ELECTRONIC

REQUEST FOR PROPOSALS FOR PHASE 4 DRAINAGE IMPROVEMENTS - DESIGN AND PERMITTING

APTIM

PROPOSED TO:

TOWN OF LONGBOAT KEY
501 Bay Isles Road
Longboat Key, Florida 34228

PROPOSED BY:

APTIM ENVIRONMENTAL & INFRASTRUCTURE, LLC
6401 Congress Ave, Suite 140
Boca Raton, FL 33487

RFP 27-004
November 12, 2026

054746

APTIM

November 9, 2026

Kari L. Kennedy, Procurement Manager
501 Bay Isles Road
Longboat Key, Florida 34228

Subject: RFP 27-004/Longboat Key Village Phase 4 Drainage Improvements -Design and Permitting

Dear Ms. Kennedy and Selection Committee:

Aptim Environmental & Infrastructure LLC (APTIM) has served the Town of Longboat Key (Town) for more than three decades. We developed the Town's Vulnerability Assessment and Adaptation Plan that prompted this project, and we are pleased to submit our proposal to advance the Phase 4 Drainage Improvements. Our work with Town staff has shaped a shared understanding of local flood risks, infrastructure priorities, and community expectations. This assignment is a continuation of that work: moving the strategies we developed with the Town into detailed design and implementation. **We are ready to carry that work forward into improvements the Town can permit, fund, construct, and maintain.**

Longboat Key's beauty and coastal character are central to its identity. Protecting that character requires engineering that responds to the realities of a developed barrier island: low roadway elevations, tidal backwater, limited space for drainage improvements, sensitive coastal habitats, and homes and driveways closely connected to public infrastructure. Roadway elevation, outfall performance, and private-property drainage must work together. Our approach will address these connections while protecting neighborhood access and the qualities that make the Village a special place to live.

In developing the Town's Vulnerability Assessment and Adaptation Plan, we carefully evaluated how the Village could adapt incrementally over time, not simply where flooding occurs today. We considered how redevelopment would affect the neighborhood while some properties remain at very low elevations, and the essential role of drainage in keeping roads functional and maintaining services through that transition. We helped the Town evaluate redevelopment policies, compared incremental adaptation alternatives, and assessed best practices suited to the Village's unique conditions. We also evaluated the performance of other Town drainage projects, assessed backflow prevention needs, and surveyed all stormwater assets in the area. Phase 4 carries this work into detailed design, drawing on our understanding of the Village's drainage network, low-lying properties, and adaptation needs while coordinating connections with earlier drainage improvement phases and related Town infrastructure initiatives.

Our team combines APTIM's local knowledge and resilience expertise with the specialized capabilities **of The Balmoral Group** and **AREHNA**—two woman-owned businesses with extensive regional experience. **The Balmoral Group brings drainage modeling and design expertise, supported by roadway engineering and utility coordination capabilities** essential to integrating elevated roadways with effective stormwater conveyance. Balmoral's coastal roadway adaptation work for FDOT District One—featured in the American Society of

Highway Engineers' publication—pairs evaluation of tidal exposure with investment priorities, making the firm particularly well suited to help the Village integrate drainage and roadway improvements as sea levels rise. **AREHNA provides geotechnical expertise** to inform pavement design, subgrade preparation, settlement considerations, and construction recommendations. Together, we will develop coordinated solutions grounded in site conditions, hydraulic performance, constructability, and long-term maintenance.

We will start with the end in mind: a buildable project informed by how high tides and rainfall act together. Working with the Town, we will establish performance objectives that balance flood reduction, access, property impacts, cost, and maintenance. Our compound-flooding analysis will evaluate extreme high tides coupled with rainfall events, using historical rainfall and water-level records to understand their timing and combined effects on drainage performance, then evaluating how future sea level and rainfall projections change those conditions. Consistent with emerging coastal flood research, including application in New York, this approach connects observed conditions with future risk to provide a practical basis for selecting roadway elevations and drainage improvements while understanding residual risk. Where feasible, we will preserve opportunities for future modifications or elevation as sea levels rise and community needs evolve, allowing today's investment to support tomorrow's improvements.

Funding will be integral to this effort from the outset, building on APTIM's experience helping the Town secure and manage multiple grant awards, evaluating assessment allocations for past capital projects, and working with the Town to evaluate disaster recovery funding options to implement its Adaptation Plan. Alongside design and permitting, APTIM will actively pursue construction funding opportunities with the Town, aligning project documentation, cost estimates, benefit information, and schedules with applicable grant requirements. Our goal is to position the project for funding and construction as soon as practicable, with the technical and administrative groundwork in place to act when opportunities become available.

Under the leadership of **Samantha Danchuk, Project Manager, and Cigdem Ozkan, Deputy Project Manager** and Town Coordination Lead, the Town will have an accessible, accountable team that understands its priorities and is committed to seeing them through. We will maintain clear communication, engage Town staff and residents early on property-specific concerns, and resolve issues across disciplines before they delay delivery. **We are prepared to build on that trust by moving from understanding the Village's flood risks to delivering lasting improvements that keep its roads accessible, reduce recurring flooding, and protect its coastal character**.

Thank you for your consideration. We look forward to continuing our service to the Town of Longboat Key.

