

# STRUCTURAL ENGINEERING

## Statement of Qualifications





## **RE: Structural Engineering Statement of Qualifications**

Thank you for considering WGI as a Structural Engineering service partner. When selecting WGI as a partner, you are choosing a commitment to clear and consistent communication, high-quality building information models and dedication to best practices for the timely execution of your project. Our commitment is to the success of YOUR project, we understand our role as a supporting member of your team, and below are the benefits of selecting WGI Structural Engineering Services.

### **Quality:**

- At WGI, every project goes through our rigorous QA/QC process.
- Quality Assurance is highlighted at every phase of work by internal peer reviews, standards auditing, clash detection, and interim & milestone reviews by senior staff.
- Quality Control is completed in a multi-stage process with the Engineer of Record, Project Manager, and a Principal Engineer completing their reviews before a project is issued for construction.

### **Technology:**

- WGI makes full use of Autodesk's REVIT by use of the BIM 360 platform. The structural framing is modeled with accurate geometric and engineering information, making member identification, location, size, and spacing integral to the design and made available in real time to the design team. Additionally, we heavily stress the use of BIM 360 docs
- WGI actively leverages the interoperability of REVIT to take advantage of the most current analysis technologies for increased efficiency and model accuracy. Our team uses "round trip" capabilities to directly export physical & analytical models from REVIT to various analysis platforms such as ADAPT Builder, Tekla Structural Designer, RISA and ETABs among others. Subsequently, the updated analysis data from these cutting-edge technologies is seamlessly sent back via data links to effectively eliminate data corruption during design.
- WGI also leverages the use of Bluebeam Studio and Microsoft Teams throughout design and expressly during the QAQC process for task assignment and verification, document review and control prior to milestone submissions and interim checks.

### **Team Members:**

- Our team members are experts in Structural Engineering. Most of our associates are licensed Professional Engineers and licensed Structural Engineers. Our core team has been consistent for years, specializing in the nuances of jurisdictions where we practice.
- WGI staffs every project for success. Your project will be assigned a Project Manager, and a Principal Engineer specifically suited to design and manage your project type. The Project Manager will keep you informed throughout the design process via weekly status update letters and consistent communication.

At WGI, we believe the difference is apparent. Our dedicated experts have the technology, processes, and support necessary to deliver success to your project. We look forward to speaking with you further and supporting your next project.

We look forward to serving you,

A handwritten signature in black ink, appearing to read 'Arnaud' followed by a stylized surname.

Arnaud Thibonnier, P.E., S.E.  
Director, Structural Engineering

**THIS IS  
WHO WE ARE**

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# FIRM PROFILE

WGI is a national design and professional services firm leading in technology-based solutions for the construction of public and private infrastructure and real estate development.

Founded in South Florida in 1972, WGI grew from a private client base and diversified into the public sector by growing our expertise to include a wide variety of disciplinary services. With nearly 600 professionals in 23 offices nationwide, WGI is concentrated on providing cutting-edge efficiencies and solutions that affirm our national trademark: *Tomorrow's Infrastructure Solutions, Today.*

WGI combines the experience of our industry veterans with the vision and innovation of our young professionals. These combined talents enhance WGI's ability to execute our strategic plan of market leadership while meeting evolving infrastructure demands and maintaining our focus on autonomy, smart and connected cities, resiliency, and sustainability.

An award-winning firm, we are recognized for exceptional service, commitment to providing a superb work product, and continuing a four-decade tradition of being engaged, passionate, responsive, accountable, creative, and inspired. WGI is committed to remaining at the forefront of innovation, investing in the tools and the people necessary to remain constantly agile and able to deliver tomorrow's possibilities, today.

WGI serves a multitude of private clients, public agencies, and municipalities. We remain dedicated to the development and economic prosperity of the local communities in which we live and work. We intently focus on delivering our professional commitments while encouraging our associates to "give back" by supporting a variety of non-profits and professional organizations through their leadership, volunteerism, and sponsorship.

## WGI'S CORE VALUES AND VISION

Creatively transforming how our world is envisioned, designed, and experienced.



**PASSION**  
for People



Be the  
**CHANGE**  
You Seek



**COMMIT**  
to Greatness



# OFFICE LOCATIONS

## CORPORATE

2035 Vista Parkway  
West Palm Beach, FL 33411  
t. 561.687.2220 | f. 561.687.1110

## ARLINGTON

1201 Wilson Boulevard, 27th floor  
Arlington, VA, 22209  
t. 571.438.940

## ATLANTA

5051 Peachtree Corners, Suite 200  
Norcross, GA 30092  
t. 470.336.5058

## AUSTIN

2021 East 5th Street, Suite 200  
Austin, TX 78702  
t. 512.669.5560

## CHARLOTTE

14045 Ballantyne Corporate Place, Suite 380  
Charlotte, NC 28277  
t. 704.716.8000

## CHICAGO

2001 Butterfield Road, Suite 410  
Downers Grove, IL 60515  
t. 630.307.3800

## DALLAS

8144 Walnut Hill Lane, Suite 903  
Dallas, TX 75231  
t. 214.307.4767

## DENVER

1600 Broadway, Suite 1600  
Denver, CO 80202  
t. 720.398.6060

## FT. LAUDERDALE

3230 W. Commercial Boulevard, Suite 300  
Fort Lauderdale, FL 33309  
t. 954.660.1660

## FT. MYERS

6310 Techster Boulevard, Unit #1  
Fort Myers, FL 33966  
t. 239.984.6995

## GAINESVILLE

3499 NW 97th Boulevard, Suite 14  
Gainesville, FL 32606  
t. 352.565.6850

## HOUSTON

2727 Allen Parkway, Suite 1350  
Houston, TX 77019  
t. 832.730.1901

## INDIANAPOLIS

8910 Purdue Road, Suite 400  
Indianapolis, IN 46268  
t. 317.735.3349

## JACKSONVILLE

4371 U.S. Highway 17 South, Suite 203  
Fleming Island, FL 32003  
t. 904.470.4503

## KALAMAZOO

5136 Lovers Lane, Suite 200  
Kalamazoo, MI 49002  
t. 269.381.2222

## MIAMI

11401 SW 40th Street, Suite 455  
Miami, FL 33165  
t. 305.553.0500

## ORLANDO

800 N. Magnolia Avenue, Suite 1750  
Orlando FL 32803  
t. 407.581.1221

## PORT ST. LUCIE

548 Mercantile Place  
Port St. Lucie, FL 34986  
t. 772.408.5258

## RALEIGH

5640 Dillard Drive, Suite 200  
Cary, NC 27518  
t. 919.852.0468

## SAN ANTONIO

5710 W. Hausman Road, Suite 115  
San Antonio, TX 78249  
t. 210.860.9224

## TALLAHASSEE

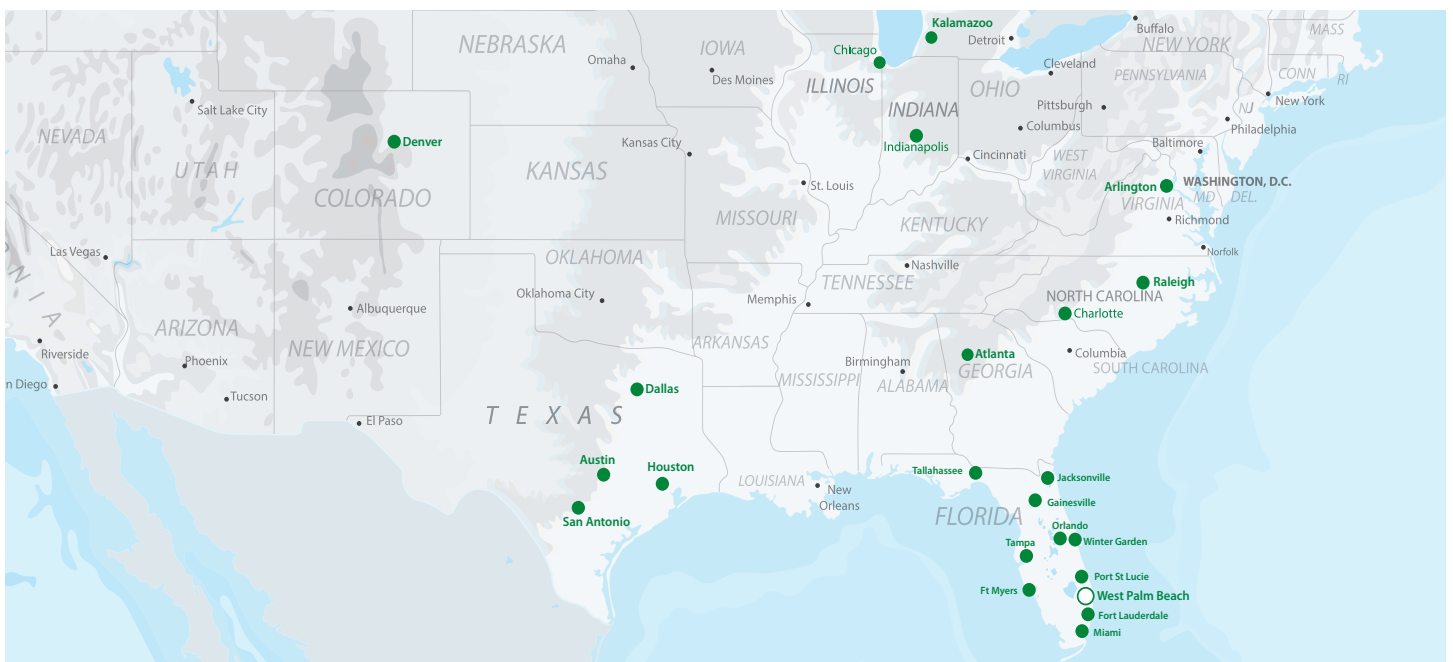
2316 Killearn Center Boulevard  
Building C, Suite 100  
Tallahassee, FL 32309  
t. 850.210.0101

## TAMPA

3111 W. Dr. Martin Luther King Jr. Boulevard  
Suite 375, Tampa, FL 33607  
t. 813.574.3190

## WINTER GARDEN

1232 Winter Garden Vineland Road, Suite 124  
Winter Garden, FL 34787  
t. 407.581.1221



# STRUCTURAL ENGINEERING

**As an integral component of the design process, structural engineering must facilitate design aesthetics, economics, safety, and long-term serviceability.**

WGI delivers high-quality designs while focusing on client relationships and diligent expectation management. We aim to maintain a consistent service level from project to project, while uniquely treating each new solution.

