



Statement of Qualifications

RFQ #22-006

General Engineering Services

City of Key West, Florida

November 30, 2022

→ The Power of Commitment





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November 30, 2022

City Clerk
City of Key West
1300 White Street
Key West, Florida 33040

RE: RFQ #22-006 General Engineering Services

GHD is pleased to have the opportunity to submit our qualifications to provide civil, utility, solid waste, coastal and structural engineering services to the City of Key West. This proposal is based on the City's RFQ No. 22-006 dated October 26, 2022. The GHD team is best suited to deliver these services for several reasons:

→ **Specialized Experience & Technical Competence.** GHD understands the unique challenges facing the City and our staff have successfully navigated both the City and other South Florida clients through similar general engineering contracts. This includes experience with:

- **Civil Engineering.** GHD is providing independent technical reviews and alternative mitigation measures to improve traffic flows within the growing City of North Port.
- **Utility Engineering.** GHD developed an asset management plan to improve customer service levels, better manage risk, and reduce asset lifecycle costs that are projected to result in annual savings of \$2.8M for the City of Fort Lauderdale.
- **Solid Waste Engineering.** GHD has completed over 600 solid waste and waste management projects over the past 35 years; including landfill and waste to energy projects in Okeechobee, Naples, Medley, Tampa, Palm Beach, and Pasco County.
- **Coastal Engineering.** GHD recently developed a coastal modeling tool as part of Miami-Dade County's Sea Level Rise strategy to assist in the development of cost-effective storm and flood adaptation and mitigation projects.
- **Structural Engineering.** GHD recently provided structural assessments and design alternatives to repair and restore C Dock and Turtle Kraals within the Key West Historic Seaport. Our team is also experienced with design and renovation of buildings; including nationally significant structures in Washington D.C.

→ **Ability & Capacity to Perform the Services Expeditiously.** The breadth of this Contract will not stress the resources of GHD. Our company and staff resources are large enough to provide uninterrupted, quality services throughout the life of this contract. We also use our in-house communication tool, iConnect, to leverage the broad technical expertise of our 10,000 plus staff and we are committed to putting all of these resources to use for the City.

→ **Local & Dedicated Resources.** Our offices in South Florida have more than 100 professional staff located within easy reach of Key West and a long history of delivering successful engineering projects. We are embedded in the community and have two Team member offices in the lower Florida Keys to provide the local resources and equipment needed to provide timely and efficient field investigations. In addition, our dedicated project manager, Jesse Davis, PE, ENV SP, was born at Fishermen's Hospital in Marathon and is located in nearby Homestead, FL.

We appreciate the opportunity to submit our qualifications for the City's consideration. GHD looks forward to being favorably selected to provide our exemplary services to the City.

Regards,

A handwritten signature in blue ink that reads "Brian Moore".

Brian Moore, PE

Vice President / Senior Environmental Engineer
813 257 0658
brian.moore@ghd.com

→ 2. Information Page

Prime: GHD Services Inc.

Jesse Davis, PE, ENV SP

Project Manager (located in Homestead, FL)

3380 Fairline Farms Road

Suite 16

Wellington, FL 33414

T 561 293 8464

E jesse.davis@ghd.com

Brian Moore, PE

Vice President / Senior Environmental Engineer

5904 Hampton Oaks Pkwy

Suite F

Tampa, FL 33610

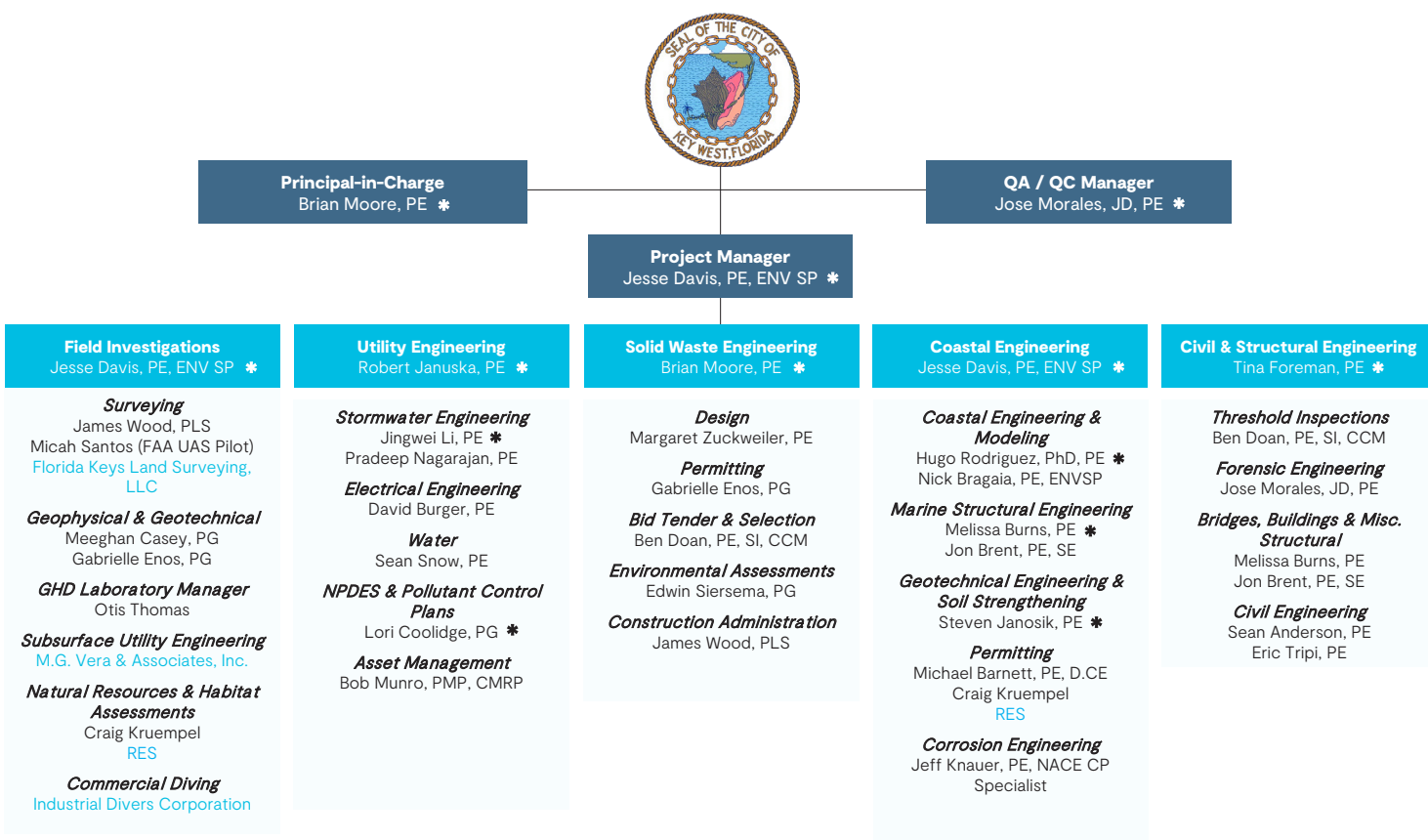
T 813 257 0658

E brian.moore@ghd.com

→ 3. Organization Chart

The GHD Team is uniquely qualified to provide services to the City of Key West due to our extensive On-Call contract experience (50+plus contracts in Florida) and ability to provide a comprehensive suite of engineering services in-house.

Our proposed organizational structure for this project is shown below. GHD's key staff includes local engineers, marine scientists, former regulators and contractors with experience designing, permitting, developing cost estimates, providing constructability reviews, developing bid documents, and providing construction phase services.



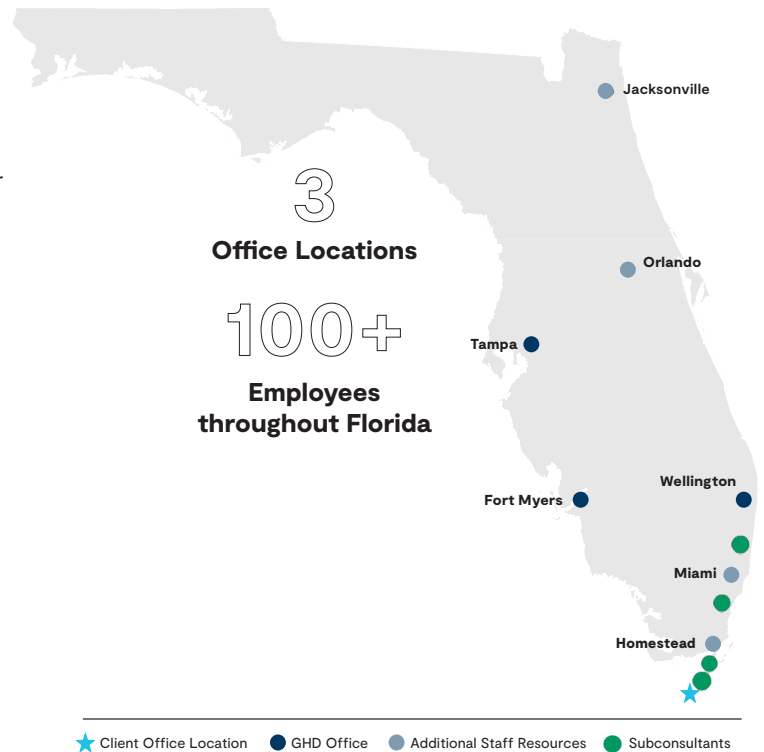
Key Staff (resumes included) * Subconsultants

Ability to Perform Services for the City

Our offices in South Florida have more than 100 professional staff located within easy reach of Key West and a long history of delivering successful projects. We are embedded in the community and have Team member offices in the Florida Keys to provide the local resources and equipment needed to provide timely and efficient field investigations. In addition, our dedicated project manager, Jesse Davis, PE, ENV SP, is located in nearby Homestead, FL.

GHD has a broad bench of dedicated and committed staff to support the City of Key of West

- **100+** Science and Engineering professionals in Florida
- **4,000+** professionals in North America
- **10,000+** professionals Globally



→ 4. Company Information

GHD is one of the world's leading professional services companies operating in the global markets of water, energy and resources, environment, property and buildings, and transportation. We provide engineering, environmental, advisory, digital and construction services to private and public sector clients.

Established in 1928 and privately owned by our people, GHD operates across five continents – North and South America, Asia, Australia, Europe, and the Pacific region. We employ more than 10,000 people in 200+ offices to deliver projects with high standards of safety, quality and ethics across the entire asset value chain. Driven by a client-service led culture, we connect the knowledge, skill, and experience of our people with innovative practices, technical capabilities, and robust systems to create lasting community benefits.

Committed to sustainable development, GHD improves the physical, natural and social environments of the many communities in which we live and operate. We are guided by our workplace health, safety, quality and environmental management systems, which are certified to the relevant international standards (ISO and OHSAS). GHD is one of the few engineering/consulting firms that have attained an ISO 9001:2015 Certification in Consulting, Engineering, Project Management, Design Services, and Materials Testing.

2022 ENR Rankings

#10 Hazardous Waste
#27 Top 500 Design Firms
#11 Water
#13 Sewer/Waste
#16 Top 100 Pure Designers
#13 Top 50 Designers in International Market

↳ Engineering News Record's (ENR) 2022 Rankings

Team Members

Although GHD staff are capable of providing all of the required consulting and engineering services, specialty subconsultants have been selected to support the GHD Team. Two of the assembled delivery Team members have offices located in the lower Florida Keys, providing the local resources and equipment needed to provide timely and efficient field investigations. Many of our staff and Team members have worked together for decades, including on the current Environmental Services Contract for the City. We bring a cohesive Team to all of the civil, utility, solid waste, coastal and structural engineering task order assignments that may be issued under this contract.

Florida Keys Land Surveying, LLC (FKLS) | Surveying



Florida Keys Land Surveying is a state of Florida registered professional land surveying firm located on Sugarloaf Key. FKLS is a registered Minority owned Business and is operated under the responsible charge of Professional Surveyor and Mapper Eric Adlai

Isaacs. FKLS is an established surveying firm that serves only Key West and Monroe County. FKLS has been providing land and hydrographic surveying solutions at the federal, state, county, city, and private level in the Florida Keys, since 2010. FKLS is licensed, insured and is a sustaining firm member of the Florida Surveying and Mapping Society. FKLS is extremely well versed in all aspects of land and hydrographic surveying in Monroe County.

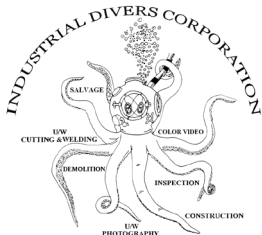
M.G. Vera & Associates, Inc. (MGV) | Subsurface Utility Engineering



MGV was established in 1973 and has been providing quality Surveying and Mapping and Subservice Utility Engineering services to both public and private clients for over 40 years in Florida. They hold a Professional

Surveying Services contract with the City that was extended in April 2021 via Resolution No. 21-061.

Industrial Divers Corporation (IDC) | Commercial Diving



IDC is a woman owned Small Business (as defined by the SBA) located in Fort Lauderdale, Florida. IDC was established in 1984, as a Subchapter S, Florida Corporation. IDC is a commercial diving business which provides worldwide diving services in inland, coastal, and offshore waters. IDC is staffed with 21 full-time employees, 17 of which are certified commercial divers. IDC maintains an extensive inventory of state-of-the-art diving equipment. This gives us the ability to perform a wide variety of underwater work on short notice. Three IDC divers are USCG licensed captains for the operation of our seven workboats of various sizes.

Res | Natural Resource & Habitat Assessments | Permitting



RES is an environmental, engineering, ecological consulting, environmental mitigation, stormwater management and water quality, and climate adaptation and flood resilience firm providing a wide range of services to clients in both the public and private sectors. Their company was formed in 2000, bringing together a team of professional and technical staff

members with a long history of successfully executing projects throughout the United States. Their fundamental philosophy is based on responsiveness, expertise and creating value for their clients.

100%

→ At GHD we pride ourselves on the power of commitment.

We are 100% committed to the City of Key West. «

Since the 1990's, we have provided On-Call Services to communities throughout the State and currently hold nearly 50 contracts similar to the City's On-Call Engineering Services. We bring cost-effective solutions and responsiveness, to our clients in every aspect of design as possible, we have the end result in mind.

The GHD Team is uniquely qualified to provide the full breadth of General Engineering Services for the City of Key West due to our extensive and comprehensive suite of in-house professional services and equipment located in Florida. GHD brings the following in-house facilities, capabilities, and resources to the City of Key West on this project.

