CHARLOTTE COUNTY
FLORIDA

Proposal for

Repair or Replace Rotonda MSBU Bridge 014113

RFP No. 2023000154

HDR

Feb. 8
2023

February 8, 2023

Senior Division Manager – Purchasing
Charlotte County Administration Complex
18500 Murdock Circle, Suite 344
Port Charlotte, FL 33948-1094

RE: Request for Proposal – Replace or Repair Rotonda MSBU Bridge 014113 | RFP No. 2023000154

Dear Selection Committee Members,

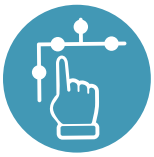
HDR is pleased to submit this proposal to assist the County in developing the most cost-effective solution to restore / rehabilitate / replace the bridge that was severely damaged by Hurricane Ian and to improve the resiliency of its infrastructure. HDR Engineering, Inc. (HDR) provides our valued clients with a fresh, holistic design approach to identify and implement forward thinking, economical solutions. We are pleased to provide our capabilities, experience, and approach for your consideration.

Why Select HDR?

The right expertise, locally.

We are a local team with expertise in bridge design, bridge repair and rehabilitation services, roadway, drainage design, environmental permitting, traffic design, public involvement, and construction design services. We are providing a comprehensive team along with our key subconsultant partners to provide coastal analysis, geotechnical services, survey, and utility coordination. Our proposed team has cohesively worked on many projects in the past and regularly collaborates on projects of similar size and complexity across Florida. **This team brings the experience necessary to deliver comprehensive solutions in partnership with Charlotte County.** We have committed the appropriate resources and have a local, regional, and national network of professionals to implement on this project. HDR provides the full range of disciplines needed for this contract, primarily staffed from our Sarasota and Tampa offices. With over 40 bridge staff in Florida, and a local office in Sarasota to provide you with timely service, the HDR team will provide responsive, seamless staffing for all project needs.

Practical and innovative perspectives, bringing optimized solutions.



As a leading consultant in transportation design, HDR understands the challenges at this bridge location include:

- Restoring traffic on Rotonda Blvd South over Rotonda River Bridge to provide relief to the Rotonda West residents
- A repair solution that can extend the useful life of the existing structure or a replacement bridge that provides 75 years of service life

Our Florida team provides an integrated approach to condition assessment, rehabilitation/replacement design, and careful construction management to meet project objectives within schedule and budget with strong collaboration with Charlotte County. HDR has developed a repair solution to restore traffic on the existing bridge within an estimated seven (7) months between design NTP and completing construction, and then utilize the existing structure during phased consruction to facilitate bridge replacement in 15 years, based on a life cycle cost analysis performed. HDR is also presenting an independent bridge replacement alternative which has an expected 1 year of design time and 1.5 years of construction duration, including procurement, before traffic can be restored at this location.

Our focus on total life cycle costs and sustainability.

HDR's approach to planning and design focuses on working collaboratively with your administration, engineering, and operations and maintenance staff to implement solutions that not only optimize your initial capital investment, but also considers your long-term operability and maintenance costs. With our local team, we understand the unique combinations of climate, geology, and economics in coastal Florida communities.

HDR Contacts

We are eager to support Charlotte County for this contract. We bring the right mix of local experience and are firm with a depth of expertise to partner with your staff. Mohit Garg has served as the project/contract manager for similar projects for multiple Florida clients, so he understands how to take a project from initiation to completion and manage a team as an extension of a client's staff to meet project objectives.

Respectfully Submitted,

HDR Engineering, Inc.

Mohit Garg, PE
Project Manager
Mohit.Garg@hdrinc.com
(o) 813.262.2786 (c) 813.253.9043

Katie S. Duty, PE, ENV SP
Vice President
Katie.Duty@hdrinc.com
(o) 813.282.2300 (c) 727.542.3692

In accordance with Part IV, Sections RP-20 and RP-22 of the RFP, this proposal is made without collusion with any other person or entity submitting a proposal pursuant to this RFP. In accordance with Part III, Section RP-22 on Page 16 of the RFP, our Principal, Melanie Fowler, and proposed Project/Contract Manager, Mohit Garg, and Design Team presented within the Team Organization Chart will not be substituted without the express permission of the County.

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We have structured our Proposal to follow the format outlined in the Consultant Evaluation Form provided on pages 18 and 18 of Charlotte County Request for Proposal (RFP).

01

TEAM

Proposed for this Project

01 TEAM PROPOSED FOR THIS PROJECT

A. Background of the Personnel

Our team has proven performance in providing quality and efficient services to Charlotte County. We bring top quality level of staff, service, relevant experience, and abilities to the County. Our deep pool of available, experienced resources provides the County with a comfort level that we will be able to meet the peak staffing demands and provide back-up resources in the event of an emergency or critical / unforeseen situations.

HDR's multi-disciplined team, as shown in our organizational chart, of competent experienced professionals and specialists will provide the required expertise for this project. We formulated our team based on project objectives, project needs, previous Charlotte County project experience, individual expertise, capabilities, and availability.

Our **Project Manager, Mohit Garg, PE**, has experience managing bridge projects and has a successful and proven track record of working small to large projects, providing timely services to meet project objectives within budget and schedule. Mohit serves as the Bridge Section Manager in the Tampa Office and brings 16 years of solid bridge design experience, including repair and rehabilitation experience for simple to complex bridge projects. Mohit is a leader who goes above and beyond to be accountable and will effectively communicate with stakeholders, the County's project manager and the project team to deliver quality and efficient cost-effective services within scope, budget, and schedule. Mohit has served as project manager and Engineer of Record (EOR) for dozens of projects. He has proven problem solving skills which will be vital for the success of this project. Mr. Garg will successfully address elements of uncertainty in project planning and will effectively navigate through project constraints, complexities, and limitations by leveraging the knowledge and skills of team members. Mohit is reliable, approachable and will serve you while leading the HDR team with integrity and commitment.

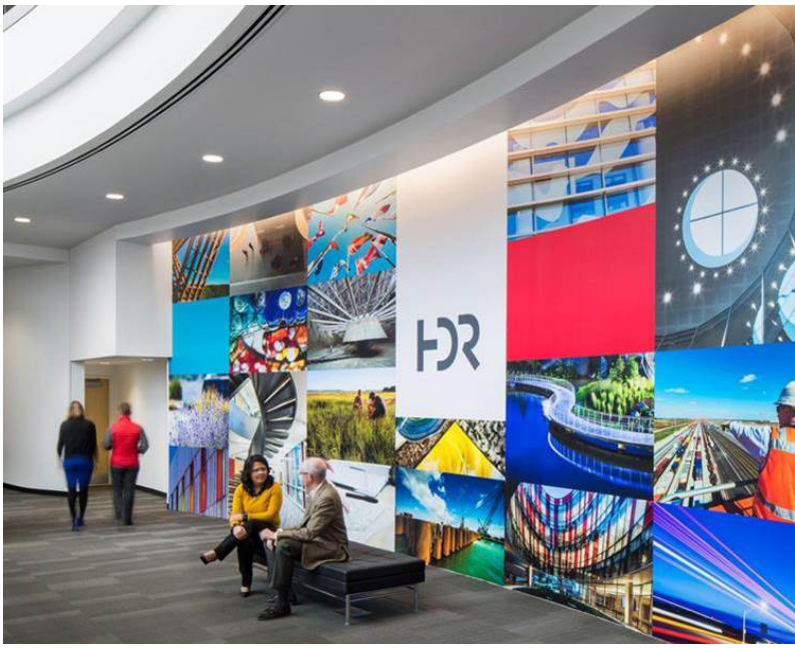
HDR's proven leadership team has what it takes to deliver projects associated with this contract on time and within budget. Quality work is of utmost importance to us.

Mohit will be supported by HDR Deputy Project Manager and Bridge Engineer, Cory Hill, PE. Cory brings 8 years of design experience and has excellent project management and communication skills. Cory provides complementary redundancy to meet project needs in unforeseen circumstances. With the strong collaboration between Mohit and Cory, the HDR team will meet project objectives and will be extremely responsive.

HDR's Technical Advisor Shinji Konno, PE, has worked with Charlotte County in the past and has more than 30 years of bridge design experience. Mohit will leverage his expertise to solve complex problems and to provide cost-effective solutions. **HDR's Quality Control Managers** Tom Quinn, PE; **John Danielsen, PE; Carlos Lopez, PE**; and Bijan Behzadi, PE, PTOE, bring significant experience to meet our commitment to provide quality services using sound engineering judgment.

As **HDR's Project Principal, Melanie Fowler, PE**, will provide oversight and support to Mohit, Cory and the Quality Control Managers.

The HDR Team's full organization chart is shown in *Tab 02*.



01 TEAM PROPOSED FOR THIS PROJECT

1. Project Manager

Mohit Garg, PE
Project Manager

Mohit will apply his 16 years of experience with solid design and project management focused on simple to complex brides to deliver a successful project.

As Project Manager, Mohit will be your main point of contact and drive the team's performance. His experience includes design of pre-stressed concrete girder bridges, segmental box girder bridges, spliced girder bridges, steel plate and steel box girder bridges. His design experience also includes the design of hammerhead piers, multi-column piers, inverted-T bents, post-tensioned straddle bents, post-tensioned C-piers and load rating of concrete and steel bridges.

Project Manager References: Mohit has over 16 years of solid design, structures engineering and project management experience. As requested in the RFP, below are client references for projects that he was directly involved with, serving in a lead design engineering role. Mohit has overseen projects awarded under these contracts, coordinating with these clients' leadership teams on major deliverables.

CLIENT REFERENCE	PROJECT / DESCRIPTION
Hillsborough County **601 E Kennedy Blvd** **Tampa, FL 33602** **Jay Bhatt, PE** **813.307.1918**	**BRIDGE ASSET MANAGEMENT & ENGINEERING SERVICES** *Hillsborough, FL* • Project Manager • 21 bridge alternative analysis reports • Bridge repair plans for 10 bridges • Bridge load rating, bridge inspection and condition evaluation of existing structures • Post design construction support services
FDOT District 1 **801 N Broadway Ave** **Bartow, FL 33830** **Katharine Sampson, EI** **813.612.3384**	**PROFESSIONAL SERVICES CONTRACT** *Various Counties, FL* • Project Manager • Bridge load rating of 30 reinforced concrete box culverts • Integral non-structural pile jackets • Repair of exposed sand-cement slope protection tow • Site condition investigation and smart design brought cost savings
FDOT District 7 **11201 N Malcom McKinley Dr** **Tampa, FL 33612** **Tracy Hood, PE** **813.975.6158**	**US 301 FROM SR 674 (SUN CITY CENTER) TO GIBSONTON DRIVE** *Hillsborough County, FL* • Replacement of three water crossing bridges • Designed to maximize vertical clearances to water crossings while minimizing roadway profile impacts • Precast slab superstructure eliminated the need for form work • Accelerated construction time, reduced construction noise & impacts to the community • Plans production & post design services
Pinellas County **22211 US Hwy 19 N** **Clearwater, FL 33765** **Erin Lawson, PE** **727.464.3176**	**ROADWAYS, DRAINAGE, STRUCTURAL SITE AND TRAFFIC ENGINEERING CONSULTING SERVICES, VARIOUS BRIDGES** *Pinellas County, FL* • Bridge replacement for Oakwood Dr over Stephanie's Channel, 37-ft long, two 12-ft travel lanes and 7.5-ft wide raised sidewalk, phased construction to allow a single operational lane throughout construction • Preliminary Engineering Report (PER) for bridge repair/rehabilitation: Madonna Blvd Bridge Ph 1&2, 13th St/ Sands Pt Dr Bridge Ph 1&2 • Park Blvd Bascule Bridge Rehabilitation, electrical & mechanical systems repairs of double leaf bascule bridge

01 TEAM PROPOSED FOR THIS PROJECT

2. Other Key Personnel

Cory Hill, PE
Deputy Project Manager

- *8 years of structures experience*
- *Rehabilitation alternative delivery experience*
- *Plans production*
- *MicroStation Geopak, AutoCAD, LARSA, Conspan, RC Pier, FB-Multiplier, ATLAS, AASHTOWare BrR*
- *Strengths include design of pre-stressed concrete bridges, substructure components, bridge rehabilitation, miscellaneous structures*
- *Charlotte County bridge repair experience*
- *Local and state rehabilitation experience*

Cory is known for his attention to detail, responsiveness and resourcefulness.

Shinji Konno, PE
Technical Advisor

- *30 years of bridge design & review experience*
- *16 years with FDOT*
- *Extensive knowledge & experience in all aspects of bridge engineering*
- *Bridge alternatives evaluation expert*
- *Thoroughly practiced in repairing existing structures*
- *Charlotte County bridge repair experience*
- *substantial quality control review experience*

Shinji manages all aspects of bridge analysis and design.

John Danielsen, PE
Quality Control - Bridge

- *40 years' structures experience*
- *Bridge inspection, rating & rehabilitation*
- *30 years with FDOT (District 4) as District Structures Maintence Engineer and the District Maintenance Engineer*
- *Extensive experience with bridges from small to complex*
- *HDR Florida bridge repair and rehabilitation expert*
- *Provides continuing expertise for FDOT District 4 Bridge Miscellaneous Structures and Inspection contracts*

With 40 years of structures experience, John provides informed, thorough reviews.

01 TEAM PROPOSED FOR THIS PROJECT

2. Other Key Personnel

Jason Starr, PE
Roadway Analysis & Design

- *18 years' transportation engineering experience*
- *Design of rural and urban highways, interstate highways, local streets, and bike / ped accommodations*
- *Strong project management skills and practice*
- *Utility coordination experience*
- *Extensive experience working with local counties (including Charlotte County) and FDOT District 1*
- *Experienc providing roadway design services for similar bridge projects*

Jason is known for his innovative approaches.

Carlos Lopez, PE
Quality Control - Drainage

- *30 years of water resources engineering experience*
- *Previously oversaw all aspects of FDOT D7's drainage services*
- *Experience ranges from small to large, complex projects*
- *Drainage quality control expert*
- *Well versed as expert witness*
- *Strong design-build experience, served as I4 Ultimate P3 project drainage EOR*
- *Charlotte County bridge repair experience*

Carlos is a drainage expert with extensive FDOT knowledge.

Mark Gosselin, PhD, PE (II)
Coastal Engineering

- *Nearly three decades of coastal engineering experience*
- *Hundreds of scour & hydraulics assessments of bridges & coastal structures*
- *Numerous coastal engineering studies*
- *Wave, hurricane storm surge, riverine flooding, & dam break hydraulic modeling*
- *Assessments for bridge repairs and replacements*
- *Authored state and federal guidelines for NCHRP, FDOT, SCDOT and NCDOT*

Mark has the coastal expertise and local knowledge needed for this project.

01 TEAM PROPOSED FOR THIS PROJECT

2. Other Key Personnel

Voni Moore
Environmental Permitting

- *Nearly 15 years of environmental science experience*
- *Environmental permitting, wetland science & restoration, ecological monitoring & environmental assessments*
- *State & federal permitting experience*
- *Connections and great working relationship with permitting agencies*
- *Mitigation and wetland delineation expert*

Voni is knowledgeable of FDOT requirements and skilled with agency coordination.

Olivia Smith
Public Involvement

- *Nearly a decade of communications experience*
- *Public information, government relations, community outreach & media relations*
- *Strategic communications methods*
- *Integrates technology with grass-roots outreach*
- *Well experienced in crisis communications*
- *Logistics coordinator*
- *Public information officer and spokesperson trained*
- *lead write experience for local news releases, media advisories, editorial articles and website copy*

Olivia is known for her proven track record of success and ability to connect with diverse communities.

Joseph Antinori, PE (TI)
Geotechnical Services

- *16 years of geotechnical engineering experience*
- *Municipal projects*
- *Englewood Water District Water Reclamation Facility New Headworks Design in Charlotte County*
- *Experienced project manager*
- *In-situ soil improvement and settlement evaluation expert*
- *Significant retaining wall system design experience*
- *Well versed in seismograph monitoring and vibration analysis*
- *Experience with bridge foundation studies*

Joseph is a trusted geotechnical engineer with extensive local municipal experience.

3. Subconsultants

Our proposed subconsultants include, Adams Traffic, Inc., American Government Services, CONSOR Engineers, LLC, Diversified Professional Service Corp, Element Engineering Group, LLC, Hyatt Survey Services, Inc, Intera, Inc., SEARCH, Inc., and Tierra, Inc.

Adams Traffic, Inc.
Traffic Data Collection Services

Adams Traffic, Inc. (ATI) | Traffic Data Collection

Adams Traffic (ATI) has provided traffic data collection services in Florida for over 21 years. ATI serves as the traffic data collection subconsultant on numerous FDOT districtwide contracts including traffic studies, safety studies, access management, statistics annual counts, and signal retiming. Data is collected by experienced staff utilizing high quality equipment including 70 machine traffic counters, 30 video camera systems, and 30 turning movement count boards. ATI staff is both knowledgeable of data collection standards and committed to accurate traffic counts on schedule.

American Government Services (AGS) | Title Searches

American Government Services (AGS) is a full-service title company that specializes in providing real estate services to government agencies. AGS has been providing title and closing services in the State of Florida since 1979. American Government Services is a 100% women-owned business, certified as a DBE/MBE firm with the State of Florida and registered as a real estate broker corporation with the Florida Department of Business and Professional Regulation.

consor

CONSOR Engineers, LLC (CE) | Bridge Inspection & Underwater Inspection

Consor is recognized nationally by local, state, and federal agencies as a premier leader in bridge and waterfront facilities inspections. The firm's extensive roster of clients is comprised of the US Army Corps of Engineers (USACE), the US Coast Guard (USCG), the US Navy, and the US Department of the Interior, numerous State Departments of Transportation (DOTs), among others.

DPS

Diversified Professional Service Corp (DPS) | Geotechnical Support

Diversified Professional Services Corp. (DPS) is a FDOT and DMS State Certified Woman owned Minority Business Enterprise (W/MBE) and a certified SBE. They provide a wide variety of construction, drilling and environmental support services. Their geotechnical field services include land clearing for drilling operations, test pits, and field sampling assistance.

ELEMENT
ENGINEERING GROUP

Element Engineering Group, LLC (EEG) | Utility Coordination, Roadway & Drainage Design Support

Since 2006, ELEMENT Engineering Group (ELEMENT) has focused on raising civil engineering in Florida to a higher standard. Their expertise is in transportation engineering, survey, utility coordination, and subsurface utility engineering. ELEMENT not only collaborates with the companies and state and municipal agencies they serve, but also actively participates in the communities where they work, live, and volunteer.

3. Subconsultants

Hyatt Survey Services, Inc. (HSS) | Survey

Hyatt is a Woman-Owned Business Enterprise/Small Business Enterprise (WBE/SBE) firm headquartered in Manatee County that provides full-service surveying and mapping. Services include boundary, topographic, and right of way (ROW) surveying to intricate geodetic, construction, and hydrographic/bathymetric surveying. Hyatt has provided professional surveying services to clients throughout Florida for over 20 years.

Intera, Inc. (II) | Coastal Engineering

Intera has a three-decade-long, proven track record of providing bridge scour and coastal engineering related services in support of infrastructure design. These services have included scour and wave force research, development of state and federal guidance documentation, disaster response, historical hindcasting of hurricane hydrodynamics, and development of design hydraulic and scour parameters at bridges in support of design, design/build, and scour evaluation studies. They have completed bridge hydraulics reports, bridge hydraulics analyses, and/or scour assessments for hundreds of individual riverine and tidal bridges across Florida and across the country. These applications have included prediction of design hydraulic and scour conditions during both hurricane storm surge and riverine flooding events for design, evaluation, and hindcasting projects.

SEARCH (SEARCH) | Cultural Resources

SEARCH is the largest archaeology and cultural resources management company in the United States, and SEARCH2O is the largest underwater archaeology program. SEARCH specializes in the full spectrum of cultural services related to Archaeology, Maritime Archaeology, Architectural History, Archives and Museum Services, and Media Production. SEARCH has unmatched experience in completing transportation projects according to federal and state guidelines, including Sections 106 and 110 of the National Historic Preservation Act of 1966, as amended, the Section 303/Section 4(f) Evaluation Process (USDOT Act of 1966), and Chapter 267, Florida Statutes.

Tierra, Inc. (TI) | Geotechnical Services

Tierra, Inc. is a full service consulting geotechnical, environmental and construction materials testing engineering firm with capabilities to provide test borings, install piezometers and monitoring wells, engineering analyses and reports, AutoCAD and MicroStation plan sheets, laboratory soils testing, and construction materials testing. Tierra, Inc. began operations in Florida in May 1992 and has offices in Tampa, Winter Garden, and Pensacola, Florida. Tierra's staff of nearly 200 professionals includes principal engineers and technicians certified through CTQP, ACI and state programs with 5 to more than 30 years of experience in contamination assessments, geotechnical, construction, laboratory and field materials testing and inspection services.

02

Proposed **MANAGEMENT PLAN**

02 PROPOSED MANAGEMENT PLAN

A. Team Organization

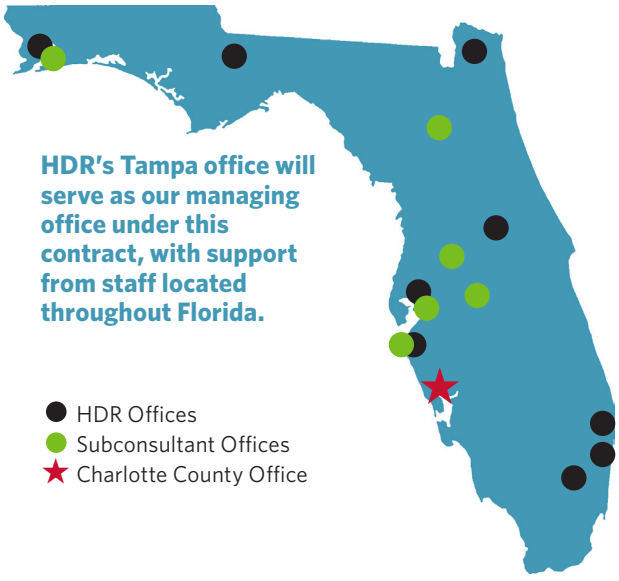
The organization chart on the following page highlights the project management and design team members that will provide management, design, and construction services for the overall contract. **Mohit Garg, PE, Project Manager**, will be responsible for all aspects of the day-to-day execution of tasks for this project, including schedule, project coordination, and quality control. **Principal-in-Charge, Melanie Fowler, PE**, will provide management oversight of the overall project team and serve as an additional point of contact for Charlotte County. She will also work with Mohit to oversee that the proper resources are available and assigned to the project effort. Mohit and Melanie are supported by a uniquely qualified group of Quality Control Managers and professionals who will deliver the technical work products. The combined areas of expertise in the project team were selected to be most responsive to Charlotte County's needs.

Our Company

The HDR Team has successfully collaborated on similar contracts throughout Florida and we look forward to partnering with Charlotte County.

The HDR Team's Florida Offices

HDR Team's Statewide and Local Office Locations



HDR 2022 ENR Rankings

- #5 Top 20 in Transportation
- #3 Top 25 in Bridges
- #5 Top 25 in Highways
- #9 Top 10 in Engineering/ Design Work
- #5 Top 500 Design Firms

2022 ENR TOP 500 DESIGN FIRMS

HDR has partnered with clients to shape communities and push the boundaries of what is possible since 1917. We specialize in engineering, architecture, environmental, consulting, and construction administration services. Identifying your unique needs, we pull together the top minds and resources to develop the smartest solutions for your challenges. **Our 11,000 employees, working in over 200 locations, push open the doors to what is possible each and every day.**

HDR has been offering Florida clients comprehensive transportation professional engineering services since 1985. Our Florida staff provides engineering and planning services for clients throughout the state, backed by nationally recognized experts. Our clients know HDR will develop a balanced approach to solving their toughest transportation infrastructure and regulatory challenges. We will be a strong partner in managing your needs. Consistently ranked among the nation's Top 5 Bridge Design firms by *Engineering News-Record (ENR)*, our professionals combine the latest technical innovations with practical solutions.

02

PROPOSED MANAGEMENT PLAN

Team Organization Chart

CHARLOTTE COUNTY

PROJECT PRINCIPAL / QA
Melanie Fowler, PE (27) (HDR)

PROJECT MANAGER / STRUCTURES ENGINEER OF RECORD
Mohit Garg, PE (17) (HDR)

TECHNICAL ADVISOR
Shinji Konno, PE (40) (HDR)

DEPUTY PROJECT MANAGER
Cory Hill, PE (8) (HDR)

QUALITY CONTROL
Tom Quinn, PE (39) (HDR) - *Roadway*
John Danielsen, PE (40) (HDR) - *Bridge*
Carlos Lopez, PE (39) (HDR) - *Drainage*
Bijan Behzadi, PE, PTOE (39) (HDR) - *Traffic, S&PM, Lighting*

Analysis, Design, and Construction Engineering Services

BRIDGE ANALYSIS & DESIGN
Chad Smith, PE (17) (HDR)
Jos van Dijk (32) (HDR)
Rohit Tallur, EI (CA) (3) (HDR)
Daryl Anderson (27) (HDR)
Khawla El mir (2) (HDR)

ROADWAY ANALYSIS & DESIGN
Jason Starr, PE (19) (HDR)
Jake Hemingway, PE (7) (HDR)
John Muniz-Aleman, EI (3) (HDR)
Lynn Decker, PE (15) (EEG)

DRAINAGE ANALYSIS & DESIGN
Adam Mitchum, PE (15) (HDR)
Rana Stansell, PE (30) (HDR)
Richard Endrzejewski, PE (17) (EEG)

TRAFFIC ANALYSIS
Heather Hubbard, PE (13) (HDR)
Bryan St. George, PE (10) (HDR)

SIGNING & PAVEMENT MARKING
Indike Ratnayake, PhD, PE (21) (HDR)
Greg Stevanus, PE (15) (HDR)
Jagrav Pandya, PE (2) (HDR)

LIGHTING
Jose Gonzalez, PE (30) (HDR)

GEOTECHNICAL INVESTIGATIONS
Joseph Antinori, PE (15) (TI)
Tom Musgrave, PE (18) (TI)
Sandra Polanis (18) (DPS)

UTILITY COORDINATION
Azalea Aoki (24) (HDR)
Brent Postma (13) (EEG)

UTILITY DESIGN
Heather Manganiello, PE (20) (HDR)

COASTAL ENGINEERING
Mark Gosselin, PhD, PE (32) (II)
Huseyin Demir, PhD, PE (23) (II)

ENVIRONMENTAL PERMITTING
Voni Moore (15) (HDR)
Zach Hovey (6) (HDR)

BRIDGE INSPECTION & UNDERWATER INSPECTION
Fredrick Meek, CBI (22) (CE)

CONSTRUCTION PLANS, SPECIFICATIONS & BID DOCUMENTS
Shinji Konno, PE (40) (HDR)
Brian Zimmerman, PE (18) (HDR)
Jansel Sexto, CCM (20) (HDRC)

SURVEY
Russell Hyatt, PSM (34) (HSS)
Pamela Hyatt, PSM (30) (HSS)

SUE
Edward Connolly, PSM (15) (EEG)

PUBLIC INVOLVEMENT
Olivia Smith (12) (HDR)
Beth Frady (16) (HDR)
Trinity Otero (19) (HDR)

TITLE SEARCHES
Wendi McAleese (24) (AGS)
Tammy Mehl (24) (AGS)

CULTURAL RESOURCES
Jason Newton (12) (SEARCH)
Bryan Harrell, MS, RPA (20) (SEARCH)
Austin Burkhard (10) (SEARCH)

DATA COLLECTION
Nancy Adams, PE (32) (AT)

AIR QUALITY, NOISE IMPACTS
Michael Parsons, PE (NC, OR) (25) (HDR)
Noemi Castillo, PE (23) (HDR)

PROJECT TEAM

HDR Engineering, Inc. (HDR)
HDR Construction Control Corporation (HDRC)
Adams Traffic, Inc. (ATI) *DBE*
American Government Services (AGS) *DBE*
CONSOR Engineers, LLC (CE)
Diversified Professional Service Corp (DPS) *MBE*
Element Engineering Group, LLC (EEG) *DBE*
Hyatt Survey Services, Inc. (HSS) *DBE*
Intera, Inc. (II)
SEARCH, Inc. (SEARCH) *DBE*
Tierra, Inc. (TI) *MBE*

*Key personnel identified in **blue** | (Years' Experience)*
Resumes for key personnel presented in this section are included in the Appendix.

