the long term. Should you have any questions, please contact Mr. Kozan at 850.386.9500 or via email at kozandw@cdm.com. We look forward to serving you and thank you for your kind consideration.

Very truly yours,

Kart Vaith, P.E., BCEE
Senior Vice President
Camp Dresser & McKee Inc.

David W. Kozan, P.E.
Client Service Manager
Camp Dresser & McKee Inc.



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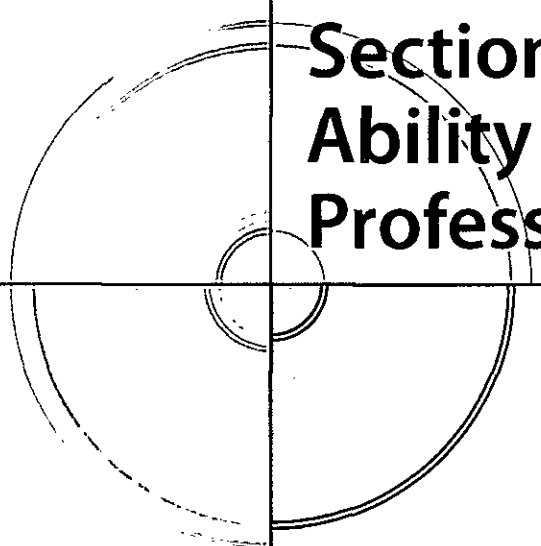


Section A: Ability of Professional Personnel

SECTION A: ABILITY OF PROFESSIONAL PERSONNEL

A.1 TOTAL NUMBER OF PROFESSIONALS

CDM is a consulting, engineering, construction, and operations firm delivering exceptional service to public and private clients worldwide. With headquarters in Cambridge, Massachusetts, CDM, together with our recently acquired subsidiary WSA, has over ***6,000 employees in 170 offices around the globe***—offering a full range of services in water, environment, transportation, energy, and facilities.

In Florida, CDM has been successfully assisting clients for more than 35 years and WSA for over 35 years. Our hand-picked project teams are backed by the CDM team's ***15 Florida offices, which boast nearly 500 staff*** with a variety of specialties, covering all the engineering disciplines. In addition, our Tallahassee offices are staffed with over 20 professionals ready to serve the County.

The CDM team recognizes the importance of balancing workload and staffing commitments to meeting the service expectations of our clients (**Figure A.1-1**). A local client service manager will see that Leon County's expectations are met, a dedicated program manager will see to it that CDM's wealth of resources are available to Leon County whenever needed, and a dedicated, local transportation principal to support the program coordinator and provide consultation on agency coordination, technical issues, planning, and work programming. With the majority of our work coming in the form of repeat business from clients with whom we have long-term working relationships, we recognize the value of maintaining the highest level of performance on all the work that we receive. We have continuously maintained a presence in Tallahassee since 1989 and continue to work with many of the same clients that we started with years ago, including Leon County. This success is built on continually providing service and work products that meet or exceed our clients' expectations for accuracy, quality, cost, and schedule.

We have assembled a strong group of professionals and support personnel in our Tallahassee offices to deliver work to our clients. Although we effectively manage our workload and staff, applying their expertise to multiple projects based on current requirements, we can also offer the County the reassurance that the CDM team has over 6,000 staff worldwide that could contribute in the event we need to exert extra efforts to complete the assigned project work. In summary, CDM has resource availability to handle acute short-term spikes in

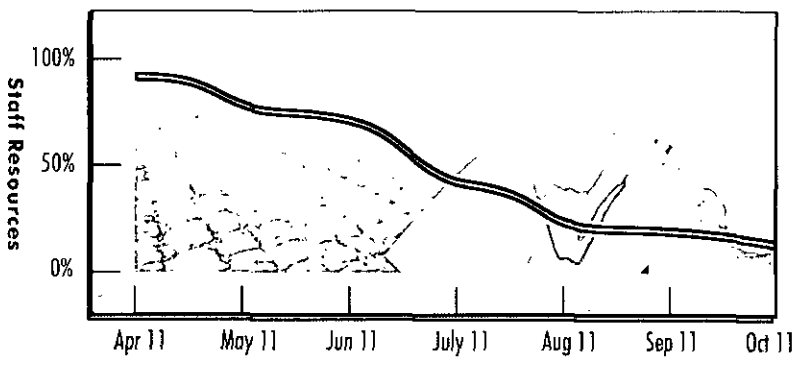


Figure A.1-1: CDM's current backlog of work and the need for additional work in the near future.

Florida Staffing

CDM will draw from our extensive pool of local resources to support this project.

Staff	Job Classification
43	Administrative
6	Architects
1	Biologists
6	Chemical Engineers
28	Civil Engineers
31	Construction Inspector
15	Construction Manager
11	Cost Estimators
19	Drafters/Designers/CADD
2	Ecologist
4	Economists
24	Electrical Engineers
53	Environmental Engineers
4	Environmental Scientists
9	Geographical Information Specialists
14	Geologists
5	Geotechnical Engineers
19	Hydraulic Engineer
28	Hydrologists
10	Info Mgmt. Specialists/Programmers
9	Mechanical Engineers
56	Other
10	Planners
2	Risk Assessor
3	Safety/Occupational Health Engineer
10	Sanitary Engineer
2	Scheduler
4	Specifications Writer
10	Structural Engineer
32	Technician
14	Transportation Engineer
7	Transportation Planner
16	Water Resources Engineer
497	**TOTAL**

workload, and our past track record indicates that we have been successful in effectively handling multiple projects concurrently.

A.1.1 Proposed Project Team

The CDM team is comprised of highly qualified specialists and locally-based subconsultants to meet the needs of the County's continuing services contract. The project managers, engineers, and support staff assigned to this project are well-qualified personnel who are *familiar* with the issues important to the County. At both a company and individual level, our key personnel will be committed and available at whatever level of effort is needed to get the job done. Expertise, experience, and anticipated availability were all considered in selecting team members.

The organization chart (**Figure A.1.1-1**) illustrates the personnel and principal elements required to complete work assignments. The CDM team represents all disciplines necessary to successfully implement the County's roadway design projects.

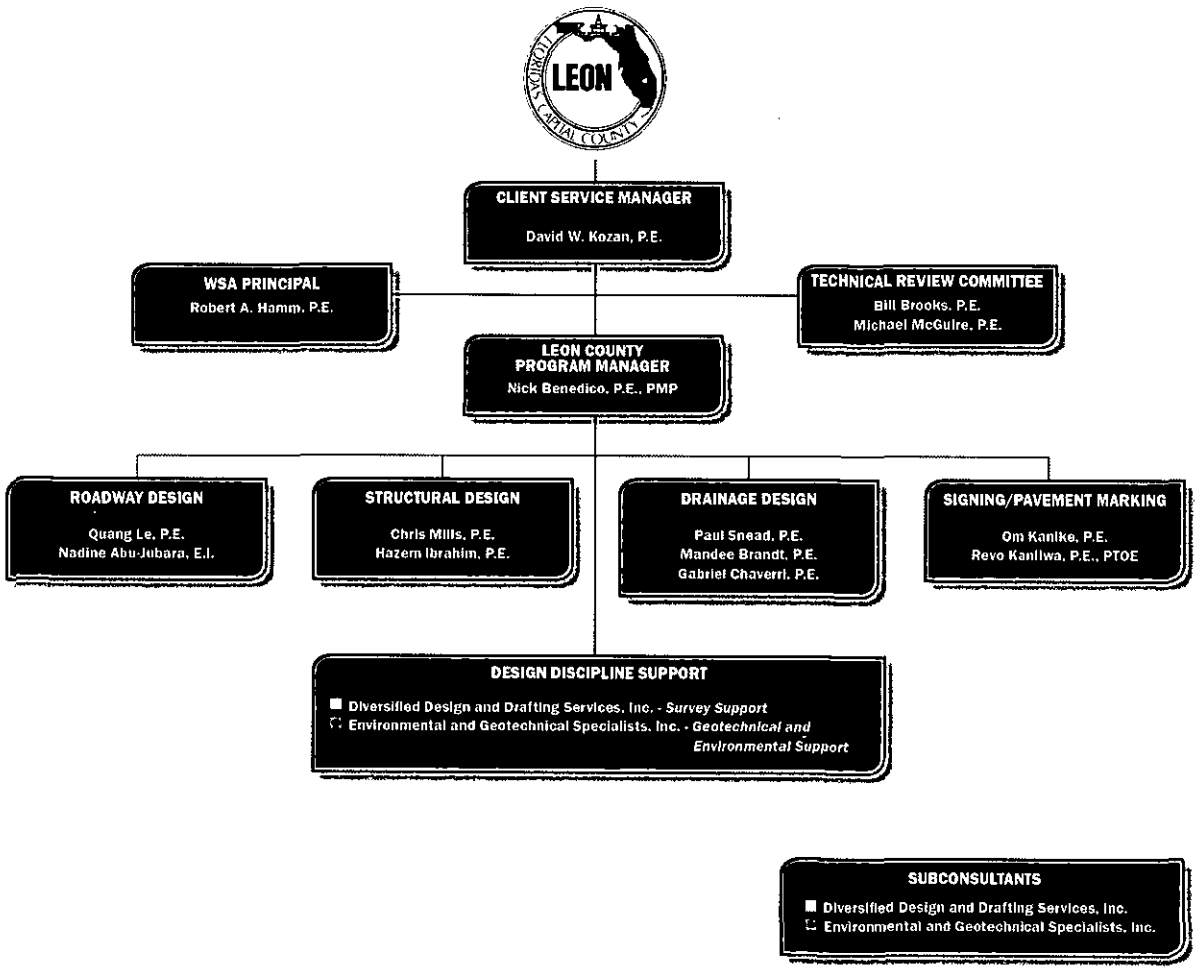


Figure A.1.1-1: CDM has assembled a local team that is highly qualified and familiar to the County to implement roadway design projects under this continuing services contract.

A.2 RESUMES

Included at the end of this section are the resumes of the identified project team members. We encourage the review of each individual's experience and qualifications to perform the services of this potential scope of services. Many of our project team members are recognized experts who are supported by personnel with diverse experience who contribute to the accomplishments of these individuals and the CDM team.

CDM and WSA bring a core team of experts in roadway design, structural engineering, and drainage design/permitting—all of whom have experience working as a cohesive team on recent assignments. In addition, two locally based subconsultant firms provide expertise in surveying, geotechnical, and environmental services.

David W. Kozan, P.E. | Client Service Manager

Mr. Kozan is CDM's client service manager for Northwest Florida, including Leon County. He is responsible for seeing that Leon County expectations are met by CDM's services. He is familiar with Leon County procedures and staff from his role as client service manager in charge of delivery on the current stormwater continuing contract. He has over 15 years of project delivery experience for a variety of clients and industries.

Nick Benedico, P.E., PMP | Leon County Program Manager

Mr. Benedico is director of WSA's Florida transportation design operations. He will serve as the CDM team's overall program manager for this contract and will be in frequent contact with Leon County to respond to questions, attend meetings, and provide project updates. Mr. Benedico has 20 years of extensive transportation engineering experience, including preliminary engineering studies, roadway design, project management, and general consulting. He is certified as a Project Management Professional (PMP) and his career experience includes managing both complex projects for the FDOT and the Orlando-Orange County Expressway Authority and local county-level projects on arterials and collector streets. Recently, he served as project manager on roadway design work for Charlotte County and Sarasota County. Mr. Benedico has maintained a solid track record of consistently responding to the needs of the client, addressing issues promptly and coordinating with team members to provide effective solutions.

Robert A. Hamm, P.E. | WSA Principal

Mr. Hamm is manager of WSA's Tallahassee office and serves as the firm's manager for transportation for North Florida. Mr. Hamm has more than 18 years of engineering experience and has served as the program manager on several general consultant contracts. He will be available to advise Leon County on topics ranging from work programming, procedures, coordination with other agencies, and technical consideration.

A.3 OUTSIDE CONSULTANTS

In addition to the highly qualified CDM and WSA personnel proposed for this project, we have included two outstanding local companies that are abundantly qualified in services related to roadway design services. Ours is a team of recognized leaders with the creative energies, technical know-how, management expertise, and financial resources that are essential to the successful delivery of professional engineering services required by the County.

Environmental and Geotechnical Specialists, Inc. | Geotechnical and Environmental Support

Environmental and Geotechnical Specialists, Inc. (EGS), a certified M/DBE firm, provides specialty services associated with environmental and geotechnical engineering. EGS is highly qualified and has outstanding work experience in North Florida. The staff at EGS has been providing professional services in this area since 1992. EGS is a full-service geotechnical consulting firm, which provides subsurface drilling, soil sampling, laboratory testing, engineering evaluations, and recommendations for a wide range of projects. EGS's professional staff has extensive experience in working with clients to facilitate the cost-effective investigation, engineering design, and construction of all aspects of a project requiring these services. All subsurface investigations and recommendations are coordinated with the project manager to ensure an investigation is focused on the project issues. All team members are familiar with the requirements for geotechnical evaluations and report submittals.

Diversified Design and Drafting Services, Inc. | Survey Support

3DS is a professional surveying and mapping firm with offices in Tallahassee and Pensacola, Florida. Since 1998, 3DS has developed innovative surveying and mapping solutions for professionals seeking quality design surveys, digital mapping, image scanning, and ortho photos. The firm marries a variety of conventional and cutting-edge technologies to fulfill each client's needs, and, whether utilizing traditional surveying techniques, photogrammetry, or a combination of methods, finds the right solution. 3DS offers a wide range of professional surveying and mapping services, including photogrammetry, route surveying, boundary surveys, as-built surveys, right-of-way surveying, ALTA surveys, geodetic control surveys, construction layout, CEI surveys, and wetland jurisdiction surveys. 3DS currently maintains MBE status in Florida and holds MBE/DBE certifications with the FDOT, South Florida Water Management District, Leon County, and the City of Tallahassee.

DAVID W. KOZAN, P.E.

CLIENT SERVICE MANAGER

Education: ***B.S. – Civil Engineering;*** **Registration:** ***P.E. – FL, LA (1999);***
Years with CDM: ***5;*** **Years with Other Firms:** ***9.5***

Project Engineer, Stormwater Outfall Design Enhancements, Panama City Beach, FL. For this project, the CDM team developed a multi-phased response plan for 51 beach outfalls that were damaged by Hurricane Dennis. The project consisted of the following six phases: (1) hurricane damage assessment, (2) outfall design enhancements, (3) coordination with the Federal Emergency Management Agency (FEMA), (4) preparation of bid documents, (5) construction services, and (6) outfall maintenance plan. Starting in September 2006, Mr. Kozan participated in this effort, which included providing documented results of the damage assessment of each outfall, a technical memorandum summarizing design improvement concepts, and construction plans and specifications. ***($950K)***

Project Manager, Design of 2.0-MG Ground Storage Tank and Booster Station, Panama City, FL. The City of Panama City retained CDM to provide design, permitting, and services during construction for a ground storage tank, booster pumping station, and water lines. Mr. Kozan was responsible for managing design and contract coordination of a new ground storage tank on a challenging, reclaimed site. ***($3.1M)***

Engineering Services During Construction Project Manager and Resident Engineer, 10-mgd Arbennie Pritchett Water Reclamation Facility Design-Build, Okaloosa County, FL. Okaloosa County contracted CDM to provide design, bidding, and engineering services during construction for a $48M design-build water reclamation facility. The project consisted of a dual train 10-mgd water reclamation facility with headworks, oxidation ditches, clarifiers, ultraviolet (UV) disinfection, and effluent pump station. It also included septage receiving, digester, and various internal pump stations and chemical feed systems. CDM implemented the project with a 3D/4D design approach. The project was modeled in 3D and the 4th dimension, information associated with the equipment, was from the 3D model to the Maintenance Management System. Mr. Kozan's responsibilities included assisting with design coordination, field engineering, and coordination of information systems. ***($49M)***

Project Manager, Engineering Services During Construction – Water Distribution Improvements, Callaway, FL. In 2005, the City of Callaway retained CDM to design a new 5.0-MG ground storage tank and booster pumping station, an 18-inch water transmission main (dedicated fill line), and distribution mains from the booster pumping station to provide adequate volume and pressure to the City and the surrounding communities. CDM also provided permitting and bid assistance services. For the final portion of this project, Mr. Kozan provided project management services and limited engineering assistance, including construction monitoring and supervision during construction of the water distribution system improvements. He also attended pre-construction meetings, prepared conformed contract documents, reviewed shop drawings, and prepared and submitted record drawings. ***($4.2M)***

Project Manager, 3.5-mgd Expansion to Port St. Joe Water Treatment Plant, Port St. Joe, FL. In 2004, CDM was hired by Preble-Rish, Inc. (PRI), the prime consultant, to perform the membrane and raw water pump station design for a 2.5-mgd surface water treatment plant (WTP). CDM completed the design, the project was bid, and construction began in late August 2006. In 2006, PRI hired CDM to design an expansion of the plant to 6.0-mgd capacity. The expansion was planned for in the original design. For this project, Mr. Kozan was responsible for permitting and implementing an expansion of the membrane and disinfection portions of the City's WTP while construction of the original 2.5-mgd portion was under construction. ***($21M)***

Project Manager, Disinfection By-products Water Treatment Improvements, Carrabelle, FL. The City of Carrabelle had negotiated a consent order with the FDEP concerning its disinfection by-products (DBP) exceptions. For this project, Mr. Kozan prepared a conceptual design report, including CDM's recommendations of alternatives for a solution to the DBP problem. ***($141K)***

Project Engineer, Water Treatment Plant Process Evaluation, Bay County, FL. For an expansion project to the 48-mgd Bay County Water Treatment Plant, a review of the plant as an operating unit was necessary. The scope of this review was to identify any opportunities that might exist to re-rate the plant to a higher operating capacity. For this project, Mr. Kozan prepared a technical memorandum to determine maximum hydraulic flow through the individual process units and calculate filter loading scenarios for the existing 8 filters, 10 filters, and 12 filters, and compare to the target flow rates of 48 mgd, 53 mgd, and build-out of 60 mgd. ***($25K)***

Project Manager, Development of Callaway Water and Wastewater Standards, Callaway, FL. Due to rapid development of some areas within the city, the City of Callaway desired to establish standard specifications and details to facilitate the installation of quality water and wastewater infrastructure that will be owned or maintained by the City. For this project, Mr. Kozan provided professional services related to the development of these water and wastewater standards. The specifications included standards for water and wastewater system materials, electrical specifications, standard requirements and details for water and wastewater system design, and utility placement guidelines. ***($22K)***

Project Manager, Water and Wastewater Plan Review and Modeling Assistance, Callaway, FL. Mr. Kozan was responsible for providing modeling services to update the City's water and wastewater models. The project also included an analysis of the impacts of additional new development on the city's water and wastewater system. ***($50K)***

Project Engineer, FIRM Re-Map, Bossier Parish (County), LA. Mr. Kozan planned and executed a GPS control study to coordinate the work of survey subcontractors working on a FIRM re-map of Bossier Parish (County). Mr. Kozan also performed an analysis of the re-map. ***($350K)***

Project Engineer, Tall Timbers Subdivision, Bossier Parish (County), LA. Mr. Kozan created the preliminary design of an impoundment/levee and drainage pump system for the Tall Timbers subdivision in Bossier Parish (County). ***($1.5M)***

Project Manager, Wyandotte Tower and Pump Station, Morgan City, LA. Mr. Kozan served as project manager for the automation of the Wyandotte Tower and Pump Station. ***($50K)***

Project Manager, Planned Development for the St. Joe Company, Port St. Joe, FL. Mr. Kozan was the project manager for the civil work on a 2,000-acre, 1,600-unit planned development for the St. Joe Company. Mr. Kozan was responsible for client relations, surveying, design, and consultant coordination. ***($12M)***

Project Engineer, Ground Storage Tank and Booster Pump Station, East Baton Rouge Parish, LA. Mr. Kozan served as the project engineer for a 500,000-gallon ground storage tank and 1,000 GPM booster pump station for Parish Water Company. ***($1.5M)***

Project Engineer, Potable Water System Analysis, Houston, TX. Mr. Kozan composed a potable water system analysis for an industrial complex in the Houston area. The report outlined system deficiencies and recommended improvements required to achieve consistent regulatory compliance and safer operation. Mr. Kozan also wrote an enterprise-wide potable water system standard for the same multinational petrochemical company. ***($40K)***

Project Engineer, Water Treatment Plant, Morgan City, LA. Mr. Kozan composed an evaluation for the City of Morgan City water treatment plant, identifying means of complying with new water quality regulations, providing budgetary estimates, and prioritizing work required. ***($75K)***

Project Manager, Surface Water Treatment Plant Upgrade, Morgan City, LA. For this $3.3M surface water treatment plant upgrade, Mr. Kozan coordinated in-house design and electrical and structural consultants. Mr. Kozan brought this project with a "hands-on" owner and numerous unknown sub-surface conditions to a successful conclusion. ***($3.3M)***

Project Engineer, Rehabilitation of Staring Lane Pump Station, Baton Rouge, LA. Mr. Kozan contributed to the rehabilitation of the Staring Lane Pump Station by designing a 42-inch HDPE submarine crossing to replace a deteriorating aerial stream crossing. ***($450K)***

Project Manager, Design-Build Surface Water Treatment Plant, McAdams, MS. Mr. Kozan served as project manager for the design portion of a fast-tracked $15M, 6.5-mgd design-build surface water treatment plant for a merchant power station. Mr. Kozan was responsible for coordinating in-house design, consultants, and client interface. ***($15M)***

Project Manager, Filter Automation Project, New Iberia, LA. Mr. Kozan was the project manager for a $1.1M filter automation project at an aging 12-mgd groundwater plant. Mr. Kozan wrote a detailed filter control narrative and performance-based specifications. Mr. Kozan coordinated in-house design with the electrical consultant. Mr. Kozan proposed a unique project solution of soliciting a proposal from an oil field contractor who could do piping and I&E in-house. The solution significantly reduced overall project costs. ***($1.1M)***

ENGINEERS PLANNERS ECONOMISTS

WilburSmith ASSOCIATES

Nickson A. Benedico, PE, AICP, PMP

Program Coordinator

Education
MBA, Business Administration, University of Central Florida, 1995

BS, Civil Engineering, University of Florida, 1989

Registrations
Professional Engineer: Florida, 1994 (#48110)

Certifications
Project Management Professional (PMP), 2007 (#463251)

American Institute of Certified Planners, Florida, 2001 (#017037)

Years of Experience
Total Years: 20
WSA: 4

August 2006-Present
Wilbur Smith Associates
Orlando, Florida

Professional Affiliations
American Society of Civil Engineers
American Planning Association
Florida Engineering Society
National Society of Professional Engineers
Project Management Institute

Technical Training
FDOT Errors and Omissions
FDOT Specification Preparation
AASHTO Interchange Design
FHWA Access Management
Primavera SureTrak
Geopak Roadway Design Software
MicroStation

Nick Benedico is a vice president with Wilbur Smith Associates and serves as the Florida director of transportation design. He has more than 20 years of extensive transportation engineering experience, including serving in senior management positions on roadway/expressway projects for clients such as Florida's Turnpike Enterprise, the Orlando-Orange County Expressway Authority, and Districts 1 and 5 of the Florida Department of Transportation. His relevant project experience includes:

S.R. 500/Indian River Relief Bridges Replacement Project Design-Build, Johnson Bros. LLC, FDOT District 5, Brevard County, FL (2010-Present) – WSA is serving as the lead design firm on this $9.3 million design-build project. The project involves the replacement of three low-level "relief" bridges on the S.R. 500 crossing of the environmentally sensitive Indian River. The three bridges were functionally deficient and require replacement, with the additional requirement of maintaining four lanes of traffic throughout construction on this hurricane evacuation route from the town of Indialantic to the Florida mainland. Nick is the lead roadway designer on the project and is also providing quality control/quality assurance reviews of the project.

Systemwide Production Management Consultant for OOCEA, Orlando, FL (2009-Present) – Nick is serving as project manager for this contract, which involves coordinating and conducting reviews of plans, reports, and calculations submitted by OOCEA's design consultant at the preliminary engineering, 30 percent, 60 percent, 90 percent, 100 percent, pre-bid, and bid phases of the project.

S.R. 46 Lake Jesup Bridge Replacement, Design-Build, FDOT District 5, Seminole, and Volusia Counties, FL (2008-Present) – Nick serves as a quality control/quality assurance manager for the roadway and maintenance of traffic plans on this $38 million design-build project. This project includes realignment of the roadway intersections at Old Geneva Road and Osceola Road and incidental roadway construction. The project also involves the replacement of a 500-foot long obsolete bridge with a 3,740-foot structure in the environmentally sensitive region where the St. Johns River intersects with Lake Jesup. In addition to removing the deficient bridge, the existing causeway will be removed as well within the limits of the proposed bridge to increase the flow of water between the river and Lake Jesup.

Experience prior to joining WSA:
General Engineering Consultant for Florida's Turnpike Enterprise (2005-2006) – Nick served as a senior project manager for the Turnpike's GEC and was responsible for managing the work of the Turnpike's design consultants on numerous widening, interchange, and toll plaza projects.

S.R. 408 Widening from Hiawassee Road to Tampa Avenue, OOCEA, Orange County, FL (2001-2003) – Served as project manager and oversaw all elements of this project. Managed the schedule and budget and coordinated with all team members. This project involved the widening of a 4-lane divided, limited-access toll road to six lanes by widening to the median. Work included demolition of the existing barrier toll plaza west of Tampa Avenue and construction of a new express toll plaza east of Pine Hills Road. Modifications were designed to the

interchanges at Pine Hills Road, Old Winter Garden Road, and S.R. 423/John Young Parkway.

S.R. 710 Interchange with Florida's Turnpike, Florida's Turnpike Enterprise, Palm Beach County, FL (2000-2003) – This project involved designing and preparing construction plans for a new tight diamond interchange. The project included the widening and extension of an arterial that served as the connection between the interchange and S.R. 710. Extensive public involvement with the adjacent Steeplechase subdivision and nearby emergency management facilities was performed. Aesthetic design features were incorporated into the design of the interchange.

S.R. 429 (Western Beltway), Part C – Section 2, from Sand Hill Road to West Orange Lake Boulevard, Florida's Turnpike Enterprise, Osceola and Orange Counties, FL (1998-2003) – The Western Beltway was a new, limited- access roadway from I-4 in Osceola County to Florida's Turnpike in Orange County. Nick was the project manager for Section 2, a 3.8-mile segment of 4-lane, divided expressway that included a diamond interchange at U.S. 192 (S.R. 530) in the highly urbanized tourist corridor near the segment's midpoint. The project also included three bridge crossings and an express toll plaza. Two local roads, Sand Hill Road and Dreamers Drive, were relocated to avoid having to construct costly retaining walls, and U.S. 192 was widened to provide turn lanes to and from the ramps.

S.R. 417 (GreeneWay) Widening (from S.R. 50 to the Seminole County Line), OOCEA, Orange County, FL (1999-2002) – This project involved the widening of S.R. 417 from S.R. 50 to north of University Boulevard. The design included widening the existing 4-lane divided toll road to six lanes and converting the existing toll plaza to an express toll plaza. The interchange with University Boulevard was modified to include a collector-distribution (C-D) road. The project also included improvements to University Boulevard to accommodate the C-D road. Nick served as project manager and oversaw all elements of this project.

S.R. 417 (GreeneWay) Seminole County Expressway – Project 2, Section 2 Final Design, Florida's Turnpike Enterprise, Seminole County, FL (1995-2002) – The Seminole County Expressway, Project 2, was the second phase of S.R. 417 and traversed an urbanized area of Seminole County. Nick served as the project manager for this 2.7-mile segment from Old Lake Mary Road to Rinehart Road. The project involved the design of a new, 4-lane, divided expressway with a diamond interchange at C.R. 46A and a bridge over Upsala Road. It also included two ramp toll plazas and widening a 0.65-mile segment of C.R. 46A from a 2-lane rural road to a 4-lane divided urban arterial between Country Club Road and Airport Boulevard. Also, a 0.25-mile local road was constructed to replace the access to Upsala Road eliminated by the expressway. The project crossed an old Seminole County Landfill that had not been regulated for many years. Since the buried refuse was unidentified, soil samples were analyzed to determine whether the landfill should be capped, removed, or bridged.

Western Beltway, Part C Project Development and Environment (PD&E) Study, OOCEA, Orange County, FL (1995-1996) – This project involved developing conceptual designs for alternative alignments of new 22-mile limited access expressway, including nine interchanges.

ENGINEERS PLANNERS ECONOMISTS

WilburSmith ASSOCIATES

Robert (Bob) A. Hamm, PE

Project Principal

Education
MS, Civil Engineering, Texas A&M University, 1994

BS, Civil Engineering, Texas A&M University, 1992

Registrations
Professional Engineer:
Florida, 2005 (#63155)
Texas, 1998 (#83928)
Louisiana, 2001 (#29835)

Years of Experience
Total Years: 17
WSA: 16

January 1994-Present
Wilbur Smith Associates
Tallahassee, Florida

Professional Affiliations
Institute of Transportation Engineers (ITE), Member
American Society of Civil Engineers (ASCE), Member

Publications
"Prioritizing Intersection Improvements for CMAQ Funding," ITE Journal, November 1995.

"Inductance Loop Detector Lead Length," Texas Transportation Institute, Research Report 1392-1, September 1994.

"Speed Measurement with Inductance Loop Speed Traps," Texas Transportation Institute, Research Report 1392-8, August 1994.

"Detector Accuracy and Reliability Testing for Elevated Roadways," Texas Transportation Institute, Research Report 1232-22, April 1994.

Bob Hamm is the senior transportation planning manager for Wilbur Smith Associate's Tallahassee office. His project involvement includes transportation planning, traffic operational analyses, corridor studies, and traffic impact analyses. Mr. Hamm has served as project manager for numerous traffic engineering and transportation planning projects. Relevant project experience includes:

Strategic Intermodal System (SIS)/Florida Intrastate Highway System (FIHS) On-Call Planning Services, Florida Department of Transportation, Central Office (2005-Present) – Project manager for this on-call services contract for the FDOT and the SIS and FIHS programs. Work assignments to date have included GIS and planning support for both the SIS and FIHS programs, as well as the following assignments:

- Development of the SIS First Five, Second Five, and Cost Feasible Plans, statewide
- Development of the SIS Unfunded Needs Plan
- Evaluation and Recommendation of Highway Performance Measures related to Safety, System Preservation, Economics, Mobility, and Quality of Life
- Development of the Strategic Investment Tool (SIT), an ArcServer web based analysis tool for statewide SIS project prioritization
- Development of annual FIHS Status Reports
- Development of SIS Related Studies, including Status Change Studies and Designation Studies
- Evaluation and Planning for the Statewide Future Corridors Program
- Evaluation and Planning for Statewide Origin/Destination (O/D) Studies at Freight and Passenger Terminals and Intermodal Facilities

Evacuation Transportation Modeling and Analysis, Florida Department of Emergency Management, FL (2008-Present) – Project manager for this study for the FDEM and all 11 Regional Planning Council's within Florida. This study involves the development and implementation of a travel demand modeling framework and methodology to evaluate transportation impacts of various hurricane evacuation scenarios on both a regional and statewide level. The methodology is being developed to be consistent statewide using CUBE Voyager and CUBE Avenue travel demand modeling software. Travel demand models will then be developed and implemented for each Regional Planning Council area and used to develop updated Regional Evacuation Studies.

S.R. 40 Status Change Study, FDOT, District 5, Ocala to Daytona Beach, FL (2008) – Served as project engineer for this study for the FDOT to reevaluate the status of S.R. 40 from I-75 in Marion County to I-95 in Volusia County as part of the Emerging SIS. The study included a review of the SIS, Emerging SIS, and FIHS designation criteria, development of potential alternative corridors, a safety analysis, future traffic volume forecasts along S.R. 40 and alternative corridors, identification of environmental issues and concerns, a review of emergency evacuation needs, and development of recommendations.

Sterling Development, Destin, FL (2007) – Served as project engineer for this study that provided professional planning and engineering analysis of parking, transit integration, and a review of the proposed Multimodal Transportation

Concurrency (MMTC) ordinance developed by the City of Destin. The proposed development included a new hotel, restaurants, retail, interval condominiums, and town home condominiums.

Lamesa Bypass Feasibility Study, TxDOT, Lubbock District, Lamesa, TX (2005) – Served as project manager for this study which involved a review of the proposed alignment and feasibility of a new highway bypass around the City of Lamesa. Project responsibilities included consideration of two new alignment concepts, development of projected year 2025 traffic volume forecasts, and a review of access/interchange needs along the new alignment.

Embarcadero Traffic Impact Analysis, Laredo, TX (2005) – Served as project manager for this traffic impact study of a proposed mixed use development in Laredo. The project involved the evaluation of traffic impacts of a proposed industrial, residential, and commercial development, including over 8,000,000 square feet of warehouse, retail, and office space, as well as residential units and an elementary school. The study conformed to the TxDOT Traffic Impact Study guidelines and included data collection, existing system analysis, trip generation, trip distribution, projection of future background traffic, analysis of future conditions, and development of transportation recommendations. The study also included a review of the current access management plan and proposed median opening layout along FM 1472 (Mines Road) and traffic signal warrant studies.

Tyler Area MPO Metropolitan Transportation Plan, Tyler, TX (2005) – Served as project manager for this transportation plan for the Tyler metropolitan area. Project involved evaluation of potential roadway, transit, bicycle, and pedestrian projects to be included in the MPO's 25-year long range transportation plan (LRTP). Analysis included the use of the area's TransCAD travel demand model, including modification and adjustment of traffic analysis zones, as well as interim year trip assignments. The MTP update also included a detailed financial plan, including project cost estimates and projection of future revenues from federal, state, and local sources. The project included development of the City of Tyler's Master Street Plan, which included arterial and collector street designations and cross section standards.

S.H. 288 Corridor Feasibility Study, TxDOT, Houston District, TX (2005) – Served as project engineer for this project that involved the evaluation of a wide range of improvement concepts for a 55 mile section of S.H. 288 from downtown Houston to Freeport. Alternatives under evaluation include increasing roadway capacity, commuter rail options, light rail options, HOV lanes, and managed toll lanes. Project responsibilities included traffic analysis, review of travel demand forecasts, determining travel efficiency benefits, and development of benefit-cost ratios.

Double Creek Village Traffic Impact Analysis (TIA), Austin, TX (2003-2005) – Served as project manager for this TIA conducted for a proposed development in South Austin. The project involved the evaluation of traffic impacts of a proposed commercial development, including over 700,000 square feet of retail and restaurant space. The study conformed to the City of Austin Traffic Impact Study criteria and included data collection, existing system analysis, trip generation, trip distribution, projection of future background traffic, analysis of future conditions, and development of transportation recommendations.

ENGINEERS PLANNERS ECONOMISTS

WilburSmith ASSOCIATES

William G. "Bill" Brooks, P.E.

Regional Vice President/ Project Principal

Education
B.S. Civil Engineering, University of Alabama, 1983

Registrations
Professional Engineer: Florida, 1990 (#42490)

Years of Experience
Total Years: 26
WSA: 12

Areas of Specialization
Program management construction administration and design.

Professional Affiliations
ASCE, ITE

Civic Activities
Blue Ribbon Panel of Transportation Experts, National Transportation Policy and Revenue Study Commission (2007)

Steering Committee, Florida's Strategic Intermodal System, (2002)

Transportation Technical Committee, Metroplan Orlando (2001-2008)

Public Presentations / Testimony
"Highway and Transit Needs: The State and Local Perspective on Reauthorization of TEA-21." Testimony before the U.S. House of Representatives Subcommittee on Highways, Transit, and Pipelines of the Committee on Transportation and Infrastructure, 2003

"Near Term Program Management-Orlando International Airport", ASCE, 2002

Mr. Brooks has more than 26 years experience in aviation, collectively valued at over $500 million in construction. Mr. Brooks' current project experience includes:

Daytona Beach International Airport Continuing Engineering Consultant / Volusia County, FL (2008-Present) – Serves as the client program manager for the on-call services of WSA. Current project includes Aircraft Parking Apron Expansion design.

Continuing Engineering Consultant –Orlando Executive Airport, Greater Orlando Aviation Authority, FL (2008-Present) – Client manager for airport's CIP projects. Current projects include design of North Ramp Pavement Rehabilitation, Modifications to Taxiway A-1, Pavement Rehabilitation of Taxiway E – North of Runway 7-25, Pavement Rehabilitation of Runway 13-31 Blast Pads and Compass Rose Calibration Pad, Installation of Three New Compass Rose Calibration Pads, Rehabilitation of the North Canal Drainage Structure and North Hangar Road.