GHD's Drill Rig

*Matheson Hammock Park Seawall Upland Utility Conflict Avoidance
using High Density Point Cloud from 2022 GHD Drone Survey*

An aerial photograph of a coastal or urban area with various infrastructure labeled. Labels include "AT&T Telecom Building", "Light Pole", "Water", "Electric Utility Vault", "Public Gas Utility Pull Box", "Public - Lighting", "Public - Water", "Utility Pull Box", "Public Electric Substation", "Human Frontal & Temporal", "E-Substation", "Comms", "W-Fit Electric", "Electrical Line", and "Public". Colored dashed lines connect some of these points across the terrain.

GHD's key staff include NACE CP4 Specialists that have unparalleled corrosion engineering design experience that includes life cycle costing, cathodic protection & impressed current design and specifications, installation inspection, commissioning and monitoring, verification of third party designs and specifications, and operational support on over 1,000+ projects worldwide. This includes recent and ongoing experience providing corrosion engineering services for Port Everglades, Port of Palm Beach, and an active vendor contract for the Miami-Dade County Water & Sewer Department.

GHD staff have extensive experience conducting vibration monitoring, nondestructive testing methods (liquid penetrant testing, magnetic particle testing, radiographic testing, ultrasonic testing) and maintain certifications as structural masonry special inspectors, spray-applied fireproofing special inspectors, structural steel and bolting special inspectors, structural welding inspectors (AWS-CWI), ACI Concrete Field Testing Technicians.

In-house Construction Materials Testing Lab



Civil & Utility Engineering Services

Stormwater Management

GHD has extensive experience in the design and permitting of stormwater management systems. Our personnel have designed and assisted in the permitting process for dozens of sites throughout Florida. Our experience also encompasses the design of city and county stormwater systems.

The task leaders and senior engineers on our Project Team have decades of combined experience in the civil engineering field, as well as stormwater management engineering services in south Florida. Our Project Team's knowledge encompasses all phases of stormwater management, ensuring that each project is expertly designed and properly permitted in a timely manner.

Sewer

We've been delivering innovative solutions to the wastewater industry for more than 80 years: **Strategic planning** – feasibility studies for new systems and the expansion of existing systems, evaluation surveys, business case studies, and design concepts; **System development and augmentation** – concept, functional and detail design and documentation of collection and transfer system elements, including hydraulic analysis material evaluation, construction methodology, optimisation and trenchless technology solutions; **Custom solutions** – pump station design including 1 L/s to 25,000 L/s and up to 4 MW motor size, wet and dry wells, fixed and variable speed pumps, parametric design tools to optimize life cycle costs, and expedited design; private sewer development; and detention storage concept development and design; **Network modeling** – simulations of small and large sewerage networks, existing and new schemes using static and dynamic models, and comprehensive support tools to link GIS and external databases; **Alternative collection systems** – alternative development of vacuum sewers, grinder pumps, septic tank effluent pump (STEP), common effluent drainage (CED), variable grade sewers (VGS), and on-site systems; **Special structures** – design of special structures for topographical and physical conditions, siphons, vortex drops and chutes, peak flow bypass structures, detention, and in-line ventilation structures; **Sewer overflow reduction** – hydraulic assessments, overflow risk management planning, source control strategies, in-system and off-system storage, overflow treatment, system control, capacity enhancement, maintenance controls, and reliability improvements.

Electrical

Electrical loads are crucial to the operation of many industries. We provide electrical and instrumentation services for new projects and additions/upgrades to existing facilities.

Our team can perform all levels and stages of project delivery – from feasibility studies, concept designs, and detailed design, through to construction support and commissioning. We can provide a cost-effective product that meets specifications and process requirements. Our team's substantial experience in the operations, maintenance, and construction of industrial plants allows us to design projects which are straight-forward to construct, operate, and maintain.

Communications

GHD provides an exceptional capability for audiovisual, broadcast and acoustical assessment, consulting, and design efforts in a myriad of industries and business sectors with a global presence. A key element to our designs is that they are aesthetically pleasing and are vendor agnostic, supporting all software-based conferencing platforms.

Our staff are particularly qualified with the diverse experience of designing some of the most advanced audiovisual systems in the United States as well as some of the nation's most visited facilities. Some of the high-visibility facilities include the Smithsonian Institution's National Air and Space Museum, National Museum of Natural History, and National Museum of American History.

"GHD prepared a sustainability evaluation report to design and implement a Watershed Asset Management Plan (WAMP) for the City of Ft. Lauderdale. I've been working for the City over 20 years and GHD has been one of the best team of professionals I have worked with. Their attention to detail, schedules, and to the client has been excellent."

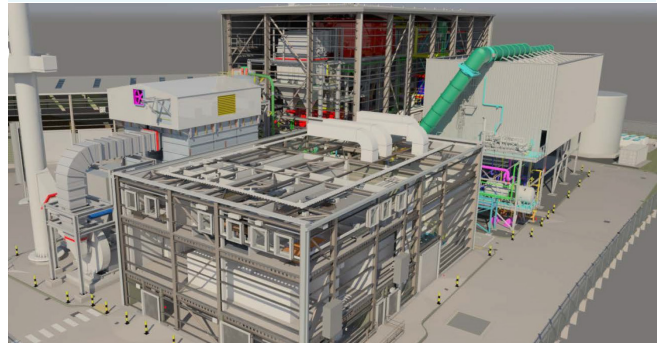
Elkin Diaz, Senior Project Manager, City of Ft Lauderdale Public works Department



Solid Waste Management

The professionals at GHD have been actively involved in solid waste management projects for over 35 years and have acquired extensive experience in all aspects of waste management. We have worked on hundreds of landfill projects around the world, and in so doing, have considerable first-hand expertise in all aspects of landfill and transfer station design, permitting, construction, operation, maintenance, closure, and redevelopment. In addition, our experience also includes hydrogeological studies, geotechnical studies, environmental assessments, contaminant assessments, remedial design, and implementation/construction of remedial strategies. As industry leaders in waste management issues and technologies, our solid waste experts have also developed extensive experience and expertise in landfill gas (LFG) management, treatment, and utilization, including LFG-to-energy facilities, and have extensive experience with the management and treatment of leachate. We are also actively involved with innovative solid waste solutions such as material recycling and recovery, composting, and anaerobic digestion facilities, which promote waste diversion, to culminate in saving capacity in landfills and producing beneficial end products such as composting material and methane gas.

GHD has worked on landmark energy-from-waste projects across the world, developing innovative and sustainable solutions to complex project challenges. Our energy from waste capabilities broadly comprise: waste management and waste sourcing, environmental impact assessment, stakeholder engagement, regulatory approvals and permitting, owner's engineering services, detailed design, and construction management.



We have performed solid waste design and construction projects throughout North America, including numerous sites in Florida (see Section 8 for project descriptions), with various clients and regulatory agencies. Our success has been through a combination of open discussion with the client and regulatory officials to determine the appropriate course of action. We have also been very successful in negotiating with regulatory agencies to obtain approval for permitting modifications to improve operating efficiencies and reduce operational costs. These successes are a direct result of having the technical expertise and depth of personnel to provide engineering services, as well as the knowledge of regulations and the appropriate approval processes to achieve success for our clients and the industry.

Permitting / Compliance / Air Quality

Our specialists are knowledgeable of and experienced with applicable environmental laws and regulations, including landfill design and operations, air quality, stormwater, and industrial hygiene and safety. We have developed a long standing reputation for helping clients to meet or exceed environmental regulatory requirements. Our professionals are familiar with major compliance and permitting issues at all regulatory levels across North America. We understand that solid waste facilities present several unique challenges when it comes to permitting and have an in-depth, working knowledge of applicable rules and regulations. We have the expertise and experience to work with clients and regulators to address these challenges.

Our engineers have also been active in the areas of assessing and certifying greenhouse gas credits with UN, ANSI, and other accreditation organizations. As environmental regulations have developed and innovative technologies have evolved, GHD has always respected its clients' mandate of cost-effective environmental responsibility with careful regard for protection of the public and the environment. Our environmental services encompass the assessment and cleanup of historical contamination as well as the planning and design of new facilities to achieve and maintain environmental compliance.

Construction Management

GHD has acquired extensive experience in all aspects of construction management, which ensures cost-effective implementation of the design product. Our services include preparation of construction contract documents and specifications based on our experience developing these documents for many large complex landfill and environmental projects. Our specific expertise in construction management is a result of the combination of our firm's construction engineering and environmental engineering origins.

Coastal Engineering Services

Maritime developments often pose unique challenges. They must be sensitively designed, attractive, functional, cost-effective, and environmentally sustainable. The design must take into account coastal processes, including the effects of severe storms and elevated water levels, sea level rise, winds, tides, and currents.

GHD has over 50 dedicated maritime and coastal professionals in North America, equipping us with a diverse team to develop the most effective adaptations and solutions to these challenges. Our distinguished team includes recognized leaders in marine structures, climate change, coastal and maritime design and modeling, waterfront development, port planning and logistics, coastal and ecosystem restoration, coastal zone resource planning, shoreline protection engineering and construction, biological monitoring, and reef restoration.

Located in key coastal communities, including our local South Florida offices, our maritime and coastal team operates without geographic borders to develop and protect critical infrastructure throughout North America. Our dedicated Project Manager is located only a few hours' drive north of Key West (in Homestead,) to provide the City with a high level of service and efficiency throughout this continuing services contract.

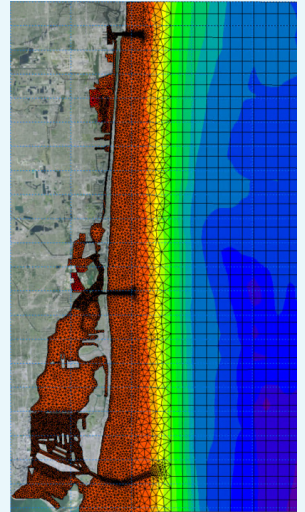
A thorough understanding of the environmental conditions and coastal processes along the City's shorelines are critical to a successful project. During most projects, GHD coastal engineers will document the site-specific tidal datums, water levels (including flood elevations and sea level rise estimates), winds, waves, scour and the resulting impact forces likely to occur for a range of design storm events. For some projects, this may include the use of publically available data and GHD's in-house calculation files; for others it will include the use of complex numerical models. Our coastal engineers tailor our approach-based on the project requirements to provide our clients with the most value.

Should a project require complex numerical modeling, GHD's key staff has over 60 years of demonstrated expertise in the numerical simulation of complex coastal processes and interactions, including the simulation of hydrodynamics, storm surge and coastal flooding; waves and wave transformation including wave breaking; erosion, transport, and deposition of sediments; shoreline change; dune erosion; scour; and water quality. The GHD Team has experience with industry-leading modeling platforms including MIKE by DHI, Delft3D, SMS (STWAVE, CMS Flow/Waves, PTM, ADCIRC), EFDC, and Telemac. These platforms are useful for hindcasting and forecasting coastal hydrodynamics (currents and waves), sediment transport, and morphology at local and regional scales.

State and Federal Permitting

GHD has a thorough understanding of regulatory approvals required by the FDEP and the USACE Jacksonville District. We also have worked closely with the resource/commenting agencies that serve the state and federal permitting process (i.e., U.S. Fish and Wildlife Service, Environmental Protection Agency, National Marine Fisheries Service, and the Florida Fish and Wildlife Conservation Commission (FWC)). Led by Michael Barnett, PE, D.CE, the former Chief of FDEP's Beaches & Coastal Systems (2003 – 2011), GHD staff have established and maintained a thorough understanding of the state and federal regulatory submittal requirements and processes, as well as the probable processing and issuance timelines. We frequently communicate with the planning and regulatory divisions of USACE Jacksonville, as well as FDEP staff in the Beaches, Inlets and Ports Program, the Coastal Construction Control Line Permitting Program, and the Division of Water Resource Management office, to sustain an open dialogue and familiarity with staff, procedures, policies and workload issues that may influence the processing of the City's projects. We recognize frequent, open and honest communication with the agencies is vital toward obtaining timely and appropriately-conditioned authorizations to implement the City's coastal engineering projects.

GHD recently developed a coastal modeling tool as part of Miami-Dade County's Sea Level Rise (SLR) Strategy to identify cost-effective mitigation and adaptation strategies. Our Marine & Coastal professionals are now helping with the County permitting and design options that increase the County's resiliency to future SLR and coastal storm events.



Miami Beach

Structural Engineering

Our structural team is experienced across a wide-range of forms including:

- High & medium rise
- Deep basement
- Composite systems
- Post-tensioned concrete systems
- Large industrial spaces
- Refurbishment & structural modification

We consider the whole of asset life and employ Building Information Modeling (BIM) technology to allow you to monitor progress from project conception to completion. In addition, we can tap into our networks' materials technology knowledge including the development of durability and corrosion protection systems.

Our whole-of-life, pragmatic design solutions deliver your tangible results. Our network of experienced minds creates certainty of outcomes, reducing your risk and facilitating budgetary and milestone achievements.

BIM allows us to tell you when things may not work (clash detection) and allows each of our technical disciplines to work together (phasing) to create optimal outcomes. No need to take the term 'BIM' literally. "Building" may include buildings, structures, bridges, public infrastructure, mining, marine, and plant engineering projects.

Marine Structural Engineering

The first step to many coastal engineering projects involves quantifying the present-day fitness of the structure and/or asset of interest. Depending upon the assigned project, the GHD Team may conduct above and below water inspections using the ASCE Manual of Practice 130 ("Waterfront Facilities Inspection and Assessment") rating system to document inspection findings and record the relevant attributes of any defects such that the remaining design life of the asset may be estimated. The damage observations at each region will provide critical inputs into a Basic Structural Analysis (BSA) and help to determine recommended repairs or replacement suitable for future facility use.

Following inspections, GHD will perform a BSA of the asset based on current conditions and the anticipated future loading and environmental conditions (i.e., dredge depths, scour due to the design storm event, sea level rise scenarios, etc.). Record information or geotechnical data gathered during the site investigation phase of the project will be used in the structural analysis of the asset. Loads to be considered may include earth pressure, hydrostatic (ground water) and lateral surcharge pressures, waves, vessel wake, mooring and berthing loads, water levels, and anticipated scour depth. The BSA will estimate the existing structural capacity of the structure/asset using anticipated and code basis loads and the deterioration noted during the inspections. The evaluation will identify deficiencies with respect to vertical (gravity) and lateral (seismic) load resisting systems using the appropriate design standards (such as ASCE 7 and UFC). Demand and capacity values will be determined for each section of the asset.