We are industry leaders in structural engineering for building and bridge projects across the U.S. for private and public entities. We make full use of Autodesk's REVIT platform and produce our projects with accurate geometric and engineering information, making coordination of spatial constraints and scheduling integral to our design process. Lastly, every project is executed with a rigorous QA/QC process, including phase-end internal reviews, standards reviews, and clash detection.



Capitol Beverage | 10300 Metropolitan | Austin, TX



## SERVICES

- Schematic Design
- Design Development
- Construction Documents
- Construction Administration
- Bidding and Negotiation
- Structural Observations
- Capacity Analysis
- Peer Reviews
- Design for Resilient and Hardened Structures



Park Place | Tempe, AZ



Miller Canfield | Office/Underground Parking | Kalamazoo, MI

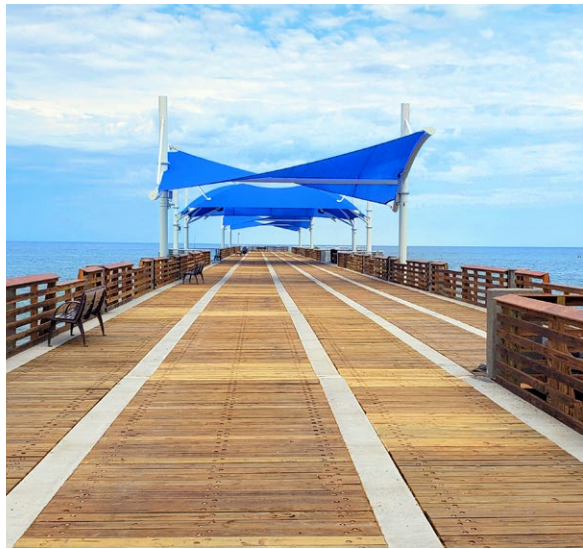
**WE'VE DONE  
THIS BEFORE**







# STRUCTURAL ENGINEERING MARKET SECTORS



## MARKETS SERVED

- Commercial
- Community Development
- Education
- Healthcare
- Hospitality
- Industrial
- Multi-Family
- Mixed-Use
- Parking Structures
- Public Infrastructure
- Recreational Facilities
- Renovations/Strengthening
- Water Resources

## SPECIALTY EXPERTISE

- Structural Steel (includes light-gauge steel)
- Concrete (conventional, tilt-wall, precast, and post-tensioned)
- Timber (Light frame, heavy timber, cross-laminated timber [CLT])
- Masonry
- ICC-500 Storm Shelter Design & Peer Reviews
- High-Rise Design
- Mass Timber Design
- Storm Hardening
- Ocean Piers/Seawalls/Marinas
- Structural Refurbishment
- Minor Bridges
- Temporary Construction
- Support Structures







# LAKESIDE TERRANEA

City of Flower Mound, Texas

The Lakeside Terranea project includes the design of a new luxury mixed-use, multi-family high-rise project located on the eastern shores of Lake Grapevine. The project provides immediate access to the Lake and Rockledge Park. The project includes ground-floor retail, 210 apartment units, luxury townhome units, 519 parking spaces, luxury amenity deck including a pool, interior, and exterior lounge at level 6 with uninterrupted views of the lake. WGI is responsible for the project's structural engineering, which includes the design and coordination of the foundation elements.

## PROJECT HIGHLIGHTS

- The project is located on the shores of Grapevine Lake in Flower Mound, Texas. The project features a luxury amenity deck at level 6, complete with lush landscaping, pool amenity deck, and interior/exterior bar and lounge. The first-floor features retail spaces serving the vibrant lakeside park and within immediate walking distance of Rockledge park.



### PROGRAM:

Mixed-Use  
Multi-Family  
Parking  
Retail

### CLIENT:

Merriman Anderson Architects, Inc.

### DATA:

16-Stories  
210 Apartment Units  
519 Parking Spaces  
13,300 SF Retail  
26,000 SF Amenity

### SERVICES PROVIDED:

Structural Engineering  
Construction Documents  
Construction Administration







## MESA CREEK I OFFICE BUILDING

Round Rock, Texas

The Mesa Creek I project is a ground-up 60,000 square-foot, two-story Class A office building near the heart of Round Rock, Texas. The structural steel frame is clad with architectural precast concrete panels, and a central lobby bisects the building to bring in light through two vaulted glass-enclosed atria. An exterior 4,000 SF amenity deck is framed in structural steel and cantilevers over a concrete detention pond to overlook the greenbelt beyond.

### PROJECT HIGHLIGHTS

- 60,000 square-foot Class A office space
- Exterior structural steel and wood amenity deck



#### PROGRAM:

Commercial Office

#### CLIENT:

Performance Services

#### DATA:

2-Story Class A Office  
Structural Steel Frame with  
Concentric Braces  
60,000 GSF  
Persons Max Occupancy 1,688

#### SERVICES PROVIDED:

Structural Engineering  
Construction Documents  
Construction Administration





Rendering by Merriman Anderson

## MCMILLAN JAMES OFFICE AND WAREHOUSE

Grapevine, Texas

The McMillan James project is a new 34,000-square foot, two-story, concrete tilt-wall and steel office building and warehouse. The office area includes a mezzanine and exterior terrace on the second floor, an atrium and curtain wall glazing at the entry, and clerestory windows to bring light into the interior. An additional amenity area adjacent to the main footprint is detailed in structural steel to provide a continuous 70-foot wraparound window cutting across a masonry veneer façade. The warehouse is a volume space with a 21-foot clear height, 50-foot clear spans, and an industrial slab-on-grade floor.

### PROJECT HIGHLIGHTS:

- 25,000-square foot office space
- 9,000-square foot warehouse floor
- 50-foot clear spans
- Exposed structure at amenity, atrium, and clerestory

### PROGRAM:

Mixed-Use  
Commercial Office  
Industrial (Warehouse Storage)

### CLIENT:

Merriman Anderson Architects

### DATA:

Stories 2  
SF 34,000  
Tilt-wall Concrete with  
Structural Steel Frame

### SERVICES PROVIDED:

Structural Engineering  
Construction Documents  
Construction Administration





## TEXPORT LOGISTICS

Wilmer, Texas

The design of a new 836,300-square foot tilt-wall industrial warehouse building core and shell.

### PROJECT HIGHLIGHTS

- Overall building dimensions are 1,428 feet by 550 feet
- 60-foot speed bays with a 36-foot clear height
- Four offices at the main corner of the facility; 4,200 square feet each
- Slab-on-grade designed for industrial loading

#### PROGRAM:

Industrial Warehouse

#### CLIENT:

Ware Malcomb Architects

#### DATA:

Story 1  
Tilt-wall Concrete and  
Structural Steel Frame  
SF 836,000  
Speed Bays 60-Foot  
Clear Height 36-Foot

#### SERVICES PROVIDED:

Structural Engineering  
Construction Documents  
Construction Administration





## LHC GROUP HOME OFFICE EXPANSION

Lafayette, Louisiana

The LHC Group home office expansion project included major additions to the existing headquarters building located at 901 Hugh Wallis Road South in Lafayette, Louisiana. The expansion includes offices, conference spaces, a foodservice area, and a pharmacy, totaling approximately 200,000 square feet within three new adjoining building structures.

The new office spaces are contained within two 3-story concrete tilt-wall and steel buildings. At one end, these buildings are connected via a third structure that contains the conference spaces and main entry atrium and is constructed of structural steel and curtain wall glass. At the other end, the office buildings are connected by a two-level pedestrian "sky bridge" spanning 75 feet across a landscaped courtyard using an expressed steel truss structure.

The expansion also includes two monumental steel stairs, an architectural entry canopy with an aggressive 19-foot cantilever, and a 9,500-square foot outdoor chiller and generator yard with a steel fiber-reinforced slab enclosed by 20-foot tall buttressed tilt-wall panels.