02 PROPOSED MANAGEMENT PLAN

We at HDR understand that both design phase and construction phase are important aspects of a project. We utilize our experienced team and leverage other disciplines such as construction engineering and inspection (CEI) to discuss design options to provide a solution that is cost-effective and constructible. We understand in some instances we may need to talk to contractors and get their feedback during the design phase or earlier. We consulted contractors during the preparation of this proposal. The solution we presented to repair the existing seawall has been vetted by two contractors after we consulted our bridge repairs experts in our FL program.

In this section, we detail our Project Management Plan (PMP).

1. Design Phase

It is our goal to consistently provide professional services that meet or exceed the expectations of our clients. We accomplish this through our Quality Management System (QMS) which defines the project management processes, which includes the management of project planning, scope, schedule, cost and quality. HDR's QMS applies to HDR business services, employees and on a project-by-project basis, to our subconsultants. All employees are trained and expected to be aware of and assist with the implementation of the QMS Manual. Quality is about how we do business, and each employee of HDR has a responsibility to make sure we are delivering quality work, no matter where they are within the organization.

The HDR team seeks to continue to build a relationship of trust with Charlotte County, the local community, and project stakeholders. We understand the project needs, and we will use our talent, skills and experience to provide a solution that is a consensus of teamwork for all. We recognize that there are many issues that are known, and many more that may be unknown.

Our team brings diversity in services, depth of experience, flexibility to accommodate and resolve the various challenges and the commitment to partner with the County to make this project successful through our leadership and teamwork. **Anyone can follow a process, but the way the process is executed makes a tremendous difference.**

Our process begins with project planning management upon award of the project, which includes finalizing:

A Project Development Plan that includes: Project purpose; method of execution of scope of services (work plan) with task assignments and deliverables; schedule with task milestones and deliverables provided to the project team; budget, including task assignments, quality review activities, and project close-out activities.

A Project Team Plan that identifies our project team and the roles of HDR task leads, and our partner subconsultant task leads.

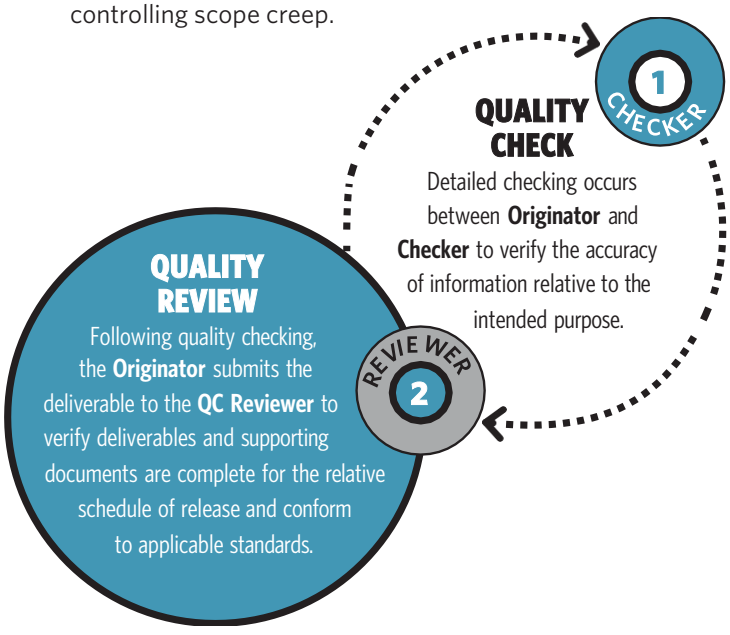
A Project Quality Management Plan (QMP) that outlines the acceptable quality control process for HDR and our subconsultants.

A Communication Plan that includes team meetings, subconsultants and stakeholder communications. The County Project Manager will provide input in terms of communication protocol with County and external parties.

A Risk Management Plan that specifies events that can occur and can impact the major goals and delivery of the project. For instance, the utility attached to the bridge will require temporary relocation for replacement option and can impact the construction start date. Risk mitigation strategies will be developed to assist the County in making well informed decisions to minimize the schedule impacts.

Internal Project Administration that sets up the project within HDR's Oracle E-Business Suite (EBS) financial system to track costs, invoicing and earned value estimates. The system will provide sufficient documentation for the speedy review and approval of invoices on a monthly basis.

Project Scope Management will be required for this project. On most projects this task involves staying within the negotiated scope and preventing cost overruns by controlling scope creep.



02 PROPOSED MANAGEMENT PLAN

Scope management will be a proactive task that can be influenced by the following:

- Engagement of the community to address their need to restore traffic on bridge.
- Stakeholder needs will be vital to the success of this project. Foremost, understanding our client needs to repair / replace the bridge within a short duration design schedule and construction budget is our main priority. Our team will work closely with the County Project Manager to assure that we approach the local community as a trusted partner to build a consensus to define the scope and control the scope in determining, documenting and managing stakeholder needs.

Project Schedule Management is a key part to a successful project since the schedule is a "living" document. An important part of developing a schedule for this project is to understand the importance of constraining dates. Factors related to constraints include:

- Environmental permitting required for this project;
- Utility that will need a temporary or permanent relocation prior to bridge demolition;
- Recognization of any external commitments that have been made that may need careful consideration such as recognizing a level of resiliency;
- Recognize other external factors that may impact the schedule;
- If the County funds the construction, the County is the main driver of the schedule and a Basis of Design report can be a feasibility study of the various bridge replacement alternatives.

In the FDOT environment, a Bridge Development Report (BDR) is commonly developed where various profiles and structure types can be evaluated and a recommendation is made based on estimated costs, construction schedules, and value added. However, this report does not typically account for environmental impacts and potential right-of-way impacts. HDR would propose a Bridge Basis of Design Report to be similar to the Feasibility Study Report HDR prepared for Pinellas County Public Works for the Dunedin Causeway Bridge. HDR evaluated the existing conditions and performed an alternatives analysis that included roadway, stormwater management, environmental and wetland impacts, structural alternatives and life cycle cost as well as an opinion of probable costs and a discussion of future funding opportunities. The recommendations of the Basis of Design Report would be for immediate implementation. If the local community is involved early through a proactive community outreach process, then the Basis of Design Report will serve as a summary of the solution and a checklist of what needs to be evaluated to justify the proposed outcome.

If state funds are obtained, with or without federal funds, then the schedule will be bound by the FDOT constraints, dates identified in the LAP agreement and additional tasks required to satisfy the NEPA process. HDR has experience working with both of these scenarios.

Project Cost Management is the last component of HDR's Earned Value Management (EVM) methodology that integrates scope, schedule, and cost. It is a framework that allows a project manager to monitor these three components to objectively measure project health. Advantages of the EVM approach include:

- Accurate forecast of project completion and final cost;
- Objective measurement of accomplishments against scope, schedule, and cost;
- Early warnings to delays or cost overruns;
- Information about schedule and cost variances during the course of the project;
- Minimizing small changes in a plan that can become large over time (scope creep) and reduce profitability;
- Improvement in the control of contract performance.

HDR's tool to assist in Project Cost Management/EVM is Oracle's EBS software. Oracle EBS provides a project manager the visibility and control to deliver projects successfully and manage the project throughout its life cycle; from planning, to execution, and to completion. As a Project Manager, Mohit will have unrestricted and continual access to detailed cost information to monitor project performance and cost.

Project Quality Management is of the utmost importance to the HDR team because it is vital to our continued professional and commercial viability. Quality management and services bring us recognition and also help us in meeting client's expectations. Our quality management can be summarized in four components: Policy, Expectations, Goals and Process.

- **HDR's Quality Policy** requires our team's professional services to be based on sound principals that meet the standards of professional practice and satisfy the quality requirements of the scope of services. Mohit will distribute copies of HDR's QMP to all team members including subconsultants. All project team members are required to use the QC production and review procedures described in the QMP. Each team member, must understand the project objectives, apply sound engineering principals and is expected to produce quality, accurate, and complete documents.

02 PROPOSED MANAGEMENT PLAN

- **HDR's Quality Expectations** are to produce a quality work product that meets or exceeds our contractual requirements with the County and is prepared in accordance with accepted standards of professional practice. It is the responsibility of the project team to plan and execute each work assignment such that **the quality of the work produced is "built in" and not "added on."** Quality is achieved when the work is planned, assigned, executed and checked. It is more efficient to prevent errors and omissions from inception rather than find and correct mistakes during the phase review process. It is expected that quality work will be produced and that responsible professionals and quality reviewers will check all work for conformance to standards and requirements.
- **HDR's Quality Control Goals** for quality include safeguarding the public, the County and ourselves from errors and omissions; reducing the amount of rework in order to minimize production costs; and to provide quality engineering services and, where required, construction documents that avoid contractor claims and supplements. In order to achieve these QC goals, HDR is committed to providing professional services that are focused on preparation of accurate and complete work without errors and omissions, meeting our contractual obligations and commitments and protecting the health and welfare of the public.

HDR's Quality Control Process is "Built In" to Services in 3 Phases:

Phase I, Project Initiation: HDR's Project Initiation Phase begins with the preparation of a Project Guide. Preparation of Project Guides is a mandatory requirement of HDR's national QA program.

The Project Guide is a communication tool used to inform the project team of pertinent project data including:

» Project background, purpose and description

» Define the project team including key County contacts, subconsultants and other organizations' phone, fax, e-mail and mailing address

» Documentation procedures for all project communication and written correspondence

» Documentation of the scope of services, task assignments, budgets, project schedule and project deliverables

» Technical requirements for the production of plans, calculations, software and reference documents to be used on the project, and applicable design criteria

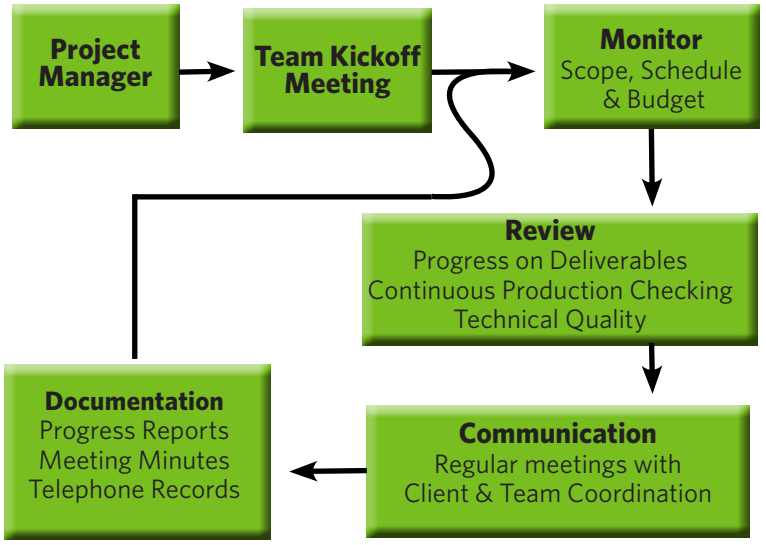
» Administrative procedures for project filing, electronic filing, invoicing and progress reporting

» Quality control requirements and other specific project requirements

HDR will provide a copy of the Project Guide to the County Project Manager

Phase II, Project Execution: HDR's Project Execution Phase begins with a team kick-off meeting. Copies of the Project Guide are distributed and reviewed. The Project Manager oversees the execution and development of the project deliverables, communicates with the County and project team and documents the progress and decisions made during the development of the project. The flow chart shown below describes the project execution phase.

Phase III, Formalized Checking Process: HDR's Formalized Checking Process begins when the plans or documents are production ready. All project deliverables, including plans, calculations, reports, studies, quantities and cost estimates, undergo a formalized checking process and detailed quality control review prior to submittal to the County. HDR's QA Manager will oversee the formalized checking process to verify the procedures defined in the QMP are implemented. A standard (color-coded) checking procedure is used to document that all information contained in the documents to be submitted has been checked.



02 PROPOSED MANAGEMENT PLAN

This procedure will provide a check-and-balance arrangement between the Responsible Professional (RP) and the Quality Reviewers (QRs) such that two responsible professionals will agree on the correctness of all work. **The flow chart to the right describes HDR's formalized checking process.**

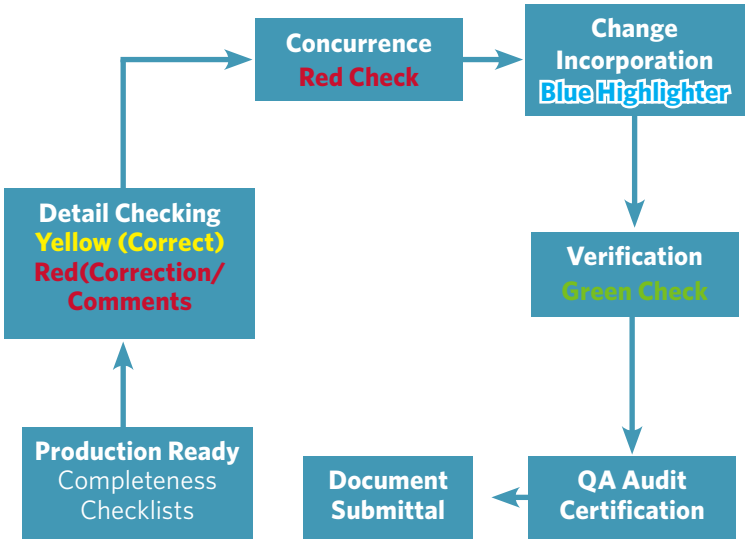
Upon completion of the formalized checking process, HDR's QA Manager will perform a QA audit and certify that the documents being submitted have been reviewed and prepared in accordance with HDR's QMP.

This part of the project approach, is not only a process, but requires leadership skills to drive the project and team to a common goal. Some of these **leadership qualities** that will be used when interfacing with the County are:

- **Trust based relationship** will be immediately established and developed throughout the life of the project. We will build on the relationship we have developed with County on the recent Midway Blvd Bridge Repair WO. The County staff will know that the right decisions will be made and the project tasks completed as agreed upon with the County and stakeholders. Obtaining the trust of the stakeholder is a major goal, including the local community, to instill their confidence that our team is developing the best solution and working on behalf of mutual, non-conflicting, interests that are not in conflict.
- **Communication channels** to establish and maintain relationships by listening and acting upon County and stakeholder needs to deliver a solution based on consensus. Mohit will keep County Project Manager informed and involved to make decisions based on a full understanding of project parameters.
- **Flexibility** to accommodate changes to scope, schedule and any challenges to the completion of the project.
- **Experience** in managing projects and providing multi-task solutions.

As the Project Manager, Mohit's goal is to lead a diverse staff of resources to act as an extension of County staff, keeping the County Project Manager fully informed of all project issues and challenges so that we can make informed decisions in the project planning and execution. **Mohit will be 100% available to meet County staff, local community and any other stakeholder meetings that are required in order to advance the project on schedule and with outstanding quality service and deliverables.**

Our staffing plan management begins in assembling the HDR led team with the people that have proven



HDR's formalized checking process

experience in their area of specialty. Communication through coordination requires a thorough understanding of the County's policies, procedures, needs, and goals. Our basic approach to coordination is to keep the County fully informed, while minimizing County staff resources. HDR understands that successful coordination involves the following primary components, as described below:

- **Coordination with the County** involves maintaining an open flow of communication between HDR and County staff.
- **Coordination with subconsultants** involves keeping them informed about upcoming County needs and tracking work performed by each subconsultant on current assignments.
- **Coordination with other agencies** and stakeholders requires serving as an accurate, dependable and credible representative of the County.

Our risk management plan will identify risks that need to be managed (the highest priority risks and possibly some or all of the intermediate priority risks) and a risk response strategy will be developed for each. The plan will include specific actions to be taken by the appropriate responsible parties. The plan will be continuously monitored to identify new risks and selected strategies are properly executed and their effectiveness evaluated. Detailed updates of the risk management plan will be made at critical milestones and a risk-based "graded approach analysis" methodology used as a simplified approach to risk analysis.

02 PROPOSED MANAGEMENT PLAN

2. Construction Phase

During the construction phase HDR will be responsible for the following:

- Review and comment on submittals such as shop drawings, product data, samples, etc. provided by the Contractor;
- Evaluate and make recommendations on substitution requests from the Contractor or Owner;
- Review and respond to Requests for Information (RFI) submitted by the Contractor;
- Review and acceptance of mitigation plans to correct construction errors or defects;
- Prepare technical information (sketches, drawings and/or specifications) for proposed change orders, or for changes issued to the Contractor;
- Periodic site visits for construction observations to review that the construction is proceeding in general conformance with the Contract Documents and design intent or respond to specific issues identified by the Owner and/or Construction Management team.

The services described will follow HDR's Quality Management System Manual. Reviewed submittals, RFI, and substitution request responses and other reports are considered deliverables. Therefore, these deliverables and/or documents will go through a quality control review. HDR uses Bluebeam for pdf creation, editing, markup and collaboration and to conduct submittal reviews, including inserting submittal action code stamps, perform comparison of PDF documents, and document review comments throughout the life of the project, including submittal reviews. Only submittals required by the contract documents will be reviewed and returned. Unspecified submittals will be returned without review to the Contractor unless directed by the County. All submittals will be reviewed within agreed upon timeframe.

HDR does not direct the Contractor to take any specific action that would dictate their means or methods as we understand that Contractor could potentially file a claim, on the grounds that they would have done it differently and it would have cost them less time and money.

When work performed by the Contractor is discovered to not comply with the contract requirements, County representative will issue a notice identifying the non-conforming work. Typically, the Contractor owns the corrective action. In case HDR is directed by the County to provide a corrective action, we will provide the design solution and appropriate documents to the County. HDR will communicate to Contractor through County during the construction phase. HDR will prepare record drawings and will participate in bidding process, pre-bid meetings, bid review as directed by the County and will also attend pre-construction meeting.

03

Previous **EXPERIENCE OF TEAM** Proposed for this Project

03

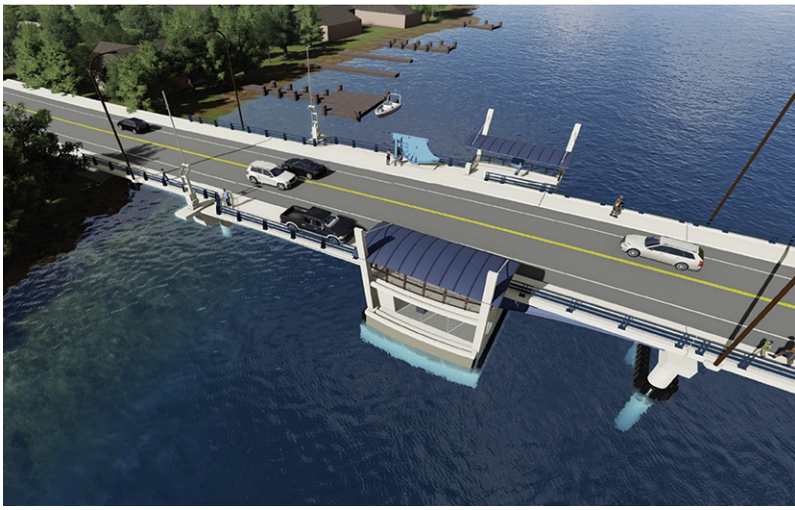
PREVIOUS EXPERIENCE OF TEAM PROPOSED FOR THIS PROJECT

The HDR team of local professionals and national experts has extensive experience with bridge assessment, replacement, repair and rehabilitation that will be required for this project. In this section, we highlight recent examples of similar Florida bridge projects our team has delivered.

1. Beckett Bridge Replacement

This project replaced the existing Beckett Bridge (No. 15400), which is a historic but structurally deficient and obsolete bridge. The existing bascule bridge was replaced on the same alignment with a single leaf rolling lift bascule bridge providing a 25-ft navigational channel and a minimum vertical clearance of 7.8-ft. The approach spans consists of 60-ft spans, 118-ft to the east and 180-ft to the west of the movable bascule leaf main span. HDR, as a subconsultant to Hardesty & Hanover, LLC, performed the design of the bridge approach superstructure. HDR also provided environmental permitting services required for this bridge replacement project. Design was completed January 2023. The project will be advertised as a design-bid-build project by Pinellas County.

HDR was responsible for the design and detailing of a 360-ft five-span Florida Slab Beam (FSB) superstructure comprised of two individual continuous units (a two-span unit and a three-span unit) in accordance with AASHTO and FDOT codes and Design Standards, Guidelines and Specifications. Project efforts included project management, coordination, plans preparation, rebar detailing, continuous deck design and the support of other various design aspects.



Beckett Bridge Replacement Rendering

KEY PERSONNEL & SUBCONSULTANTS

MOHIT GARG, PE | Fixed Superstructure EOR

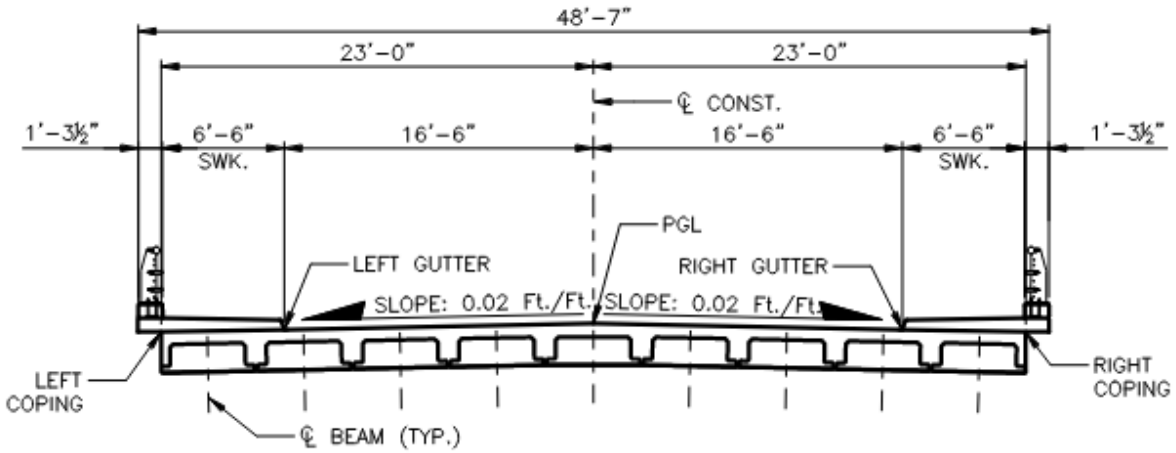
CORY HILL, PE | Structures Designer

SHINJI KONNO, PE | Structures Quality Control

VONI MOORE | Environmental Permitting

TIERRA, INC | Geotechnical/Contamination

INTERA, INC | Coastal Engineering



TYPICAL SECTION
(SPANS 4, 5 AND 6)

03

PREVIOUS EXPERIENCE OF TEAM PROPOSED FOR THIS PROJECT

2. Bridge BR 4351 Oakwood Drive over Stephanie's Channel

HDR has been providing transportation engineering services to Pinellas County under their Roadways Drainage, Structural Site and Traffic Engineering Consulting Services contract since 2010. During the last five year cycle, we had twelve assignments including seven bridge projects, one being the Bridge BR 4351 Oakwood Drive over Stephanie's Channel.

HDR developed construction plans for the replacement of the Oakwood Drive Bridge over Stephanie's Channel. Oakwood Drive is a two-lane undivided residential street that is the only access to 69 residences located on an island within Harbor Bluffs in Largo, Florida. The focus of the project is the replacement of the existing single span bridge (Bridge No. 154351) over Stephanie's Channel while providing transitions to the existing Oakwood Drive roadway typical section in close proximity to the bridge.

The proposed bridge is 37-ft long and the typical section provides for two 12-ft wide travel lanes and a 7.5-ft wide raised sidewalk. A phased construction sequence was devised so that a single lane was operational throughout construction. HDR provided all necessary permitting services for this effort. HDR also provided utility design services for the relocation of a 4-inch Pinellas County force main and a 6-inch Pinellas County water main which cross the channel. Construction started in spring 2022.

KEY PERSONNEL & SUBCONSULTANTS

MOHIT GARG, PE | Structures Quality Control & Structures EOR

CORY HILL, PE | Structures Designer

SHINJI KONNO, PE | Structures Quality Control

VONI MOORE | Environmental Permitting

TIERRA, INC | Geotechnical/Contamination

INTERA, INC | Coastal & Scour Evaluation

3. US 301 from SR 674 (Sun City Center) to Gibsonton

HDR designed 9.7-miles of roadway improvement project from SR 674 to south of Gibsonton Drive in Hillsborough County. This was a unique project, in cooperation with

US 301 design from Sun City Center to Gibsonton Dr.

FDOT District 7 and the development community, as the Department acquired the pond right-of-way, or the developers provided the land as part of the development requirements.

The proposed roadway will be a 6-lane divided rural highway with a depressed median, a 5-ft sidewalk and a 12-ft multi-use path on the other side. Improvements to the northern segment of US 301, from south of Balm Road to Gibsonton Drive, have been constructed. Construction for the southern segment from SR 674 to south of Balm Road began in 2017.

The project involved the replacement of three water crossing bridges:

- Big Bull Frog Creek - existing 26'-8" wide 208'-0" bridge was replaced with a 136'-0" wide 230'-0" long bridge
- Little Bull Frog Creek - existing 26'-8" wide 104'-0" bridge was replaced with a 136'-0" wide 150'-0" long bridge
- Tadpole Creek - existing 33'-2" wide 104'-0" bridge was replaced with a 136'-0" wide 105'-0" long bridge

The bridges were designed to maximize the vertical clearances to the water crossings while minimizing roadway profile impacts. **Accelerated bridge construction technique was utilized by designing a precast slab superstructure to eliminate the need of form work over the water and minimize construction time, reducing construction noise and impacts to the surrounding businesses and community. Post design services were performed to assess out of tolerance piles on intermediate pile bents.**

03 PREVIOUS EXPERIENCE OF TEAM PROPOSED FOR THIS PROJECT

The project also involved extensive drainage design, including conveyance systems, two bridge hydraulics reports, FEMA no-rise certification, 20 stormwater management facilities and two floodplain mitigation sites. Environmental permitting, utility design and coordination, as well as lighting, MOT and public involvement were key to the project success.

KEY PERSONNEL & SUBCONSULTANTS

MOHIT GARG, PE | Structures Designer

SHINJI KONNO, PE | Structures Quality Control

CARLOS LOPEZ | Lead Drainage Engineer

TIERRA, INC | Geotechnical/Contamination

4. Bridge Asset Management & Engineering Services

HDR supported Hillsborough County with this task work order contract for engineering services between 2017 and 2022. Services for this contract include but are not limited to: plans reviews, bridge inspection, condition evaluation of existing structures, preparation of bridge alternative analysis report, preparation of bridge repair plans, bridge load rating, box culvert design checklist and emergency bridge inspection and assessment support. **HDR also provided construction post design support services as part of this effort.**

HDR has prepared 21 bridge alternative analysis reports and repair plans for 10 bridges under this contract. Detailed descriptions of select projects are located in Tab 6.