Puerto Rico Ports Authority (PRPA) (2008-Present) – Client manager for general consulting contract for professional engineering, architectural support, environmental, management and planning services for airport development at PRPA's 11 publicly owned and operated airports. Projects have included a new Aircraft Rescue & Firefighting Facility and Taxiway Rehabilitation and Strengthening at Aguadilla. Mr. Brooks also participated in WSA's prior contract for PRPA's Interactive Aviation Planning System for PRPA's airports.

General Engineering Consultant, Valdosta Regional Airport, Valdosta-Lowndes County Airport Authority, GA (2006-Present) – Project principal: Projects include 2007 construction of 1,700 ft. runway extension and current (2008) construction of parallel and exit taxiways rehabilitation.

General Engineering Consultant, Flagler County Airport, Flagler County Board of County Commissioners, FL (2006-Present) – Project principal: New Air Traffic Control Tower currently under construction (2008). Previously designed and administered construction of runway rehabilitation.

General Engineering Consultant, Avon Park Executive Airport, City of Avon Park, FL (2006-Present) – Project principal. Projects include construction of runway rehabilitation (2007), new t-hangars (2006), and new FBO building and apron improvements (2008).

General Engineering Consultant, Vero Beach Municipal Airport, FL (2007-Present) – Project principal. Projects include construction of runway 4/22 and adjacent taxiway rehabilitation (2008); and replacement of runway and taxiway lighting and NAVAIDS fixtures and circuits (2008-09).

General Engineering Consultant, DeLand Municipal Airport, FL (2008-Present) – Project principal: New Air Traffic Control Tower Siting Study (2008). Previously designed and administered construction of runway and apron rehabilitation.

Liberty-Casey County Airport, KY (2007) – Client manager for the design of this new airport's runway, taxiway, aircraft parking apron, access road and associated electrical, NAVAID and drainage facilities.

Rum Cay Airport, Bahamas (2007) – Client manager for private development owner's plan for expansion of this resort island airport to comply with the agreement with the government of the Bahamas and ICAO standards. Phase 1 design work includes a 2,500 foot runway extension, a new terminal building, lighting, NAVAIDS, ATCT, ARFF, FBO and all associated apron, terminal curbs, auto parking and access roads.

New Hassan Airport, Karnataka, India (2007) – Engineering lead for concept layouts for a new greenfield airport east of Hassan, the 4th largest city of the state of Karnataka, a rapidly developing region. The site includes a 3,600 m runway; 27,000 sm terminal with 8M annual passenger capacity and supporting airside and landside facilities for international and domestic commercial service; corporate aircraft; A-380 MRO facility; flight training and surrounding land development on an overall 2,400 acre property as part of a 3P project.

(Experience with previous firm-1992-2004)
General Consultant/Program Manager, Greater Orlando Aviation Authority, FL (1992-2002) – Served as Program Manager and Construction Administrator for 11 years with responsibilities for over $400 million worth of projects, including numerous airfield, roadway, bridge, and parking capital improvement projects, including quality assurance; owner's representative services and close out. Specific projects included:
Northwest Terminal Support Area Apron -Design management and construction owner's representative for an approximately 90,000 square yard concrete aircraft parking apron reconstruction project for commercial air cargo carriers.
Near Term Program (16 Simultaneous Prime Consultants Bid Packages): New roadway, parking, bridge, terminal and east airfield improvements. Projects included: a new bridge from A-side parking garage to terminal-top parking, tunnels/ramps into the A & B garages levels 1 and 2, new public parking ramps to helices serving A and B garages level 3; new canvas covered parking areas, rental car quick turn around area improvements; Blue lot remote public parking in NW Support Area; expansion of Gold lot remote public parking; Cargo Road interchange with Airport Blvd; and associated signage upgrades.
North Terminal Program (4 Simultaneous Civil Consultant Bid packages) Various landside roadway and curb capacity enhancements including: Hyatt Motor Court accel / decel lanes; drainage improvements, terminal service road improvements and signage improvements.
Cargo Road Expansion Projects Design management and owner's representative construction services for a new $3.5 million interchange with Airport Boulevard and a roadway segment through a closed landfill. Also included $12 million for widening Cargo Road to four-lanes and construction of a new building for the various Authority departments.
Heintzelman Boulevard Project– Design management for six mile, four-lane road and bridge project between the SR 528 and South Access Road. The $40 million project included six bridges and a new interchange with South Access Road, and four-laning a one mile section of South Access Rd.
South Terminal Complex, – Developed two "passenger friendly" roadway and parking analyses and models for the "hybrid" concept for the future South Terminal Complex.

ENGINEERS
PLANNERS
ECONOMISTS

WilburSmith
ASSOCIATES

Quang Le, PE

Roadway Design

Education
BS, Civil Engineering, University of Connecticut, 2003

Registrations
Professional Engineer Florida, 2009 (#69964)

Certifications
Maintenance of Traffic (FDOT)

Years of Experience
Total Years: 6
WSA: 5

Areas of Specialization
Roadway design, traffic design and drainage design

Technical Training
FDOT Maintenance of Traffic, Intersection Design, Pavement Design, GeoPak, MicroStation V8, FDOT SiteMenu

Quang Le serves as a roadway engineer for Wilbur Smith Associates in the Highway Division. He has six years of experience in roadway design, traffic engineering, and roadway drainage design. Relevant project experience includes:

Kirkuk Ring Road, Segment 2, Iraq - Roadway designer for a 3-mile section of new construction of a 6-lane divided freeway. The design also includes an interchange and side street.

S.R. 111/McLendon Street Intersection, FDOT District 2, Nassau County (Jacksonville), FL - Serves as project designer for this project which involves the analysis and evaluation of alternatives for improvements at intersection (S.R. 111 and McClendon Street).

S.R. 15/600 (U.S. 17/92), Florida Department of Transportation District 5, FL - Served as project designer for this project which includes three miles of 4-lane resurfacing, roadside safety improvements, and pedestrian curb ramp upgrades.

S.R. 76 Resurfacing in Martin County, FDOT District 4 - Serves as project designer responsible for the design and productivity for this project which involves milling, resurfacing, and safety improvements to two miles of a rural 2-lane highway.

S.R. 91 (Florida's Turnpike) Milling and Resurfacing, Florida's Turnpike Enterprise, St. Lucie County, FL - Serves as project designer for this project which consists of preparing the design documents for the milling and resurfacing, design criteria upgrades, and the preparation of design variations and exceptions for the turnpike mainline from MP 138.2 to MP 153.2 in St. Lucie County. Responsible for the preparation of CADD drawings and composition book.

S.R. 91 (Florida's Turnpike) Milling and Resurfacing, Florida's Turnpike Enterprise, Martin County, FL - Served as project designer for this project that included the preparation of the design documents for the milling and resurfacing, design criteria upgrades, and the preparation of design variations and exceptions for the turnpike mainline from MP 125.4 to MP 138.2 in Martin County.

S.R. 46/Lake Jesup Bridge Replacement Design-Build, FDOT District 5, Seminole and Volusia Counties, FL - Roadway designer for this $38 million design-build project that was approximately 1.5 miles in length; half of which was a bridge. The project involved the replacement of a 500-foot long obsolete bridge with a 3,740-foot structure in the environmentally sensitive region where the St. Johns River intersects with Lake Jesup. This project was unique because in addition to removing the deficient bridge, the existing causeway was removed as well within the limits of the new bridge. This will remove the pollutant load currently draining from the roadway into the lake and allow better flow between the St. Johns River and Lake Jesup.

S.R. 5 (U.S. 1), FDOT District 5, FL - Serves as project designer for this project which includes 6.9 miles of 2-lane resurfacing and roadside safety improvements.

Burnt Store Road, Charlotte County Public Works, Charlotte County, FL - Serves as project designer for this project which involves widening the travel lanes to 12-feet and providing a paved shoulder for nine miles of Burnt Store Road in Charlotte County, a rural arterial. The improvements include roadway design, pavement design, signing and pavement markings, channel and ditch design, cross drain design and analysis, as well as the replacement of more than 80 side drains, and maintenance of traffic.

Honore Avenue, Sarasota County Public Works, Sarasota County, FL - Served as a roadway designer responsible for designing 3.8 miles of a new construction of a 4-lane divided major arterial urban roadway.

Oak Leaf Lane Drainage Improvements, City of Kissimmee, FL - Served as project roadway designer responsible for design of proposed roadway profile adjustments, plans production, quantities, and cost estimates. Project involved raising Oak Leaf Lane to mitigate flooding from adjacent Mill Slough.

Sand Run Road Drainage Improvements, City of Kissimmee, FL - Served as the project designer responsible for the plans productions, quantities, and cost estimates. The project involved expanding the existing retention pond to mitigate flooding from adjacent Mill Slough.

Prior to joining WSA, Quang served as a project engineer assisting the project manager with design and productivity for the following contracts:

- **S.R. 528 - Beeline Expressway Widening, Florida's Turnpike Enterprise**
- **S.R. 429 Maitland Boulevard Extension, Contract 201, Orlando-Orange County Expressway Authority (OOCEA)**
- **S.R. 408 Improvements Contract 253C, OOCEA**
- **Western Beltway Part C, Section 2A (Florida's Turnpike Enterprise), Orange and Osceola County**

ENGINEERS PLANNERS ECONOMISTS

WilburSmith ASSOCIATES

Kathleen (Kathi) Ruvarac, PE

Roadway Design

Education
BS, Civil Engineering, University of Central Florida, 2002

Registrations
Professional Engineer: Florida, 2007 (#66411)

Years of Experience
Total Years: 26
WSA: 3

December 2006-Present
Wilbur Smith Associates
Sarasota, Florida

Technical Training
ASCE Steel Design Seminar, June 2007
Highway Bridge Design Course, University of Wisconsin-Madison, December 2006
Post-Tensioning Design Seminar, ASCE, June 2006
Partnering Workshop, Turnpike Project Team, May 2006
LRFR Load Rating Summit, FDOT, December 2005
Bridge Scour Practices, FES, May 2005
Geopak Drainage for FDOT Standards, ModernTech, 2003
ICPR Version 2 Workshop, Streamline Technologies, 2001
Hydric Soils Workshop, Florida Association Environmental Soil Scientists, 1999
Estimating Seasonal High Ground Water, SWFWMD, 1999
Optional Pipe Materials Selection, FDOT 1999
Basic Culvert Hydraulics, FDOT 1999
FDOT CES Training, FDOT 1995

Kathi Ruvarac joined Wilbur Smith Associates as a senior transportation analyst. She brings more than 26 years of extensive transportation engineering experience in the architectural and engineering industry. She specializes in highway design, including the geometric design of roads and bridges, and stormwater management facility design in accordance with Florida Department of Transportation standards. Kathi is skilled in the following software: MicroStation, GeoPak Road & Drainage, AutoCAD, ICPR, ASAD, Culvert Master, Flow Master, and MathCAD. Relevant project experience includes:

Neal Road Paved Shoulders, Lee County FL (2008-Present) - Deputy project manager of the 3-mile roadway design project, extending from Buckingham Road to Orange River Road. Responsible for design, plans production, and project management.

S.R. 111/McLendon Street Intersection, FDOT District 2, Nassau County (Jacksonville), FL (2007-2008) - Served as project engineer on this project which included evaluating alternatives and designing improvements for this accident prone intersection.

Veterans Expressway Bridge Painting at Gunn Highway and Ehrlich Road, Hillsborough County, FL (2008) - Served as the deputy project manager responsible for preparing maintenance of traffic concept and plans detailing detours to be used during the cleaning and re-coating of twin steel structures at two interchange locations operated by the Florida's Turnpike Enterprise. Plans Production efforts included extensive signing layout for interchange detours for phased maintenance of traffic plan.

I-75 Express Toll Lanes, Southwest Florida Expressway Authority, Lee and Collier Counties (2007-2009) - Served as project engineer on this project which involved performing a traffic and revenue study and conceptual design for a 35-mile widening of I-75 to accommodate six express toll lanes. It included providing general consultant services to the client, the SWFEA, and implementing the public involvement elements.

Highland Ridge Bike Park, North Port, FL (2007-2008) - As project engineer, Kathi was responsible for site plan development of a 10-acre park renovation that included new BMX bike ramp equipment, an office building and facilities. She was also responsible for coordinating subcontractors regarding the utility lighting, landscape design, and geotechnical services.

Honore Avenue/Pinebrook Road Extension Design, Sarasota County, FL (2007-2008) - As project engineer, was responsible for the structural design and quality control (QC) of plans for this 3.8-mile, 4-lane divided urban roadway on a new alignment. This project required very close coordination with FDOT District 1 for utilizing the limited access right-of-way at I-75.

Burnt Store Road Final Design, Charlotte County, FL (2007) - Project engineer; The project was for the final design for a 7-mile segment for this major arterial roadway. Segment I was a 2.4-mile 4-lane divided urban section. Segment II was a 4.6-mile divided rural section. The design was based on the design criteria established during the alternative alignment study.

Fruitville Road, Sarasota County (2007) - Project engineer responsible for reviewing box culvert and drainage structure shop drawings as a part of the post design services. The design included three concrete box culverts, four cross drains, and three wildlife crossings.

S.R. 70 Bridges, FDOT District 4, St. Lucie County (2007) - Project engineer responsible for reviewing box culvert and drainage structure shop drawings. These include bridge widening and replacements of the S.R. 70 bridges over Header Creek and Ten Mile Creek, as well as two Shared Use Pedestrian Bridges, including the Pedestrian Bridge at the St. Lucie County Fair Ground

S.R. 20 PD&E Study, FDOT Central Office, Tallahassee, FL (2007) - As project engineer, was responsible for updating the proposed interchange alternatives; developed ramp configurations and long range cost estimates.

Pace Road Extension West of Polk Parkway, Williams Property, Polk County, FL (2007) - As project engineer, Kathi was responsible for developing a proposed roadway design, incorporating the Florida Turnpike Enterprise's proposed interchange design with the proposed roadway network planned for the Williams Property DRI.

FEMA Disaster DR-1829-ND – Flood Event 2009, Fargo and Bismarck, ND (2009) – Federal Emergency Management Agency (FEMA) TAC bridge specialist for public assistance; Served as a FEMA contractor through a task order managed by FLUOR and Hanson Professional Services, duties included performing bridge inspections, writing damage descriptions, scope of proposed work, and cost estimating for the repair and/or replacement of a variety of timber, steel, and concrete bridges throughout the state. Project specialist working directly with applicants (city and county representatives), North Dakota Department of Transportation, North Dakota Department of Emergency Services, and FEMA Department of Homeland Security Region VIII.

Traffic Engineering Study for Lee Tran Beach Trolley Routes, Lee County FL (2009-Present) - Serving as the project engineer preparing transit alternatives for the Ft. Myers Beach trolley circulator as a part of a Carbon Emission and Fuel Reduction Strategy for Lee Tran Study will also provide operating scenarios including potential enhancements for facilities.

ENGINEERS
PLANNERS
ECONOMISTS

WilburSmith
ASSOCIATES

Nadine B. Abu-Jubara, EI

Roadway Design

Education
BS, Civil Engineering (Construction Emphasis), University of Central Florida, 2009

Registrations
Engineering Intern
Florida, 2008

Years of Experience
Total Years: 4
WSA: 2

Professional Affiliations
American Society of Civil Engineers (ASCE),
American Society of Highway Engineers (ASHE)

Technical Training
MicroStation, GeoPAK, AutoCAD, Excel, MATLab, and ADICPR Vs. 3/2

Ms. Abu-Jubara serves as transportation design engineer in the roadway design department for Wilbur Smith Associates in the Orlando, Florida office. She is responsible for working on technical documents using MicroStation and GeoPak in accordance with Florida Department of Transportation standards. Ms. Abu-Jubara also serves as planning support in the preparation of Energy Efficiency and Conservation Block Grant (EECBG) applications and strategy implementation and also serves on the firm sustainability team. Other software that Ms. Abu-Jubara is proficient in the use of includes AutoCAD and ADICPR Vs. 3/2. Relevant project experience includes:

Highland Ridge Bike Park, City of North Port, FL (2008-2009) – As a transportation designer, provided stormwater management CADD services for the new Highland Ridge Bike Park, as well as pavement design services. This site/civil design project included layout and design of a new 2.5-acre BMX Bike Park facility on an existing 8-acre park owned by the city. The stormwater management design included a dry retention pond with sidedrain filters that were permitted through the Southwest Florida Water Management District.

Burnt Store Road Alternative Alignment Study, Charlotte County, FL (2006-Present) – This project is an alternative alignment study for a major arterial roadway. The 2-lane undivided rural roadway is 8.5 miles from the Lee/Charlotte County line to U.S. 41. This study is for a 4-lane divided urban and rural segment. The study includes exploring several alignments and typical sections, preparation of an Alternative Alignments Report, a conceptual drainage and pond siting report, and presentation of the findings at a public information meeting. Ms. Abu-Jubara is a transportation designer responsible for CADD drawings on this project.

Honore Avenue/Pinebrook Road Extension Design, Sarasota County, FL (2006-Present) – This project involves design of a 3.8-mile, 4-lane divided urban roadway on a new alignment. This project requires very close coordination with FDOT District 1 for utilizing the limited access right-of-way at I-75. Serving as a transportation designer responsible for CADD drawings on this project.

S.R. 46 Lake Jesup Bridge Replacement, Design-Build, FDOT District 5, Seminole and Volusia Counties, FL (2008-2009) – Provided team support for this $38 million design-build project which had a length of approximately 1.5 miles and involved the replacement of a 500-foot long obsolete bridge with a 3,740-foot structure in the environmentally sensitive region where the St. Johns River intersects with Lake Jesup. This project was unique because in addition to removing the deficient bridge, the existing causeway was also removed within the limits of the proposed bridge. This will remove the pollutant load currently draining from the roadway into the lake and allow better flow between the St. Johns River and Lake Jesup.

Winchester Boulevard Phase III Design, Charlotte County, FL (2008-Present) – Providing CADD support for this project on which WSA is providing engineering analysis, design, plan preparation, contract bid documents, environmental permitting services, and construction phase services for a new 4-lane section of Winchester Boulevard from S.R. 776 to C.R. 775 in the City of

Englewood. Services include reviewing, completing, and updating the current design plans and specifications to current standards along with preparing the necessary environmental permit applications and bid forms.

Edgewater Corridor Phase III, Charlotte County, FL (2008-Present) – Providing CADD support. WSA is the lead consultant selected by Charlotte County to design a proposed connector between Edgewater/Collingswood Boulevard intersection and the S.R. 776/ Flamingo Boulevard intersection. One segment of the Edgewater corridor is on a new alignment, and the other segment already exists as a 2-lane undivided roadway. This design is for an ultimate 4-lane divided roadway with 12-foot travel lanes, sidewalks, paved shoulders, and swales.

ENGINEERS PLANNERS ECONOMISTS
WilburSmith ASSOCIATES

Christopher J. Mills, PE

Structural Design

Education
MS, Structures and Foundations, University of Central Florida, 1997

BS, Environmental Engineering, University of Central Florida, 1995

Registrations
Professional Engineer: Florida, 2001 (#56801)

Years of Experience
Total Years: 14
WSA: 4

February 2007-Present
Wilbur Smith Associates
Orlando, Florida

Areas of Specialization
Project Management, structural engineering,
final bridge design,
miscellaneous structures design

Professional Affiliations
Member – American Society of Civil Engineers (ASCE)

Mr. Mills is the Florida structure department head for Wilbur Smith Associates. He has 14 years of experience which includes the design of both complex and conventional structures. Complex projects include both cast-in-place and precast segmental box girder structures, post-tensioned voided slab structures designed for aircraft loading as well as other aircraft structures. These projects required extensive structural modeling which included time-dependent analyses and/or finite element analysis. Conventional structures include widening of American Association of State Highway and Transportation Officials (AASHTO) I-girder structures, new AASHTO I-girder structures, and a post-tensioned spliced bulb-tee bridge. His steel design experience includes both I-girder and box girder bridges as well as integral steel substructure elements. Mr. Mills also has substantial experience in the design of substructure from simple pile supported bents to piers supporting segmental structures designed for vessel impact. He has worked on both conventional design-bid-build and design-build projects and fully understands both delivery methods. Relevant project experience includes:

S.R. 500/Indian River Relief Bridge Replacement Design-Build, Florida Department of Transportation (FDOT) District 5, Brevard County (2009-Present) – WSA is the lead design firm on this design-build project to replace three low-level "relief" bridges over the environmentally sensitive Indian River. The existing bridges were functionally deficient and required replacement, with the requirement of maintaining four lanes of traffic throughout construction on this hurricane evacuation route from the town of Indialantic to the Florida mainland. As design project manager and lead structural engineer, Chris devised an innovative approach to the project that removed the necessity for constructing a temporary pedestrian bridge during construction, saving time in the project schedule and reducing environmental impacts.

S.R. 46 Lake Jesup Bridge Replacement Design-Build, FDOT District 5, Seminole and Volusia Counties, FL (2007-Present) – Design project manager and lead structural engineer for this $38 million design-build project that is approximately 1.5 miles in length, half of which is a bridge. The project involves the replacement of a 500-foot long obsolete bridge with a 3,740-foot structure in the environmentally sensitive region where the St. Johns River intersects with Lake Jesup. This project is unique because in addition to removing the deficient bridge, the existing causeway will be removed as well within the limits of the proposed bridge. This will remove the pollutant load currently draining from the roadway into the lake and allow better flow between the St. Johns River and Lake Jesup. ***Mr. Mills was voted "Outstanding Partner" by the project team that included the CEI, FDOT, and the joint venture contractors.***

Burnt Store Road (C.R. 765), Charlotte County, FL (2007) – Served as project engineer for this project which involved the improvement of approximately 8.8 miles of roadway from U.S. 41 to the Lee County line. Improvements included the widening of the existing 2-lane roadway, the addition of auxiliary lanes, and the replacement of the existing flat slab and pedestrian bridges over Alligator Creek. Engineering responsibilities included assisting in the preliminary design of multiple alternatives to be included in the Bridge Development Report (BDR). Alternatives considered included a precast flat slab alternate, a haunched slab alternate, and an AASHTO girder alternate.

Honore Avenue/Pinebrook Road Extension, Sarasota County, FL (2007) – Served as project engineer for this project, which is approximately 3.8 miles in length and involved the extension of Pinebrook Road from Laurel Road to S.R. 681. Project responsibilities included a BDR and the preliminary design of structures over Salt Creek, Cow Pen Slough, and Fox Creek. Each of the bridges use AASHTO Type III girders and final plans included twin bridges to match the existing structures over Salt Creek and Cow Pen Slough, as well as two new structures over Fox Creek.

Hathaway Bridge Replacement Project, FDOT District 3, Panama City, FL (2001) – Served as the design engineer on this $81 million design-build project that consisted of construction of twin bridges, approximately 3,800 feet long, each with a single segmental concrete box that was more than 80 feet wide and had no internal supports. Performed a 3-D analysis for ship impact, which included the non-linear effects of the soil, substructure, and superstructure. Also performed an independent check of the superstructure longitudinal design and a construction analysis for both bridges to determine displacements during construction.

S.R. 429/S.R. 414 Maitland Boulevard Extension, Orlando-Orange County Expressway Authority (OOCEA), Orange County, FL (2006) – Served as the project engineer for the design of the ramp E1 flyover of northbound U.S. 441. This curved box structure has spans of 85 feet-190 feet-85 feet. This bridge uses a weighted end spans to resist uplift. Performed the Bridge Concept Report, designed the superstructure for this bridge, and was responsible charge of this structure.

S.R. 408 Improvements from Conway Road to Oxalis Drive, OOCEA, Orange County, FL (2006) – Served as the design engineer on the Lake Underhill Bridge over S.R. 408 ramp, which is a 3-span continuous steel girder. Designed the substructure elements for the integral piers and end bents. Directed the design methodology of the integral steel box pier caps and checked the drawings for the substructure and integral pier caps.

I-4 Widening from S.R. 472 to S.R. 44, FDOT District 5, Volusia County, FL (2006) – Served as design engineer for Summit Avenue over I-4. This bridge was a severely skewed steel plate girder bridge that accommodated a widened I-4 typical section. Developed a grid model to properly represent the deck casting sequence calculate diaphragm forces.

S.R. 408 from Crystal Lake to Conway Road, OOCEA, Orange County, FL (2005) – Served as the project engineer for two mainline bridge widenings and two new ramp bridges over Lake Underhill, each with 21 spans and a typical span length of 81 feet. Directed the design and plans production, which involved a multi-office effort. Performed secondary analysis of substructure elements using FB pier and a structural analysis package to determine lateral load distribution.

S.R. 44 over I-4, FDOT District 5, Volusia County, FL (2003) – Served as design engineer for the widening of S.R. 44 from two lanes to four lanes in Volusia County. The proposed improvement and the roadway included a new bridge over I-4. To accommodate the ultimate typical section of I-4 and the skew, two 180-foot spans were required. The proposed structure consisted of prestressed, post-tensioned Florida Bulb-T 78-inch beams on a multi-column pier. Performed preliminary and final design of the superstructure.

ENGINEERS PLANNERS ECONOMISTS

WilburSmith ASSOCIATES

Hazem E. Ibrahim, PE

Structural Design

Education
MS, Structures and Foundations, University of Central Florida, 1998

BS, Civil Engineering, Alexandria University, Alexandria, Egypt, 1992

Registrations
Professional Engineer: Florida, 2001 (#56839)

Years of Experience
Total Years: 17
WSA: 5

January 2010-Present
1998-2003
Wilbur Smith Associates
Orlando, Florida

Areas of Specialization
Structural Analysis
Concrete & Prestressed Concrete Design
Steel Design
Foundation Design
Sign Structures
Cost Estimates

Professional Affiliations
Member – American Society of Civil Engineers (ASCE)

Presentations
"Acoustic Emission from Concrete Filled FRP Tubes," ASCE 12th Engineering Mechanics Conference

"Acoustic Emission of Retrofitted Fiber-Wrapped Columns," Nondestructive Evaluation Technique for Aging Infrastructure and Manufacturing

"Effect of Column Parameters on RFP-Confined Concrete," *ASCE Journal of Engineering Mechanics, Aug. 1999, Vol. 125 No. 8*, 1998

Mr. Ibrahim is a senior structural engineer with Wilbur Smith Associates and has more than 17 years of experience in structural analysis and preparation of plans for bridges (flat slab, AASHTO girder, and steel girder) and other structures (reinforced concrete, prestressed concrete and structural steel). He also has experience with sign structures, structural dynamics, structural stability, site inspection, quantities calculation, cost estimation, and construction quality control. Mr. Ibrahim is proficient in a variety of software packages including Mathcad, STAAD-III, Simon, RC-Pier, Descus I, Geomath, Conspan, and various Florida Department of Transportation generated software. Relevant project experience includes:

I-10 Final Design – S.R. 263 (CCNW), FDOT District 3, Tallahassee, FL (2003-2006) – Served as the structural engineer responsible for the overall design of all the bridges. He designed all the continuous decks and the substructures, including end bents and piers and reviewed the girders design. Mr. Ibrahim also performed quality assurance on all of the plans. The project involved widening three dual bridges: I-10 over S.R. 263 is a four-span AASHTO type III girder bridge with a 73-foot maximum span length; I-10 over CSX Railroad is a three-span AASHTO type II girder bridge with 49-foot span length; and I-10 over Mission Road is a three-span AASHTO type II girder bridge with 56-foot maximum span length. Design was in accordance with AASHTO LRFD design specifications.

I-10 Final Design – S.R. 63 (Monroe), FDOT District 3, Tallahassee, FL (2003-2006) – Served as a structural engineer and performed review for the substructure design and the RCPIER runs and also performed overall QA for the entire bridge plans. The project included improvements to the I-10/S.R. 63 (U.S. 27) interchange, widening of S.R. 63 (U.S. 27) from four to six lanes in the interchange area, four bridge widenings, and noisewalls. The then existing U.S. 27 interchange was a four-span continuous CIP concrete box with a 58'-134'-130'-54' span configuration.

S.R. 500/Indian River Relief Bridge Replacement Design-Build, Florida Department of Transportation (FDOT) District 5, Brevard County (2009-Present) – WSA is the lead design firm on this design-build project to replace three low-level "relief" bridges over the environmentally sensitive Indian River. The existing bridges were functionally deficient and required replacement, with the requirement of maintaining four lanes of traffic throughout construction on this hurricane evacuation route from the town of Indialantic to the Florida mainland. As structural engineer, Hazem provided design services for the new bridges.

Kennedy Boulevard, Wall Design, Orlando, FL (2004) – Served as the senior structural engineer responsible for design services for the wall control drawing/ under-cut bridge.

C.R. 314 (Sharpes Ferry) over Ocklawaha River, FDOT District 5, Marion County, FL (2008-2009) – Served as the senior structural engineer. This project included replacement of the existing bridge and incorporating the 117-foot historical swing span truss span (Category 2) into the new bridge. The design included Florida I Beam supported spans alongside the truss to be used for

pedestrian access. The project also included rehabilitation and retrofitting of the existing truss including repair, new decking and painting.

Neptune Road (C.R. 525) Widening from Partin Settlement Road to U.S. 192, Osceola County, FL (2008-2009) – This project included the design of two bridges, one on Neptune Road over Florida's Turnpike and the other bridge crosses over St. Cloud Canal C-31. The project is currently under design and Mr. Ibrahim completed the preliminary design, preliminary quantities, and the Bridge Development Report for this project.

S.R. 408 Widening – Oxalis Drive to Chickasaw Trail, Orlando-Orange County Expressway Authority, Orlando, FL (2006-2009) – Served as the structural engineer responsible for steel girder design and reviewing the inverted-T caps design. The project involved widening two existing prestressed concrete bridges, widening one continuous steel plate girder bridge, and construction of two new braided ramps. The AASHTO I-girder bridges are three-span and four-span bridges with 36'-57'-36' and 44'-50'-63'-44' span configurations respectively. The continuous steel girder bridge is a two-span bridge with a 110'-147' span configuration. The new ramps are both five equal spans with 100-foot or 112-foot FL U-Beam. Substructures for the ramps are cantilever and straddle inverted-T caps.

I-75 Widening, Golden Gate Parkway to Bonita Beach Road, Collier County, FL (2004-2006) – Served as the senior structural engineer. Project included widening I-75 from four to six lanes, from Golden Gate Parkway to Bonita Beach Road, a total of 10.6 miles. Also included widening of the I-75 bridges over Pine Ridge Road, Vanderbilt Beach Road, Immokalee Road, and Cocohatchee Canal. Mr. Ibrahim worked as a support engineer for this project. He performed the geometry design of the I-75 bridge over Vanderbilt Beach Road using GEOMATH. He also reviewed the design of the substructure elements for the different bridges.

I-4 Widening – DeLand to Daytona, FDOT District 5, Deland to Daytona, FL (2003-2005) – Senior structural engineer. Project included replacement of the Tomoka River Bridge, three new animal crossings and reconstruction of the I-4/U.S. 92 interchange which will replace the existing bridge with a new flyover ramp. The flyover ramp is a five-span, 1,072-foot long bridge, with continuous curved steel plate girders. Mr. Ibrahim was the responsible engineer for this bridge. He designed the curved steel girders using Descus. He also performed the design of the diaphragms, cross frames, and bearing pads design, and reviewed the concrete piers design.

S.R. 13 from C.R. 13 to S.R. 16, Jacksonville, FL (2004) – Served as the senior structural engineer responsible for the design services of the bridge rail replacement and bridge bar ratings. He also performed bar rating and evaluation of the existing deck for traffic railing retrofit.

Eby Value Engineering (VE) Study, U.S. 27 Bridge over the CSX Railroad (2003) – The project was a bridge replacement with a new three-span bridge (9m-32m-10m), with AASHTO girders and steel girders. Mr. Ibrahim reviewed the proposed steel girder design, and provided new alternative for a single span bridge. He also prepared cost comparison between both alternatives.

ENGINEERS PLANNERS ECONOMISTS

WilburSmith ASSOCIATES

Paul Q. Snead, PE

Drainage Design

Education
MS, Civil Engineering (water resources), University of Central Florida, 2004

BS, Environmental Engineering, University of Central Florida, 1996

Registrations
Professional Engineer
Florida, 2001 (#56982)

Years of Experience
Total Years: 14
WSA: 5

2005-Present
Wilbur Smith Associates
Orlando, Florida

Areas of Specialization
Water resources / stormwater management, project management, drainage design, and permitting

Professional Affiliations
Florida Engineering Society (FES)
UCF CECS Alumni Board, Chairman
ASCE Water Resources Group, Vice Chair (2000-2001), Secretary (1999-2000)
FDEP Certified Stormwater Management & Erosion Control Inspector

Technical Training
ADICPR Vs. 3/2, ASAD, StormCad, HEC-RAS, MicroStation, GeoPak, GeoPak Drainage, Ponds, Pondflow II and AquiSeep

Office Location
Orlando, FL

Paul Snead serves as a project manager and the lead senior drainage engineer for Wilbur Smith Associates. He has 14 years of experience in water resources/stormwater management engineering including the analysis and design of channel improvements, erosion and sediment control measures, open and closed drainage conveyance systems, hydrologic and hydraulic computer modeling of watersheds, and stormwater related permitting to include Management and Storage of Surface Water (MSSW), ACOE dredge and fill, and NPDES permitting. Additionally, Paul is proficient in river modeling with respect to FEMA flood mapping and CLOMR studies.

Paul's responsibilities include project management tasks as well as leading the drainage design team. Drainage tasks include designs of hydraulic conveyance systems, ponds, ditches, canals, and basin models. Additional design services include pond siting studies, flood plain compensation analysis, FEMA No-Impact Studies, bridge scour analysis, river modeling, and erosion control design. Responsibilities also include permitting preparation and coordination with public and private clients, permitting authorities and subconsultants. Relevant project experience includes:

S.R. 500/Indian River Relief Bridges Replacement Project Design-Build, Johnson Bros. LLC, Florida Department of Transportation District 5, Brevard County, FL (2010-Present) – WSA is serving as the lead design firm on this $9.3 million design-build project. The project involves the replacement of three low-level "relief" bridges on the S.R. 500 crossing of the environmentally sensitive Indian River. The three bridges were functionally deficient and require replacement, with the additional requirement of maintaining four lanes of traffic throughout construction on this hurricane evacuation route from the Town of Indialantic to the Florida mainland. Paul is the lead drainage engineer responsible for the stormwater management design and coordination of permitting the project through the various regulatory agencies.

S.R. 46 Lake Jesup Bridge Replacement, Design-Build, FDOT District 5, Seminole and Volusia Counties, FL (2008-8/2009) – Served as the drainage/ permitting and scour analysis lead engineer. This $38 million design-build project involved the replacement of a 500-foot long obsolete bridge with a 3,740-foot structure in the environmentally sensitive region where the St. Johns River intersects with Lake Jesup. In addition to removing the deficient bridge, the existing causeway was removed as well to reduce the pollutant load draining from the roadway into the lake and to allow better flow between the river and Lake Jesup.

Highland Ridge Bike Park, City of North Port, FL (2007-2008) – Served as project manager providing stormwater management design services for the new Highland Ridge Bike Park. This project was a site civil design project for the city of North Port which included layout and design of a new two and one half acre BMX bike park facility on an existing 8-acre park owned by the city. The stormwater management design included a dry retention pond with sidedrain filters which were permitted through the Southwest Florida Water Management District.

Kissimmee CDBG Drainage Projects, Kissimmee, FL (2007-2008) – Served as the project manager and engineer of record for the design of drainage and roadway improvements for three locations in the City of Kissimmee. Responsibilities included design of stormwater collection systems, roadway profile adjustments, and permitting with the South Florida Water Management District. Developed construction plans and bid documents and provided construction administrative services. The project schedule was so that construction could begin before the grant funding deadline.

Fruitville Road Improvements, Sarasota County, FL (2005-2006) – Served as the engineer of record for the drainage design of this 4.5 mile fast-track improvement project which included ditch improvements to compensate for floodplain impacts and design of seven cross drains to prevent future road overtopping and also meet strict no-impact requirements for Southwest Florida Water Management District. Extensive basin modeling including updating existing models was also required to meet Sarasota County Stormwater permitting requirements. Plans are complete.

Burnt Store Road Alignment Study, Charlotte County, FL (2006-Present) – Drainage engineer of record for this project which involves developing pond siting alternatives for 15 basins along eight miles of Burnt Store Road from the Lee County line to north of U.S. 41 at North Jones Loop Road. Responsible for developing the pond siting criteria and determining the minimum pond size requirements for 15 basins along the roadway alignment.

S.R. 25/500 Drainage Improvements, FDOT District 5 (2005-2006) – Served as project manager and lead senior drainage engineer for this project which involved the design and permitting of a new stormwater management pond. Responsibilities included project management tasks, coordination with FDOT project manager, and oversight of plans production and electronic deliverables.