### PROGRAM:

Healthcare  
Medical Office Building  
Pharmacy

### CLIENT:

Chase Marshall Architects  
(Architect of Record)  
Gensler

### DATA:

3-Stories  
Tilt-wall Concrete and Structural Steel  
200,000 SF Addition  
Pedestrian "Sky" Bridge

### SERVICES PROVIDED:

Structural Engineering  
Construction Documents  
Construction Administration





## WEBBERVILLE MIXED-USE

Austin, Texas

This project is located in an up-and-coming area east of downtown Austin and contains approximately 10,000 square-feet of retail space and 34 residential units, with heavy timber and cross-laminated timber (CLT) structural systems exposed throughout. The ground floor contains shell retail space, while the three upper floors are comprised of apartments, a rooftop terrace, and a PV solar installation. The building is wrapped with planters and a series of vine trellises, and an exterior cantilevered steel stair sets off the otherwise organic façade.

### PROJECT HIGHLIGHTS

- First commercial building in Texas to use CLT as both gravity and lateral system
- 1-Hour CLT floors with exposed ceilings
- 7-ply CLT transfer floor at Level 2



#### PROGRAM:

Mixed-Use  
Multi-Family  
Retail

#### CLIENT:

Harris Bay

#### DATA:

3-Stories  
Tilt-wall Concrete and Structural Steel  
200,000 SF Addition  
Pedestrian "Sky" Bridge

#### SERVICES PROVIDED:

Structural Engineering  
Construction Documents  
Construction Administration







Rendering by Michael Hsu Office of Architecture

## HANCOCK CENTER CAPACITY ANALYSIS

Austin, Texas

The project consisted of performing a structural capacity analysis of the existing Hancock Center located at 1000 East 41st Street in Austin in order to determine its feasibility to be converted into a mixed-use facility. The original structure was designed in 1962 and built shortly after that as a Sears Department store. The structural frame consists of mild-reinforced concrete slabs with drop panels and column capitals, supported by reinforced concrete columns. As Sears wound down its operation at this Austin location, the property owner looked to determine the structure's feasibility to support other tenants and their associated loading. WGI was asked to recreate a structural analysis model from a combination of existing drawings and non-destructive testing reports provided by third-party field testing personnel. WGI's team performed Building Code Research to determine the associated loading in effect when the structure was originally designed. We also re-created a finite element model with the reinforcement described in the original contracts documents (and verified by third-party field testing) to determine the building's existing load capacity. Lastly, we ran a series of scenarios based on different tenant types to determine the locations and types of strengthening required, if any, to accommodate the new tenant. WGI produced a summary of the findings report detailing our process, findings, and recommendations for the various scenarios that the owner could price for prospective tenants.

### PROJECT HIGHLIGHTS

- Existing Building Capacity Analysis
- Adaptive Re-use of existing structure to minimize cost on property owner and lengthen project life.
- Building Code Research
- Finite Element Analysis

#### PROGRAM:

Capacity Analysis  
Adaptive Reuse  
Retail Conversion to Office

#### CLIENT:

Regency Centers

#### DATA:

3-Stories (2 above, 1 below)  
Concrete Beam and Column frame  
Partial Existing Drawings  
Coordination with Forensic NDT  
Analysis.

#### SERVICES PROVIDED:

Structural Engineering







## LAKESHORE PEARL PHASE II

Austin, Texas

The Lakeshore Pearl Phase II project included the expansion of multi-family units in the Lakeshore Pearl redevelopment located in the vibrant South Shore District of Austin.

The project includes 235 apartment units and 484 parking spaces to serve both the Phase I and Phase II development. Amenity courtyards located on the second floor of the podium structure provide both quiet and active zones for tenants, including a place to relax at the structured pool, among other amenities.

As the Civil and Structural Engineer for the project, WGI was responsible for significant onsite and offsite utility improvements, designing and permitting the civil improvements, and designing and permitting the two-story concrete podium structure supporting four stories of wood-framed apartments.



### PROGRAM:

Multifamily  
Parking Garage

### DEVELOPER:

Cypress Real Estate Advisors

### ARCHITECT:

GFF Architects, LLC

### DATA:

Units	235
SF	374,000
Parking Spaces	484

### SERVICES PROVIDED:

Structural Engineering  
Civil Engineering Design  
Regulatory Permitting  
Construction Phase Services







## AVENTURA HEART AND HEALTH BUILDING (FORMERLY KNOWN AS AVENTURA MEDICAL ARTS BUILDING)

Aventura, Florida

WGI provided structural engineering design services for a 100,000 square foot medical center campus, which included a two-story atrium. Foundation design implemented vibroflotation to strengthen the soil bearing capacity to 8000 psf for the building. The five-story building was designed with a concrete frame with cast-in-place columns, exterior CMU walls, and pre-cast/pre-stressed joists with a 4" concrete slab for floors and roof.

A new bridge from the existing parking garage elevator lobby to the new building was designed, including a curved bridge roof that has a standing seam metal roof over a metal deck.

Construction phase services included site visits for structural components, review of shop drawings, responses to contractor RFI's, and a final certification upon completion.

### **PROGRAM:**

Building/Healthcare

### **CLIENT:**

The Greenfield Group

### **DATA:**

5-Story Building  
2-Story Atrium  
Concrete Frame  
Cast-in-Place Columns  
CMU Walls

### **SERVICES PROVIDED:**

Structural Engineering  
Construction Phase Services

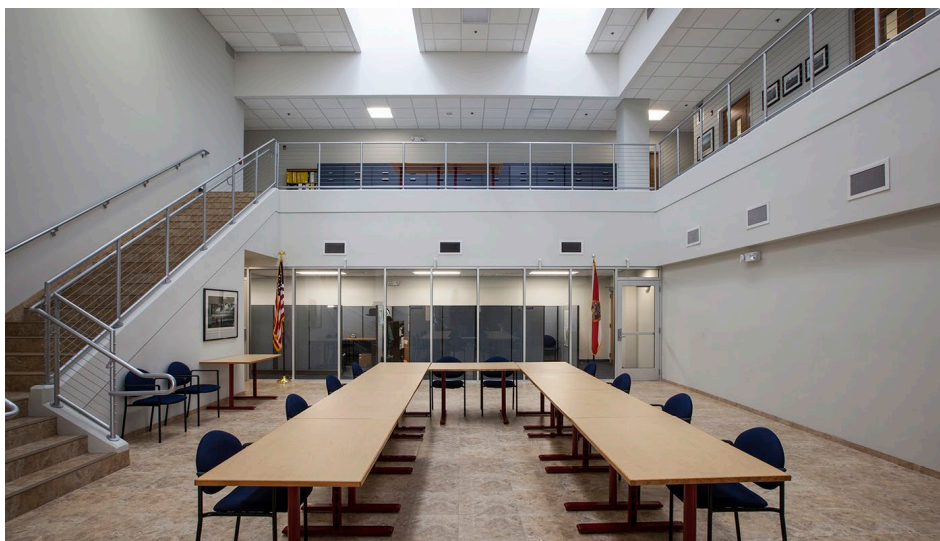




## CHEMISTRY LAB SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Palm Beach County, Florida

WGI staff provided the South Florida Water Management District Environmental Services Laboratory Relocation Project's structural engineering services. The project consisted of the design of an approximately 36,000 square-foot building. The building is constructed with reinforced masonry (CMU) walls, cast-in-place beam and column frame, and prestressed hollow-core roof slabs with a 2-inch concrete diaphragm topping slab. The project included a 15-ton bridge crane located within a bay area and extensive roof-mounted equipment such as chillers and ice collectors. WGI also provided construction phase services consisting of site visits and field reports, shop drawing reviews, response to Contractor RFI's, and final certification.