» Example Experience

South Bayshore Lane Pump Station Seawall Outfall Design | City of Miami, FL | 2021-2022

The City of Miami is upsizing an existing drainage outfall that is located within a 15-foot wide easement between two condominium buildings. An existing seawall, constructed in 1965, is located at the outfall terminus into Biscayne Bay. GHD provided geophysical field investigations and structural engineering, to develop expedited construction plans and specifications ahead of schedule.

Challenge: The record drawings obtained from the City did not match field conditions. Thus, GHD performed a GPR survey to determine whether any upland conflicts existed (e.g., tie-backs) and the approximate location of reinforcing, thickness of wall, and concrete cover.



➔ 5. Methodology and Approach

Proposed Management Approach

GHD’s approach to managing continuing services contracts is geared toward each segment of a project being organized, directed, and controlled to ensure the efficient completion of each task, within scope and budget as well as schedule. Our guiding principles for successful management of any contract are organizational simplicity to ensure accountability, and effective communication. GHD recognizes that meeting project schedules/budgets for small, medium, or large projects requires four essential elements:

- A clear and concise understanding of the Task Order elements;
- An in-depth understanding of our staff capabilities and identification of the personnel required to efficiently complete each task;
- Consistent communication of the schedule and budget requirements to ensure all team members are administratively connected to the project; and
- Diligence and transparency in the tracking of the progress of each task.

GHD has successfully managed similar contracts through clear and consistent communications by our Project Manager, Jesse Davis. For this General Engineering Services contract, the Project Manager is ultimately responsible for the overall technical and administrative management of the contract. For continuing service contracts, multiple projects may be ongoing simultaneously utilizing different resources within the firm. As such, the Project Manager is essentially the link between the various projects and the City’s representatives. Regardless of the task or project, the City can feel comfortable that Jesse will be available to answer questions regarding progress or status of any active task.

Under similar GHD contracts, the GHD Project Manager will serve many primary roles, which are noted in the Table to the right. Thus, the Project Manager is the focal point and key to the management efficiency and organizational productivity.

GHD currently holds similar continuing service contracts with the City of Key West (Environmental Engineering), City of Fort Lauderdale, City of Tampa, City of Fort Myers, Miami-Dade County, Tampa Bay Water, City of Clearwater, Brevard County, City of St. Petersburg, Hillsborough County, and Lee County. Under each of these contracts, the key to successful project completion is centralized project management. In each instance, the Project Manager acts as the direct line of communication for the client. All project tasks are communicated directly to the Project Manager.

The Project Manager develops a project team based on the understanding of the needs of the project, which could include internal professional or support staff, and/or subcontractors. Once the team is identified, the schedule and budget information is provided and the work scope is implemented. All along, the Project Manager evaluates progress and prioritizes tasks as necessary, to meet the project schedule. If additional resources are necessary, the Project Manager has authority to call upon additional staff and/or subcontractors.

GHD understands that specific project scope and complexity will vary between assignments under this contract. The appropriate level of QA/QC for small, medium, or large projects will be consistent with GHD’s quality system and will be determined and implemented by Jesse. In order to effectively manage the City’s Environmental Engineering and Coastal Engineering Services Contract, we intend to put into action four activities to manage schedule and budget requirements successfully. These elements will be applied to all of the medium and large projects, but may also be applicable to certain small projects. These are:

Client Information
<ul style="list-style-type: none">– Communications– Negotiate Work Plans– Cost Estimates– Schedule Tracking– Technical Disclosures– Milestones– Invoicing– Issue Resolution
Team Director
<ul style="list-style-type: none">– Communication– Assign Tasks– Allocate Resources– Establish Technical Requirements– Monitor Programs (Milestones & Budget)– Corrective Actions– Issue Resolution
Corporate Liaison
<ul style="list-style-type: none">– Communication– Subcontractor– Management– Contracting– Public Relations– Review Work Product– Invoicing– Issue Resolution

- 1) **Initial Site Visit:** An initial site visit establishes rapport with the City representative and an appreciation for the circumstances of the site. During the visit, a request is made to obtain site figures, utility location maps (where appropriate) and features are identified that may pose a hazard or hindrance to the project team, the public, or the City. In order to deliver the appropriate work product, we also inquire about the objective of the requested services and how the services fit into the overall project, including the schedule. The initial site visit provides the basis for the detailed scope of work.
- 2) **Detailed Scope of Work:** The scope of work is the project's "road map." The successful progress of any task can be attributed to the clarity by which the work task has been understood by both the City and GHD's key personnel. We emphasize the preparation of a correct and detailed, but easily understood, scope of work to launch each task.
- 3) **Monthly Project Summaries:** GHD recognizes that a few City Task Orders are likely to be completed within one or two months. Short-term tasks rarely result in budget and schedule conflicts, however, GHD will prepare monthly summary reports for all active projects to keep the City's Project Manager current.
- 4) **Communications:** GHD's technicians and professional engineers are accustomed to maintaining continuous communication with the Project Manager during completion of projects. We can be on a project site within hours of notification. GHD can provide night and weekend availability to the City. E-mail and/or text messages concerning project conditions, site access agreements, and regulatory issues have proven a successful communication tool while completing assigned tasks. For example, GHD mobilized a ground penetrating radar crew to immediately assess the spatial and vertical extent of voids beneath C Dock between Christmas and New Years in 2021.

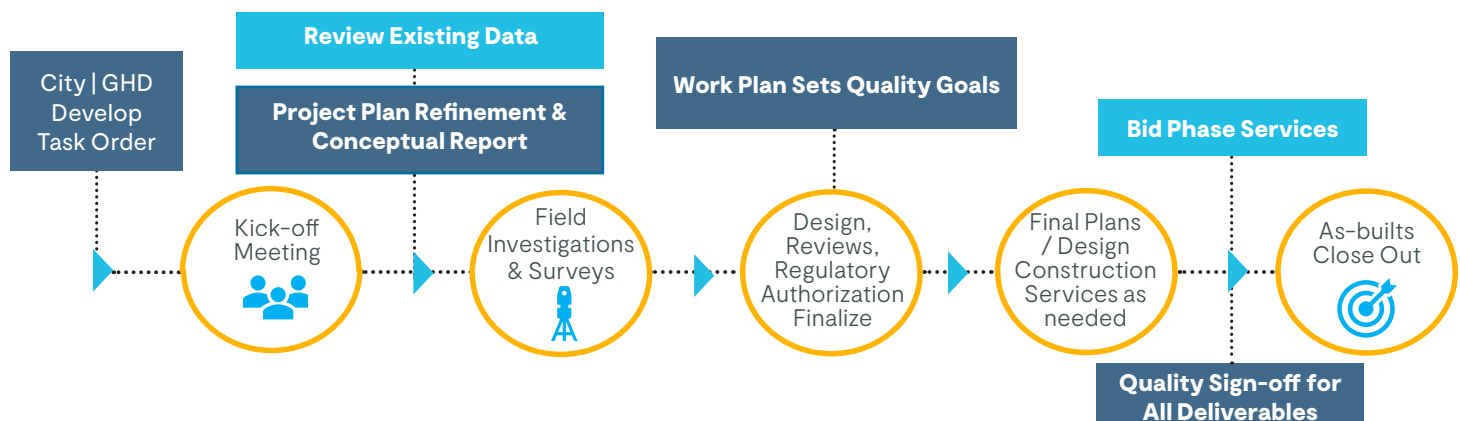
By using our standardized approach to managing this contract, projects will remain on schedule and within budget. GHD is familiar with the City's process for reviewing proposals, issuing Task Orders, and invoicing. GHD understands that following the initial discussion with the City's Project Manager and completion of the site visit (if required), a detailed scope of work will be developed by GHD that reflects the understanding of the overall objectives and detailed tasks that need to be completed. Once the scope of work and cost estimate are submitted, work cannot proceed until a Task Order is approved by the City Commission and issued through the City's Finance/Budget Department. Invoicing will be prepared that reflects the specific items completed and the percent of task completion. GHD will provide detailed information on all of our invoices.

Proposed Technical Approach

The GHD Team was built and thrives as a result of our demonstrated experience in successfully delivering a broad range of projects throughout South Florida. The goal is to create and maintain a professional partnership with our clients and subconsultants, with equal emphasis on both project delivery and overall client needs. We are committed to the many relationships that result from the successful completion of projects as they are the avenue through which we help our clients achieve their short and long term project goals. Our design philosophy includes simplicity, functionality, and flexibility as summarized below:

- **Simplicity:** The basis for design highlights and emphasizes the essential, core purpose.
- **Functionality:** Maintaining focus on the overall objectives ensures quality while conforming to cost constraints.
- **Flexibility:** Deliberately providing future decision opportunities to respond to future events.

The GHD Team will utilize a phased approach that ensures a timely, efficient and cost-effective formulation of the basis of design. This focus will continue through to construction administration and the preparation, certification and transmittal of record drawings associated with the constructed project. Our team will deliver a complete, comprehensive suite of services that will result in the construction of a successful project. Our approach to the design of any type or size project for this contract is shown in the figure below.



→ 6. Personnel

Capacity of Assigned Staff

The breadth of this project will not stress the resources of GHD or its Team members. GHD employs over 100+ professional and degreed individuals statewide. We have identified multiple Key Team members with a demonstrated capability to manage multiple sites and projects simultaneously. A majority of the personnel identified in the Organizational Chart are long-time employees of GHD. It is our intent that these individuals remain a part of this project for its duration.

In case of unforeseen circumstances, GHD has appropriate backup staff available, whether in a particular project planning or implementation stages. From our years of experience providing similar services to various clients, we have found that being prepared in advance of a problem not only affirms our commitment to each client, but safeguards proper and timely completion of necessary tasks to ensure a successful project outcome.

Simply stated, GHD and its staff are large enough to provide uninterrupted, quality services throughout the project life, but small enough to commit our most qualified personnel to the task. Our Project Team is unequivocally committed to submit timely proposals and cost estimates to the City and will do so expeditiously to meet agreed upon project schedules and budgets. The City will benefit from access to our highly qualified, motivated, and committed personnel.

The following table lists our staff, their role, location and availability.

Key Personnel Officer	Role	Location	Availability
Jesse Davis, PE, ENV SP A GHD Associate	Project Manager Coastal Engineering	Homestead	65%
Jose Morales, PE, ENV SP A GHD Shareholder	QA / QC Manager	Miami	50%
Brian Moore, PE A GHD Principal	Principal-in-Charge Solid Waste Engineering	Tampa	20%
Robert Januska, PE A GHD Associate	Utility Engineering	Ft. Myers	40%
Jingwei Li, PE	Stormwater Engineering	Miami	40%
Lori Coolidge, PG A GHD Associate	NPDES & Pollutant Control Plans	Ft. Myers	40%
Hugo Rodriguez, PhD, PE	Coastal Engineering & Modeling	Miami	65%
Melissa Burns, PE A GHD Associate	Marine Structural Engineering Bridges & Misc. Structural	Wellington	50%
Steve Janosik, PE A GHD Principal	Geotechnical Engineering & Soil Strengthening	Tampa	40%
Tina Foreman, PE	Civil & Structural Engineering	Tampa	45%
Local and Efficient Field Evaluations			
Eric Isaacs, PSM, PLS Florida Keys Land Surveying, LLC	Surveying	Key West	50%
Manuel G. Vera, PE M.G. Vera & Associates, Inc.	Subsurface Utility Engineering	Miami	50%
Alejandro DelGado Industrial Divers Corporation	Commercial Diving	Pembroke Pines	50%
Sandra Walters, RES	Natural Resources & Habitat Assessments Permitting	Key West	50%

Personnel Qualifications

GHD's proposed team members have worked collaboratively spanning more than 25 years and are currently working together on the City's Environmental Services contract. The City can have the confidence that this team will be with the City of Key West for the long haul.



Jesse Davis, PE, ENV SP | Project Manager / Coastal Engineering

Jesse has 17 years' experience managing municipal on-call contracts and managing multi-disciplinary teams to deliver successful projects. He has provided design, permitting, environmental field assessments, and construction phase services for projects located throughout the United States, the Caribbean, and South America. Career

highlights include playing a key role (from conception to construction) for the permitting, design, and construction of a nature-based island storm protection system in Fort Pierce, Florida that was the recipient of the 2016 ASCE-COPRI Project Excellence Award for large projects; the construction of an 11.6 acre artificial reef off the Port of Miami; and the design/construction engineering services for a 1,500 foot of shoreline stabilization project on Whidbey Island in Puget Sound, WA that was recognized in NAVFAC's Environmental Restoration News as a success story. Additional project experience includes living shorelines, marinas, boat ramps, dredging, shoreline stabilization, seawalls, propeller wash modeling, vessel berthing & mooring calculations, disaster response, design of fall protection for water control structures, inspection of breakwaters and water control structures, water quality sampling, hazwaste & drycleaner site sampling and contaminated soils removal oversight.

Office location: **Homestead, FL**

Education | Licenses | Certifications

Education

- MS, Ocean Engineering, Florida Institute of Technology;
- BS, Ocean Engineering, Florida Institute of Technology

Licenses

- Licensed Professional Engineer: FL & MS
- Envision Sustainability Professional (ENV SP)
- 40-Hr. HAZWOPER
- PADI Open Water Diver

Relevant Projects

- **City of Key West Environmental Engineering Services Contract #20-002** | Key West, FL
- **Miami-Dade County Continuing Services Contract #EDP-PSA-2024** | Miami, FL
- **Misc. Marine & Coastal Engineering Services #19-20-020** | City of Miami | Miami, FL



Jose Morales, JD, PE | QA / QC Manager

José Morales was the founder, CEO, and President of J2 Engineering, Inc., a Florida-based engineering consulting and design/build construction firm that he successfully grew to more than 130 professionals spread throughout ten offices in the USA and abroad. The firm was sold in 2014. Jose has had a

distinguished career as a civil and environmental engineer, as an author, and in environmental law.

José has been previously qualified as an expert in the fields of environmental and civil engineering, facility operations, safety engineering, environmental site assessment, waste characterization, soil assessment, transport, fate and migration of contaminants and fugitive emissions, risk analysis, and remedial design and performance. Both his academic and professional experience also includes substantial training in the legal, regulatory, and engineering fields.