Taft-Vineland Culverts, Orange County, FL (2006) – Served as the drainage engineer of record for the design of the minimum culvert cross sectional area requirements for a proposed crossing over the C-11 Canal located within the Valencia Community Water Control District (VCWCD). Design tasks included updating the existing AdICPR regional basin model for analyzing resulting flood stages for the proposed structures. Results were coordinated with VCECD in developing the minimum cross sectional requirements for the proposed structures.

Davenport Creek FEMA CLOMR Study, Osceola County, FL (2005) – Served as the project engineer responsible for updating the FEMA HEC-RAS model from S.R. 400 (I-4) to S.R. 535 for two proposed bridges placed in the floodway for the Reunion Development by the Ginn Company. Modeling tasks included preparation of existing, revised existing, and proposed 100-year water profiles and a floodway analysis using the computer program HEC-RAS. Scour depths were also determined for the 100-year and 500-year events.

Conway Road Widening from S.R. 528 to Hoffner Road, City of Orlando, FL (2004-2005) – Served as the drainage engineer responsible for the design of the stormwater management facilities and secondary conveyance systems for widening of Conway Road from S.R. 528 to Hoffner Road. Stormwater management design included wet detention ponds and the secondary conveyance design of closed stormsewer system and bypass system to Lake Conway.

ENGINEERS PLANNERS ECONOMISTS

WilburSmith ASSOCIATES

Mandee Brandt, PE

Drainage Design

Education
BS, Environmental Engineering, University of Central Florida, 2002

Registrations
Professional Engineer Florida, 2007 (#65581)
FDEP Qualified Stormwater Management Inspector, 2009

Years of Experience
Total Years: 10
WSA: <1

Affiliations
Society of Women Engineers (SWE), Life Member
Florida Engineering Society (FES), 2010-11 Chapter President

Awards
Central Florida FES Young Engineer of Year (2008)
Engineering Week New Faces in Engineering Nominee (2007)

Computer Skills
MicroStation J, GEOPAK, GEOPAK Drainage, ASAD, ICPR, Ponds 3.2, HY-8, HEC-12, HEC-18, Culvert Life Estimator, SureTrak

Mandee joins Wilbur Smith Associates as a drainage engineer in the roadway division. She has more than 10 years of experience and her responsibilities include design of stormwater collection systems, hydraulic reports, permit coordination, stormwater field investigations, stormwater management systems, permitting, and plans preparation.

Experience prior to joining WSA includes:

Juanita Avenue Bridge Replacement, Design-Build, St. Lucie County, Florida Bridge and Transportation - The project consisted of replacing the existing bridge over Taylor Creek as well as adding six foot shoulders. This project was funded by the American Recovery and Reinvestment Act (ARRA). Responsibilities included the design of the storm sewer collection facilities and ditch design; obtaining the permits from the South Florida Water Management District (SFWMD) and the Fort Pierce Farms Water Control District. Also prepared the Bridge Hydraulics Report for Juanita Avenue over Taylor Creek.

Hoagland Boulevard Segment 2, Osceola County, FL - The project consisted of adding a new 4-lane divided urban roadway facility to Osceola County. Prepared the Pond Siting Report including verifying proposed pond locations and basin limits. Key responsibilities included managing the drainage design by assigning tasks to team members, and coordinating with permitting agencies, adjacent projects and team members to ensure resources were properly managed. The drainage design included a stormwater management facility, stormsewer collection facility, and cross drains.

Narcoossee Road Segment 3 from Jack Brack Road to the Boggy Creek Road, Osceola County, FL - The project consisted of utility relocation, roadway, and drainage improvements over a distance of 3.19 miles. Responsibilities included the design of the stormwater management facilities, storm sewer collection facilities, cross drain design, and permitting with SFWMD. Key responsibilities included managing and coordinating the drainage design by assigning tasks to team members and training junior engineers on storm sewer design. Prepared the Pond Siting Report and Bridge Hydraulics Report for Narcoossee Road over Canal 29B. Also provided post design services and plans production.

Wymore Road Sidewalk Design, Seminole County Public Works, FL - The project consisted of designing a six foot wide sidewalk from the Altamonte Manor Apartment Homes to the Walgreens. Lead drainage engineer, solely responsible for the design and plans production of the storm sewer collection facilities and obtaining the permit from the St. Johns River Water Management District (SJRWMD).

North Lockwood Boulevard, Seminole County, City of Oviedo, FL - This project consisted of the reconstruction of North Lockwood Boulevard from C.R. 419 to C.R. 426. This project was funded by ARRA. Lead drainage engineer, solely responsible for the design and plans production of the underdrain system to lower ground water away from the roadway base and obtaining the permit from the SJRWMD.

Ormond Crossings Boulevard from U.S. 1 west of I-95 to U.S. 1 east of I-95, Volusia County, FL - The project consisted of designing Ormond Crossings Boulevard, a new 4-lane divided roadway over a railroad accessing a private development. Responsibilities included the design and plans production of the storm sewer collection facilities along Ormond Crossings Boulevard and U.S. 1.

Metro Parkway (S.R. 739) Design from Six Mile Cypress Parkway to Daniels Parkway, FDOT District 1, Lee County, FL - The project consisted of widening 1.2 miles of S.R. 739 (Metro Parkway) from a 2-lane undivided rural roadway to a 6-lane urban roadway and included four-foot bike lanes and five-foot sidewalks. Provided post design services and plans production.

Chapman Road Design from S.R. 426 to S.R. 434 – Phase 1, Seminole County Public Works, FL - Project involved plans update and production of construction plans for the reconstruction of Chapman Road. Responsibilities included environmental resource permitting and final drainage plans.

Palm Bay Road Design from Minton Road to Robert J. Conlan Boulevard, FDOT District 5, Brevard County, FL - The project included final engineering design and permitting to widen approximately five miles of C.R. 516 from a 4-lane suburban to a 6-lane divided urban arterial roadway. Provided post design services and plans production

I-75 Widening, FDOT District 5, Sumter County, FL - Project improved the existing I-75 from south of C.R. 470 to just south of Florida's Turnpike. Responsibilities included the Pond Siting Report Update including verifying proposed pond locations and basin limits. Also responsible for developing the drainage design. Key responsibilities were managing the design by assigning tasks to team members, and coordinating with permitting agencies, adjacent projects and team members. The drainage design includes stormwater management facilities, ditch design, and stormsewer collection facility.

I-75 PD&E, FDOT District 5, Sumter County, FL - A 20-mile study of the I-75 corridor. Provided assistance to the lead drainage engineer that included data collection, pond site analysis for 80 stormwater management facilities.

East West Road Segment 2, Orange County, FL - The project consisted of adding a new 4-lane divided urban roadway facility to Orange County. Provided assistance developing drainage calculations for stormsewer systems, and floodplain compensation calculations. Assisted with coordination efforts with the adjacent project, East West Road Segment 1; assisted with the roadway design such as profile grade line and back of sidewalk profiles; and provided drainage and roadway CADD support services.

S.R. 426 (Aloma Ave), FDOT District 5, Seminole County, FL - An urban roadway that was changed from a four-lane divided to a 5-lane undivided roadway. Developed the maintenance of traffic design, including calculating the quantities and provided roadway CADD support services. Responsible for preparing 90 percent deliverables, receiving the comments and providing responses. Responsible for developing the construction schedules using the SureTrak software.

ENGINEERS
PLANNERS
ECONOMISTS

WilburSmith
ASSOCIATES

Gabriel Chaverri, PE

Drainage Design

Education
BS, Environmental Engineering, Kansas State University, Manhattan, Kansas, 2002

Registrations
Professional Engineer: Florida, 2008 (#67544)

Years of Experience
Total Years: 8
WSA: <1

June 2010-Present
Wilbur Smith Associates
Orlando, Florida

Affiliations
Member - American Society of Civil Engineers (ASCE)

Gabriel Chaverri is a drainage engineer for Wilbur Smith Associates in the Orlando, FL office. He has more than eight years of experience in environmental and civil engineering and has provided stormwater management design services on numerous projects in Florida. He is experienced in the use of MicroStation, using it for design drawings and in developing ICPR models for stormwater systems. In addition, Gabe has experience in the engineering of remediation systems to remove and treat contaminated soil and groundwater.

Experience prior to joining WSA includes the following:

Stillwater Subdivision Stormwater Retrofit, Seminole County, FL (2009) – Project engineer: Researched the issued permits, roadway plans, and design documentation to recreate a comprehensive ICPR model for the subdivision. Gabe also conducted field visits to determine drainage problems and recommended solutions.

S.R. 400 and S.R. 434 Interchange, FDOT District 5, FL (2009) – Project engineer: Utilized Geopak Drainage software to complete the storm sewer design of the interchange and mainline. Prepared drainage structure cross sections, pond details and other plan features utilizing MicroStation XM. Supervised the work of junior engineers and CADD technicians. Prepared and submitted the environmental resource permit application for the St Johns River Water Management District (SJRWMD).

Neptune Road Widening, Osceola County Department of Public Works, Osceola County, FL (2008-2009) – Project engineer: Prepared drainage design documentation, design of four wet detention ponds and ICPR modeling for the completion of the 60 percent plans. Gabriel also conducted field visits and weekly meetings with Osceola County and the South Florida Water Management District (SFWMD).

I-95 Design-Build from Palm Bay Road to Eau Gallie Boulevard, FDOT District 5, Brevard County, FL (2008-2009) – Project engineer: Designed the primary system for eight drainage basins. Supervised and reviewed the work of junior engineers and CADD personnel. Developed and maintained the appropriate quality control/quality assurance (QC/QA) procedure during the design phase of the roadway plans. Utilized ICPR software to model the different design storms and meet pre- vs. post-discharge criteria set forth by the water management districts and the FDOT.

U.S. 17/92 and S.R. 436 Interchange, FDOT District 5, Casselberry, FL (2006-2007) – Drainage engineer: Completed the 60 percent design submittal and the associated drainage report. Design included pond sizing, storm sewer layout, utility relocation, plans preparation, etc. Prepared the environmental resource permit application submittal for the SJRWMD.

John Young Parkway/Canadian Court. Section 1 and Section 3, Orange County, FL (2007) – Drainage engineer: Conducted preliminary modeling of

the Bridge Hydraulic Reports for Sections 1, 2, and 3 utilizing Hydraulic Engineering Circular (HEC-RAS 3.1.3). Supported senior staff in final technical documentation of three BHR's. Gabe utilized Geopak Drainage for the 60 percent submittal of Sections 1 and 3 which included storm sewer design and spread calculations. Also completed the drainage reports for both projects.

Miscellaneous Drainage Improvements for the Belleview Pond (Districtwide Stormwater Contract), FDOT District 5, Marion County, FL (2007) – Drainage engineer: Gained experience with electronic submittal using PEDDS, and EDI. Conducted various technical reviews on behalf of the FDOT on various plans and reports from consultants and issued corresponding comments.

Alternate Surfacing Program, Seminole County, FL (2006) – Drainage engineer: Successfully secured a general stormwater environmental resource permits from the SJRWMD to pave 32 rural roads in Seminole County. Conducted numerous site visits with county officials.

Pellicer Creek Bridge Construction, St. John's River Water Management District Continuing Engineering Services, Flagler County, FL (2007) – Drainage engineer: Conducted a preliminary HEC-RAS design to model the surface water elevations during different storm events. Performed a regression analysis to estimate the runoff over the project area.

Narcoossee Road and Goldenrod Road Intersection Improvements, Orange County, FL (2005) – Project engineer: Performed engineering analyses using ASAD for the design of the stormwater conveyance system. Coordinated pre-application meetings with SJRWMD for the expedition of an ERP. Performed various tasks in the production of plans using MicroStation and Geopak.

Boggy Creek Road, Osceola County Department of Public Works, Osceola County, FL (2005) – Drainage engineer: Scheduled, coordinated, and attended field meetings with county, Infrastructure, SFWMD, and KCG to address wetland and permitting issues. Resolved several tasks via teleconferences and CADD reviews with Infrastructure, to address problems with the design of the bridge, approach slabs, ditches, etc. Successfully designed the floodplain compensation requirements for approval and issuance of the ERP application (Permit issued August 2005). Provided support in the development of drainage documentation including exhibits, ICPR reports, and engineering calculations included in the drainage design documentation, and ERP application for the county and SFWMD. Coordinated numerous teleconferences with Osceola County, Florida's Turnpike Enterprise, and SFWMD to expedite the issuance of the ERP and drainage connection permit approval. Performed various tasks in the production of plans using MicroStation.

Lois Drive Bridge Replacement, Lake County, Lake County, FL (2004) – Drainage engineer: Prepared the permit submittal package for the SJRWMD. Provided support in the development of drainage documentation including exhibits, ICPR reports, and engineering calculations included in the drainage design documentation, and ERP application for the SJRWMD and the DOT. Performed various tasks in the production of plans using MicroStation.

ENGINEERS
PLANNERS
ECONOMISTS

WilburSmith
ASSOCIATES

Om Prakash Kanike, PE

Signing/Pavement Marking

Education
MS, Transportation Systems Engineering, University of Central Florida, 2003

BS, Civil Engineering, S.V.U. College of Engineering, India, 2001

Registration
Professional Engineer
Florida, 2009 (#70702)

Years of Experience
Total Years: 6
WSA: 4

Areas of Specialization
Traffic engineering, travel demand modeling, transportation modeling and simulation, traffic signal timing

Professional Affiliations
Member, Institute of Transportation Engineers

Research Experience
Created an emergency response model for Orlando International Airport using PARAMICS micro-simulation software.

Technical Training
Cube Voyager, TRANPLAN, TransCAD, VISSIM, CORSIM (TSIS), Paramics, SimTraffic, Synchro, HCS, SIDRA, TRANSYT-7F, MicroStation, ArcView

Office Location:
Orlando, FL

Om Kanike is a traffic analyst for Wilbur Smith Associates. He has more than six years of experience in transportation planning and traffic engineering. Prior to joining WSA, Om served as a transportation/traffic analyst responsible providing transportation modeling and simulation support; completing transportation studies, traffic signal system timing, traffic impact studies, signal warrant studies, comprehensive plan amendments, driveway analyses, and other traffic studies. Relevant project experience includes:

S.R. 500/Indian River Relief Bridges Replacement Project Design-Build, Johnson Bros. LLC, Florida Department of Transportation District 5, Brevard County, FL (2010-Present) – WSA is serving as the lead design firm on this $9.3 million design-build project. The project involves the replacement of three low-level "relief" bridges on the S.R. 500 crossing of the environmentally sensitive Indian River. The three bridges were functionally deficient and require replacement, with the additional requirement of maintaining four lanes of traffic throughout construction on this hurricane evacuation route from the town of Indialantic to the Florida mainland. Om is the design engineer responsible for developing signing and pavement marking plans.

S.R. 46 Bridge Replacement over Lake Jesup, Design-Build, FDOT District 5, Seminole County, FL (2008-2010) – Served as a traffic engineer responsible for developing the signing and pavement marking plans and coordinating with the contractor on construction issues. This $38 million project included realignment of the roadway intersections at Old Geneva Road and Osceola Road and incidental roadway construction. The project also involved the replacement of a 500-foot long obsolete bridge with a 3,740-foot structure in the environmentally sensitive region where the St. Johns River intersects with Lake Jesup.

S.R. 15 Milling and Resurfacing from M.P. 10.471 to M.P. 13.600, FDOT District 5, Seminole County, FL (2008-2009) – This project required milling and resurfacing, upgrading to meet ADA requirements, replacing loops at signalized intersections, and three traffic monitoring sites. Om was responsible for developing signing and pavement marking plans, signalization plans.

Florida Regional Evacuation Studies, FDOT Central Office, Tallahassee, FL (2008-Present) – Serves as a travel demand modeler on this project involving network preparation, roadway capacities, and background traffic profile estimation tasks.

Honore Avenue/Pinebrook Road Extension, Sarasota County Public Works, Sarasota County, FL (2007-Present) – Serves as lead traffic engineer on a traffic signal design at the Honore Avenue/Laurel Road intersection. Also provided signing and marking plans for this 3.8-mile, 4-lane extension of Honore Avenue.

Piper Road Improvements, Charlotte County Public Works, Punta Gorda, FL (2006-2009) – This project featured the design and the reconfiguration of Piper Road/North Jones Loop Road. Om was responsible for developing the signing and pavement marking plans, signalization plans, and conducting the traffic study.

S.R. 436 at Lake Margaret Drive Intersection Study, FDOT District 5, Orlando, FL (2008) – Served as traffic engineer for this intersection safety study. Tasks included data collection/processing, field observations, level of service analysis, crash data analysis, recommendation for mitigation measures, and report preparation.

Strategic Intermodal System (SIS) Evaluation Phase 2: Southbound I-95 to SW 7th Street/SW 8th Street Exit Ramp Study, FDOT District 6, Miami, FL (2008) – As lead project engineer, conducted a CORSIM simulation study to identify the traffic problems on the I-95 exit ramp to SW 7th and 8th Streets and developed conceptual improvements to alleviate congestion.

Shingle Creek Community Development District, Revenue Study (2008), Kissimmee, FL (2008) – Served as traffic engineer responsible for conducting a traffic study for this private development to quantify its impacts on revenue for the Osceola Parkway toll road. Tasks included data collection, trip generation, trip distribution and assignments (using travel demand model), sensitivity analysis, and report writing.

Winchester Boulevard, Traffic Analysis and Design, Charlotte County Public Works, Charlotte County, FL (2007-Present) – Serves as a traffic engineer responsible for conducting a signal warrant study for the S.R. 776/Winchester Boulevard intersection; design of two traffic signals at the S.R. 776 and C.R. 775 intersections; and development of signing and marking plans for this new 4.7-mile, 4-lane roadway.

S.R. 40 SIS, FDOT Central Office, Tallahassee, FL (2007) – Served as traffic engineer responsible for completing the traffic analysis required to research the statewide significance of S.R. 40 as a Florida Intrastate Highway System (FIHS)/SIS facility. This effort involved analyzing crash data and existing traffic conditions, comparing alternative corridors (via the statewide transportation model), and recommending the status of S.R. 40's FIHS/SIS designation.

Pace Road/DRI Circulator Road/Polk Parkway Intersection/Interchange Concept, Polk County, Private Developer (2007) – As lead traffic engineer, developed conceptual design to provide access to the Williams Developments of Regional Impact (DRI) and University of South Florida campus developments. This project is located in the southwest quadrant of the I-4/Polk Parkway interchange and is anticipated to generate 100,000+ daily trips. Involved coordination with the Turnpike, use of the Polk County Transportation Planning Organization (TPO) model for volume projections, and use of Synchro and CORSIM models to evaluate the feasibility of the conceptual designs.

AmSouth Bank Traffic Impact Study, Private Developer, Bay County, FL – As traffic engineer, conducted a traffic study and addressed the city's and county's transportation issues within the study area due to the project traffic.

Commander Center Traffic Impact Study, Private Developer, Leesburg, FL – Served as traffic engineer responsible for conducting turn lane warrant analysis and recommended turn lane lengths at the project driveway and medians on U.S. 27.

ENGINEERS PLANNERS ECONOMISTS

WilburSmith ASSOCIATES

Revocatus Kanilwa, PE, PTOE

Signing/Pavement Marking

Education
MS, Civil Engineering, Transportation, Kansas State University, December 2000

BS, Civil Engineering, University of Dar-es-Salaam, July 1996

Registrations
Professional Engineer:
Florida, 2008 (#68543)
Ohio, 2004 (#69120)

Professional Traffic Operations Engineer (PTOE), 2004

Years of Experience
Total Years: 11
WSA: 1

November 2008-Present
Wilbur Smith Associates
Miami, Florida

Affiliations
Member, Institute of Transportation Engineers

Areas of Specialization
Traffic Signal Design
Signing and Pavement Marking Design
Construction Staging (Sequencing) and Traffic Management Plans Preparation
Traffic Studies and Analyses
Highway Geometric Design

Mr. Kanilwa has more than 11 years of experience as a transportation engineer and has substantial experience in various aspects of traffic engineering design and studies, as well as roadway design. His responsibilities have included traffic signal system design; signing and pavement marking design for all types of roadway facilities; designing associated traffic management plans (TMPs), also known as maintenance of traffic (MOT), for highway and street work zones; and conducting various traffic studies and analyses, including traffic impact studies, capacity and level of service analyses, parking studies, project development and environmental (PD&E) studies, and development of regional impact (DRI) studies. Mr. Kanilwa has also been responsible for the geometric design of temporary highway roads and ramps used during major interchange construction throughout central Florida. Relevant project experience prior to joining WSA includes:

Districtwide Plans Review, Florida Department of Transportation, District 6, FL (2008-Present) – Traffic engineer; this project involves providing assistance to the district in reviewing plans prepared by outside consultants and also by the district's internal design group. Mr. Kanilwa has been providing reviews in the following disciplines: roadway, signing and pavement marking, signalization plans, and safety reports. Responsibilities also include attending review meetings with department staff and the engineer of record to review comments and resolve outstanding design issues.

Traffic Impact Study for Collier County Area Transit Bus Transfer Facility, Collier County, FL (2009) – Traffic engineer; Collier Area Transit was planning to use their office headquarters premises as the site for a bus system transfer facility. Mr. Kanilwa prepared the traffic technical memorandum documenting the impacts of adding this activity at the CAT headquarters, located on Radio Road. Tasks included collecting existing data and analyzing the existing conditions, and analyzing the future conditions.

Intersection Qualitative Assessment at Several Signalized Intersections, FDOT, District 6, Miami, FL (2008) – This project involved the evaluation of existing operational conditions at several signalized on-ramp intersections to I-95 northbound as part of the department's readiness to deploy ramp-metering on I-95. Mr. Kanilwa served as the lead traffic engineer coordinating the field reviews, data collection and evaluation, and preparing the traffic technical memorandum. A total of eight intersections were evaluated.

S.R. 408/S.R. 417 Interchange, Roadway Design, Orlando, FL (2006-2008) – Project engineer for this major systems interchange reconstruction project. Mr. Kanilwa was responsible for the design of construction phasing, MOT plans, detour routes, and temporary guide signs. He was also responsible for designing horizontal/vertical alignments, typical sections, and cross-sections for all temporary roadways that were needed to accommodate the traffic during the different phases of construction.

Sistrunk Boulevard Improvement Project, Fort Lauderdale, FL (2007-2008) – Project engineer; This streetscape project in downtown Fort Lauderdale involved the reconstruction of a section of Sistrunk Boulevard to narrow the road from four travel lanes to two lanes as well as the milling and resurfacing of

another section. Mr. Kanilwa worked on the team that responsible for the production of the construction documents where he was responsible for developing the signal plans from 30 percent to 60 percent. The signal design included nine different locations and an interconnect system.

U.S. 1/S.R. 5 Overseas Highway RRR Project, from North MM 97 to M 100 (2007-2008) – Project engineer responsible for designing the signing and pavement marking plans for the southbound highway and a portion of the northbound highway as well as designing the signal equipment layout at the signalized intersection of U.S. 1/Atlantic Boulevard/North Bay Drive.

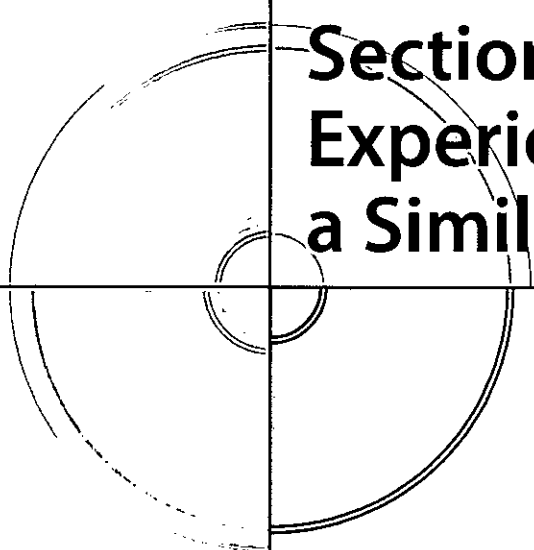
Districtwide Miscellaneous Plans Review and Services, FDOT District 6, Miami, FL (2007-2008) – Project engineer; Worked at the district offices with the district's internal design group as part of a contract providing plans review and services to the district. Assignments included designing signalized intersections as well as preparing signing and pavement marking plans on several different state roadways in Miami-Dade and Monroe counties. Also helped with responding to design comments in the district's ERC system.

The District, City of Boca Raton, FL (2006) – Traffic engineer; Provided consulting services for a mixed-land use redevelopment project known as The District. Services included traffic impact analyses for a series of development alternatives. The impact analysis was performed in accordance with the West Palm Beach County performance standards and the City of Boca Raton's Land Development regulations to assess impacts to the surrounding transportation system and to determine required roadway improvements. Mr. Kanilwa was responsible for the field reviews, trip generations/distributions/assignments, level of service (LOS) analyses, and report preparation.

Virginia Key Master Plan, Miami, FL (2006-2007) – Project engineer; Evaluated the Virginia Key Master Plan from an engineering standpoint. Prepared existing and future conditions analyses for the proposed plan alternatives including the determination of the necessary transportation improvements. Also reviewed the master plan development alternatives relative to access, which included non-motorized modes, public transportation, and internal site circulation.

S.R. 84 from Pine Island Road to Davie Road, Fort Lauderdale, FL (2006-2007) – Project engineer; The scope of work included all activities involved in a RRR as per FDOT requirements. Work involved milling and resurfacing of the existing pavement, extending turning lanes, upgrading the existing substandard guardrails, signing, pavement marking, signalization, sidewalk, various upgrades to meet ADA requirements, and evaluation of lighting conditions against the current standards to identify the need for additional lighting.

Town of Bay Harbor Islands, Broad Causeway Toll Plaza, Bay Harbor Islands, FL (2006-2007) – Traffic engineer; Selected by the City of Bay Harbor Island to evaluate different alternatives to improve the operation of the toll plaza on Broad Causeway. Conducted field reviews, coordinated the data collection efforts with a sub consultant, performed analysis of the operating conditions at the toll plaza, and evaluated different alternatives for improvements.



Section B:
Experience With Projects of a Similar Type and Size

SECTION B: EXPERIENCE WITH PROJECTS OF A SIMILAR TYPE AND SIZE

B.1 PROJECTS ILLUSTRATING THE EXPERIENCE OF THE FIRM AND CURRENT STAFF

CDM and WSA are proud of the excellent reputation our firms have earned for completing complex projects on time, within budget, and with a high degree of competence. The recent and ongoing projects described below illustrate the CDM team's vast experience and strong commitment to successfully completing any roadway design assignment requested by Leon County.

Edgewater Corridor Phase III, Charlotte County, FL

Firm's Responsibility: ***Prime Consultant/Lead Designer***
Project Owner's Representative: ***Brian Barnes, P.E., Capital Projects Engineer; Charlotte County Public Works, 7000 Florida Street, Punta Gorda, FL 33950; Tel: 941.575.3600***
Date Completed: ***May 2009***
Project Manager and Other Key Personnel: ***Project Manager - Paul Snead; Key Staff - Revo Kanilwa***

WSA designed a new four-lane divided roadway section for the ultimate build-out of Edgewater Boulevard in Charlotte County.

WSA was the lead consultant selected by Charlotte County to provide professional engineering services for the design of a proposed connector between the Edgewater/Collingswood Boulevard intersection and the S.R. 776/ Flamingo Boulevard Intersection. A segment of the Edgewater corridor is on a new alignment, and the other segment exists as a two-lane undivided roadway. WSA designed for an ultimate four-lane divided roadway with 12-foot travel lanes, sidewalks, paved shoulders, and swales. The County chose to initially build just two lanes and expand to the ultimate configuration when funding becomes available. The FDEP and the SWFWMD required the County to compensate for water quality and treatment of stormwater for all the basins connected to the roadway to facilitate the removal of the Manchester lock at Charlotte Harbor. This required an innovative design approach to maximize the right-of-way for ponds, as well as the roadway improvements. The project also included the design of two bridges over existing canals and the removal of one existing bridge. The corridor traverses the habitat of the Florida scrub jay, which required extensive mitigation and permitting.

Fruitville Road Design, Sarasota County, FL

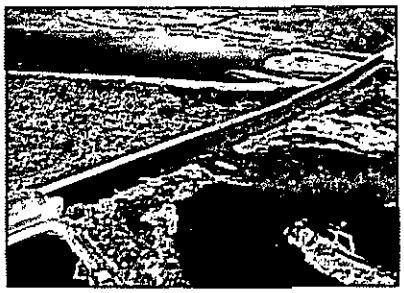
Firm's Responsibility: ***Prime Consultant/Lead Designer***
Project Owner's Representative: ***Carolyn Eastwood, P.E., Sarasota County Public Works; 1001 Sarasota Center Blvd., Sarasota, FL 34240; Tel: 941.861.0890***
Date Completed: ***2006***
Project Manager and Other Key Personnel: ***Project Manager - Paul Snead***

WSA, under an on-call contract with Sarasota County, Florida, was selected to provide preliminary engineering and final design services for the Fruitville Road project. The project corridor began at the intersection with Verna/Myakka Road and terminated 4.5 miles to the west. The existing roadway consisted of two 10-foot travel lanes with unpaved shoulders and roadside swales. To expedite the right-of-way donation process, the County allowed WSA only 90 days in which to prepare the final design plans. WSA delivered the 100 percent plans on time

and submitted all applicable permits to the agencies in just 60 days. The design included three concrete box culverts, four cross drains, three wildlife crossings, roadside ditch reconstruction, and raising the roadway profile in one area to eliminate flooding on this evacuation route.

S.R. 46/Lake Jesup Bridge Replacement Design-Build Project, Seminole/Volusia County, FL

Firm's Responsibility: ***Prime Consultant/Lead Designer***
Project Owner's Representative: ***Todd Long, P.E.; Florida Department of Transportation, District 5, 719 S. Woodland Blvd., DeLand, FL 32720; Tel: 386.943.5558***
Date Completed: ***2010***
Project Manager and Other Key Personnel: ***Project Manager - Chris Mills; Other Key Personnel - Nick Benedico, Revo Kanilwa, Quang Le, Om Kanike, Paul Snead***



The S.R. 46 project involved design of a new bridge and removal of an existing causeway at Lake Jesup.

WSA served as the prime designer on this $37M design-build project, which was 1.5 miles long and included a new S.R. 46 bridge in the environmentally-sensitive region where the St. Johns River intersects with Lake Jesup. The project involved the replacement of the existing 500-foot bridge, which was functionally obsolete, with a 3,740-foot structure. In addition to removing the deficient bridge, the existing causeway was also removed within the limits of the new bridge. This removed the pollutant load that had been draining from the roadway directly into the lake and also greatly improved the natural flow of water between the river and lake. A temporary workbench was utilized to facilitate the construction of the new bridge. The workbench traversed the southern side of the existing roadway and was supported by rows of temporary steel sheet piling. The outer row of this wall supported crane and construction surcharge loads in excess of 800 pounds per square foot. More than 4,000 linear feet of sheeting was used on this project. The project also included realignment of the roadway intersections at Old Geneva Road and Osceola Road and incidental roadway construction. Traffic analyses were performed to project the need for a potential widening of the four-lane divided section of S.R. 46. WSA also managed the maintenance of traffic and the development of a traffic control plan to satisfy the goals of providing a safe environment for the traveling public and the construction workers, minimizing traffic delays, allowing the contractor to perform efficiently, and controlling construction costs. WSA also provided the utility coordination, contractor quality control, and public involvement for this project. The S.R. 46/Lake Jesup Bridge was ranked No. 6 among the Top 10 Bridges of 2009 by Roads and Bridges magazine.

Honore Avenue/Pinebrook Road Extension, Sarasota County, FL

Firm's Responsibility: ***Prime Consultant/Lead Designer***
Project Owner's Representative: ***Vinod Sancheti, P.E., Project Manager; Sarasota County Public Works, 1001 Sarasota Center Blvd., Sarasota, FL 34240; Tel: 941.861.0803***
Date Completed: ***2011 (anticipated)***
Project Manager and Other Key Personnel: ***Project Manager - Nick Benedico; Other Key Personnel - Chris Mills, Paul Snead, Quang Le, Om Kanike***

WSA was selected by Sarasota County to provide professional engineering services for the design of the Honore Avenue/Pinebrook Road Extension. The project included constructing 3.8 miles of a four-lane divided roadway from Laurel Road to S.R. 681 with sidewalks, closed drainage, street lighting, landscaping, and bike lanes. This project included an at-grade intersection with a limited access roadway to S.R. 681, which required signalization, and also included improvement of traffic

signals and lane geometry at the Laurel Road intersection. The project also included design services for three bridge crossings over Salt Creek, Fox Creek, and Cow Pen Slough. Engineering services included design, permitting, bidding, and limited construction phase services.

The County will use a 1.5-mile segment of the existing I-75 southbound lanes and the limited access right-of-way in the area north of the Laurel Road Interchange to Cow Pen Slough. Close coordination with Florida Department of Transportation District 1 was necessary in the areas of roadway design, transfer of the limited access right-of-way to the County, construction costs, construction schedule, cost sharing, funding, and public involvement.

The design is underway and WSA submitted the 100 percent plans on schedule and are currently modifying the design for an interim two-lane urban roadway. Using the WSA value engineering process for the approved PD&E preferred alignment, WSA determined that twin bridges at Fox Creek and Cow Pen Slough will provide a saving to the County of over $1.5M. In addition, WSA modified the alignment at Cow Pen Slough and secured approval from the County and the FDOT that will allow the County to use the existing bridge and roadway fill for an additional savings of $1M. The County adopted both changes.

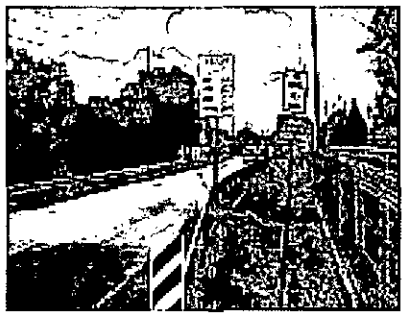
Neal Road Paved Shoulders, Lee County, FL

Firm's Responsibility: ***Prime Consultant/Lead Designer***
Project Owner's Representative: ***Don DeBerry, P.E., Public Works Operations Manager; Lee County Department of Transportation, 1500 Monroe Street, Fort Myers, FL 33901; Tel: 239.533.8503***
Date Completed: ***2009***
Project Manager and Other Key Personnel: ***Project Manager - Nick Benedico; Other Key Personnel - Kathi Ruvarac***

This project involved the design of five-foot paved shoulders for a three-mile section of Neal Road, a two-lane road in rural Lee County, from Buckingham Road north to Orange River Boulevard. WSA provided professional design services and prepared roadway construction plans and specifications, including land survey services, utility relocation plans, and utility coordination. The project also included re-grading of roadside ditches and adding guardrail where necessary to maintain the clear zone. The design was completed in early July 2009.

Burnt Store Road Design and CEI Services, Charlotte County, FL

Firm's Responsibility: ***Prime Consultant/Lead Designer***
Project Owner's Representative: ***Brian Barnes, P.E., Capital Projects Engineer; Charlotte County Public Works, 7000 Florida Street, Punta Gorda, FL 33950; Tel: 941.575.3600***
Date Completed: ***2010***
Project Manager and Other Key Personnel: ***Project Manager - Nick Benedico; Other Key Personnel - Quang Le, Paul Snead, Chris Mills***



WSA completed an alignment study and final design for the 8.5-mile Burnt Store Road corridor.

The Burnt Store Road (BSR) corridor is a hurricane evacuation route that begins at the Charlotte/Lee County line and ends north of U.S. 41 at the four-lane section of Jones Loop Road, a distance of approximately 8.5 miles, in Charlotte County. BSR (C.R. 765) is a heavily traveled route serving highly populated Cape Coral in Lee County, as well as rapidly growing areas in Charlotte County, and will also serve numerous future developments proposed along the corridor.

WSA was selected to provide preliminary and final engineering and construction engineering and inspection (CEI) services for BSR. In September 2006, WSA successfully completed an Alternative Alignment Study and presented the study findings to the Board of County Commissioners (BCC). The BCC approved the preferred alignment as presented and approved a scope and fee contract with WSA for the design phase.

The general objective of the Alternative Alignment Study was to provide documented information to help the County reach a decision on the type, design, and location of improvements for this roadway. WSA explored three different alternative alignments for the corridor and tabulated the results in an impact evaluation matrix. Several typical sections were investigated, and the preferred typical section included a four-lane divided suburban section from the county line to Notre Dame Boulevard (6.5 miles) and a divided urban section from Notre Dame to U.S. 41 (2.4 miles). The study followed the principals of avoidance and minimization to the Charlotte County Harbor Preserve areas, the bridge over Alligator Creek, which is a sovereign and submerged state land, and an existing Florida Power & Light transmission line. The study included an access management plan and an extensive public involvement plan that involved close coordination with nine different developers regarding right-of-way issues and joint use stormwater facilities within the corridor that will form the basis for a public-private partnership with the county.