Kind Regards,

Samantha Danchuk

Aptim Environmental & Infrastructure, LLC
Samantha Danchuk, PhD, PE,
Director of Critical Infrastructure Resilience *(Primary Contact)*
Phone: 561 532 5882 Email: Samantha.Danchuk@APTIM.com

APTIM ENVIRONMENTAL & INFRASTRUCTURE, LLC

CERTIFICATE OF THE CORPORATE ASSISTANT SECRETARY OF APTIM ENVIRONMENTAL & INFRASTRUCTURE, LLC

CORPORATE RESOLUTION

I, **J. Todd Kindler**, do hereby declare and certify that I am duly elected, qualified and acting Assistant Secretary of Aptim Environmental & Infrastructure, LLC, (the "Company"), a limited liability company duly organized and validly existing under the laws of the State of Louisiana, and that in such capacity, I do hereby declare and certify the following:

> In accordance with the authority granted by the Company's Managing Member and its governing documents (and associated approved delegations thereof), **Samantha Danchuck, Client and Coastal Resilience Lead** has the authority to and is empowered to act for and on behalf of the Company in executing in the name of the Company, any and all types of proposals, bids, contracts, agreements, documents and instruments of whatever nature or kind necessary relating to the **Request for Proposal No. 27-004 for Town of Longboat Key, FL for Phase 4 Drainage Improvements – Design and Permitting.**

IN WITNESS WHEREOF, I have herewith signed my name and affixed the seal of Aptim Environmental & Infrastructure, LLC on this 3rd day of November, 2026.

APTIM ENVIRONMENTAL & INFRASTRUCTURE, LLC

By: _____
Name: J. Todd Kindler
Title: Assistant Secretary

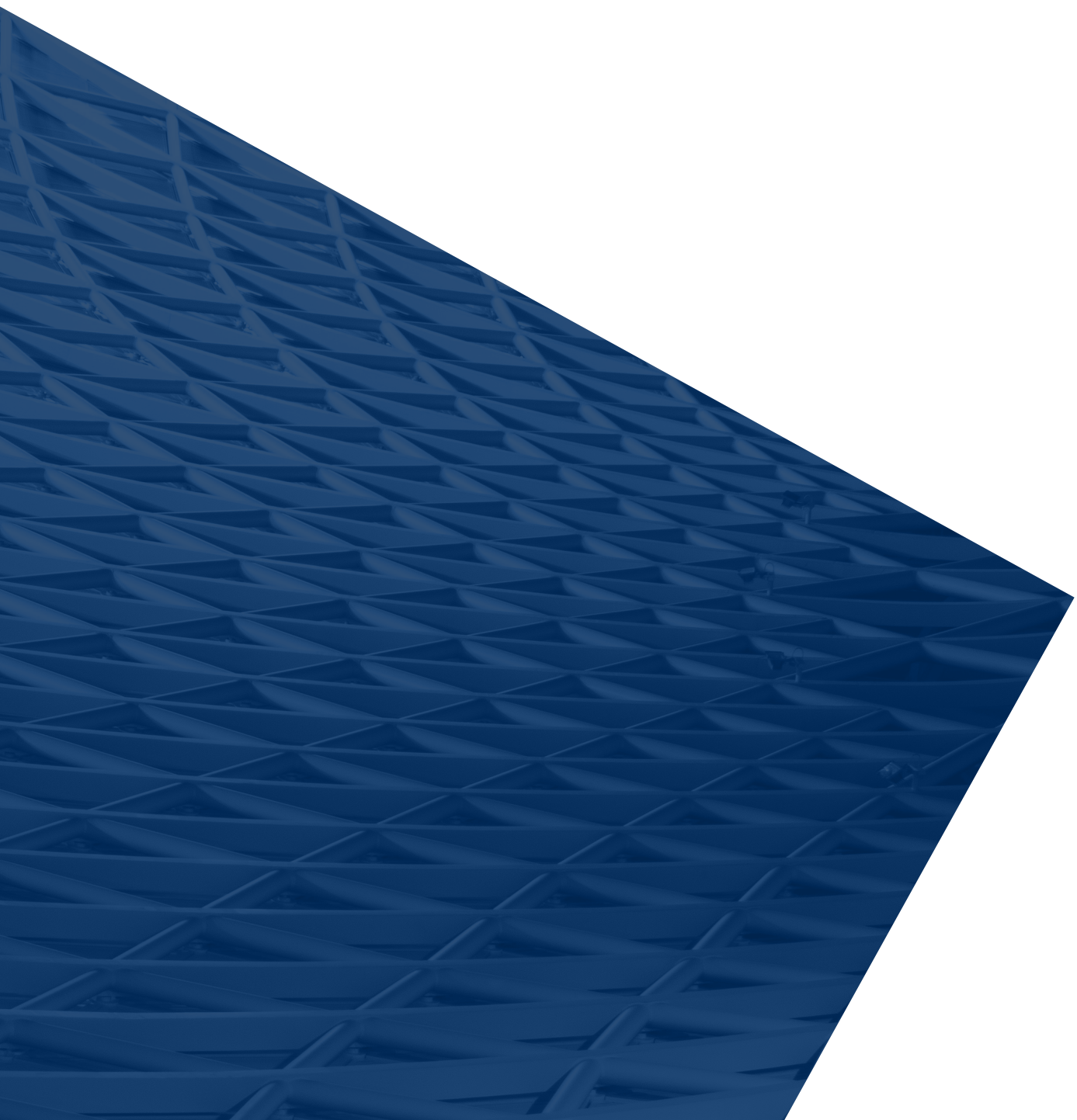
Corporate Seal:



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TAB 1. EXECUTIVE SUMMARY



EXECUTIVE SUMMARY





Aptim Environmental & Infrastructure, LLC (APTIM), a national leader in environmental, resilience, and sustainability services with a proven legacy of executing large-scale, complex coastal and watershed master planning projects. APTIM combines broad technical depth with a practical, multidisciplinary approach that carries projects from planning and analysis through **design, permitting, funding, construction, and implementation.** This continuity supports consistent technical decision-making, effective coordination across disciplines, and delivery of innovative, technology-informed solutions that are constructible and aligned with long-term project objectives.

APTIM designates **Samantha Danchuk, PE, PhD, Director of Critical Infrastructure Resilience**, as the authorized representative and primary point of contact for this Proposal and all related negotiations. Dr. Danchuk may be reached at **Samantha.Danchuk@aptim.com or (561) 532-5882.**

The **primary office** providing services to the Town for this project will be APTIM's Boca Raton, Florida office.