Office location: **Miami, FL**

Education | Licenses | Certifications

Education

- JD, International Law, Thomas M Cooley Law School
- MS, Business Administration, Central Michigan University
- BS, Civil Engineering, University of Florida

Licenses

- Licensed Professional Engineer: FL, NC, GA, NJ, PR, AK, KY, VI

Relevant Projects

- **City of Key West Environmental Engineering Services Contract #20-002** | Key West, FL
- **Asset Management Services Contract** | City of Ft Lauderdale | Ft Lauderdale, FL
- **City of Ft. Lauderdale | Environmental & Asset Management Contracts** | Ft. Lauderdale, FL



Brian Moore, PE | Principal-in-Charge | Solid Waste Engineering

Brian is a Principal Engineer with over 25 years of experience in environmental consulting. Brian has experience in various disciplines, including civil engineering, environmental engineering, coastal engineering, solid waste, water, stormwater, and wastewater. He has assumed leadership roles directing project teams and junior staff throughout GHD's Florida offices.

Brian has served as GHD's contract manager for the FDEP Hazardous Waste Contract, including serving as the principal design engineer for various environmental remediation, design/build, permitting, and solid waste projects. Recent projects include design, permitting, and compliance associated with developing properties in Port Tampa, Port Manatee, and Port Redwing, and design and permitting for projects involving Brownfield's redevelopment.

Office location: Tampa, FL

Education | Licenses | Certifications

Education

- MSEE, University of South Florida
- MBA, Business Administration, University of South Florida
- BA, Environmental Science, University of North Carolina at Wilmington,
- AS, Science, County College of Morris

Licenses

- Licensed Professional Engineer: FL

Relevant Projects

- **Closed Landfill Investigation Program** | City of Tampa | Tampa, FL
- **Hazardous Waste Program** | Florida Department of Environmental Protection | Florida
- **Environmental Engineering Contract** | City of St. Petersburg | St. Petersburg, FL
- **City of Key West Environmental Engineering Services Contract #20-002** | Key West, FL



Robert Januska, PE | Utility Engineering

Bob brings over 40 years of engineering experience including decades of I/I investigations for public agencies and private clients. He has overseen both the planning and implementations phases of I/I programs. Including the development of long-term prioritized capital improvement programs.

He has managed multiyear investigation and capital improvement programs. He has broad experience in the selection and application of project delivery methods. Technical areas of specialization include regulatory driven collection systems improvement programs, wastewater facilities upgrade programs and integrated project delivery. He has extensive experience in the development of rehabilitation and repair programs for municipal and industrial owners.

Office location: Ft. Myers, FL

Education | Licenses | Certifications

Education

- BS, Environmental Engineering, California Institute of Technology

Licenses

- Licensed Professional Engineer: AL, AR, AZ, CA, IL, LA, MN, MO

Relevant Projects

- **Comprehensive I&I Reduction Program** | Metropolitan St. Louis Sewer District | St. Louis, MO |
- **I&I Investigation** | City of Moline | Moline, IL |
- **I&I Investigation** | City of Collinsville | Collinsville, IL



Jingwei Li, PE | Stormwater Engineering

Jingwei is a professional engineer with 7 years of experience, whose primary focus has been on hydraulic modeling, environmental mitigation, water resources and Geographical Information Systems (GIS). She is experienced in analyzing surface water and groundwater data and GIS databases; developing hydraulic and hydrological models. Her work history also

includes Phase I and II Environmental Site Assessments, Spill Prevention and Countermeasure Control Plans and Stormwater Pollution Prevention Plans. Jingwei possesses skills that give clients confidence that their projects will have an effective outcome.

Office location: **Miami, FL**

Education | Licenses | Certifications

Education

- MS, Civil & Environmental Engineering, Carnegie Mellon University
- BS, Civil Engineering, Hohai University

Licenses

- Licensed Professional Engineer: FL

Relevant Projects

- **Stormwater Groundwater Elevation Updates** | Miami-Dade County | Miami, FL |
- **Flow Data Analysis** | South Florida Water Management District | West Palm Beach, FL
- **Miami-Dade County Continuing Services Contract | Stormwater Master Planning** | Miami, FL



Lori Coolidge, PG | NPDES & Pollutant Control Plans

Lori Coolidge is a Staff Geologist at GHD with 11 years of progressive experience in the field of geology, focusing on environmental and geotechnical investigations. Upon joining GHD in 2007, Lori performed work related to the identification of geologic hazards, which included performing investigations for the presence and potential for sinkhole activity,

slope stability and mine subsidence. Lori has provided support for geotechnical evaluations in Tennessee, Alabama, Pennsylvania, Virginia and Kentucky.

Since 2013, Lori has actively participated in over 500 Phase I/II due diligence environmental assessments, and has performed field data/sample collection, preparation of assessment documents, assimilation and review of field data, and research and reporting for various environmental engineering projects. When managing various projects, Lori understands that adhering to defined project schedules and budgets, and prompt communication with clients is key.

Office location: **Ft. Myers, FL**

Education | Licenses | Certifications

Education

- BS, Geology, University of South Florida

Licenses

- Licensed Professional Geologist: FL

Relevant Projects

- **Phase I/II Environmental Site Assessments** | Various Sites | FL |
- **Gas Monitoring Oversight** | Spruce Street Landfill | Tampa, FL
- **Miami-Dade County Continuing Services Contract | Environmental Engineering: Stormwater Treatment Nutrient Removal Pilot Study & Pollutant Control Plans** | Miami, FL
- **City of Ft. Myers Continuing Service Contracts | TMDL Monitoring & Assessment Plan** | Ft Myers, FL



Hugo Rodriguez, PhD, PE | Coastal Engineering & Modeling

Dr. Rodriguez has more than 30 years of experience specializing in environmental engineering and water resources engineering, including coastal engineering, hydraulics, hydrology, and water quality modeling. He has performed hydrodynamic, sediment transport and water quality modeling studies in estuaries, coastal zones, rivers, lakes

and reservoirs, using physical and numerical models. His numerical modeling experience includes the use of Environmental Fluid Dynamics Code (EFDC), Water Quality Analysis Simulation Program (WASP), EPD-RIV1, VPLUMES, Cormix, Bouss2D, Delft3D, Flow3D, CE-QUAL-W2 and HEC-RAS. With partial support provided by the U.S. Army Corps of Engineers (USACE), he developed and tested a highly specialized numerical code, which includes complex interactions between waves, currents and muddy beds. His teaching experience includes courses on fluid dynamics, open channel flow, and environmental hydraulics, which he taught at the University of Uruguay and at the University of Florida.

Office location: **Miami, FL**

Education | Licenses | Certifications

Education

- PhD, Coastal & Civil Engineering, University of Florida
- MS, Coastal & Oceanographic Engineering, University of Florida; Civil Engineer, University of Uruguay; Structural Engineering, University of Uruguay

Licenses

- Licensed Professional Engineer: LA

Relevant Projects

- **Modeling Support for Caloosahatchee TMDL Refinement and BMAP Allocation** | Florida Dept. of Environmental Protection | FL
- **Coastal Flooding Risk Assessment** | Cayman Island Government | Grand Cayman Islands
- **City of Ft. Myers Continuing Service Contracts | Coastal Modeling, Planning, Permitting & Design Services** | Miami, FL



Melissa Burns, PE | Marine Structural Engineering | Bridges, Building & Misc. Structural

Melissa is a Marine and Linear Infrastructure Structural Engineer and Project Manager with 11 years of design and management experience. Her projects have encompassed a wide range of private and public facilities including feasibility evaluations, design,

modeling, and computation of structural elements, and production detailing of plan sets within all phases of design from preliminary engineering pursuit to the final design of structures for both design-build and conventional projects.

Melissa is thoroughly experienced in both linear infrastructure and coastal projects ranging in complexity from simple structures to multi-phase projects accounting for future year expansion capacities.

Office location: **Wellington, FL**

Education | Licenses | Certifications

Education

- BS, Civil Engineering, University of Central Florida

Licenses

- Licensed Professional Engineer: FL, LA, GA, SC

Relevant Projects

- **City of North Port Continuing Service Contracts | Jeffrey Lake Seawall Replacement** | City of North Port | North Port, FLSouth
- **Bayshore Lane Roadway and Drainage Improvements - Phase II Stormwater Pump Station** | City of Miami | Miami, FL
- **SR408 Widening from SR417 to Alafaya Trail | Central Florida Expressway Authority (CFX)** | Orange County, FL
- **Miami Dade County Continuing Services Contract** | Parks Recreation and Open Spaces (PROS) EDP | **Matheson Hammock** | Miami, FL
- **City of Key West Environmental Engineering Services Contract | Historic Turtle Kraals & C Dock** | Key West, FL



Steven Janosik, PE | Geotechnical Engineering & Soil Strengthening

Steven has 19 years of experience in forensic engineering assessments with accompanying expert witness testimony, geotechnical engineering design, and construction materials testing, including threshold inspections of reinforcing steel, pile inspections and construction vibration monitoring. His forensic engineering expertise is focused on

the evaluation of subsidence-related damage to structures, earthen slope and retaining wall failures, construction vibration damage, and pavement failures.

Steven's geotechnical engineering design expertise encompasses sinkhole risk assessment and mitigation, shallow and deep foundation design, pavement design, slope stability analyses, and site suitability studies.

Office location: Tampa, FL

Education | Licenses | Certifications

Education

- BS, Civil Engineering (Geotechnical and Transportation Engineering)

Licenses

- Licensed Professional Engineer: FL, MD, TN

Relevant Projects

- **Bonita Grande Mine Due Diligence Study** | Private Client | Bonita Springs, FL
- **Geotechnical Services** | Hillandale Estates (Private Client) | Tampa, FL
- **Boat Channel Slope Stability Analyses** | Esplanade Lake Club Development (Private Client) | Ft. Myers, FL
- **City of Key West Environmental Engineering Services Contract | Historic Turtle Kraals & C Dock** | Key West, FL



Tina Foreman, PE | Civil & Structural Engineering

Tina has more than 11 years design experience, and has worked on complex structural designs to enhance existing buildings structures in an attempt to preserve materials, from a sustainability perspective.

Bringing recent design experience, Tina has worked on complex structural designs

to enhance existing buildings structures in an attempt to preserve materials, from a sustainability perspective. This experience has been spread across the state of Florida, London, and Victoria, Australia. These projects have involved identifying the best outcome for the stakeholders requirements, to deliver successful structural outcomes on projects.

Tina will help to establish the communication efforts to provide structural technical input providing a coordinated response within key technical details.

Office location: Tampa, FL

Education | Licenses | Certifications

Education

- MS, Civil Engineering, City University, London
- BS, Civil Engineering, Florida State University

Licenses

- Licensed Professional Engineer: FL

Relevant Projects

- **BRUNS-PAK Structural Investigations** | BRUNS-PAK | Jacksonville, FL
- **Crowley Talleyrand** | Crowley | Jacksonville, FL
- **City of North Port | Continuing Service Contracts | Jeffrey Lake Seawall** | North Port, FL

Florida Keys Land Surveying, LLC (FKLS)

Eric Isaacs, PSM, PLS | Surveying

Eric is a licensed land surveyor who has managed multiple crews of various sizes and is well-versed in all aspects of land surveying including: construction staking, primary control networks, boundary resolution, and drafting with Autodesk AutoCAD products.

He places an emphasis on professionalism and customer service on each. The combined experience of him and his team included over 50 years of combined land surveying experience.

Land Surveying and Construction Services include: Elevation Certificates, Boundary Surveys, Mortgage / Real Estate Closing Surveys, As-Built Surveys, Topographic Surveys, Building Permit Surveys, Construction Staking, Percolation Tests, ALTA / ACSM Survey, Engineering Design Surveys, GPS Work, and Accident Site Mapping Services.



Office location: **Key West, FL**

Education | Licenses | Certifications

Education

- AS, Science Surveying Technology, Tulsa Community College

Licenses

- Professional Surveyor & Mapper: FL
- Professional Land Surveyor: OK
- Trimble, Advance RTK Procedures
- PADI Assistant Instructor

Relevant Projects

- **Surveying Continuing Services Contract** | Monroe County, FL
- **Hydrographic Survey Map** | Sunset Marina | FL

M.G. Vera & Associates

Manuel G. Vera, Jr. | Geotechnical Subsurface Utility Engineering



Manuel, a registered Land Surveyor, has over 38 years of experience with the company and throughout the state of Florida. He has managed a variety of survey contracts and projects for the Florida Department of Transportation, Miami-Dade County, Miami-Dade Expressway Authority, City of Miami, and numerous Engineering and Design firms. Mr. Vera has performed and managed all types of surveying services including: Design Surveys, Right-of-Way Control Surveys, Right-of-Way Mapping, Platting, Construction Layout, Asbuilt Surveys, Drainage Surveys, etc. Manuel is a Chief Surveyor and Mapper as well as our Chief Executive Officer. He has extensive experience in the management and coordination of survey projects involving a variety of surveying techniques such as Aerial Surveys, Conventional Ground Surveying, Utilities designation, etc.

Office location: **Miami, FL**

Education | Licenses | Certifications

Education

- BS, Legal Studies, Nova Southeastern University; AS, Land Surveying, Miami-Dade College

Licenses

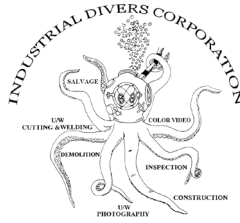
- Professional Surveyor & Mapper: FL

Relevant Projects

- **Right-of-Way Survey** | FDOT District 6, SR5 / Overseas Highway from MM 86.4 to MM 91.2 (Plantation Key) in Monroe County
- **Right-of-Way Survey** | FDOT District 6, SR 5 / Whitehead Street from Fleming Street to West of Truman Avenue in Monroe County
- **Survey** | Village of Islamorada | Parmelee Key in Monroe County

Industrial Divers Corporation (IDC)

Alejandro DelGado | Commercial Diving



Alejandro is a Dive Coordinator and Assistant Vice President at IDC. He coordinated the rigging and salvage of a sunken barge and crane for B & M Marine in the ICWW in Hallendale, FL in March 2013. He has supervised the rigging and salvage in support of solid fuel cell debris recovery for Space Exploration Tech and also assisted in the setup of a salvage sled in 2010.

He is the supervisor for culvert & storm drain inspections, cleaning, & maintenance including confined space and penetration diving up to 750' for: South Broward Drainage District, Old Plantation Drainage District, City of Weston, South Florida Water Management District, Coral Springs Improvement District, and several Property management companies.

Alejandro provides scuba and surface-supplied diving and supervision in support of heavy marine construction operations (coffer dam prep., bottom debris removal, etc.). His diving and supervisory responsibilities in u/w burning and recovery of Coast Guard Navigational aids piles and sunken hardware. He also has diving and supervisory responsibilities u/w (surface supplied & scuba) deployment and recovery of U.S. Navy/ Seaward Services sea-bottom.