WSA also conducted a signal warrant study at the Acline Road/Burnt Store Road intersection, designed a traffic signal at the U.S. 41/Burnt Store Road intersection, and developed signing and marking plans for a 2.5 mile 4-lane roadway.

Winchester Boulevard Phase 3, Charlotte County, FL

Firm's Responsibility: ***Prime Consultant/Lead Designer***
Project Owner's Representative: ***Brian Barnes, P.E., Capital Projects Engineer; Charlotte County Public Works, 7000 Florida St., Punta Gorda, FL 33950; Tel: 941.575.3600***
Date Completed: ***2011 (anticipated)***
Project Manager and Other Key Personnel: ***Project Manager - Nick Benedico***

WSA was contracted by Charlotte County to finalize the design plans for Winchester Boulevard.

Charlotte County prepared 90 percent plans for this 2.93-mile roadway project and selected WSA to move the plans to 100 percent and to provide new design services as well. WSA performed the final design for this hurricane evacuation route. The design includes the new construction of a four-lane divided roadway, sidewalks, bike lanes, raised median, lighting, a new signal at S.R. 776 and at C.R. 775, and a box culvert over Oyster Creek. One segment includes closed drainage with curb and gutter and the other segment is a rural section with open drainage.

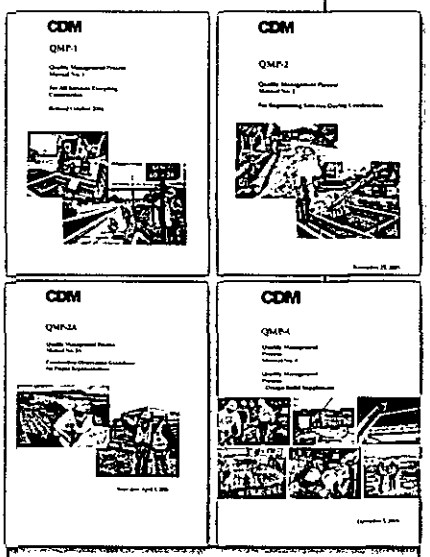
FDOT driveway connection permits at S.R. 776 are being reviewed by the FDOT for approval. The project has been on hold awaiting approval by the U.S. Army Corps of Engineers of the county-wide Scrub Jays Habitat Conservation Plan. The Southwest Florida Water Management District permit has been extended and a letter modification has been submitted.

B.2 PROJECTS PRESENTLY UNDER CONTRACT

In 2010, CDM entered into entered into contractual agreements with 775 regional, state, and municipal governments and utilities, as well as 10 different U.S. federal agencies. Additionally, over the last five years, CDM has maintained several hundred different continuing services contracts with 130 government entities throughout Florida, and, in Florida alone, CDM has more than 600 active projects and over 220 clients, many of these being municipal entities. Likewise, WSA has several ongoing contracts with municipalities and counties throughout the state for a range of services that includes roadway design and construction engineering and inspection (CEI) of roadway and bridge projects. Due to the length of this list and the County's express interest in keeping submittals as concise as possible, we have chosen to highlight several current projects for which CDM and WSA are currently under contract for your review. These projects, shown in **Table B.2-1**, demonstrate our capabilities and qualifications to perform roadway design services. If the County wishes, we can provide further projects and references that can attest to our professionalism and the qualify of our work.

B.3 PROCESS AND PROCEDURES FOR ENSURING THAT CURRENT DESIGN STANDARDS, CODES, AND OTHER REGULATORY DIRECTION ARE UTILIZED

The CDM team has a formal procedure for managing the quality of a project and meeting client expectations. The CDM Quality Management Procedures (QMP) Manual No. 1 defines the requirements for maintaining a high-level of quality in all stages of a project, including project initiation (scope and budget development) activities, project start-up activities, project execution activities, and project closeout activities. CDM project managers are trained in correct procedures in our multilevel training program administered by CDM University (CDMU), based on Project Management Institute guidelines. Project managers must take the designated training and pass certification to enable them to manage the appropriate level of risk and complexity of projects. A separate training course is held for the specifics of design-build projects, large design projects, and large program management (multi-project) assignments.



Quality has been, and remains, the cornerstone of CDM's business for more than six decades. Achieving quality requires vigilance and scrupulous attention to the standards set forth by clients, professional associations, regulators, and CDM. To codify this commitment to quality, CDM has developed Quality Management Process Manuals to address project needs and specific phases.

Because of the diversity of the services we provide and the clients we serve, QMP manuals have been developed for engineering services during construction (QMP-2 and 2A), construction (QMP-3 and 3a), and alternative delivery (QMP 4) projects. CDM unit presidents are responsible for compliance with all the QMP requirements within their units, using their quality managers to develop auditing systems consistent with their specific operations and client requirements. As a corollary to these review requirements, the CDM team uses specialized project tracking software for schedule, budget, and staffing factors for each major component of the project, so that key staff have instantly available information to assist them in completing the project on time and within budget.

The CDM team believes that meeting our commitments for submittal of deliverables on schedule is of critical importance to project success. Thus, we take a sophisticated approach to project scheduling to measure actual progress against the project plan and provide deliverables to clients on time. We accomplish this by using powerful software programs (such as Primavera) capable of critical path method (CPM) schedule analysis, cost control analysis, and resource usage and leveling analyses.

These programs enable project managers to readily access scheduling and analysis system capabilities. Our proposed project managers are trained in the use of this scheduling software and will be able to provide the critical input needed to the project team for schedule refinement. Issues of quality management, cost control, and early identification and resolution of problems are addressed in every feature of our QMP. Through our careful selection of team members and key staff, to the application of principles and procedures described below, we can provide the County with project management that meets a rigorous standard of quality, cost control, and responsiveness.

Our approach to quality management has three overriding principles:

- **Quality Ethic.** Quality, excellence delivered, is embodied in CDM's core values of excellence, initiative, shared commitment, integrity, and teamwork. These are the fundamental principles that guide our collective and individual decisions, strategies, and actions at CDM. Our staff has been instrumental in effectively permitting, designing, and constructing numerous complex projects, and we will reinforce this ethic in our project start up kickoff meeting and adhere to it throughout project execution.
- **Quality Checkpoints.** These include ongoing direction and review by senior technical specialists during task/activity execution, in the definition of outcomes and measures, and during the production cycle. For a design project, the main checkpoints are at the 10%, 30%, and 60% design stages so as to minimize rework and schedule slippage. A technical review committee (TRC) consisting of distinguished and experienced practitioners that have not been heavily involved in the design will be assigned to perform reviews at the specified design milestones. These independent reviewers will be assigned by the client service manager or project managers.
- **Quality Audits.** During the kickoff meeting, our project managers will identify opportunities for quality audits, ranging from a direct follow-up contact with the County project team on a specific task; for example, to a formal quality audit with senior CDM and County management staff.

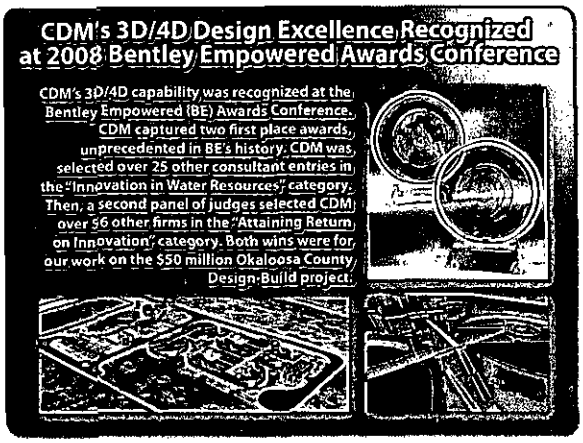
At the core of a sound quality management program is the early identification and resolution of potential problems. Our project managers will do so through:

- Regularly scheduled weekly progress meetings to monitor performance against scope
- Regular project status meetings with County staff
- Regular project status reports to County and follow-up on items needing attention.

B.4 BASIC AND SPECIAL RESOURCES

CDM Orlando 3D/4D Design Center

One of the distinct advantages of choosing CDM is our ability to utilize our 3D/4D Orlando Design Center. The Design Center has all the architectural and engineering disciplines necessary to cost effectively produce 2D designs or 3D engineering models. The center is interconnected electronically with five other similar centers across the country and most have full video conferencing capabilities between them. This approach offers several advantages. First, CDM is able to offer an increased depth and breadth of experience backed by an experienced team that is accustomed to working together. The volume of work performed by these engineering centers gives the CDM staff constant exposure to new technologies



and new design developments among the various engineering disciplines. Furthermore, the location of key specialists in design centers provides for specialty consulting needs on all projects regardless of the geographical location of the project site, thereby providing the best possible service and solutions for clients. Lastly, design technologies, such as application programming and computer-aided design (CAD), are applied across such a large number of projects that CDM-standardized approaches and automated routine functions create an extremely efficient design and application engineering process. Such efficiency, combined with our depth of experienced staff, allows CDM to meet the tight schedules often required by our clients while adhering to CDM's proven quality management processes. When the scope of the project makes it beneficial, staff and clients from Florida gather in this state-of-the-art facility and work together to produce innovative designs in 3D/4D. 4D integrates a database into the 3D facility model, providing a consistent and lasting platform for efficient O&M and long-term asset management. Facilities designed using 3D/4D technology see significant improvements in the efficiency of the design and the quality of the construction drawings and specifications through graphical visualization of design decisions. CDM's 3D/4D design excellence was recognized at the 2008 Bentley Empowered Awards Conference with the capture of two first place awards. Both awards were for the Arbennie Pritchett WRF DB project.

Computer Capabilities

The CDM team possesses all the necessary equipment and support facilities to analyze, research, report, display, and produce data and information collected for engineering and environmental designs and studies. Our engineering design specialists direct the development and use of computer-aided engineering tools throughout the firm. Powerful computer-aided design (CAD) stations, combined with sophisticated communications and reproduction tools, permit the accurate and timely production of engineering designs. These specialists also direct the company-wide development and use of technical specifications and coordinated details to maintain technical quality assurance in specification development for clients. Master specifications and standard design details being developed on an ongoing basis are accessible to all offices through an extensive computer and communications network.

Table B.2-1

PROJECT NAME	DESCRIPTION
S.R. 500/Indian River Relief Bridge Replacement Design-Build Project, Brevard County, FL	WSA is serving as the lead design consultant on a design-build team led by Johnson Bros., LLC, to design and construct three new low-level "relief" bridges over the Indian River in Brevard County. The project, being completed for District 5 of the Florida Department of Transportation (FDOT), includes structural design, environmental permitting, and associated roadway design services such as signing and pavement marking.
Systemwide Production Management Consultant Services, Orlando-Orange County Expressway Authority	Under a continuing services contract, WSA is reviewing design plans prepared by other consultants for roadway and bridge projects on the expressway authority's system. WSA's staff performs quality reviews of roadway, structural, and drainage elements.
Districtwide Plans Review Consultant, FDOT District 6	Similar to the OOCEA contract described above, WSA is providing plans review services for a variety of roadway projects designed by other consultants in District 6.
Winchester Boulevard, Phase III, Charlotte County, FL	WSA was selected by Charlotte County to provide final design for this hurricane evacuation route. The design includes the new construction of a four-lane divided roadway, sidewalks, bike lanes, raised median, lighting, a new signal at S.R. 776 and at C.R. 775, and a box culvert over Oyster Creek. One segment includes closed drainage with curb and gutter and the other segment is a rural section with open drainage.
Honore Avenue/Pinebrook Road Extension, Sarasota County, FL	WSA was selected by Sarasota County to provide professional engineering services for the design of the Honore Avenue/Pinebrook Road Extension. The project included constructing 3.8 miles of a four-lane divided roadway from Laurel Road to S.R. 681, with sidewalks, closed drainage, street lighting, landscaping, and bike lanes.
Gum Creek Letter of Map Revision, Leon County, FL	Under CDM's existing continuing services contract with Leon County, CDM is performing a flood study for the Gum Creek and Gum Swamp watersheds. CDM is currently updating and revising existing models and preparing a LOMR to revise the FEMA flood maps accordingly.
Southbrook Floodplain Enhancement and Final Design Services, Leon County, FL	CDM is designing stormwater improvements to the current stormwater system in the Southbrook Lane area, which was experiencing home flooding. CDM evaluated the current system through field investigation, historical information, hydraulic and hydrologic evaluation, and review of available data, and proposed alternative conceptual design measures to mitigate the current flooding issues during the conceptual design phase of this project. Currently, CDM is designing the selected alternative, including enhancement of storage areas and natural channel section improvements.
Gulf Highlands Letter of Map Amendment, Panama City, FL	Under CDM's master services agreement with the City, CDM is preparing a Letter of Map Amendment for the Gulf Highlands area, as a follow up to the Gulf Highlands LOMR. CDM is also preparing resident notification letters, collecting data, submitting a report to FEMA, and notifying residents after approval by FEMA.
Hombre Circle Stormwater Improvements, Panama City, FL	The City has requested that CDM provide consulting engineering services for the design of stormwater improvement facilities at Hombre Circle. CDM is completing the following tasks for this project: coordination of geotechnical work, design services, permit assistance, and limited bidding and limited engineering services during construction. This project also includes design and permitting of a pipe crossing with concrete headwalls.

Table B.2-1

PROJECT NAME	DESCRIPTION
Moonlight Bay Stormwater Improvements, Panama City Beach, FL	CDM is providing consulting engineering services for the design of stormwater improvement facilities at Moonlight Bay. The City identified pipe integrity problems from south of Moonlight Bay Drive to the West Bay outfall, and CDM is completing the following tasks to assist the City: site visit and coordination for survey and geotechnical work, hydrologic and hydraulic evaluation, design services, permit assistance, and limited bidding and limited engineering services during construction.
South Glades Trail Stormwater Improvements, Panama City Beach, FL	To support the City of Panama City Beach in the design of stormwater improvements to the existing treatment facilities at South Glades Trail, CDM is providing services related to site visits and coordination for survey and geotechnical work, hydrologic and hydraulic evaluation, design services, permit assistance, and limited bidding and limited engineering services during construction.
Lullwater Drive Stormwater Improvements, Panama City Beach, FL	CDM is designing improvements to the stormwater treatment facilities located at Lullwater Drive. Tasks include site visit and coordination for survey and geotechnical work, hydrologic and hydraulic evaluation, design services, permit assistance, and limited bidding and limited engineering services during construction. Also included under this project is the design and permitting of a pipe crossing with retaining walls and inlets.
Beth & Gardenia Street Stormwater Improvements, Panama City Beach, FL	The City identified several yards with flooding along Gardenia Street and subsequently requested that CDM provide stormwater improvement design services. CDM is performing site visits and coordination for survey and geotechnical work, hydrologic and hydraulic evaluation, and alternatives analysis.
Coral Drive Stormwater Improvements, Panama City Beach, FL	CDM is assisting the City in obtaining a Florida Department of Transportation Drainage Connection Permit for a stormwater design improvements project along Coral Drive.
Bond Stormwater Management Facility Stormwater Monitoring, Tallahassee, FL	The Bond Stormwater Management Facility (SWMF) was selected by the FDEP to receive grant funding through the Section 319(h) Nonpoint Source Management Program, which requires stormwater quality monitoring. The City requested CDM to provide consulting engineering services to complete this project, which includes implementation of an effectiveness monitoring program for the SWMF, determination of the treatment efficiency of the SWMF, and preparation of the draft and final reports that summarize the data evaluation for the performance of the SWMF.
Killearn Acres Subdivision - Middle Basin Drainage Improvements, Leon County, FL	CDM was retained to provide engineering design services to improve the Killearn Acres Middle Basin drainage system. Services to date have included data collection, geotechnical investigation, environmental assessments, survey, preparation of construction documents, permitting, and bidding.
Lake Heritage Dam Phase I, Leon County, FL	CDM is assisting the County with a feasibility study and the conceptual design for the rehabiliation of the existing earthen dam and local drainage system. Tasks have included dam inspection and subsurface investigation for the existing earthen dam impounding Lake Heritage; the development of H&H models for the existing and proposed conditions; the development of alternatives for repair/rehabilitation of the dam; and conceptual design for a preferred alternative.

Section C: Willingness to Meet Schedule and Budget Requirements

SECTION C: WILLINGNESS TO MEET SCHEDULE AND BUDGET REQUIREMENTS

Work Category - Roadway Design

The CDM team has a formal procedure for managing the quality of a project and meeting client expectations. The CDM Quality Management Process Manual No. 1 details the requirements for maintaining a high level of quality in all stages of a project, including project initiation (scope and budget development) activities, project startup activities, project execution activities, and project closeout activities. At each stage of completion, the project manager and client service manager review the project to ensure quality requirements have been met. These requirements may include the review of calculations, the review of alternative analyses, the review of drafting standards, and the review between disciplines for design projects.

As a corollary to these review requirements, the CDM team utilizes specialized project tracking software for schedule, budget, and staffing factors for each major component of the project, so that key staff have instantly available information to assist them in completing the project on time and within budget.

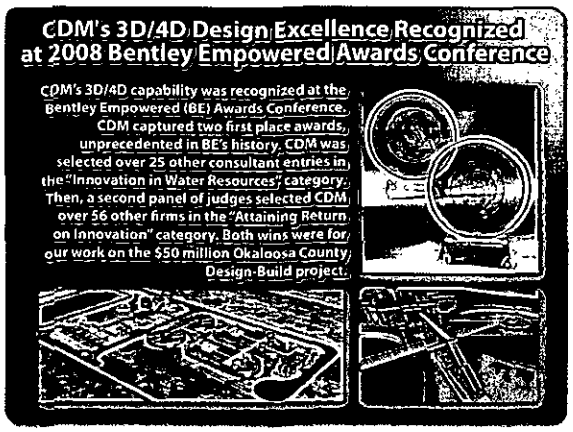
Leon County staff are familiar with CDM's commitment to maintaining schedule and budget. Public projects are notably difficult to schedule because of the need for input from various stakeholders, variability in the schedule of regulatory entities, and other external drivers. However, CDM has consistently delivered projects for Leon County that meet schedule expectations. One of the key means of doing this, as described in the "project approach," is ***regular monthly meetings between CDM and Leon County project staff.*** These meetings, in addition to meetings help for specific topics, allow CDM and County staff to make certain that project schedules are coordinated and moving satisfactorily, and allows for adjustments as required.

Often, regulatory requirements, funding requirements, or other circumstances require fast execution for project success. When a "short fuse" project comes along, CDM Panhandle staff delivers, as the examples below indicate.

- To expedite the right-of-way donation process on the ***Fruitville Road project in Sarasota County,*** the County allowed WSA only 80 days in which to prepare the final design plans. WSA delivered the 100 percent plans on time and submitted all applicable permits to the agencies within 60 days. The design included three concrete box culverts, four cross drains, three wildlife crossings, roadside ditch reconstruction, and raising the roadway profile in one area to eliminate roadway flooding on this evacuation route.
- On the ***S.R. 500 Indian River Relief Bridges design-build project,*** WSA's engineers devised a maintenance of traffic plan and construction sequence that eliminated the need to construct a temporary pedestrian bridge at one of the Indian River crossings. This significantly shortened the project schedule and resulted in a cost savings to the client, the FDOT.
- On the Honore Avenue/Pinebrook Road Extension for Sarasota County, WSA's value engineering process determined that constructing twin bridges rather than connected, multi-lane structures at the crossings of Fox Creek and Cow Pen Slough would provide a savings to the County of more than $1.5M. In addition, WSA modified the roadway alignment at Cow Pen Slough and secured

approval from the County and the FDOT that will allow the County to use the existing bridge and roadway fill for an additional savings of $1M.

- In the spring of 2010, the ***Emerald Coast Utility Authority (ECUA)*** needed a fast assessment of well head protection areas to support revisions to County regulations. They turned to CDM, who performed the groundwater modeling, met with ECUA staff, revised models as required, and delivered the required report in eight weeks, meeting the client's schedule expectations.
- The ***Alligator Point Water Resources District*** asked CDM to produce plans for a 3,000-foot 10-inch waterline project to meet permitting, funding, and construction cycle deadlines. CDM's Panhandle staff, supported by Orlando design center staff, delivered the project design in 30 days, meeting the client's schedule expectations.
- The ***City of Port St. Joe,*** experiencing red water problems in its drinking water distribution system, asked CDM to assess water quality and make recommendations. With five weeks of receiving water quality data from the City, CDM Panhandle staff, supported by Orlando design center staff and other CDM technical experts, delivered technical memoranda evaluating the water quality and making recommendations with cost opinions for improvement alternatives. This schedule met City and Water Management District expectations.



- In an effort to utilize available funding, the ***City of Callaway*** asked CDM to expedite a preliminary design report for lift station CA-31 expansion. CDM delivered the draft preliminary design in 30 days and the final, which addressed City comments and included cost estimates, within 60 days, again meeting client expectations.

Additional recent project examples that illustrate CDM's ability to closely and successfully monitor project costs and schedule include:

- The ***Arbennie Pritchett Water Reclamation Facility in Okaloosa County,*** for which CDM provided design, construction, outfit, start up, performance testing, and permitting services. The project was completed on schedule and on budget with zero unsolicited change orders.
- CDM designed an ***award-winning stormwater park for the City of Casselberry*** to provide stormwater treatment to previously untreated systems. The project, with a budget of $273,831, was completed on budget and on schedule.
- The ***award-winning Little Lake Fairview Restoration and Dubsdread Golf Course Renovation,*** which consisted of the construction of a new drainage management system that outfalls through an existing wetland to Little Little Fairview and a new irrigation system for the golf course utilizing the improved drainage system. Throughout the project, CDM utilized a critical path method schedule to keep the project progressing, despite outside delays affecting certain aspects of the project. The project team also developed detailed cost estimates following each major design submittal package.
- For the ***Seminole County System Inventory and Engineering Analysis for the Lake Sylvan Subbasin,*** CDM provided the County with monthly schedule updates using Microsoft Project. Additionally, CDM provided monthly status reports and earned value reports based upon CDM project specific software to make sure defined project budgets were met.

- As part of the ***Astor Flood Study in Lake County,*** CDM provided the City with monthly schedule updates using Microsoft Project. Additionally, CDM provided monthly status reports and earned value reports based upon CDM project specific software to make sure defined project budgets were met.
- The ***Town of Fort Myers Beach Stormwater Master Plan,*** for which CDM developed a comprehensive plan to develop processes, systems, organizations, costs, and cost funding mechanisms to facilitate reliable and compliant stormwater management practices. This project was completed on time and on budget.
- Project schedule and control measures on the ***Dakin Avenue Box Culvert Improvements projects in Kissimmee*** were important because of grant funding requirements. The project had to be designed and constructed within 36 months. To track schedule and costs, CDM used Microsoft Project and its financial tracking system to monitor both schedule and costs incurred versus earned value. This information was used to adjust project resources and keep the City informed on progress.

The CDM team is committed to meeting the County's schedule and budget requirements for roadway design services by providing appropriate levels of effort that will produce project savings. We will do this by assigning strong project managers with local experience, having the depth of personnel to properly allocate low cost resources, and by our firm commitment to maintain open channels of communication with County staff.

Our extensive experience in managing projects of this nature has shown that the key to successfully meeting schedule and budget is to utilize an experienced project manager who has a disciplined project planning approach. By developing a thorough work plan at the beginning of the project, updating the plan on a monthly basis, and regularly communicating project objectives to the project team, the County should realize benefits in terms of time and cost savings.

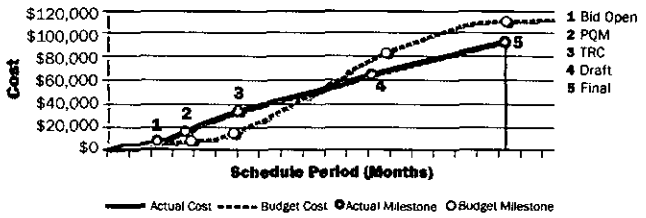


Figure C-1: In this example S-curve, the vertical axis represents costs, either budgeted or actual, and the horizontal axis represents project weeks.

CDM has developed several computer programs to enhance our project managers' ability to monitor and control project schedules and budgets. Each project's schedule and budget is established through a Project Management Plan (PMP) at the time of enrollment. The PMP process establishes the initial tools for effective project and quality management. On a weekly basis, the project manager is provided information to compare actual expense to the budget and develop S-curves.

As shown in **Figure C-1**, an example S-curve, the vertical axis represents the costs, either budgeted or actual, and the horizontal axis represents the project duration. The curve indicates the budget versus time, as well as the actual expenses versus time. A comparison of the two provides the project manager with a quick, yet accurate assessment of the project compared to time, budget, and deliverables.

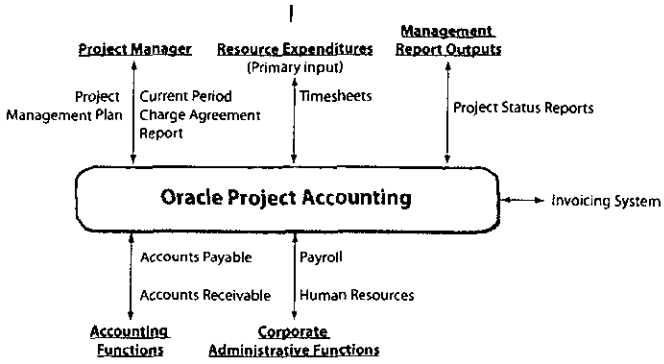


Figure C-2: PRISM project management functions.

CDM developed the Project Information System, or PRISM, to improve project management. PRISM is an integrated management information system centered on the Oracle Project Accounting system to improve efficiency. **Figure C-2** illustrates

PRISM's functions. These are the basic tried and proven tools for effective project management at CDM that will benefit the County through delivery of CDM projects efficiently, on time, and within budget. The CDM team will continue to use these existing project controls throughout our involvement in the County's projects.

C.1 COST ESTIMATES VS. ACTUAL COSTS

While the CDM team is experienced in accurately estimating construction costs, a more critical issue is the project closeout cost as compared to the original bid amount. This information is an excellent indication of the engineer's thoroughness during the design phase and of cost control during the construction phase. With consideration that extenuating circumstances often result in significant increases or decreases in contract closeout prices, we have listed in **Table C.1-1** some of our closeout contract prices for some Florida projects. We believe this closeout cost data reflects favorably on our ability to control costs. In addition, Leon County is familiar with our team's ability to deliver projects on budget through our extensive previous work.

Table C.1-1: Representative Florida Cost Estimates and Change Orders

Project Title	Final Design Estimate ($1,000)	Actual Award Amount ($1,000)	Actual Final Construction Amount ($1,000)
Stormwater Projects			
City of Jacksonville Cedar River Stormwater Improvements	3,686	3,319	3,319
City of Jacksonville Sandalwood Canal In-channel Improvements	6,093	7,315	---
Clay County Culvert Rehabilitation	2,380	2,380	2,380
SJRWMD TCAA Yarborough Regional SWTF	2,134	570[1]	601
SJRWMD TCAA Edgefield Regional SWTF	2,800	629[1]	631
Boynton Beach Downtown Watershed Regional Detention Facility	4,500	5,200	5,280
Daytona Beach 5th Avenue Stormwater Improvements	750	650	700
Daytona Beach Oleander Ave. Stormwater Improvements	575	365	405
Leon County Lake Munson Restoration Program	9,000	9,000	9,000
Ocala - Lake Tuscawilla Demonstration Project	800	880	880
Ormond Beach 1999 Stormwater Improvements	1,500	1,426	1,500
Ormond Beach Cypress Circle Stormwater Improvements	1,250	1,180	1,200
Ormond Beach Trails Stormwater Improvements	1,450	1,380	1,500
Pinellas Park WMD Channel 1A Improvements	1,400	1,300	1,300
Rockledge Barton Park Manor Regional Facility	10,625	-438[2]	-438
Rockledge Levitt Stormwater Park	649	683	757[3]
Little Lake Fairview and Dubsdread Golf Course	9,500	7,100	7,100
Seminole County Navy Canal Stormwater Improvements	1,412	1,741	2,194[4]
Seminole County Cameron Ditch Stormwater Improvements	918	1,134	2,194[4]
Daytona Beach B-5/B-6 Regional Detention Pond	4,600	3,566	3,560

[1] SJRWMD was paid for excavated fill; [2] City was paid for excavated fill; [3] To be modified lower pending client call; [4] City awarded these sites as one project for construction; SJRWMD = St. Johns River Water Management District; WMD = Water Management District; SWTF = Stormwater Treatment Facility

Section D: Effect of Firm's Recent, Current and Projected Workload

SECTION D: EFFECT OF FIRM'S RECENT, CURRENT AND PROJECTED WORKLOAD

Work Category - Roadway Design

The CDM team's current and committed workload was taken into consideration in the development of this proposal. All project personnel will be available to initiate any work assignments immediately upon authorization by the County and will complete their assigned duties consistent with the project schedule for that work assignment.

Furthermore, CDM's Tallahassee office will serve as the center for all project work ensuring prompt, cost-effective service.

The RFP requests a listing of all projects currently under contract and the anticipated completion dates. As a company, CDM has thousands of projects underway worldwide. Therefore, we are providing the listing of the transportation projects currently being supported by members of our Tallahassee-based team (a listing of additional projects underway in our team's Tallahassee offices is located in our stormwater engineering proposal). The list that follows includes those projects and their anticipated completion date. The CDM team has the capacity to provide the resources needed to absorb any projects resulting from this contract.

- FDOT Systems Planning Office, Trip Generation Study
  25% Complete
  Estimated Completion Date: August 2011
- FDOT Rail Office, Corridor Traffic Study
  10% Complete
  Estimated Completion Date: December 2011
- FDOT Aviation Office, On-Call Aviation Services
  50% Complete
  Estimated Completion Date: September 2012
- FDOT Systems Planning Office, On-Call Transportation Support Services
  10% Complete
  Estimated Completion Date: September 2014
- FDOT Policy Planning Office, On-Call Policy Planning Services
  10% Complete
  Estimated Completion Date: December 2014
- FDOT District Three, On-Call Transportation Systems Support
  5% Complete
  Estimated Completion Date: December 2016

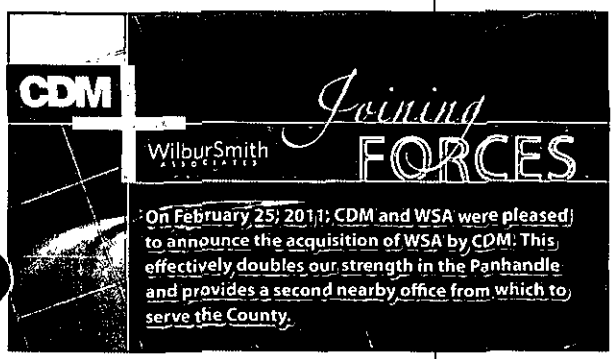
Section E: Effect of Project Team Location

SECTION E: EFFECT OF PROJECT TEAM LOCATION

Work Category - Roadway Design

The CDM team fully recognizes the importance of local staff and local knowledge to the expeditious implementation of important projects and offers a local team to meet your needs. For easy access and close coordination, all projects under this contract will be managed from our Tallahassee office, located less than 15 minutes from the County's facilities, and supported by over 550 CDM staff located throughout our 15 Florida offices (**Figure E-1**).

We are prepared to provide the County with a high level of interaction through the dedicated efforts of our project management team. Due to our close proximity, we can meet with your staff on short notice; make field visits with your staff, contractors, and regulators; attend public meetings; and spend time listening to your needs for each unique project. Because we have decades-long history of working with Leon County—delivering nearly 40 projects in the last ten years alone—we know how you do business. We understand how important it is to Leon County to provide excellent service to its citizens, how complex the regulatory environment is, how interaction with other government entities is a never-ceasing challenge, and how budget concerns are more pressing than ever. Our experience of over 20 years working in Leon County provides us with unmatched local knowledge. We understand local technical issues such as soil and hydrology, we recognize the political and cultural dynamics that play a part in project decisions, we know and have good working relationships with local regulators and specialty subconsultants, and our institutional knowledge of engineering projects performed in the Leon County area helps us work with you to make appropriate and cost-effective engineering decisions.



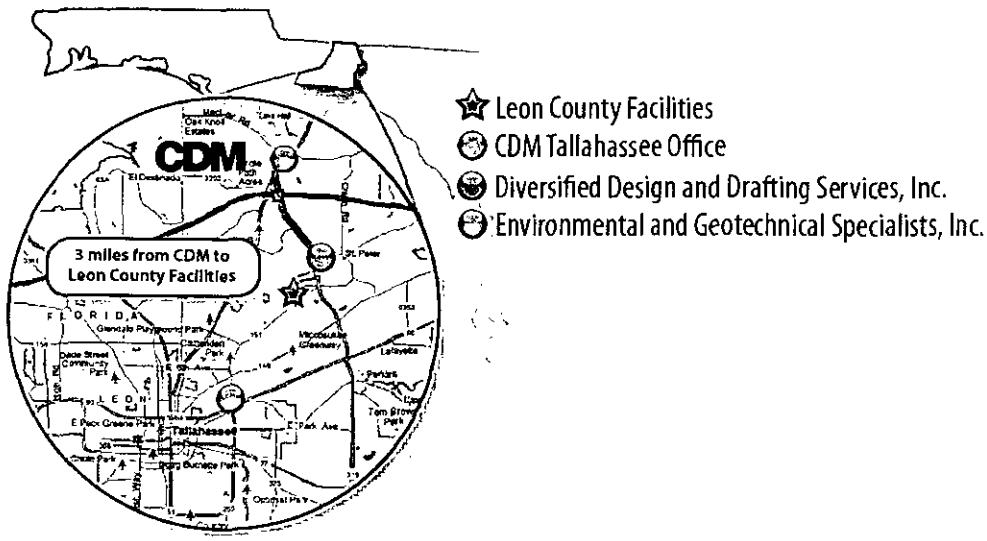


Figure E-1: CDM has continuously maintained an office in Tallahassee since 1989, and our geographic proximity ensures that the County will receive high-quality and efficient services.

Section F:
Approach to the Project

SECTION F: APPROACH TO THE PROJECT

Work Category - Roadway Design

CDM and WSA understand that a well-operated roadway network is essential for regional economic growth and enhancement of the quality of life for the citizens of Leon County. Providing efficient transportation services and mobility requires a coordinated effort of planning, analysis, design, and implementation of roadway projects. To this end, Leon County is seeking consultant expertise and assistance to conduct and prepare a variety of roadway design projects. CDM and its wholly-owned subsidiary, WSA, will not only provide roadway design services for Leon County but will serve as your advisors to provide innovative and efficient solutions to financial constraints, challenging design issues, and public perception.

WSA understands and appreciates that Leon County wants to entrust roadway design projects to a firm that has demonstrated its ability on past projects to deliver a quality, functional design in a timely and cost-effective manner. WSA has demonstrated our capabilities to meet and exceed our clients' expectations on numerous occasions, and we have provided specific examples of similar projects with client reference information in Section B of this proposal. WSA uses an approach that greatly empowers our program manager, Nick Benedico, P.E., PMP, to have complete authority to achieve the successful completion of the project by accessing the needed manpower and corporate resources. Mr. Benedico will be supported by senior, experienced staff in key task leadership roles that will be committed throughout the life of the project. In addition, we are committing Bob Hamm, P.E. to serve as the local project principal and an additional liaison between Leon County and the CDM team. Both will be supported by local client service manager David Kozan, with whom responsibility rests for seeing that Leon County's expectations are met. This will enhance our ability to communicate project status to the County and to respond quickly to requests for information or attendance at meetings.

Mr. Benedico and our team will begin a specific task work order by preparing a work plan that identifies the project goals, the deliverables, and the building blocks needed to create those deliverables. He will determine the steps and events needed to accomplish the design in a logical sequence while identifying the staff, materials, and equipment resources needed. This will be done using the project scope of services, contract negotiations, coordination with County staff, and other information that is available.

As part of this planning process, WSA will identify project issues that need to be addressed very early in the project, for their impact on the project design as well as on the project's budget and schedule. The proposed plans will be reviewed and refined with the entire project team and Leon County. This work plan will be reviewed with the County and project team throughout the life of the project to address any changes that occur.