KEY PERSONNEL & SUBCONSULTANTS

MOHIT GARG, PE | Project Manager & Structures EOR

CORY HILL, PE | Deputy Project Manager & Structures Designer

SHINJI KONNO, PE | Structures Quality Control

JOHN DANIELSEN, PE | Structures Quality Control

ADAMS TRAFFIC, INC | Traffic Data Collection

TIERRA, INC | Geotechnical/Contamination

HYATT SURVEY, INC | Survey

5. San Martin Blvd. over Riviera Bay Bridge Replacement Study

HDR was retained by Pinellas County to conduct a NEPA compliant Project Development & Environment (PD&E) study for the rehabilitation or replacement of the existing San Martin Bridge over Riviera Bay. The limits of the bridge study are from Tallahassee Drive to Weedon Drive in St. Petersburg, Florida. A second component of the project will evaluate trail enhancements from Macoma Drive to Gandy Boulevard.

The trail enhancement component of the study will evaluate the opportunities to connect the North Bay Trail, which currently ends at Macoma Drive, with the Friendship Trail at Gandy Boulevard. Safe crossing locations will also be identified during the evaluation process. This study is expected to take approximately 18 months.

The study of San Martin Bridge was needed in order to address the deficiencies of the existing bridge. The bridge was constructed in 1962 and is nearing the end of its service life. The existing bridge does not meet current design standards and Americans with Disabilities Act (ADA) requirements. Vertical profile alternatives were be evaluated for increasing the clearance at the bridge crossing. The trail enhancements have been identified as priorities in the City of St. Petersburg's Trail Program, Pinellas County's Bicycle and Pedestrian Master Plan, and the Metropolitan Planning Organization's North Bay Trail/Rio Vista Trail connection priority in the Long Range Transportation Plan.

This study was done in accordance with the federal National Environmental Policy Act (NEPA) process in coordination with FDOT District 7. The NEPA process will allow the County the opportunity to apply for federal grant funding.

KEY PERSONNEL & SUBCONSULTANTS

MOHIT GARG, PE | Structures EOR

CARLOS LOPEZ | Drainage Quality Control

VONI MOORE | Environmental Permitting

TIERRA, INC | Geotechnical/Contamination

INTERA, INC | Coastal & Scour Evaluation

ADAMS TRAFFIC, INC | Traffic Data Collection

03 PREVIOUS EXPERIENCE OF TEAM PROPOSED FOR THIS PROJECT

San Martin Blvd. over Riviera Bay

6. Rehabilitation of SR 70 over Joshua Creek

HDR, subconsultant to WSP, has provided professional engineering services for bridge engineering design on a continuing basis for FDOT District 1 since 2021. The rehabilitation of SR 70 over Joshua Creek was performed under this contract.

The scope of services under this project includes standard concrete spall repairs, construction of integral non-structural pile jackets to rehabilitate pile deterioration exhibited in the form of hour-glassing and scaling damage, and the repair of exposed sand-cement slope protection toe with a lift of rubble riprap. Preliminary investigation into the site conditions during project scoping revealed a non-aggressive environment and allowing the implementation of non-structural pile jacket without cathodic protection on all 12 piles for the 3 intermediate bents of concern in lieu of structural jackets. A non-structural pile jacket limits the encroachment into the waterway's conveyance, allowing the design team to forego a hydraulic analysis, saving the client the potential associated design fee.

KEY PERSONNEL & SUBCONSULTANTS

MOHIT GARG, PE | Project Manager & Structures EOR

CORY HILL, PE | Deputy Project Manager & Structures Engineer

JOHN DANIELSEN, PE | Quality Control

JASON STARR, PE | Roadway Quality Control & Specification Package Preparation

7. Sarasota County Bridge Replacements

HDR completed the design, permitting, and preparation of construction plans for the replacement of Jackson Road, Ortiz Blvd., and 23rd Street pedestrian bridge. The design included roadway realignment, drainage modifications, structural design, and SWFWMD/USACE permitting efforts.

The existing Jackson Road and Ortiz Blvd. bridges will be replaced with new structures that maintain the existing low member elevation while providing 2-lanes, sidewalk, and bike lane. The bridges are 50' single span concrete pre-stressed slab units with accommodations for Jackson Road to be widened to 4 lanes in the future.

The 23rd Street Pedestrian Bridge construction was completed in March 2021 and now provides a 49' weathering steel truss bridge spanning the canal with 6' sidewalks and an ADA compliant ramp on the south approach.

KEY PERSONNEL & SUBCONSULTANTS

MOHIT GARG, PE | Structures Quality Control

SHINJI KONNO, PE| Structures Engineer

CARLOS LOPEZ, PE| Drainage Quality Control

JASON STARR, PE | Roadway EOR & Utility Coordinator

JOHN DANIELSEN, PE | Structures Technical Advisor

TIERRA, INC | Geotechnical/Contamination

8. I-4 Ultimate Design-Build - Bridges 241, 245-246 & 269

Project involves the reconstruction of 21 miles of I-4 from west of Kirkman Road in Orange County to east of SR 434 in Seminole County. Mohit served as EOR on following bridges:

- Multi-span steel plate girder bridge with pile supported cantilevered slabs. Bridge includes full depth integral steel diaphragm supporting girders, post-tensioned integral c-pier; 130-ft long post-tensioned straddle pier, pile supported slabs and end bents.

03 PREVIOUS EXPERIENCE OF TEAM PROPOSED FOR THIS PROJECT

- Single span steel plate girder curved bridge approx. 240-ft span. Bridge is designed to be supported on end bent with two rows of HP piles.
- Multi-span (29 spans) bridge widening for the complex SR 408 Viaduct.
- Design, plans production, conflict resolution and Contractor liaison
- Pier types included are hammerhead piers, C-piers, existing substructure strengthening, and substructure modifications from hammerhead piers to multi-column piers.

KEY PERSONNEL & SUBCONSULTANTS

MOHIT GARG, PE | Structures EOR

SHINJI KONNO, PE | Structures Quality Control

JOHN DANIELSEN, PE | Structures Quality Control

CARLOS LOPEZ, PE | Drainage EOR

VONIE MOORE | Environmental Permitting

TIERRA, INC | Geotechnical/Contamination

I-4 Ultimate Rendering

9. US 19 from Northside Drive to County Road 95

HDR was selected by the Florida Department of Transportation for the design of 1.21 miles of US 19 from Northside Drive to CR 95 in Pinellas County, Florida. The project included reconstructing the eight-lane divided roadway to a 6-lane controlled access facility with two-lane one-way frontage road on each side to provided for local access. The existing at-grade signalized intersection of US 19 and Curlew Rd. was replaced with a Single Point Urban Interchange (SPUI) with a complex long span steel bridge to provide the grade separation of the US 19 mainline from Curlew Rd.

HDR performed full design services including major highway design, stormwater management facility design, temporary traffic control plans, environmental permitting, complex structural design, miscellaneous structures design, signing and pavement marking plans, signalization design and intelligent transportation design. The project was let to construction in June 2022 and is expected to begin construction in spring 2023.

US 19 at Curlew Road

KEY PERSONNEL & SUBCONSULTANTS

MOHIT GARG, PE | Structures EOR

SHINJI KONNO, PE | Structures Quality Control

ADAMS TRAFFIC, INC | Traffic Data Collection

TIERRA, INC | Geotechnical/Contamination

ELEMENT ENGINEERING GROUP, LLC | Utility Coordination

04

PROJECT CONTROL

04 PROJECT CONTROL

HDR Project Managers use state-of-the-art tools which provide critical, real-time project information, including labor costs, expenses, staff availability and assignments, accounts receivable, quality control status, scheduling, earned value reports, and project reviews. All are available electronically, in an internet-based platform. We will provide the Charlotte County Project Manager with a monthly Project Status Report which will include updated schedules, budget analysis, and projected monthly work tasks.

As a practice, HDR conducts internal business reviews of the project on a bi-monthly frequency. At this meeting, the principal-in-charge and Florida leadership review project metrics with the project manager, including costs to date, costs to complete, schedule status, quality control milestones, and staffing/workload status. As a result, project managers are held accountable for keeping projects within schedule and budget constraints and have the support of leadership to deliver commitments to our clients.

Specific techniques for controlling schedules, costs, and workloads are detailed in this section.

A. Schedule Control

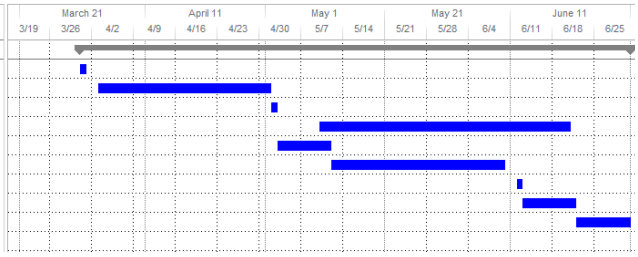
HDR will meet schedule and budget requirements through a proven approach to project execution and well-established methods for resource planning, resource scheduling, critical path method (CPM) scheduling, and HDR's sophisticated web-based project management tools. HDR's approach to successfully controlling schedules begins with upfront planning by HDR's Project Manager, Principal and County Project Manager to develop a scope of work and schedule that meets the County's requirements and expectations. A detailed work breakdown structure and manpower projection is prepared that reflects the breakdown of major project components and identifies the resources assigned to each discipline.

As the overall **Project Manager, Mohit Garg** will coordinate with individual project task leads and subconsultants to confirm that project assignments are progressing on schedule.

HDR has strong understanding of this project requirements and will **expedite the design schedule by adding more resources (40+ bridge staff in FL), fast-track dependent activities such as structural design and permitting application process and accelerate activities such as geotechnical investigation, survey, and drainage analysis for timely completion of dependent activities.** Mohit understands synergy is important in a team for successful completion of a project and has assembled the team of task leads and key subconsultants such as Hyatt, Tierra and Intera who have worked with HDR on numerous past projects.

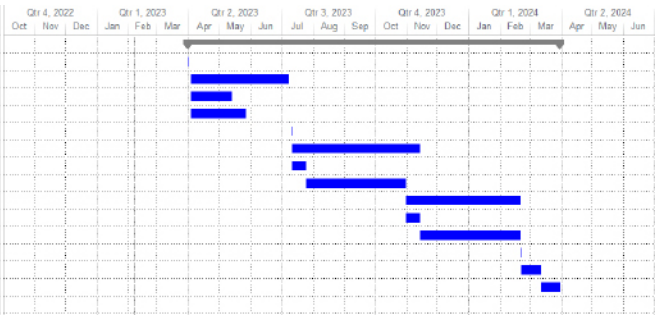
For this project, HDR will work with the County to expedite schedule by eliminating some of the submittals mentioned in RFP such as 60% and 90% for the repair option and 90% for the replacement option. HDR will submit cost estimate with every submittal and submit all the required documents with submittals to present a clear understanding of different disciplines key design activities.

Task Name	Duration	Start	Finish	Add New Column
Rotonda Blvd. Bridge over Rotonda River - Repair Option	66 days	Fri 3/31/23	Fri 6/30/23	
1 Design - NTP	1 day	Fri 3/31/23	Fri 3/31/23	
2 Prepare 30% Plans & Permit Applications	21 days	Mon 4/3/23	Mon 5/1/23	
3 Submit 30% Plans	1 day	Tue 5/2/23	Tue 5/2/23	
4 Review Permit Applications	30 days	Wed 5/10/23	Tue 6/20/23	
5 Review 30% Plans	7 days	Wed 5/3/23	Thu 5/11/23	
6 Prepare 100% Plans	21 days	Fri 5/12/23	Fri 6/9/23	
7 Submit 100% Plans	1 day	Mon 6/12/23	Mon 6/12/23	
8 Review 100% Plans	7 days	Tue 6/13/23	Wed 6/21/23	
9 Submit S&S Plans	7 days	Thu 6/22/23	Fri 6/30/23	



30% and 100% rehabilitation schedule

Task Name	Duration	Start	Finish
Rotonda Blvd. Bridge over Rotonda River - Replacement Schedule	261 days	Fri 3/31/23	Fri 3/29/24
1 Design - NTP	1 day	Fri 3/31/23	Fri 3/31/23
2 Prepare 30% Plans & Permit Applications	70 days	Mon 4/3/23	Fri 7/7/23
3 Survey & Geotechnical Investigation	30 days	Mon 4/3/23	Fri 5/12/23
4 Coastal Analysis	40 days	Mon 4/3/23	Fri 5/26/23
5 Submit 30% Plans	1 day	Mon 7/10/23	Mon 7/10/23
6 Review Permit Applications	90 days	Tue 7/11/23	Mon 11/13/23
7 Review 30% Plans	10 days	Tue 7/11/23	Mon 7/24/23
8 Prepare 60% Plans	70 days	Tue 7/25/23	Mon 10/30/23
9 Temporary Utility Relocation Coordination / Design	80 days	Tue 10/31/23	Mon 2/19/24
10 Review 60% Plans	10 days	Tue 10/31/23	Mon 11/13/23
11 Prepare 100% Plans	70 days	Tue 11/14/23	Mon 2/19/24
12 Submit 100% Plans	1 day	Tue 2/20/24	Tue 2/20/24
13 Review 100% Plans	14 days	Wed 2/21/24	Mon 3/11/24
14 Submit S&S Plans	14 days	Tue 3/12/24	Fri 3/29/24



30%, 60% and 100% replacement schedule

04 PROJECT CONTROL

Oracle E-Business Suit software

Techniques to Meet Schedule

1. Project Manager Mohit Garg, will actively follow the Project Management Plan (PMP) and keep track of all activities with the support from key team members including Technical Advisor Shinji Konno and Deputy Project Manager Cory Hill.

2. Mohit will setup project meetings with the County PM to provide project updates and discuss any stakeholder issues/challenges. Solutions and recommendations for known and unknown issues will be presented.

3. Mohit is a leader with strong business skills and will actively provide routine projects status reports to the County PM related to project budget and schedule. He will clearly outline steps required to complete remaining tasks in a timely manner. Efforts will be made to expedite design for seamless integration with adjacent planned activities.

4. Mohit will setup internal project meetings with discipline leads and key team members to discuss project issues and collaborate with the team to seek creative and innovate solutions to overcome challenges.

5. Mohit will contact our Project Principal, Melanie Fowler, for additional resources if deemed necessary to meet schedule demands. Mohit has access to 170 total staff based in our Tampa office and more than 450 employee-owners throughout Florida. The proposed staff included on our Organization Chart, in Tab 02, represents only a portion of HDR's total Florida staff that have solid transportation design experience.

6. If there is a need to resubmit a particular milestone deliverable, we will provide a revised project schedule that shows new interim milestone dates to support the original final delivery for your review and concurrence.

7. HDR management oversight and status monitoring of the project as well as enhanced status reporting to the County are our prescribed way of maintaining health of this project.

As the overall Project Manager, Mohit Garg, will be responsible for meeting the schedule.

B. Cost Control

HDR uses Oracle E-Business Suite software, as depicted below to track all project costs (labor and expenses) on a task and subtask level. Timesheet and expense report data is automatically integrated into this system weekly. As a result, HDR project managers have real-time access to all cost data associated with their projects on an easy to monitor dashboard. Given this timely data, project managers can quickly adjust staffing mix, individual workload assignments, and pace of delivery to keep projects progressing with the budgeted spend rate.

As the overall Project Manager, Mohit Garg will coordinate with individual project managers to confirm that project assignments are being completed within budget.

Steps to Provide Cost Effective Solutions

HDR's Project Manger will take the following steps to leverage available resources and tools to provide cost effective services:

1. Mohit will hold a kickoff meeting with the County PM and consultant Subject Matter Experts (SMEs) soon after the project NTP.

2. Our team will begin efforts of throughly outlining project needs and prepare a well-defined scope of services.

3. Discipline leads will utilize the listed resources available (i.e., engineering in training, project engineer, senior engineer, chief engineer) to appropriately staff the type of work with the level of expertise required for the complexity of the activity. The staff proposed for this contract includes a wide range of levels of experience both locally, as well as throughout the state of Florida and nationwide.

4. Discipline leads along with SMEs will brainstorm solutions to overcome project challenges and will recommend cost-effective solutions. Mohit and his team members will present recommended solutions to the County PM.

5. We understand that transportation infrastructure projects have many constraints that must be considered by all the disciplines involved to develop cost-effective solutions that balance competing interests. As we move into Phase I (30%) Design, a design kickoff meeting will be held with the County, and internally will the HDR team. Maintaining a high level of communication between the involved design changes and new developments is critical.

6. There are design and construction aspects to delivery of a cost-effective product. We understand that it may be appropriate to provide a design solution that requires more design effort or to specify a particular construction element that is more expensive to build, to realize a lower effective cost for the overall improvement. For example, specifying a more costly typical section so that impacts to the existing drainage systems, utilities or floodplains can be avoided may be appropriate.

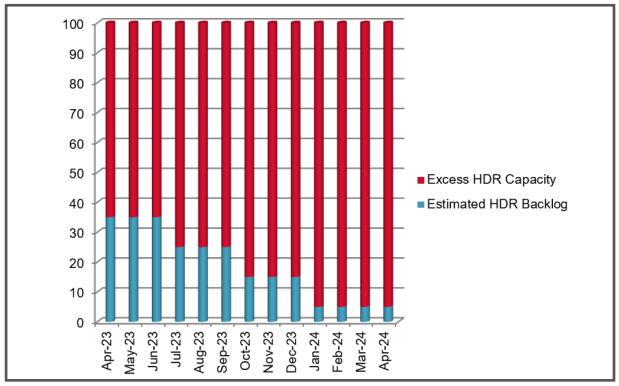
C. Recent, Current, and Projected Workload

HDR understands that our most critical asset is our people. Our employee-owners take pride in providing our valued clients with the appropriate technical experts to deliver the right solutions to challenges.

Proposed Staff Availability

HDR uses Business Intelligence software to monitor project commitments and protect future staff workloads. Based on current data, the key personnel shown in our organization chart in *Tab 02* has not only the technical and management skills, but also the appropriate availability (see below) to serve Charlotte County for the duration of this contract.

Our bridge group has availability to deliver this project and will expedite design work to meet project objectives.



The HDR Team has the capacity to serve Charlotte County today and into the future.

KEY PERSONNEL	ROLE	AVAILABILITY
Mohit Garg, PE	Project Manager	75%
Shinji Konno, PE	Technical Advisor	60%
Cory Hill, PE	Deputy Project Manager	90%
John Danielsen, PE	Quality Control - Bridge	55%
Jason Starr, PE	Roadway Analysis & Design	60%
Carlos Lopez, PE	Quality Control - Drainage	70%
Mark Gosselin, PhD	Coastal Engineering	55%
Voni Moore	Environmental Permitting	65%

The current availability of HDR staff is appropriate for their roles on Charlotte County's work order assignments

05

DESIGN APPROACH for this Project

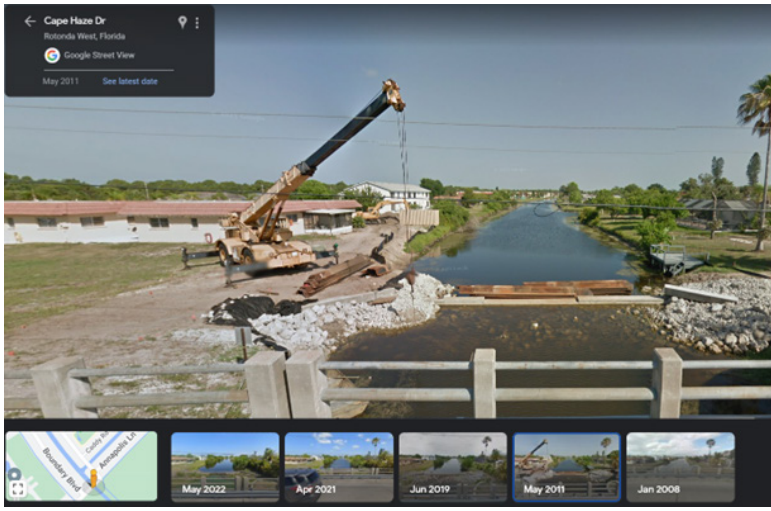
05 DESIGN APPROACH FOR THIS PROJECT

HDR consistently delivers projects on time and within budget, and we are mindful of the County's time and financial resources. We have assembled a team specifically designed to align with the needs of the project under this contract and to meet project objectives. Our team approach is customized to address specific issues the County has deemed critical for success, including the three phases: cost analysis, design, and construction engineering process.

Rotonda Blvd South is classified as a Local Road per the Charlotte County Comprehensive Plan Future Transportation Map Series Map #1 and is located within Rotonda West. The clear roadway is approximately 20-ft wide and connects the western ends of Boundary Blvd and Rotonda Circle with no connected development to the west due to an environmentally protected area. Rotonda Blvd South has a dead end approximately 4,600-feet north of the Rotonda Circle intersection.

Boundary Blvd and Rotonda Circle are both one-way stop-controlled intersections with Rotonda Blvd South. Both intersecting roadways have 35 mph posted speed limits, centerline double yellow striping, and white edge line striping. Rotonda Blvd South is unstripped and unsigned except for a "No Outlet" sign to the north of Rotonda Circle, object markers indicating the dead ends at both intersections, "No Trespassing" signs on the bridge, and various warning signs regarding the adjacent bird sanctuary. While a 5-foot sidewalk is accommodated on the east side of the existing bridge, there are no pedestrian facilities within the subdivision roadway network. The road serves approximately 500 commuters daily.

The Rotonda Blvd bridge over the Rotonda River is in a low-lying coastal environment subject to hurricane storm surges. The river, which is a man-made canal, is a circular freshwater waterway with no direct connection to the saltwater marsh. The canal outfalls to two Coral Creek tributaries via the two canal termini in the vicinity of Rotonda Blvd bridge and the Cape Haze Drive bridge. Coral Creek flows to Gasparilla Sound on route to the Gulf of Mexico. The eastern outfall, just downstream of the project site, drains to the Rotonda Sands once canal runoff overflows the control elevation. Immediately upstream (east) of the bridge is a debris collecting structure preventing floatables/debris from draining to the downstream sensitive wetlands. Its wingwalls slightly constrict the channel opening and the abutment seawalls match the same hydraulic opening. This structure appears to have been constructed sometime in 2011 by inspection of Google Street View history of the twin structure located adjacent to Cape Haze Drive bridge.



Storm surge hydraulics is the controlling design event as the canal acts as a pond under rainfall events. Under a freshwater storm event, minimal scour is anticipated due to low canal velocities and high water elevations limited by the topography. Under a hurricane storm surge higher velocities are generated by the difference in waters surface elevations during the landfall or receding periods with the ability to produce more scour. Review of the recently adopted FEMA flood maps on December 15, 2022 indicates that the 100-year storm surge elevation is 8.0 [NAVD 88]. As shown below, most of the areas around the area are flooded with the exception of some isolated high terrain in lots or the elevated roadway bridge approaches depicted in a tan color. In general, the roadways in the community are about elevation 5.0 or higher, thus significant flooding would result by the 100-year storm event. Upon field review of the site and seeing the damage produced by Hurricane Ian in 2022, seawall failure appears to be caused by loss of soil behind the seawall as a result of the area being submerged and the rapid draw down of the storm surge.

05 DESIGN APPROACH FOR THIS PROJECT

Built in 1985, Bridge No. 014113 serves the Rotonda Blvd over Rotonda River crossing, located approximately 0.1-miles north of Boundary Blvd. The superstructure consists of 3-span (22.6-ft in length) simple span precast pre-stressed concrete channel beams (approximately 14.5-in depth) with a concrete topping and post-tensioning located at mid-spans. The superstructure rests on concrete bent caps founded on precast pre-stressed concrete piles. Anchored concrete panel seawalls encompass the end bents to contain the backfill which supports the end bent caps and approach slabs.

Based on site reconnaissance and the 2021 Bridge Inspection Report Overall NBI Ratings, the existing structure is in good condition with the exception of the satisfactory substructure. The bridge's Sufficiency Rating and Health Index are 85.8 and 77.06, respectively. The superstructure exhibits minor beam spalls and longitudinal deck cracking, which is anticipated due to the differential deflections of adjacent beams, which is a result of the superstructure systems behavior. The substructure has numerous spalls on the piles and bent caps with the majority appearing to be gunshot related. Prior to hurricane Ian, the seawalls exhibited cracks, spalls and erosion behind bulkhead caps. More notably, within the inspection report, some seawall panels were identified to be experiencing deformation related to rotation and perhaps settlement. Hurricane Ian severely damaged the south seawall system, blowing out concrete panels, washing away backfill and undermining the south end bent and its adjacent approach slab.

While limited access was available during our site visit, the south end bent and top side of deck did not appear to show additional signs of distress (e.g., additional cracking, spalling, deformations) as a result of the substructure undermining. The longitudinal crack located on the east side of the undermined approach slab appears to have increased in width, following Hurricane Ian.

With unsupported end bent cap, piles and approach slab, the bridge is unsafe to travel on and has been shut down since.

HDR has developed a rehabilitation solution to restore traffic back on the existing bridge in approximately 7 months from the design NTP. It is estimated that design will take approximately 3 months including permits, 1 months for procurement and 3 months for construction depending on site conditions as construction will likely fall into next hurricane season.

South bulkhead wash out, looking east

South bulkhead wash out, looking west

Bridge closed down and south approach slab

HDR has performed preliminary life cycle cost analysis and based on the results, it is economically viable to rehabilitate the existing structure and plan for replacement design to begin in 12 years from now, with design and construction to take approximately three years combined.

05 DESIGN APPROACH FOR THIS PROJECT

A. Bridge Rehabilitation

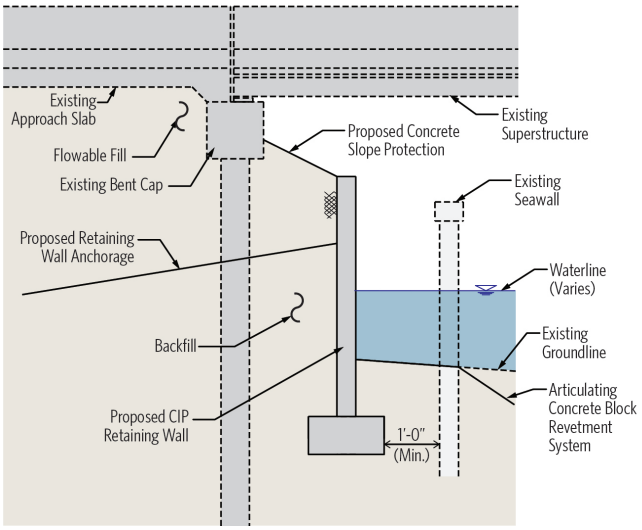
Roadway: Minimal involvement in the rehabilitation of the structure.

Structures: The most direct approach to opening the bridge back up to the citizens of Rotonda West is to perform rehabilitation in the form of a seawall replacement at the south abutment. This is a feasible solution considering the existing structure appears to be in good condition with many expected years left of service life. The existing groundline is approximately 17-ft below the top of roadway curb. The waterline varies throughout the year but was noted within the Bridge Inspection Report to be 12-ft below the top of the roadway curb in October 2021. Based on site measurements, the top of the existing seawall bulkhead is approximately 5-ft below the bottom of the superstructure.

Vertical clearance of existing south seawall bulkhead from bottom of superstructure

This provides for an unsupported seawall height of 9-ft, vertical clearance from groundline of 14-ft and water depth of approximately 4-ft.