Office location: **Pembroke Pines, FL**

Education | Licenses | Certifications

Education

- BS, History, University of Montgomery, AL

Licenses

- ADC Diver / Tender Certification, Diver's Institute of Technology, Seattle, WA
- USCG Licensed Boat Captain
- ROV Pilot

Relevant Projects

- **City of Key West Environmental Engineering Services Contract | Historic Turtle Kraals & C Dock** | Key West, F
- **Rigging and Salvage Support** | B&M Marine | ICWW | Hallendale, FL
- **Culvert & Storm Drain Penetration Diving** | South Broward Drainage District | , FL
- **Culvert & Storm Drain Penetration Diving** | Coral Springs Improvement District | , FL

RES

Sandra Walters | Natural Resources & Habitat Assessments | Permitting



Sandra is a seasoned project administrator with more than 35 years of professional experience in South Florida. She has extensive experience in environmental planning, permitting and construction compliance, including PD&E and NEPA studies; design and implementation of public information programs; and review and development of comprehensive plans. She is qualified as an Expert Witness in Florida administrative hearings and court proceedings; has conducted and supervised environmental studies, and developed avoidance and mitigation plans, in all South Florida submerged and upland habitats; has successfully permitted projects ranging from single family homes to developments of regional impact, working with all regulatory agencies; has extensive experience in design and implementation of public participation programs and review and development of comprehensive plans; and has represented clients successfully with many agencies and government boards. Additionally, she served from 2006 to 2021 on the South Florida Regional Planning Council, was chair in 2009 and 2015, and served on Florida Regional Council Association executive committee including as president in 2021. She also serves on EPA's Water Quality Steering Committee and Technical Advisory Committee for the Florida Keys National Marine Sanctuary, and served as a Governor's appointee from 2000 to 2004 on Florida's Acquisition and Restoration Council, which oversees purchase and management of State conservation lands.

Office location: **Key West, FL**

Education | Licenses | Certifications

Education

- MS, Marine Affairs, University of Miami, FL
- BS, Animal Behavior and Marine Biology, University of California @ Davis

Licenses

- FDOT Pre-Qualified; Florida Keys National Marine Sanctuary Certified

Relevant Projects

- **Horizontal Directional Drill Permitting and Third-Party Environmental Monitoring** | Islamorada | Monroe County, FL
- **Horizontal Directional Drill Permitting for Wastewater Project** | Islamorada, Village of Islands | Monroe County, FL
- **Environmental Impact Study/Permitting** | Hollywood-Ft. Lauderdale International
- **Bahama Village Redevelopment Plan Update**, | City of Key West, Monroe County, FL

→ 7. Qualifications

Below is a table showing our key personnel qualifications and licenses of our personnel and subconsultants. We have included at the end of this section our FDOT Certification Letters, along with a copy of our company engineering license, teams licenses and certifications. (Any additional certifications / licenses can be provided upon request).

Personnel	Qualifications / Licenses
Jesse Davis, PE, ENV SP Project Manager / Coastal Engineering	MS, Ocean Engineering; Licensed Professional Engineer: FL, MS; PADI Open Water Diver; 40-Hr. HAZWOPER
Jose Morales, JD, PE QA / QC Manager	Juris Doctor 05/15; MS, Business Administration; Licensed Professional Engineer: FL, NC, GA, PR, AK, KY, VI; 40-Hr. HAZWOPER
Brian Moore, PE Principal-in-Charge/Solid Waste Engineering	Licensed Professional Engineer: FL
Robert Januska, PE Utility Engineering Services	Licensed Professional Engineer: AL, AR, AZ, CA, IL, LA, MN, MO
Jingwei Li, PE Stormwater Engineering	MS, Civil & Environmental Engineering; Licensed Professional Engineer: FL
Lori Coolidge, PG NPDES & Pollutant Control Plans	Licensed Professional Geologist: FL; 40-Hr. HAZWOPER
Hugo Rodriguez, PhD, PE Coastal Engineering & Modeling	PhD, Coastal & Civil Engineering; Licensed Professional Engineer: LA (Civil)
Melissa Burns, PE Bridge & Marine Structural Engineering	Licensed Professional Engineer: FL, GA, LA, SC
Steven Janosik, PE Geotechnical Engineering & Soil Strengthening	Licensed Professional Engineer: FL, MD, TN
Tina Foreman, PE Building & Structural Engineering	MS, Civil Engineering; Licensed Professional Engineer: FL
Micah Santos Surveys	FAA Registered UAS Pilot; OSHA 40-Hr. HAZWOPER; Certified Pix4D Photogrammetry Processor
Jeff Knauer, PE NACE SP Corrosion Engineering	National Association of Corrosion Engineers (NACE); Cathodic Protection (CP) Specialist Level 4
GHD Laboratory Certifications	CMEC AASHTO R18 Accredited
Subconsultants	Qualifications / Licenses
Eric Isaacs, PSM, PLS Florida Keys Land Surveying, LLC (FKLS)	Professional Surveyor and Mapper
Manuel G. Vera M.G. Vera & Associates, Inc. (MGV)	MGV Professional Surveyor and Mapper Business License; PSM License; FDOT Pre-Qualification; FDOT Disadvantaged Business Enterprise (DBE); Monroe County LBT
Alejandro DelGado Industrial Divers Corporation (IDC)	OSHA 10, CPR, First Aid, AED, 02, Blood Borne Pathogen Certified, Member of Marine Industries Association of South Florida
Sandra Walters RES	FDOT Pre-Qualification; Florida Keys National Marine Sanctuary Certified

Other Certifications including LEED and FDOT certified staff professionals

Our Team is committed to sustainable approaches for all our designs and have over 25 LEED Professionals and 20 Envision Accredited Professionals on staff to promote close cooperation for environmentally conscious designs. Our Team is well versed in environmental compliance, development of environmental management plans, assessments and remediation and can quickly address specific compliance requirements, if necessary.

In addition to our experience with the U.S. Green Building Council's LEED rating system, GHD is also an organizational member of Envision; a framework to improve the performance and resiliency of all other infrastructure projects across the full spectrum of sustainability. GHD is one of a handful of firms that has been an organizational member of Envision since its creation by the Institute for Sustainable Infrastructure (ISI) in 2013. Like the City of Key West, we are committed to sustainable development that enhances the local communities we live and work in.



GHD also maintains a comprehensive list of FDOT technical & laboratory certifications as evidenced in the two letters found on the following page.

FDOT Certification Letters



Florida Department of Transportation

RON DESANTIS
GOVERNOR

JARED W. PERDUE, P.E.
SECRETARY

April 14, 2022

Ben Doan, Florida Transportation Manager
GHD CONSULTING INC. cross reference GHD INC.
5904 Hampton Oaks Parkway, Suite F
Tampa, Florida 33610

Dear Mr. Doan:

The Florida Department of Transportation has reviewed your application for prequalification package and determined that the data submitted is adequate to technically prequalify your firm for the following types of work:

Group 3 - Highway Design - Roadway

- 3.1 - Minor Highway Design
- 3.2 - Major Highway Design

Group 4 - Highway Design - Bridges

- 4.1.1 - Miscellaneous Structures
- 4.1.2 - Minor Bridge Design

Group 5 - Bridge Inspection

- 5.4 - Bridge Load Rating

Group 6 - Traffic Engineering and Operations Studies

- 6.1 - Traffic Engineering Studies
- 6.2 - Traffic Signal Timing
- 6.3.1 - Intelligent Transportation Systems Analysis and Design

Group 7 - Traffic Operations Design

- 7.3 - Signalization

Group 10 - Construction Engineering Inspection

- 10.1 - Roadway Construction Engineering Inspection
- 10.3 - Construction Materials Inspection

Your firm is now technically prequalified with the Department for Professional Services in the above referenced work types. The overhead audit has been accepted, and your firm may pursue projects in the referenced work types with fees of any dollar amount. This status shall be valid until December 31, 2022, for contracting purposes.

Per Title 23, U.S. Code 112, there are restrictions on sharing indirect cost rates. Refer to Code for additional information.

Should you have any questions, please feel free to contact me by email at carliayn.kell@dot.state.fl.us or by phone at 850-414-4597.

Sincerely,

Carliayn Kell
Professional Services
Qualification Administrator



Florida Department of Transportation

RON DESANTIS
GOVERNOR

605 Suwannee Street
Tallahassee, FL 32399-0450

KEVIN J. THIBAUT, P.E.
SECRETARY

December 20, 2021

Ben Doan, Transportation Manager
GHD SERVICES INC.
5904 Hampton Oaks Parkway, Suite F
Tampa, Florida 33610

Dear Mr. Doan:

The Florida Department of Transportation has reviewed your application for prequalification package and determined that the data submitted is adequate to technically prequalify your firm for the following types of work:

Group 9 - Soil Exploration, Material Testing and Foundations

- 9.1 - Soil Exploration
- 9.2 - Geotechnical Classification Laboratory Testing
- 9.4.1 - Standard Foundation Studies

Your firm is now technically prequalified with the Department for Professional Services in the above referenced work types. The overhead audit has been accepted, and your firm may pursue projects in the referenced work types with fees of any dollar amount. This status shall be valid until December 31, 2022, for contracting purposes.

Per Title 23, U.S. Code 112, there are restrictions on sharing indirect cost rates. Refer to Code for additional information.

Should you have any questions, please feel free to contact me by email at carliayn.kell@dot.state.fl.us or by phone at 850-414-4597.

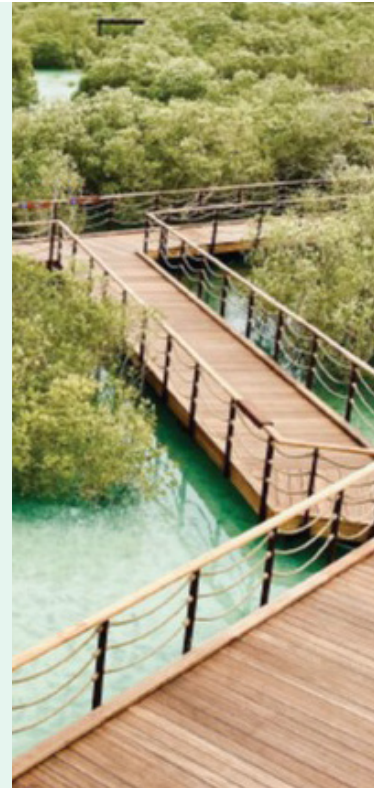
Sincerely,

Carliayn Kell
Professional Services
Qualification Administrator

Safety, Mobility, Innovation
www.fdot.gov

Jubail Mangrove Park is the first self-contained educational, nature and leisure destination of its kind in the UAE

GHD's in-house environmental and landscape architects designed a first of its kind, award-winning ecotourism mangrove park in Abu Dhabi. The Park attracted over 100,000 visitors in the first month of opening and incorporates 1.2 miles of boardwalk, kayak launches, floating pontoons, and two-story observation tower to provide the public with panoramic views of natural mangrove habitat, internal mudflats, salt marches, lagoon channels, and unique sandstone geologic formations (zeugens).



State of Florida

Department of State

I certify from the records of this office that GHD SERVICES INC. is a Delaware corporation authorized to transact business in the State of Florida, qualified on October 16, 2003.

The document number of this corporation is F03000005291.

I further certify that said corporation has paid all fees due this office through December 31, 2022, that its most recent annual report/uniform business report was filed on March 10, 2022, and that its status is active.

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

*Given under my hand and the
Great Seal of the State of Florida
at Tallahassee, the Capital, this
the Twenty-third day of March,
2022*



Randy Be
Secretary of State

Tracking Number: 8197973734CU

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

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



Florida Department of Agriculture and Consumer Services
Division of Consumer Services
Board of Professional Surveyors and Mappers
2005 Apalachee Pkway Tallahassee, Florida 32399-6500
800HELPFLA(435-7352) or (850) 488-2221

March 23, 2022

GHD, INC.
320 GODDARD STE 200
IRVINE, CA 92618-4613

SUBJECT: Professional Surveyor and Mapper Business Certificate # LB8496

Your application / renewal as a professional surveyor and mapper business as required by Chapter 472, Florida Statutes, has been received and processed.

The license appears below and is valid through February 28, 2023.

You are required to keep your information with the Board current. Please visit our website at www.800helpfla.com/psm to create your online account. If you have already created your online account, you can use the website to maintain your license. You can also find other valuable information on the website.

If you have any questions, please do not hesitate to call the Division of Consumer Services, Board of Professional Surveyors and Mappers at 800-435-7352 or 850-488-2221.