Communication and coordination is vital to the success of any project and is a very important part of our management plan. In addition to the normal correspondence through e-mails and memos, Mr. Benedico and Mr. Hamm will facilitate communication between the project staff (including subconsultants) and Leon County staff by keeping all parties up to date on critical issues, events, schedules, and submittal due dates via e-mail, phone, and fax. The coordination effort will include all the design decisions and commitments that may have previously

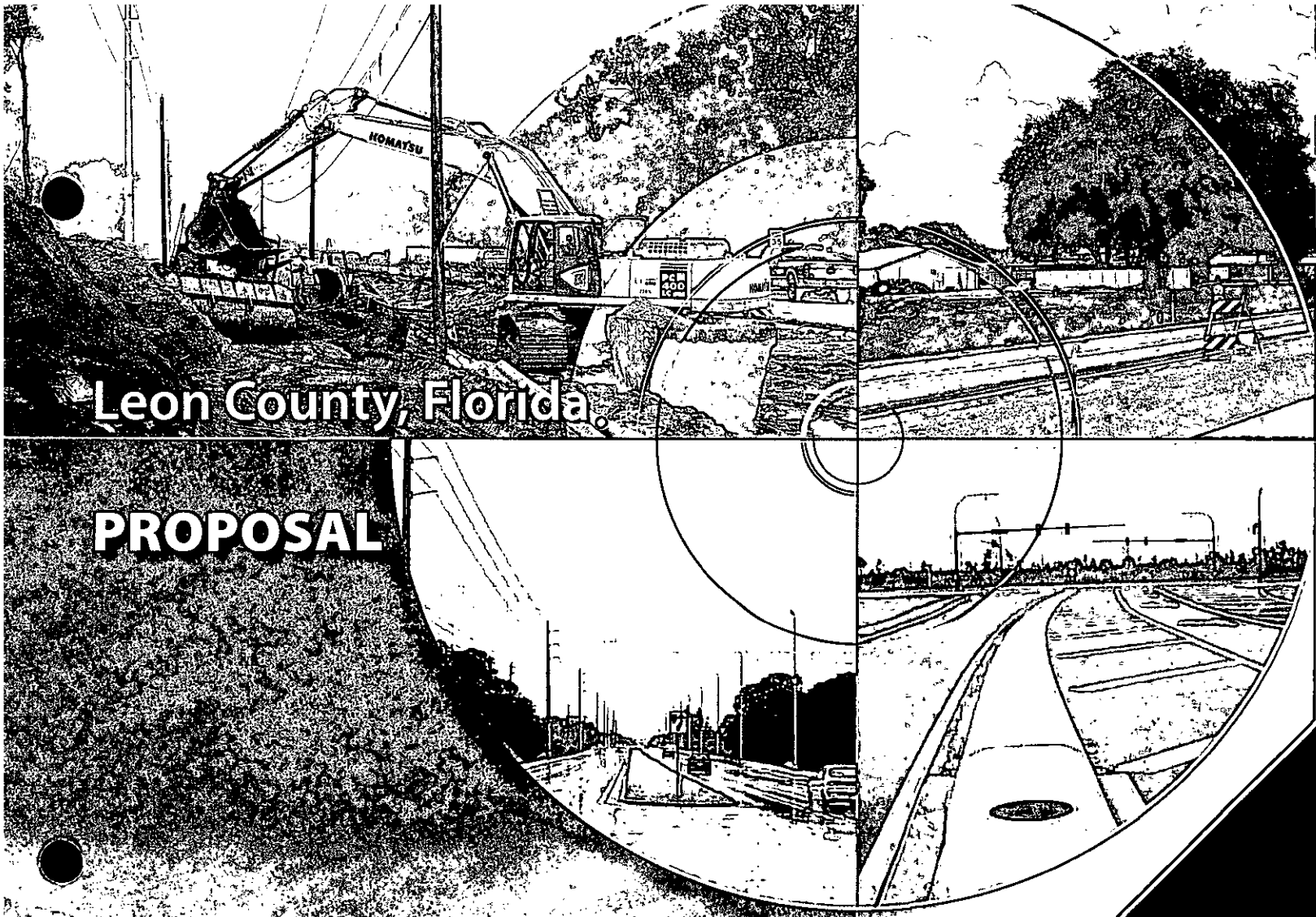
made by the County to the local citizens, current design decisions made, utility relocations and adjustments, and coordination with adjacent projects.

In providing on-call roadway design services for Leon County, each task work order will have its own work plan that is customized to the requirements of the specific project, while conforming to our project management and quality control standards. The quality control checking procedure will be spelled out and incorporated into the project schedule. Constructability reviews will be conducted, when appropriate, to give a construction perspective to the design.

In addition, the CDM team employs a collaborative process for developing project schedules. The process begins with a kickoff meeting with the client and all team members to identify the project goals, discuss key issues and "critical path" schedule items, and set target dates for completion. After our kickoff meeting, the list of action items and responsibilities will be incorporated into our design schedule. Identified design submittal milestones, permitting meetings, owner's submittal reviews, and permitting agency time frames will be sequenced to establish a design completion date and bid/construction start dates. Our scheduling process will monitor all design and permitting activities. This schedule may include and address the following, as applicable to an assignment from Leon County:

- The County's list of anticipated activities
- Public information meetings
- Permit acquisition activities (pre-app meetings, submittals, review time frames)
- Design submittal dates
- Leon County design reviews
- Pre-construction meetings
- Construction progress meetings
- Construction close-out.

Value engineering is important to effective cost control. It is a process aimed at value creation rather than mere cost reduction. By evaluating ideas early in the project, when changes are less costly, we can provide the greatest value for the lowest project cost. The experienced WSA roadway design professionals on the CDM team understand value engineering concepts and constructability reviews. Our daily activities involve close coordination of design, and we understand how to balance construction costs with quality and maintainability.



Leon County, Florida

PROPOSAL

Traffic and Intersection

Civil Engineering Services, Continuing Supply

Traffic and Intersection Engineering

Proposal Number BC-03-17-11-25

March 2011

CDM

CDM
3522 Thomasville Road, Suite 300
Tallahassee, Florida 32309
tel: 850 386-9500
fax: 850 668-6745

March 17, 2011

Leon County
Purchasing Division
1800-3 Blair Stone Road
Tallahassee, FL 32308

Subject: Proposal Number: BC-03-17-11-25 Civil Engineering Services, Continuing Supply Work Category – Traffic and Intersection Engineering

Dear Selection Committee Members:

Camp Dresser & McKee Inc. (CDM), on behalf of the entire CDM organization—along with our recently acquired wholly-owned subsidiary Wilbur Smith Associates—is pleased to submit one (1) original and three (3) copies of our proposal to provide continuing traffic and intersection engineering services to Leon County (County). CDM has been fortunate to work with the County in the past, and we look forward to the opportunity to extend our working relationship under this contract.

Selection of the CDM team to serve as your engineering consultant provides the County with numerous advantages as you continue your efforts to ensure high-quality and cost-efficient service to your residents. On February 25, 2011, CDM and WSA were pleased to announce the acquisition of WSA by CDM. WSA is recognized throughout the nation as a leader in transportation consulting, not only providing traffic and intersection engineering services for our clients, but also providing innovative and efficient solutions to financial constraints, challenging design issues, and public perception. This acquisition also effectively doubles our strength in the Panhandle—WSA's Tallahassee office is located at 2490 Kerry Forest Parkway, Suite 201, Tallahassee, FL 32309—and provides a second nearby office from which to serve the County.

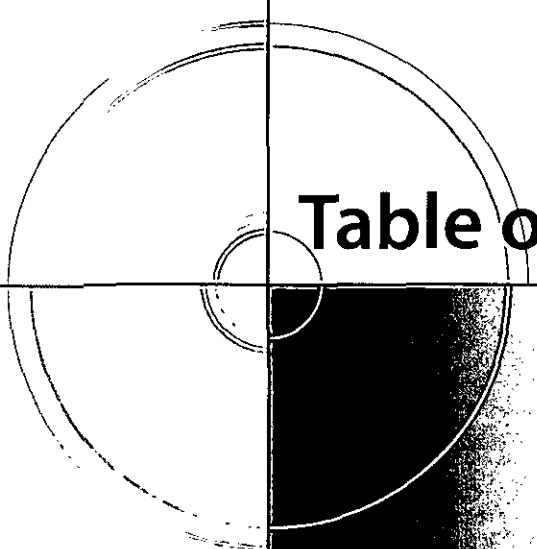
Bob Hamm, P.E., will serve as traffic engineering program manager for Leon County. Mr. Hamm is the manager of WSA's Tallahassee office and has more than 18 years of traffic engineering and program management experience on several general consultant contracts. He has a strong foundation as both a traffic engineer and a transportation planner, and his proactive communication and coordination style will ensure each assignment is responsively and responsibly carried out with quality, efficiency, and timeliness.

In summary, CDM provides the technical knowledge, local experience, and world-class expertise to address your traffic and intersection engineering issues. Even more importantly, CDM has the proven ability to work with the County to understand your vision for the future of the community. This shared vision and ongoing relationship will allow us to resolve issues before they become problems. We hope that you will again select CDM to become your engineering partner in providing a good quality of life for the County in the long term. Should you have any questions, please contact Mr. Kozan at 850.386.9500 or via email at kozandw@cdm.com. We look forward to serving you and thank you for your kind consideration.

Very truly yours,

Kart Vaith, P.E., BCEE
Senior Vice President
Camp Dresser & McKee Inc.

David W. Kozan, P.E.
Client Service Manager
Camp Dresser & McKee Inc.



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Work Category - Traffic and Intersection Engineering

Section A: Ability of Professional Personnel

SECTION A: ABILITY OF PROFESSIONAL PERSONNEL

Work Category - Traffic and Intersection Engineering

A.1 TOTAL NUMBER OF PROFESSIONALS

CDM is a consulting, engineering, construction, and operations firm delivering exceptional service to public and private clients worldwide. With headquarters in Cambridge, Massachusetts, CDM, together with our recently acquired subsidiary WSA, has over ***6,000 employees in 170 offices around the globe***—offering a full range of services in water, environment, transportation, energy, and facilities.

In Florida, CDM and WSA have been successfully assisting clients for more than 35 years. Our hand-picked project teams are backed by the CDM team's ***15 Florida offices, which boast nearly 500 staff*** with a variety of specialties, covering all the engineering disciplines. In addition, our Tallahassee offices are staffed with over 20 professionals ready to serve the County.

The CDM team recognizes the importance of balancing workload and staffing commitments to meeting the service expectations of our clients (**Figure A.1-1**). A local client service manager who will be responsible for seeing that Leon County expectations are met, and a dedicated local program manager will see to it that the CDM team's wealth of resources are available to Leon County whenever needed. With the majority of our work coming in the form of repeat business from clients with whom we have long-term working relationships, we recognize the value of maintaining the highest level of performance on all the work that we receive. We have continuously maintained a presence in Tallahassee since 1989 and continue to work with many of the same clients that we started with years ago, including Leon County. This success is built on continually providing service and work products that meet or exceed our clients' expectations for accuracy, quality, cost, and schedule.

We have assembled a strong group of professionals and support personnel in our Tallahassee offices to deliver work to our clients. The CDM team's project management system makes us effective at managing our workload and staff, and applying their expertise to multiple projects based on current requirements. We can also offer the County the reassurance that the CDM team has over 6,000 staff worldwide, and nearly 500 in Florida alone that could contribute in the event we need to exert extra efforts to complete the assigned project work. In summary, we have resource availability to handle acute short-term spikes in

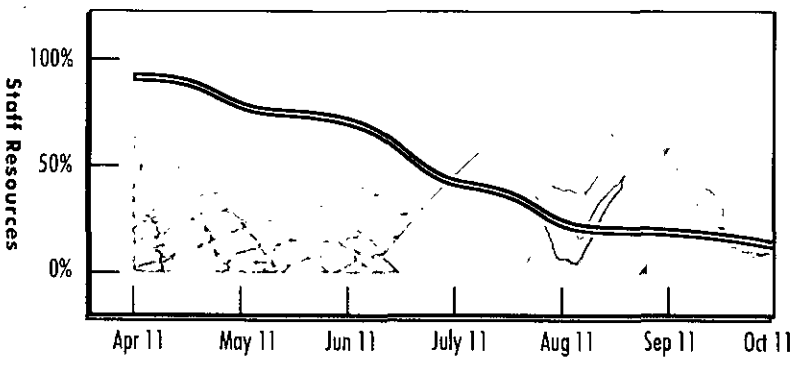


Figure A.1-1: CDM's current backlog of work and the need for additional work in the near future.

Florida Staffing

CDM will draw from our extensive pool of local resources to support this project.

Staff	Job Classification
43	Administrative
6	Architects
1	Biologists
6	Chemical Engineers
28	Civil Engineers
31	Construction Inspector
15	Construction Manager
11	Cost Estimators
19	Drafters/Designers/CADD
2	Ecologist
4	Economists
24	Electrical Engineers
53	Environmental Engineers
4	Environmental Scientists
9	Geographical Information Specialists
14	Geologists
5	Geotechnical Engineers
19	Hydraulic Engineer
28	Hydrologists
10	Info Mgmt. Specialists/Programmers
9	Mechanical Engineers
56	Other
10	Planners
2	Risk Assessor
3	Safety/Occupational Health Engineer
10	Sanitary Engineer
2	Scheduler
4	Specifications Writer
10	Structural Engineer
32	Technician
14	Transportation Engineer
7	Transportation Planner
16	Water Resources Engineer
497	**TOTAL**

workload, and our past track record indicates that we have been successful in effectively handling multiple projects concurrently. Our local staff, in constant touch with Leon County staff, will make sure these resources are available when needed to meet the County's expectations.

A.1.1 Proposed Project Team

The CDM team is comprised of highly qualified specialists and locally-based subconsultants to meet the needs of the County's continuing services contract. The project managers, engineers, and support staff assigned to this project are well-qualified personnel who are familiar with the issues important to the County. At both a company and individual level, our key personnel will be committed and available at whatever level of effort is needed to get the job done. Expertise, experience, and anticipated availability were all considered in selecting team members.

The organization chart (**Figure A.1.1-1**) illustrates the personnel and principal elements required to complete work assignments. The CDM team represents all disciplines necessary to successfully implement the County's traffic and intersection engineering projects. CDM understands the County's desire to have a consultant who is able to provide services on relatively short notice; CDM has experience responding to needs for rapid project delivery. Because of our size and available resources, CDM is better equipped than many firms to respond with a fast approach that meets our client's objectives and provides the required level of responsiveness.

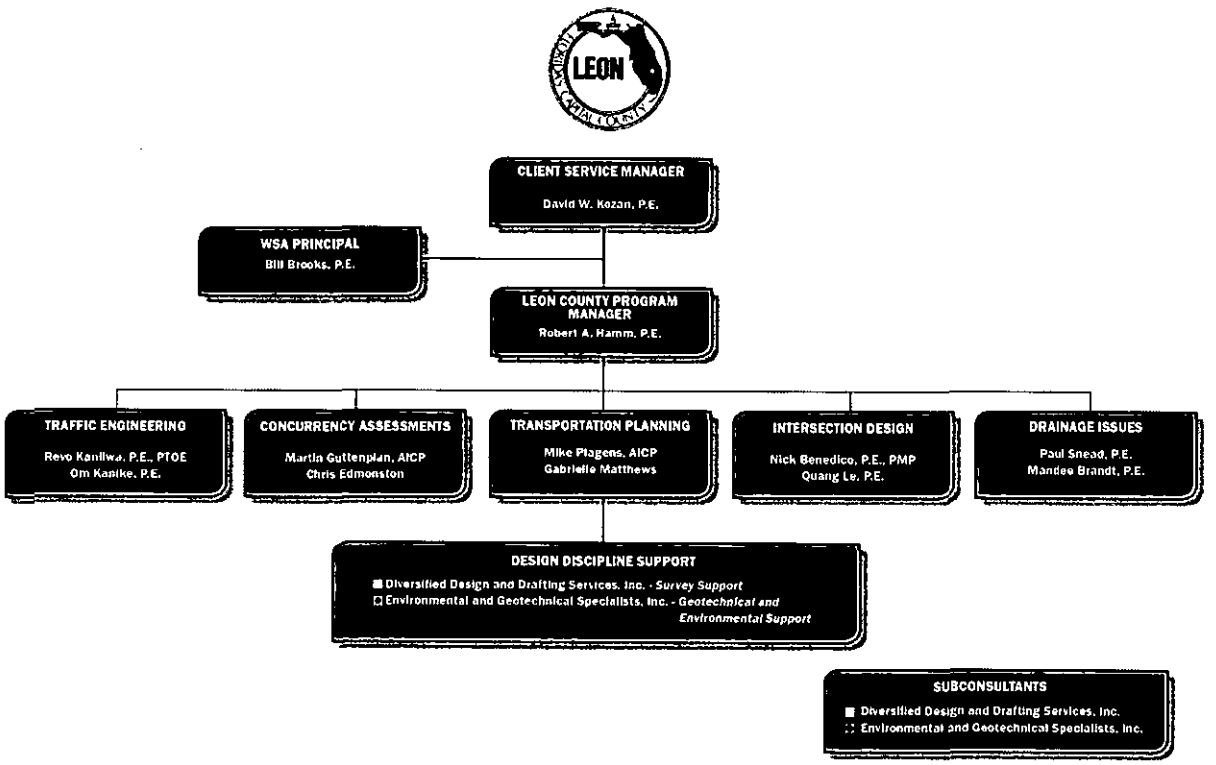


Figure A.1.1-1: CDM has assembled a local team that is highly qualified and familiar to the County to implement traffic and intersection projects under this continuing services contract.

A.2 RESUMES

Included at the end of this section are the resumes of the identified project team members. We encourage the review of each individual's experience and qualifications to perform the services of this potential scope of services. Many of our project team members are recognized experts who are supported by personnel with diverse experience who contribute to the accomplishments of these individuals and the CDM team.

CDM and WSA bring a core team of experts in traffic engineering and intersection design—all of whom have experience working as a cohesive team on recent assignments. In addition, two locally-based subconsultant firms provide expertise in surveying, geotechnical, and environmental services to provide support on intersection design related work assignments.

David W. Kozan, P.E. | Client Service Manager

Mr. Kozan is CDM's client service manager for Northwest Florida, including Leon County. He is responsible for seeing that Leon County expectations are met by CDM's services. He is familiar with Leon County procedures and staff from his role as client service manager in charge of delivery on the current stormwater continuing contract. He has over 15 years of project delivery experience for a variety of clients and industries.

Robert A. Hamm, P.E. | Program Manager

Mr. Hamm is the manager of WSA's Tallahassee office and serves as the client service manager for transportation for North Florida. Mr. Hamm has more than 18 years of traffic engineering experience and has served as the program manager on several general consultant contracts. He has a strong foundation as both a traffic engineer and transportation planner. His project involvement over the years has included a wide variety of traffic operational analyses, corridor studies, and traffic impact analyses. His traffic engineering foundation features traffic operational analyses, microsimulation models, traffic impact studies, traffic signal warrant studies, and parking studies. A proven leader in his field, Mr. Hamm's proactive communication and coordination style will ensure each assignment is responsively and responsibly carried out with quality, efficiency, and timeliness. He will be available to advise Leon County on topics ranging from work programming, procedures, coordination with other agencies, and technical consideration.

Nick Benedico, P.E., PMP | Intersection Design Task Manager

Mr. Benedico is the director of WSA's Florida transportation design operations. He will serve as the CDM team's task manager for intersection design work assignments. Mr. Benedico has 20 years of extensive transportation engineering experience, including preliminary engineering studies, roadway design, project management, and general consulting. He is certified as a Project Management Professional (PMP), and his career experience includes local county level design projects on arterials and collector streets. Recently, he served as project manager on roadway design work for Charlotte County and Sarasota County. Mr. Benedico maintained a solid track record of consistently responding to the needs of the client and addressing issues promptly and coordinating with team members to provide effective solutions.

A.2 OUTSIDE CONSULTANTS

In addition to the highly qualified CDM team member personnel proposed for this project, we have included two outstanding local companies that are abundantly qualified in services related to stormwater engineering and drainage services. Ours is a team of recognized leaders with the creative energies, technical know-how, management expertise, and financial resources that are essential to the successful delivery of professional engineering services required by the County.

Environmental and Geotechnical Specialists, Inc. | Geotechnical and Environmental Support

Environmental and Geotechnical Specialists, Inc. (EGS), a certified M/DBE firm, provides specialty services associated with environmental and geotechnical engineering. EGS is highly qualified and has outstanding work experience in North Florida. The staff at EGS has been providing professional services in this area since 1992. EGS is a full-service geotechnical consulting firm, which provides subsurface drilling, soil sampling, laboratory testing, engineering evaluations, and recommendations for a wide range of projects. EGS's professional staff has extensive experience in working with clients to facilitate the cost-effective investigation, engineering design, and construction of all aspects of a project requiring these services. All subsurface investigations and recommendations are coordinated with the project manager to ensure an investigation is focused on the project issues. All team members are familiar with the requirements for geotechnical evaluations and report submittals.

Diversified Design and Drafting Services, Inc. | Survey Support

3DS is a professional surveying and mapping firm with offices in Tallahassee and Pensacola, Florida. Since 1998, 3DS has developed innovative surveying and mapping solutions for professionals seeking quality design surveys, digital mapping, image scanning, and ortho photos. The firm marries a variety of conventional and cutting-edge technologies to fulfill each client's needs, and, whether utilizing traditional surveying techniques, photogrammetry, or a combination of methods, finds the right solution. 3DS offers a wide range of professional surveying and mapping services, including photogrammetry, route surveying, boundary surveys, as-built surveys, right-of-way surveying, ALTA surveys, geodetic control surveys, construction layout, CEI surveys, and wetland jurisdiction surveys. 3DS currently maintains MBE status in Florida and holds MBE/DBE certifications with the FDOT, South Florida Water Management District, Leon County, and the City of Tallahassee.

DAVID W. KOZAN, P.E.

CLIENT SERVICE MANAGER

Education: ***B.S. – Civil Engineering;*** **Registration:** ***P.E. – FL, LA (1999);***
Years with CDM: ***5;*** **Years with Other Firms:** ***9.5***

Project Engineer, Stormwater Outfall Design Enhancements, Panama City Beach, FL. For this project, the CDM team developed a multi-phased response plan for 51 beach outfalls that were damaged by Hurricane Dennis. The project consisted of the following six phases: (1) hurricane damage assessment, (2) outfall design enhancements, (3) coordination with the Federal Emergency Management Agency (FEMA), (4) preparation of bid documents, (5) construction services, and (6) outfall maintenance plan. Starting in September 2006, Mr. Kozan participated in this effort, which included providing documented results of the damage assessment of each outfall, a technical memorandum summarizing design improvement concepts, and construction plans and specifications. ***($950K)***

Project Manager, Design of 2.0-MG Ground Storage Tank and Booster Station, Panama City, FL. The City of Panama City retained CDM to provide design, permitting, and services during construction for a ground storage tank, booster pumping station, and water lines. Mr. Kozan was responsible for managing design and contract coordination of a new ground storage tank on a challenging, reclaimed site. ***($3.1M)***

Engineering Services During Construction Project Manager and Resident Engineer, 10-mgd Arbennie Pritchett Water Reclamation Facility Design-Build, Okaloosa County, FL. Okaloosa County contracted CDM to provide design, bidding, and engineering services during construction for a $48M design-build water reclamation facility. The project consisted of a dual train 10-mgd water reclamation facility with headworks, oxidation ditches, clarifiers, ultraviolet (UV) disinfection, and effluent pump station. It also included septage receiving, digester, and various internal pump stations and chemical feed systems. CDM implemented the project with a 3D/4D design approach. The project was modeled in 3D and the 4th dimension, information associated with the equipment, was from the 3D model to the Maintenance Management System. Mr. Kozan's responsibilities included assisting with design coordination, field engineering, and coordination of information systems. ***($49M)***

Project Manager, Engineering Services During Construction – Water Distribution Improvements, Callaway, FL. In 2005, the City of Callaway retained CDM to design a new 5.0-MG ground storage tank and booster pumping station, an 18-inch water transmission main (dedicated fill line), and distribution mains from the booster pumping station to provide adequate volume and pressure to the City and the surrounding communities. CDM also provided permitting and bid assistance services. For the final portion of this project, Mr. Kozan provided project management services and limited engineering assistance, including construction monitoring and supervision during construction of the water distribution system improvements. He also attended pre-construction meetings, prepared conformed contract documents, reviewed shop drawings, and prepared and submitted record drawings. ***($4.2M)***

Project Manager, 3.5-mgd Expansion to Port St. Joe Water Treatment Plant, Port St. Joe, FL. In 2004, CDM was hired by Preble-Rish, Inc. (PRI), the prime consultant, to perform the membrane and raw water pump station design for a 2.5-mgd surface water treatment plant (WTP). CDM completed the design, the project was bid, and construction began in late August 2006. In 2006, PRI hired CDM to design an expansion of the plant to 6.0-mgd capacity. The expansion was planned for in the original design. For this project, Mr. Kozan was responsible for permitting and implementing an expansion of the membrane and disinfection portions of the City's WTP while construction of the original 2.5-mgd portion was under construction. ***($21M)***

Project Manager, Disinfection By-products Water Treatment Improvements, Carrabelle, FL. The City of Carrabelle had negotiated a consent order with the FDEP concerning its disinfection by-products (DBP) exceptions. For this project, Mr. Kozan prepared a conceptual design report, including CDM's recommendations of alternatives for a solution to the DBP problem. ***($141K)***

Project Engineer, Water Treatment Plant Process Evaluation, Bay County, FL. For an expansion project to the 48-mgd Bay County Water Treatment Plant, a review of the plant as an operating unit was necessary. The scope of this review was to identify any opportunities that might exist to re-rate the plant to a higher operating capacity. For this project, Mr. Kozan prepared a technical memorandum to determine maximum hydraulic flow through the individual process units and calculate filter loading scenarios for the existing 8 filters, 10 filters, and 12 filters, and compare to the target flow rates of 48 mgd, 53 mgd, and build-out of 60 mgd. ***($25K)***

Project Manager, Development of Callaway Water and Wastewater Standards, Callaway, FL. Due to rapid development of some areas within the city, the City of Callaway desired to establish standard specifications and details to facilitate the installation of quality water and wastewater infrastructure that will be owned or maintained by the City. For this project, Mr. Kozan provided professional services related to the development of these water and wastewater standards. The specifications included standards for water and wastewater system materials, electrical specifications, standard requirements and details for water and wastewater system design, and utility placement guidelines. ***($22K)***

Project Manager, Water and Wastewater Plan Review and Modeling Assistance, Callaway, FL. Mr. Kozan was responsible for providing modeling services to update the City's water and wastewater models. The project also included an analysis of the impacts of additional new development on the city's water and wastewater system. ***($50K)***

Project Engineer, FIRM Re-Map, Bossier Parish (County), LA. Mr. Kozan planned and executed a GPS control study to coordinate the work of survey subcontractors working on a FIRM re-map of Bossier Parish (County). Mr. Kozan also performed an analysis of the re-map. ***($350K)***

Project Engineer, Tall Timbers Subdivision, Bossier Parish (County), LA. Mr. Kozan created the preliminary design of an impoundment/levee and drainage pump system for the Tall Timbers subdivision in Bossier Parish (County). ***($1.5M)***

Project Manager, Wyandotte Tower and Pump Station, Morgan City, LA. Mr. Kozan served as project manager for the automation of the Wyandotte Tower and Pump Station. ***($50K)***

Project Manager, Planned Development for the St. Joe Company, Port St. Joe, FL. Mr. Kozan was the project manager for the civil work on a 2,000-acre, 1,600-unit planned development for the St. Joe Company. Mr. Kozan was responsible for client relations, surveying, design, and consultant coordination. ***($12M)***

Project Engineer, Ground Storage Tank and Booster Pump Station, East Baton Rouge Parish, LA. Mr. Kozan served as the project engineer for a 500,000-gallon ground storage tank and 1,000 GPM booster pump station for Parish Water Company. ***($1.5M)***

Project Engineer, Potable Water System Analysis, Houston, TX. Mr. Kozan composed a potable water system analysis for an industrial complex in the Houston area. The report outlined system deficiencies and recommended improvements required to achieve consistent regulatory compliance and safer operation. Mr. Kozan also wrote an enterprise-wide potable water system standard for the same multinational petrochemical company. ***($40K)***

Project Engineer, Water Treatment Plant, Morgan City, LA. Mr. Kozan composed an evaluation for the City of Morgan City water treatment plant, identifying means of complying with new water quality regulations, providing budgetary estimates, and prioritizing work required. ***($75K)***

Project Manager, Surface Water Treatment Plant Upgrade, Morgan City, LA. For this $3.3M surface water treatment plant upgrade, Mr. Kozan coordinated in-house design and electrical and structural consultants. Mr. Kozan brought this project with a "hands-on" owner and numerous unknown sub-surface conditions to a successful conclusion. ***($3.3M)***

Project Engineer, Rehabilitation of Staring Lane Pump Station, Baton Rouge, LA. Mr. Kozan contributed to the rehabilitation of the Staring Lane Pump Station by designing a 42-inch HDPE submarine crossing to replace a deteriorating aerial stream crossing. ***($450K)***

Project Manager, Design-Build Surface Water Treatment Plant, McAdams, MS. Mr. Kozan served as project manager for the design portion of a fast-tracked $15M, 6.5-mgd design-build surface water treatment plant for a merchant power station. Mr. Kozan was responsible for coordinating in-house design, consultants, and client interface. ***($15M)***

Project Manager, Filter Automation Project, New Iberia, LA. Mr. Kozan was the project manager for a $1.1M filter automation project at an aging 12-mgd groundwater plant. Mr. Kozan wrote a detailed filter control narrative and performance-based specifications. Mr. Kozan coordinated in-house design with the electrical consultant. Mr. Kozan proposed a unique project solution of soliciting a proposal from an oil field contractor who could do piping and I&E in-house. The solution significantly reduced overall project costs. ***($1.1M)***

ENGINEERS PLANNERS ECONOMISTS

WilburSmith ASSOCIATES

Robert (Bob) A. Hamm, PE

Program Coordinator

Education
MS, Civil Engineering, Texas A&M University, 1994

BS, Civil Engineering, Texas A&M University, 1992

Registrations
Professional Engineer:
Florida, 2005 (#63155)
Texas, 1998 (#83928)
Louisiana, 2001 (#29835)

Years of Experience
Total Years: 17
WSA: 16

January 1994-Present
Wilbur Smith Associates
Tallahassee, Florida

Professional Affiliations
Institute of Transportation Engineers (ITE), Member
American Society of Civil Engineers (ASCE), Member

Publications
"Prioritizing Intersection Improvements for CMAQ Funding," ITE Journal, November 1995.

"Inductance Loop Detector Lead Length," Texas Transportation Institute, Research Report 1392-1, September 1994.

"Speed Measurement with Inductance Loop Speed Traps," Texas Transportation Institute, Research Report 1392-8, August 1994.

"Detector Accuracy and Reliability Testing for Elevated Roadways," Texas Transportation Institute, Research Report 1232-22, April 1994.

Bob Hamm is the senior transportation planning manager for Wilbur Smith Associate's Tallahassee office. His project involvement includes transportation planning, traffic operational analyses, corridor studies, and traffic impact analyses. Mr. Hamm has served as project manager for numerous traffic engineering and transportation planning projects. Relevant project experience includes:

Strategic Intermodal System (SIS)/Florida Intrastate Highway System (FIHS) On-Call Planning Services, Florida Department of Transportation, Central Office (2005-Present) – Project manager for this on-call services contract for the FDOT and the SIS and FIHS programs. Work assignments to date have included GIS and planning support for both the SIS and FIHS programs, as well as the following assignments:

- Development of the SIS First Five, Second Five, and Cost Feasible Plans, statewide
- Development of the SIS Unfunded Needs Plan
- Evaluation and Recommendation of Highway Performance Measures related to Safety, System Preservation, Economics, Mobility, and Quality of Life
- Development of the Strategic Investment Tool (SIT), an ArcServer web based analysis tool for statewide SIS project prioritization
- Development of annual FIHS Status Reports
- Development of SIS Related Studies, including Status Change Studies and Designation Studies
- Evaluation and Planning for the Statewide Future Corridors Program
- Evaluation and Planning for Statewide Origin/Destination (O/D) Studies at Freight and Passenger Terminals and Intermodal Facilities

Evacuation Transportation Modeling and Analysis, Florida Department of Emergency Management, FL (2008-Present) – Project manager for this study for the FDEM and all 11 Regional Planning Council's within Florida. This study involves the development and implementation of a travel demand modeling framework and methodology to evaluate transportation impacts of various hurricane evacuation scenarios on both a regional and statewide level. The methodology is being developed to be consistent statewide using CUBE Voyager and CUBE Avenue travel demand modeling software. Travel demand models will then be developed and implemented for each Regional Planning Council area and used to develop updated Regional Evacuation Studies.

S.R. 40 Status Change Study, FDOT, District 5, Ocala to Daytona Beach, FL (2008) – Served as project engineer for this study for the FDOT to reevaluate the status of S.R. 40 from I-75 in Marion County to I-95 in Volusia County as part of the Emerging SIS. The study included a review of the SIS, Emerging SIS, and FIHS designation criteria, development of potential alternative corridors, a safety analysis, future traffic volume forecasts along S.R. 40 and alternative corridors, identification of environmental issues and concerns, a review of emergency evacuation needs, and development of recommendations.

Sterling Development, Destin, FL (2007) – Served as project engineer for this study that provided professional planning and engineering analysis of parking, transit integration, and a review of the proposed Multimodal Transportation

Concurrency (MMTC) ordinance developed by the City of Destin. The proposed development included a new hotel, restaurants, retail, interval condominiums, and town home condominiums.

Lamesa Bypass Feasibility Study, TxDOT, Lubbock District, Lamesa, TX (2005) – Served as project manager for this study which involved a review of the proposed alignment and feasibility of a new highway bypass around the City of Lamesa. Project responsibilities included consideration of two new alignment concepts, development of projected year 2025 traffic volume forecasts, and a review of access/interchange needs along the new alignment.

Embarcadero Traffic Impact Analysis, Laredo, TX (2005) – Served as project manager for this traffic impact study of a proposed mixed use development in Laredo. The project involved the evaluation of traffic impacts of a proposed industrial, residential, and commercial development, including over 8,000,000 square feet of warehouse, retail, and office space, as well as residential units and an elementary school. The study conformed to the TxDOT Traffic Impact Study guidelines and included data collection, existing system analysis, trip generation, trip distribution, projection of future background traffic, analysis of future conditions, and development of transportation recommendations. The study also included a review of the current access management plan and proposed median opening layout along FM 1472 (Mines Road) and traffic signal warrant studies.

Tyler Area MPO Metropolitan Transportation Plan, Tyler, TX (2005) – Served as project manager for this transportation plan for the Tyler metropolitan area. Project involved evaluation of potential roadway, transit, bicycle, and pedestrian projects to be included in the MPO's 25-year long range transportation plan (LRTP). Analysis included the use of the area's TransCAD travel demand model, including modification and adjustment of traffic analysis zones, as well as interim year trip assignments. The MTP update also included a detailed financial plan, including project cost estimates and projection of future revenues from federal, state, and local sources. The project included development of the City of Tyler's Master Street Plan, which included arterial and collector street designations and cross section standards.

S.H. 288 Corridor Feasibility Study, TxDOT, Houston District, TX (2005) – Served as project engineer for this project that involved the evaluation of a wide range of improvement concepts for a 55 mile section of S.H. 288 from downtown Houston to Freeport. Alternatives under evaluation include increasing roadway capacity, commuter rail options, light rail options, HOV lanes, and managed toll lanes. Project responsibilities included traffic analysis, review of travel demand forecasts, determining travel efficiency benefits, and development of benefit-cost ratios.

Double Creek Village Traffic Impact Analysis (TIA), Austin, TX (2003-2005) – Served as project manager for this TIA conducted for a proposed development in South Austin. The project involved the evaluation of traffic impacts of a proposed commercial development, including over 700,000 square feet of retail and restaurant space. The study conformed to the City of Austin Traffic Impact Study criteria and included data collection, existing system analysis, trip generation, trip distribution, projection of future background traffic, analysis of future conditions, and development of transportation recommendations.

ENGINEERS PLANNERS ECONOMISTS
WilburSmith ASSOCIATES

William G. "Bill" Brooks, P.E.

Regional Vice President/ Principal-in-Charge

Education
B.S. Civil Engineering, University of Alabama, 1983

Registrations
Professional Engineer: Florida, 1990 (#42490)

Years of Experience
Total Years: 26
WSA: 12

Areas of Specialization
Program management construction administration and design.

Professional Affiliations
ASCE, ITE

Civic Activities
Blue Ribbon Panel of Transportation Experts, National Transportation Policy and Revenue Study Commission (2007)

Steering Committee, Florida's Strategic Intermodal System, (2002)

Transportation Technical Committee, Metroplan Orlando (2001-2008)

Public Presentations / Testimony
"Highway and Transit Needs: The State and Local Perspective on Reauthorization of TEA-21." Testimony before the U.S. House of Representatives Subcommittee on Highways, Transit, and Pipelines of the Committee on Transportation and Infrastructure, 2003

"Near Term Program Management-Orlando International Airport", ASCE, 2002

Mr. Brooks has more than 26 years experience in aviation, collectively valued at over $500 million in construction. Mr. Brooks' current project experience includes:

Daytona Beach International Airport Continuing Engineering Consultant / Volusia County, FL (2008-Present) – Serves as the client program manager for the on-call services of WSA. Current project includes Aircraft Parking Apron Expansion design.