Our Understanding of the Phase 4 Drainage Improvements

APTIM understands that the Village Phase 4 Drainage Improvements represent more than an individual stormwater project. They are part of the Town's continued effort to address recurring drainage and flooding challenges while improving the long-term resilience and function of infrastructure within an established coastal community.

A Trusted Partner for More Than 3 Decades

APTIM brings **more than three decades of experience serving the Town**, through its legacy organizations, with a relationship that dates to 1995. Throughout that time, APTIM has supported the Town's **infrastructure and resilience objectives through coastal engineering, surveying, geotechnical, environmental, stormwater, and planning services**. This longstanding partnership has provided our team with a thorough understanding of the Town's unique coastal environment, infrastructure challenges, regulatory landscape, and community priorities, enabling us to deliver informed, responsive, and cost-effective solutions tailored specifically to the Town's needs.

Successful delivery will require an integrated approach that considers drainage performance, roadway and existing infrastructure conditions, constructability, permitting requirements, neighborhood access, and coordination with the Town's ongoing initiatives. Our team will build upon the Town's previous planning and technical work to advance practical improvements through design and permitting, with a focus on developing a coordinated, constructible, and bid-ready solution that the Town can confidently move into implementation.

APTIM recognizes that the Town needs a trusted partner with local insight, the ability to coordinate ongoing infrastructure initiatives, regulatory expertise, and a commitment to meaningful stakeholder engagement. Building on our longstanding relationship with the Town, the complementary strengths of **The Balmoral Group** and **AREHNA**, we are prepared to turn that trust into results: practical, constructible drainage improvements that reduce recurring flooding, preserve neighborhood access, and strengthen the Village's resilience for decades to come.



Hurricane Milton's Impacts on Longboat Key, October 2024.
Photo courtesy of the Town of Longboat Key's Facebook page.

Professional Certifications/Documentation



State of Florida
Department of State

I certify from the records of this office that APTIM ENVIRONMENTAL & INFRASTRUCTURE, LLC is a Louisiana limited liability company authorized to transact business in the State of Florida, qualified on January 7, 2019.

The document number of this limited liability company is M19000000202.

I further certify that said limited liability company has paid all fees due this office through December 31, 2026, that its most recent annual report was filed on February 25, 2026, and that its status is active.

I further certify that said limited liability company has not filed a Certificate of Withdrawal.

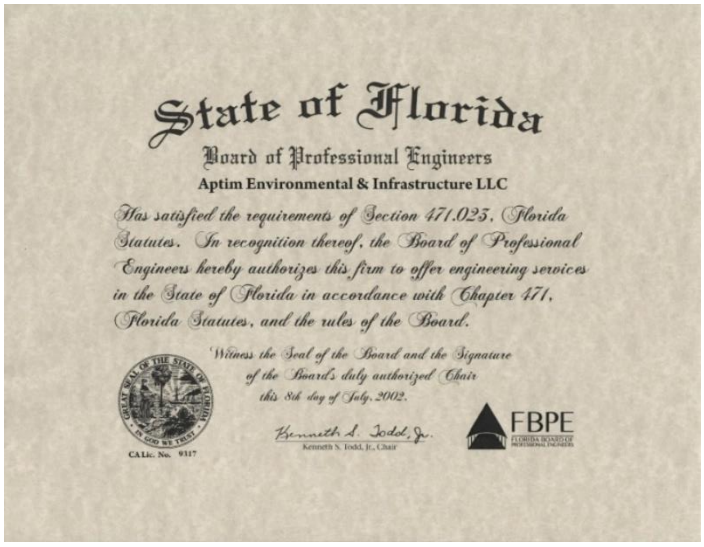
Given under my hand and the Great Seal of the State of Florida at Tallahassee, the Capital, this the Twenty-fifth day of February, 2026

Secretary of State

Tracking Number: 676652185BCC

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

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



State of Florida
Board of Professional Engineers
Aptim Environmental & Infrastructure LLC

Has satisfied the requirements of Section 471.023, Florida Statutes. In recognition thereof, the Board of Professional Engineers hereby authorizes this firm to offer engineering services in the State of Florida in accordance with Chapter 471, Florida Statutes, and the rules of the Board.

Witness the Seal of the Board and the Signature of the Board's duly authorized Chair this 8th day of July, 2002.

CA Lic. No. 9317

Kenneth S. Todd, Jr., Chair

FBPE



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.: LB8051
Expiration Date February 28, 2027

Professional Surveyor and Mapper Business License
Under the provisions of Chapter 472, Florida Statutes