### **PROGRAM:**

Building/Research

### **CLIENT:**

South Florida Water Management District

### **DATA:**

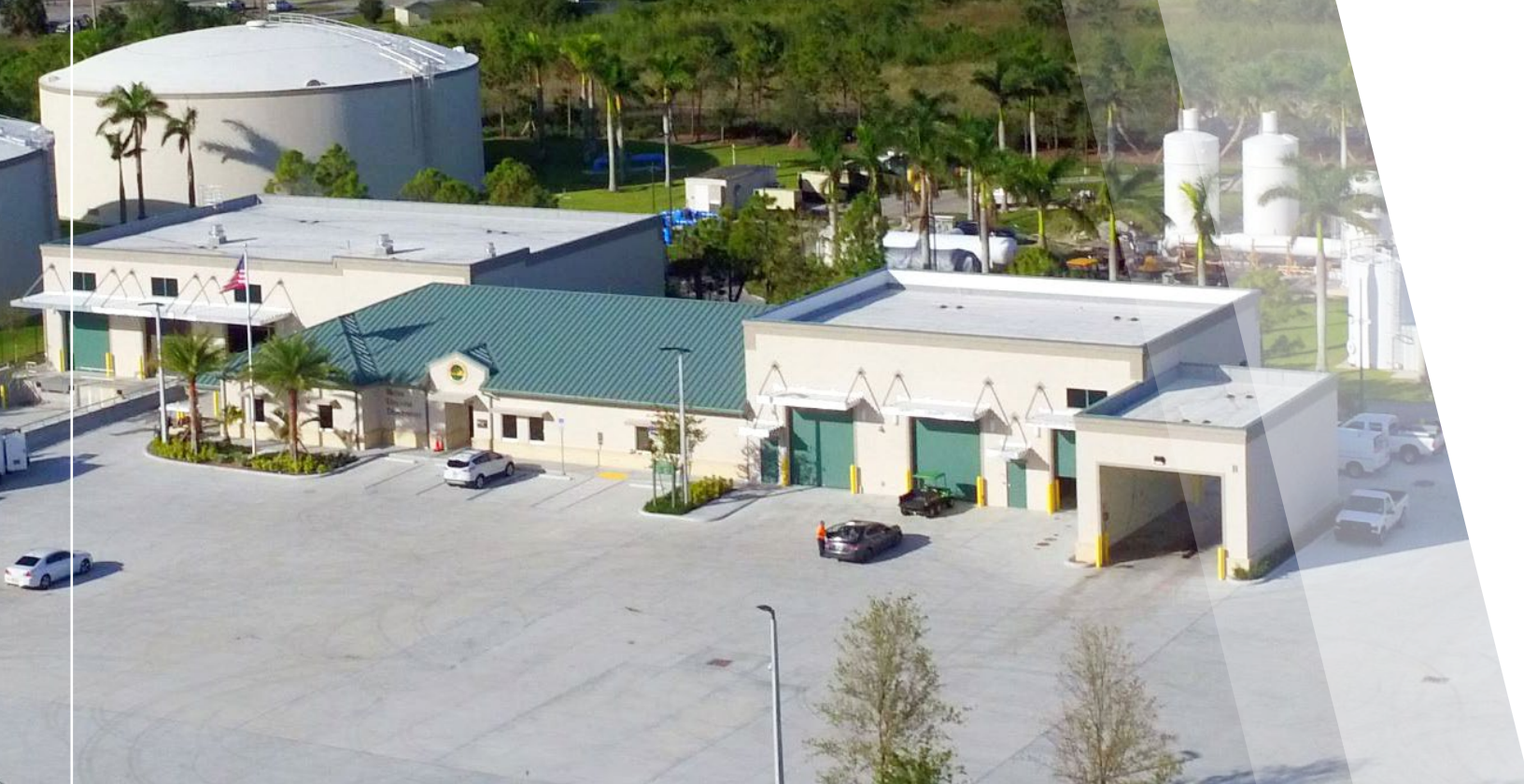
CMU walls  
Cast-in-Place Beam and Column Frame  
Hollow-Core Roof Slabs  
15-Ton Bridge Crane

### **SERVICES PROVIDED:**

Structural Design  
Construction Phase Services







## WESTERN REGION OPERATIONS CENTER

Palm Beach County, Florida

WGI provided structural engineering design and construction phase services for Palm Beach County's Western Region Operations Center (WROC). The Western Operation Center serves the Belle Glade, Pahokee, and South Bay area in Palm Beach County. The Center also includes a 16,337-square foot warehouse, administration and repair shop, and a 2,600-square foot generator building. The buildings are designed to Risk Category III/IV with ultimate wind speeds of 180 mph and are constructed with reinforced masonry walls, concrete tie columns and beams, steel joist/structural steel roof framing members, and steel roof deck. The shop buildings include a two-ton bridge crane supported from the roof structure, and the pump wash section of the building consists of a two-ton underslung monorail hoist. The building site also includes two 10,000 square-foot pavilion structures covering storage for portable generators, material, and equipment laydown areas.



### PROGRAM:

Building  
Municipal/Utilities

### CLIENT:

Palm Beach County Water Utilities

### DATA:

16,337 SF Warehouse  
2,600 SF Generator Building  
10,000 SF Pavilion  
Reinforced Masonry Walls  
Steel Roof Deck

### SERVICES PROVIDED:

Structural Engineering  
Construction Phase Services







## POMPANO BEACH FISHING PIER

Pompano Beach, Florida

WGI was contracted by the City of Pompano Beach to design an 864-foot-long replacement fishing pier. Design of the pier walkway forms a circle around a bait shop and continues east. The walking surface is approximately 20-feet wide up to the mean high water mark. Beyond the mean high water line, the deck widens to 30 feet to the east end of the pier. In lieu of the previous octagonal shaped end, the structure was designed to represent the head of a pompano fish, similar to the City's logo. The walking surface deck was constructed utilizing concrete beams and wood decking.

Amenities on the pier include four shade structures, electrical outlets for maintenance staff, fresh water hose bibs, a dry fire line for fire safety, and three fish gutting stations. Design also includes lighting on the pier, which meets requirements for sea turtle-friendly lighting, along with environmental education signs.

### Award Winning Project

For the work completed on the Pompano Beach Fishing Pier, WGI was recognized by the American Council of Engineering Companies (ACEC) of Florida as the recipient of an Engineering Excellence Award of Honor. The award is based on the use of unique and innovative applications; future value to the engineering profession; perception by the public; social, economic, and sustainable development considerations; complexity; and successful fulfillment of the client/owners' needs, including schedule and budget management.

#### PROGRAM:

Seawalls, Marinas and Piers  
Ocean Pier

#### CLIENT:

City of Pompano Beach

#### DATA:

864 Feet Long  
20-30' Wide  
Shade Structures  
Electrical & Plumbing Provided

#### SERVICES PROVIDED:

Structural Engineering  
Construction Documents  
Construction Administration







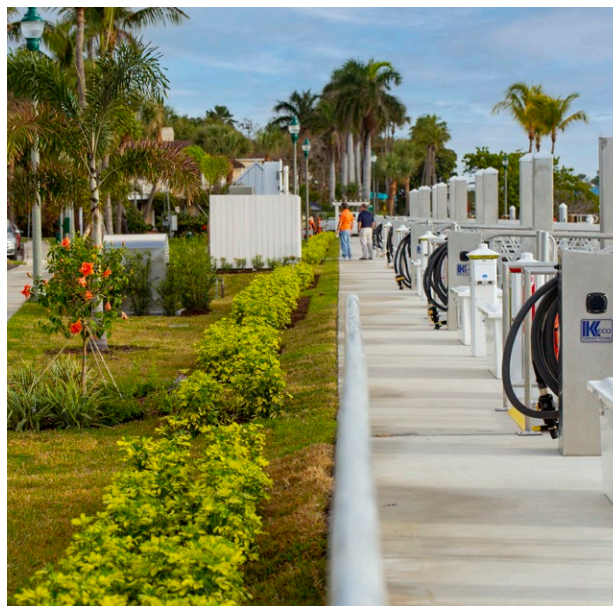
# CITY OF DELRAY BEACH CITY MARINA IMPROVEMENTS

Delray Beach, Florida

As part of Delray Beach's effort to correct structural deficiencies in their aging seawall system and public docks at their City Marina and address sea-level rise, WGI was awarded the design and construction administration contract to upgrade these facilities in the City's municipally owned marina. Improvements included the marina seawall's total reconstruction between SE 1st and SE 2nd Street and providing new floating and marginal boat docks. WGI's scope of services Included an initial structural and geotechnical assessment report, public outreach, 30%, 60%, 90%, and 100% design plans, permitting, bidding and construction administration, and project close-out.

## PROJECT HIGHLIGHTS:

- A state-of-the-art floating dock system
- Upgraded water service
- Individual and public accessible vacuum sewer pump-out stations
- Electrical upgrades and communications services
- ADA accessible walkways
- Security fencing
- Landscaping



## PROGRAM:

Seawalls, Marinas and Piers  
Seawall Repair/Retrofit  
Dock Improvements

## CLIENT:

City of Delray Beach

## DATA:

Seawall Reconstruction  
Floating Dock System  
Upgraded Water Service  
Vacuum Sewer Pump-Out  
Electrical Upgrades  
ADA Accessible Upgrades  
Security Fencing  
Landscaping

## SERVICES PROVIDED:

Structural & Geotechnical Assessment  
Structural Engineering  
Construction Documents  
Bidding & Permitting  
Construction Administration  
Close Out







## PALM BEACH SHERIFF'S OFFICE HQ - HURRICANE HARDENING

Palm Beach County, Florida

PBSO Building A is located on Gun Club Road in Palm Beach County and houses the 911 Emergency Call Facility, among other critical services. As part of an overall building space planning and renovation, Palm Beach County wanted to expand the call center in areas adjacent to the existing 911 hurricane hardened area; conduct a structural assessment of the existing facility to assess the perimeter envelope, allowable floor, and roof loads; and provide construction documents for upgrading the building to meet current FBC hurricane loading requirements.

WGI performed an analysis of the existing building to establish the structure's allowable capacity. A frame analysis of the original and 1990 addition was performed. Areas of concern were identified, and recommendations for replacement or strengthening were provided. The foundations, floors, and roof were analyzed for their allowable capacity. The client's areas as requiring additional support of equipment, storage, re-roofing, and a mezzanine infill was reviewed or designed with repair and enhancement recommendations provided for additional support and structural modifications.

WGI developed exterior envelope hardening options to obtain preliminary costs from the Construction Manager with two options developed. Option 1 included the use of exterior concrete panels, vertically supported by an independent foundation system and laterally connected to the existing structure at the roof diaphragms. Option 2 included an external reinforced CMU wall vertically supported by an independent foundation system and laterally connected to the floor and roof diaphragms' existing structure. A concept design report was prepared to describe each of the options. Based on a review by the County and PBSO, drawings were developed showing typical reinforcing, connections to the existing structural floor framing, and connection at the foundation and roof level.