Continuing Engineering Consultant –Orlando Executive Airport, Greater Orlando Aviation Authority, FL (2008-Present) – Client manager for airport's CIP projects. Current projects include design of North Ramp Pavement Rehabilitation, Modifications to Taxiway A-1, Pavement Rehabilitation of Taxiway E – North of Runway 7-25, Pavement Rehabilitation of Runway 13-31 Blast Pads and Compass Rose Calibration Pad, Installation of Three New Compass Rose Calibration Pads, Rehabilitation of the North Canal Drainage Structure and North Hangar Road.

Puerto Rico Ports Authority (PRPA) (2008-Present) – Client manager for general consulting contract for professional engineering, architectural support, environmental, management and planning services for airport development at PRPA's 11 publicly owned and operated airports. Projects have included a new Aircraft Rescue & Firefighting Facility and Taxiway Rehabilitation and Strengthening at Aguadilla. Mr. Brooks also participated in WSA's prior contract for PRPA's Interactive Aviation Planning System for PRPA's airports.

General Engineering Consultant, Valdosta Regional Airport, Valdosta-Lowndes County Airport Authority, GA (2006-Present) – Project principal: Projects include 2007 construction of 1,700 ft. runway extension and current (2008) construction of parallel and exit taxiways rehabilitation.

General Engineering Consultant, Flagler County Airport, Flagler County Board of County Commissioners, FL (2006-Present) – Project principal: New Air Traffic Control Tower currently under construction (2008). Previously designed and administered construction of runway rehabilitation.

General Engineering Consultant, Avon Park Executive Airport, City of Avon Park, FL (2006-Present) – Project principal. Projects include construction of runway rehabilitation (2007), new t-hangars (2006), and new FBO building and apron improvements (2008).

General Engineering Consultant, Vero Beach Municipal Airport, FL (2007-Present) – Project principal. Projects include construction of runway 4/22 and adjacent taxiway rehabilitation (2008); and replacement of runway and taxiway lighting and NAVAIDS fixtures and circuits (2008-09).

General Engineering Consultant, DeLand Municipal Airport, FL (2008-Present) – Project principal: New Air Traffic Control Tower Siting Study (2008). Previously designed and administered construction of runway and apron rehabilitation.

Liberty-Casey County Airport, KY (2007) – Client manager for the design of this new airport's runway, taxiway, aircraft parking apron, access road and associated electrical, NAVAID and drainage facilities.

Rum Cay Airport, Bahamas (2007) – Client manager for private development owner's plan for expansion of this resort island airport to comply with the agreement with the government of the Bahamas and ICAO standards. Phase 1 design work includes a 2,500 foot runway extension, a new terminal building, lighting, NAVAIDS, ATCT, ARFF, FBO and all associated apron, terminal curbs, auto parking and access roads.

New Hassan Airport, Karnataka, India (2007) – Engineering lead for concept layouts for a new greenfield airport east of Hassan, the 4th largest city of the state of Karnataka, a rapidly developing region. The site includes a 3,600 m runway; 27,000 sm terminal with 8M annual passenger capacity and supporting airside and landside facilities for international and domestic commercial service; corporate aircraft; A-380 MRO facility; flight training and surrounding land development on an overall 2,400 acre property as part of a 3P project.

(Experience with previous firm-1992-2004)
General Consultant/Program Manager, Greater Orlando Aviation Authority, FL (1992-2002) – Served as Program Manager and Construction Administrator for 11 years with responsibilities for over $400 million worth of projects, including numerous airfield, roadway, bridge, and parking capital improvement projects, including quality assurance; owner's representative services and close out. Specific projects included:
Northwest Terminal Support Area Apron -Design management and construction owner's representative for an approximately 90,000 square yard concrete aircraft parking apron reconstruction project for commercial air cargo carriers.
Near Term Program (16 Simultaneous Prime Consultants Bid Packages): New roadway, parking, bridge, terminal and east airfield improvements. Projects included: a new bridge from A-side parking garage to terminal-top parking, tunnels/ramps into the A & B garages levels 1 and 2, new public parking ramps to helices serving A and B garages level 3; new canvas covered parking areas, rental car quick turn around area improvements; Blue lot remote public parking in NW Support Area; expansion of Gold lot remote public parking; Cargo Road interchange with Airport Blvd; and associated signage upgrades.
North Terminal Program (4 Simultaneous Civil Consultant Bid packages) Various landside roadway and curb capacity enhancements including: Hyatt Motor Court accel / decel lanes; drainage improvements, terminal service road improvements and signage improvements.
Cargo Road Expansion Projects Design management and owner's representative construction services for a new $3.5 million interchange with Airport Boulevard and a roadway segment through a closed landfill. Also included $12 million for widening Cargo Road to four-lanes and construction of a new building for the various Authority departments.
Heintzelman Boulevard Project– Design management for six mile, four-lane road and bridge project between the SR 528 and South Access Road. The $40 million project included six bridges and a new interchange with South Access Road, and four-laning a one mile section of South Access Rd.
South Terminal Complex, – Developed two "passenger friendly" roadway and parking analyses and models for the "hybrid" concept for the future South Terminal Complex.

ENGINEERS PLANNERS ECONOMISTS

WilburSmith ASSOCIATES

Revocatus Kanilwa, PE, PTOE

Traffic Engineering

Education
MS, Civil Engineering, Transportation, Kansas State University, December 2000

BS, Civil Engineering, University of Dar-es-Salaam, July 1996

Registrations
Professional Engineer:
Florida, 2008 (#68543)
Ohio, 2004 (#69120)

Professional Traffic Operations Engineer (PTOE), 2004

Years of Experience
Total Years: 11
WSA: 1

November 2008-Present
Wilbur Smith Associates
Miami, Florida

Affiliations
Member, Institute of Transportation Engineers

Areas of Specialization
Traffic Signal Design
Signing and Pavement Marking Design
Construction Staging (Sequencing) and Traffic Management Plans Preparation
Traffic Studies and Analyses
Highway Geometric Design

Mr. Kanilwa has more than 11 years of experience as a transportation engineer and has substantial experience in various aspects of traffic engineering design and studies, as well as roadway design. His responsibilities have included traffic signal system design; signing and pavement marking design for all types of roadway facilities; designing associated traffic management plans (TMPs), also known as maintenance of traffic (MOT), for highway and street work zones; and conducting various traffic studies and analyses, including traffic impact studies, capacity and level of service analyses, parking studies, project development and environmental (PD&E) studies, and development of regional impact (DRI) studies. Mr. Kanilwa has also been responsible for the geometric design of temporary highway roads and ramps used during major interchange construction throughout central Florida. Relevant project experience prior to joining WSA includes:

Districtwide Plans Review, Florida Department of Transportation, District 6, FL (2008-Present) – Traffic engineer; this project involves providing assistance to the district in reviewing plans prepared by outside consultants and also by the district's internal design group. Mr. Kanilwa has been providing reviews in the following disciplines: roadway, signing and pavement marking, signalization plans, and safety reports. Responsibilities also include attending review meetings with department staff and the engineer of record to review comments and resolve outstanding design issues.

Traffic Impact Study for Collier County Area Transit Bus Transfer Facility, Collier County, FL (2009) – Traffic engineer; Collier Area Transit was planning to use their office headquarters premises as the site for a bus system transfer facility. Mr. Kanilwa prepared the traffic technical memorandum documenting the impacts of adding this activity at the CAT headquarters, located on Radio Road. Tasks included collecting existing data and analyzing the existing conditions, and analyzing the future conditions.

Intersection Qualitative Assessment at Several Signalized Intersections, FDOT, District 6, Miami, FL (2008) – This project involved the evaluation of existing operational conditions at several signalized on-ramp intersections to I-95 northbound as part of the department's readiness to deploy ramp-metering on I-95. Mr. Kanilwa served as the lead traffic engineer coordinating the field reviews, data collection and evaluation, and preparing the traffic technical memorandum. A total of eight intersections were evaluated.

S.R. 408/S.R. 417 Interchange, Roadway Design, Orlando, FL (2006-2008) – Project engineer for this major systems interchange reconstruction project. Mr. Kanilwa was responsible for the design of construction phasing, MOT plans, detour routes, and temporary guide signs. He was also responsible for designing horizontal/vertical alignments, typical sections, and cross-sections for all temporary roadways that were needed to accommodate the traffic during the different phases of construction.

Sistrunk Boulevard Improvement Project, Fort Lauderdale, FL (2007-2008) – Project engineer; This streetscape project in downtown Fort Lauderdale involved the reconstruction of a section of Sistrunk Boulevard to narrow the road from four travel lanes to two lanes as well as the milling and resurfacing of

another section. Mr. Kanilwa worked on the team that responsible for the production of the construction documents where he was responsible for developing the signal plans from 30 percent to 60 percent. The signal design included nine different locations and an interconnect system.

U.S. 1/S.R. 5 Overseas Highway RRR Project, from North MM 97 to M 100 (2007-2008) – Project engineer responsible for designing the signing and pavement marking plans for the southbound highway and a portion of the northbound highway as well as designing the signal equipment layout at the signalized intersection of U.S. 1/Atlantic Boulevard/North Bay Drive.

Districtwide Miscellaneous Plans Review and Services, FDOT District 6, Miami, FL (2007-2008) – Project engineer; Worked at the district offices with the district's internal design group as part of a contract providing plans review and services to the district. Assignments included designing signalized intersections as well as preparing signing and pavement marking plans on several different state roadways in Miami-Dade and Monroe counties. Also helped with responding to design comments in the district's ERC system.

The District, City of Boca Raton, FL (2006) – Traffic engineer; Provided consulting services for a mixed-land use redevelopment project known as The District. Services included traffic impact analyses for a series of development alternatives. The impact analysis was performed in accordance with the West Palm Beach County performance standards and the City of Boca Raton's Land Development regulations to assess impacts to the surrounding transportation system and to determine required roadway improvements. Mr. Kanilwa was responsible for the field reviews, trip generations/distributions/assignments, level of service (LOS) analyses, and report preparation.

Virginia Key Master Plan, Miami, FL (2006-2007) – Project engineer; Evaluated the Virginia Key Master Plan from an engineering standpoint. Prepared existing and future conditions analyses for the proposed plan alternatives including the determination of the necessary transportation improvements. Also reviewed the master plan development alternatives relative to access, which included non-motorized modes, public transportation, and internal site circulation.

S.R. 84 from Pine Island Road to Davie Road, Fort Lauderdale, FL (2006-2007) – Project engineer; The scope of work included all activities involved in a RRR as per FDOT requirements. Work involved milling and resurfacing of the existing pavement, extending turning lanes, upgrading the existing substandard guardrails, signing, pavement marking, signalization, sidewalk, various upgrades to meet ADA requirements, and evaluation of lighting conditions against the current standards to identify the need for additional lighting.

Town of Bay Harbor Islands, Broad Causeway Toll Plaza, Bay Harbor Islands, FL (2006-2007) – Traffic engineer; Selected by the City of Bay Harbor Island to evaluate different alternatives to improve the operation of the toll plaza on Broad Causeway. Conducted field reviews, coordinated the data collection efforts with a sub consultant, performed analysis of the operating conditions at the toll plaza, and evaluated different alternatives for improvements.

ENGINEERS
PLANNERS
ECONOMISTS

WilburSmith
ASSOCIATES

Om Prakash Kanike, PE

Traffic Engineering

Education
MS, Transportation Systems Engineering, University of Central Florida, 2003

BS, Civil Engineering, S.V.U. College of Engineering, India, 2001

Registration
Professional Engineer
Florida, 2009 (#70702)

Years of Experience
Total Years: 6
WSA: 4

Areas of Specialization
Traffic engineering, travel demand modeling, transportation modeling and simulation, traffic signal timing

Professional Affiliations
Member, Institute of Transportation Engineers

Research Experience
Created an emergency response model for Orlando International Airport using PARAMICS micro-simulation software.

Technical Training
Cube Voyager, TRANPLAN, TransCAD, VISSIM, CORSIM (TSIS), Paramics, SimTraffic, Synchro, HCS, SIDRA, TRANSYT-7F, MicroStation, ArcView

Office Location:
Orlando, FL

Om Kanike is a traffic analyst for Wilbur Smith Associates. He has more than six years of experience in transportation planning and traffic engineering. Prior to joining WSA, Om served as a transportation/traffic analyst responsible providing transportation modeling and simulation support; completing transportation studies, traffic signal system timing, traffic impact studies, signal warrant studies, comprehensive plan amendments, driveway analyses, and other traffic studies. Relevant project experience includes:

S.R. 500/Indian River Relief Bridges Replacement Project Design-Build, Johnson Bros. LLC, Florida Department of Transportation District 5, Brevard County, FL (2010-Present) – WSA is serving as the lead design firm on this $9.3 million design-build project. The project involves the replacement of three low-level "relief" bridges on the S.R. 500 crossing of the environmentally sensitive Indian River. The three bridges were functionally deficient and require replacement, with the additional requirement of maintaining four lanes of traffic throughout construction on this hurricane evacuation route from the town of Indialantic to the Florida mainland. Om is the design engineer responsible for developing signing and pavement marking plans.

S.R. 46 Bridge Replacement over Lake Jesup, Design-Build, FDOT District 5, Seminole County, FL (2008-2010) – Served as a traffic engineer responsible for developing the signing and pavement marking plans and coordinating with the contractor on construction issues. This $38 million project included realignment of the roadway intersections at Old Geneva Road and Osceola Road and incidental roadway construction. The project also involved the replacement of a 500-foot long obsolete bridge with a 3,740-foot structure in the environmentally sensitive region where the St. Johns River intersects with Lake Jesup.

S.R. 15 Milling and Resurfacing from M.P. 10.471 to M.P. 13.600, FDOT District 5, Seminole County, FL (2008-2009) – This project required milling and resurfacing, upgrading to meet ADA requirements, replacing loops at signalized intersections, and three traffic monitoring sites. Om was responsible for developing signing and pavement marking plans, signalization plans.

Florida Regional Evacuation Studies, FDOT Central Office, Tallahassee, FL (2008-Present) – Serves as a travel demand modeler on this project involving network preparation, roadway capacities, and background traffic profile estimation tasks.

Honore Avenue/Pinebrook Road Extension, Sarasota County Public Works, Sarasota County, FL (2007-Present) – Serves as lead traffic engineer on a traffic signal design at the Honore Avenue/Laurel Road intersection. Also provided signing and marking plans for this 3.8-mile, 4-lane extension of Honore Avenue.

Piper Road Improvements, Charlotte County Public Works, Punta Gorda, FL (2006-2009) – This project featured the design and the reconfiguration of Piper Road/North Jones Loop Road. Om was responsible for developing the signing and pavement marking plans, signalization plans, and conducting the traffic study.

S.R. 436 at Lake Margaret Drive Intersection Study, FDOT District 5, Orlando, FL (2008) – Served as traffic engineer for this intersection safety study. Tasks included data collection/processing, field observations, level of service analysis, crash data analysis, recommendation for mitigation measures, and report preparation.

Strategic Intermodal System (SIS) Evaluation Phase 2: Southbound I-95 to SW 7th Street/SW 8th Street Exit Ramp Study, FDOT District 6, Miami, FL (2008) – As lead project engineer, conducted a CORSIM simulation study to identify the traffic problems on the I-95 exit ramp to SW 7th and 8th Streets and developed conceptual improvements to alleviate congestion.

Shingle Creek Community Development District, Revenue Study (2008), Kissimmee, FL (2008) – Served as traffic engineer responsible for conducting a traffic study for this private development to quantify its impacts on revenue for the Osceola Parkway toll road. Tasks included data collection, trip generation, trip distribution and assignments (using travel demand model), sensitivity analysis, and report writing.

Winchester Boulevard, Traffic Analysis and Design, Charlotte County Public Works, Charlotte County, FL (2007-Present) – Serves as a traffic engineer responsible for conducting a signal warrant study for the S.R. 776/Winchester Boulevard intersection; design of two traffic signals at the S.R. 776 and C.R. 775 intersections; and development of signing and marking plans for this new 4.7-mile, 4-lane roadway.

S.R. 40 SIS, FDOT Central Office, Tallahassee, FL (2007) – Served as traffic engineer responsible for completing the traffic analysis required to research the statewide significance of S.R. 40 as a Florida Intrastate Highway System (FIHS)/SIS facility. This effort involved analyzing crash data and existing traffic conditions, comparing alternative corridors (via the statewide transportation model), and recommending the status of S.R. 40's FIHS/SIS designation.

Pace Road/DRI Circulator Road/Polk Parkway Intersection/Interchange Concept, Polk County, Private Developer (2007) – As lead traffic engineer, developed conceptual design to provide access to the Williams Developments of Regional Impact (DRI) and University of South Florida campus developments. This project is located in the southwest quadrant of the I-4/Polk Parkway interchange and is anticipated to generate 100,000+ daily trips. Involved coordination with the Turnpike, use of the Polk County Transportation Planning Organization (TPO) model for volume projections, and use of Synchro and CORSIM models to evaluate the feasibility of the conceptual designs.

AmSouth Bank Traffic Impact Study, Private Developer, Bay County, FL – As traffic engineer, conducted a traffic study and addressed the city's and county's transportation issues within the study area due to the project traffic.

Commander Center Traffic Impact Study, Private Developer, Leesburg, FL – Served as traffic engineer responsible for conducting turn lane warrant analysis and recommended turn lane lengths at the project driveway and medians on U.S. 27.

ENGINEERS
PLANNERS
ECONOMISTS

WilburSmith
ASSOCIATES

Martin E. Guttenplan, AICP

Concurrency Assessments

Education
MA, Fine Arts, Florida State University, 1982

BA, Penn State University 1977

Years of Experience
Total Years: 18
WSA: <1

Professional Affiliations
American Institute of Certified Planners, No. 018479 - 2003

Affiliations
Transportation Research Board:
- Highway Capacity Committee, Bike/Ped Subcommittee Chair
- Bicycle Transportation Committee, Research Subcommittee Chair

American Planning Association
Association of Bicycle/Pedestrian Professionals
League of American Bicyclists

Martin Guttenplan is a senior transportation planner with Wilbur Smith Associates' Tallahassee office. He has an in-depth knowledge of the federal, state, and local transportation planning processes. Martin's experience covers a wide range of transportation, land use, growth management, and multimodal initiatives including mobility management processes, comprehensive plans, bicycle/pedestrian plans, programs, and trainings. Martin served as the Mobility and Congestion Management Process Coordinator for the Florida Department of Transportation Systems Planning office for 10 years. Responding to metropolitan planning organization requests for relevant performance measures for non-automobile modes, he spearheaded FDOT's efforts in developing multimodal level of service methodologies. Relevant project experience includes:

LOCAL PLANS

At FDOT, Martin reviewed local comprehensive plan amendments, DRIs, proposed multimodal transportation districts, transportation concurrency exception areas, level of service variances, and transportation plans. He also served on the Florida Department of Community Affair's transportation team in implementing changes in 2005 growth management legislation.

Public Involvement, Leon County, FL (1996-2000) – Martin coordinated the efforts of local agencies to address traffic safety problems in Leon County by forming the Leon County Community Traffic Safety Team. With regular meetings and public outreach and newspaper columns, traffic safety issues were elevated resulting in team-coordinated solutions. Martin coordinated a pedestrian safety team to improve conditions on U.S. 90 adjacent to the Florida State University Campus. He enlisted the support of business owners, student government, churches, university administration, local government, and business associations to implement safety improvements.

University of Florida Campus Master Plan – Transportation Element, Gainesville, FL (2009) – Martin spearheaded an intercept survey in April of 2009 designed to capture all modes of travel to the main campus in Gainesville. With 3,500 valid responses, the university will have a wealth of data including trip origin, modal split, and time of travel.

GROWTH MANAGEMENT/TRANSPORTATION CONCURRENCY

Campus Trail Study, Florida State University, Tallahassee, FL (1993-1996) – Martin worked with a group to build and design additional bike and pedestrian paths throughout the campus. Installation of additional bicycle parking was also planned and executed.

Student Transportation Survey, Florida State University, Tallahassee, FL (1997) – Martin conducted a survey of 7,000 students to determine transit, bicycle, and pedestrian uses and needs. The design of this survey was used as a template for other non-motorized transportation surveys to follow.

Transportation Impacts of Development Handbook Update, FDOT, Tallahassee, FL (2008) - Martin was the FDOT project manager responsible for updating the Site Impact Handbook to address all transportation impacts of

development. This included forming a group of public and private stakeholders who perform development analysis.

Multimodal Transportation District Plan, Pinellas County, FL (2008-2009) – Martin helped guide the development of a conceptual plan for a legislatively mandated study to designate a five-municipality area as a Multimodal Transportation District.

Multimodal Areawide Planning, FDOT, Tallahassee, FL (2001–2008) – Martin developed the state's Multimodal Transportation District and Areawide Quality of Service Handbook and training to address transportation and land-use coordination. Prior to leaving FDOT, Martin led research on a vehicle miles traveled mobility fee system.

2002 Quality/Level of Service Handbook, FDOT, Tallahassee, FL (2007-2008) – Martin was the FDOT project manager for the development of 16 technical issue papers that were published as an addendum to the Quality/Level of Service Handbook. These papers became the basis of the 2009 update of the handbook.

Documentation of Improved Mobility Techniques on the Strategic Intermodal System and Trip Facilities, FDOT, Tallahassee, FL (2007-2008) – Martin directed statewide research for FDOT that identified best practices in the use of level of service analysis for developments of regional impact (DRIs), sub-DRIs, and comprehensive plan amendments. These practices are recommended as methodologies for identifying and mitigating impacts to facilities on the Strategic Intermodal System and Florida Intrastate Highway System.

Growth Management/Traffic Impact Analysis, FDOT, Tallahassee, FL (2006-2008) – Martin was a key instructor in this FDOT training that provided solutions to growth management and traffic impact analysis issues for planners in all arenas. He led topics on level of service standards and techniques, transit, and linking transportation concurrency with comprehensive planning.

Level of Service Rule 14-94 FAC Update, FDOT, Tallahassee, FL (2005-2006) – Martin led FDOT's process to update the roadway level of service administrative rule by coordinating input from multiple stakeholders statewide. As a result, FDOT closed a number of loopholes in the transportation concurrency process.

Bicycle/Pedestrian Plans, Pathways Plan Update, City of Destin, FL (2009) – Martin assisted the city in updating its pathways plan to reflect its multimodal concurrency system and public input. Public outreach provided verification of high priority needs.

Bicycle Plan, City of Key West, FL (1995) – Martin worked with a team to inventory and assess all existing bicycle and pedestrian facilities and conditions. The group also studied usage and bicycle parking locations, density, and need. Recommendations were made for further improvement of these networks.

ENGINEERS
PLANNERS
ECONOMISTS

WilburSmith
ASSOCIATES

Christopher T. Edmonston

Concurrency Assessments

Education

BS, Political Science, Minor in Urban and Regional Planning, Florida State University, 2003

12 credit hours towards MS, Planning and Public Administration , Florida State University, 2004-2005

Experience

Total Years: 5
WSA: 2

2008-Present
Wilbur Smith Associates
Tallahassee, Florida

Achievements

Recipient of the1999 Florida Bright Futures Merit Scholarship;
Served on the 2005 Growth Management Legislative Training Panel;
Served as Department of Community Affairs Liaison for the Florida Commuter Rail Project

Chris Edmonston is a transportation planner for Wilbur Smith Associates. He has extensive knowledge of Florida's comprehensive planning process, growth management process, and local government planning, outstanding public speaking and presentation skills; excellent research, writing, and editing skills; and more than two years of growth management experience in Florida. Representative project experience includes:

Strategic Intermodal System/Florida Intrastate Highway System On-Call Planning Services, FDOT Central Office, Tallahassee, FL (2008-Present) – Transportation planner for this contract for FDOT and the SIS and FIHS programs. Work assignments to date have included GIS and planning support for both SIS/FIHS programs, as well as the following assignments:

- Statewide 5-Year Work Program – The 5-Year Work Program identifies all transportation improvement projects that are projected to be funded and constructed during the next five year time period. Project responsibilities included review of FDOT District submittals, review, and programming of cost estimates, and prioritization of projects.
- Statewide Second 5-Year Work Program and Cost Feasible Plan – Following approval of the 5-Year Work Program, project responsibilities include the identification of all transportation improvement projects that are projected to be funded and constructed following the 5-Year Work Program to 2035.
- SIS Implementation Tool (SIT) – The SIT was developed by FDOT to prioritize transportation improvement projects based on performance measures related to safety, mobility, economics, system preservation, and quality of life. Project responsibilities included development and review of measures and datasets to keep the SIT updated.

Florida Department of Community Affairs, Tallahassee, FL (2006-2008) – While employed as a community planner for FDCA, Chris was involved in a wide range of land use and urban planning issues, including the following:

- Reviewed Comprehensive Plan Amendments from local governments to ensure compliance with Chapter 163, F.S., and Rule 9J-5, F.A.C.
- Served as the Department's liaison for the Florida Commuter Rail Project.
- Reviewed development of regional impact (DRI) applications and development orders for DRI projects in Lake, Osceola, Orange, Seminole, and Volusia counties.
- Assisted the Division of Community Planning Management staff, the Secretary of the Department, and Osceola County planning staff in re-writing the Osceola County Comprehensive Plan.
- Provided daily assistance to local government planners and citizens with planning issues in their area.
- Assisted local governments within the Wekiva River Study Area in preparation of the state mandated 10-year water supply work plans and associated comprehensive plan amendments.

- Prepared reports in accordance with statutory deadlines regarding proposed and adopted comprehensive plan amendments in the East Central Florida Region.
- Presented issues and research findings to the Chief of Comprehensive Planning, Director of Community Planning, and Secretary of the Department.
- Performed miscellaneous research on planning related issues throughout the East Central Florida Region and presented findings to the East Central Florida Regional Planning Administrator.
- Extensive knowledge of changes in Florida Growth Management Legislation. Served on the DCA committee responsible for the application of the Capital Improvements related legislation in Senate Bill 360 in 2005.
- Served as a panel member for the 2005 Senate Bill 360 Workshops held in various locations state-wide.
- Served on the 2005 Growth Management Workshop Committee: organized the agenda, contacted potential speakers, and facilitated panel discussions.

City of Powder Springs, Powder Springs, GA (2005-2006) – While employed as a special projects coordinator for the city of Powder Springs, Chris was involved in the following projects:

- Responsible for state of Georgia mandated 10-year Comprehensive Plan Update, including scheduling and advertising of public meetings and workshops, and serving as a liaison between planning department and city council
- Established a Citizens Advisory Panel and coordinated monthly meeting locations, times, and agenda.
- Held Town Hall Meetings regarding the city's CPU and answered any questions from the city residents.
- Re-established the City's Neighborhood Incentive Grant Program and determined what local homeowners associations would receive funding.
- Established the 2006 Annexation Plan for the city of Powder Springs. Required coordination with Cobb County Planning Department, city of Powder Springs Public Works Department, and residents of the city.
- Responsible for the formation and management of landscaping contracts for all city owned property.
- Established a School Coordination program.
- Prepared vacant/developable land database, which will enable the city to review future development needs in comparison with the city's vacant and developable land.

ENGINEERS
PLANNERS
ECONOMISTS

WilburSmith
ASSOCIATES

Michael A. Plagens, AICP

Transportation Planning

Education
MS, Urban and Regional Planning, Florida State University, 1998

BS, Geography, Florida State University, 1996

Years of Experience
Total Years: 15
WSA: <1

Professional Affiliations
American Institute of Certified Planners
016084 - 2000

Affiliations
Member, American Planning Association, 1998

Member Big Bend Florida Chapter - Institute of Transportation Engineers, 1998-2009

Secretary, Big Bend Florida Chapter - Institute of Transportation Engineers, 2001

Vice-President, Big Bend Florida Chapter - Institute of Transportation Engineers, 2002

President, Big Bend Florida Chapter - Institute of Transportation Engineers, 2003

Mike Plagens has more than 15 years of experience in estimating budget and staff requirements, giving oral presentations to various groups, preparing and editing written documents, and participating in public involvement and outreach activities. Mike's experience includes strategic planning; long-range needs plan analysis, project prioritization, database management, GIS support, as well as providing planning, consulting, and technical services to statewide transportation agencies, regional agencies, and local communities. Major project experience, both with WSA and other firms, include the following:

Development of Regional Impact Update, Tallahassee Regional Airport, FL - Contributor to the development of a regulatory approval process to secure development approval for all proposed development projects identified in the Airport Layout Plan and prepared a DRI Application for Substantial Deviation for projects that are considered substantial deviations as defined in the current Amended Development Order. Activities included analysis of existing planning documents, formation of regulatory strategies, traffic counting, trip generation, traffic forecast, and completion of applications to secure development approval.

Florida Department of Transportation District 3, Districtwide Miscellaneous System Planning, General Planning Consultant - Assists District 3 planning staff with Florida Intrastate Highway System (FIHS) and Strategic Intermodal System (SIS) projects including various: FIHS/SIS Needs Plans, FIHS/SIS Cost Feasible Plans, and the FIHS/SIS Work Program Projects and revenue exercises, SB-360/HB 7203 and other growth management initiatives, and districtwide project prioritization. Provided contract management, policy assistance, planning expertise, historical perspective, institutional knowledge, database management, and GIS services in support of district effort to address district responsibilities associated with the FIHS and SIS. Specific projects include:

- **2040 Multimodal SIS Needs Plan.** Current efforts include coordination with strategic partners including the four Transportation Planning Organization (TPOs) in the District, as well as multimodal partners. Plan analysis includes reviewing of District corridor action plans, and the TPOs' Needs Plans, Long-Range Transportation Plans, and regional freight plans.
- **2010 SIS Update** including involvement in the Public and Partner Involvement Plan (PPI) and the Technical Advisory Committee (TAG).
- **2060 Florida Transportation Plan (FTP).** Current efforts include supporting District staff with the 2010 update of the 2060 long-range Florida Transportation Plan including the Public and Partner Involvement Plan (PPI) and the TAG.
- **2010 SIS Update** including involvement in the PPI and the TAG.
- **Interchange Modification Reports and Interchange Justification Reports** in the district including U.S. 29.
- **SIS Designation Change Request for the Port of Port St. Joe.** Worked on the SIS Designation process and application for the Port of Port St. Joe. Efforts included the economic feasibility analysis, analysis of the transportation implications associated with the development of the port and socioeconomic impacts and securing local community stakeholder support.

- **District SIS Freight Connector analysis.** This analysis focused on developing performance measures, identifying "bottlenecks," creating low-cost solutions to streamline efficiency and improve safety and prioritized projects for DOT review along the District SIS freight connectors.
- **2004 SIS/Growth Management Connector Funding Project.** This project included highway projects and multimodal projects. In addition to working with highway projects, assisted the District's Multimodal Coordinator with the selection of seaport projects and aviation projects. Including working with the individual seaports, the Florida Seaport Transportation and Economic Development Council on obtaining the matching Chapter 311 funds and selected aviation projects from the Joint Automated Capital Improvement Plan.

I-95 Transportation Alternatives Study, FDOT Systems Planning Office, FL - The project consisted of gathering and evaluating planning level data along I-95 within Districts 4 and 6. Managed the traffic analysis that was conducted to determine capacity shortfalls. Project Specific tasks included GIS mapping, technical analysis, alternatives evaluation, report write-up, and coordination efforts with multiple consulting firms and FDOT staff. Provided internal project team quality control/quality assurance (QC/QA).

Regional Mobility Plan, Capital Region Transportation Planning Agency, FL - The Regional Mobility Plan is the required update of the Long Range Transportation Plan for the Tallahassee-Leon County, FL region. This plan update is focused on developing a comprehensive, multimodal regional mobility plan for the four-county region. This update incorporates a non-traditional approach focusing on a long-range community vision, the integration of land use and development patterns with transportation, and interconnectivity within the transportation network and among the different modes.

I-75 North Sketch Plan, FDOT Systems Planning Office, FL - Project manager for this study that assisted department staff with the development of a new planning area that focuses on linking the NEPA process to the current Systems Planning process of long-range planning. The "Sketch Plan" is essentially a detailed need analysis of the interstate system focused on traffic forecasting and anticipated safety needs. Activities include meeting with senior FDOT management, working through the development process, extensive research, testing of possible data, performance measures, and defining plan requirements. Responsible for utilizing various planning principals, policy assistance, conflict resolution techniques, historical perspective and managing various RS&H professionals.

Madison County Comprehensive Development Study: Economic Development Feasibility Study, Madison County Board of County Commissioners - Created the master land-use plan that identified attractive sites for private investment, protected the satisfactory operation of the intermodal transportation system and adequately planned for the public infrastructure needed to support the development. This plan was a blueprint for the desired development pattern and access management system within the study area using sustainable community and context sensitive design concepts. Activities included conducting community leader interviews, analysis of existing planning documents, GIS mapping, data collection and analysis, public participation workshops and formation of alternative land-use concepts and funding concepts.

ENGINEERS
PLANNERS
ECONOMISTS

WilburSmith
ASSOCIATES

Gabrielle Matthews

Transportation Planning

Education

MS, Transportation Planning, Florida State University, 2008

BA, International Affairs/ Spanish, Florida State University, 1995

Years of Experience

Total Years: 3
WSA: 2

November 2008-Present
Wilbur Smith Associates
Tallahassee, Florida

Technical Skills

ArcGIS, SPSS, Cube Voyager, HCS 2000, and LOSPLAN-ARTPLAN
Spanish competency

Professional Affiliations

Curriculum Committee, Department of Urban and Regional Planning, Florida State University, 2006-2007 and 2007-2008 school years
Junior League of Tallahassee, August 2004 – August 2005

Gabrielle Matthews is a transportation planner for Wilbur Smith Associates' Tallahassee Office. She is a graduate of Florida State University where she received her Master of Science in Planning with a specialization in transportation planning. Gabrielle has completed related coursework in travel demand modeling with a focus on using Cube Voyager. Additionally, she has three years of experience using ArcGIS. Prior to joining WSA, Gabrielle served as a GIS Elections Assistant for the Leon County Supervisor of Elections. Relevant project experience includes:

Statewide Regional Evacuation Study Program, Florida Division of Emergency Management, FL (2008-2009) – Served as a project planner for this study for the Florida Division of Emergency Management and all 11 Regional Planning Council's within Florida. This study involves the development and implementation of a modeling methodology to evaluate transportation impacts of various hurricane evacuation scenarios on both a regional and statewide level. The methodology is being developed to be consistent statewide using CUBE Voyager and CUBE Avenue travel demand modeling software. Responsibilities included developing traffic analysis zones, reviewing and applying socioeconomic data for all 67 counties statewide, coordination with all Regional Planning Councils, and travel demand modeling assignments using CUBE.

Statewide Rail Mapping Updates, FDOT Rail Office, FL – GIS Analyst for this update of the GIS rail coverages for both SIS and Non-SIS rail lines throughout the state. The study included updating and relocating rail line files to correspond to recent aerial photography and creating and populating attribute tables with relevant information about each rail line. The study also involves creating a linear referencing system for the rail system.

River Oaks Road Engineering Traffic Study, FDOT Rail Office, FL - WSA developed an engineering traffic study to review traffic and transportation related conditions in and around the River Oaks Road railroad grade crossing and determine if closing the crossing would have an adverse impact on traffic operations. As a transportation planner, Gabrielle analyzed origin-destination data, conducted traffic operations analyses, and developed the study documentation.

Strategic Investment Tool (SIT) Development, FDOT Central Office, Tallahassee, FL (- WSA assisted FDOT in the creation and development of the SIT. The SIT is a project prioritization tool to aid in the prioritization of projects for funding and includes 24 performance measures to score projects in five main SIS goal categories. As a transportation planner, Gabrielle conducted research on new measures to include in SIT, such as Rural Areas of Critical Economic Concern and Emergency Evacuation Routes. Gabrielle also conducted an analysis of the existing LOS dataset to verify the impact of future traffic volumes on project scores.

Interstate 75 South Sketch Interstate Plan, FDOT Central Office, Tallahassee, FL - WSA prepared a Sketch Interstate Plan for the 205 mile I-75 South Corridor from S.R. 951 to C.R. 476 B. The SIP serves as a baseline needs analysis to future studies in the SIS/FIHS Plan, as well as the transportation plans of the MPOs in the corridor. As a transportation planner, Gabrielle conducted an existing bridge conditions analysis, along with traffic and safety analyses.

Interstate 95 Transportation Alternatives Study, FDOT Central Office, Tallahassee, FL (2009) - WSA is conducting this study of the I-95 corridor to assess the travel demand and freight moving along the I-95 corridor against four measures: transportation, emergency management, homeland security, and economic development. As a transportation planner, Gabrielle developed a corridor needs report for emergency management and homeland security, and assisted in the development of economic development and tourism impacts.