APTIM ENVIRONMENTAL & INFRASTRUCTURE, LLC
1200 BRICKYARD LN STE 202
BATON ROUGE, LA 70802-8084

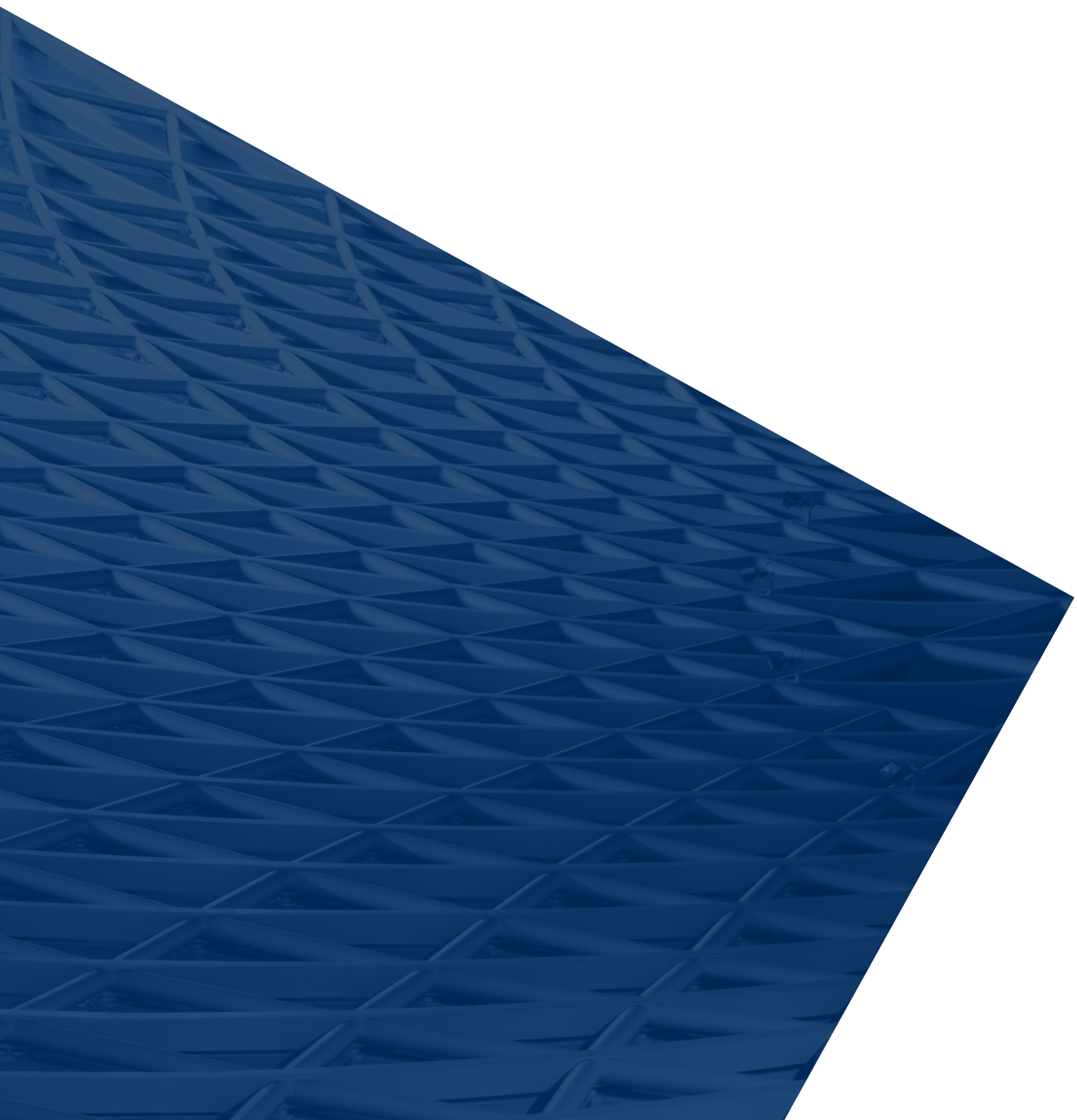
WILTON SIMPSON
COMMISSIONER OF AGRICULTURE

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.

Below is a list of any judgements, claims, arbitration proceedings or suits pending that have been initiated by or against APTIM in the past five (5) years.

Aptim Environmental & Infrastructure, LLC					
Matter Name	**Type of Incident**	**Date of Incident**	**What was the initial circumstance for this action?**	**Jurisdiction**	**Final Outcome**
Patriot Response Group, LLC v. Aptim Environmental & Infrastructure, LLC, Domingo Camarano, Jonathon Hunt and Lissa Metoyer	Alleged Contract Breach/Dispute	2021	Patriot Response Group, LLC filed suit against APTIM for nonpayment of funds from work in the USVI.	19th Judicial District Court for the Parish of East Baton Rouge, Louisiana	Resolved
Hunt, Guillot & Associates, LLC v. Aptim Environmental & Infrastructure	Alleged Contract Breach/Dispute	2021	An Aptim subcontractor filed suit against Aptim Environmental & Infrastructure alleging breach of contract for nonpayment in relation to work completed after Hurricane Harvey. In turn, Aptim added the City of Houston as an additional defendant in order to seek payment for that and other work.	District Court of Harris County, TX	Resolved
William Grit vs Koch Remediation and Environmental Services, LLC, Global Remediation and Environmental Services, LLC, Aptim Environmental and Infrastructure Inc. f/k/a CBI Environmental and Infrastructure Inc, Kennedy Jenks Consulting	Alleged Negligence	2021	William Grit alleges Aptim f/k/a CB&I failed to test wells on his property from 2014-2018 resulting in personal harm.	District Court of Shawnee County, Kansas	Resolved
Chitolie, Allan, d/b/a Chitolie Trucking Services v. Aptim Environmental & Infrastructure, LLC	Allged Contract Breach/Dispute	2022	Allan Chitolie, d/b/a Chitolie Trucking Services filed suit against Aptim Environmental & Infrastructure, LLC alleging unpaid invoices in the amount of $110,000.	Superior Court of the Virgin Islands, District of St. Croix	Resolved
Entergy New Orleans v. Coastal Protection and Restoration Authority, Great Lakes Dredge & Dock Company, LLC of Louisiana, Aptim Corp., et al.	Alleged Negligence	2023	Entergy New Orleans filed suit against CPRA, Great Lakes Dredge & Dock Company, APTIM, GeoEngineers, and Southern Shores Engineering due damage to Entergy's pipeline that allegedly resulted from the "block shift" that occurred during construction of Marsh Containment Area No. 2 on the Golden Triangle Project. Aptim retained by CPRA to design the Project; Southern Shores was the engineer of record for the Project and a sub to APTIM; Geo was a sub to APTIM as the geotechnical engineer on the Project and Great Lakes was retained by CPRA to construct the project.	19th Judicial District Court for the Parish of East Baton Rouge, Louisiana	Ongoing
Aptim Environmental & Infrastructure, LLC v. Virgin Islands Government Hospitals and Health Facilities Corporation	Alleged Breach of Contract	2023	Suit against the USVI hospital entity for breach of contract and bad faith "termination" of a substantially completed contract.	USVI Superior Court, St. Croix Division	Ongoing
USA and State of NJ (ex rel. Lee Wasserman) v. ICF International, Gilbane, Inc., Aptim Environmental & Infrastructure, LLC, et al.	Alleged Negligence	2024	Lead remediation specialist alleges improprieties with regard to work after Hurricane Sandy (2012) pursuant to the New Jersey Reconstruction, Rehabilitation, Elevation and Mitigation ("RREM") program.	U.S. District Court-District of New Jersey	Ongoing
Dacosta, Christine Ophelia v. Michael Jake Goutreaux, Donlen Trust, Aptim Holding Corporation and Aptim Corp.	Auto	2025	Auto accident involving APTIM insured driver and pedestrian in crosswalk.	Circuit Court of the Eighteenth Judicial Circuit Court, Seminole County, Florida	Ongoing
Crossman, Robyn, et al. v. Waste Connections, Aptim Environmental &Infrastructure, LLC, et al.	Alleged Negligence	2025	Mass Action Petition for Damages filed by residents of neighborhood in proximity to the Jefferson Parish Landfill in Waggaman, LA (the "Landfill") for nuisance damages alleged to be related to the emission of noxious odors from the Landfill believed to be primarily methane and hydrogen sulfide gases. Named defendants include Waste Management, IESI LA Landfill Corporation as the leachate management system contractor, and Aptim Corp. as the landfill gas collection contractor.	24th Judicial District Court for the Parish of Jefferson, LA	Ongoing
Barnes, J.D., et al. v. v. Progressive Waste Solutions of LA, Inc., Waste Connections, US, Inc., Aptim Corp., et al.	Alleged Negligence	2026	Additional Petition for Damages filed by residents of neighborhood in proximity to the Jefferson Parish Landfill in Waggaman, LA (the "Landfill") for nuisance damages alleged to be related to the emission of noxious odors from the Landfill believed to be primarily methane and hydrogen sulfide gases. This claim was filed after the judge disallowed amendment to add plaintiffs to the Crossman matter.	24th Judicial District Court for the Parish of Jefferson, LA	Ongoing
Giles, Samuel v. Colorado Energy Office, Aptim Environmental & Infrastructure, LLC, et al.	General Litigation	2026	Samuel Giles filed suit in Colorado challenging the denial of his application for a state vehicle rebate and naming APTIM, the program administrator, along with Colorado state entities/officials as defendants.	District Court of Denver County, Colorado	Ongoing