### PROGRAM:

Buildings  
Resiliency  
Hurricane Hardening

### CLIENT:

Palm Beach County

### DATA:

Structural Enhancements for Resiliency  
(Hurricane Hardening)

### SERVICES PROVIDED:

Structural Engineering  
Construction Documents  
Bidding & Permitting  
Construction Administration







## WATER TREATMENT PLANT 8 ANION EXCHANGE PROJECT

Palm Beach County, Florida

WGI provided structural engineering support for the Anion Exchange System Project at Palm Beach County Water Treatment Plant 8. The various structural systems required in support of the Anion Exchange Project included demolition of existing phosphate feed and chlorinator rooms to create a single area to house new and future Variable Frequency Drives; design of a precast concrete building to support electrical controls and water sampling; design of two raft foundations to accommodate ten new and four future 10,000-gallon anion exchange vessels; design of an elevated catwalk to access the upper dome of the anion exchange vessels; design of water sampling station shelters; and design of a number of elevated pump base frames.

### PROGRAM:

Industrial/Utilities

### CLIENT:

Palm Beach County Water Utilities

### DATA:

Demolition  
Precast Concrete Building  
10,000 Gallon Anion Exchange Vessels  
Catwalk

### SERVICES PROVIDED:

Structural Engineering  
Construction Phase Services







## WATER TREATMENT PLANT 8 LIME SLUDGE THICKENER STRUCTURAL REHABILITATION

Palm Beach County, Florida

In November 2015, WGI was contacted by Palm Beach County Water Utility Department (PBCWUD) regarding a recently installed motor replacement for its lime sludge thickener basin. The installed motor induced vibrations into the existing support bridge, causing vibration amplitudes in the order of 4 to 8 inches. WGI immediately investigated the cause and damage to the thickener basin and support bridge and provided structural analysis and an assessment report with recommendations to PBCWUD.

Following the report, WGI was engaged to provide structural design and construction drawings to retrofit the existing sludge thickener rake and motor support beams with enhanced support framing. The design and construction documents followed the design presented in the Structural Analysis and Assessment Report. The design transferred loading from the motor to independent structural frame support, relieving the existing tank from the dynamic loads of the thickener motor assembly and bridge while providing a direct load path for those loads into an independent foundation.

### **PROGRAM:**

Industrial/Utilities

### **CLIENT:**

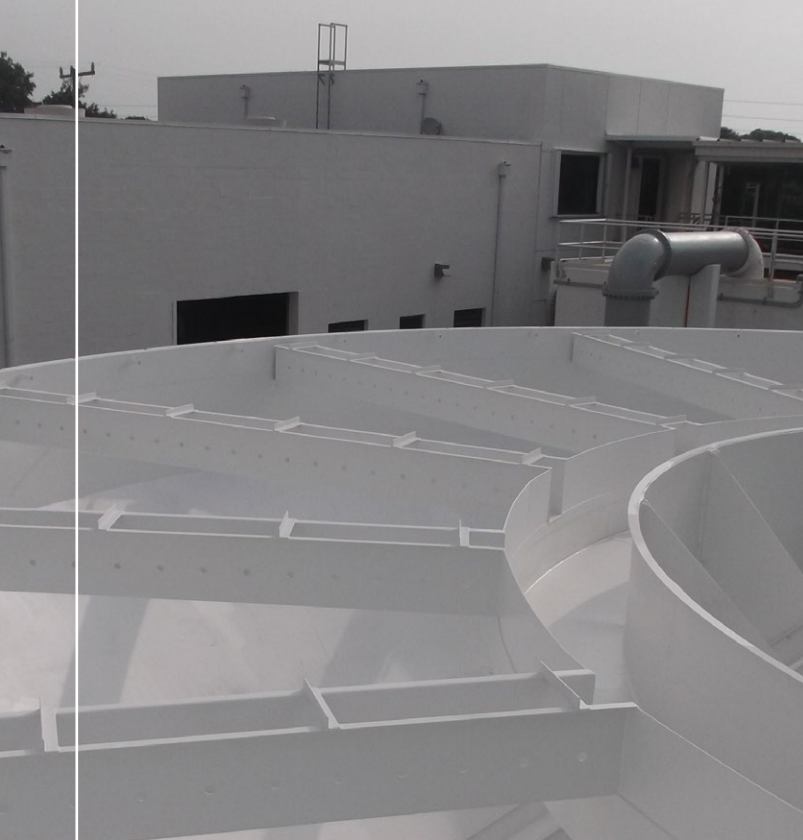
Palm Beach County Water Utilities

### **DATA:**

Structural Analysis

### **SERVICES PROVIDED:**

Structural Analysis  
Report



## FT. PIERCE UTILITY AUTHORITY (FPUA) SOFTENER REHABILITATION

St. Lucie County, Florida

The FPUA requested the lime softener clarifier be rehabilitated at their Water Treatment Plant. The scope of the project included replacement of the launders, removal and replacement of the corroded upper section of the tank, and the addition of hatchways for improved maintenance and service. The existing circular steel tank was modeled by Finite Element Analysis for the stress increase due to the proposed penetrations. A four-foot by four-foot hatchway was designed and the tank, in the region of the penetration, was reinforced with additional plating to compensate for the concentrated stresses. In addition to the structural analysis and construction documents, construction phase services were also provided.



### PROGRAM:

Water/Wastewater  
Improvements/Rehabilitation

### CLIENT:

Ft. Pierce Utility Authority

### DATA:

Structural modification of existing structure for larger access hatch, refurbishing and recoating of structure

### SERVICES PROVIDED:

Structural Engineering  
Construction Documents  
Construction Administration





## SOUTH FLORIDA WATER MANAGEMENT DISTRICT G-716

Palm Beach County, Florida

The G-716 spillway is within the STA-1E Inflow Distribution Area, along the levee between the East Distribution Cell (EDC) and the West Distribution Cell (WDC). WGI's Structural Engineering department designed, detailed, and provided construction phase services to South Florida Water Management District (SFWMD) for a fully automated, electronically operated, three (12 foot by 16 foot) gated spillway to increase the capacity of flow between the EDC and WDC to 3600 cfs. WGI prepared construction documents and performed construction management for a reinforced cast-in-place concrete spillway with steel sheet piles wingwalls, seepage cutoff walls, concrete weir structure, embedments for automated roller gates, needle-beam supports for temporary dewatering panels, concrete guide towers for roller gates with raised control platform, prestressed concrete access bridge, precast concrete control building, and stilling well platforms. During construction, WGI provided on-site representatives to examine critical design components; review and assist SFWMD in responding to shop drawing submittals, requests for information, change orders, field orders, value engineering, and submittals; review of testing results; and provided record drawings based on contractor certified as-built information and completion certification.



### PROGRAM:

Water Management Structures

### CLIENT:

South Florida Water Management District

### DATA:

Water Management Performance Enhancements Increase of 3600 CFS  
CIP Concrete Spillway  
Steel Sheet Pile Wingwalls  
Seepage Cutoff Walls  
Concrete Weir Structure  
Automated Roller Gates embedments  
Needle Beam Supports for Dewatering Panels  
Prestressed Access Bridge  
Precast Concrete Control Building

### SERVICES PROVIDED:

Structural Engineering  
Construction Documents  
Construction Administration







## SFWMD S-140

Broward County, Florida

The SFWMD S-140 Pump Station is located in Broward County, Florida, approximately 40 miles west of the City of Weston and 40 miles south of the City of Clewiston.

The S-140 Pump Station includes a Controls and Pump Building, three surface water pumps, a gated gravity spillway, a trash raking system, and an on-site fuel system. There is paved access from I-75 and paved access roads/areas within the site.

WGI Structural Solutions Division designed and prepared construction documents for the five primary components of the project: Trash Rake and Bridge Structure at the confluence of the C-60 and the L-28 Canals; replacement of the existing trash rack beam support posts on the upstream side of the pump station; repair and coating of the fuel storage/supply tank containment area; installation of a Generator/Control Building; and Stilling Well catwalks.

WGI provided design, calculations, and construction documents for a 170' long prestressed concrete service bridge for an automated trash rake. The project included prestressed concrete and steel sheet pile design, concrete pile cap design, bridge superstructure design, design of stainless steel bar screen and bar screen support, and substructure design for trash rack stand, guide rails, and beam. Sheet pile abutments at each end of the bridge were designed to provide scour protection for the approach slab and bridge abutments. Design details were also provided for a reinforced CMU with cast-in-place concrete roof Generator Control Building. During construction, WGI reviewed shop drawings, test result reviews, construction observations, reinforcing steel inspection, pile driving criteria special inspections, and substantial and final inspections. Upon completion, a final certification was provided.