Geographic Information Systems Assistant, Leon County Supervisor of Elections, Tallahassee, FL (2008) - Utilized ArcGIS to create detailed and specific maps for voters, candidates, and elected officials. Performed voter data analysis to suit requests of public and party officials. Distributed election day materials to poll workers and answered procedural questions for poll workers.

Graduate Research Assistant, Mineta Transportation Institute, San Jose, CA (Tallahassee, FL) (2008) - Research was carried out while based in Tallahassee, FL. Coordinated with Broward County Transit and Fort Worth Transportation Authority to obtain transit ridership and service data. Constructed graphs and tables to display research results from transit use analysis.

Graduate Teaching Assistant - Statistics, Department of Urban and Regional Planning, Florida State University, Tallahassee, FL (2008) - Conducted lab sessions and assisted students with various assignments. Instructed students on the use of SPSS, which is statistical analysis software. Directed students in methods of using SPSS to analyze planning related data.

Graduate Research Assistant, Florida Planning and Development Lab, Tallahassee, FL (2008) - Supported staff in researching the effectiveness of the Florida Rural Land Stewardship (RLS) Program. Created maps (in ArcGIS) displaying distribution of present RLS programs by county and distribution of counties with application for RLS. Researched the structure of Area-wide DRI's, optional sector plans, and large-scale comp plan amendments.

ENGINEERS
PLANNERS
ECONOMISTS

WilburSmith
ASSOCIATES

Nickson A. Benedico, PE, AICP, PMP

Intersection Design

Education
MBA, Business Administration, University of Central Florida, 1995

BS, Civil Engineering, University of Florida, 1989

Registrations
Professional Engineer: Florida, 1994 (#48110)

Certifications
Project Management Professional (PMP), 2007 (#463251)

American Institute of Certified Planners, Florida, 2001 (#017037)

Years of Experience
Total Years: 20
WSA: 4

August 2006-Present
Wilbur Smith Associates
Orlando, Florida

Professional Affiliations
American Society of Civil Engineers
American Planning Association
Florida Engineering Society
National Society of Professional Engineers
Project Management Institute

Technical Training
FDOT Errors and Omissions
FDOT Specification Preparation
AASHTO Interchange Design
FHWA Access Management
Primavera SureTrak
Geopak Roadway Design Software
MicroStation

Nick Benedico is a vice president with Wilbur Smith Associates and serves as the Florida director of transportation design. He has more than 20 years of extensive transportation engineering experience, including serving in senior management positions on roadway/expressway projects for clients such as Florida's Turnpike Enterprise, the Orlando-Orange County Expressway Authority, and Districts 1 and 5 of the Florida Department of Transportation. His relevant project experience includes:

S.R. 500/Indian River Relief Bridges Replacement Project Design-Build, Johnson Bros. LLC, FDOT District 5, Brevard County, FL (2010-Present) – WSA is serving as the lead design firm on this $9.3 million design-build project. The project involves the replacement of three low-level "relief" bridges on the S.R. 500 crossing of the environmentally sensitive Indian River. The three bridges were functionally deficient and require replacement, with the additional requirement of maintaining four lanes of traffic throughout construction on this hurricane evacuation route from the town of Indialantic to the Florida mainland. Nick is the lead roadway designer on the project and is also providing quality control/quality assurance reviews of the project.

Systemwide Production Management Consultant for OOCEA, Orlando, FL (2009-Present) – Nick is serving as project manager for this contract, which involves coordinating and conducting reviews of plans, reports, and calculations submitted by OOCEA's design consultant at the preliminary engineering, 30 percent, 60 percent, 90 percent, 100 percent, pre-bid, and bid phases of the project.

S.R. 46 Lake Jesup Bridge Replacement, Design-Build, FDOT District 5, Seminole, and Volusia Counties, FL (2008-Present) – Nick serves as a quality control/quality assurance manager for the roadway and maintenance of traffic plans on this $38 million design-build project. This project includes realignment of the roadway intersections at Old Geneva Road and Osceola Road and incidental roadway construction. The project also involves the replacement of a 500-foot long obsolete bridge with a 3,740-foot structure in the environmentally sensitive region where the St. Johns River intersects with Lake Jesup. In addition to removing the deficient bridge, the existing causeway will be removed as well within the limits of the proposed bridge to increase the flow of water between the river and Lake Jesup.

Experience prior to joining WSA:
General Engineering Consultant for Florida's Turnpike Enterprise (2005-2006) – Nick served as a senior project manager for the Turnpike's GEC and was responsible for managing the work of the Turnpike's design consultants on numerous widening, interchange, and toll plaza projects.

S.R. 408 Widening from Hiawassee Road to Tampa Avenue, OOCEA, Orange County, FL (2001-2003) – Served as project manager and oversaw all elements of this project. Managed the schedule and budget and coordinated with all team members. This project involved the widening of a 4-lane divided, limited-access toll road to six lanes by widening to the median. Work included demolition of the existing barrier toll plaza west of Tampa Avenue and construction of a new express toll plaza east of Pine Hills Road. Modifications were designed to the

interchanges at Pine Hills Road, Old Winter Garden Road, and S.R. 423/John Young Parkway.

S.R. 710 Interchange with Florida's Turnpike, Florida's Turnpike Enterprise, Palm Beach County, FL (2000-2003) – This project involved designing and preparing construction plans for a new tight diamond interchange. The project included the widening and extension of an arterial that served as the connection between the interchange and S.R. 710. Extensive public involvement with the adjacent Steeplechase subdivision and nearby emergency management facilities was performed. Aesthetic design features were incorporated into the design of the interchange.

S.R. 429 (Western Beltway), Part C – Section 2, from Sand Hill Road to West Orange Lake Boulevard, Florida's Turnpike Enterprise, Osceola and Orange Counties, FL (1998-2003) – The Western Beltway was a new, limited- access roadway from I-4 in Osceola County to Florida's Turnpike in Orange County. Nick was the project manager for Section 2, a 3.8-mile segment of 4-lane, divided expressway that included a diamond interchange at U.S. 192 (S.R. 530) in the highly urbanized tourist corridor near the segment's midpoint. The project also included three bridge crossings and an express toll plaza. Two local roads, Sand Hill Road and Dreamers Drive, were relocated to avoid having to construct costly retaining walls, and U.S. 192 was widened to provide turn lanes to and from the ramps.

S.R. 417 (GreeneWay) Widening (from S.R. 50 to the Seminole County Line), OOCEA, Orange County, FL (1999-2002) – This project involved the widening of S.R. 417 from S.R. 50 to north of University Boulevard. The design included widening the existing 4-lane divided toll road to six lanes and converting the existing toll plaza to an express toll plaza. The interchange with University Boulevard was modified to include a collector-distribution (C-D) road. The project also included improvements to University Boulevard to accommodate the C-D road. Nick served as project manager and oversaw all elements of this project.

S.R. 417 (GreeneWay) Seminole County Expressway – Project 2, Section 2 Final Design, Florida's Turnpike Enterprise, Seminole County, FL (1995-2002) – The Seminole County Expressway, Project 2, was the second phase of S.R. 417 and traversed an urbanized area of Seminole County. Nick served as the project manager for this 2.7-mile segment from Old Lake Mary Road to Rinehart Road. The project involved the design of a new, 4-lane, divided expressway with a diamond interchange at C.R. 46A and a bridge over Upsala Road. It also included two ramp toll plazas and widening a 0.65-mile segment of C.R. 46A from a 2-lane rural road to a 4-lane divided urban arterial between Country Club Road and Airport Boulevard. Also, a 0.25-mile local road was constructed to replace the access to Upsala Road eliminated by the expressway. The project crossed an old Seminole County Landfill that had not been regulated for many years. Since the buried refuse was unidentified, soil samples were analyzed to determine whether the landfill should be capped, removed, or bridged.

Western Beltway, Part C Project Development and Environment (PD&E) Study, OOCEA, Orange County, FL (1995-1996) – This project involved developing conceptual designs for alternative alignments of new 22-mile limited access expressway, including nine interchanges.

ENGINEERS PLANNERS ECONOMISTS

WilburSmith ASSOCIATES

Quang Le, PE

Intersection Design

Education
BS, Civil Engineering, University of Connecticut, 2003

Registrations
Professional Engineer Florida, 2009 (#69964)

Certifications
Maintenance of Traffic (FDOT)

Years of Experience
Total Years: 6
WSA: 5

Areas of Specialization
Roadway design, traffic design and drainage design

Technical Training
FDOT Maintenance of Traffic, Intersection Design, Pavement Design, GeoPak, MicroStation V8, FDOT SiteMenu

Quang Le serves as a roadway engineer for Wilbur Smith Associates in the Highway Division. He has six years of experience in roadway design, traffic engineering, and roadway drainage design. Relevant project experience includes:

Kirkuk Ring Road, Segment 2, Iraq - Roadway designer for a 3-mile section of new construction of a 6-lane divided freeway. The design also includes an interchange and side street.

S.R. 111/McLendon Street Intersection, FDOT District 2, Nassau County (Jacksonville), FL - Serves as project designer for this project which involves the analysis and evaluation of alternatives for improvements at intersection (S.R. 111 and McClendon Street).

S.R. 15/600 (U.S. 17/92), Florida Department of Transportation District 5, FL - Served as project designer for this project which includes three miles of 4-lane resurfacing, roadside safety improvements, and pedestrian curb ramp upgrades.

S.R. 76 Resurfacing in Martin County, FDOT District 4 - Serves as project designer responsible for the design and productivity for this project which involves milling, resurfacing, and safety improvements to two miles of a rural 2-lane highway.

S.R. 91 (Florida's Turnpike) Milling and Resurfacing, Florida's Turnpike Enterprise, St. Lucie County, FL - Serves as project designer for this project which consists of preparing the design documents for the milling and resurfacing, design criteria upgrades, and the preparation of design variations and exceptions for the turnpike mainline from MP 138.2 to MP 153.2 in St. Lucie County. Responsible for the preparation of CADD drawings and composition book.

S.R. 91 (Florida's Turnpike) Milling and Resurfacing, Florida's Turnpike Enterprise, Martin County, FL - Served as project designer for this project that included the preparation of the design documents for the milling and resurfacing, design criteria upgrades, and the preparation of design variations and exceptions for the turnpike mainline from MP 125.4 to MP 138.2 in Martin County.

S.R. 46/Lake Jesup Bridge Replacement Design-Build, FDOT District 5, Seminole and Volusia Counties, FL - Roadway designer for this $38 million design-build project that was approximately 1.5 miles in length; half of which was a bridge. The project involved the replacement of a 500-foot long obsolete bridge with a 3,740-foot structure in the environmentally sensitive region where the St. Johns River intersects with Lake Jesup. This project was unique because in addition to removing the deficient bridge, the existing causeway was removed as well within the limits of the new bridge. This will remove the pollutant load currently draining from the roadway into the lake and allow better flow between the St. Johns River and Lake Jesup.

S.R. 5 (U.S. 1), FDOT District 5, FL - Serves as project designer for this project which includes 6.9 miles of 2-lane resurfacing and roadside safety improvements.

Burnt Store Road, Charlotte County Public Works, Charlotte County, FL - Serves as project designer for this project which involves widening the travel lanes to 12-feet and providing a paved shoulder for nine miles of Burnt Store Road in Charlotte County, a rural arterial. The improvements include roadway design, pavement design, signing and pavement markings, channel and ditch design, cross drain design and analysis, as well as the replacement of more than 80 side drains, and maintenance of traffic.

Honore Avenue, Sarasota County Public Works, Sarasota County, FL - Served as a roadway designer responsible for designing 3.8 miles of a new construction of a 4-lane divided major arterial urban roadway.

Oak Leaf Lane Drainage Improvements, City of Kissimmee, FL - Served as project roadway designer responsible for design of proposed roadway profile adjustments, plans production, quantities, and cost estimates. Project involved raising Oak Leaf Lane to mitigate flooding from adjacent Mill Slough.

Sand Run Road Drainage Improvements, City of Kissimmee, FL - Served as the project designer responsible for the plans productions, quantities, and cost estimates. The project involved expanding the existing retention pond to mitigate flooding from adjacent Mill Slough.

Prior to joining WSA, Quang served as a project engineer assisting the project manager with design and productivity for the following contracts:

- **S.R. 528 - Beeline Expressway Widening, Florida's Turnpike Enterprise**
- **S.R. 429 Maitland Boulevard Extension, Contract 201, Orlando-Orange County Expressway Authority (OOCEA)**
- **S.R. 408 Improvements Contract 253C, OOCEA**
- **Western Beltway Part C, Section 2A (Florida's Turnpike Enterprise), Orange and Osceola County**

ENGINEERS PLANNERS ECONOMISTS

WilburSmith ASSOCIATES

Paul Q. Snead, PE

Drainage Issues

Education
MS, Civil Engineering (water resources), University of Central Florida, 2004

BS, Environmental Engineering, University of Central Florida, 1996

Registrations
Professional Engineer
Florida, 2001 (#56982)

Years of Experience
Total Years: 14
WSA: 5

2005-Present
Wilbur Smith Associates
Orlando, Florida

Areas of Specialization
Water resources / stormwater management, project management, drainage design, and permitting

Professional Affiliations
Florida Engineering Society (FES)
UCF CECS Alumni Board, Chairman
ASCE Water Resources Group, Vice Chair (2000-2001), Secretary (1999-2000)
FDEP Certified Stormwater Management & Erosion Control Inspector

Technical Training
ADICPR Vs. 3/2, ASAD, StormCad, HEC-RAS, MicroStation, GeoPak, GeoPak Drainage, Ponds, Pondflow II and AquiSeep

Office Location
Orlando, FL

Paul Snead serves as a project manager and the lead senior drainage engineer for Wilbur Smith Associates. He has 14 years of experience in water resources/stormwater management engineering including the analysis and design of channel improvements, erosion and sediment control measures, open and closed drainage conveyance systems, hydrologic and hydraulic computer modeling of watersheds, and stormwater related permitting to include Management and Storage of Surface Water (MSSW), ACOE dredge and fill, and NPDES permitting. Additionally, Paul is proficient in river modeling with respect to FEMA flood mapping and CLOMR studies.

Paul's responsibilities include project management tasks as well as leading the drainage design team. Drainage tasks include designs of hydraulic conveyance systems, ponds, ditches, canals, and basin models. Additional design services include pond siting studies, flood plain compensation analysis, FEMA No-Impact Studies, bridge scour analysis, river modeling, and erosion control design. Responsibilities also include permitting preparation and coordination with public and private clients, permitting authorities and subconsultants. Relevant project experience includes:

S.R. 500/Indian River Relief Bridges Replacement Project Design-Build, Johnson Bros. LLC, Florida Department of Transportation District 5, Brevard County, FL (2010-Present) – WSA is serving as the lead design firm on this $9.3 million design-build project. The project involves the replacement of three low-level "relief" bridges on the S.R. 500 crossing of the environmentally sensitive Indian River. The three bridges were functionally deficient and require replacement, with the additional requirement of maintaining four lanes of traffic throughout construction on this hurricane evacuation route from the Town of Indialantic to the Florida mainland. Paul is the lead drainage engineer responsible for the stormwater management design and coordination of permitting the project through the various regulatory agencies.

S.R. 46 Lake Jesup Bridge Replacement, Design-Build, FDOT District 5, Seminole and Volusia Counties, FL (2008-8/2009) – Served as the drainage/ permitting and scour analysis lead engineer. This $38 million design-build project involved the replacement of a 500-foot long obsolete bridge with a 3,740-foot structure in the environmentally sensitive region where the St. Johns River intersects with Lake Jesup. In addition to removing the deficient bridge, the existing causeway was removed as well to reduce the pollutant load draining from the roadway into the lake and to allow better flow between the river and Lake Jesup.

Highland Ridge Bike Park, City of North Port, FL (2007-2008) – Served as project manager providing stormwater management design services for the new Highland Ridge Bike Park. This project was a site civil design project for the city of North Port which included layout and design of a new two and one half acre BMX bike park facility on an existing 8-acre park owned by the city. The stormwater management design included a dry retention pond with sidedrain filters which were permitted through the Southwest Florida Water Management District.

Kissimmee CDBG Drainage Projects, Kissimmee, FL (2007-2008) – Served as the project manager and engineer of record for the design of drainage and roadway improvements for three locations in the City of Kissimmee. Responsibilities included design of stormwater collection systems, roadway profile adjustments, and permitting with the South Florida Water Management District. Developed construction plans and bid documents and provided construction administrative services. The project schedule was so that construction could begin before the grant funding deadline.

Fruitville Road Improvements, Sarasota County, FL (2005-2006) – Served as the engineer of record for the drainage design of this 4.5 mile fast-track improvement project which included ditch improvements to compensate for floodplain impacts and design of seven cross drains to prevent future road overtopping and also meet strict no-impact requirements for Southwest Florida Water Management District. Extensive basin modeling including updating existing models was also required to meet Sarasota County Stormwater permitting requirements. Plans are complete.

Burnt Store Road Alignment Study, Charlotte County, FL (2006-Present) – Drainage engineer of record for this project which involves developing pond siting alternatives for 15 basins along eight miles of Burnt Store Road from the Lee County line to north of U.S. 41 at North Jones Loop Road. Responsible for developing the pond siting criteria and determining the minimum pond size requirements for 15 basins along the roadway alignment.

S.R. 25/500 Drainage Improvements, FDOT District 5 (2005-2006) – Served as project manager and lead senior drainage engineer for this project which involved the design and permitting of a new stormwater management pond. Responsibilities included project management tasks, coordination with FDOT project manager, and oversight of plans production and electronic deliverables.

Taft-Vineland Culverts, Orange County, FL (2006) – Served as the drainage engineer of record for the design of the minimum culvert cross sectional area requirements for a proposed crossing over the C-11 Canal located within the Valencia Community Water Control District (VCWCD). Design tasks included updating the existing AdICPR regional basin model for analyzing resulting flood stages for the proposed structures. Results were coordinated with VCECD in developing the minimum cross sectional requirements for the proposed structures.

Davenport Creek FEMA CLOMR Study, Osceola County, FL (2005) – Served as the project engineer responsible for updating the FEMA HEC-RAS model from S.R. 400 (I-4) to S.R. 535 for two proposed bridges placed in the floodway for the Reunion Development by the Ginn Company. Modeling tasks included preparation of existing, revised existing, and proposed 100-year water profiles and a floodway analysis using the computer program HEC-RAS. Scour depths were also determined for the 100-year and 500-year events.

Conway Road Widening from S.R. 528 to Hoffner Road, City of Orlando, FL (2004-2005) – Served as the drainage engineer responsible for the design of the stormwater management facilities and secondary conveyance systems for widening of Conway Road from S.R. 528 to Hoffner Road. Stormwater management design included wet detention ponds and the secondary conveyance design of closed stormsewer system and bypass system to Lake Conway.

ENGINEERS
PLANNERS
ECONOMISTS

WilburSmith
ASSOCIATES

Mandee Brandt, PE

Drainage Issues

Education
BS, Environmental Engineering, University of Central Florida, 2002

Registrations
Professional Engineer Florida, 2007 (#65581)
FDEP Qualified Stormwater Management Inspector, 2009

Years of Experience
Total Years: 10
WSA: <1

Affiliations
Society of Women Engineers (SWE), Life Member
Florida Engineering Society (FES), 2010-11 Chapter President

Awards
Central Florida FES Young Engineer of Year (2008)
Engineering Week New Faces in Engineering Nominee (2007)

Computer Skills
MicroStation J, GEOPAK, GEOPAK Drainage, ASAD, ICPR, Ponds 3.2, HY-8, HEC-12, HEC-18, Culvert Life Estimator, SureTrak

Mandee joins Wilbur Smith Associates as a drainage engineer in the roadway division. She has more than 10 years of experience and her responsibilities include design of stormwater collection systems, hydraulic reports, permit coordination, stormwater field investigations, stormwater management systems, permitting, and plans preparation.

Experience prior to joining WSA includes:

Juanita Avenue Bridge Replacement, Design-Build, St. Lucie County, Florida Bridge and Transportation - The project consisted of replacing the existing bridge over Taylor Creek as well as adding six foot shoulders. This project was funded by the American Recovery and Reinvestment Act (ARRA). Responsibilities included the design of the storm sewer collection facilities and ditch design; obtaining the permits from the South Florida Water Management District (SFWMD) and the Fort Pierce Farms Water Control District. Also prepared the Bridge Hydraulics Report for Juanita Avenue over Taylor Creek.

Hoagland Boulevard Segment 2, Osceola County, FL - The project consisted of adding a new 4-lane divided urban roadway facility to Osceola County. Prepared the Pond Siting Report including verifying proposed pond locations and basin limits. Key responsibilities included managing the drainage design by assigning tasks to team members, and coordinating with permitting agencies, adjacent projects and team members to ensure resources were properly managed. The drainage design included a stormwater management facility, stormsewer collection facility, and cross drains.

Narcoossee Road Segment 3 from Jack Brack Road to the Boggy Creek Road, Osceola County, FL - The project consisted of utility relocation, roadway, and drainage improvements over a distance of 3.19 miles. Responsibilities included the design of the stormwater management facilities, storm sewer collection facilities, cross drain design, and permitting with SFWMD. Key responsibilities included managing and coordinating the drainage design by assigning tasks to team members and training junior engineers on storm sewer design. Prepared the Pond Siting Report and Bridge Hydraulics Report for Narcoossee Road over Canal 29B. Also provided post design services and plans production.

Wymore Road Sidewalk Design, Seminole County Public Works, FL - The project consisted of designing a six foot wide sidewalk from the Altamonte Manor Apartment Homes to the Walgreens. Lead drainage engineer, solely responsible for the design and plans production of the storm sewer collection facilities and obtaining the permit from the St. Johns River Water Management District (SJRWMD).

North Lockwood Boulevard, Seminole County, City of Oviedo, FL - This project consisted of the reconstruction of North Lockwood Boulevard from C.R. 419 to C.R. 426. This project was funded by ARRA. Lead drainage engineer, solely responsible for the design and plans production of the underdrain system to lower ground water away from the roadway base and obtaining the permit from the SJRWMD.

Ormond Crossings Boulevard from U.S. 1 west of I-95 to U.S. 1 east of I-95, Volusia County, FL - The project consisted of designing Ormond Crossings Boulevard, a new 4-lane divided roadway over a railroad accessing a private development. Responsibilities included the design and plans production of the storm sewer collection facilities along Ormond Crossings Boulevard and U.S. 1.

Metro Parkway (S.R. 739) Design from Six Mile Cypress Parkway to Daniels Parkway, FDOT District 1, Lee County, FL - The project consisted of widening 1.2 miles of S.R. 739 (Metro Parkway) from a 2-lane undivided rural roadway to a 6-lane urban roadway and included four-foot bike lanes and five-foot sidewalks. Provided post design services and plans production.

Chapman Road Design from S.R. 426 to S.R. 434 – Phase 1, Seminole County Public Works, FL - Project involved plans update and production of construction plans for the reconstruction of Chapman Road. Responsibilities included environmental resource permitting and final drainage plans.

Palm Bay Road Design from Minton Road to Robert J. Conlan Boulevard, FDOT District 5, Brevard County, FL - The project included final engineering design and permitting to widen approximately five miles of C.R. 516 from a 4-lane suburban to a 6-lane divided urban arterial roadway. Provided post design services and plans production

I-75 Widening, FDOT District 5, Sumter County, FL - Project improved the existing I-75 from south of C.R. 470 to just south of Florida's Turnpike. Responsibilities included the Pond Siting Report Update including verifying proposed pond locations and basin limits. Also responsible for developing the drainage design. Key responsibilities were managing the design by assigning tasks to team members, and coordinating with permitting agencies, adjacent projects and team members. The drainage design includes stormwater management facilities, ditch design, and stormsewer collection facility.

I-75 PD&E, FDOT District 5, Sumter County, FL - A 20-mile study of the I-75 corridor. Provided assistance to the lead drainage engineer that included data collection, pond site analysis for 80 stormwater management facilities.

East West Road Segment 2, Orange County, FL - The project consisted of adding a new 4-lane divided urban roadway facility to Orange County. Provided assistance developing drainage calculations for stormsewer systems, and floodplain compensation calculations. Assisted with coordination efforts with the adjacent project, East West Road Segment 1; assisted with the roadway design such as profile grade line and back of sidewalk profiles; and provided drainage and roadway CADD support services.

S.R. 426 (Aloma Ave), FDOT District 5, Seminole County, FL - An urban roadway that was changed from a four-lane divided to a 5-lane undivided roadway. Developed the maintenance of traffic design, including calculating the quantities and provided roadway CADD support services. Responsible for preparing 90 percent deliverables, receiving the comments and providing responses. Responsible for developing the construction schedules using the SureTrak software.

Section B:
Experience With Projects of a Similar Type and Size

SECTION B: EXPERIENCE WITH PROJECTS OF A SIMILAR TYPE AND SIZE

Work Category - Traffic and Intersection Engineering

B.1 PROJECTS ILLUSTRATING THE EXPERIENCE OF THE FIRM AND CURRENT STAFF

CDM and WSA are proud of their excellent reputation for completing complex projects on-time, within budget, and with a high degree of competence. These recent and on-going projects illustrate the CDM team's vast experience and strong commitment to successfully completing any traffic and intersection engineering assignment requested by Leon County:

River Oaks Road Engineering Traffic Study, Jacksonville, FL

Firm's Responsibility: ***Prime***
Project Owner's Representative: ***Annette Lapkowski, P.E., Florida Department of Transportation Rail Office, 605 Suwannee Street, MS-25, Tallahassee, FL 32399; Tel: 850.414.4541***
Date Completed: ***April 2009***
Project Manager and Other Key Personnel: ***Project Manager - Bob Hamm; Traffic Engineer - Om Kanike; Transportation Planner - Gabrielle Matthews***

The Florida Department of Transportation received an application to close the highway-rail grade crossing located on River Oaks Road in Jacksonville, Florida. The application was filed by local residents. WSA was selected to develop an engineering traffic study to review traffic and transportation related conditions in and around the grade crossing and determine if closing the crossing would have an adverse impact on traffic operations. The study included an extensive origin/ destination study at the crossing to determine travel patterns of traffic using the crossing, as well as data collection activities to evaluate the travel time impacts of closing the crossing. The study also included a review of emergency response impacts from the City of Jacksonville Fire and Police Departments, along with a review of traffic capacity implications.

Safety Study: Comparison of 4 and 6 Lane Divided Cross Sections to 5 and 7 Lane Cross Sections, Florida

Firm's Responsibility: ***Prime***
Project Owner's Representative: ***John Taylor, P.E., Florida Department of Transportation, Systems Planning Office, 605 Suwannee Street, MS-19, Tallahassee, FL 32399; Tel: 850.414.4930***
Date Completed: ***March 2011***
Project Manager and Other Key Personnel: ***Project Manager - Bob Hamm; Traffic Engineer - Revo Kanilwa; Transportation Planner - Gabrielle Matthews***

WSA conducted this safety study to compare various crash, economic, and traffic characteristics of four- and six-lane divided cross sections to five- and seven-lane cross sections. Data was obtained from the Traffic Characteristics Inventory (TCI), Crash Analysis Reporting System (CARS), and Roadway Characteristics Inventory (RCI). More than 80 study segments were evaluated statewide, including statistical analysis of crash rates compared to land use, number of driveways, and intersection spacing. The study also included a review of the economic impacts of

crashes and an analysis of traffic characteristics. Recommendations included the appropriate use of five- and seven-lane cross sections on Florida's state highway system.

I-95 Interchange with SW 7th/SW 8th Streets Traffic Analysis, Miami, FL

Firm's Responsibility: ***Subconsultant***
Project Owner's Representative: ***Ken Jeffries, P.E., Florida Department of Transportation, District 6, 1000 N.W. 111th Avenue, Miami, FL 33172; Tel: 305.470.5840***
Date Completed: ***March 2008***
Project Manager and Other Key Personnel: ***Project Manager - Bob Hamm; Traffic Engineer - Revo Kanilwa***

This study involved evaluating the current bottleneck conditions at the southbound I-95 exit ramp to SW 7th/SW 8th Streets. Two build alternatives were developed and evaluated for design year 2018 conditions using CORSIM and SYNCHRO software packages. Intersection design reviews were conducted to review constructability issues and only consider solutions that could be accommodated within the existing right-of-way. The recommendation included both short- and long-term solutions estimated at less than $150,000.

Evacuation Transportation Modeling and Analysis, Florida

Firm's Responsibility: ***Prime***
Project Owner's Representative: ***Sandy Meyer, Florida Division of Emergency Management, 2555 Shumard Oak Boulevard, Tallahassee, FL 32399; Tel: 850.413.9893***
Date Completed: ***December 2010***
Project Manager and Other Key Personnel: ***Project Manager - Bob Hamm; Transportation Planner - Gabrielle Matthews***

This study for the Florida Division of Emergency Management and all 11 regional planning councils within Florida involved the development and implementation of a travel demand modeling framework and methodology to evaluate transportation impacts of various hurricane evacuation scenarios on both a regional and statewide level. The methodology was developed to be consistent statewide using CUBE Voyager and CUBE Avenue travel demand modeling software. Travel demand models were then developed and implemented for each Regional Planning Council area (including the Apalachee RPC and Leon County) and used to develop updated Regional Evacuation Studies.

Honore Avenue/Pinebrook Road Extension, Sarasota County, FL

Firm's Responsibility: ***Prime***
Project Owner's Representative: ***Vinod Sancheti, P.E., Project Manager; Sarasota County Public Works, 1001 Sarasota Center Blvd., Sarasota, FL 34240; Tel: 941.861.0803***
Date Completed: ***Ongoing since 2006***
Project Manager and Other Key Personnel: ***Project Manager - Nick Benedico; Other Key Personnel - Chris Mills, Paul Snead, Quang Le, Om Kanike***

WSA was selected by Sarasota County to develop design plans for intersection improvements and traffic signal design at the Honore Avenue/Laurel Road intersection in Sarasota County as part of the extension of Honore Avenue. The

project included constructing 3.8 miles of a four-lane divided roadway from Laurel Road to S.R. 681, with sidewalks, closed drainage, street lighting, landscaping, and bike lanes. This project included an at-grade intersection with a limited access roadway S.R. 681, which required signalization, and also included improvement of traffic signals and lane geometry at the Laurel Road intersection. The project also included design services for three bridge crossings over Salt Creek, Fox Creek, and Cow Pen Slough. Engineering services included design, permitting, bidding, and limited construction phase services.

The County will use a 1.5-mile segment of the existing I-75 southbound lanes and the limited access right-of-way in the area north of the Laurel Road Interchange to Cow Pen Slough. Close coordination with Florida Department of Transportation District 1 was necessary in the areas of roadway design, transfer of the limited access right-of-way to the County, construction costs, construction schedule, cost sharing, funding, and public involvement.

The design is underway, and WSA submitted the 100 percent plans on schedule and are currently modifying the design for an interim two-lane urban roadway. Using the WSA value engineering process for the approved PD&E preferred alignment, WSA determined that twin bridges at Fox Creek and Cow Pen Slough will provide a saving to the county over $1.5M. In addition, WSA modified the alignment at Cow Pen Slough and secured approval from the County and the FDOT that will allow the County to use the existing bridge and roadway fill for an additional savings of $1M. The County adopted both changes.

SR 40 Status Change Study, Ocala to Daytona Beach, Florida

Firm's Responsibility: ***Prime***
Project Owner's Representative: ***John Taylor, P.E.; Florida Department of Transportation, Systems Planning Office, 605 Suwannee Street, MS-19, Tallahassee, FL 32399; Tel: 850.414.4930***
Date Completed: ***March 2008***
Key Personnel: ***Traffic Engineers - Bob Hamm, Om Kanike***

This study involved the reevaluation of the status of SR 40 from I-75 in Marion County to I-95 in Volusia County as part of the Emerging SIS. The study included a review of the SIS, Emerging SIS, and FIHS designation criteria, development of potential alternative corridors, a safety analysis, future traffic volume forecasts along SR 40 and alternative corridors, identification of environmental issues and concerns, a review of emergency evacuation needs, and development of recommendations.

Piper Road Improvements, Punta Gorda, FL

Firm's Responsibility: ***Prime***
Project Owner's Representative: ***Brian Barnes, P.E., Capital Projects Engineer; Charlotte County Public Works, 7000 Florida Street, Punta Gorda, FL 33950; Tel: 941.575.3600***
Date Completed: ***2009***
Project Manager and Other Key Personnel: ***Project Manager - Nick Benedico; Other Key Personnel - Om Kanike***

WSA was selected to develop intersection design plans for the reconfiguration of Piper Road/North Jones Loop Road. As part of the design efforts, WSA was responsible for developing the signing and pavement marking plans, traffic signalization plans, and conducting the traffic study.

Edgewater Corridor Phase III, Charlotte County, FL

Firm's Responsibility: ***Prime Consultant/Lead Designer***
Project Owner's Representative: ***Brian Barnes, P.E., Capital Projects Engineer; Charlotte County Public Works, 7000 Florida Street, Punta Gorda, FL 33950; Tel: 941.575.3600***
Date Completed: ***May 2009***
Project Manager and Other Key Personnel: ***Project Manager - Paul Snead; Key Staff - Revo Kanilwa***

WSA was the lead consultant selected by Charlotte County to provide professional engineering services for the design of a proposed connector between the Edgewater/Collingswood Boulevard intersection and the S.R. 776/Flamingo Boulevard Intersection. A segment of the Edgewater corridor is on a new alignment, and the other segment exists as a two-lane undivided roadway. WSA designed for an ultimate four-lane divided roadway with 12-foot travel lanes, sidewalks, paved shoulders, and swales. The County chose to initially build just two lanes and expand to the ultimate configuration when funding becomes available. The FDEP and tje SWFWMD required the County to compensate for water quality and treatment of stormwater for all the basins connected to the roadway to facilitate the removal of the Manchester lock at Charlotte Harbor. This will require an innovative design approach to maximize the right-of-way for ponds, as well as the roadway improvements. The project also included the design of two bridges over existing canals and the removal of one existing bridge. The corridor traverses habitat of the Florida scrub jay, which required extensive mitigation and permitting.

Fruitville Road Design, Sarasota County, FL

Firm's Responsibility: ***Prime Consultant/Lead Designer***
Project Owner's Representative: ***Carolyn Eastwood, P.E.; Sarasota County Public Works; 1001 Sarasota Center Blvd., Sarasota, FL 34240; Tel: 941.861.0890***
Date Completed: ***2006***
Project Manager and Other Key Personnel: ***Project Manager - Paul Snead***

WSA, under its on-call contract with Sarasota County, FL, was selected to provide preliminary engineering and final design services for the Fruitville Road project. The project corridor began at the intersection with Verna/ Myakka Road and terminated 4.5 miles to the west. The existing roadway consisted of two 10-foot travel lanes with unpaved shoulders and roadside swales. To expedite the right-of-way donation process, the County allowed WSA only 90 days in which to prepare the final design plans. WSA delivered the 100 percent plans on time and submitted all applicable permits to the agencies in just 60 days. The design included three concrete box culverts, four cross drains, three wildlife crossings, roadside ditch reconstruction, and raising the roadway profile in one area to eliminate flooding on this evacuation route.

Browning and Gay Streets Engineering Traffic Study, Polk County, FL

Firm's Responsibility: ***Prime***
Project Owner's Representative: ***Annette Lapkowski, P.E.; Florida Department of Transportation Rail Office, 605 Suwannee Street, MS-25, Tallahassee, FL 32399; Tel: 850.414.4541***
Date Completed: ***2006***
Project Manager and Other Key Personnel: ***Project Manager - Bob Hamm; Traffic Engineers - Revo Kanilwa, Om Kanike***

The Florida Department of Transportation received an application to close the highway-rail grade crossings located on Browning Street and Gay Street in Lakeland, Florida. The application was filed by CSX Corporation. WSA was selected to develop an engineering traffic study to review traffic and transportation related conditions in and around the grade crossing locations and determine if closing the crossings would have an adverse impact on traffic operations. The study included extensive data collection activities to evaluate the travel time impacts of closing the crossing. The study also included a review of emergency response impacts from the City of Lakeland Fire and Police Departments, along with a review of traffic capacity implications.