TAB 2. PROPOSER ABILITY AND EXPERIENCE



PROPOSER ABILITY AND EXPERIENCE

A. Capabilities & Expertise

APTIM has extensive experience providing engineering, resilience, environmental, and infrastructure services to public-sector clients throughout Florida. Our team has successfully supported municipalities, counties, state agencies, water management districts, and special districts on projects **involving drainage improvements, stormwater management, flood mitigation, coastal resilience, utility infrastructure, capital improvement planning, permitting, and construction-phase services.** Representative clients include **Monroe County, City of Hollywood, Sarasota County, Lee County, Collier County, Palm Beach County, the Florida Department of Transportation (FDOT), the Florida Department of Environmental Protection (FDEP), and multiple Florida Water Management Districts**. Through these engagements, APTIM has developed a comprehensive understanding of Florida's regulatory framework, environmental conditions, permitting requirements, funding programs, and infrastructure challenges, enabling our team to deliver effective solutions tailored to the needs of local communities.

Our multidisciplinary team provides the full range of services required to support **drainage improvement programs**, including data collection and assessment, hydrologic and hydraulic modeling, stormwater system evaluation, drainage master planning, engineering design, permitting, environmental review, utility coordination, grant support, construction administration, and stakeholder engagement. These capabilities enable APTIM team to deliver projects from initial evaluation through implementation while maintaining schedule, budget, and quality objectives.

Unmatched Scale and Track Record

While our legacy spans decades of combined professional expertise across the nation, our recent measurable impact demonstrates our unparalleled capacity to handle the Town's requirements.



Figure 2-1. CCBJ Business Achievement Award.

Furthermore, our firm brings the distinct qualification of having supported communities in securing and managing vast amounts of recovery and mitigation funding. **We have supported more than $30 billion in state and federal grant-funded projects** that help communities recover from, mitigate, and adapt to flooding, severe storms, and wildfires.

In Florida, APTIM literally **wrote the book on adaptation planning** by updating the Florida Adaptation Planning Guidebook. As a consultant to the Resilient Florida program, we updated the state's foundational guidebook for climate resilience planning and led statewide engagement to improve its utility and provided workshops that helped municipalities and infrastructure owners put it to work.

APTIM was recognized with a **Climate Change Business Journal Business Achievement Award** for advancing best practices in coastal resilience **(Figure 2-1)**.

Differentiator: The APTIM Way - Collaborative by Design, Resilience at the Core

Throughout Florida, APTIM has successfully supported local governments facing challenges like those identified by the Town, including recurring flooding, aging infrastructure, sea level rise and storm surge vulnerability, coastal resilience, regulatory compliance, and community expectations for sustainable infrastructure investment.



Figure 2-2. Map of APTIM's Municipal and County-Level Vulnerability Assessments.

Our experience serving municipalities along Florida's Gulf and Atlantic coasts provides firsthand knowledge of the technical, environmental, and permitting considerations associated with drainage and stormwater improvements in coastal communities.

APTIM's regional resilience team has successfully completed more than 30 vulnerability assessments and adaptation plans across thirteen Florida counties, **including the Town of Longboat Key's Vulnerability Assessment and Adaptation Plan (Figure 2-2)**. These assessments resulted in identified flood-prone areas and implementation-ready mitigation and adaptation strategies.