Detach Here



Florida Department of Agriculture and Consumer Services
Division of Consumer Services
Board of Professional Surveyors and Mappers
2005 Apalachee Pkway Tallahassee, Florida 32399-6500

License No.: **LB8496**

Expiration Date February 28, 2023

Professional Surveyor and Mapper Business License

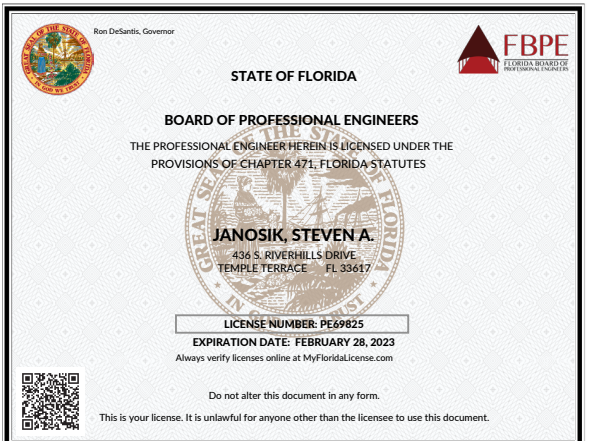
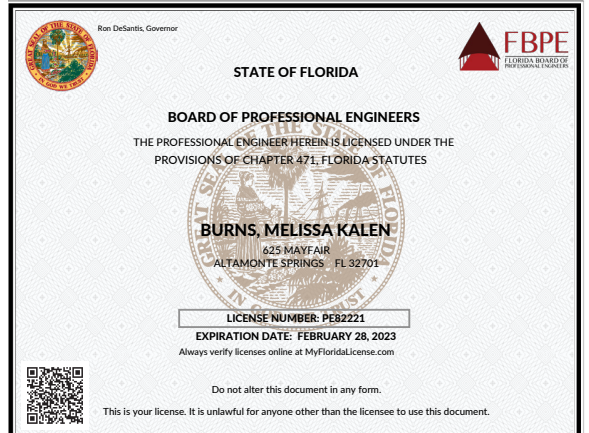
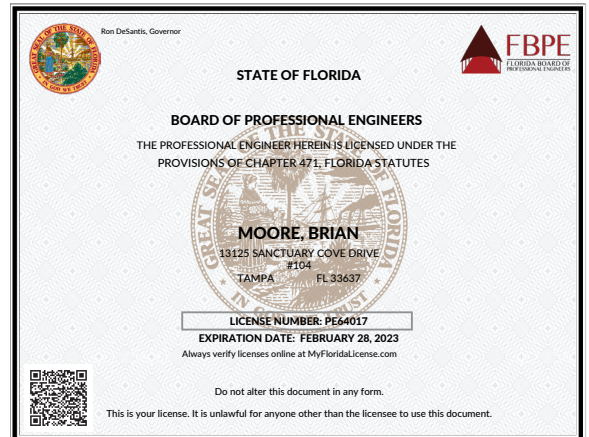
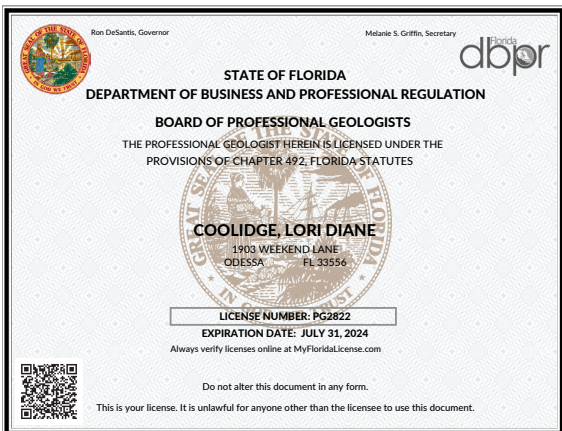
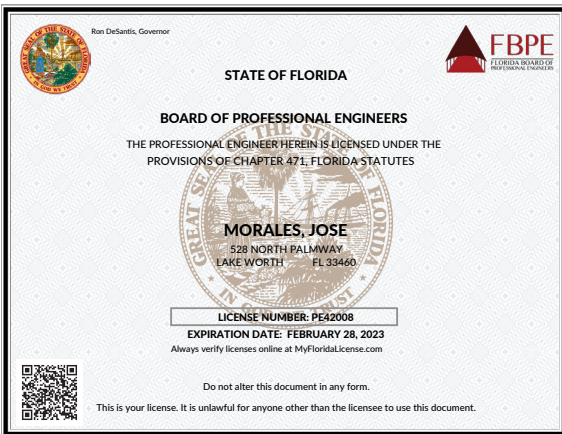
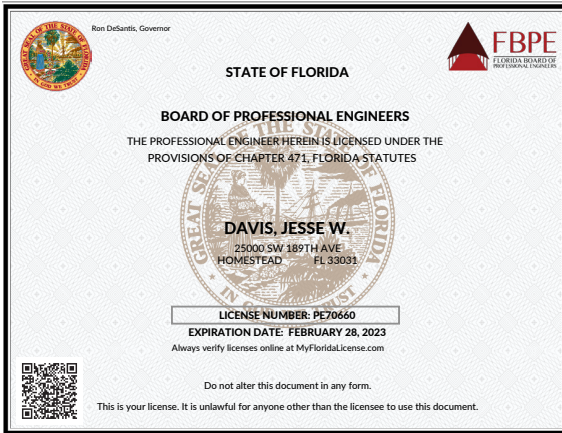
Under the provisions of Chapter 472, Florida Statutes

GHD, INC.
320 GODDARD STE 200
IRVINE, CA 92618-4613

NICOLE "NIKKI" FRIED
COMMISSIONER OF AGRICULTURE

This is to certify that the professional surveyor and mapper whose name and address are shown above is licensed as required by Chapter 472, Florida Statutes.

Key staff professional licenses



→ 8. Representative Engineering Experience and Client References

GHD understands the unique challenges facing the City and recognizes the importance of thoroughly understanding the City's preferences and needs for project delivery and efficient communication. With all team members having offices in South Florida, our team is geographically positioned to be responsive to any and all Utility, Solid Waste or Coastal Engineering projects that may arise over the next 3 to 5 years. With two offices located in the Florida Keys, our team has the ability to be on the job site quickly for project meetings or other coordination efforts as needed.

The table below highlights our project experience for the scope of services for Civil, Utility, Solid Waste, Coastal, and Structural Engineering.

Relevant Project Table					
Client Name Location Project Name	Civil	Utility	Solid Waste	Coastal	Structural
City of Key West Environmental Engineering Services Contract Key West, FL					
– C Dock Assessment	X			X	X
– Historic Turtle Kraals & C Dock Assesment	X			X	X
– C Dock Ground Penetrating Radar Survey	X	X		X	
Miami-Dade County Continuing Services Contract Miami FL					
– Building Information Modeling (BIM) Services	X	X			X
– Central District Wastewater Treatment Plant Structural Rehabilitation			X		X
– Coastal Modeling (Hydrodynamic, Waves, Shoreline Morphology)				X	
– System-wide Groundwater & Stormwater Elevation Updates	X	X			
– Beach Erosion Control Modeling, Permitting, Planning & Design Services	X			X	X
– Stormwater Master Planning, Water Quality Modeling	X	X			
– Environmental Engineering	X	X			
– Matheson Hammock Park Flood Improvement Project	X	X		X	X
– Bird Road Expansion Wetland Survey & Permit Support	X				
City of Ft. Lauderdale Environmental & Asset Management Contracts					
– Stormwater Pump Station (SS1) and SS2 Condition Assessment	X	X			X
– Unverified Storm Water Structures (Red Dots) Survey and Engineering Assessment	X	X			X
– Development of a Condition Assessment Plan for All City Assets	X	X			X
– Lincoln Park Playground Soil Management Plan	X		X		X
– Phase I ESA's (multiple sites)		X			
– Lake Melva Sediments Study		X			
– Wastewater Break Air Monitoring	X	X	X		

Relevant Project Table

Client Name Location Project Name	Civil	Utility	Solid Waste	Coastal	Structural
City of Ft. Myers Continuing Service Contracts					
– TMDL Monitoring & Assessment Plan	X	X			
– Back-up Injection Well Project	X	X			
– Utilities Master Planning for Potable Water, Wastewater, Reclaimed Water Systems	X	X	X		
City of North Port Continuing Service Contracts					
– Cocoplum Village Shops Traffic Impact Study Review	X	X			
– Commercial Development Toledo Blade / N. Cranberry Traffic Statement and Turn Lane Analysis Review	X	X			
– Development of Traffic Concurrency Management System Review	X	X			
– Jefferson Lake Seawall Project	X	X		X	X
Solid Waste Projects					
– Design of Gas Handling/Control System Okeechobee Landfill FL	X		X		
– Collier County Landfill Mechanical, Structural, Electrical Design & Project Management Collier County, FL	X		X		
– Medley Landfill Medley, FL	X		X		
– Closed Landfill Investigations City of Tampa Tampa, FL	X		X		
– Landfill Monitoring and Compliance Town of Palm Beach Palm Beach, FL	X		X		
Infiltration & Inflow Projects					
Infiltration / Inflow (I&I) Program Utilities Inc. Stroudsburg, PA	X	X			
I&I Demonstration Project Town of Tonawanda Tonawanda, NY	X	X			
I&I Reduction Program Lower Paxton Township Authority Harrisburg, PA	X	X			
Comprehensive I&I Reduction Program Metropolitan St. Louis Sewer District St. Louis, MO	X	X			
I&I Investigation City of Moline Moline, IL	X	X			
I&I Investigation City of Collinsville Collinsville, IL	X	X			
NEID DS 006 Sewer Separation KC Water Services Kansas City, MO	X	X			
I&I Removal (Little Blue River & Blue River Central) KC Water Services Kansas City, MO	X	X			
Historic Building Projects					
Building Restoration of the Edison-Ford Winter Estates Ft Myers, FL					X
Engineering Services Boca Grande Community Center Boca Grande, FL					X
National Museum of Natural History, Central Halls Washington, DC					X
Sewall-Belmont Hous Washington, DC					X



Project: City of Key West Environmental Engineering Services Contract | Historic Turtle Kraals & C Dock Assessment | Key West, FL

Date: 2021-Ongoing

Our Challenge: C Dock is located within the Key West Bight Marina at the Historic Seaport and is part of a popular waterfront that is traversed daily by tourists, marina boat owners, and other recreationists. The project site was added to the U.S. National Register of Historic Places (NRHP) in 1994 as part of the Thompson Fish House, Turtle Cannery and Kraals. Record drawings of the original construction and subsequent modifications to this historic structure could not be found in City files.

Our Response: GHD developed a project approach that combined a public records search and non-intrusive field investigations to develop insight into the history of C Dock (e.g., materials of construction, dimensional data, year constructed, major modifications/repairs, etc.) and to characterize the structure's current condition. GHD determined that the most recent repairs were conducted in the mid-1990's and assigned the structure an overall condition assessment rate of "severe to critical" based on the results of an underwater inspection conducted by the GHD Team.

The Impact: Following the American Society of Civil Engineers (ASCE) underwater inspection guidelines, GHD immediately notified the City of the condition assessment rating and recommended implementing load restrictions and daily monitoring due to the numerous large voids observed and the potential lack of bearing capacity support beneath the pedestrian walkway and northern seawall. GHD immediately performed a ground penetrating radar (GPR) survey the day before New Years' Eve 2021 to further characterize the condition of the structure. The GPR survey confirmed that voids were located directly below the concrete walkway along portions of the structure.

GHD expedited the engineering assessment and presented the City with the results, recommendations to perform temporary emergency repairs, and opinions of probable construction costs for two options. The City agreed to move forward with agency coordination of the emergency repair while long-term repairs were being designed and permitted.

The City and GHD Team met with multiple regulatory agencies, including the United States Army Corps of Engineers (USACE), Florida Department of Environmental Protection (FDEP), NOAA Florida Keys National Marine Sanctuary, and the National Park Service State Historic Preservation Office (SHPO) to determine the regulatory process and timeline associated with authorizing the temporary emergency repairs. The USACE indicated that both the emergency repair and long-term repair alternatives would take up to 12 months to obtain federal authorization. Thus, the City elected to pursue a long-term repair option.



Project: Miami-Dade County Continuing Services Contract | Miami, FL

Date: 2020–ongoing

As part of the continuing Services Contract GHD holds with Miami-Dade County, relevant services for the following projects have been provided:

Structural Rehabilitation for the Central District WWTP. GHD evaluated options for biosolids screening and dewatering, anaerobic digestion processes, emergency digester gas flaring and biogas treatment. We then provided a summary of evaluation and made recommendations in a technical memorandum.

Coastal Modeling, Planning and Design Services, providing coastal resiliency, flood control, surface water modeling and environmental services. GHD developed a coastal modeling tool that will aid in identifying and developing cost effective mitigation and adaptation strategies to maintain a resilient coastline, both now and into the future. GHD is now assisting the County with obtaining a permit modification to streamline truck haul beach nourishments along 13 miles of beach shoreline and developing a preliminary breakwater design to mitigate an erosion hotspot located on Miami Beach.

System-Wide Groundwater and Stormwater Elevation Updates. GHD provided system-wide stormwater groundwater elevation updates services under Equitable Distribution Program (EDP) for Miami-Dade County Stormwater Master Plan Update. Reviewed the available time series from well data within Miami-Dade County and develop a series of maps (contours and raster), tables and figures. Developed long term trending of groundwater table within the county and develop daily, monthly, annual and seasonal summaries. Provided statistical data analysis to account for historic Sea Level Rise Impacts, correlating tidal and groundwater elevations. .

Beach Erosion Control Modeling, Permitting, Planning and Design. Miami-Dade County beaches are known worldwide as a prime tourist destination and are important to the local economy. The County's beaches also provide resiliency and storm protection for billions of dollars in beachfront infrastructure and create habitat for protected animal species, including sea turtles. As part of the County's Sea Level Rise Strategy, GHD is assisting the County with obtaining a permit modification to streamline truck haul beach nourishments along 13 miles of beach shoreline and developing a preliminary breakwater design to mitigate an erosion hotspot located on Miami Beach.

Matheson Hammock Park Flood Improvement Project. GHD is responsible for the replacement of 675 linear feet of sea wall on the upland side of a marina to mitigate sea level rise and sunny day flooding events that limit public enjoyment of this iconic Miami park. This is step one by the client to ensure protection of the 630-acre Matheson Hammock Park located along the western shoreline of Biscayne Bay that has been open to the public since 1930. The historic park includes a 243-slip marina, restaurant, large wading lagoon and beach, mangrove trails,

Wetland Survey and Permit Support for the Bird Road Expansion Project. GHD supported David Plummer & Associates (prime consultant), in developing a wetland mitigation plan and associated permitting. A comprehensive technical report was prepared and delivered and GHD prepared the required permit applications to the FDEP for Clean Water Act Section 404, providing the mitigation proposal for Miami-Dade County Class IV Permit (wetlands).

Project: City of Ft. Lauderdale | Environmental & Asset Management Contracts | Unverified Storm Water Structures (Red Dots) Survey and Engineering Assessment

Date: 2021-current

In April 2018, “A Budget Evaluation to Create a Watershed Asset Management Program”, study was performed by GHD for the City of Fort Lauderdale’s (City) Public Works Stormwater Operations Department, in which a high level, preliminary roadmap was developed for the creation of a multi-year Watershed Asset Management Program (WAMP). The study defined the WAMP as the sustainable strategic framework for efficient management of the City’s current and future Public Works stormwater Operations and Maintenance and environmental needs. On December 21, 2018, GHD was authorized to begin development of the WAMP, and the WAMP v1.0 was completed in December 2019. This current project, Red Dots, will help support one of the WAMP implementation goals, which is to build a complete stormwater GIS asset registry by (1) verifying the ownership, (2) mapping red dots owned by the City, (3) identifying illicit drainage connections, and (4) verifying the storm pipe connectivity, between basins or discharge points located immediately adjacent to City Right of Ways or waterways, of unverified stormwater assets (known as Red Dots). or easements.



Given the current number of unknown City owned assets, located within each of the ten (10) City watersheds, GHD has been retained to conduct high-level “desk-top” research of existing City owned stormwater assets to identify potential discrepancies or duplication of unknown stormwater drainage structures (Red Dots). Then, starting in July 2022, GHD will physically locate, surveying, and field verify the ownership of these Red Dots. unknown assets. In total, GHD is tasked to identify and field-verify approximately 2717 stormwater system assets and to update the City’s ESRI (an international supplier of mapping and analytic software) File Geodatabase (FGDB) for those assets, currently listed as unknown in the City’s Geographic Information System (GIS) database.