B.2 PROJECTS PRESENTLY UNDER CONTRACT

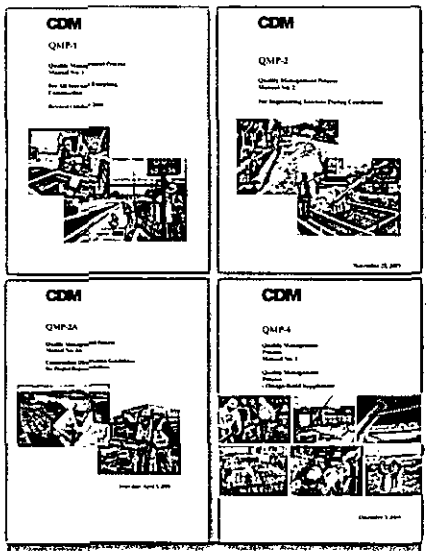
In 2010, CDM entered into entered into contractual agreements with 775 regional, state, and municipal governments and utilities, as well as 10 different U.S. federal agencies. Additionally, over the last five years, CDM has maintained several hundred different continuing services contracts with 130 government entities throughout Florida, and, in Florida alone, CDM has more than 600 active projects and over 220 clients, many of these being municipal entities. Likewise, WSA has several ongoing contracts with municipalities and counties throughout the state for a range of services that includes roadway design and construction engineering and inspection (CEI) of roadway and bridge projects. Due to the length of this list and the County's express interest in keeping submittals as concise as possible, we have chosen to highlight several current projects for which CDM and WSA are currently under contract for your review. These projects, shown in **Table B.2-1**, demonstrate our capabilities and qualifications to perform roadway design services. If the County wishes, we can provide further projects and references that can attest to our professionalism and the qualify of our work.

Table B.2-1

PROJECT NAME	DESCRIPTION
Corridor Engineering Traffic Study, Florida	WSA was selected by the Florida Department of Transportation to conduct a corridor engineering traffic study of railroad grade crossings along the CSX line in Central Florida. The study will include capacity/level-of-service analysis at nearby intersections and evaluation of the traffic impacts of closing selected crossings.
Trip Generation Study, Florida	WSA was selected by the Florida Department of Transportation to conduct a series of trip generation studies for selected land uses in Florida. Land uses will include specialty supermarkets, casinos, and adult care retirement communities. The study will involve traffic data collection and statistical analysis of the data for various land uses.
Honore Avenue/Pinebrook Road Extension, Sarasota County, FL	WSA was selected by Sarasota County to provide professional engineering services for the design of the Honore Avenue/Pinebrook Road Extension. The project included constructing 3.8 miles of a four-lane divided roadway from Laurel Road to S.R. 681, with sidewalks, closed drainage, street lighting, landscaping, and bike lanes.
Winchester Boulevard, Phase III, Charlotte County, FL	WSA was selected by Charlotte County to provide final design for this hurricane evacuation route. The design includes the new construction of a four-lane divided roadway, sidewalks, bike lanes, raised median, lighting, a new signal at S.R. 776 and at C.R. 775, and a box culvert over Oyster Creek. One segment includes closed drainage with curb and gutter and the other segment is a rural section with open drainage.
On-Call Transportation Support, Florida	WSA was selected by the Florida Department of Transportation to provide on-call transportation support services on a statewide basis to the Systems Planning Office. Work assignments include traffic engineering and transportation planning assignments, including corridor studies, access management, interchange justification support, strategic intermodal system support, travel demand modeling, and growth management support.
Gum Creek Letter of Map Revision, Leon County, FL	Under CDM's existing continuing services contract with Leon County, CDM is performing a flood study for the Gum Creek and Gum Swamp watersheds. CDM is currently updating and revising existing models and preparing a LOMR to revise the FEMA flood maps accordingly.
Southbrook Floodplain Enhancement and Final Design Services, Leon County, FL	CDM is designing stormwater improvements to the current stormwater system in the Southbrook Lane area, which was experiencing home flooding. CDM evaluated the current system through field investigation, historical information, hydraulic and hydrologic evaluation, and review of available data, and proposed alternative conceptual design measures to mitigate the current flooding issues during the conceptual design phase of this project. Currently, CDM is designing the selected alternative, including enhancement of storage areas and natural channel section improvements.
Gulf Highlands Letter of Map Amendment, Panama City, FL	Under CDM's master services agreement with the City, CDM is preparing a Letter of Map Amendment for the Gulf Highlands area, as a follow up to the Gulf Highlands LOMR. CDM is also preparing resident notification letters, collecting data, submitting a report to FEMA, and notifying residents after approval by FEMA.
Hombre Circle Stormwater Improvements, Panama City, FL	The City has requested that CDM provide consulting engineering services for the design of stormwater improvement facilities at Hombre Circle. CDM is completing the following tasks for this project: coordination of geotechnical work, design services, permit assistance, and limited bidding and limited engineering services during construction. This project also includes design and permitting of a pipe crossing with concrete headwalls.

Table B.2-1

PROJECT NAME	DESCRIPTION
Moonlight Bay Stormwater Improvements, Panama City Beach, FL	CDM is providing consulting engineering services for the design of stormwater improvement facilities at Moonlight Bay. The City identified pipe integrity problems from south of Moonlight Bay Drive to the West Bay outfall, and CDM is completing the following tasks to assist the City: site visit and coordination for survey and geotechnical work, hydrologic and hydraulic evaluation, design services, permit assistance, and limited bidding and limited engineering services during construction.
South Glades Trail Stormwater Improvements, Panama City Beach, FL	To support the City of Panama City Beach in the design of stormwater improvements to the existing treatment facilities at South Glades Trail, CDM is providing services related to site visits and coordination for survey and geotechnical work, hydrologic and hydraulic evaluation, design services, permit assistance, and limited bidding and limited engineering services during construction.
Lullwater Drive Stormwater Improvements, Panama City Beach, FL	CDM is designing improvements to the stormwater treatment facilities located at Lullwater Drive. Tasks include site visit and coordination for survey and geotechnical work, hydrologic and hydraulic evaluation, design services, permit assistance, and limited bidding and limited engineering services during construction. Also included under this project is the design and permitting of a pipe crossing with retaining walls and inlets.
Beth & Gardenia Street Stormwater Improvements, Panama City Beach, FL	The City identified several yards with flooding along Gardenia Street and subsequently requested that CDM provide stormwater improvement design services. CDM is performing site visits and coordination for survey and geotechnical work, hydrologic and hydraulic evaluation, and alternatives analysis.
Coral Drive Stormwater Improvements, Panama City Beach, FL	CDM is assisting the City in obtaining a Florida Department of Transportation Drainage Connection Permit for a stormwater design improvements project along Coral Drive.
Bond Stormwater Management Facility Stormwater Monitoring, Tallahassee, FL	The Bond Stormwater Management Facility (SWMF) was selected by the FDEP to receive grant funding through the Section 319(h) Nonpoint Source Management Program, which requires stormwater quality monitoring. The City requested CDM to provide consulting engineering services to complete this project, which includes implementation of an effectiveness monitoring program for the SWMF, determination of the treatment efficiency of the SWMF, and preparation of the draft and final reports that summarize the data evaluation for the performance of the SWMF.
Killearn Acres Subdivision - Middle Basin Drainage Improvements, Leon County, FL	CDM was retained to provide engineering design services to improve the Killearn Acres Middle Basin drainage system. Services to date have included data collection, geotechnical investigation, environmental assessments, survey, preparation of construction documents, permitting, and bidding.
Lake Heritage Dam Phase I, Leon County, FL	CDM is assisting the County with a feasibility study and the conceptual design for the rehabiliation of the existing earthen dam and local drainage system. Tasks have included dam inspection and subsurface investigation for the existing earthen dam impounding Lake Heritage; the development of H&H models for the existing and proposed conditions; the development of alternatives for repair/rehabilitation of the dam; and conceptual design for a preferred alternative.



Quality has been, and remains, the cornerstone of CDM's business for more than six decades. Achieving quality requires vigilance and scrupulous attention to the standards set forth by clients, professional associations, regulators, and CDM. To codify this commitment to quality, CDM has developed Quality Management Process Manuals to address project needs and specific phases.

B.3 PROCESS AND PROCEDURES FOR ENSURING THAT CURRENT DESIGN STANDARDS, CODES, AND OTHER REGULATORY DIRECTION ARE UTILIZED

The CDM team has a formal procedure for managing the quality of a project and meeting client expectations. The CDM Quality Management Procedures (QMP) Manual No. 1 defines the requirements for maintaining a high-level of quality in all stages of a project, including project initiation (scope and budget development) activities, project start-up activities, project execution activities, and project closeout activities. CDM project managers are trained in correct procedures in our multilevel training program administered by CDM University (CDMU), based on Project Management Institute guidelines. Project managers must take the designated training and pass certification to enable them to manage the appropriate level of risk and complexity of projects. A separate training course is held for the specifics of design-build projects, large design projects, and large program management (multi-project) assignments.

Because of the diversity of the services we provide and the clients we serve, QMP manuals have been developed for engineering services during construction (QMP-2 and 2A), construction (QMP-3 and 3a), and alternative delivery (QMP 4) projects. CDM unit presidents are responsible for compliance with all the QMP requirements within their units, using their quality managers to develop auditing systems consistent with their specific operations and client requirements. As a corollary to these review requirements, the CDM team uses specialized project tracking software for schedule, budget, and staffing factors for each major component of the project, so that key staff have instantly available information to assist them in completing the project on time and within budget.

The CDM team believes that meeting our commitments for submittal of deliverables on schedule is of critical importance to project success. Thus, we take a sophisticated approach to project scheduling to measure actual progress against the project plan and provide deliverables to clients on time. We accomplish this by using powerful software programs (such as Primavera) capable of critical path method (CPM) schedule analysis, cost control analysis, and resource usage and leveling analyses.

These programs enable project managers to readily access scheduling and analysis system capabilities. Our proposed project managers are trained in the use of this scheduling software and will be able to provide the critical input needed to the project team for schedule refinement. Issues of quality management, cost control, and early identification and resolution of problems are addressed in every feature of our QMP. Through our careful selection of team members and key staff, to the application of principles and procedures described below, we can provide the County with project management that meets a rigorous standard of quality, cost control, and responsiveness.

Our approach to quality management has three overriding principles:

- **Quality Ethic.** Quality, excellence delivered, is embodied in CDM's core values of excellence, initiative, shared commitment, integrity, and teamwork. These are the fundamental principles that guide our collective and individual decisions, strategies, and actions at CDM. Our staff has been instrumental in effectively permitting, designing, and constructing numerous complex projects, and we

will reinforce this ethic in our project start up kickoff meeting and adhere to it throughout project execution.

- **Quality Checkpoints.** These include ongoing direction and review by senior technical specialists during task/activity execution, in the definition of outcomes and measures, and during the production cycle. For a design project, the main checkpoints are at the 10%, 30%, and 60% design stages so as to minimize rework and schedule slippage. A technical review committee (TRC) consisting of distinguished and experienced practitioners that have not been heavily involved in the design will be assigned to perform reviews at the specified design milestones. These independent reviewers will be assigned by the client service manager or project managers.
- **Quality Audits.** During the kickoff meeting, our project managers will identify opportunities for quality audits, ranging from a direct follow-up contact with the County project team on a specific task; for example, to a formal quality audit with senior CDM and County management staff.

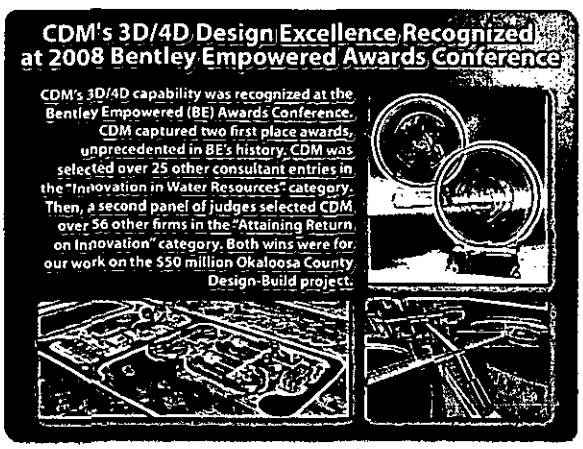
At the core of a sound quality management program is the early identification and resolution of potential problems. Our project managers will do so through:

- Regularly scheduled weekly progress meetings to monitor performance against scope
- Regular project status meetings with County staff
- Regular project status reports to County and follow-up on items needing attention.

B.4 BASIC AND SPECIAL RESOURCES

CDM Orlando 3D/4D Design Center

One of the distinct advantages of choosing CDM is our ability to utilize our 3D/4D Orlando Design Center. The Design Center has all the architectural and engineering disciplines necessary to cost effectively produce 2D designs or 3D engineering models. The center is interconnected electronically with five other similar centers across the country and most have full video conferencing capabilities between them. This approach offers several advantages. First, CDM is able to offer an increased depth and breadth of experience backed by an experienced team that is accustomed to working together. The volume of work performed by these engineering centers gives the CDM staff constant exposure to new technologies and new design developments among the various engineering disciplines. Furthermore, the location of key specialists in design centers provides for specialty consulting needs on all projects regardless of the geographical location of the project site, thereby providing the best possible service and solutions for clients. Lastly, design technologies, such as application programming and computer-aided design (CAD), are applied across such a large number of projects that CDM-standardized approaches and automated routine functions create an extremely efficient design and application engineering process. Such efficiency, combined with our depth of experienced staff, allows CDM to meet the tight schedules often required by our clients while adhering to CDM's proven quality management processes. When the scope of the project makes it beneficial, staff and clients from Florida gather in this state-of-the-art facility and work together to produce innovative designs in 3D/4D. 4D integrates a database into the 3D facility model, providing a consistent and lasting platform

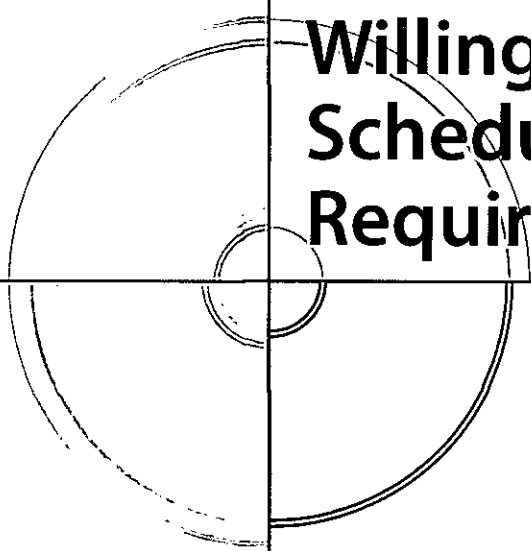


for efficient O&M and long-term asset management. Facilities designed using 3D/4D technology see significant improvements in the efficiency of the design and the quality of the construction drawings and specifications through graphical visualization of design decisions. CDM's 3D/4D design excellence was recognized at the 2008 Bentley Empowered Awards Conference with the capture of two first place awards. Both awards were for the Arbennie Pritchett WRF DB project.

Computer Capabilities

The CDM team possesses all the necessary equipment and support facilities to analyze, research, report, display, and produce data and information collected for engineering and environmental designs and studies. Our engineering design specialists direct the development and use of computer-aided engineering tools throughout the firm. Powerful computer-aided design (CAD) stations, combined with sophisticated communications and reproduction tools, permit the accurate and timely production of engineering designs. These specialists also direct the company-wide development and use of technical specifications and coordinated details to maintain technical quality assurance in specification development for clients. Master specifications and standard design details being developed on an ongoing basis are accessible to all offices through an extensive computer and communications network.

Section C: Willingness to Meet Schedule and Budget Requirements



SECTION C: WILLINGNESS TO MEET SCHEDULE AND BUDGET REQUIREMENTS

Work Category - Traffic and Intersection Engineering

The CDM team has a formal procedure for managing the quality of a project and meeting client expectations. The CDM Quality Management Process Manual No. 1 details the requirements for maintaining a high level of quality in all stages of a project, including project initiation (scope and budget development) activities, project startup activities, project execution activities, and project closeout activities. At each stage of completion, the project manager and client service manager review the project to ensure quality requirements have been met. These requirements may include the review of calculations, the review of alternative analyses, the review of drafting standards, and the review between disciplines for design projects.

As a corollary to these review requirements, the CDM team utilizes specialized project tracking software for schedule, budget, and staffing factors for each major component of the project, so that key staff have instantly available information to assist them in completing the project on time and within budget.

Leon County staff are familiar with CDM's commitment to maintaining schedule and budget. Public projects are notably difficult to schedule because of the need for input from various stakeholders, variability in the schedule of regulatory entities, and other external drivers. However, CDM has consistently delivered projects for Leon County that meet schedule expectations. One of the key means of doing this, as described in the "project approach," is ***regular monthly meetings between CDM and Leon County project staff.*** These meetings, in addition to meetings help for specific topics, allow CDM and County staff to make certain that project schedules are coordinated and moving satisfactorily, and allows for adjustments as required.

Often, regulatory requirements, funding requirements, or other circumstances require fast execution for project success. When a "short fuse" project comes along, CDM Panhandle staff delivers, as the examples below indicate.

- To expedite the right-of-way donation process on the ***Fruitville Road project in Sarasota County,*** the County allowed WSA only 80 days in which to prepare the final design plans. WSA delivered the 100 percent plans on time and submitted all applicable permits to the agencies within 60 days. The design included three concrete box culverts, four cross drains, three wildlife crossings, roadside ditch reconstruction, and raising the roadway profile in one area to eliminate roadway flooding on this evacuation route.
- On the ***S.R. 500 Indian River Relief Bridges design-build project,*** WSA's engineers devised a maintenance of traffic plan and construction sequence that eliminated the need to construct a temporary pedestrian bridge at one of the Indian River crossings. This significantly shortened the project schedule and resulted in a cost savings to the client, the FDOT.
- On the Honore Avenue/Pinebrook Road Extension for Sarasota County, WSA's value engineering process determined that constructing twin bridges rather than connected, multi-lane structures at the crossings of Fox Creek and Cow Pen Slough would provide a savings to the County of more than $1.5M. In addition, WSA modified the roadway alignment at Cow Pen Slough and secured

approval from the County and the FDOT that will allow the County to use the existing bridge and roadway fill for an additional savings of $1M.

- In the spring of 2010, the ***Emerald Coast Utility Authority (ECUA)*** needed a fast assessment of well head protection areas to support revisions to County regulations. They turned to CDM, who performed the groundwater modeling, met with ECUA staff, revised models as required, and delivered the required report in eight weeks, meeting the client's schedule expectations.
- The ***Alligator Point Water Resources District*** asked CDM to produce plans for a 3,000-foot 10-inch waterline project to meet permitting, funding, and construction cycle deadlines. CDM's Panhandle staff, supported by Orlando design center staff, delivered the project design in 30 days, meeting the client's schedule expectations.
- The ***City of Port St. Joe,*** experiencing red water problems in its drinking water distribution system, asked CDM to assess water quality and make recommendations. With five weeks of receiving water quality data from the City, CDM Panhandle staff, supported by Orlando design center staff and other CDM technical experts, delivered technical memoranda evaluating the water quality and making recommendations with cost opinions for improvement alternatives. This schedule met City and Water Management District expectations.
- In an effort to utilize available funding, the ***City of Callaway*** asked CDM to expedite a preliminary design report for lift station CA-31 expansion. CDM delivered the draft preliminary design in 30 days and the final, which addressed City comments and included cost estimates, within 60 days, again meeting client expectations.

Additional recent project examples that illustrate CDM's ability to closely and successfully monitor project costs and schedule include:

- The ***Arbennie Pritchett Water Reclamation Facility in Okaloosa County,*** for which CDM provided design, construction, outfit, start up, performance testing, and permitting services. The project was completed on schedule and on budget with zero unsolicited change orders.
- CDM designed an ***award-winning stormwater park for the City of Casselberry*** to provide stormwater treatment to previously untreated systems. The project, with a budget of $273,831, was completed on budget and on schedule.
- The ***award-winning Little Lake Fairview Restoration and Dubsdread Golf Course Renovation,*** which consisted of the construction of a new drainage management system that outfalls through an existing wetland to Little Little Fairview and a new irrigation system for the golf course utilizing the improved drainage system. Throughout the project, CDM utilized a critical path method schedule to keep the project progressing, despite outside delays affecting certain aspects of the project. The project team also developed detailed cost estimates following each major design submittal package.
- For the ***Seminole County System Inventory and Engineering Analysis for the Lake Sylvan Subbasin,*** CDM provided the County with monthly schedule updates using Microsoft Project. Additionally, CDM provided monthly status reports and earned value reports based upon CDM project specific software to make sure defined project budgets were met.

- As part of the ***Astor Flood Study in Lake County,*** CDM provided the City with monthly schedule updates using Microsoft Project. Additionally, CDM provided monthly status reports and earned value reports based upon CDM project specific software to make sure defined project budgets were met.
- The ***Town of Fort Myers Beach Stormwater Master Plan,*** for which CDM developed a comprehensive plan to develop processes, systems, organizations, costs, and cost funding mechanisms to facilitate reliable and compliant stormwater management practices. This project was completed on time and on budget.
- Project schedule and control measures on the ***Dakin Avenue Box Culvert Improvements projects in Kissimmee*** were important because of grant funding requirements. The project had to be designed and constructed within 36 months. To track schedule and costs, CDM used Microsoft Project and its financial tracking system to monitor both schedule and costs incurred versus earned value. This information was used to adjust project resources and keep the City informed on progress.

The CDM team is committed to meeting the County's schedule and budget requirements for traffic and intersection engineering services by providing appropriate levels of effort that will produce project savings. We will do this by assigning strong project managers with local experience, having the depth of personnel to properly allocate low cost resources, and by our firm commitment to maintain open channels of communication with County staff.

Our extensive experience in managing projects of this nature has shown that the key to successfully meeting schedule and budget is to utilize an experienced project manager who has a disciplined project planning approach. By developing a thorough work plan at the beginning of the project, updating the plan on a monthly basis, and regularly communicating project objectives to the project team, the County should realize benefits in terms of time and cost savings.

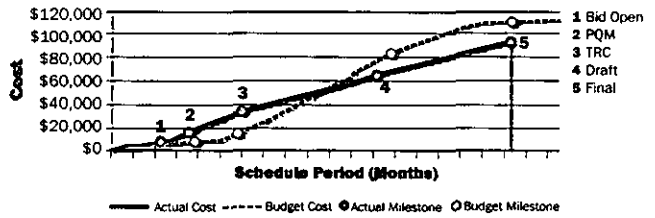


Figure C-1: In this example S-curve, the vertical axis represents costs, either budgeted or actual, and the horizontal axis represents project weeks.

CDM has developed several computer programs to enhance our project managers' ability to monitor and control project schedules and budgets. Each project's schedule and budget is established through a Project Management Plan (PMP) at the time of enrollment. The PMP process establishes the initial tools for effective project and quality management. On a weekly basis, the project manager is provided information to compare actual expense to the budget and develop S-curves.

As shown in **Figure C-1**, an example S-curve, the vertical axis represents the costs, either budgeted or actual, and the horizontal axis represents the project duration. The curve indicates the budget versus time, as well as the actual expenses versus time. A comparison of the two provides the project manager with a quick, yet accurate assessment of the project compared to time, budget, and deliverables.

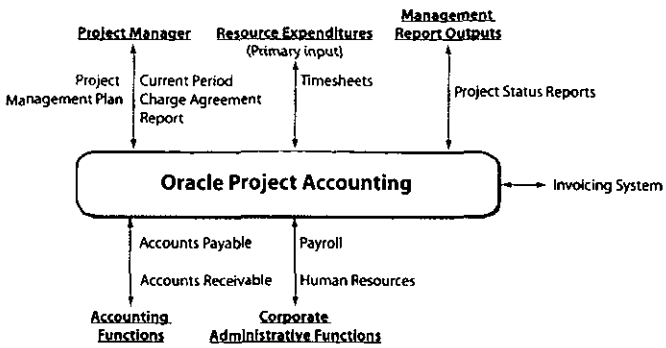


Figure C-2: PRISM project management functions.

CDM developed the Project Information System, or PRISM, to improve project management. PRISM is an integrated management information system centered on the Oracle Project Accounting system to improve efficiency. **Figure C-2** illustrates PRISM's functions.

These are the basic tried and proven tools for effective project management at CDM that will benefit the County through delivery of CDM projects efficiently, on time, and within budget. The CDM team will continue to use these existing project controls throughout our involvement in the County's projects.

C.1 COST ESTIMATES VS. ACTUAL COSTS

While the CDM team is experienced in accurately estimating construction costs, a more critical issue is the project closeout cost as compared to the original bid amount. This information is an excellent indication of the engineer's thoroughness during the design phase and of cost control during the construction phase. With consideration that extenuating circumstances often result in significant increases or decreases in contract closeout prices, we have listed in **Table C.1-1** some of our closeout contract prices for some Florida projects. We believe this closeout cost data reflects favorably on our ability to control costs. In addition, Leon County is familiar with our team's ability to deliver projects on budget through our extensive previous work.

Table C.1-1: Representative Florida Cost Estimates and Change Orders

Project Title	Final Design Estimate ($1,000)	Actual Award Amount ($1,000)	Actual Final Construction Amount ($1,000)
Stormwater Projects			
City of Jacksonville Cedar River Stormwater Improvements	3,686	3,319	3,319
City of Jacksonville Sandalwood Canal In-channel Improvements	6,093	7,315	—
Clay County Culvert Rehabilitation	2,380	2,380	2,380
SJRWMD TCAA Yarborough Regional SWTF	2,134	570[1]	601
SJRWMD TCAA Edgefield Regional SWTF	2,800	629[1]	631
Boynton Beach Downtown Watershed Regional Detention Facility	4,500	5,200	5,280
Daytona Beach 5th Avenue Stormwater Improvements	750	650	700
Daytona Beach Oleander Ave. Stormwater Improvements	575	365	405
Leon County Lake Munson Restoration Program	9,000	9,000	9,000
Ocala - Lake Tuscawilla Demonstration Project	800	880	880
Ormond Beach 1999 Stormwater Improvements	1,500	1,426	1,500
Ormond Beach Cypress Circle Stormwater Improvements	1,250	1,180	1,200
Ormond Beach Trails Stormwater Improvements	1,450	1,380	1,500
Pinellas Park WMD Channel 1A Improvements	1,400	1,300	1,300
Rockledge Barton Park Manor Regional Facility	10,625	-438[2]	-438
Rockledge Levitt Stormwater Park	649	683	757[3]
Little Lake Fairview and Dubsdread Golf Course	9,500	7,100	7,100
Seminole County Navy Canal Stormwater Improvements	1,412	1,741	2,194[4]
Seminole County Cameron Ditch Stormwater Improvements	918	1,134	2,194[4]
Daytona Beach B-5/B-6 Regional Detention Pond	4,600	3,566	3,560

[1] SJRWMD was paid for excavated fill; [2] City was paid for excavated fill; [3] To be modified lower pending client call; [4] City awarded these sites as one project for construction; SJRWMD = St. Johns River Water Management District; WMD = Water Management District; SWTF = Stormwater Treatment Facility

Section D:
Effect of Firm's Recent, Current and Projected Workload

SECTION D: EFFECT OF FIRM'S RECENT, CURRENT AND PROJECTED WORKLOAD

Work Category - Traffic and Intersection Engineering

The CDM team's current and committed workload was taken into consideration in the development of this proposal. All project personnel will be available to initiate any work assignments immediately upon authorization by the County and will complete their assigned duties consistent with the project schedule for that work assignment.

Furthermore, CDM's Tallahassee office will serve as the center for all project work ensuring prompt, cost-effective service.

The RFP requests a listing of all projects currently under contract and the anticipated completion dates. As a company, CDM has thousands of projects underway worldwide. Therefore, we are providing the listing of the transportation projects currently being supported by members of our Tallahassee-based team (a listing of additional projects underway in our team's Tallahassee offices is located in our stormwater engineering proposal). The list that follows includes those projects and their anticipated completion date. The CDM team has the capacity to provide the resources needed to absorb any projects resulting from this contract.

- FDOT Systems Planning Office, Trip Generation Study
  25% Complete
  Estimated Completion Date: August 2011
- FDOT Rail Office, Corridor Traffic Study
  10% Complete
  Estimated Completion Date: December 2011
- FDOT Aviation Office, On-Call Aviation Services
  50% Complete
  Estimated Completion Date: September 2012
- FDOT Systems Planning Office, On-Call Transportation Support Services
  10% Complete
  Estimated Completion Date: September 2014
- FDOT Policy Planning Office, On-Call Policy Planning Services
  10% Complete
  Estimated Completion Date: December 2014
- FDOT District Three, On-Call Transportation Systems Support
  5% Complete
  Estimated Completion Date: December 2016

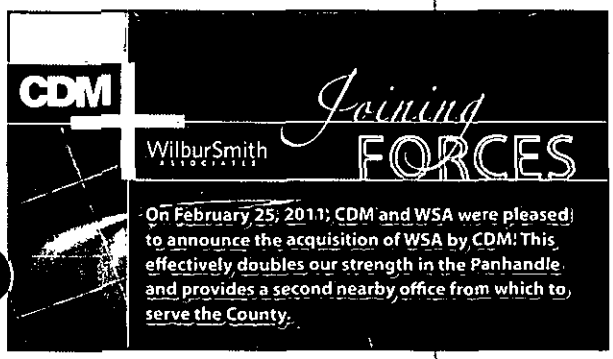
Section E: Effect of Project Team Location

SECTION E: EFFECT OF PROJECT TEAM LOCATION

Work Category - Traffic and Intersection Engineering

The CDM team fully recognizes the importance of local staff and local knowledge to the expeditious implementation of important projects and offers a local team to meet your needs. For easy access and close coordination, all projects under this contract will be managed from our Tallahassee office, located less than 15 minutes from the County's facilities, and supported by more than 500 CDM staff located throughout our 15 Florida offices (**Figure E-1**).

We are prepared to provide the County with a high level of interaction through the dedicated efforts of our project management team. Due to our close proximity, we can meet with your staff on short notice; make field visits with your staff, contractors, and regulators; attend public meetings; and spend time listening to your needs for each unique project. Because we have decades-long history of working with Leon County—delivering nearly 40 projects in the last ten years alone—we know how you do business. We understand how important it is to Leon County to provide excellent service to its citizens, how complex the regulatory environment is, how interaction with other government entities is a never-ceasing challenge, and how budget concerns are more pressing than ever. Our experience of over 20 years working in Leon County provides us with unmatched local knowledge. We understand local technical issues such as soil and hydrology, we recognize the political and cultural dynamics that play a part in project decisions, we know and have good working relationships with local regulators and specialty subconsultants, and our institutional knowledge of engineering projects performed in the Leon County area helps us work with you to make appropriate and cost-effective engineering decisions.



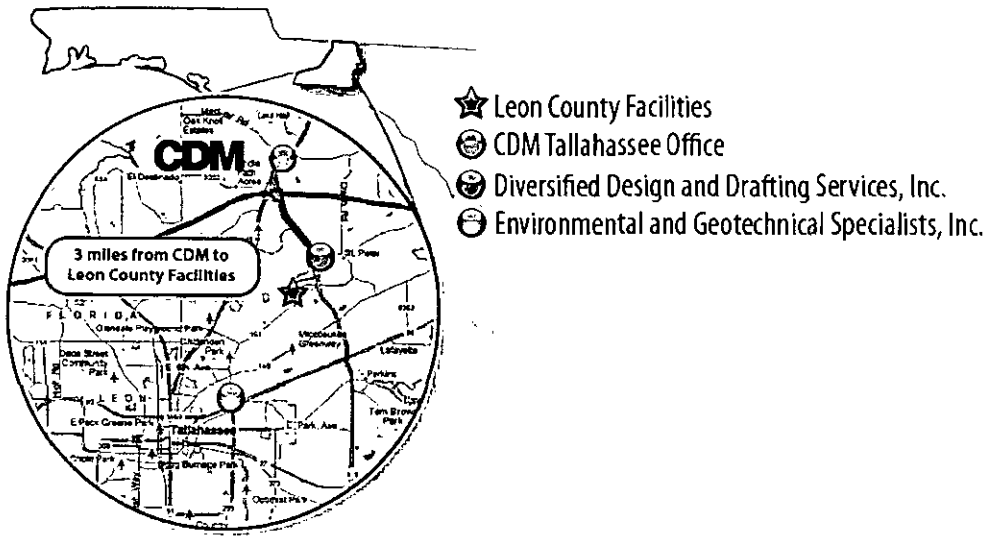


Figure E-1: CDM has continuously maintained an office in Tallahassee since 1989, and our geographic proximity ensures that the County will receive high-quality and efficient services.

Section F:
Approach to the Project

SECTION F: APPROACH TO THE PROJECT

Work Category - Traffic and Intersection Engineering

CDM and WSA understand that a well operated roadway network is essential for regional economic growth and enhancement of the quality of life for the citizens of Leon County. Providing efficient transportation services and mobility requires a coordinated effort of planning, analysis, design, and implementation of roadway projects. To this end, Leon County is seeking consultant expertise and assistance to conduct and prepare a variety of traffic and intersection related studies, including traffic modeling, traffic signal warrant studies, concurrency impact assessments, intersection-related capacity analyses, and design of improvements or modifications to intersections. Intersection design services may include traffic signalization, additional lanes, pedestrian access, or drainage and stormwater treatments. The CDM team will not only provide traffic engineering and intersection design services for Leon County but will also serve as your advisors to provide innovative and efficient solutions to financial constraints, challenging design issues, and public perception.

We understand and appreciate the fact that Leon County wants to entrust traffic and intersection engineering projects to a firm that has demonstrated its ability on past projects to deliver a quality, functional design in a timely and cost-effective manner. Team member WSA uses an approach that greatly empowers our program manager, Bob Hamm, P.E., to have complete authority to achieve the successful completion of the project by accessing the needed manpower and corporate resources. Mr. Hamm will be supported by senior, experienced staff in key task leadership roles that will be committed throughout the life of the project. Mr. Hamm is based in Leon County to enhance our ability to communicate with the County and respond quickly to requests for information or attendance at meetings. Mr. Hamm will be supported by client service manager David Kozan, who will be responsible for seeing that Leon County expectations are met.

Mr. Hamm and the CDM team will begin a specific task work order by preparing a work plan that identifies the project goals, deliverables, and building blocks needed to create those deliverables. He will determine the steps and events needed to complete a work task in a logical sequence while identifying the staff, materials, and equipment resources needed. This will be done using the project scope of services, contract negotiations, coordination with county staff, and other information that is available.

Following notice-to-proceed, a work authorization will typically begin with the collection of existing data. Depending on the type of project, this may include traffic volume counts, intersection or roadway geometric data, travel time/delay data, spot speed studies, accident data, traffic control device inventories, traffic signal timing plans, and/or roadway plans and profiles. The CDM team will then conduct an analysis and evaluation of assigned tasks and projects. The CDM team's focus will be on providing the best engineering solutions that meet the needs of Leon County for the project assigned. Depending on the work authorization, this effort may include, but not be limited to, the following components:

- Capacity/level-of-service analysis (existing and/or future conditions)
- Traffic modeling, using HCS, LOSPLAN, SYNCHRO, CORSIM, or other software as appropriate
- Accident evaluation and collision diagrams
- Signalization and signal timing
- Intersection/sight distance studies
- Evaluation of traffic signal warrants identified in the MUTCD
- Concurrency impact assessments
- Signing, pavement marking, and channelization
- Illumination/lighting analysis and design
- Spot speed study and determination of 85th percentile speed.

A draft study report will be submitted to Leon County for each completed work authorization for review and concurrence prior to submittal of the final report. Depending upon the project, the reports will vary from simple letter reports identifying the results/recommendations from a traffic signal warrant study to detailed study reports including appropriate text, tables, and graphics for a detailed traffic operations study. The reports will document data collected, the study process, evaluation results, and recommendations.

For complete intersection design or intersection modifications tasks, the CDM team will identify project issues that need to be addressed very early, for both their impact on the project design as well as the project's budget and schedule. The proposed intersection plans will be reviewed and refined with the entire project team and Leon County. This work plan will be reviewed with the County and project team throughout the life of the project to address any changes that occur.

Communication and coordination is vital to the success of any project and is a very important part of our management plan. In addition to the normal correspondence through e-mails and memos, Mr. Hamm will facilitate communication between the project staff (including subconsultants) and Leon County staff by keeping all parties up to date on critical issues, events, schedules, and submittal due dates via e-mail, phone, and fax. The coordination effort will include all the design decisions and commitments that may have previously been made by the County to the local citizens, current design decisions made, utility relocations and adjustments, and coordination with adjacent projects.

In addition, team member WSA employs a collaborative process for developing intersection design project schedules. The process begins with a kickoff meeting with the client and all team members to identify the project goals, discuss key issues and "critical path" schedule items, and set target dates for completion. After our kickoff meeting, the list of action items and responsibilities will be incorporated into our intersection design schedule. Identified intersection design submittal milestones, permitting meetings, owner's submittal reviews, and permitting agency time frames will be sequenced to establish a design completion date and bid/ construction start dates. Our scheduling process will monitor all intersection design and permitting activities. This schedule may include and address the following, as applicable to an assignment from Leon County:

- The County's list of anticipated activities
- Public information meetings
- Permit acquisition activities (pre-app meetings, submittals, review time frames)
- Design submittal dates
- Leon County design reviews
- Pre-construction meetings
- Construction progress meetings
- Construction close-out.