### PROGRAM:

Water Management  
Bridge

### CLIENT:

South Florida Water Management  
District

### DATA:

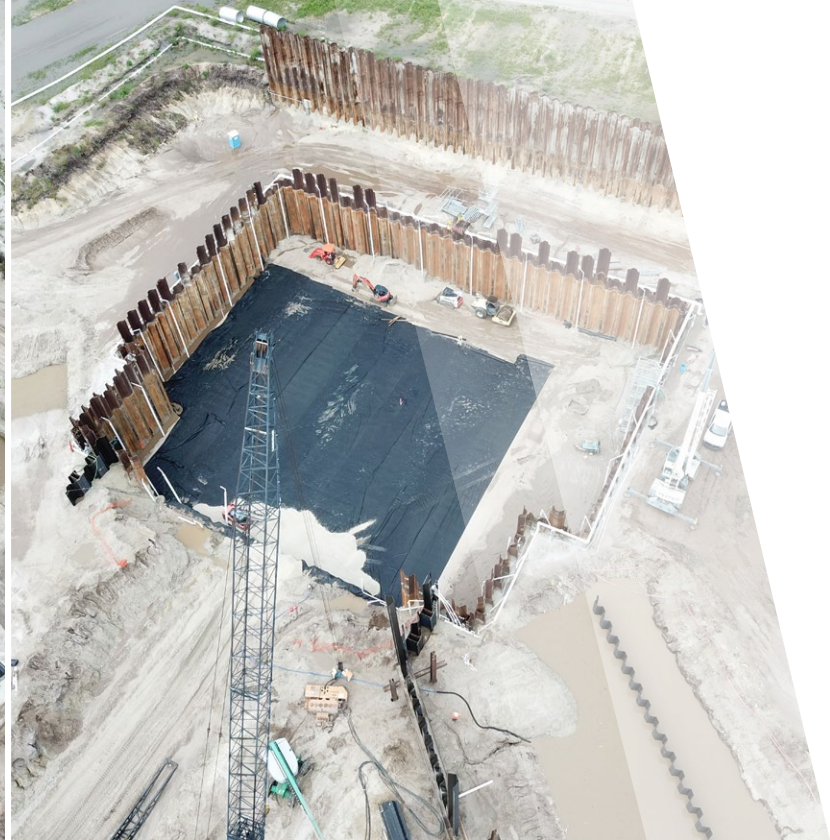
Trash Rake and Bridge Structure  
Generator/Control Building  
Prestressed Concrete Service Bridge

### SERVICES PROVIDED:

Structural Engineering  
Construction Phase Services







## SFWMD S-470 COFFERDAM AT C-43 CANAL

Labelle, Hendry County, Florida

WGI, on behalf of the contractor, provided value engineering for the design and construction of a cofferdam and wing wall system. The cofferdam was a steel combi-wall and was approximately 25,000 square-feet and had an exposed height of 25 feet. The cofferdam also had a cut-off wall and a temporary retaining wall outside of the footprint. The wing wall was a 260-foot long steel sheet pile wall tied back with steel sheet pile deadman anchors. The design utilized the United States Army Corp of Engineers (USACE) design software CWALSHT and complied with design requirements.



### PROGRAM:

Construction Support  
Water Management

### CLIENT:

South Florida Water Management  
District

### DATA:

Cofferdam  
Wingwall  
260 ft Steel Sheet Wing Wall  
Steel Sheet Pile Deadman Anchors

### SERVICES PROVIDED:

Structural Engineering







## COONTIE HATCHEE KAYAK LANDING

Fort Lauderdale, Florida

The City of Fort Lauderdale desired to create a kayak and canoe launch area at the Coontie Hatchee Landing Park located at 1116 SW 151th Avenue, Fort Lauderdale. The project required stabilizing the existing bulkhead wall, removing sections of the existing seawall adjacent to the South Fork New River, installing a new varying height and continuous concrete cap to join the wall sections, and creation of a mangrove island in the approximate location of the existing seawall. The project's primary goal was the creation of a beach launching and landing area for canoes and kayaks.



### PROGRAM:

Recreational

### CLIENT:

City of Ft. Lauderdale

### DATA:

Kayak and Canoe Launch  
Beach Launch and Landing Area

### SERVICES PROVIDED:

Structural Engineering







## WINDING WATERS BOARDWALK

Palm Beach County, Florida

Winding Waters Park boardwalks and observation shelter were developed as part of a Palm Beach County initiative to provide new passive park systems which provide hiking through natural areas, including boardwalks to traverse wetlands and elevated decks to observe birds and other native wildlife living in the natural surroundings.

As a part of the park improvements, WGI's staff designed the structural components of a new 8' wide by 300' long wood boardwalk supported on concrete piling. The use of IPE Brazilian hardwood for the decks and railing system, combined with the concrete foundations for the boardwalks, will provide safe, low-maintenance facilities for long-term use by visitors to the Winding Waters nature trails and park.

**PROGRAM:**

Recreational

**CLIENT:**

Palm Beach County Environmental  
Resources Management

**DATA:**

Boardwalk with Concrete Piling  
Concrete Foundations

**SERVICES PROVIDED:**

Structural Engineering  
Construction Phase Services







## SHARK WAKE 561 PARK

Palm Beach County, Florida

Shark Wake 561 is the first cable-tow wakeboard park in Palm Beach County. The facility, located at Okeeheelee Park in Palm Beach County, consists of cable-stayed compression towers and an interior-tensioned cable loop driven through a series of sheaves mounted to the towers. Through the interior cable loop, the wakeboard (or water skier) is towed. Shark Wake 561 Park utilizes Alta CableSki Tower and Cable systems to provide the primary towing equipment and dock. For Palm Beach County to permit the facility, WGI was required to review the referenced Alta CableSki design drawings and calculations, sign and seal the tower placement and foundation drawings and accept the engineer of record responsibility. Based on the final system documents, WGI incorporated the final system layout, designed the foundations, and produced construction documents for final permitting. WGI provided signed and sealed drawings for submission to the Palm Beach County Building Department and was also the designated resident inspector at Palm Beach County's request.



### PROGRAM:

Entertainment/Recreational  
Cable-Tow Wakeboard Park

### CLIENT:

Palm Beach County

### DATA:

Interior-Tensioned Cable Loop &  
Towers for Cable-Tow Wakeboard Park

### SERVICES PROVIDED:

Structural Engineering  
Construction Documents  
Construction Administration







## WELLINGTON OBSERVATION TOWER

Wellington, Florida

The six-story observation tower is a feature in the Wellington Environmental Preserve. This is an open structure with concrete columns and concrete decks, painted steel stairs and railings, and a two-tier standing seam metal roof. The ground floor has a security fence to close off access as needed. This project was built through a partnership between South Florida Water Management District and the Village of Wellington.

### PROGRAM:

Recreational

### CLIENT:

Village of Wellington

### DATA:

Concrete Columns  
Concrete Decks  
Steel Stairs & Railings

### SERVICES PROVIDED:

Structural Engineering  
Construction Phase Services



# RESUMES

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## DIRECTOR, STRUCTURES

*Arnaud is director of structural engineering services for WGI's Structures & Parking Department. He is involved in all phases of the design process, from initial concept through completion of construction documents, including calculations, coordination of design, and production of drawings and specifications. Arnaud has more than 10 years of experience with the U.S. Army Corps of Engineers, as both an enlisted soldier and officer, during which he developed his leadership skills directing various structural evaluation and construction projects in difficult environments.*



**Arnaud  
Thibonnier, P.E, S.E.**

### RELEVANT EXPERIENCE

#### Municipal

- Fort Bend Co MUD 50 WWTP Lift Station Design, Houston, TX
- Harris County MUD No 391 - Wastewater Treatment Plant Phase One, Houston, TX
- Willow Trace Lift Station, Tomball, TX

#### Industrial

- Dayton Phase 1, Dayton, TX
- Cummins San Antonio Expansion, San Antonio, TX
- EIL - Pinnacle Road LF Project (w/LFG), Montgomery County, OH
- Trinity West Business Park, Round Rock, TX

#### Multi- Family

- Lakeside Terranea, Dallas, TX
- 10300 Metropolitan Drive - Structural, Austin, TX
- Lakeshore Phase II Multi-Family, Austin, TX
- The Park Tower Project - Civil, STR, MEP, Fort Worth, TX
- The Duke, Austin, TX
- Elizabeth Street CSU, Fort Collins, CO

#### Office

- Performance Services Office Building, Round Rock, TX
- South Austin Medical Office Building, Bee Caves, TX
- McMillan James Office Building, Grapevine, TX

#### Adaptive Reuse/ Restoration

- Hancock Center Capacity Analysis, Austin, TX
- Crescent Riverside Renovation, Austin, TX
- 320 Congress, Austin, TX
- 420 Congress, Austin, TX
- Foxglove Renovation, Dallas, TX

#### Parking

- Bexar County Parking Garage, San Antonio, TX
- Colorado School of Mines Parking Structure #2, Golden, CO
- Capitol Chevrolet - North Bluff Parking Garage, Austin, TX

#### Hospitality

- Clive Bar Expansion, Austin, TX
- Buda Main Street Project, Buda, TX

#### REGISTRATIONS:

Professional Engineer:  
Oklahoma #30608, 2018  
Texas #117015, 2014  
Utah #10964915-2203, 2018  
Virginia #0402057609, 2017  
Colorado #0054671, 2018  
Alabama #37736, 2018  
Wyoming #16813, 2018  
Louisiana #42303, 2018  
Arizona #63691, 2017  
Structural Engineer:  
Illinois #81007708, 2015  
Nevada #025867, 2018

#### EDUCATION:

Bachelor of Science, Architectural  
Engineering - University of Texas at  
Austin, 2007  
Master of Science in Civil  
Engineering - University of Texas at  
Austin, 2009

#### AFFILIATIONS:

American Concrete Institute, (ACI)  
American Institute of Steel  
Construction, (AISC)  
Post-Tensioning Institute, (PTI)  
Structural Engineers Association of  
Texas, (SEAoT)