The minimum vertical clearance under the structure is restrictive for driving a new steel sheet or concrete panel seawall, whether hammer driven or press-in driven, as confirmed with contractors. As such, a cast-in-place (CIP) concrete cantilever retaining wall is proposed. The existing concrete panel seawall would be removed and cutoff below the groundline. The CIP retaining wall would be constructed behind the existing seawall to avoid conflict with existing structure left in-place below the groundline and not to encroach into the existing channel width. The construction of CIP concrete requires dry conditions, which would be accomplished by dewatering under the bridge between constructed coffer dams, which would run north/south, parallel with the bridge. The retaining wall would sit on a footing approximately 2-ft in thickness by 4-ft in width and be anchored to a deadman behind the existing end bent. Backfill would be placed behind the retaining wall and concrete slope protection installed to connect the new seawall to the existing end bent. Flowable fill would then be poured to fill any remaining voids or undermining of the approach slab and end bent. HDR will explore feasibility of a CIP wall without an anchored deadman during design once geotechnical parameters are available. An articulating concrete block revetment system would be installed in front of the retaining wall and toe'd into the groundline to provide for scour protection. With consideration of the sound state of the rest of the structure, this repair would allow the bridge to last for its expected service life, with regular maintenance activities. **In lieu of available pile driving records for the existing structure and to minimize rehabilitation cost, a CIP wall option deemed appropriate for this situation. We have discussed this option with two contractors, and they expressed that it is achievable with dewatering.**



Bridge Rehabilitation Cross-section

Drainage & Coastal: To analyze the complex coastal hydraulics of the site, we have added Intera Incorporated to the design team to perform the computer modeling of the area, calculate scour depths and design the scour countermeasures. Lead by Dr. Mark Gosselin, Intera will utilize the available ADCIRC model used by FEMA. The ADvanced CIRCulation model (ADCIRC) is a two-dimensional, depth-integrated, hydrodynamic circulation model. With this model we can quickly and efficiently refine the 2-D mesh in the project area to better simulate the hydraulics at the site. FHWA Hydraulic Circulars, including HEC-18, will be employed to estimate local scour depths at the bridge crossing.

Permitting: Repairs to the bridge that require in-water work will need both federal and state authorization. The state Environmental Resource Permit (ERP) would be reviewed by the Southwest Florida Water Management

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District (SWFWMD). The responsibility for the review of the federal 404 permit is expected to be assumed by the Florida Department of Environmental Protection (FDEP) based on a review of the FDEP retained waters map.

Because the damage to the bridge was a result of Hurricane Ian, our team will pursue permits through emergency authorizations that were issued to allow quicker recovery from the hurricane damage. From a state perspective, Emergency Order Number 22-2602 was issued on September 24, 2022. This order allows for a quicker review timeframe to initiate repairs caused by the storm. The Executive Order allows repairs or restoration of structures to the configuration that existed prior to the storm without notification to the Water Management District. The repairs must be completed by one year from the issuance of the Executive Order (by September 24, 2023). The HDR team will coordinate with the SWFWMD to confirm that the repairs are covered by the Executive Order. If the Executive Order does not apply, HDR would pursue an exemption for the repairs of vehicular bridges pursuant to Section 62-330.051(4)(a) F.A.C. or a general permit for bridge repairs pursuant to Section 62-330.443 F.A.C. Both processes offer a quicker approval time compared to the Individual ERP permitting process.

For the Federal 404 Program, a public notice was issued by the U.S. Army Corps of Engineers on September 30, 2022, outlining emergency permitting procedures for Hurricane Ian in the State of Florida. The procedures allow an expedited authorization process through the submittal of an Emergency Request Form to restore structures back to conditions that existed before the storm. The repairs are typically covered under NW Permit 3 for "repair and replace." Based on discussions with FDEP, the state has implemented a similar emergency procedure that allows quick authorization under the State 404 permitting process. HDR will coordinate with the FDEP staff in Fort Myers to secure authorization for the emergency repairs to the Rotonda Bridge. If the emergency order doesn't apply, HDR will pursue a general permit for maintenance pursuant to Section 62-331.210 F.A.C. for authorization under the State 404 program.

For both state and federal permitting, HDR will work with Charlotte County to develop a plan for use of best management practices required under both the federal and state emergency authorizations. These best management practices would be primarily implemented to control turbidity in the canal to maintain state water quality standards during construction.

Survey: To facilitate this repair Hyatt Survey Services, Inc. will perform a topographic survey to acquire existing bridge elevations along the top of the deck, low member elevations, slope protection, high water marks and waterline,etc. Right-of-way limits will be determined along with a bathymetric survey performed upstream, downstream and under the bridge. A Digital Terrain Model (DTM) will be prepared along with contour lines at routine increment. Survey elevations will be referenced to existing County/NGS Vertical Control benchmarks and the NAVD 1988 vertical datum. They survey team will finish their data collection and submit deliverables within 30 days of NTP.

Inspection Services: Consor Engineers, LLC, will support the team by providing an above water and underwater site inspection of the existing bridge components, seawall and channel. This is prudent for the design team to be fully informed on the site conditions and account for complexities which might otherwise have been encountered during construction. It will also identify if the north seawall is compromised and also needing to be repaired or replaced while the contractor is mobilized and the dewatering activities are underway. Inspection services will be scheduled and mobilized immediately upon NTP.

Geotechnical: Tierra, Inc. will provide geotechnical services to support the design of the retaining wall system. Hand auger borings will be performed to determine the seasonal high groundwater table. Geophysical testing such as ground penetrating radar will be performed to identify anomalies beneath the ground surface and approach slabs. Geotechnical analysis will be provided to support AASHTO LRFD methodology to verify sliding, bearing, overturning and global stability requirement for the retaining wall and to acquire anchorage system design parameters. The geotechnical team will finish their data collection and design efforts within 30 to 45 days of NTP.

Utility Coordination: Element Engineering Group, LLC, will provide the utility coordination for this project and have already identified CenturyLink, Charlotte County Water and Sewer, Comcast and FP&L as Utility Agency Owners (UAO) within the project corridor. FP&L, Comcast and CenturyLink are currently providing overhead services to each residential account within the area of the bridge. Each of these utility owner's facilities stop at the west ends of Rotonda Blvd and Rotonda Cir, and do not cross the bridge by either overhead or underground facilities, and therefore, are not expected to be impacted by proposed construction. Furthermore, there would not be any concerns with OSHA clearances if cranes are utilized as the existing FPL single phase 13 kv overhead electric lines are approximately 170' away from this project. Charlotte County does provide water and sanitary

05 DESIGN APPROACH FOR THIS PROJECT

services in the area. Sanitary lines do not appear to be located within the project limits as they appear to stop at manholes located at the west end of Rotonda Blvd and Rotonda Circle. The County does have an approximately 12-in diameter watermain that crosses the water and is currently mounted to the east side of the bridge. As a result of the existing damage its current attachments are in very poor condition. During bridge rehabilitation this utility connection would be properly re-established. The utility coordination team will begin communication and coordination immediately after receipt of NTP.

Existing 12-in diameter Charlotte County watermain bridge mounted

B. Bridge Replacement

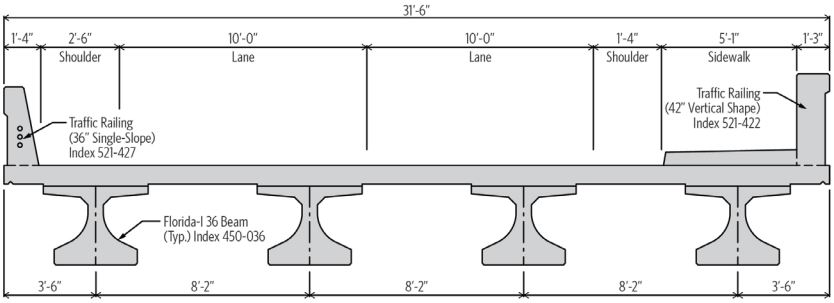
Replacing the bridge is an option regardless of rehabilitation. Rehabilitation is advantageous as it would restore the structure into good working condition to be opened to traffic. It would also allow for the bridge to be replaced in a fast-track manner through phased construction. Otherwise, if rehabilitation is not pursued, it is expected that bridge replacement will take a total of 2.5 years, 1 year for design and 1.5 years for construction (including procurement). Of which, during this time, the public will not be able to utilize the crossing, requiring some of the residents to continue to be burdened by detour inconveniences.

Roadway: The approximate grades from the existing bridge are 3.5% to the north and 4% to the south. The roadway approaches and the adjacent intersections are located within FEMA Flood Zone X. The adjacent properties and roadway segments are located within FEMA Flood Zone 8AE.

Due to the Local Road classification and MSBU status, the proposed improvements for Rotonda Blvd South follow several criteria including the Charlotte County Engineering Design and Construction Standards, the 2018 FDOT Manual of Uniform Minimum Standards for Design, Construction, and Maintenance for Streets and Highways (Florida Greenbook), and the current 2023 FDOT Design Manual (FDM). The County Standards refer to FDOT and with the low-volume, residential status of Rotonda Blvd South, the Florida Greenbook should control design components where applicable.

Per Florida Greenbook Chapter 16 – Residential Street Design, the minimum travel way should be 10-ft wide. Sidewalks have a 5-ft minimum width and should be provided on both sides of the street with connectivity to existing public sidewalks. Without a neighborhood sidewalk network, the pedestrian accommodations at this bridge should provide safe passage for residents but maintaining an east side location only is applicable.

Based on a review of Florida Greenbook Chapter 17 and FDM Figure 260.1.3, our team recommends the following bridge typical section: two (2) 10-ft wide travel lanes with a 5-ft wide raised sidewalk on the east side, Test Level 2 (TL-2) railings on both sides with a pedestrian/bicycle railing adjacent to the sidewalk that meets FDOT drop-off hazard criteria, with appropriate shoulders (16" adjacent to the sidewalk and 30" adjacent to the TL-2 railing). The approaching roadway would maintain the 10-ft wide travel lanes and 5-ft wide sidewalk within the project limits.



Proposed Bridge Replacement Typical Section

Raising the profile of the bridge by 2.5 ft to accommodate a single span structure will result in reconstruction of the approaching roadway and serves as justification to extend the sidewalk. There is approximately 210 LF between the existing approach slab and Boundary Blvd. Maintaining a 4% approach grade would require approximately 185 LF of reconstruction after raising the profile. While the longitudinal grade is below the PROWAG/ADA 5% maximum, having a dedicated sidewalk will improve safety for pedestrians crossing this bridge. North of the bridge there is approximately 153 LF between the approach slab and Rotonda Circle. Increasing the approach grade to match the south side at 4% would require approximately 165 LF of reconstruction after raising the profile. Intersection work will be minimized to tie into existing grades on Rotonda Circle and the sidewalk extension to this intersection will improve safety for residents as well.

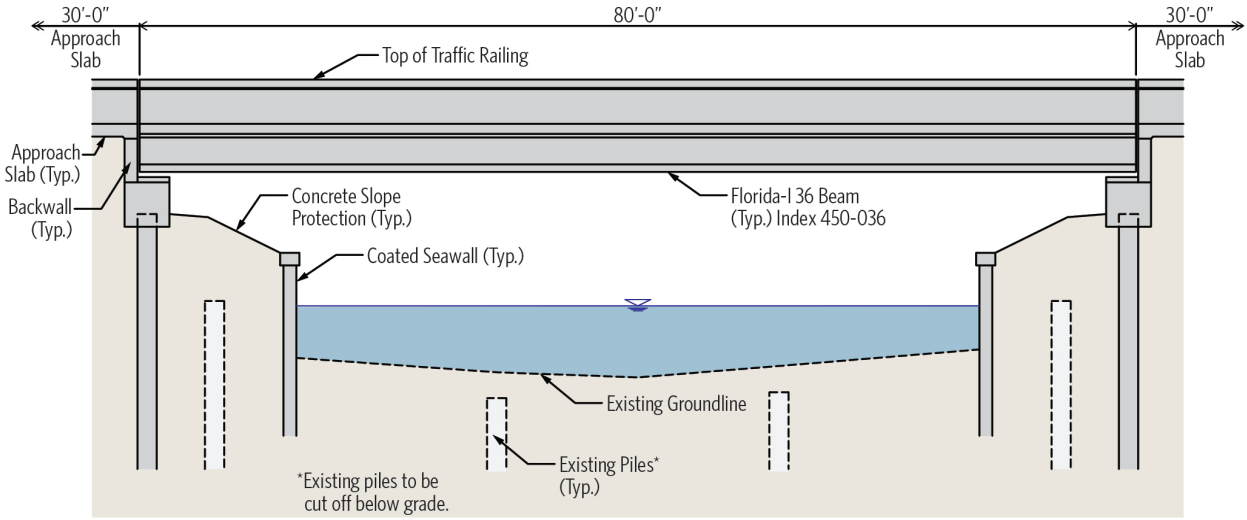
05 DESIGN APPROACH FOR THIS PROJECT

The Type F curb and gutter is proposed to continue down the approach grades to the adjacent driveways on the west side to maintain access. Due to the proposed profile grading, these gravel driveways will be reconstructed back to their existing gates and can be upgraded with the project, if desired, for access into the TIITF/SWFWMD property.

With the short segment of Rotonda Blvd South between Boundary Blvd and Rotonda Circle being reconstructed, our team recommends matching the striping of those two roadways. Maintaining a double yellow centerline stripe and white edge lines will match consistency with the rest of Rotonda West. The existing striping and stop signs at the side streets will not be impacted with the reconstruction limits.

Structures: There are numerous permutations for the design and layout of the bridge replacement. During design a Bridge Basis of Design Report will be performed to compare and analyze whether a Florida-I Beam (FIB) or Florida Slab Beam (FSB) superstructure would be more efficient and cost effective.

Based on our preliminary cost comparison and historical data, a single span FIB structure will be an economical structure as compared to three-span FSB structure. Removing intermediate bents simplify construction and decreases the construction time frame, considering there are less piles to drive or drilled shafts to construct, less concrete to form, cast and cure, and less beam erection to perform. It also removes piles from the channel which obstruct stream conveyance. By inspection of FDOT Standard Plans Instruction 450-010, a 36-inch deep FIB is appropriate for a span of this length at a reasonable beam spacing. The beams can be fabricated using more durable materials such as Carbon Fiber Reinforced Polymer (CRFP) or Stainless Steel (SS) strands and reinforcement. End bents would be offset from the existing end bents to avoid conflict with their piles as they will be left in-place, cutoff below the groundline. Full extraction of piles is not recommended as it impacts the integrity of the in-situ soil and poses settlement and vibration concerns. The roadway profile will be increased to at least maintain or improve the existing low member elevation.



Proposed Bridge Replacement Elevation

HDR is always looking for **innovative solutions and or bringing innovative materials** to provide cost-effective solutions to complex problems. Depending on the environmental classification severity, pre-stress concrete piles, 18" square piles, with CRFP or SS strands and reinforcement is a preferred alternative over steel piles. These piles can be used in extremely aggressive environments since the piles are less likely to lose their concrete covers as corrosion is deterred using these alternative materials. As of 2022, the FDOT Structures Manual, Volume 1 suggests a unit of $135 per linear foot of CRFP or SS piles, compared to the $100 per linear foot of carbon steel piles. The additional costs of these piles can be justified if the cost of maintenance for a 75-year period (expected service life) is considered since the cost of future pile jacketing is expected to be avoided. To provide additional durability, highly reactive pozzolons in the concrete mix will be considered. Furthermore, using precast piles for the foundation will assist in expediting construction. Pile driving operations will be limited to daytime and vibration monitoring measures will be considered due to close proximity of residential units.

New seawalls will be installed during the phase construction. The wall will be driven below the scour elevation and embedded depending on if a cantilever solution or anchored seawall is pursued. As the environment is likely to be

considered extremely aggressive for steel substructures due to the potentially high chloride content of the area, steel sheet piling would need to be coated appropriately.

Phased construction is proposed whether the existing bridge is rehabilitated and then either replaced in the future or replaced now. In both cases, traffic can be maintained / restored at this location on a single lane providing two-way movement maintained with temporary signal during construction. To facilitate the phased sequencing necessary to provide a single lane of traffic during construction, sheet pile walls will be necessary to maintain and contain stable soil between demolition and adjacent construction. These sheet pile walls are expected to be driven along Rotonda Blvd and are permitted to be abandon in-place below grade to avoid potential damage to the soil structure integrity upon removal and vibration concerns to neighboring residence. In accordance with FDOT Design Manual and FDOT Structures Manual, the proximity of these walls to the travel way will necessitate them being considered critical temporary walls and will need to be designed for and detailed within the plans during the design phase.

Phase construction may require the use of mechanical couplers at the construction joint for the deck transverse reinforcement, otherwise this reinforcement will conflict with the form work and necessitate a pour strip. A pour strip can be accommodated considering there are not restrictive right-of-way concerns. A Type K Temporary Concrete Barrier will be used during the phase construction to protect the vehicular traffic from pedestrian and the roadway drop-off. These traffic barriers are connected into the bridge deck with adhesive bonded anchors, with a minimum embedment of 7-inches per FDOT Standard Plans Index 120-110.

Drainage: In case bridge replacement is preferred, the proposed drainage system would closely resemble the existing system. With a roadway crest profile centered in the middle of the bridge, runoff sheet flow to the roadway bridge approaches and to the adjacent properties as in the current condition. No bridge deck scuppers are necessary. An improvement to the area is to collect the runoff with inlets at the roadway approaches and pipe the runoff to the canal. No stormwater management facilities are necessary for water quality and quantity as this project is not adding traffic capacity and the increase in impervious area is negligible. With no existing wetlands along the roadway right-of-way, this work will not result in additional environmental impacts.

Permitting: Permits are required from both federal and state authorization. The state Environmental Resource Permit (ERP) would be reviewed by the Southwest Florida Water Management District (SWFWMD). The responsibility for the review of the federal 404 permit is expected to be assumed by the Florida Department of Environmental Protection (FDEP) based on a review of the FDEP retained waters map.

Constructibility: The bridge can be constructed in phases. There are no overhead utilities in the vicinity of the bridge. Large capacity cranes can be placed at the south abutment to drive piles at each abutments as well as erecting precast beams. Precast beams and piles can be fabricated off-site and transported to the site for expedited construction. The existing structural element can be safety demolished during phased construction. Special consideration will be given to assess and address any hazardous (e.g., lead) materials which may reside within the existing structure during design. Preliminarily, there appears to be no right-of-way concerns, with the area around the bridge providing sufficient space for the contractor to stage construction materials and equipment, and access the site.

Survey: Hyatt Survey will perform a Topographic Survey of the site. The survey limits will extend 200' north & south of the bridge approaches as well at 100' west and up to the control structure on the east side of the bridge centerline.

Geotechnical: Tierra will evaluate the environmental substructure classification at the bridge site according to the current FDOT Structures Design Guidelines. It is anticipated that the bridge site may be classified as extremely aggressive for steel substructures due to the proximity of bodies of water with potentially high chloride contents. After our review of the existing data, a field exploration program will be performed to evaluate the insitu soil/rock conditions which is anticipated to consist of a combination of the following: Hand Auger Borings with Seasonal High Groundwater table (SHGWT) determination, Probes, Pavement Cores and Standard Penetration Test Borings. In addition, Geophysical testing such as Ground Penetrating Radar (GPR) will be completed to help identify anomalies beneath the ground surface and/or approach slab. Prior to commencing with the field services Tierra will coordinate utility clearance via Sunshine State One Call.

Utility Coordination: Charlotte County does provide water and sanitary services in the area. Sanitary lines do not appear to be located within the project limits as they appear to stop at manholes located at the west end of Rotonda Blvd and Rotonda Circle. The County does have an approximately 12-inch diameter watermain that crosses the water and is currently mounted to the east side of the bridge. The watermain will be temporarily or permanently relocated during design.

06

Examples of Recently Accomplished **SIMILAR PROJECTS**

06 EXAMPLES OF RECENTLY ACCOMPLISHED SIMILAR PROJECTS

Similar Project Experience

The HDR Team has a successful history of performing various multi-disciplinary transportation engineering services for clients throughout Florida and nationwide. On the following pages, we include several similar projects where our team has worked together.

Further, we have annotated our project references with examples of the criteria referenced in the RFP, including schedule control, cost control, construction problems solved.

PROJECT ELEMENT KEY		
Schedule Control	Cost Control	Construction Problems Solved

Beckett Bridge Replacement, Pinellas County

Pinellas County, FL

Beckett Bridge Replacement Rendering

FINANCIAL DETAILS

Cost: $313,237, HDR fee

KEY TEAM MEMBERS INVOLVED

- Mohit Garg
- Cory Hill
- Shinji Konno
- Voni Moore
- Tierra, Inc.
- Intera, Inc.

CLIENT REFERENCE

Ann Venables
727.464.3640

This project replaced the existing Beckett Bridge (No. 15400), which is a historic but structurally deficient and obsolete bridge. The existing bascule bridge was replaced on the same alignment with a single leaf rolling lift bascule bridge providing a 25-ft navigational channel and a minimum vertical clearance of 7.8-ft. The approach spans consists of 60-ft spans, 118-ft to the east and 180-ft to the west of the moveable beascule leaf main span. HDR, as a subconsultant to Hardesty & Hanover, LLC, performed the design of the bridge approach superstructure. HDR also provided environmental permitting services required for this bridge replacement project. Design was completed January 2023. The project will be advertised as a design-bid-build project by Pinellas County.

HDR was responsible for the design and detailing of a 360-ft five-span Florida Slab Beam (FSB) superstructure comprised of two individual continuous units (a two-span unit and a three-span unit) in accordance with AASHTO and FDOT codes and Design Standards, Guidelines and Specifications. Project efforts included project management, coordination, plans preparation, rebar detailing, continuous deck design and the support of other various design aspects.

06 EXAMPLES OF RECENTLY ACCOMPLISHED SIMILAR PROJECTS

Bridge Asset Management & Engineering Services, Hillsborough County

Hillsborough County, FL

FINANCIAL DETAILS

Cost: <$200,000 per work order

KEY TEAM MEMBERS INVOLVED

- Mohit Garg
- Cory Hill
- Shinji Konno
- John Danielsen
- Jos Van Dijk
- Melanie Fowler
- Daryl Anderson
- Khawla El mir
- Adam Mitchum
- Carlos Lopez
- Tom Quinn
- Azalea Aoki
- Tierra, Inc.
- Hyatt Survey, Inc.
- Adams Traffic, Inc.

CLIENT REFERENCE

Jay Bhatt
813.307.1918

HDR supported Hillsborough County with this task work order contract for engineering services between 2017 and 2022. Services for this contract include but are not limited to: plans reviews, bridge inspection, condition evaluation of existing structures, preparation of bridge alternative analysis report, preparation of bridge repair plans, bridge load rating, box culvert design checklist and emergency bridge inspection and assessment support. HDR also provided construction post design support services as part of this effort.

Tasks performed under this contract include:

- **Bridge Alternative Analysis Reports:** HDR performed bridge inspection and prepared 21 alternative analysis reports for box culverts, multi-span channel beam bridges, and pre-stressed concrete bridges.
- **Bridge Repair Plans:** HDR prepared plans to improve/ extend the service life of existing bridges, addressing issues like spalling, sheet pile wall delamination, settlement of approach roadway, and excessive pile scaling.
- **Grange Hall Loop over Howard Creek (Bridge No. 104334):** HDR performed the plans production and post design construction services for the rehabilitation of a settling and rotating concrete wingwall. A new steel sheet pile wall was driven in front of the existing destabilized wingwall and the gap between the new and old wall was filled with flowable fill to ensure continuous contact and load transfer. The sheet pile design was efficiently performed to protect the County's project expenses. In conjunction with the geotechnical engineer, **HDR resolved construction concerns regarding the continuing deflection of the existing wingwall during sheet pile driving operations. HDR's experienced team also recommended the Contractor to change sheet pile driving sequence to address concerns related to the movement of existing wingwall. The contractor was unable to meet minimum tip elevation which necessitated the analysis of as-built conditions to ensure a safe and code compliant structure. With timely post design services, HDR alleviated the County's concerns for schedule delay.**
- **Stephens Road over Wildcat Creek (Bridge No. 104329):** HDR performed the plans production and post design construction services for the rehabilitation of corroded and perforated steel sheet pile "curtain" walls which retain the backfill supporting the approach roadways along with other various minor bridge defects. The existing sheet piling was cleaned and painted and a cast-in-place concrete "stub wall" was constructed in front of the curtain wall, sealing the perforations, preventing the loss of backfill and stabilizing the bridge approaches. The stub wall was founded on a footing which tipped below scour depth and an articulating concrete block revetment system was designed to protect the channel bed and prevent future degradation. Poor soils and wet conditions during construction created backfill loss problems below the existing sheet pile walls, as during construction the Contractor identified that the steel sheeting did not extend below the bottom of stub wall footing design elevation. **The bottom of stub wall footing elevation requirements was reassessed to suit site conditions based on the Contractors means and methods to keep construction**

on schedule. Due to poor site conditions, the revetment system was redesigned to a standard rubble riprap system. During construction multiple bridge beams were damaged, spalling concrete, exposing pre-stressing strands and necessitating additional repair along with a load rating assessment as HDR deemed it necessary. HDR submitted signed and sealed load rating report considering field conditions and limited as-built records and the structure was posted. HDR produced signing plans to facilitate the placement of bridge posting signage.