Project: City of Ft. Lauderdale | Environmental & Asset Management Contracts | Lake Melva Sediments Study

Date: 2020-2021

GHD conducted a Condition Assessment Report to document impacts to water and benthic sediments in Lake Melva caused by a release of dewatering fluids from sewer force main construction activity along NW 18th Street in the City of Fort Lauderdale, Broward County, Florida. Lake Melva is a city-owned, man-made stormwater retention lake located in a residential area in the northeast part of the City. The Lake’s water clarity was significantly reduced for several days during the mid-September 2020, but it was unclear, however, as to exact source(s) and/or relative contributions to this reduced clarity. GHD investigated a combination of factors including:

- Limestone marl from the directional drilling operation staging/dewatering area that had migrated into the Lake from the adjacent shoreline.
- A lighter colored, finer grained material present within the shoreline at the incident site. This material consisted of bentonite and other fines contained in the dewatering effluent, and
- The presence of naturally occurring, fine-grained sediments and significant organic material within the waterbody, as observed at the control site.



Differentiation between introduced materials and naturally occurring sediments made this project challenging. But after performing our field investigation, which included site observations and collection of sediment samples of the area in Lake Melva where the dewatering fluid from horizontal drilling activities was discharged to the Lake, GHD concluded that the extent of sediment deposits from the dewatering discharge appeared to be limited to a small area (less than 25 feet by 25 feet) in the immediate vicinity of the discharge point. The quantity of material discharged into the Lake did not result in sustained, or detrimental effects to lake water quality or bottom sediments. In addition, the type of material that may have been present in the discharge did not pose a health risk to lakeshore property residents or to users of the lake for recreational purposes. While the assessment was under development, approximately three (3) months after the dewatering discharge to the Lake, the City was made aware of a large algal bloom in Lake Melva. GHD concluded that the algal bloom did not appear related in any way to the dewatering discharge, as well.

Project: City of Ft. Myers | Continuing Service Contracts | TMDL Monitoring and Assessment Plan | Fort Myers, FL

Date: 2013-present

GHD currently provides water quality monitoring and reporting services for the City of Fort Myers National Pollutant Discharge Elimination System (NPDES) MS4 Stormwater Testing Program. The sample sites are in various locations along Billy's Creek, Manuel's Branch, Carrell Canal, Winkler Canal, the North Colonial Waterway, and the Downtown Basin.

GHD began conducting water quality sampling on a monthly basis at nine designated locations in 2013. Quality assurance procedures for the collection of samples and decontamination of sampling apparatus prior to and during use in the field is conducted in general accordance with the FDEP field sampling and laboratory analysis quality assurance protocol codified in Chapter 62-160 FAC Standard Operation Procedures for Field Activities (FDEP SOP-001/01).

On occasion, the City has asked GHD to provide emergency sampling services to determine the source of bacterial and other contaminations of concern. Most recently, evidence of bacterial contamination was discovered in one of the City's canals. The City requested expedited mobilization for the collection of water samples to genetically define the source (ruminant, man, cat, dog, etc.). Special sample containers are required for these genetic tests and are supplied by Source Molecular Laboratory in Miami. GHD staff worked with the lab to quickly obtain the appropriate containers and were able to complete sampling within two business days. Once samples were collected, GHD coordinated with the laboratory to initiate the analysis the following day. Thanks to GHD's immediate response, the City was able to quickly determine that the source of the bacterial contamination was birds, not human or dog.

GHD also provided public outreach, coordinated a walk the waterbody, and developed a GIS storyboard map to document the City of Ft Myers plan to reduce nutrient and bacteria from entering the adjacent water bodies via stormwater. The project received high praise from both the FDEP and City and GHD is now performing similar services for Miami-Dade County.

A link to the GIS storyboard and more information is provided at this link:

<https://storymaps.arcgis.com/stories/09a474d5a8104dbfb49c94cbd43d03b8>.



Solid Waste Projects

Project: Okeechobee Landfill | Medley, FL

Designed a gas handling/control system capable of handling 24,000 cfm of landfill gas that is predicted to be produced from an approved expansion at one of the largest landfills in Florida. The system incorporates eight landfill gas blowers to provide 90 inches of water column vacuum on the landfill, then six compressors to pressurize the gas, and a series of air-to-air gas coolers to chill the compressed landfill gas so that it can go through the sulfur treatment system. GHD worked with Florida Power and Light for the utility interconnect and designed the motor control center, variable frequency drives, and controls for the blowers. We also provided operations manuals for the proper system operation and on-going support throughout construction.



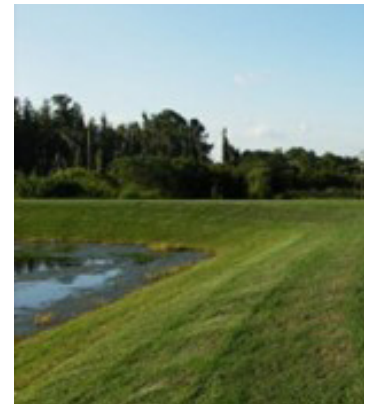
Project: Collier County Landfill | Naples, FL

GHD was retained to provide mechanical, structural, and electrical design and project management services for a new landfill gas to energy plant housing five CAT 3516 engines at the Collier County Landfill Site. The building design is unique in that it was built on cast-in-place augered piles supporting grade beams due to local soil conditions (the plant is about 10 feet above mean sea level). The plant generates approximately 4.1 megawatts (MW) of renewable electricity. GHD worked with the client and Florida Power and Light on the design of the electrical interconnection and transfer-trip requirements, as well as local authorities for building permit approvals. The plant is designed to operate in conjunction with two existing open flares. GHD also developed and installed a data tracking system that collects flow data from each engine and flare to calculate running monthly emissions averages used to demonstrate permit compliance. The plant was LEED® certified in June 2014.

Project: Medley Landfill | Medley, FL

GHD performed landfill gas sampling, gas collection system evaluation, preliminary gas interconnect design, civil and utilities engineering for a landfill gas to energy plant. The project involved the design of approximately 1,800 feet of gas header system to connect the landfill gas collection system and existing flare to the proposed renewable energy plant.

Shallow limestone and a high groundwater table were complicating factors in the ability to transmit gas and manage condensate collection. The system also needed to accommodate the delivery of landfill gas to the plant, but also allow for the operation of the existing flare system for excess gas or during times when the plant was down or operating at less than capacity. GHD also coordinated with the town and provided a design for potable water and fire hydrant system as well as sanitary discharge and stormwater discharge.



Project: Closed Landfill Investigations | City of Tampa | Tampa, FL

GHD serves as the engineering consultant for the City of Tampa's Closed Landfill Investigation Program, which consists of over forty-nine historic landfills located in the City of Tampa Hillsborough County. The scope of services provided to the City under this contract include assessment and mitigation of the potential risks from groundwater contamination, surface debris, landfill gases, supporting the City when making presentations to the public and the regulatory communities, and undertaking remediation activities as needed.

Project: Landfill Monitoring and Compliance | Town of Palm Beach | Palm Beach, FL

GHD conducted site assessments, hydrogeologic investigations, and compliance monitoring at the Okeechobee Boulevard Yard Waste and Skees Road Yard Waste sites for the Town of Palm Beach. Scope of work included soil boring penetrations for sampling, monitoring well installations for sampling, hydrogeologic testing and evaluations, laboratory data evaluations, reporting for compliance issue resolution and/or permitting, preparation of monitoring plans and compliance monitoring. The following services were performed: Pre-permit Site Investigations, Groundwater Monitoring Plan, Permit acquisition support, Semi-annual Compliance Monitoring; Sampling & Reporting, Monitoring Well network maintenance, Report Preparation for regulatory agency submittal, Impacted Groundwater & Surface Water Evaluation parameter Monitoring, Report Preparation for regulatory agency submittal and Alternate Water Supply Well Design, Permitting, and Installation.

Inflow and Infiltration Projects

Project: Comprehensive Inflow and Infiltration Reduction Program | St. Louis Metropolitan Sewer District | St. Louis, MO

Date: 2005-2016

This project was a 10-year, \$38.7-million I/I investigation program for separate and combined sewer areas. Key responsibilities included prioritization of investigation activities, rehab and repair recommendations, strategy development in support of DOJ negotiations, establishment of data collection standards, and overall program cost justification. The project provided detailed investigation and analysis of over 8,000,000 feet of sewer and developed recommendations for long-term capital program.

Project: Comprehensive Inflow and Infiltration Investigation | City of Moline | Moline, IL

Date: 2012

This project was for I/I investigation of selected areas, including smoke testing and visual inspection of 48,000 LF of sanitary sewer and 168 manholes. The field investigation work included dyed water flooding and GPS surveying. Data was compiled into a database and input into a sewer system model.

Project: Inflow and Infiltration Investigation | City of Collinsville | Collinsville, IL

Date: 2013

This city wide I/I investigation included smoke testing and visual inspection of complete city system. The project identified numerous repair and separation projects which resulted in a reduction of the wastewater treatment plant expansion – at an overall cost savings to the City.



Historic Building Projects



Project: Edison-Ford Winter Estates | Ft Myers, FL

The Edison and Ford Winter Estates contain a historical museum and 17-acre botanical garden on the adjacent sites of the winter homes of Thomas Alva Edison and Henry Ford. Through multiple projects spanning several years, our staff provided environmental, structural, mechanical, plumbing and electrical services for the restoration of the Edison Home, Edison/Ford Museum, Edison Guest House, Caretaker's Cottage, swimming pool and cistern, and the Edison/Ford Theater Building.

Project: Boca Grande Community Center | Boca Grande, FL

The building that is today the Boca Grande Community Center (at the corner of Park Avenue and First Street) was Boca Grande's school. It was designed in 1929 and built by the citizens of the town. GHD provided structural, mechanical, plumbing, and electrical engineering services for the field investigation of the existing facilities and preparation of construction drawings for the renovation of the existing community center.



Project: National Museum of Natural History, Central Halls | Washington, DC

GHD was responsible for the design of the electronic security systems for the Smithsonian Central Halls renovation project. This project included the design and layout of the electronic security systems consisting of electronic entry controls, panic, closed circuit television, intrusion detection systems, and supportive communications infrastructure to integrate into the existing electronic security system within the facility.

Project: Sewall-Belmont House | Washington, DC

GHD provided code consulting and life safety analysis in support of master plan report for the historic Sewell-Belmont House. In the follow up phase, GHD prepared construction documents including detailed design of fire suppression and alarm systems successfully integrated into the historic structure. This building is the headquarters of the historic National Woman's Party. Work included unique challenges to provide proper egress and maintain the historical fabric of the building.



→ References

For well over 30 years, our key staff have provided engineering services for state and local governments in South Florida. We pride ourselves on our client service and have included the following contact information for the required references.

City of Key West

Address: 201 William Street, Key West, FL 33040

CLIENT CONTACT INFORMATION

Karen Olson

Deputy Director, Ports & Marine Services

Phone: 305.809.3803

Email: kolson@cityofkeywest-fl.gov

City of Ft. Lauderdale

Address: 100 N. Andrews Avenue, 6th Floor, Fort Lauderdale, FL 33301

CLIENT CONTACT INFORMATION

Todd Hiteshew

Environmental Compliance Manager, Public Works Department

Phone: 954.828.7807

Email: thiteshew@fortlauderdale.gov

Miami-Dade County

Address: 111 NW 1st Street, Miami, FL 33128

CLIENT CONTACT INFORMATION

Alberto Pisani, PE, ENV SP

Senior Professional Engineer, Division of Water Management

Phone: 786 493 1439

Email: alberto.pisani@miamidade.gov

"The City and GHD have partnered on several projects over the past 15 years, each delivered on time, within budget, and with quality. In all instances, GHD has demonstrated a commitment to responsiveness and client service that has earned the firm a reputation for excellence"

Todd Hiteshew, Environmental Compliance Manager
City of Ft. Lauderdale

"GHD has proven to be an excellent contractor, providing Miami-Dade County with industry leading expertise in coastal modeling. The assigned PM has been responsive throughout the contract and the team provides excellent analysis of the work product as it is developed. We are very pleased with GHD services to date"

Alberto Pisani, PE, ENVSP, Senior Professional Engineer
Division of Water Management
Miami-Dade County

➔ 9. Sworn Statements and Affidavits

On the following pages are the completed forms from "Exhibit A" in the RFQ that include:

- Anti-Kickback Affidavit
- Non-Collusion Affidavit
- Sworn Statement Pursuant to Section 287.133(3)(A) Florida Statutes on Public Crimes
- Equal Benefits for Domestic Partners Affidavit
- Cone of Silence Affidavit
- City of Key West Indemnification Form

Exhibit A

Affidavits

ANTI-KICKBACK AFFIDAVIT

STATE OF FLORIDA

SS:

COUNTY OF MONROE

I the undersigned hereby duly sworn, depose and say that no portion of the sum herein response will be paid to any employee of the City of Key West as a commission, kickback, reward or gift, directly or indirectly by me or any member of my firm or by an officer of the corporation.

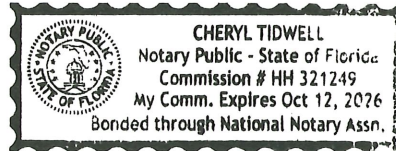
BY: _____

Brian Moore, PE | Vice President

sworn and prescribed before me this 10th day of Nov, 2022

Cheryl Tidwell
Cheryl Tidwell

NOTARY PUBLIC, State of Florida



My commission expires: 10-12-26

NON-COLLUSION AFFIDAVIT

STATE OF FLORIDA)

: SS


COUNTY OF MONROE)

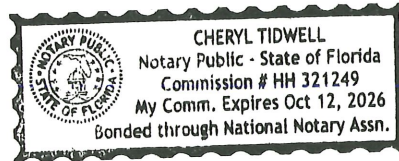
I, the undersigned hereby declares that the only persons or parties interested in this Proposal are those named herein, that this Proposal is, in all respects, fair and without fraud, that it is made without collusion with any official of the Owner, and that the Proposal is made without any connection or collusion with any person submitting another Proposal on this Contract.

By: 
Brian Moore, PE | Vice President

Sworn and subscribed before me this

10th day of Nov., 2022.