#### YEARS OF EXPERIENCE

TOTAL: 15 WITH WGI: 5



## DIRECTOR, SPECIALTY STRUCTURES

*Jeffrey has vast experience in managing civil and structural engineering projects in both the public and private sectors related to regulatory compliance, structural and civil engineering design and construction, construction administration, and contract management. Jeffrey's technical expertise includes structural engineering and inspection, hurricane hardening and evaluation, forensic building assessments, membrane and roofing design and detailing, building and specialty structure design forensic analysis, and finite element analysis. He is also proficient in design and permitting of surface water management systems, sediment transportation and erosion analysis, water use permitting, design and permitting of roadways and highways, design and permitting of water distribution and sanitary sewer collection systems, and design and permitting of reuse and irrigation quality water systems.*



Jeffrey  
Bergmann, PE

### RELEVANT EXPERIENCE

#### Bridges

- CR 880 Horizon Bridge, Palm Beach County, FL
- Audubon Causeway Bridge Replacement, Palm Beach County, FL
- C-21 Bridge Canal Crossing, Hendry County, FL

#### Buildings

- Aicher House, Palm Beach County, FL
- Ocean Reef Room Interior Mods & Roof Framing, Monroe County, FL
- I-75 Rest Area Design, Charlotte County, FL
- City of Tamarac Water Treatment Plant Control Building, Broward County, FL

#### Hurricane Hardening

- PBCWUD Western Facilities Hurricane Hardening, Palm Beach County, FL
- Boca WTP 25,33 & 52 Hurricane Hardening, Palm Beach County, FL
- Boca WTP Building 29 Hurricane Hardening, Palm Beach County, FL

#### Piers, Seawalls, Marinas, Docks

- PGA Marina Seawall, Palm Beach County, FL
- MacArthur Estuary and Dune Crossover Boardwalks, Palm Beach County, FL
- Bluffs Marina Repair, Palm Beach County, FL
- Dominica Boat Ramp, Duval County, FL

#### Recreational, Boardwalks & Pedestrian Bridges

- Coontie Hatchee Park Kayak Launch, Broward County, FL
- Shark Wake 561 Park, Palm Beach County, FL
- Sparrow Drive Pedestrian Bridge, Royal Palm Beach, FL

#### Water Control Structures

- South Florida Water Management District G-716 Spillway Structure, Palm Beach County, FL
- SFWMD S-140 Pump Station Improvements, Broward County, FL
- SFWMD L-8 DuPuis Culverts, Palm Beach County, FL
- C-44 Stormwater Treatment Area Engineers Estimate of Remaining Probable Construction Costs, Martin County, FL
- SFWMD G150 G151, Hendry County, FL

#### Water Control Structures

- Lake Worth Water Treatment Plant Safety Upgrades, Palm Beach County, FL
- Western Region Operations Center (WROC) CPS, Palm Beach County, FL
- Western Regional Operations Center (WROC) Pavilions, Palm Beach County, FL

#### REGISTRATIONS:

Professional Engineer: Florida  
#PE50159, 1996

#### EDUCATION:

Bachelor of Science, Civil  
Engineering - University of New  
Mexico, 1984

#### CERTIFICATIONS:

OSHA Fall Protection Authorized  
Standard - Full Day

#### AFFILIATIONS:

American Society of Civil Engineers  
Florida Engineering Society, FES #  
9005342

#### YEARS OF EXPERIENCE

TOTAL: 38 WITH WGI: 9





*As the Dallas Structural Market Leader, Mike is seeking to redefine consulting engineering service. By embracing new technologies and advancing our approach to architectural solutions, we serve our clients and the end product at a higher level. Mike brings nearly a decade of design and management experience in multiple markets including mixed use, retail, commercial, municipal, hospitality, higher education, and K-12*

### RELEVANT EXPERIENCE

#### Municipal

- City of Richardson Central Plaza, Richardson, TX
- Weatherford Public Safety Building - Structural, MEP, and Architecture, Weatherford, TX
- Wylie Fire Station NO. 4 & 911 Backup Call Center - Structural, MEP, and Architecture, Wylie, TX
- Saginaw Central Fire Station & EOC, Saginaw, TX
- Duncanville Fire Station #1 & EOC, Duncanville, TX

#### Industrial

- Midlothian Self Storage, Midlothian, TX
- Trinity West Business Park, Dallas, TX
- Scout Capital Dallas Food Center - Industrial Due Diligence, Garland, TX
- Southport Logistics Phase I Buildings One and Two, Wilmer, TX
- Texport Logistics Lovett Industrial, Wilmer, TX

#### Commercial

- Cloud Kitchens - 3800 Irving Mall Renovation, Irving, TX
- White Rhino Coffee Arlington (TX 19-007), Arlington, TX
- Oni Ramen Restaurant, Richardson, TX

#### Parking Garage

- Texas Ophthalmology Parking Expansion, Dallas, TX
- 1925 W John Carpenter Garage, Irving, TX
- Doral City Hall Parking Garage Retrofit, Doral, FL

#### Multi- Family

- Walzem Apartments, San Antonio, TX
- Bella Terra Twin Creeks Phase II, Allen, TX
- Westerly 360 Apartments Remediation, Austin, TX
- Park Creek Independent Living, Cypress, TX
- Park7 Reno Apartments, Reno, NV

#### Education

- Ursuline Academy, Structural, MEP, and Architecture, Dallas, TX
- Solar Preparatory Academy, Dallas County, TX
- Texas Tech Administration Building, Lubbock County, TX

#### Healthcare

- Preston Regional Medical Center MOB Renovation, Kerrville, TX
- Access Healthcare Renovation, Dallas, TX
- Electra Hospital District Trauma Center PT Expansion, Electra, TX
- Alto Pharmacy HQ3, Plano, TX



**James (Mike)  
Oler, PE**

#### REGISTRATIONS:

Professional Engineer: Texas  
#123287, 2016

#### EDUCATION:

Master of Architecture, - Texas Tech  
University, 2012

Bachelor of Science, Civil  
Engineering - Texas Tech University,  
2011

Bachelor of Architecture, - Texas  
Tech University, 2011

#### YEARS OF EXPERIENCE

TOTAL: 13 WITH WGI: 2



*Marcía provides a unique combination of experience with structural engineering and Building Information Modeling (BIM) coordination as a project manager. She has 16 years of structural engineering experience and project management of new construction and renovation in healthcare, commercial, higher education, multi-story residential, federal, aviation, and parking garages. Marcía's extensive experience in a large variety of markets further strengthens her comprehensive knowledgebase, making her a vital asset to the team. Her engineering expertise also extends to structural design for restoration construction and forensic engineering investigations, structural analysis for existing buildings for seismic, wind, and AT/FP blast resistance and progressive collapse upgrades, including National Technical Reviews for various FEMA programs.*



Marcía  
Alvarado, PE

### RELEVANT EXPERIENCE

#### Municipal

- South County Courts Expansion & Renovation, Venice, FL
- Naples Fire Station, Naples, FL
- Highlands County Detention Facility Expansion, Sebring, FL

#### Federal

- U.S. Garrison Cadet Barracks Chilled Water Plant, West Point, NY
- ANG MacDill JCSS Reserve Forces Bldg. 1885 and 1886 Renovations, MacDill AFB, Tampa, FL
- Michie Stadium Hoffman Pressbox, U.S. National Guard Bureau, West Point, NY

#### Commerical

- JEA Headquarters, Jacksonville, FL
- ARC Office Renovation, Tampa, FL

#### Parking Garage

- University of Tampa Gilchrist Parking Garage, Tampa, FL
- Heritage Plaza, Lakeland, FL
- Candlewood Suites Parking Garage, Lake Buena Vista, FL

#### Multi- Family

- Spring Cypress Independent Living Facility, Houston, TX
- Maple Avenue Apartments, Evanston, IL
- 11th Avenue Townhomes, Tampa

#### Education

- University of Tampa Gilchrist Parking Garage, Tampa, FL
- Sligh Middle School Community Center, Tampa, FL
- Florida College Hutchinson Auditorium Assessment, Tampa, FL

#### Aviation

- Identity Miami, Sweetwater, FL
- 1000 Ocean, Boca Raton, FL

#### Healthcare

- BayCare HealthHub™ Bloomingdale, Valrico, FL
- St. Joseph's Women's Hospital, Neonatal Intensive Care Unit (NICU) & Dietary Kitchen Renovation, Tampa, FL
- Florida Cancer Specialist, Altamonte Springs, FL

#### REGISTRATIONS:

Professional Engineer: Florida  
#71423, 2010  
Professional Engineer: New York  
#090682, 2012  
Professional Engineer: North  
Carolina #047016

#### EDUCATION:

Bachelor of Science, Civil  
Engineering - Florida Institute of  
Technology, 2004  
Master of Science, Civil/Structural  
Engineering - University of South  
Florida, 2009

#### YEARS OF EXPERIENCE

TOTAL: 16 WITH WGI: > 1





## PRINCIPAL ENGINEER, STRUCTURAL ENGINEERING

*Victor is a Principal Engineer and is the production and technology team leader within the structural engineering department. He is responsible for designing efficient and effective structural systems for various types of industrial, commercial, and residential projects. He is involved in all phases of the design process from initial concept through completion of construction documents, including calculations, coordination of design, and production of drawings and specifications. Victor has over 17 years of structural engineering experience.*