- **Balm Boyette Road over Bell Creek (Bridge No. 104335):** HDR performed the plans production and post design construction services for the rehabilitation of asphalt cracks, standard concrete spalls/delaminations, and corroded and perforated steel sheet pile curtain walls. **Between the design phase and construction additional watermain and force main utilities were installed to serve a new housing development near the site. Additional channel armoring analysis and plan revision were performed to ensure the articulating concrete block revetment system construction would not conflict and damage these new utilities. HDR coordinated with the Contractor, revetment supplier and utility owner to accommodate any concerns in re-design.**

- **Boytette Road over Fish Hawk Creek (Bridge No. 104327):** HDR performed the plans production and post design construction services for the rehabilitation of expansion joints, deck spalls/delaminations and other various miscellaneous bridge defects. Further investigation during design revealed that these deck defects were a result of the superstructure beam type, minimal structural topping, insufficient shear keys and lack of transverse post-tensioning. It is the nature of these low profile beam/slab superstructure systems to exhibit differential deflections due to live loading and subsequently result in longitudinal cracking, delaminations and spalls at the joints between beams. **HDR advised the County that replacing the deck would not solve the reoccurring issues and proposed to repair the individual defects to extend the bridge's service life and schedule the bridge for future replacement, saving the client approximately $650K in rehabilitation cost.**

- **Dickman Road over Dolphin Cover (Bridge No. 104322):** HDR performed the plans production and post design construction services for the rehabilitation of expansion joints, piles, approaches and standard concrete spall/delaminations. Approach slabs were constructed to address the settling approach roadways. To facilitate and maintain public access phase construction was designed for the construction of these approach slabs. Piles at the intermediate pier exhibited deterioration corrosion of their reinforced due to the aggressive environment. Pile jackets were designed and constructed with cathodic protection. **Non-structural pile jackets were installed where deemed appropriate to limit the project costs for the County.**

Stephens Road over Wildcat Creek

Balm Boyette Road over Bell Creek

Dickman Road over Dolphin Creek

06 EXAMPLES OF RECENTLY ACCOMPLISHED SIMILAR PROJECTS

Professional Services Contract, FDOT District 1

District 1 Counties, FL

FINANCIAL DETAILS

Cost: <$200,000 per work order

KEY TEAM MEMBERS INVOLVED

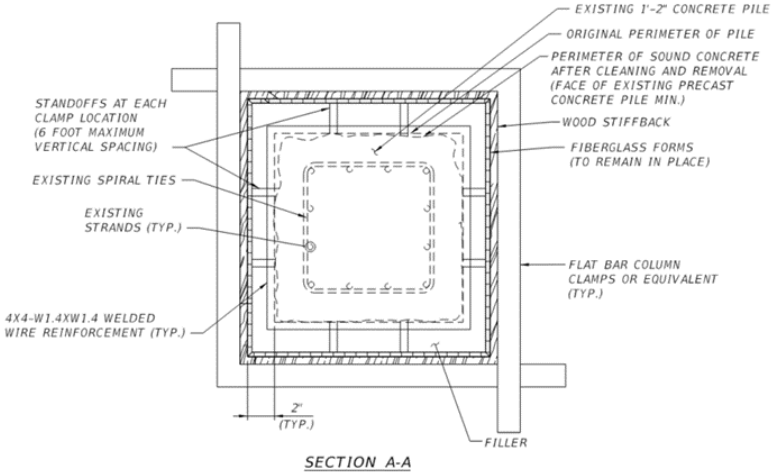
- Mohit Garg
- Cory Hill
- John Danielsen
- Jos Van Dijk
- Melanie Fowler
- Daryl Anderson
- Khawla El mir
- Jason Starr
- Tom Quinn
- Azalea Aoki
- Element Engineering Group, LLC

CLIENT REFERENCE

Katharine Sampson
813.612.3384

HDR, subconsultant to WSP, has provided professional engineering services for bridge engineering design on a continuing basis for FDOT District 1 since 2021. Projects performed under this contract include:

- **Rehabilitation of SR 70 over Joshua Creek (Bridge No. 040027):** The scope of services includes standard concrete spall repairs, construction of integral non-structural pile jackets to rehabilitate pile deterioration exhibited in the form of hour-glassing and scaling damage, and the repair of exposed sand-cement slope protection toe with a lift of rubble riprap. Preliminary investigation into the site conditions during project scoping revealed a non-aggressive environment and allowing the implementation of non-structural pile jacket without cathodic protection on all 12 piles for the 3 intermediate bents of concern in lieu of structural jackets. **A non-structural pile jacket limits the encroachment into the waterway's conveyance, allowing the design team to forego a hydraulic analysis, saving the client the potential associated design fee.**



SECTION A-A

- Based on qualitative analysis and to minimize excavation depth below the existing 2-foot sand-cement slope protection toe, the repair consists of a single lift of bank and shore riprap on top of filter fabric, without the standard 1-foot lift of bedding stone. **To facilitate and maintain the short and accelerated construction, duration site reconnaissance was performed along with the FDOT D1 staff and Contractor to decide on the stability of the slope protection during excavation. To keep the project construction on schedule, HDR recommended to perform excavation in short 5-ft segments to maintain slope protection stability.**

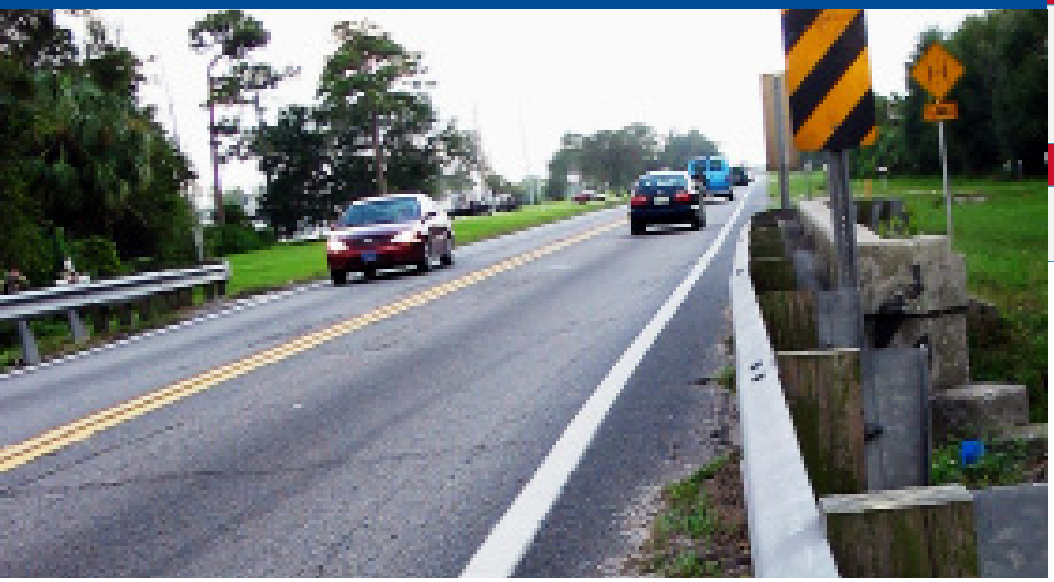
- **Bridge Load Ratings:** HDR performed the load rating of **30 reinforced concrete box culverts** under current FDOT design standards and codes using AASHTOWare BrR.

- **Rehabilitation of SR 60 EB over Peace River (Bridge Nos. 160129 & 160130):** Rehabilitation design is underway to remove and replace existing steel girder coatings and steel bearing coatings, repair the deck cracking using methacylate deck sealer and replace bridge expansion joints.

06 EXAMPLES OF RECENTLY ACCOMPLISHED SIMILAR PROJECTS

US 301 from SR 674 (Sun City Center) to Gibsonton Drive, FDOT District 7

Hillsborough County, FL



FINANCIAL DETAILS

Cost: $15.7M, HDR fee
$135.5M Construction Cost

KEY TEAM MEMBERS INVOLVED

- Mohit Garg
- Shinji Konno
- Carlos Lopez
- Tierra, Inc.

CLIENT REFERENCE

Tracy Hood
813.975.6158

HDR designed 9.7-miles of roadway improvement project from SR 674 to south of Gibsonton Drive, in Hillsborough County. Although the FDOT was the lead agency delivering this $55 million project, Hillsborough County and more than 20 private developers were substantial financial partners. **This unique financing partnership required an unprecedented level of coordination and collaboration throughout the final design phase.**

The proposed roadway provided a 6-lane divided rural highway with a depressed median, 8-foot shoulders, a 5-foot sidewalk and a 12-foot multi-use path.

Improvements to the northern segment of US 301, from south of Balm Road to Gibsonton Drive, have been constructed. Construction for the southern segment from SR 674 to south of Balm Road will began in 2017. The project involved the replacement of three water crossing bridges:

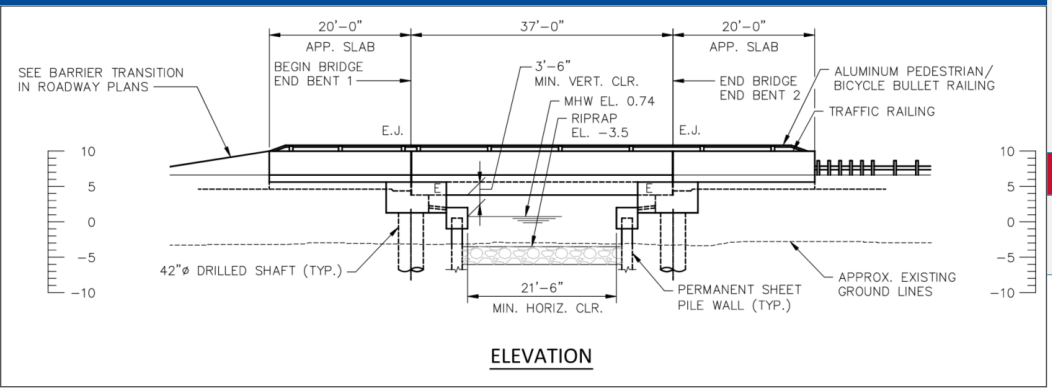
- **Big Bull Frog Creek - existing 26'-8" wide 208'-0" bridge was replaced with a 136'-0" wide 230'-0" long bridge**
- **Little Bull Frog Creek - existing 26'-8" wide 104'-0" bridge was replaced with a 136'-0" wide 150'-0" long bridge**
- **Tadpole Creek - existing 33'-2" wide 104'-0" bridge was replaced with a 136'-0" wide 105'-0" long bridge**

The bridges were designed to maximize the vertical clearances to the water crossings while minimizing roadway profile impacts. **An accelerated bridge construction technique was utilized by designing a precast slab superstructure to eliminate the need of form work over the water and minimize construction time, reducing construction noise and impacts to the surrounding businesses and community. Post design services were performed to assess out of tolerance piles on intermediate pile bents.**

The project also involved extensive drainage design, including conveyance systems, two bridge hydraulics reports, FEMA no-rise certification, 20 stormwater management facilities and two floodplain mitigation sites. Environmental permitting, utility design and coordination, as well as lighting, MOT and public involvement were key to the project success.

06 EXAMPLES OF RECENTLY ACCOMPLISHED SIMILAR PROJECTS

Roadways, Drainage, Structural Site & Traffic Engineering Consulting Services, Pinellas County, *Pinellas County, FL*



ELEVATION

FINANCIAL DETAILS

Cost: <$200,000 per work order

KEY TEAM MEMBERS INVOLVED

- Mohit Garg
- Cory Hill
- Shinji Konno
- Voni Moore
- Tierra, Inc.
- Intera, Inc.

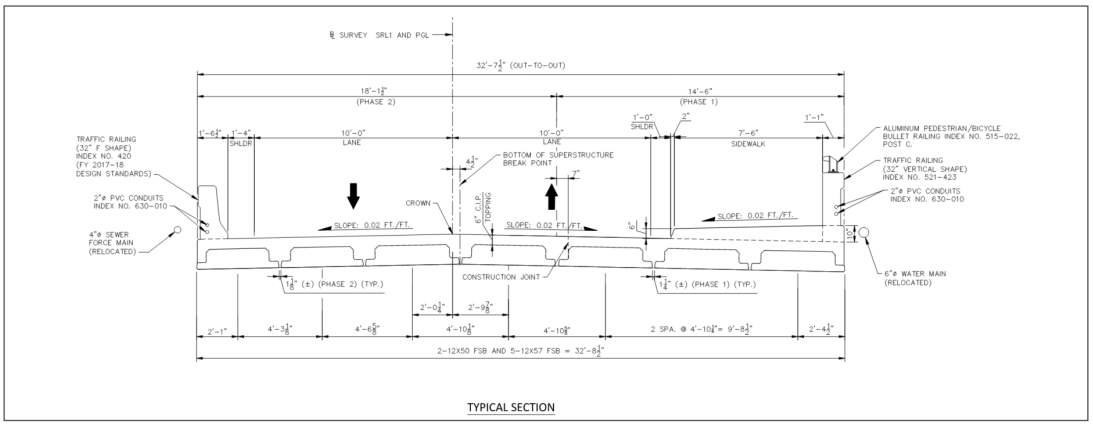
CLIENT REFERENCE

Erin Lawson
727.464.3176

HDR has been providing transportation engineering services as requested by Pinellas County since 2010. During the last five year cycle, we had twelve assignments including the seven bridge projects listed below:

- **Tarpon Woods Pedestrian Bridge, PID#416394:** HDR developed construction plans for the pre-stressed slab widening of the Tarpon Woods Blvd. Bridge over Brooker Creek to accommodate pedestrian access via a 6-foot sidewalk on the bridge. Awarded 2018-2019 Florida's West Coast Branch APWA Project of the Year. Fee: $156,210

- **Bridge BR 4351 Oakwood Drive over Stephanie's Channel:** HDR was retained by Pinellas County to develop construction plans for the replacement of the Oakwood Drive Bridge over Stephanie's Channel. Oakwood Drive is a two-lane undivided residential street that is the only access to 69 residences located on an island within Harbor Bluffs in Largo, Florida. The focus of the project is the replacement of the existing single span bridge (Bridge No. 154351) over Stephanie's Channel while providing transitions to the existing Oakwood Drive roadway typical section in close proximity to the bridge. The proposed bridge is 37-feet long and the typical section provides for two 12-foot wide travel lanes and a 7.5-foot wide raised sidewalk. **A phased construction sequence was devised to ensure a single lane was operational throughout construction.** The superstructure consists of low profile Florida Slab Beams which sit on a concrete end bent cap founded on drilled shafts. **An anchored seawall system was designed and detailed to support each end bent and accommodate drainage pipes. Post design services were performed to re-design the transverse pocket reinforcement which is cast into the pre-stressed precast concrete beams to accommodate fabricator forms upon fabricator's request. HDR provided all necessary permitting services for this effort. HDR also provided utility design services for the relocation of a 4-inch Pinellas County force main and a 6-inch Pinellas County water main which cross the channel. Construction started in spring 2022. HDR reviewed impact of an out of tolerance pile on intermediate pile bent design. Other post design work was reviewing shop drawings and addressing RFI/RFM's on traffic structures and drainage structures.** Fee: $256,170



TYPICAL SECTION

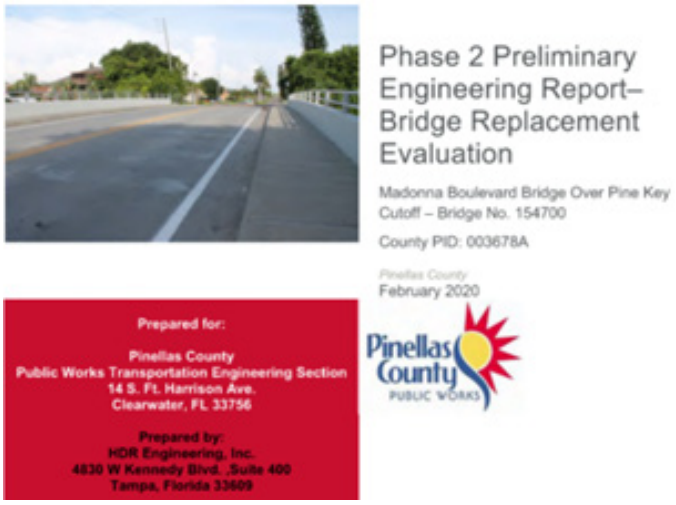
- **Madonna Blvd. Bridge - Phase I Preliminary Engineering Report - Bridge Repair/Rehabilitation, Widening or Replacement Study, PID#003678A:** HDR assisted Pinellas County in developing a Scope of Services template to be used for Phase 1 task orders and then proceeded to develop the Phase 1 Report for the 3-span, 120-ft concrete beam bridge in Tierra Verde. Fee: $14,271

- **Madonna Blvd. Bridge - Phase 2 Preliminary Engineering Report - Bridge Replacement Evaluation, PID#003678A:** HDR assisted Pinellas County in developing a Scope of Services template to be used for Phase 2 task orders and then proceeded to develop the Phase 2 Preliminary Engineering Report for the 3-span, 120-ft concrete beam bridge in Tierra Verde, which included computations for the replacement cost of the structure. Fee: $87,238

- **13th St/Sands Pt. Dr. Bridge - Phase I Preliminary Engineering Report - Bridge Repair / Rehabilitation, Widening or Replacement Study, PID#000125A:** HDR developed a Phase 1 Report that evaluated the existing bridge and recommended repair, rehabilitation or replacement for the 3-span, 120-ft concrete beam bridge in Tierra Verde. Fee: $14,271

- **13th St/Sands Pt. Dr. Bridge - Phase 2 Preliminary Engineering Report - Bridge Replacement Evaluation, PID#000125A:** HDR developed the Phase 2 Preliminary Engineering Report that proposed bridge replacement alternatives considering site location, environmental and construction phasing for the 3-span, 120-ft concrete beam bridge in Tierra Verde, which included computations for the replacement cost of the structure. Fee: $85,796

- **Park Blvd Bascule Bridge Rehab:** HDR provided final construction and detour plans, special provisions and engineer's estimates for the electrical and mechanical systems repairs of this double leaf bascule bridge. Fee: $214,559




Tarpon Roods Bridge


13th St/Sands Point Drive Bridge


Madonna Blvd Bridge


Park Blvd Bridge

06 EXAMPLES OF RECENTLY ACCOMPLISHED SIMILAR PROJECTS

San Martin Blvd over Riviera Bay Bridge Replacement Study, Pinellas County

Pinellas County, FL

HDR was retained by Pinellas County to conduct a NEPA compliant Project Development & Environment (PD&E) study for the rehabilitation or replacement of the existing San Martin Bridge over Riviera Bay. The limits of the bridge study are from Tallahassee Drive to Weedon Drive in St. Petersburg, Florida. A second component of the project will evaluate trail enhancements from Macoma Drive to Gandy Boulevard.

The trail enhancement component of the study will evaluate the opportunities to connect the North Bay Trail, which currently ends at Macoma Drive, with the Friendship Trail at Gandy Boulevard. Safe crossing locations will also be identified during the evaluation process. This study is expected to take approximately 18 months.

The study of San Martin Bridge was needed in order to address the deficiencies of the existing bridge. The bridge was constructed in 1962 and is nearing the end of its service life. The existing bridge does not meet current design standards and Americans with Disabilities Act (ADA) requirements. Vertical profile alternatives were evaluated for increasing the clearance at the bridge crossing. The trail enhancements have been identified as priorities in the City of St. Petersburg's Trail Program, Pinellas County's Bicycle and Pedestrian Master Plan, and the Metropolitan Planning Organization's North Bay Trail/Rio Vista Trail connection priority in the Long Range Transportation Plan.

This study was done in accordance with the federal National Environmental Policy Act (NEPA) process in coordination with FDOT District 7. The NEPA process will allow the County the opportunity to apply for federal grant funding.

FINANCIAL DETAILS

Cost: $641,431, HDR fee

KEY TEAM MEMBERS INVOLVED

- Mohit Garg
- Carlos Lopez
- Voni Moore
- Tierra, Inc.
- Intera, Inc.
- Adams Traffic, Inc.

CLIENT REFERENCE

Erin Lawson
727.464.3176

San Martin Blvd. over Riviera Bay

06 EXAMPLES OF RECENTLY ACCOMPLISHED SIMILAR PROJECTS

Sarasota County Bridge Replacements, Sarasota County, FL

Sarasota County, FL

HDR completed the design, permitting, and preparation of construction plans for the replacement of Jackson Road, Ortiz Blvd., and 23rd Street pedestrian bridge. The design included roadway realignment, drainage modifications, structural design, and SWFWMD/USACE permitting efforts.

The existing Jackson Road and Ortiz Blvd. bridges will be replaced with new structures that maintain the existing low member elevation while providing 2-lanes, sidewalk, and bike lane. The bridges are 50' single span concrete pre-stressed slab units with accommodations for Jackson Road to be widened to 4 lanes in the future.

The 23rd Street Pedestrian Bridge construction was completed in March 2021 and now provides a 49' weathering steel truss bridge spanning the canal with 6' sidewalks and an ADA compliant ramp on the south approach.

FINANCIAL DETAILS

Cost: $524,000, HDR fee

KEY TEAM MEMBERS INVOLVED

- Mohit Garg
- Shinji Konno
- Carlos Lopez
- Jason Starr
- John Danielsen
- Tierra, Inc.

CLIENT REFERENCE

Sandra Boudreau
941.914.3319

Ortiz Blvd - Existing Bridge

Jackson Rd - Existing Bridge

07

EXPERIENCE AND CAPABILITIES

07 EXPERIENCE AND CAPABILITIES

Partnering with HDR not only involves our proposed staff, but also the knowledge and experience of 11,000 employees of various disciplines located in over 200 locations around the world. If we encounter a design, permitting, or construction issue that our team has not faced before, chances are that someone in our company has. Each individual on the team has a network of contacts within the company who they can draw on for advice or assistance, or who can suggest someone who can help. Each discipline within HDR has an email group where questions can be addressed, or help can be obtained. We also have a pool of well-qualified resources to supplement the team if needed to meet schedule requirements.

In addition, we have access to internal resources of various disciplines that smaller engineering firms may not. Executing this work internally provides continuity and uniformity of product and leverages existing relationships within our company to complete projects on time and on budget.

A. Value Engineering

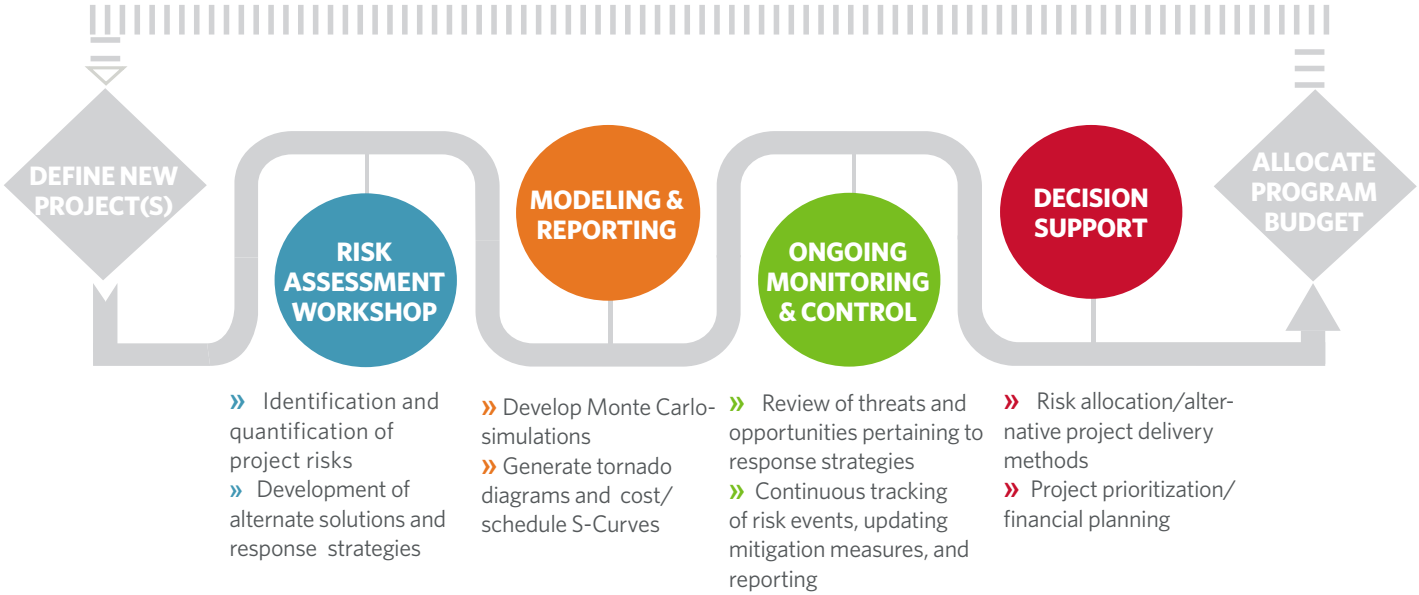
Our approach to the Value Engineering process follows the prescribed six-step job plan of SAVE International, and is basically the same regardless of the design phase. However, the objective of each workshop can be different depending on the level of development of the project. The primary objective of a value engineering study is value improvement. These value improvements might relate to scope definition, functional design, constructibility, coordination (both internal and external), or the schedule for project development. Other possible value improvements are reduced environmental impacts, reduced public inconvenience, or reduced project cost.

We use performance attributes and value matrices to evaluate each alternative and establish their value. Planning for and managing risks during a project is critical. Working with you, we will initiate a Risk Management Process (RMP). The RMP is a method to identify and quantify risks. We will use a Risk Register to make sure every risk is formally identified, quantified, and monitored. The Risk Register will include a brief description of the risk, estimate timing, risk impact (cost or schedule), and likelihood of occurrence.

We will manage the Risk Register and monitor risks throughout the project. We will attend progress meetings to update risk maturity and progress for risk implementation and mitigation.

If necessary, we may conduct a Cost and Schedule Risk Analysis (CSRA). Through CSRA workshops with project stakeholders, we will determine the potential risk impacts to the project and develop risk-response strategies to minimize or avoid key risk factors.

If the risk should be avoided, value engineering and brainstorming may be required to develop alternatives. Risk and value management are inherently related and should be discussed at the same time to produce an optimally vetted design.



B. Life Cycle Cost Analysis

We know that every penny spent on changes or efficiencies must yield a positive benefit. Our economics and finance professionals conduct comprehensive cost-benefit analyses to help objectively assess if future enhancements will reap proposed benefits. We involve stakeholders —clients, staff and the community — as well as our in-house environmental, engineering, and planning professionals to examine not only the economic costs and benefits, but also the social and environmental costs and benefits. **The result is an open and transparent process that identifies options that maximize value.**

We want to make sure that your project goes as planned and avoids any unpleasant surprises during the construction process. To do this, we develop a life cycle cost estimate that includes direct and indirect costs with clear scope definitions. We outline cost guidance and requirements for Design Consultants and Contractors to develop an Estimate Basis Memorandum (EBM). EBM topics include cost estimating methodology consistency, unit cost accuracy, indirect costs, year of expenditure conversions, and risk and contingencies.

Our cost estimating approach includes:

- Skilled personnel who are accustomed to working in collaborative environments with multiple stakeholders
- Innovative teams that are focused on proactively and continually identifying cost issues for an early resolution
- Managing the overall process by tracking details and holding team members accountable
- Providing assessments and recommendations necessary to make timely, informed, and data-driven decisions
- Employing lessons learned from previous projects to optimize cost savings and schedule commitments

HDR currently hold the statewide contract for risk analysis and value engineering (CRAVE) covering all districts. The current contract is the continuation of the previous statewide VE contract, when we performed life cycle cost assessments for the rehab vs. replacement of several bridges in FDOT D4 and FDOT D6.

The following are the life cycle cost analysis reports prepared recently:

- Las Olas Bridge Ft. Lauderdale
- Bahia Honda Bridge
- Long Key Bridge

HDR conducted preliminary life cycle cost analysis for this project (Rotonda Bridge # 014113). Two options were considered for the analysis.