APTIM's longstanding relationship with the Town further enhances our ability to provide these services. **APTIM has been supporting the Town since 1995** through flood mitigation planning, risk assessments, comprehensive coastal engineering and related infrastructure services, providing our team with a deep understanding of the community's infrastructure systems, resilience initiatives, environmental setting, and long-term objectives. We have created the **Town's Stormwater Atlas**, surveying and mapping each drainage infrastructure, and identified outfalls with and without tidal valves. We know the local flooding hot spots. We will pair this knowledge with **The Balmoral Group's drainage modeling and roadway design expertise** and **AREHNA's geotechnical capabilities** to examine opportunities for improving system performance, constructability, and long-term value. This institutional knowledge will allow us to rapidly advance the Phase 4 Drainage Improvements Program while minimizing learning curves and maintaining continuity with previous Town initiatives.

The Town's prior investments provide a strong foundation; our team brings the independent technical judgment to build on that work, test assumptions, and identify refinements that could improve outcomes. We understand how tidal backflow, overland flooding, roadway elevations, and private-property drainage interact, and we bring the multidisciplinary expertise to address them as one coordinated system.

Our experience **serving Florida public agencies has taught us that the strongest solution is one a community can permit, fund, construct, and maintain**. APTIM will start with those outcomes in mind, evaluating design choices against measurable reductions in flooding, protection of neighborhood access, compatibility with adjacent properties, and lifecycle costs.

We will explore creative combinations of roadway grading, conveyance improvements, backflow prevention, storage, and nature-based features, using hydraulic modeling to establish where each measure adds value. Early coordination among our engineers, environmental specialists, grant professionals, and Town staff will help resolve implementation constraints while the design remains flexible.

As a result, the Town will benefit from **a fresh engineering perspective** that builds on previous consultants' work while looking beyond the solutions explored to date. APTIM brings the local knowledge and independent technical judgment to challenge established assumptions, uncover overlooked opportunities, and translate new ideas into practical, implementable drainage improvements.



Hurricane Milton's Impacts on Longboat Key, October 2024.
Photo courtesy of the Town of Longboat Key's Facebook page.

B. Projects

H&H Modeling and Flood Mitigation

Client
Town of Belleair

Size
Town-Wide

Costs
Ph 1: $269,000
Ph 2&3: $446,000

Completion
Ph 1: 2023 - 2025
Ph 2&3: 2025- Ongoing

Current POCs
Ashley Linda Avis Bernal
Assistant Town Manager
Town of Belleair
727 647 7487
abernal@townofbelleair.net



TOWN OF BELLEAIR BLUFF RESTORATION AND EROSION ABATEMENT

Town of Belleair, FL

Project Overview

APTIM is delivering a comprehensive, multi-phase bluff restoration, stormwater management, and coastal resilience project for the Town of Belleair, Florida, in coordination with the Southwest Florida Water Management District (SWFWMD). The project integrates **watershed assessment, hydrologic and hydraulic (H&H) modeling, stormwater management and best management practices (BMPs), groundwater evaluation, coastal engineering, and living shoreline design** to address bluff erosion, improve water quality, and enhance long-term community resilience.

Phase 1 established the technical foundation through field investigations, watershed and water quality assessments, evaluation of erosion mechanisms, and development of conceptual stormwater and shoreline stabilization alternatives. Phase 2 secured additional funding, while Phase 3 advances the preferred improvements through detailed H&H and coastal modeling, integrated stormwater and shoreline design, permitting, and construction-phase engineering services. The project also includes a Town-wide Vulnerability Assessment to evaluate flood exposure and the resilience benefits of the proposed improvements.

Project Description

Phase 1 evaluated bluff erosion and water quality conditions, identified management strategies, and developed conceptual alternatives to stabilize the bluff and shoreline while improving nearshore water quality. Completed work included:

Field Data Collection gathered information on site conditions, including:

- Conducted **topographic, bathymetric, and environmental surveys** in 2023 and 2025
- Collected **water quality samples** at three outfall locations and one offshore location
- Installed a **groundwater monitoring well** for a 12-month data collection period

Watershed and Water Quality Assessment identified water quality concerns and opportunities to reduce pollutant loading through:

- Water conservation, protection, and reuse strategies
- Review of storm runoff pathways and potential mitigation methods
- Identified best practices for managing upland pollutants affecting nearshore waters

Basis of Design Report established a framework for shoreline and bluff improvements. APTIM developed five conceptual alternatives addressing wave-driven erosion and groundwater discharge, incorporating best management practices (BMPs) along the Hallett Park shoreline and upland areas. Work included:

- Proposed BMPs including detention ponds, capacity improvement for the baffle box
- Developed design concept drawing, including a **Living Shorelines Design**, and provided cost estimates for each alternative
- Calculated anticipated nutrient loading reductions through the proposed BMPs to meet SWFWMD criteria of more than 50 lb/year reduction in Total Nitrogen loading

Phase 2 – Funding Support

APTIM submitted grant applications to advance the project and secured $60,000 through the FDEP Resilient Florida Program for a Vulnerability Assessment of the Town's assets, including the bluff area.

Phase 3 – Design, Permitting, Construction Services, and Vulnerability Assessment

APTIM is advancing the conceptual improvements through **coastal, sediment transport, hydrologic, and hydraulic modeling;** hydrographic, bathymetric, geotechnical, drainage, vegetation, and submerged aquatic vegetation surveys; and analysis of upland runoff and drainage at the bluff and outfalls. **H&H modeling evaluated 10- to 500-year design storms for the entire Town.**

The design develops living shoreline features, geotextile membranes, a terminal groin, bluff and upland stabilization, grading, planting, and access and construction sequencing.

APTIM is coordinating permit applications and responses with permitting agencies. During construction, APTIM supports bidding and contractor selection and provides construction oversight and technical coordination to help implement the permitted design.

In parallel, APTIM is also conducting a Vulnerability Assessment for the Town's assets and evaluates how protecting the bluff could in turn safeguard the inland assets.