NOTARY PUBLIC, State of Florida at Large



My Commission Expires: 10-12-2026

SWORN STATEMENT PURSUANT TO SECTION 287.133(3)(A)
FLORIDA STATUTES, ON PUBLIC ENTITY CRIMES

THIS FORM MUST BE SIGNED AND SWORN TO IN THE PRESENCE OF A NOTARY PUBLIC OR OTHER OFFICIAL AUTHORIZED TO ADMINISTER OATHS,

1. This sworn statement is submitted for 22-006 GHD Engineering Services
(print individual's name and title)

by GHD Services Inc.
(print name of entity submitting sworn statement)

whose business address is 8000 Governors Square Blvd. Suite 410, Miami Lakes, FL 33016

and (if applicable) its Federal Employer Identification Number (FEIN) is

16-1229774
(if the entity has no FEIN, include the Social Security Number of the individual signing this sworn statement): _____

2. I understand that a "public entity crime" as defined in Paragraph 287.133(1)(g), Florida Statutes, means a violation of any state or federal law by a person with respect to and directly related to the transaction of business with any public entity or with an agency or political subdivision of any other state or of the United States, including, but not limited to, any bid or contract for goods or services to be provided to any public entity or an agency or political subdivision of any other state or of the United States and involving antitrust, fraud, theft, bribery, collusion, racketeering, conspiracy, or material misrepresentation.
3. I understand that "conviction" as defined in Paragraph 287.133(1)(g), Florida Statutes, means a finding of guilt or a conviction of a public entity crime, with or without an adjudication of guilt, in any federal or state trial court of record relating to charges brought by indictment or information after July 01, 1989, as a result of a jury verdict, nonjury trial, or entry of a plea of guilty or nolo contendere.
4. I understand that an "affiliate" as defined in Paragraph 287.133(1)(a), Florida Statutes, means:
- a. A predecessor or successor of a person convicted of a public entity crime: or
 - b. An entity under the control of any natural person who is active in the management of the entity and who has been convicted of a public entity crime.

The term "affiliate" includes those officers, directors, executives, partners, shareholders, employees, members and agent who are active in the management of an affiliate. The ownership by one person of shares constituting a controlling interest in another person, or a pooling of equipment of income among persons when not for fair market value under an arm's length agreement, shall be a prima facie case that one person controls another person. A person who knowingly enters into a joint venture with a person who has been convicted of a public entity crime in Florida during the preceding 36 months shall be considered an affiliate.

5. I understand that a "person" as defined in Paragraph 287.133(1)(e), Florida Statute means any natural person or entity organized under the laws of any state or of the United States with the legal power to enter into a binding contract and which bids or applies to bid on contracts for the provision of goods or services let by a public entity, or which otherwise transacts or applies to transact business with a public entity. The term "person" includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in management of an entity.
6. Based on information and belief, the statement which I have marked below is true in relation to the entity submitting this sworn statement (indicate which statement applies).

 X Neither the entity submitting this sworn statement, or any of its officers, directors, executives, partners, shareholders, employees, members, or agents who are active in the management of the entity, nor any affiliate of the entity has been charged with and convicted of a public entity crime subsequent to July, 1989.

 The entity submitting this sworn statement, or one or more of its officers, directors, executives, partners, shareholders, employees, members, or agents who are active in the management of the entity or an affiliate of the entity has been charged with and convicted of a public entity crime subsequent to July 01, 1989.

 The entity submitting this sworn statement, or one or more of its officers, directors, executives, partners, shareholders, employees, members, or agents who are active in the management of the entity or an affiliate of the entity has been charged with and convicted of a public entity crime subsequent to July 01, 1989. However, there has been a subsequent proceeding before a Hearing Officer of the State of Florida, Division of Administrative Hearings and the Final Order entered by the Hearing Officer determined that it was not in the public interest to place the entity submitting this sworn statement on the convicted vendor list (attach a copy of the final order.

I UNDERSTAND THAT THE SUBMISSION OF THIS FORM TO THE CONTRACTING OFFICER FOR THE PUBLIC ENTITY IDENTIFIED IN PARAGRAPH ONE (1) ABOVE IS FOR THAT PUBLIC ENTITY ONLY AND, THAT THIS FORM IS VALID THROUGH DECEMBER 31 OF THE CALENDAR YEAR IN WHICH IT IS FILED. I ALSO UNDERSTAND THAT I AM REQUIRED TO INFORM THE PUBLIC ENTITY PRIOR TO ENTERING INTO A CONTRACT IN EXCESS OF THE THRESHOLD AMOUNT PROVIDED IN SECTION 287.017, FLORIDA STATUTES, FOR THE CATEGORY TWO OF ANY CHANGE IN THE INFORMATION CONTAINED IN THIS FORM.

B. M.

(SIGNATURE)

11/10/2022

(DATE)

STATE OF Florida

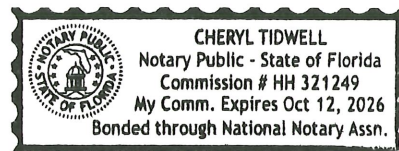
COUNTY OF Hillsborough

PERSONALLY APPEARED BEFORE ME, the undersigned authority
Brian Moore, PE who, after first being sworn by me,
(name of individual)
affixed his/her signature in the space provided above on this
10th day of Nov, 2022

Cheryl Tidwell
Cheryl Tidwell

NOTARY PUBLIC

My commission expires: 10-12-2026




CONE OF SILENCE AFFIDAVIT


Pursuant to City of Key West Code of Ordinances Section 2-773 (attached below)

STATE OF Florida)
 : SS
COUNTY OF Hillsborough)

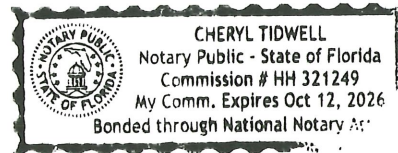
I the undersigned hereby duly sworn depose and say that all owner(s), partners, officers, directors, employees and agents representing the firm of
GHD Services Inc. have read and understand the limitations and procedures regarding communications concerning City of Key West issued competitive solicitations pursuant to City of Key West Ordinance Section 2-773 Cone of Silence (attached).
Sworn and subscribed before me this

10th day of November, 2022.

By: 
Brian Moore, PE | Vice President

 Cheryl Tidwell
NOTARY PUBLIC, State of Florida at Large

My Commission Expires: 10-12-2026



Sec. 2-773. Cone of Silence.

- (a) *Definitions.* For purposes of this section, reference to one gender shall include the other, use of the plural shall include the singular, and use of the singular shall include the plural. The following definitions apply unless the context in which the word or phrase is used requires a different definition:
- (1) *Competitive solicitation* means a formal process by the City of Key West relating to the acquisition of goods or services, which process is intended to provide an equal and open opportunity to qualified persons and entities to be selected to provide the goods or services. Competitive solicitation shall include request for proposals ("RFP"), request for qualifications ("RFQ"), request for letters of interest ("RFLI"), invitation to bid ("ITB") or any other advertised solicitation.
 - (2) *Cone of silence* means a period of time during which there is a prohibition on communication regarding a particular competitive solicitation.
 - (3) *Evaluation or selection committee* means a group of persons appointed or designated by the city to evaluate, rank, select, or make a recommendation regarding a vendor or the vendor's response to the competitive solicitation. A member of such a committee shall be deemed a city official for the purposes of subsection (c) below.
 - (4) *Vendor* means a person or entity that has entered into or that desires to enter into a contract with the City of Key West or that seeks an award from the city to provide goods, perform a service, render an opinion or advice, or make a recommendation related to a competitive solicitation for compensation or other consideration.
 - (5) *Vendor's representative* means an owner, individual, employee, partner, officer, or member of the board of directors of a vendor, or an engineer, lobbyist, or actual or potential subcontractor or sub-consultant who acts at the behest of a vendor in communicating regarding a competitive solicitation.
- (b) *Prohibited communications.* A cone of silence shall be in effect during the course of a competitive solicitation and prohibit:
- (1) Any communication regarding a particular competitive solicitation between a potential vendor or vendor's representative and the city's administrative staff including, but not limited to, the city manager and his or her staff;
 - (2) Any communication regarding a particular competitive solicitation between a potential vendor or vendor's representative and the mayor, city commissioners, or their respective staff;
 - (3) Any communication regarding a particular competitive solicitation between a potential vendor or vendor's representative and any member of a city evaluation and/or selection committee therefore; and
 - (4) Any communication regarding a particular competitive solicitation between the mayor, city commissioners, or their respective staff, and a member of a city evaluation and/or selection committee therefore.

- (c) *Permitted communications.* Notwithstanding the foregoing, nothing contained herein shall prohibit:
- (1) Communication between members of the public who are not vendors or a vendor's representative and any city employee, official or member of the city commission;
 - (2) Communications in writing at any time with any city employee, official or member of the city commission, unless specifically prohibited by the applicable competitive solicitation.
 - (A) However, any written communication must be filed with the city clerk.
Any city employee, official or member of the city commission receiving or making any written communication must immediately file it with the city clerk.
 - (B) The city clerk shall include all written communication as part of the agenda item when publishing information related to a particular competitive solicitation;
 - (3) Oral communications at duly noticed pre-bid conferences;
 - (4) Oral presentations before publicly noticed evaluation and/or selection committees;
 - (5) Contract discussions during any duly noticed public meeting;
 - (6) Public presentations made to the city commission or advisory body thereof during any duly noticed public meeting;
 - (7) Contract negotiations with city staff following the award of a competitive solicitation by the city commission; or
 - (8) Purchases exempt from the competitive process pursuant to section 2-797 of these Code of Ordinances;
- (d) *Procedure.*
- (1) The cone of silence shall be imposed upon each competitive solicitation at the time of public notice of such solicitation as provided by section 2-826 of this Code. Public notice of the cone of silence shall be included in the notice of the competitive solicitation. The city manager shall issue a written notice of the release of each competitive solicitation to the affected departments, with a copy thereof to each commission member, and shall include in any public solicitation for goods and services a statement disclosing the requirements of this ordinance.
 - (2) The cone of silence shall terminate at the time the city commission or other authorized body makes final award or gives final approval of a contract, rejects all bids or responses to the competitive solicitation or takes other action which ends the competitive solicitation.
 - (3) Any city employee, official or member of the city commission that is approached concerning a competitive solicitation while the cone of silence is in effect shall notify such individual of the prohibitions contained in this section. While the cone of silence is in effect, any city employee, official or member of the city commission who is the recipient of any oral communication by a potential vendor or vendor's representative in violation of this section shall create a written record of the event. The record shall indicate the date of such communication, the persons with whom such communication occurred, and a general summation of the communication.

(e) *Violations/penalties and procedures.*

- (1) A sworn complaint alleging a violation of this ordinance may be filed with the city attorney's office. In each such instance, an initial investigation shall be performed to determine the existence of a violation. If a violation is found to exist, the penalties and process shall be as provided in section 1-15 of this Code.
- (2) In addition to the penalties described herein and otherwise provided by law, a violation of this ordinance shall render the competitive solicitation void at the discretion of the city commission.
- (3) Any person who violates a provision of this section shall be prohibited from serving on a City of Key West advisory board, evaluation and/or selection committee.
- (4) In addition to any other penalty provided by law, violation of any provision of this ordinance by a City of Key West employee shall subject said employee to disciplinary action up to and including dismissal.
- (5) If a vendor is determined to have violated the provisions of this section on two more occasions it shall constitute evidence under City Code section 2-834 that the vendor is not properly qualified to carry out the obligations or to complete the work contemplated by any new competitive solicitation. The city's purchasing agent shall also commence any available debarment from city work proceeding that may be available upon a finding of two or more violations by a vendor of this section. (*Ord. No. 13-11, § 1, 6-18-2013*)

CITY OF KEY WEST INDEMNIFICATION FORM

PROPOSER agrees to protect, defend, indemnify, save and hold harmless The City of Key West, all its Departments, Agencies, Boards, Commissions, officers, City's Engineer, agents, servants and employees, including volunteers, from and against any and all claims, debts, demands, expense and liability arising out of injury or death to any person or the damage, loss of destruction of any property which may occur or in any way grow out of any act or omission of the PROPOSER, its agents, servants, and employees, or any and all costs, expense and/or attorney fees incurred by the City as a result of any claim, demands, and/or causes of action except of those claims, demands, and/or causes of action arising out of the negligence of The City of Key West, all its Departments, Agencies, Boards, Commissions, officers, agents, servants and employees. The PROPOSER agrees to investigate, handle, respond to, provide defense for and defend any such claims, demand, or suit at its sole expense and agrees to bear all other costs and expenses related thereto, even if it (claims, etc.) is groundless, false or fraudulent. The City of Key West does not waive any of its sovereign immunity rights, including but not limited to, those expressed in Section 768.28, Florida Statutes.

These indemnifications shall survive the term of this agreement. In the event that any action or proceeding is brought against the City of Key West by reason of such claim or demand, PROPOSER shall, upon written notice from the City of Key West, resist and defend such action or proceeding by counsel satisfactory to the City of Key West.

The indemnification provided above shall obligate PROPOSER to defend at its own expense to and through appellate, supplemental or bankruptcy proceeding, or to provide for such defense, at the City of Key West's option, any and all claims of liability and all suits and actions of every name and description covered above which may be brought against the City of Key West whether performed by PROPOSER, or persons employed or utilized by PROPOSER.

The PROPOSER's obligation under this provision shall not be limited in any way by the agreed upon Contract Price as shown in this agreement, or the PROPOSER's limit of or lack of sufficient insurance protection.

COMPANY SEAL

PROPOSER: GHD Services Inc.

Address 8000 Governors Square Blvd. Suite 410
Miami Lakes, FL 33016

Signature 

Brian Moore, PE

Print Name

Vice President

Title



11/10/2022
Date

NOTARY FOR THE PROPOSER

STATE OF Florida

COUNTY OF Hillsborough

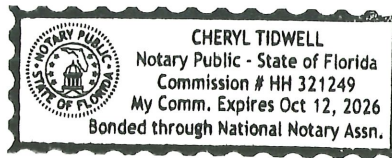
The foregoing instrument was acknowledged before me this 10th day of Nov, 2022. By Brian Moore, PE of GHD Services Inc. (Name of officer or agent, title of officer or agent) Name of corporation acknowledging)

or has produced _____ as identification.

Cheryl Tidwell

Signature of Notary

Cheryl Tidwell
Notary Public, state of Florida



Brian Moore

Brian Moore, PE

Vice President

Title or Rank

Return Completed form with Print, Type or Stamp Name of Notary

Supporting documents to: City of Key West Purchasing