Option 1: Bridge Rehabilitation completed in year 2023 and Replacement completed in year 2038

Option 2: Bridge Replacement completed in year 2025

Estimated Bridge Repair / Rehabilitation Construction Cost

CIP Wall	$122,222.22	
Articulating Concrete Block	$148,500.00	
Dewatering Operations	$60,000.00	
Coffer Dam for Dewatering	$80,000.00	
Fill & Flowable Fill	$50,000.00	
Sub-total	**$460,722.22**	
Mobilization	$69,108.33	15%
Contingency	$92,144.44	20%
Total	**$621,975.00**	

Estimated Bridge Replacement Construction Cost

Width	31.5	ft
Length	80	ft
$/sf	230	
Bridge Cost	$579,600.00	
Roadway and other discipline	$300,000.00	
Steel Sheet Piling	$324,000.00	$60/sf
Temp. Critical Walls	$240,000.00	$40/sf
Demolition	$126,000.00	
Articulating Concrete Block	$396,000.00	
Sub-total	**$1,965,600.00**	
Mobilization	$294,840.00	15%
Const. over Water	$58,968.00	3%
Phased Construction	$393,120.00	20%
Contingency	$393,120.00	20%
Total	**$3,105,648.00**	

Key considerations for the life cycle cost analysis for this project are:

1. Nominal use of delay cost of $2000 per week until traffic is restored
2. Rehabilitation is estimated to be completed in 7 months in 2023
   - Maintenance Cost of existing bridge – $200,000 every 5 years – 2 cycles of maintenance until end of service life
   - Routine maintenance cost of $10,000 every alternate year

The graph below **summarizes the life cycle cost analysis and concludes that rehabilitation instead of replacement yields financial benefits for this project. With the rehabilitation alternative, traffic is estimated to be restored in approximately 7 months from design NTP.**

C. Fast-Track Construction

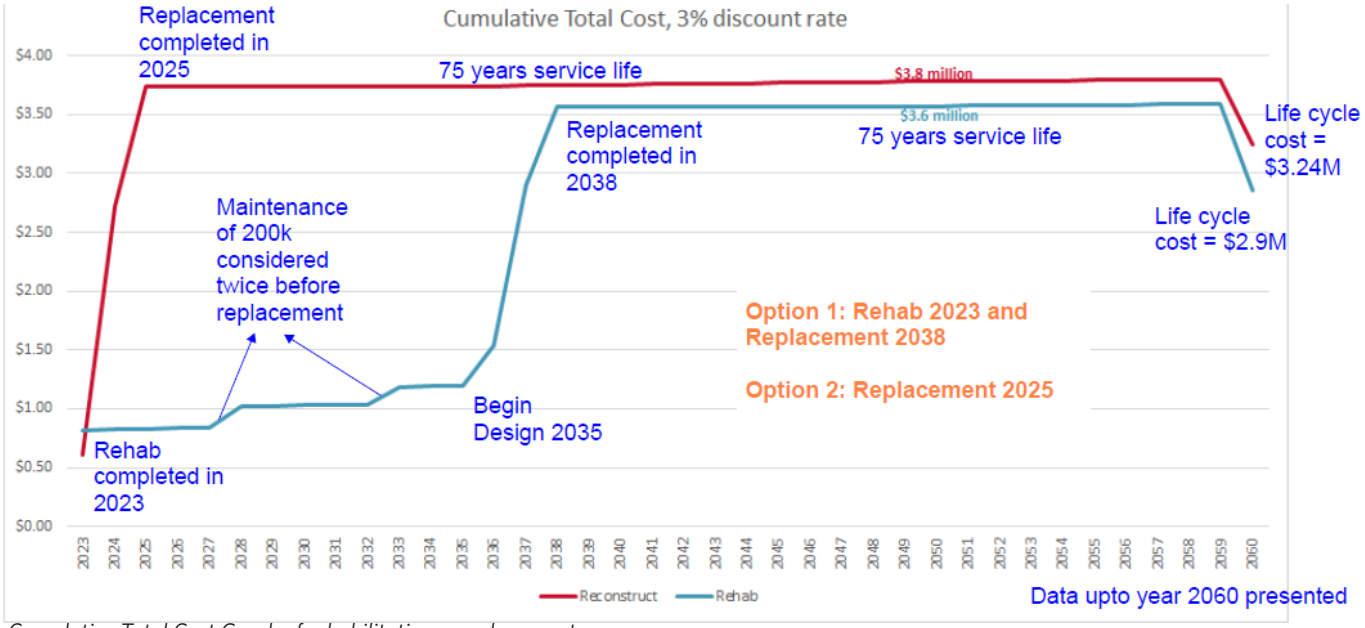
Often the most difficult aspect of a project is keeping it moving forward promptly. Diligence, flexibility, credibility, and tact are needed to work through potential delays or stopping points. Our project manager understands the criticality of project milestones and knows the required documentation and workflow to successfully deliver a fast-track project schedule.

We will develop a Primary Project Schedule that details potential durations for tasks, activities, and resourcing. The Primary Project Schedule will also allow us to identify and resolve critical schedule risks earlier and mitigate potential impacts.

A successful project starts with reviewing the project documents, studying site conditions, and gaining insight into the project challenges. Additional critical steps include setting the project up in HDR's preferred project portfolio management software (Oracle's Primavera Contract Management) and calculating quantity take-offs. We assess all aspects of the project, including reports prepared from the first day of construction to assist the contractor in building a successful project.

Key information is captured through hard copy and electronic project files and submittal logs. HDR has extensive experience handling and recording critical project information and workflow.

For this project, HDR is proposing to reduce submittal phases to 30% and 100% submittals for the repair option which will reduce submittal review time and expedite the project schedule. HDR will start key independent activities such as survey, geotechnical investigation, coastal / drainage analysis immediately following NTP. Key dependent activities such as structures design and permitting applications will be developed concurrently. We already have excellent past working relationships with our subconsultant partners and sub-agreements will be prepared after the award of this contract immediately so that time in project setup and team on-boarding can be minimized. Communication is crucial for a project of any size and is the reason we proposed HDR Deputy PM Cory Hill for this project to provide redundancy. HDR will staff sufficient resources to review shop drawings / RFIs / RFMs during construction.



Cumulative Total Cost Graph of rehabilitation v. replacement

D. Environmental Assessment

HDR's southwest Florida team includes professional wetland scientists, licensed wildlife biologists, GIS professionals, and environmental engineers who are fully trained and well-versed in wetland and wildlife regulations, including jurisdictional delineations and wildlife surveys. Our team regularly obtains local, state, and federal permits, modifications, renewals, and exemptions for projects; develops and negotiates permitting strategies that save clients time and money; conducts water quality sampling; implements Stormwater Pollution and Prevention Plans (SWPPPs); facilitates NPDES permits. We personally know the regulatory staff at USACE, the Florida Department of Environmental Protection (FDEP) and the Water Management Districts, and fully understand the intricacies, flexibilities, and collaborations needed to efficiently advance successful projects.

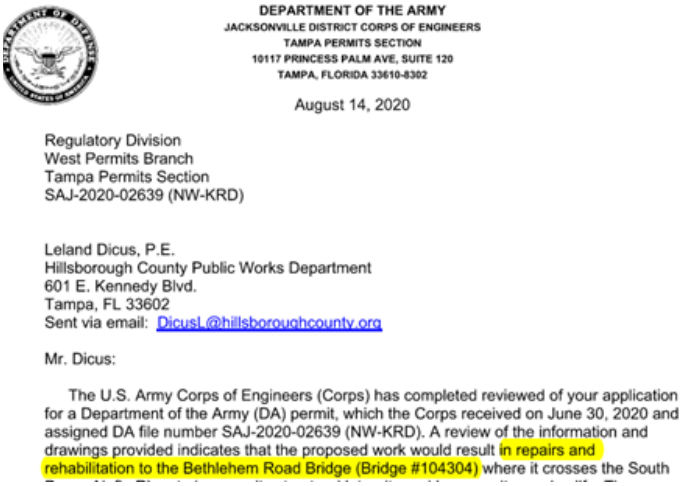
Our wildlife ecologists have surveyed federal and state-listed and protected wildlife within Charlotte County, including the Florida scrub-jay, wood stork, crested caracara, red-cockaded woodpecker, burrowing owl, Florida bonneted bat, bald eagle, and sandhill crane. We work with federal and state wildlife agencies to secure listed species permits and project concurrence. HDR's team includes an Authorized Gopher Tortoise Agent who has surveyed thousands of acres of tortoise habitat, excavated hundreds of burrows, and relocated over 100 tortoises throughout Florida. We also conduct acoustical surveys for bats, recently along I-75 through a portion of Charlotte County.

For the **City of Punta Gorda force main in Charlotte County,** HDR was responsible for permitting a 4-mile utility expansion involving excavation and HDD/jack and bore beneath ditches, across wetlands, along roads, within a municipal airport, and through the state-owned Babcock-Webb Wildlife Management Area. Our team prepared and obtained wetland and wildlife documents for state (FDEP) and federal (USACE Section 404) permits.

HDR's technical staff provides ArcGIS services and is technically skilled at integrating ArcGIS with SharePoint, Excel, and other database tools to provide interactive tracking dashboards, asset management databases, and detailed reports. Examples include creation of a GIS-based infrastructure database for the **City of Sarasota** and a GIS-based pipeline inventory for the **Peace River Manasota Regional Water Supply Authority**.

HDR has strong experience in securing permits for Hillsborough County on the following bridges with similar repair needs to Rotunda Bridge:

- Bridge 104322 - Dickman Rd Dolphin Cove
- Bridge 104306 - Taylor Gill Road Over Little Manatee River
- Bridge 104335 - Balm Boyette Road Over Bell Creek
- Bridge 104304 - Bethlehem Road Over South Prong Alafia River
- Bridge 105500 - Platt St. Over Hillsborough River
- Bridge 105504 - Columbus Drive Over Hillsborough River



DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT CORPS OF ENGINEERS
TAMPA PERMITS SECTION
10117 PRINCESS PALM AVE, SUITE 120
TAMPA, FLORIDA 33610-8302

August 14, 2020

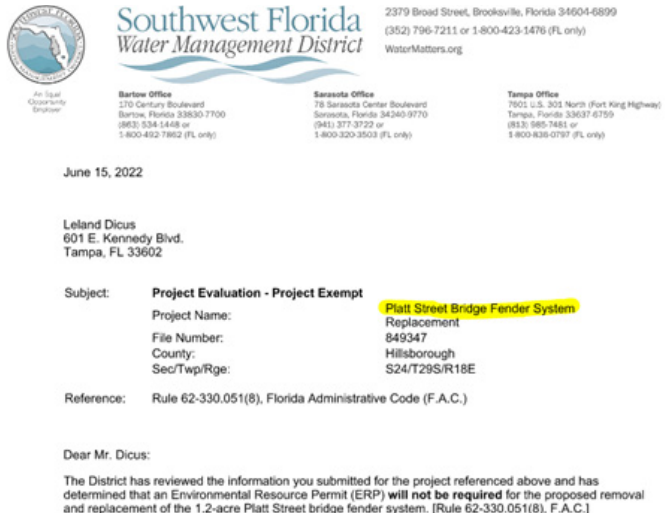
Regulatory Division
West Permits Branch
Tampa Permits Section
SAJ-2020-02639 (NW-KRD)

Leland Dicus, P.E.
Hillsborough County Public Works Department
601 E. Kennedy Blvd.
Tampa, FL 33602
Sent via email: DicusL@hillsboroughcounty.org

Mr. Dicus:

The U.S. Army Corps of Engineers (Corps) has completed reviewed of your application for a Department of the Army (DA) permit, which the Corps received on June 30, 2020 and assigned DA file number SAJ-2020-02639 (NW-KRD). A review of the information and drawings provided indicates that the proposed work would result in repairs and rehabilitation to the Bethlehem Road Bridge (Bridge #104304) where it crosses the South

Permit for Bethlehem Road Bridge, Hillsborough County



Southwest Florida Water Management District
2379 Broad Street, Brooksville, Florida 34604-6899
(352) 796-7211 or 1-800-423-1476 (FL only)
WaterMatters.org

Bartow Office
170 Century Boulevard
Bartow, Florida 33830-7700
(863) 534-1448 or
1-800-492-7862 (FL only)

Sarasota Office
78 Sarasota Center Boulevard
Sarasota, Florida 34240-9770
(941) 377-3722 or
1-800-320-3503 (FL only)

Tampa Office
7601 U.S. 301 North (Fort King Highway)
Tampa, Florida 33637-6759
(813) 985-7481 or
1-800-836-0797 (FL only)

June 15, 2022

Leland Dicus
601 E. Kennedy Blvd.
Tampa, FL 33602

Subject: **Project Evaluation - Project Exempt**
Project Name: Platt Street Bridge Fender System Replacement
File Number: 849347
County: Hillsborough
Sec/Twp/Rge: S24/T29S/R18E

Reference: Rule 62-330.051(8), Florida Administrative Code (F.A.C.)

Dear Mr. Dicus:

The District has reviewed the information you submitted for the project referenced above and has determined that an Environmental Resource Permit (ERP) **will not be required** for the proposed removal and replacement of the 1.2-acre Platt Street bridge fender system. [Rule 62-330.051(8), F.A.C.]

Permit for Platt Street Bridge, Hillsborough County

E. Specialized Experience

HDR offers the following strong and specialized experience required for this project:

Mohit Garg, Shinji Konno, and John Danielsen have an average experience of **more than 25 years in bridge design, rehabilitation, an support for post-design construction services.** The rehabilitation solution developed and discussed herein will expedite the restoration of traffic on the existing structure in approximately 7 months. This solution has been vetted through two repair contractors who have provided their services to FDOT D1 and Hillsborough County on similar jobs.

Drainage and coastal analysis are key disciplines for this rehabilitation/repair/replacement project. The location makes it vulnerable to storm events, as evidenced by the damage experienced during Hurricane Ian (2022). Our team has specialized experience for coastal analysis (Intera) and hydraulics design and detailing (HDR). Our combined experience has screened the proposed repair solution for hydraulic concerns. Consor will be providing specialized expertise to inspect north abutment seawall.

HDR has strong permitting experience and has worked with all permitting agencies that will be involved on the Rotunda project. Our team is qualified and capable to obtain permits required for this project regardless of rehabilitation / replacement strategy selected.

Our geotechnical subconsultants Tierra, Inc. and Diversified Professional Services (DBE) have strong reputations in providing the geotechnical services required for a repair solution and for a replacement solution.

Roadway design and other services, as presented in the organization chart, will be provided to support the bridge replacement efforts. Our team brings **in-depth construction services experience** through our work on many design-build projects across Florida and the US, including Florida's largest P3 I-4 Ultimate project in Orlando where HDR responded to more than 7,000 RFIs for 80+ bridges and numerous miles of roadway.

We understand all aspects of the project management process and will provide **comprehensive solutions** to your project objectives using our collective experiences working with clients, contractors and on many GEC type contracts with multiple clients across Florida.

08

VOLUME OF WORK

09

LOCATION

10

LITIGATION

11

MINORITY BUSINESS

08 VOLUME OF WORK

HDR's total payments received from Charlotte County within the last 24 months is $450,519. Of this, only $77,261 is from a structures contract. This information is also reflected on the Proposal Submittal Signature Form.

09 LOCATION

Work on this contract will be managed and primarily produced from HDR's Tampa office, located in the Westshore Business District. Our office provides immediate response to County offices or the project site. The majority of our subconsultants are local, as shown in the table below.

PARTNER FIRM	LOCATION
Adams Traffic, Inc.	Plant City, FL
American Government Services	Tampa, FL
CONSOR Engineers, LLC	St. Cloud, FL
Diversified Professional Service Corp.	Dade City, FL
Element Engineering Group, LLC	Tampa, FL
Hyatt Survey Services, Inc.	Bradenton, FL
Intera, Inc.	Gainesville, FL
SEARCH, Inc.	Pensacola, FL
Tierra, Inc.	Tampa, FL

Our proximity and expertise will result in timely and reliable service on work performed for this contract.

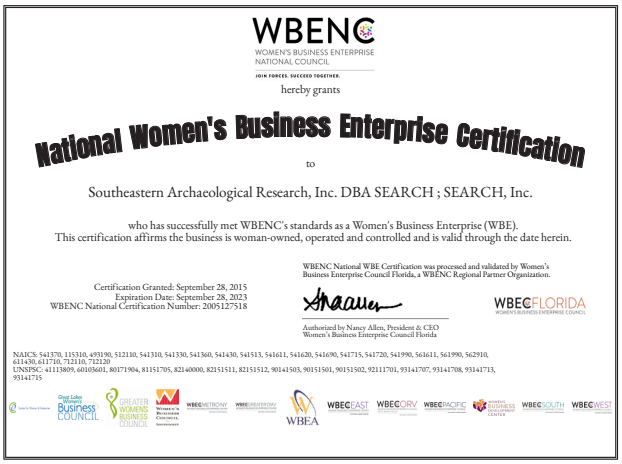
10 LITIGATION

In today's legal environment, claims and litigation are a reality for any large company in the industry, regardless of performance or merit. When claims do occur, we are proactive and cooperative in reaching a resolution that is fair and reasonable to all. We value the confidences of our clients as well as our contractual commitments to confidentiality, and do not discuss with third parties the circumstances involving ongoing projects. We would take the same position with information regarding our work for this contract.

If necessary, we would be willing to meet in person with you to discuss the merits or background of past claims. There are no claims or litigation that could impede our ability to perform this project, and we have maintained professional liability insurance in force continually since 1958 for the protection of us and our clients.

11 MINORITY BUSINESS

HDR is not a certified Minority Business Enterprise (MBE); however, when feasible, we often team with DBE and MBE firms on projects. For this project, we have included Adams Traffic, Inc.; American Government Services; Diversified Professional Service Corp; Element Engineering Group, LLC; Hyatt Survey Services, Inc.; Tierra, Inc.; and SEARCH, Inc.



WBENC
WOMEN'S BUSINESS ENTERPRISE NATIONAL COUNCIL
JOIN FORCES. SUCCEED TOGETHER.

hereby grants

National Women's Business Enterprise Certification

to

Southeastern Archaeological Research, Inc. DBA SEARCH ; SEARCH, Inc.

who has successfully met WBENC's standards as a Women's Business Enterprise (WBE).
This certification affirms the business is woman-owned, operated and controlled and is valid through the date herein.

Certification Granted: September 28, 2015
Expiration Date: September 28, 2023
WBENC National Certification Number: 2005127518

WBENC National WBE Certification was processed and validated by Women's Business Enterprise Council Florida, a WBENC Regional Partner Organization.

Authorized by Nancy Allen, President & CEO
Women's Business Enterprise Council Florida

WBECFLORIDA

NAICS: 541370, 115310, 493190, 512110, 541310, 541330, 541360, 541430, 541513, 541611, 541620, 541690, 541715, 541720, 541990, 561611, 561990, 562910, 611430, 611710, 712310, 721120
UNSPSC: 41113809, 60103601, 80171904, 81151705, 82140000, 82151511, 82151512, 90141503, 90151501, 90151502, 92111701, 93141707, 93141708, 93141713, 93141715

FDOT · BROWARD COUNTY FLORIDA · LEE COUNTY PORT AUTHORITY · GREATER ORLANDO AVIATION AUTHORITY · JACKSONVILLE TRANSPORTATION AUTHORITY

Florida Unified Certification Program

Disadvantaged Business Enterprise (DBE)
Certificate of Eligibility

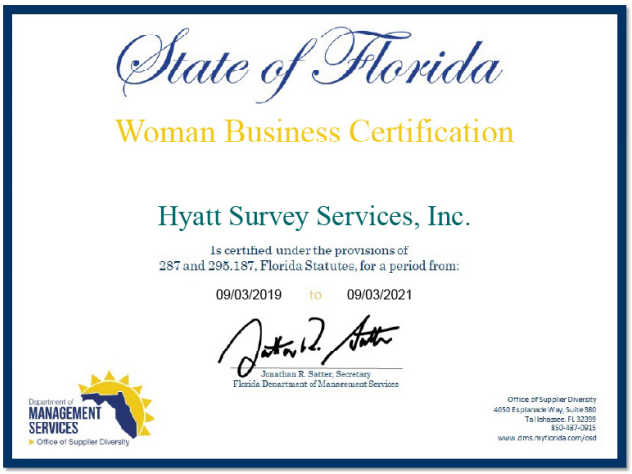
ADAMS TRAFFIC INC

MEETS THE REQUIREMENTS OF 49 CFR, PART 26
APPROVED NAICS CODES:
541330, 541690

Samuel Febres

Samuel (Sammy) Febres
DBE & Small Business Development Manager
Florida Department of Transportation

MIAMI-DADE COUNTY · Tampa International Airport · TALLAHASSEE · Votran



State of Florida

Woman Business Certification

Hyatt Survey Services, Inc.

Is certified under the provisions of
287 and 295.187, Florida Statutes, for a period from:

09/03/2019 to 09/03/2021

Jonathan R. Satter, Secretary
Florida Department of Management Services

Department of MANAGEMENT SERVICES
Office of Supplier Diversity

Office of Supplier Diversity
4050 Esplanade Way, Suite 380
Tallahassee, FL 32399
850-487-0915
www.dms.myflorida.com/osd

State of Florida

Minority Business Certification

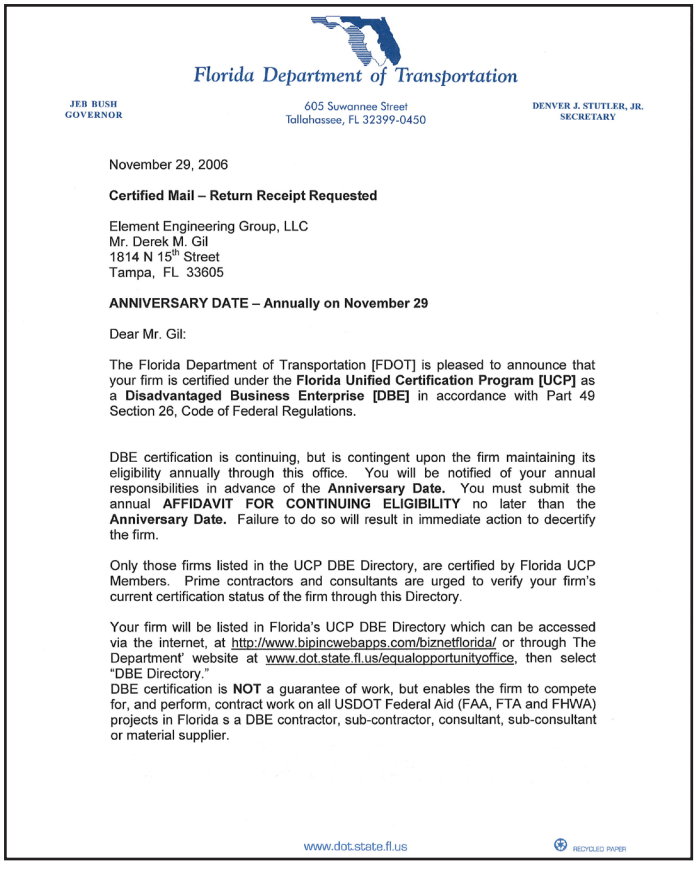
Tierra, Inc.

Is certified under the provisions of
287 and 295.187, Florida Statutes, for a period from:
08/30/2021 to 08/30/2023

Jonathan R. Satter, Secretary
Florida Department of Management Services

Department of MANAGEMENT SERVICES
Office of Supplier Diversity

Office of Supplier Diversity
4050 Esplanade Way, Suite 380
Tallahassee, FL 32399
850-487-0915
www.dms.myflorida.com/osd



Florida Department of Transportation

JEB BUSH
GOVERNOR

605 Suwannee Street
Tallahassee, FL 32399-0450

DENVER J. STUTLER, JR.
SECRETARY

November 29, 2006

Certified Mail – Return Receipt Requested

Element Engineering Group, LLC
Mr. Derek M. Gil
1814 N 15th Street
Tampa, FL 33605

ANNIVERSARY DATE – Annually on November 29

Dear Mr. Gil:

The Florida Department of Transportation [FDOT] is pleased to announce that your firm is certified under the **Florida Unified Certification Program [UCP]** as a **Disadvantaged Business Enterprise [DBE]** in accordance with Part 49 Section 26, Code of Federal Regulations.

DBE certification is continuing, but is contingent upon the firm maintaining its eligibility annually through this office. You will be notified of your annual responsibilities in advance of the **Anniversary Date.** You must submit the annual **AFFIDAVIT FOR CONTINUING ELIGIBILITY** no later than the **Anniversary Date.** Failure to do so will result in immediate action to decertify the firm.

Only those firms listed in the UCP DBE Directory, are certified by Florida UCP Members. Prime contractors and consultants are urged to verify your firm's current certification status of the firm through this Directory.

Your firm will be listed in Florida's UCP DBE Directory which can be accessed via the internet, at http://www.bipincwebapps.com/biznetflorida/ or through The Department' website at www.dot.state.fl.us/equalopportunityoffice, then select "DBE Directory."
DBE certification is **NOT** a guarantee of work, but enables the firm to compete for, and perform, contract work on all USDOT Federal Aid (FAA, FTA and FHWA) projects in Florida s a DBE contractor, sub-contractor, consultant, sub-consultant or material supplier.

www.dot.state.fl.us

RECYCLED PAPER

Hillsborough County Florida

Board of County Commissioners
Economic Development Department
Minority and Disadvantaged Business Development

Minority/Woman Business Certification

Diversified Professional Service Corp

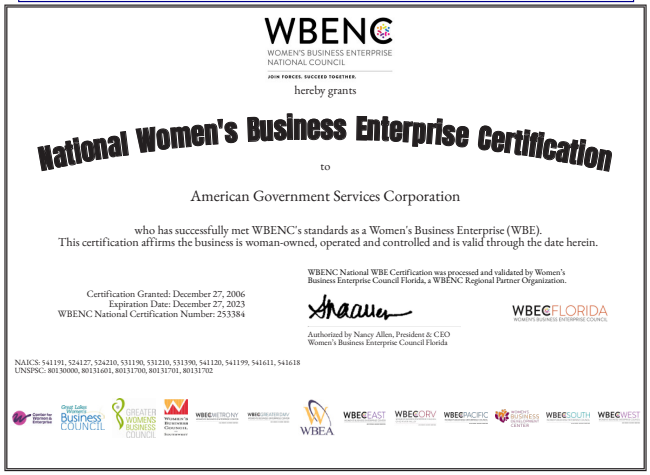
HC-1678/21

Valid from April 23, 2021 - April 23, 2023

Approved Lines of Business:

Field Testing, Environmental Assessments, Geotechnical Field Support Services

Theresa Kempa
Minority and Disadvantaged Business Manager
Economic Development Department



WBENC
WOMEN'S BUSINESS ENTERPRISE NATIONAL COUNCIL
JOIN FORCES. SUCCEED TOGETHER.

hereby grants

National Women's Business Enterprise Certification

to

American Government Services Corporation

who has successfully met WBENC's standards as a Women's Business Enterprise (WBE).
This certification affirms the business is woman-owned, operated and controlled and is valid through the date herein.

Certification Granted: December 27, 2006
Expiration Date: December 27, 2023
WBENC National Certification Number: 253384

WBENC National WBE Certification was processed and validated by Women's Business Enterprise Council Florida, a WBENC Regional Partner Organization.

Authorized by Nancy Allen, President & CEO
Women's Business Enterprise Council Florida

WBECFLORIDA

NAICS: 541191, 524127, 524210, 531190, 531210, 531390, 541120, 541199, 541611, 541618
UNSPSC: 80130000, 80131601, 80131700, 80131701, 80131702

APPENDIX

- Submittal Forms
- Resumes

APPENDIX

We pride ourselves on our continuous efforts and desires to completely understand our clients needs and preferences and to provide them with professional services which not only meet, but hopefully exceed their expectations. One of the key initial steps in developing this level of understanding is the negotiation and development of a mutually acceptable agreement which properly reflects both parties obligations and expectations. We have carefully reviewed all of the documents and information you provided as a part of your Request for Proposal (RFP). Some of the information you provided was in the form of potential terms and conditions which eventually would be reflected in a final agreement we would be entering into with you should we be successful in our pursuit of your project. Although we have identified several items which we need to obtain more information from you on, we believe that there will be no insurmountable problems in reaching a final agreement. We are basing this assumption on the reasonable expectation that the path of our negotiations will be guided by the basic premises necessary for any professional design firm to maintain the full applicability of its professional liability insurance coverage and to develop any required schedules or pricing. Those guidelines are; no guarantees or warranties (either expressed or implied); the standard of care will not be elevated beyond a normal, reasonable, negligence standard; any indemnifications will be based upon a negligence standard; any fees, pricing or scheduling requirements will be based upon quantifiable requirements.

We sincerely look forward to the opportunity to further refine our understanding of your needs and desires and the ultimate development of a complete and accurate agreement with you and respectfully request that you allow us the opportunity to provide professional design services for your project.