Unforeseen Circumstances, Errors or Oversights and Actions Taken to Mitigate and/or Correct

Detailed environmental surveys identified seagrass within the proposed footprint of offshore breakwaters developed during conceptual design. Our team promptly evaluated alternative structures to avoid seagrass impacts while maintaining the intended shoreline protection benefits. We updated the modeling, revised the design and drawings, and recalculated opinions of probable construction cost. Automated workflows and scripts accelerated these revisions, allowing the team to address the newly identified constraint while maintaining the project schedule.

Evaluating Flood and Climate-Related Vulnerabilities

Client
United States Army Corp of Engineers (USACE)

Size
Village-wide

Cost
$425,000

Completion
May 2025 – July 2026

Current POCs
David Willems
Public Works Director
Village of Estero
239-221-5035
willems@estero-fl.gov



VILLAGE OF ESTERO COMPREHENSIVE VULNERABILITY ASSESSMENT

Village of Estero, FL

Project Overview

APTIM completed a Comprehensive Vulnerability Assessment and Adaptation Plan for the Village of Estero, funded through a HUD Community Development Block Grant Disaster Recovery (CDBG-DR) grant administered through Lee County. The project evaluated risks associated with storm surge, rainfall-induced flooding, sea level rise, drought, high winds, extreme heat, and wildfire. The assessment connected detailed **flood modeling** and infrastructure vulnerability analyses with proposed adaptation projects to reduce flood impacts, protect essential services, and guide resilience investments.

Project Description

APTIM integrated **hydrologic and hydraulic (H&H) modeling**, drainage analysis, coastal engineering, and geospatial assessment to evaluate flooding across the Village. The team completed a regional **MIKE SHE watershed model** and a **local StormWise drainage model** to support updates to the Village's Stormwater Master Plan and inform the vulnerability assessment and adaptation planning process. Together, these models supported evaluation of watershed runoff and local drainage performance, helping identify flood-prone areas and infrastructure constraints.

The flood assessment examined current and future **storm surge** and **tidal flooding**, along with **rainfall-induced flooding under normal-tide and king-tide conditions**. These analyses evaluated how elevated receiving-water levels affected drainage performance and compounded rainfall-driven flooding. APTIM used the modeling results to assess exposure of roads, bridges, stormwater facilities, wastewater infrastructure, neighborhoods, and other critical assets.

APTIM translated the identified vulnerabilities into proposed adaptation projects and focus areas for flood mitigation. The Adaptation Plan linked identified flood mechanisms and drainage constraints to targeted infrastructure improvements and complementary policy measures.

Project sheets and a phased implementation schedule established a framework for advancing priority actions, coordinating responsible entities, and monitoring progress as conditions and community needs evolved.

Project Successes

- **Integrated H&H and Drainage Modeling:** Completed regional watershed and local drainage modeling to connect watershed-scale hydrologic processes with local flood conditions and stormwater infrastructure performance.
- **Evaluation of Coastal and Rainfall Interactions:** Assessed rainfall flooding under different tidal conditions to identify areas where elevated receiving-water levels limited drainage and increased flood vulnerability.
- **Model-Informed Adaptation Projects:** Used modeled flood exposure and infrastructure vulnerabilities to identify mitigation focus areas and develop proposed adaptation projects tied to the Village's documented needs.
- **Critical Infrastructure Mapping and Risk Assessment:** Developed a geospatial asset database and mapped hazard exposure to identify vulnerable infrastructure, neighborhoods, and essential services under current and future conditions.
- **Community Engagement:** Incorporated resident and stakeholder input to ground the assessment in local flood experience and inform adaptation priorities.
- **Implementation Planning:** Organized recommendations into immediate, near-term, and long-term actions, supported by project sheets and monitoring measures.

Unforeseen Circumstances, Errors or Oversights and Actions Taken to Mitigate and/or Correct

Limited information on existing drainage infrastructure presented a modeling challenge. APTIM conducted site visits to document field conditions and collect measurements to accurately represent drainage features in the model. Although the existing model did not encompass the entire Village, our evaluation confirmed that the excluded area drained away from the Village's main watershed and did not contribute runoff to the modeled drainage system. This finding, confirmed with the client, supported retaining the existing model domain and avoided unnecessary model expansion and additional simulations, preserving the project schedule. Also, the interaction between rainfall-driven runoff and elevated coastal water levels also required careful evaluation. APTIM assessed rainfall flooding under both normal-tide and king-tide conditions and interpreted the results alongside storm surge and tidal flood exposure to better understand coastal influences on local drainage performance.

Base Flood Elevations (BFEs) Lowered through Infrastructure Investment

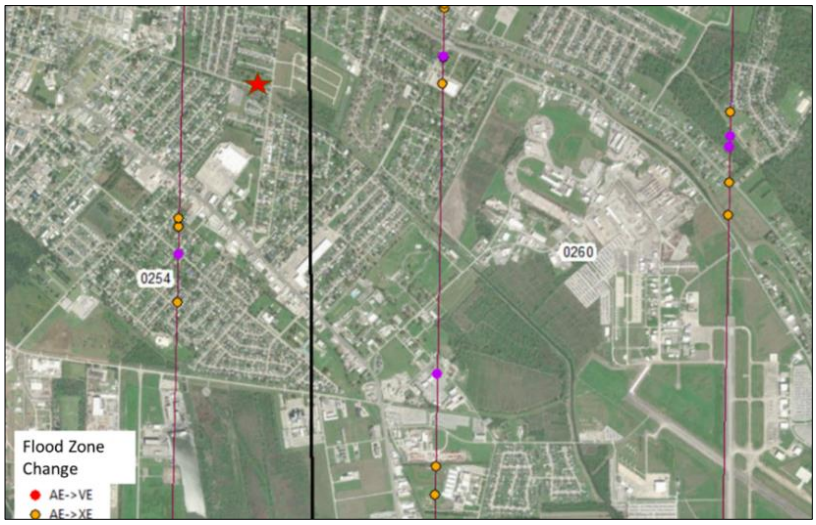
Client
Terrebonne Parish Consolidated Government