### RELEVANT EXPERIENCE

#### Municipal

- Harris County MUD 391 Wastewater Treatment Plant Phase 1, Harris County, TX
- Fort Bend County MUD 50 Wastewater Treatment Plant Lift Station Design, Fort Bend County, TX
- \*Fort Bend County MUD 50 Wastewater Treatment Plant Phase 1, Fort Bend County, TX
- \*Harris County MUD 432 Morton Creek Ranch Lift Station No. 4, Harris County, TX
- \*Northwest Harris County MUD 12 Lift Station to Serve 50-acre Business Park, Harris County, TX

#### Commerical

- Lakeside Terranea Condominiums, Flower Mound, TX
- \*Anadarko Hackett Tower, The Woodlands, TX
- \*Springhill Suites – Las Vegas Convention Center, Las Vegas, NV
- \*Bel Sole Condominiums, Gulf Shores, AL
- \*Majestic Condominiums, Gulf Shores, AL
- \*Embassy Suites, Denver, CO
- \*Homewood Suites at the Galleria, Houston, TX

#### Multi- Family

- 10300 Metropolitan Drive Apartments, Austin, TX
- The Park Tower Apartments, Fort Worth, TX
- West Oaks Apartments, Tyler, TX
- Lakeshore Pearl Apartments Phase 2, Austin, TX
- Presidio Apartments, Charlottesville VA
- Watkins Centre Apartments Phase 1 and 2, Richmond, VA
- Brookhill Apartments, Charlottesville, VA
- \*Lofts at the Ballpark Apartments, Houston, TX
- \*1900 Yorktown Apartments, Houston, TX
- \*The Susanne Apartments, Houston, TX

#### Tilt-Wall

- Southport Logistics Buildings One and Two, Wilmer, TX
- Trinity West Logistics Building, Dallas, TX
- Project Marnie Building, Liberty, MO
- Texport Logistics Building, Wilmer, TX
- Ashley Furniture, Forney, TX
- Project Cypress, Cypress, TX
- Project Bermuda, Gallaway, TN

*\* Denotes work from a previous employer*



**Victor  
Cordova, P.E, S.E.**

#### REGISTRATIONS:

Professional Engineer: Texas  
#97245, 2006 Prof. Structural  
Engineer: Nevada #027848, 2020  
Prof. Structural Engineer: Utah  
#11648452-2203, 2020 Professional  
Engineer: Louisiana PE.0043012  
Licensed in 9 Additional States  
(Available upon request)

#### EDUCATION:

Master of Engineering, Civil  
Engineering – Texas A&M University  
at College Station, 2002  
Bachelor of Science, Civil  
Engineering – Texas A&M University  
at College Station, 2001

#### YEARS OF EXPERIENCE

TOTAL: 17 WITH WGI: 17



## SENIOR PROJECT MANAGER

*Chris is a project manager and senior project engineer at WGI. He is experienced in structural engineering, including structural design of buildings, bridges, piers, retaining walls, seawalls, and pump stations. Chris also performs plan reviews for hurricane resiliency and vulnerability (ARC 4496) and provides field inspections of various structures*

### RELEVANT EXPERIENCE

#### Bridges

- I-95 (SR 9) at I-10 Interchange Operational Improvement Design-Build, Jacksonville, FL
- Yamato Road from Lakeridge Boulevard to West of Florida's Turnpike, Boca Raton, FL
- I-10 Widening from I-295 to I-95 Design-Build, Jacksonville, FL

#### Recreational, Boardwalks & Pedestrian Bridges

- City of West Palm Beach - Clear Lake Trail, West Palm Beach, FL
- Jupiter Riverwalk Lagoon Bridge, Jupiter, FL
- Indian River Boulevard Pedestrian Bridge, Indian River, FL
- Sample Road Pedestrian Bridge, Lighthouse Point, FL

#### Buildings

- Aicher House, Jupiter, FL
- Delray Lakes Estates Guardhouse, Delray Beach, FL
- Western Region Operations Center (WROC) CPS, FL
- Five Ash Water Treatment Administration Building, Fort Lauderdale, FL

#### Hurricane Hardening

- Lake Worth Water Utility Hurricane Hardening Task 15E, Lake Worth Beach, FL
- Water Treatment Plant Building No. 2 Hurricane Hardening, Boca Raton, FL
- CSID Hurricane Hardening Condition Assessment Pump Station 1 and 2, Coral Springs, FL

#### Piers

- Lake Worth Beach Pier Repairs, Lake Worth, FL
- Juno Beach Pier Condition Assessment, Juno Beach, FL
- Daytona Beach Main Street Pier Feasibility Study, Daytona Beach, FL
- Main Street Pier Grant, Daytona Beach, FL
- Dania Beach Pier Repair, Dania Beach, FL

#### Seawalls, Marinas, Docks

- Cumberland Farms Headwall, Ft. Pierce, FL
- Half Shell Raw Bar & Key West Bight Seawall, Key West, FL
- PGA Marina Seawall, Palm Beach Gardens, FL
- Canyon Town Center Wall Review, Boynton Beach, FL
- Okeeheelee Park Ski Slalom Boat Ramps, West Palm Beach, FL

#### Water Control

- C-44 Pump Station Quality Assurance Surveying, Indiantown, FL
- SUA WWTP Polymer Bulk Storage Tank Addition, Palm Beach Gardens, FL
- Loxahatchee River Environmental Control District Master Lift Station No. 1 Rehabilitation, Loxahatchee, FL
- Southern Region Water Reclamation Facility Safety Improvements, Delray Beach, FL
- Water Treatment Plant (WTP) No. 8 Anion Exchange System, West Palm Beach, FL



Christopher  
LaForte, PE

#### REGISTRATIONS:

Professional Engineer:

Florida #PE76797, 2013

Michigan #6201060389, 2013

South Carolina #35798, 2018

#### EDUCATION:

Master of Science, Civil

Engineering - Structural - Michigan  
Technological University, 2006

Bachelor of Science, Civil

Engineering - Structural - Michigan  
Technological University, 2005

#### CERTIFICATIONS:

Fall Protection Authorized Standard  
- Full Day

#### AFFILIATIONS :

Florida Engineering Society

#### YEARS OF EXPERIENCE

TOTAL: 14 WITH WGI: 14





## SENIOR STRUCTURAL ENGINEER

*As a structural engineer/special inspector, Ken has extensive experience in structural analysis, design, inspection, and construction administration for new buildings and renovation projects. His portfolio includes residential buildings, hotels, sports facilities, schools, and office buildings. He is responsible for structural analysis and design, engineering oversight, coordination with architects and design team members, production of structural drawings, and construction administration. His focus is always on developing constructable structural engineering solutions that can be built quickly and with the highest quality possible.*

### RELEVANT EXPERIENCE

#### Municipal and State Park

- Dune Crossovers 45-50-52, Jupiter, FL
- Mizell Johnson State Park Boardwalk, Dania Beach, FL
- Barnacle House Pavilion Task 12, Coconut Grove, FL
- Clematis Street Parking Garage Structural Assessment, West Palm Beach, FL
- Aventura Government Center Parking Garage, Aventura, FL
- Boca Fire Station No. 6 Phase II WO 59, Boca Raton, FL

#### Buildings

- Ocean Reef Club - Ocean Room Structural Assessment, Key Largo, FL
- Ocean Reef Room Interior Mods & Roof Framing, Key Largo, FL

#### Hurricane Hardening

- Delray Fire Station 111 Hurricane Hardening, Delray Beach, FL
- Building A Hurricane Hardening WO 61, Boca Raton, FL

#### Water and Wastewater Treatment Plant

- City of Tamarac Water Treatment Plant Control Building, Tamarac, FL
- Tamarac Water Treatment Plant Control Building, Tamarac, FL
- SUA WWTP Polymer Bulk Storage Tank Addition, Palm Beach Gardens, FL
- ECRWRF Reuse Facility Improvements, West Palm Beach, FL

#### Sports and Entertainment

- Hard Rock Stadium Master Plan and Redevelopment, Miami, FL
- Roger Dean Stadium Improvements, Jupiter, FL

#### Education

- Public Safety Training Center Phase Three Threshold Inspection, Lake Worth, FL
- University of North Florida, Wellness and Sports Education Center, Jacksonville, FL
- Palm Beach State College, Safety Complex Firing Range, Lake Worth, FL

#### Residential

- Identity Miami, Sweetwater, FL
- 1000 Ocean, Boca Raton, FL

#### Healthcare

- Bert Fish Medical Center Expansion, New Smyrna Beach, FL
- University of Miami, Sylvester Cancer Center, Deerfield Beach, FL



Suhendi  
Widjaja, PE/SI

#### REGISTRATIONS:

Professional Engineer/Special  
Inspector: Florida #PE74108, 2012

#### EDUCATION:

Master of Science, Civil Engineering  
- Southern Illinois University, 2005  
Bachelor of Science, Civil  
Engineering - Southern Illinois  
University at Carbondale, 2001

#### CERTIFICATIONS:

Fall Protection Authorized Standard  
- Full Day

#### YEARS OF EXPERIENCE

TOTAL: 16 WITH WGI: 1



**Arnaud Thibonnier, P.E., S.E.**  
**Director, Structural Engineering**

[Arnaud.Thibonnier@WGInc.com](mailto:Arnaud.Thibonnier@WGInc.com)

512.582.5556 ext. 1004

2021 East 5th Street, Suite 200  
Austin, Texas 78702