PART V - SUBMITTAL FORMS
PROPOSAL SUBMITTAL SIGNATURE FORM

1.	Project Team Name and Title	Years experience	City of office individual will work out of for this project	City individual's office is normally located	City of individual's residence
	Mohit Garg, PE, Project Manager	17	Tampa, FL	Tampa, FL	Westchase, FL
	Cory Hill, PE, Deputy Project Manager	8	Tampa, FL	Tampa, FL	Citrus Park, FL
	Shinji Konno, PE, Technical Advisor	40	Tampa, FL	Tampa, FL	Westchase, FL
	John Danielsen, PE, Bridge Quality Control	40	Fort Lauderdale, FL	Fort Lauderdale, FL	Fort Lauderdale, FL
	Carlos Lopez, PE, Drainage Quality Control	32	Tampa, FL	Tampa, FL	Tampa, FL
	Jason Starr, PE, Roadway Analysis & Design	18	Sarasota, FL	Sarasota, FL	Sarasota, FL
	Voni Moore, Environmental Permitting	15	Tampa, FL	Tampa, FL	Tampa, FL
	Olivia Smith, Public Involvement	9	Tampa, FL	Tampa, FL	Tampa, FL

2.	Magnitude of Company Operations	
	A) Total professional services fees received within last 24 months:	$ 165,219,212.83 in Florida
	B) Number of similar projects started within last 24 months:	10 in Florida
	C) Largest single project to date:	$ 136M

3.	Magnitude of Charlotte County Projects	
	A) Number of current or scheduled County Projects	6
	B) Payments received from the County over the past 24 months (based upon executed contracts with the County).	$ 450,519.85

4.	Sub-Consultant(s) (if applicable)	Location	% of Work to be Provided	*See attached for additional subconsultants Services to be Provided
	Adams Traffic, Inc.	Plant City, FL	2%	Traffic Data Collection
	American Government Services	Tampa, FL	2%	Title Searches
	Diversified Professional Service Corp	Dade City, FL	2%	Geotechnical Services
	Element Engineering Group, LLC	Tampa, FL	2%	Utility Coordination, Roadway Design
	HDR Construction Control Corporation	Tampa, FL	2%	Constructability Review

5. Disclosure of interest or involvement: List below all private sector clients with whom you have an active pending contract and who have an interest within the areas affected by this project. Also, include any properties or interests held by your firm, or officers of your firm, within the areas affected by this project.

	Firm N/A	Address
	Phone #	Contact Name
	Start Date	Ending Date
	Project Name/Description	

NAME OF FIRM HDR Engineering, Inc.

(This form must be completed and returned)

*Some of our subconsultants are providing specialized services. Depending on the preferred bridge rehabilitation alternative, HDR will seek their services. We are committed to provide at lease 15% of work to DBE/MBE/SBE firms.

4.	**Sub-Consultant(s)** (if applicable)	**Location**	**% of Work to be Provided**	**Services to be Provided**
	Hyatt Survey Services, Inc.	Bradenton, FL	2%	Survey
	Intera, Inc.	Gainesville, FL	2%	Coastal Engineering
	SEARCH, Inc.	Pensacola, FL	2%	Cultural Resources
	Tierra, Inc.	Tampa, FL	2%	Geotechnical Services
	CONSOR Engineers, LLC	Fort Myers, FL	2%	Bridge Underwater Inspection

*Some of our subconsultants are providing specialized services. Depending on the preferred bridge rehabilitation alternative, HDR will seek their services. We are committed to provide at lease 15% of work to DBE/MBE/SBE firms.

6. Minority Business:	**Yes** X **No** _____
The County will consider the firm's status as an MBE or a certified MBE, and also the status of any sub-contractors or sub-consultants proposed to be utilized by the firm, within the evaluation process.	
Comments or Additional Information:	

The undersigned attests to his/her authority to submit this proposal and to bind the firm herein named to perform as per contract, if the firm is awarded the Contract by the County. The undersigned further certifies that he/she has read the Request for Proposal, Terms and Conditions, Insurance Requirements and any other documentation relating to this request and this proposal is submitted with full knowledge and understanding of the requirements and time constraints noted herein.

By signing this form, the proposer hereby declares that this proposal is made without collusion with any other person or entity submitting a proposal pursuant to this RFP.

In accordance with section 287.135, Florida Statutes, the undersigned certifies that the company is not on the Scrutinized Companies with Activities in Sudan List, the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, and does not have business operations in Cuba or Syria (if applicable) or the Scrutinized Companies that Boycott Israel List, or is not participating in a boycott of Israel.

As Addenda are considered binding as if contained in the original specifications, it is critical that the Consultant acknowledge receipt of same. The submittal may be considered void if receipt of an addendum is not acknowledged.

Addendum No._____ Dated_____ Addendum No._____ Dated_____ Addendum No._____ Dated_____

Addendum No._____ Dated_____ Addendum No._____ Dated_____ Addendum No._____ Dated_____

Type of Organization (please check one):

INDIVIDUAL (__)
PARTNERSHIP (__)
CORPORATION (X)
JOINT VENTURE (__)

HDR Engineering, Inc. — Firm Name
941.342.2700 — Telephone
941.342.6589 — Fax

_____ — Fictitious or d/b/a Name
47-0680568 — Federal Employer Identification Number (FEIN)

1917 South 67th Street — Home Office Address

Omaha, NE 68106 — City, State, Zip
105 — Number of Years in Business

4830 W Kennedy Blvd, Suite 400, Tampa, FL 33609 — Address: Office Servicing Charlotte County, other than above

Mohit Garg, PE — Name/Title of your Charlotte County Rep.
813.282.2315 — Telephone
813.282.2430 — Fax

Melanie Fowler, Vice President — Name/Title of Individual Binding Firm (Please Print)

Signature of Individual Binding Firm
February 7, 2023 — Date

melanie.fowler@hdrinc.com — Email Address

(This form must be completed & returned)

DRUG FREE WORKPLACE FORM

The undersigned vendor in accordance with Florida Statute 287.087 hereby certifies that HDR Engineering, Inc. does:
(name of business)

1. Publish a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance is prohibited in the workplace and specifying the actions that will be taken against employees for violations of such prohibition.

2. Inform employees about the dangers of drug abuse in the workplace, the business's policy of maintaining a drug-free workplace, any available drug counseling, rehabilitation, and employee assistance programs, and the penalties that may be imposed upon employees for drug abuse violations.

3. Give each employee engaged in providing the commodities or contractual services that are under bid a copy of the statement specified in subsection (1).

4. In the statement specified in subsection (1), notify the employees that, as a condition of working on the commodities or contractual services that are under bid, the employee will abide by the terms of the statement and will notify the employer of any conviction of, or plea of guilty or nolo contendere to, any violation of Chapter 893 or of any controlled substance law of the United States or any state, for a violation occurring in the workplace no later than five (5) days after such conviction.

5. Impose a sanction on, or require the satisfactory participation in a drug abuse assistance or rehabilitation program if such is available in the employee's community, by any employee who is so convicted.

6. Make a good faith effort to continue to maintain a drug-free workplace through implementation of this section.

As the person authorized to sign the statement, I certify that this firm complies fully with the above requirements.

Katie E. Duty

Proposer's Signature Katie E. Duty, Vice President

February 3, 2023
Date

END OF PART V

(This form must be completed & returned)

BYRD ANTI-LOBBYING CERTIFICATION

Certification for Contracts, Grants, Loans, and Cooperative Agreements

The undersigned certifies, to the best of his or her knowledge and belief, that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of an Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

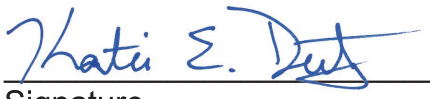
(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, U.S.C. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

February 3, 2023
Date

Katie E. Duty
Type or Print Name


Signature

Vice President
Title

(This form must be completed & returned)

Mohit Garg, PE

PROJECT MANAGER

Mohit Garg has over 17 years of solid design and project management experience focused on simple to complex bridges including category 2 structures. His experience includes design of pre-stressed concrete girder bridges, segmental box girder bridges, spliced girder bridges, steel plate and steel box girder bridges. Design experience also includes design of hammerhead piers, multi-column piers, Inverted-T bents, post-tensioned straddle bents, post-tensioned C-piers and load rating of concrete and steel bridges.

EDUCATION
MBA, University of Florida
MS, Civil Engineering, University of Florida
BS, Civil Engineering, Punjab Engineering College

REGISTRATIONS
Professional Engineer: FL, No. 74928

TOTAL EXPERIENCE
17 years

HDR EXPERIENCE
16 years

OFFICE LOCATION
Tampa, FL

RELEVANT EXPERIENCE

Pinellas County, Beckett Bridge Replacement - Pinellas County, FL
Superstructure EOR. As a subconsultant, Mohit was the EOR for the design and detailing of a 360 ft five-span Florida Slab Beam (FSB) superstructure comprised of two individual continuous units (a two-span unit and a three-span unit). Designed in accordance with AASHTO and FDOT codes and Design Standards, Guidelines and Specifications.

Pinellas County, Bridge BR 4351 Oakwood Drive over Stephanie's Channel - Pinellas County, FL
Quality Control & Structure EOR. HDR developed construction plans for the replacement of the Oakwood Drive Bridge over Stephanie's Channel. The focus of the project is the replacement of the existing single span bridge (Bridge No. 154351) while providing transitions to the existing Oakwood Drive roadway typical section in close proximity to the bridge.

FDOT District 7, US 19 from Northside Drive to County Road 95 - Pinellas County, FL
Structure Engineer. HDR was selected by the FDOT for the reconstruction of 1.21 miles of US 19 in Pinellas County, FL. The design includes modification of a single point urban interchange (SPUI) at Curlew Road to replace the existing at-grade signalized intersection.

FDOT District 7, US 301 from SR 674 (Sun City Center) to Gibsonton - Hillsborough County, FL
Structures Designer. HDR designed 9.7-miles of roadway improvement project from SR 674 to south of Gibsonton Drive, in Hillsborough County. This is a unique project, in cooperation with Hillsborough County and the Development community, as the County acquired the pond right-of-way, or the developers provided the land as part of the development requirements.

Hillsborough County, Bridge Asset Management & Engineering Services - Hillsborough, FL
Project Manager & Structures EOR. HDR supported Hillsborough County with this task work order contract for engineering services between 2017 and 2022. Services for this contract include but are not limited to: plans reviews, condition evaluation of existing structures, preparation of bridge alternative analysis report, preparation of bridge repair plans, bridge load rating and assessment support.

FDOT District 5, I-4 Ultimate P3, SGL JV - Orlando, FL
Structure Engineer on $2.32 billion I-4 Ultimate P3 project. Project involves the reconstruction of 21 miles of I-4 from west of Kirkman Road in Orange County to east of SR 434 in Seminole County.

Pinellas County, San Martin Blvd. over Riviera Bay Bridge Replacement Study - Pinellas County, FL
EOR. HDR was retained by Pinellas County to conduct a NEPA compliant Project Development & Environment (PD&E) study for the rehabilitation or replacement of the existing San Martin Bridge over Riviera Bay. The limits of the bridge study are from Tallahassee Drive to Weedon Drive in St. Petersburg, Florida.

FDOT District 1, Professional Services Contract - District 1, FL
Project Manager & Structures EOR. HDR, subconsultant to WSP, has provided professional engineering services for bridge engineering design on a continuing basis for FDOT District 1 since 2021. The scope of services under this project includes standard concrete spall repairs, construction of integral non-structural pile jackets to rehabilitate pile deterioration and the repair of exposed sand-cement slope protection toe with a lift of rubble riprap.

Sarasota County, Bridge Replacements - Sarasota County, FL
Quality Control. HDR completed the design, permitting, and preparation of construction plans for the replacement of Jackson Road, Ortiz Blvd., and 23rd Street pedestrian bridge.

MOHIT GARG, PE (CONTINUED)

FDOT District 7, US 19 over 118th Avenue and 110th Avenue - Pinellas County, FL
This project involved two steel box girder bridges 865 ft. and 935 ft. long. Pile supported slab structures with large overhangs provided room for turn lanes below to accommodate a Single Point Urban Interchange layout. **Design Engineer** for performing the LFD rating on pile supported cantilevered slab approach structure using the Influence Surface analysis on a 3D finite element model in LARSA 4D.

FDOT District 7, General Engineering Consulting Services (GEC) - Districtwide, FL
Design Engineer for a review of an 860 ft. long unit of a constant depth, pre-cast, curved post-tensioned concrete segmental box girder bridge. Responsibilities included transverse analysis of a 43'-1'' wide single cell box and its capacity checks, and assisted with the longitudinal analysis of the four span unit using LARSA.

Hillsborough County, Replacement of Maydell Dr. Bridge over Palm River - Hillsborough County, FL
Project Manager. HDR prepared construction documents consisting of plans, specifications and bid forms for the replacement of the Maydell Drive Bridge over Palm River (Bridge No. 105604). The scope included roadway, drainage, structures, signing & pavement markings, utility coordination, permitting bid items, quantities and cost estimates.

FDOT District 1 , I-75 Design-Build-Finance, ACCI/API, a Joint Venture - Collier & Lee Counties, FL
The joint venture was tasked with widening 30 miles of I-75 from four to six lanes. **Design engineer** for the widening of a 222 feet long two spans skewed twin bridges with girders made continuous for live load. The Superstructure consisted of AASHTO Type IV pre-stressed girders supported on hammerhead piers founded on piles.

FDOT District 1, I-75 at University Parkway Interchange - Sarasota County, FL
The project provides improvements to Interstate 75 (I-75) from north of University Parkway to south of State Road (SR) 64 in Manatee County. The 6.75-mile design project features reconstruction of the SR 70 interchange from its existing partial cloverleaf design to a modified diamond interchange. **Lead Engineer** for the project. Structure lead for the multi-span AASHTO beam bridge widening and twin two span FIB beam bridges. Responsibilities plans production, managing bridge delivery and coordinating with other disciplines.

Mid-Bay Bridge Authority, Phase 1 Connector Design - Niceville, Florida
Phase I of the Mid-Bay Bridge Connector Extension includes three bridge structures with various MSE walls and sign structures along a 3.5 mile corridor. Plans include an urban diamond interchange at Lake Shore Drive and a Single Point Urban Interchange (SPUI) at SR 20. Design engineer for a skewed pre-stressed AASHTO girder bridge on SR 293 over Lakeshore Drive, a 95ft single span bridge with total deck width of 89'-1'' and end bents supported on 24 inch pre-stressed concrete piles. Bridge was crowned at the center.

Phase II/III of the Mid-Bay Bridge Connector Extension includes three grade separation bridges and five waterway bridges along an eight mile corridor. Six of the bridges were pre-stressed Florida I Beams and the remaining two bridges are steel plate girder structures. Structure engineer for review of design of five multi-span concrete bridges including superstructure and substructure quantities. One of the concrete bridges is 1728 ft long with five continuous units supported on pile bents. Piles are battered either transversally or longitudinally to provide rigidity to the substructure. Also reviewed substructure design of a 340ft long three span continuous steel plate girder bridge and prepared bridge cost estimates.

Cory Hill, PE

DEPUTY PROJECT MANAGER

Cory Hill is a Bridge Designer with over 8 years of experience. He is experienced in using MicroStation Geopak, AutoCAD, LARSA, Conspan, RC Pier, FB-Multipier and ATLAS. Mr. Hill's core competencies include bridge geometry, finish grade elevations, design of prestressed concrete beams, substructure components, miscellaneous structures, plans production and rehabilitation.

EDUCATION
MS, Civil Engineering, Structural Engineering, University of South Florida

BS, Civil Engineering, University of South Florida

REGISTRATIONS
Professional Engineer: FL, No. 94458

TOTAL EXPERIENCE
8 years

HDR EXPERIENCE
4 years

OFFICE LOCATION
Tampa, FL

RELEVANT EXPERIENCE

FDOT District 5, I-4 Ultimate P3, SGL JV - Orlando, FL
Structures Engineer. This project involves the reconstruction of 21 miles of I-4 from west of Kirkman Road in Orange County to east of SR 434 in Seminole County. Structures designer supporting post design services for the review of miscellaneous structure shop drawings and resolution of RFI, RFM and FCRs.

Pinellas County, Bridge BR 4351 Oakwood Drive over Stephanie's Channel -Pinellas County, FL
Structures Engineer. HDR developed construction plans for the replacement of the Oakwood Drive Bridge over Stephanie's Channel. Oakwood Drive is a two-lane undivided residential street that is the only access to 69 residences located on an island within Harbor Bluffs in Largo, Florida. The focus of the project is the replacement of the existing single span bridge (Bridge No. 154351) over Stephanie's Channel while providing transitions to the existing Oakwood Drive roadway typical section in close proximity to the bridge.

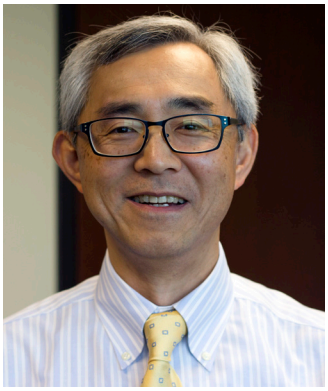
Pinellas County, Beckett Bridge Replacement - Pinellas County, FL
Structures Engineer and Deputy Project Manager for the design and detailing of a 360 ft five-span Florida Slab Beam (FSB) superstructure comprised of two individual continuous units (a two-span unit and a three-span unit) in accordance with AASHTO and FDOT codes and Design Standards, Guidelines and Specifications. Project efforts included project management, coordination, plans preparation, rebar detailing, continuous deck design and the support of other various design aspects.

Hillsborough County, Bridge Asset Management & Engineering Services - Hillsborough, FL
Deputy Project Manager & Structure Engineer. HDR supported Hillsborough County with this task work order contract for engineering services between 2017 and 2022. Services for this contract include but are not limited to: plans reviews, bridge inspection, condition evaluation of existing structures, preparation of bridge alternative analysis reports, preparation of bridge repair plans, bridge load rating, box culvert design checklist and emergency bridge inspection and assessment support. HDR also provided construction post design support services as part of this effort.

FDOT District 1, Professional Services Contract - District 1, FL
Deputy Project Manager & Structures Engineer. HDR, subconsultant to WSP, has provided professional engineering services for bridge engineering design on a continuing basis for FDOT District 1 since 2021. The scope of services under this project includes standard concrete spall repairs, construction of integral non-structural pile jackets to rehabilitate pile deterioration exhibited in the form of hour-glassing and scaling damage, and the repair of exposed sand-cement slope protection toe with a lift of rubble riprap.

44th Ave. East Phase II West of I-75 to Lakewood Ranch Blvd. - Manatee County, FL
Structures Engineer responsible for the design of the substructure of the 380 ft two-span contious steel plate girder superstructure over I-75. Additional design efforts included horizontal/vertical geometrics, intermeidate/end diaphram calcualtions, elastomeric bearing pad/anchor bolt design, permanent MSE wall calculations, along with associated detailing and plan production.

Archer Western, I-395 - Manatee County, FL
Structures Engineer responsible for the design of a 37-foot CIP flat slab structure along I-395. The flat slab spans over an existing metromover pier footing which was in conflict with the proposed MSE wall and supported pedestrian loading. Project efforts included the design of the superstructure and spread footing substructure along with geometry calculations, reinforcement detailing and plans production.



Shinji Konno, PE

Technical Advisor

Shinji Konno is a Senior Bridge Engineer with an extensive knowledge of bridge and highway related structures design. With 40 years of experience in designing and reviewing highway bridges and miscellaneous structures, including 16 years with the Florida Department of Transportation, Shinji is experienced in all aspects of bridge engineering from evaluating bridge alternatives in PD&E studies, developing and managing bridge design projects, preparing structures plans to providing construction assistance during construction and repairing existing structures.

EDUCATION
MS, Structural Engineering, Cornell University

BS, Civil Engineering, Cornell University

REGISTRATIONS
Professional Engineer: FL, No. 39536

PROFESSIONAL MEMBERSHIPS
American Society of Civil Engineers (ASCE), Member, 1985-Present

TOTAL EXPERIENCE
40 years

HDR EXPERIENCE
15 years

OFFICE LOCATION
Tampa, FL

RELEVANT EXPERIENCE

Pinellas County, Beckett Bridge Replacement - Pinellas County, FL
Quality Control for the design and detailing of a 360 ft five-span Florida Slab Beam (FSB) superstructure comprised of two individual continuous units (a two-span unit and a three-span unit) in accordance with AASHTO and FDOT codes and Design Standards, Guidelines and Specifications. Project efforts included project management, coordination, plans preparation, rebar detailing, continuous deck design and the support of other various design aspects.

FDOT District 5, I-4 Ultimate P3, SGL JV - Orlando, FL
Structures Engineer. $2.32 billion I-4 Ultimate P3 project. Project involves the reconstruction of 21 miles of I-4 from west of Kirkman Road in Orange County to east of SR 434 in Seminole County. Project includes reconstructing 15 major interchanges; constructing more than 140 bridges; adding four variable priced toll express lanes in the median, and completely rebuilding the general use lanes along the entire corridor.

FDOT District 7, US 19 from Northside Drive to County Road 95 - Pinellas County, FL
Structures Engineer. HDR was selected by the FDOT for the reconstruction of 1.21 miles of US 19 in Pinellas County, FL. The design includes a modified single point urban interchange (SPUI) at Curlew Road to replace the existing at-grade signalized intersection. US 19 will be reconstructed from an eight-lane divided arterial to a six-lane controlled access roadway with frontage roads.

Pinellas County, Bridge BR 4351 Oakwood Drive over Stephanie's Channel - Pinellas County, FL
Quality Control. HDR developed construction plans for the replacement of the Oakwood Drive Bridge over Stephanie's Channel. Oakwood Drive is a two-lane undivided residential street that is the only access to 69 residences located on an island within Harbor Bluffs in Largo, Florida.

FDOT District 7, US 301 from SR 674 (Sun City Center) to Gibsonton - Hillsborough County, FL
Structures Designer. HDR designed 9.7-miles of roadway improvement project from SR 674 to south of Gibsonton Drive, in Hillsborough County. This unique project, in cooperation with Hillsborough County and the Development community, as the County acquired the pond right-of-way, or the developers provided the land as part of the development requirements.

Hillsborough County, Bridge Asset Management & Engineering Services - Hillsborough, FL
Quality Control. HDR supported Hillsborough County with this task work order contract for engineering services between 2017 and 2022. Services for this contract include but are not limited to: plans reviews, bridge inspection, condition evaluation of existing structures, preparation of bridge alternative analysis report, preparation of bridge repair plans, bridge load rating, box culvert design checklist and emergency bridge inspection and assessment support. HDR also provided construction post design support services as part of this effort.

Sarasota County, Bridge Replacements - Sarasota County, FL
Structures Engineer. HDR completed the design, permitting, and preparation of construction plans for the replacement of Jackson Road, Ortiz Blvd., and 23rd Street pedestrian bridge. The design included roadway realignment, drainage modifications, structural design, and SWFWMD/USACE permitting efforts.

FDOT District 1, SR 93 (I-75) at University Parkway Interchange - Manatee & Sarasota Counties, FL
Bridge Task Manager. He was responsible for developing bridge developoment reports for bridge widening over Errie Creek and for bridge replacement over University Parkway. The proposed University Parkway Interchange was the first diverging diamond interchange (DDI) in the state of Florida.

John Danielsen, PE

Bridge Quality Control

John Danielsen is a Structures Senior Project Manager with more than 40 years of experience. His experience includes bridge inspections, rating and rehabilitations of existing fixed and movable bridges, design of new bridges, asset maintenance, maintenance rating programs, emergency management, fleet operations, and overall infrastructure maintenance programs and practices. Prior to joining HDR, John worked for the Florida Department of Transportation (FDOT) District 4. During his 30 year career with FDOT, his roles included serving as District Structures Engineer, District Structures Maintenance Engineer, and the District Maintenance Engineer.

EDUCATION
BS, Civil Engineering, University of Florida

REGISTRATIONS
Professional Engineer: FL, No. 41875

TOTAL EXPERIENCE
40 years

HDR EXPERIENCE
6 years

OFFICE LOCATION
Fort Lauderdale, FL

RELEVANT EXPERIENCE

Hillsborough County, Bridge Asset Management & Engineering Services - Hillsborough, FL
Quality Control. HDR supported Hillsborough County with this task work order contract for engineering services between 2017 and 2022. Services for this contract include but are not limited to: plans reviews, bridge inspection, condition evaluation of existing structures, preparation of bridge alternative analysis report, preparation of bridge repair plans, bridge load rating, box culvert design checklist and emergency bridge inspection and assessment support. HDR also provided construction post design support services as part of this effort.

FDOT District 1, Professional Services Contract - District 1, FL
Deputy Project Manager & Structures Engineer. HDR, subconsultant to WSP, has provided professional engineering services for bridge engineering design on a continuing basis for FDOT District 1 since 2021. The scope of services under this project includes standard concrete spall repairs, construction of integral non-structural pile jackets to rehabilitate pile deterioration exhibited in the form of hour-glassing and scaling damage, and the repair of exposed sand-cement slope protection toe with a lift of rubble riprap.

Sarasota County, Bridge Replacements - Sarasota County, FL
Technical Advisor. HDR completed the design, permitting, and preparation of construction plans for the replacement of Jackson Road, Ortiz Blvd., and 23rd Street pedestrian bridge. The design included roadway realignment, drainage modifications, structural design, and SWFWMD/USACE permitting efforts.

FDOT District 4, Districtwide Bridge Miscellaneous Structures Consultant Services - Districtwide, FL
Program Manager. HDR was responsible for a variety of services, including design of structural repairs and preparation of structural repair plans, emergency assistance/response, inspections, plan reviews and other miscellaneous services. Scope also includes coating condition assessments, NDT testing, welding inspection, metal failure analysis, value engineering and QA/QC reviews, field surveys, multi-beam swath bathymetric and laser scan surveys, minor roadway and MOT design, and geotechnical services. John was responsible for providing all management, client coordination, and subconsultant leadership. John has been the engineer of record on many assigned task work orders. A sample of John's recent bridge maintenance projects led under this contract:

- SR 7/US 441 over Sample Road Bridge Painting, Broward County, FL
- Spanish River Movable Bridge Rehabilitation, Palm Beach County, FL
- SR 708 Blue Heron Boulevard Bridge over ICWW, Palm Beach County, FL

FDOT District 4, Local Government Bridge Inspection Program Off System Structures - Districtwide, FL
Project Manager. HDR served as a subconsultant to perform County and City owned and maintained movable bridge inspections on mechanical and electrical components. All data inputted electronically into the Department's BRM program and uploaded to the FDOT's Electronic Document Management System. John provides quantity control of the reports and coordination with local agencies.

FDOT District 4, Districtwide Bridge Miscellaneous Structures Consultant Services - Districtwide, FL
Program Manager. HDR was responsible for a variety of services, including design of structural repairs and preparation of structural repair plans, emergency assistance/response, inspections, plan reviews and other miscellaneous services.

Jason Starr, PE

Roadway Analysis & Design

Jason Starr has 19 years of transportation engineering and project management experience. His professional career has been primarily devoted to design and management of rural and urban highways, interstate highways, local streets, and pedestrian accommodations.

EDUCATION
BS, Civil Engineering, University of Florida

REGISTRATIONS
Professional Engineer: FL, No. 70171

TOTAL EXPERIENCE
19 years

HDR EXPERIENCE
16 years

OFFICE LOCATION
Sarasota, FL

RELEVANT EXPERIENCE

FDOT District 1, Professional Services Contract - District 1, FL
Roadway QC & Specification Package Prep. HDR, sub-consultant to WSP, has provided professional engineering services for bridge engineering design on a continuing basis for FDOT District 1 since 2021. The scope of services under this project includes standard concrete spall repairs, construction of integral non-structural pile jackets to rehabilitate pile deterioration exhibited in the form of hour-glassing and scaling damage, and the repair of exposed sand-cement slope protection toe with a lift of rubble riprap.

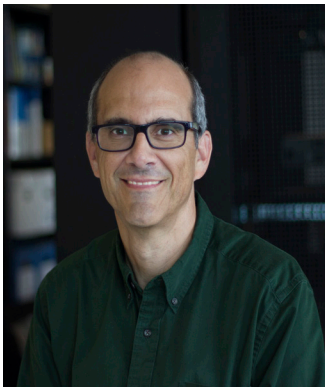
Sarasota County, Bridge Replacements - Sarasota County, FL
Roadway EOR & Utility Coordinator. HDR completed the design, permitting, and preparation of construction plans for the replacement of Jackson Road, Ortiz Blvd., and 23rd Street pedestrian bridge. The design included roadway realignment, drainage modifications, structural design, and SWFWMD/USACE permitting efforts.

FDOT District 1, I-75 at University Parkway Interchange - Sarasota, FL
Project Engineer for the reconstruction the existing I-75 University Parkway Interchange facility from the existing six 12-foot travel lanes (three in each direction) to provide for a diverging diamond configuration interchange that provides for the ultimate typical section as defined in the PD&E Study. The Ultimate typical section provides for a ten-lane facility with two express lanes and three general use lanes in each direction.

FDOT District 1, US 41 from Enterprise Dr. to Cranberry Blvd. - Charlotte County, FL
Project Engineer for plans production and permitting for capacity improvements to US 41 in Charlotte County from the Enterprise Drive to Cranberry Boulevard, a distance of approximately 3.651 miles. The existing US 41 mainline will be widened and resurfaced to 3–travel lanes in each direction. The typical section will be converted from a 4-lane divided rural section to a 6-lane suburban section. The stormwater management facilities and floodplain compensation will be completed by a combination of off-site ponds and on-site linear ponds. Other services provided include pavement design, access management design, maintenance of traffic, signing and pavement marking plans, permitting (SWFWMD, USACOE), utility coordination, intersection design, lighting, miscellaneous structures, box culvert inspections, value engineering, public involvement, and engineer's estimate.

FDOT District 1, I-75 (SR 93) Design - Charlotte County, FL
Project Engineer assisting in the production of the design plans for the improvements to I-75 from Lee County Line to south of Tuckers Grade. The 8.1-mile project consisted of adding an additional lane in each direction to the inside of the existing lanes and designing the stormwater management facilities within the existing R/W. Additional project elements included 2 bridge widenings, survey & R/W mapping, environmental, MOT, bridge hydraulics, geotechnical services, utility adjustments, and signing and pavement marking plans.

Sarasota County, Englewood Interstate Connector - Sarasota County, FL
Roadway Engineer. Assisted in the development of construction plans to reconstruct 5.7 miles of River Road between US 41and I-75 in Sarasota County, including sidewalks and bike lanes in both directions. The scope included roadway design, drainage design, historical studies, sidewalk design, FDOT and Southwest Florida Water Management District permits, right-of-way maps, parcel surveys, intersection modifications, maintenance of traffic, signals, utility design, public involvement, constructability/bidability, mitigation design and coordination with other agencies. Design plans were completed in December 2008, but the County put the project on hold for construction due to funding. HDR is currently providing post design services.



Carlos Lopez, PE

Drainage Quality Control

Carlos Lopez, the Florida Transportation Hydraulics Business Class Manager, is a former FDOT District 7 Drainage Engineer and he brings over 35 years of water resources engineering experience. At District 7, he oversaw all aspects of the District's drainage services. He also assisted the Construction Office on drainage related problems and the Environmental Management Office along with representing the District on legal issues and providing expert witness. In recent years he has been the lead drainage engineer on a number of design-build projects, including the I-75/Colonial Interchange under construction, the $2.3B I-4 Ultimate Project and the I-275 Punch-Through project.

EDUCATION
MBA, Business administration/ Management, University of South Florida

MS, Civil Engineering, Georgia Institute of Technology

BS, Civil Engineering, McGill University

REGISTRATIONS
Professional Engineer: FL, No. 41084

TOTAL EXPERIENCE
39 years

HDR EXPERIENCE
22 years

OFFICE LOCATION
Tampa, FL

RELEVANT EXPERIENCE

FDOT District 1, Districtwide Drainage Connection Permits Contract - Districtwide **Quality Assurance and Reviewer**. Responsible for the development of the quality assurance protocols and served as senior drainage engineer resource of knowledge for the technical team members. Responsible for review of Drainage and Access Connection permit applications.

FDOT District 1, I-75 at University Parkway Interchange - Sarasota County, FL **Drainage Project Manager**. Drainage lead engineer for the reconstruction the existing I-75 University Parkway Interchange facility from the existing six 12-foot travel lanes (three in each direction) to provide for a diverging diamond configuration interchange that provides for the ultimate typical section as defined in the PD&E Study. The Ultimate typical section provides for a ten-lane facility with two express lanes and three general use lanes in each direction. The Interchange improvements will also require several bridge replacements and the widening / reconstruction of University Parkway including Cattleman Road / Cooper Creek intersection and Market Street intersection.

Sarasota County, Bridge Replacements - Sarasota County, FL **Drainage Quality Control.** HDR completed the design, permitting, and preparation of construction plans for the replacement of Jackson Road, Ortiz Blvd., and 23rd Street pedestrian bridge. The design included roadway realignment, drainage modifications, structural design, and SWFWMD/USACE permitting efforts.

Hillsborough County, Bridge Asset Management & Engineering Services - Hillsborough, FL **Drainage Quality Control.** HDR supported Hillsborough County with this task work order contract for engineering services between 2017 and 2022. Services for this contract include but are not limited to: plans reviews, bridge inspection, condition evaluation of existing structures, preparation of bridge alternative analysis report, preparation of bridge repair plans, bridge load rating, box culvert design checklist and emergency bridge inspection and assessment support. HDR also provided construction post design support services as part of this effort.

FDOT District 1, US 41 from Enterprise Dr. to Cranberry Blvd. - Charlotte County, FL **Drainage Engineer of Record.** This project included the plans production and permitting for capacity improvements to US 41 from the Enterprise Drive to Cranberry Boulevard, a distance of approximately 3.65 miles. The existing US 41 mainline will be widened and resurfaced to 3–travel lanes in each direction. The typical section will be converted from a 4-lane divided rural section to a six-lane suburban section. The stormwater management facilities and floodplain compensation will be completed by a combination of off-site ponds and on-site linear ponds.

FDOT District 7, US 301 from SR 674 (Sun City Center) to Gibsonton - Hillsborough County, FL **Lead Drainage Engineer.** HDR designed 9.7-miles of roadway improvement project from SR 674 to south of Gibsonton Drive, in Hillsborough County. This unique project, in cooperation with Hillsborough County and the Development community, as the County acquired the pond right-of-way, or the developers provided the land as part of the development requirements.

FDOT District 1, I-75 from Lee County Line to Tuckers Grade - Charlotte County, FL **Drainage Engineer (EOR)**. Mr. Lopez served as Lead Drainage Engineer for this interstate improvement project. The 8.1 mile project consisted of adding an additional lane in each direction to the inside of the existing lanes. A unique stormwater regional facility was designed to eliminate all the linear treatment systems, offsite ponds and floodplain mitigation.

Voni Moore

Environmental Scientist

Voni Moore has 14 years' experience in environmental science including environmental permitting, wetland science and restoration, ecological monitoring, and environmental assessments. Her work experience includes state and federal permitting, wetland delineations, wetland mitigation site management and monitoring, nuisance species removal administration, agency coordination, and resolution of permit compliance issues. Additional permitting and mitigation experience includes wetland mitigation assessments (UMAM and WRAP), US Army Corps of Engineers (USACE) Rapanos Jurisdictional Determination Forms, mitigation assessments for the Florida Panther and the U.S. Fish & Wildlife Service's (USFWS) wood stork foraging habitat assessment.

EDUCATION

BS, Environmental Science, University of South Florida

AS, Environmental Science Technology, Hillsborough Community College

AAS, Liberal Arts, Hillsborough Community College

TOTAL EXPERIENCE

14 years

HDR EXPERIENCE

11 years

OFFICE LOCATION

Tampa, FL

RELEVANT EXPERIENCE

Pinellas County, Beckett Bridge Replacement - Pinellas County, FL
Environmental Permitting. For the design and detailing of a 360 ft five-span Florida Slab Beam (FSB) superstructure comprised of two individual continuous units (a two-span unit and a three-span unit) in accordance with AASHTO and FDOT codes and Design Standards, Guidelines and Specifications. Project efforts included project management, coordination, plans preparation, rebar detailing, continuous deck design and the support of other various design aspects.

Pinellas County, Bridge BR 4351 Oakwood Drive over Stephanie's Channel - Pinellas County, FL
Environmental Permitting. HDR developed construction plans for the replacement of the Oakwood Drive Bridge over Stephanie's Channel. Oakwood Drive is a two-lane undivided residential street that is the only access to 69 residences located on an island within Harbor Bluffs in Largo, Florida.

Hillsborough County, Bridge Asset Management & Engineering Services - Hillsborough, FL
Environmental Permitting. HDR supported Hillsborough County with this task work order contract for engineering services between 2017 and 2022. Services for this contract include but are not limited to: plans reviews, bridge inspection, condition evaluation of existing structures, preparation of bridge alternative analysis report, preparation of bridge repair plans, bridge load rating, box culvert design checklist and emergency bridge inspection and assessment support. HDR also provided construction post design support services as part of this effort.

FDOT, District 7, I-275 Howard Frankland Bridge Replacement - Hillsborough and Pinellas County, Florida
Ms. Moore provided **environmental permitting** services for the replacement of the 3-mile I-275 Howard Frankland Bridge spanning Old Tampa Bay. Ms. Moore performed wetland jurisdictional delineations, agency coordination, and prepared permitting packages for the US Coast Guard, USACE and state regulatory agencies. Ms. Moore assessed seagrass impacts and coordinated mitigation.

Florida Power & Light, Photovoltaic Solar Power Site Caracara Survey - Lee County, Florida
Ms. Moore conducted **surveys** in accordance with USFWS protocols for Audubon's crested caracara. The crested caracara is a federally-listed threatened species. The survey protocol included nine biweekly field surveys during the caracara's nesting season including all areas of potential nesting habitat onsite and within a critical distance (1,500 meters) of the project area.

Silicon Ranch Corporation, Photovoltaic Solar Power Site - Lumpkin, Georgia
Ms. Moore assisted with the Section 404/401 **permitting** effort with the USACE. Ms. Moore conducted a desktop analysis using GIS of the 2,048-acre project site for potential Section 404/401 permitting issues and other environmental constraints for development of a solar farm. Ms. Moore used this data to prepare a wetland and stream delineation field approach for teams performing the field delineations and assisted with conducting the field delineations and field reviews.

South Florida Water Mgmt. District, The Bond Farm Hydrologic Restoration Project - Charlotte County, Florida
This project is a part of the Charlotte Flatwoods Initiative, an effort to restore hydrology within the region. The hydrology within the region was historically a natural sheet flow but has been altered by farms, mining, highways, I-75 and residential development. This project will convert a 665 acre farm to a water storage facility receiving water from flooded conservation land and directing it downstream to conservation land experiencing lower water depths and shorter hydroperiods.

Olivia Smith

Senior Communications Coordinator

Olivia Smith is an experienced communications professional with nearly a decade of experience in the areas of public information, government relations, crisis communications, community outreach and media relations. Her knowledge and practice of applying strategic communications methods, connecting with diverse communities and integrating technology with grass-roots outreach has allowed Olivia to develop a consistent track record of success. Olivia has the proven ability to meet expectations enthusiastically, to professionally represent an agency within the community and to ensure the highest level of service.

EDUCATION
BS, Jouralism, Florida A&M University

REGISTRATIONS
FEMA Integrated Public Alert & Warning Systems (IPAWS)

TOTAL EXPERIENCE
12 years

HDR EXPERIENCE
6 months

OFFICE LOCATION
Tampa, FL

*work performed prior to joining HDR

RELEVANT EXPERIENCE

United States Army Corps of Engineers Risk Management Center Dam and Levee Safety Trainings Project - National HDR leads a joint venture to provide logistics, design, content, and communications support to the Risk Management Center's Dam and Levee Safety Training Program which provides fundamental, intermediate and advanced dam and levee safety training for the public. This includes creating and refreshing materials to ensure consistency, maintaining a website to host course materials and training videos, and delivering up to 36 training courses both in-person and virtually. Olivia serves as **logistics coordinator,** ensuring the successful delivery of the multiday training courses in major cities across the country. Logistics support includes coordination with event venues and vendors to accommodate breakout sessions, audio-visual and IT support and other incidentals and amenities needed during the training sessions.

Senior Communications Manager, Quest Corporation of America* - Tampa, FL
Provided **public involvement and communications support** to dozens of state and local infrastructure and construction projects, developed comprehensive community outreach plans and coordinated logistics and staffing for public meetings and open house events. Responded to media and stakeholder inquires, provided voice-over and narration support for PSA's and instructional videos and developed informative and interactive presentations and collateral materials.

- FDOT District 7, Community Outreach Specialist, Pinellas County Operations*
- FDOT Districts 1 & 7, Program Manager, istrictwide Public Involvement*
- FDOT District 7, SR 56 Extension Alternative Corridor Evaluation (ACE) Study*
- FDOT, Target Zero Statewide Initiative*
- City of Tampa, Complete Streets & Safety Improvement Project*
- Hillsborough County Aviation Authority, Tampa International Airport Noise Exposure Map Update Study*
- Hillsborough Transportation Planning Organization, Storm Evacuation Forecast & Shelter-in-place Scenarios Study*

Public Involvement Coordinator, Engineering and Planning Resources* - Pensacola, FL
Served as the **program manager** for FDOT's Pensacola Bay Bridge Replacement Project's "Pensacola Bay Bridge (PBB) Goes to School" educational program. Coordinated special events, public meetings and industry forums. Managed and developed social media content for active construction projects and established reporting metrics.

Public Information Officer, Gadsden County Board of County Commissioners* - Quincy, FL
Served as **public information officer** and media spokesperson for the Gadsden County Board of County Commissioners. Developed and implemented outreach strategies to effectively communicate the policies and procedures of the Board. Secured national news coverage, planned and facilitated all county events, wrote and prepared speeches for elected officials, led emergency management communications and served as county website administrator.

Public Information and Media Specialist, Leon County Government* - Tallahassee, FL
Lead writer for county news releases, media advisories, editorial articles and website copy. Served as the primary media contact and coordinated emergency-related press conferences and briefings. Planned and facilitated county meetings and public events. Managed county social media accounts and coordinated the production of internal publications.

Mark Gosselin, PhD, PE

Vice President of Coastal Engineering

Years of Experience: 33

Education:

- PhD, 1997, Coastal and Oceanographic Engineering, University of Florida
- MS, 1992, Naval Architecture and Offshore Structures, University of California at Berkley

Professional Registrations/Affiliations:

- Professional Engineer (Civil), FL, 1999, No. 54594
- Professional Engineer (Civil), LA, 2006, No. 32466
- Member, Florida Engineering Society
- Member, Florida Institute of Consulting Engineers Transportation Committee
- Member, Florida Coastal Hydraulics Council
- Member, American Shore and Beach Preservation Association

Professional History:

2013 – Present	Vice President of Coastal Engineering – INTERA Incorporated, Gainesville, FL
2002 – 2013	Vice President – Ocean Engineering Associates, Inc., Gainesville, FL
1997 – 2002	Chief Engineer – Taylor Engineering, Jacksonville, FL

Mark Gosselin has nearly three decades of experience in coastal processes, nearshore and open channel hydrodynamics, and sediment transport. Dr. Gosselin has served as project manager on hundreds of scour and hydraulics assessments of bridges and coastal structures throughout the country and has served as project manager on numerous coastal engineering studies that have involved wave, hurricane storm surge, riverine flooding, and dam break hydraulic modeling. His experience covers the southeastern U.S., Virginia, Washington, and Puerto Rico, and clients such as state departments of transportations, the Federal Highway Administration, U.S. Army Corps of Engineers districts, the Federal Emergency Management Agency (FEMA), and NASA. He has applied SWAN+ADCIRC, RMA2, FESWMS, AdH, HEC-RAS and other analytical techniques to support coastal structure design and assessments for design and numerous design-build projects. Dr Gosselin has authored design guidelines at both the state and federal level for clients including NCHRP, FDOT, SCDOT, and NCDOT.

Project Experience

Stan Gober Bridge over Marco Channel, Collier County, FL. 2021. *QC Reviewer.* The project involved development of the scour countermeasures design for several of the interior bents, armor stone size calculation based on HEC-23 methodologies and documentation.

Bridge Hydraulics Report for Gulf of Mexico Drive (SR-789) over Longboat Pass Project Development and Environment Study, Florida Department of Transportation - District 1, Manatee County, FL. 2020. *Project Manager.* As part of the team tasked with evaluating the hydraulic design of a replacement of the Gulf of Mexico Drive (SR 789) Bridge over Longboat Pass for the Project Development and Environment (PD&E) study, INTERA was assigned with developing the Bridge Hydraulics Report for the new bridge. Analysis required accounting for the bridges Location on the open coast directly facing the Gulf of Mexico. As such, development of the hydraulics and waves employed a tightly couple wave and hydraulics model (SWAN+ADCIRC). Provided technical guidance for the modeling effort.

Bridge Hydraulics Analysis Report for the Little Ringling Bridge Replacement Project, Florida Department of Transportation District 1, Sarasota County, FL. 2020-2021. *Quality Control Reviewer.* Provided quality control review for the bridge hydraulics report supporting the bridge replacement design. Project involved ADCIRC+SWAN modeling of storm surge and wave climate. Results of the modeling provided the hydrodynamic inputs to calculate scour at the bridge foundation, set low chord elevations, and design abutment protection.

Boulevard of the Arts Living Shoreline and Shoreline Protection Design, City of Sarasota, FL. 2018. *Project Manager.* The city requested a conceptual design of the revetment shoreline protection at 1000 Boulevard of the Arts and adjacent riprap breakwater at 1001. The intent of the breakwater is to protect mangrove plantings along the 1001 property creating a living shoreline. Work for the project involved development of design wave and surge criteria, sizing the armor stone protection for both the shoreline protection and the breakwater, and determining both the horizontal and vertical extents of the coastal structures. All design calculations and recommendations were documented in a Coastal Engineering Design Report.

No-Rise Study for the I-75 at US 301 Interchange Project, Florida Department of Transportation (FDOT) - District 1, Manatee County, FL. 2017. *Project Manager.* The I-75 at US 301 Interchange Project includes construction of two new bridges over the Manatee River parallel to the existing I-75 northbound and southbound bridges. Since the northbound bridge intersects the downstream edge of the FEMA regulated floodway, a no-rise study was required. Work involved obtaining and modifying the existing FEMA HEC-RAS model to reflect existing and proposed conditions, simulating the design flows,

comparing the results to ensure no rise in water surface elevation upstream of the project, and preparing the no-rise certification.

Value Engineering Study for the Chokoloskee Bridge Project, Collier County, FL. 2016. *Quality Control Reviewer.* Following the award of the construction contract for the replacement bridge, the bridge contractor initiated a value engineering study to reexamine the design hydraulic parameters, wave loading and scour. Performed a complete bridge hydraulics study including storm surge modeling, wave force calculation, and scour calculation. The reevaluation resulted in a redesign of the bridge substructure that reduced project costs by $1M. Specific responsibilities included review of all modeling and calculations as well as the documentation.

Scour Evaluation of Bridges with Unknown Foundations, Florida Department of Transportation (FDOT) - Districts 1, 3, 4, and 6, FL. 2010 – 2016. *Program Manager.* The unknown foundations program is an initiative by the Florida Department of Transportation to address the federal mandate to develop plans of action for the state's unknown foundation bridges. The work performed began with a risk assessment of all tidally influenced unknown foundation bridges. For certain risk classifications, performed additional work, which included developing design and check event (100- and 500-year return period) hurricane storm surge induced hydraulic and scour parameters. This information provides the inputs for the structural evaluation of the bridges' stability. The final stage involved the design and evaluation of scour countermeasure alternatives for the bridges deemed scour susceptible or scour critical. These countermeasure alternatives included both hydraulic countermeasures and non-destructive testing. The program encompassed four FDOT districts and involved hydraulic modeling, scour calculation, and/or vulnerability assessment at hundreds of Florida's coastal bridges. Work involved reevaluation of predicted scour at several bridges via application of FDOT rock scour methodologies.

SR 951 over Henderson Creek Bridge Widening Project Development and Environment (PD&E) Study, Florida Department of Transportation (FDOT) - District 1, Collier County, FL. 2015 – 2017. *Project Manager.* Served as project manager for development of the bridge hydraulics report for the bridge widening project. Project tasks involved development of the 50-, 100-, and 500-year hydraulic design conditions associated with storm surge and waves via an application of the U.S. Army Corps of Engineers ADCIRC model. Tasks also involved calculation of scour and design of abutment protection for the replacement bridge.

Hydraulic and Scour Evaluation and Recommendations for SR 789 Bridge over Longboat Key Pass, Florida Department of Transportation (FDOT) - District 1, Manatee County, FL. 2014 – 2015. *Project Manager/Lead Engineer.* On Friday October 24, 2014, FDOT became aware of an increase in the gap width at the joint on the rest pier (pier 35) at the Longboat Key Pass Bridge (#130057) which prevented normal functioning of the drawbridge. The increase in gap width, from a normal of 1.5" to approximately 4", was the result of a rotation of the rest pier to the north away from the bascule. In response to the observed rotation, the FDOT assigned T. Y. Lin International (TYLin) to perform an assessment of the current conditions at the bridge and to develop recommendations for appropriate countermeasures (to include crutch bents at pier 35). INTERA provided an assessment of the hydraulic and scour conditions at the bridge as well as provided recommendations regarding scour countermeasures. The assessment identified low remaining embedment at several piers recommended both installation of new scour countermeasures and rehabilitation of existing scour countermeasures.

Bridge Hydraulics and Scour Analyses for the I-75 at US 301 Interchange Project, Florida Department of Transportation (FDOT) - District 1, Manatee County, FL. 2013. *Project Manager.* The I-75 at US 301 Interchange Project includes construction of two new bridges over the Manatee River parallel to the existing I-75 northbound and southbound bridges. Additionally, this project involves the widening of the I-75 bridges over nearby Salt Marsh. Managed the development of the bridge hydraulics reports for both crossings, modeling of the 50-, 100-, and 500-year return period storm surge events via an application of ADCIRC, calculation of scour at all substructure elements, and design of abutment protection.

Bridge Hydraulics and Scour Analyses, Gasparilla Island Bridge Authority, Gasparilla Island, FL. 2010 – 2012. *Quality Control Reviewer.* Provided quality control review of the development of design hydraulic parameters, scour calculation, and documentation for the design project involving the replacement of three bridges (two fixed bridges and one swing bridge) connecting Gasparilla Island to the mainland. The project involved development of the 50-, 100-, and 500-year return period wave and storm surge parameters via an application of SWAN+ADCIRC, calculation of scour at all substructure elements, and design of abutment protection. All procedures, results, and recommendations were documented in a bridge hydraulics report and submitted to the Bridge Authority.

JOSEPH R. ANTINORI, P.E.

Geotechnical Engineer

TIERRA
GEOTECHNICAL • MATERIALS
ENVIRONMENTAL • ENGINEERING

Summary of Capabilities
Project Management
Design Level Geotechnical Engineering
Shallow and Deep Foundation Engineering
In-Situ Soil Improvement
Retaining Wall System Design
Roadway Soil Survey and Bridge Foundation Studies
Slope Stability
Settlement Evaluations
Seismograph Monitoring and Vibration Analysis

Years of Experience
With Tierra: 16 years

Education
B.S., Civil Engineering, University of South Florida, 2005

Professional Organizations/Registrations/Awards
FL Registered Professional Engineer – License No. 73176

Mr. Antinori has worked in the field of Geotechnical Engineering for 16 years. As an employee of Tierra, Mr. Antinori has completed roadway and bridge projects for Hillsborough County as well as other municipalities in the area. In addition, he has completed projects for private clients, which included residential, commercial and industrial sites. His experience includes soil improvements, shallow and deep foundation analyses, retaining wall and soil anchor system design, settlement and slope stability analyses, and pavement evaluation.

Relevant Project Experience

Englewood Water District Water Reclamation Facility New Headworks Design, Charlotte County
Old Coachman Road over Alligator Creek Bridge Replacement, Pinellas County
City of North Port: Chamberlain Boulevard Pedestrian Bridge, Sarasota County
CR 78 over Elephant Ear Canal (Bridge No. 074004), Bridge Culvert Scour Remediation, Hendry County
Platt Street Bridge over the Hillsborough River Rehabilitation, Hillsborough County
Grange Hall Loop Road over Howard Creek (Bridge No. 104334) Northwest Wing Wall Replacement, Hillsborough County
Maydell Bridge Pile Capacity Evaluation, Hillsborough County
Maydell Drive Bridge Replacement over Palm River, Hillsborough County
Maydell Drive Bridge Replacement PD&E, Hillsborough County
Newberger Road over Kell Creek (Bridge No. 104253), Hillsborough County
Edward Medard Reservoir Toe Drain Design, Hillsborough County
Lutz Lake Fern Road and Boulevard of the Roses, Hillsborough County
Blount Road Drainage Improvements, Cross Drain Replacement, Hillsborough County
City of St. Petersburg: Pass-a-Grille Seawall and Fishing Pier
City of St. Petersburg Seawall Replacements, Pinellas County
17th Avenue Seawall Replacement, Pinellas County
Indian Rocks Road Bridge Culverts and Box Culverts, Pinellas County
Park Street Bridge Replacement, Pinellas County
Ozello Bridge Culvert Crossings Evaluation, Citrus County
City of Tampa: David L. Tippin Water Treatment Facility High Service Pump Station and Misc. Improvements
City of Tampa: Davis Island Emergency Repair, Bering Street
City of Tampa: 12" Force Main from Harbour Island Pump Station
City of Tampa: Bypass Force Main Adjacent to Franklin Street Bridge
City of Tampa: O' Brian Street Pond Sites
City of St. Petersburg: 1st and 2nd Street South Mast Arm Signal Poles
City of St. Petersburg: Southwest Water Reclamation Facility Pump Station

City of St. Petersburg: Lake Tarpon Outfall Improvements
City of Plant City: SR 39 Designated Right Turn Lanes
City of Clearwater: Byram Drive Channel Stormwater Improvements
City of Clearwater: Del Oro Park Improvements
City of Tarpon Springs: Brick Street Improvements
City of North Port: Chamberlain Boulevard Pedestrian Bridge
George Road at Memorial Highway Intersection Improvements, Hillsborough County
North Dale Mabry Wetland Restoration, Hillsborough County
Subaqueous Crossings, Madeira Beach, Pinellas County
Subaqueous Crossings, Indian Shores, Pinellas County

FDOT District I

Districtwide Scour Evaluation for Bridges with Unknown Foundations Contract
I-75 (SR 93), from North of Daniels Parkway to South of Colonial Boulevard, Lee County
I-75 (SR 93), from North of SR 80 to North of SR 78, Lee County
I-75 (SR 93), from South of SR 78 to the Charlotte County Line, Lee County
I-75 (SR 93), from North of SR 80 to North of SR 78, Lee County
SR 82, from Alabama Rd. S. to Homestead Rd. S., Lee County
SR 82, from Lee Blvd to Shawnee Road, Lee County

FDOT District VII

I-4 / Crosstown Connector Segment 3C, from 7th Avenue to the Crosstown Expressway (Including Connections to 22nd Street), Hillsborough County
SR 50 (Cortez Blvd.) from US 19 to CR 587 (Mariner Blvd.), Hernando County
SR 694 (Gandy Blvd) from West of 9th Street to East of 4th Street, Pinellas County
I-75 South of Fowler to South of Bruce B. Downs, Roadway and Bridge, Hillsborough County
I-275, from Hillsborough Avenue to North of Yukon Street, Hillsborough County
Proposed DMS and CCTV Support Locations – SunNav ITS and West Florida ITS Improvements Project, Hillsborough, Pasco, Hernando, and Polk Counties

Florida's Turnpike Enterprise

HEFT, from US 1 to SR 874, Miami-Dade County
HEFT from south of Kendall Drive to South of 60th Street Canal Bridge, Miami-Dade County
Veteran's Expressway from Memorial Highway to Dale Mabry Highway, Hillsborough County

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