Size
2,100 Square Miles

Cost
$124,920
(Amendment 1 - $360k)

Completion
March 2009 - Present

Current POCs
Chris Pulaski, PLA
TPCG Planning Director
985 873 6569
cpulaski@tpcg.org



TERREBONNE PARISH DFIRM APPEAL AND CLOMR/LOMRS

Terrebonne Parish, LA

Project Overview

Terrebonne Parish encompasses 2,100 square miles, including 10 communities, rural lands and emerged wetland areas. Flood control within Terrebonne Parish is actively managed by extensive levees, flood gates, water control structures, canals and pump stations. Multiple major infrastructure and restoration projects have occurred in recent years to support implementation of the Morganza to the Gulf Hurricane Protection System and reduce flood risk. Based on the recently released Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps and base flood elevations (BFE) for Terrebonne Parish, an evaluation of the quality of the input data and results of the Flood Insurance Study identified areas within the Parish where the maps do not reflect likely flood zones and a strategy was developed for pursuing an amendment to the published maps.

Project Description

APTIM was contracted by the Terrebonne Parish Consolidated Government (TPCG) to perform a FEMA Digital Flood Insurance Rate Map (DFIRM) appeal which consisted of the following services:

- Define community objectives and define a flood protection plan for the parish.
- Determine the technical basis for the BFEs shown on the DFIRM maps.
- Present results of the DFIRM review to the parish and update the community objectives for the DFIRM appeal.
- Re-compute BFEs for the community based upon new data and new surge wave modeling and prepare and submit a final appeal report to FEMA.

Since the period to submit technical data to support an appeal to the final maps closed in 2022, the TPCG was pursuing the Conditional Letter of Map Revision (CLOMR) or Letter of Map Change (LOMCs) process to revise the effective maps. In 2023, APTIM was again contracted with TPCG and provided the following services:

- Review the effective and pending flood insurance studies, maps, model input data and results and list the factors driving flood risk.
- Conduct storm surge, wave propagation, overland flow and flood modeling, consistent with FEMA's requirements using technical data for use in LOMC requests. APTIM completed a coastal analysis required to prepare a complete LOMR application package. This includes completing coastal analyses necessary to duplicate the effective model, which is needed to validate model settings, and detailed coastal analyses necessary to change the flood zone designation based on existing conditions.
- Provide assistance with the preparation and submittal of LOMCs and continued agency coordination until the LOMC was processed.

Unforeseen Circumstances, Errors or Oversights and Actions Taken to Mitigate and/or Correct

Following closure of the technical-data submission period for an appeal of the final flood maps, APTIM assisted Terrebonne Parish Consolidated Government in adapting the project approach to pursue the applicable CLOMR or LOMC process. APTIM reviewed the effective and pending studies, maps, model inputs, and results; validated the effective coastal model; completed updated coastal and flood analyses consistent with FEMA requirements; and supported preparation and agency coordination for the map-change request. These actions addressed changes in the regulatory process while maintaining a technically supported approach to revising the effective flood mapping.

C. Current Workload

APTIM will manage the Town's Phase 4 Drainage Improvements as a critical assignment with defined responsibilities, coordinated staffing, and clear accountability for each milestone. Our team combines APTIM's project management, resilience, permitting, outreach, and construction support capabilities with The Balmoral Group's drainage and roadway expertise and AREHNA's geotechnical services. This division of responsibilities places each technical component with the appropriate specialists while maintaining one accountable point of contact for the Town.

Active Workload and Resource Management

At project initiation, our Project Manager Dr. Samantha Danchuk will establish a resource-loaded schedule identifying staff assignments, anticipated effort, dependencies, and review periods for each major deliverable. The schedule will address the Town's objective of completing bidding plans and specifications within twelve months, with early attention to survey, geotechnical investigations, utility information, easements, and permitting coordination.

Weekly team coordination will review progress against upcoming milestones, assess competing workload demands, and identify decisions or additional resources needed to maintain delivery. Staffing needs will be evaluated before each major design submittal so that production and quality reviews receive adequate time. When workload pressures arise, the Project Manager will coordinate with discipline managers and subconsultants to adjust assignments, bring in qualified support, or resequence activities before those pressures affect the Town's schedule.



APTIM's Resource Management Process

Continuity and Technical Accountability

Designated discipline engineers will remain responsible for their technical components throughout the assignment. APTIM will identify backup support for critical functions and maintain shared project records, design assumptions, and decision logs so that additional staff can contribute efficiently when needed. Supplemental resources will support the proposed team while preserving continuity in technical direction and client communication. Any changes to proposed key personnel will be coordinated with the Town in accordance with the RFP.

Quality reviews are built into our staffing plans and project schedule. Reviewers will evaluate the interfaces among roadway elevations, drainage performance, utilities, adjacent properties, and permit requirements at defined milestones. This review process will help resolve conflicts before they become late-stage redesign or construction issues.

Responsiveness to the Town

The Project Manager will have authority to coordinate team resources, resolve routine delivery issues, and elevate decisions requiring Town input. Regular status updates will identify completed work, upcoming activities, unresolved items, and any schedule or budget implications, with a responsible party and target resolution date for each action.

For the Town, our commitment means having the right people available when their work is needed, maintaining clear ownership of every deliverable, and addressing constraints early enough to keep the project moving. APTIM will carry that accountability from initial investigations through design, permitting, bidding, and the construction-related services included in the assignment.

APTIM is prepared to mobilize the appropriate resources to meet the Town's needs and provide the responsive, coordinated service necessary to successfully deliver the Phase 4 Drainage Improvements.

D. Previously Performed Projects for Town of Longboat Key

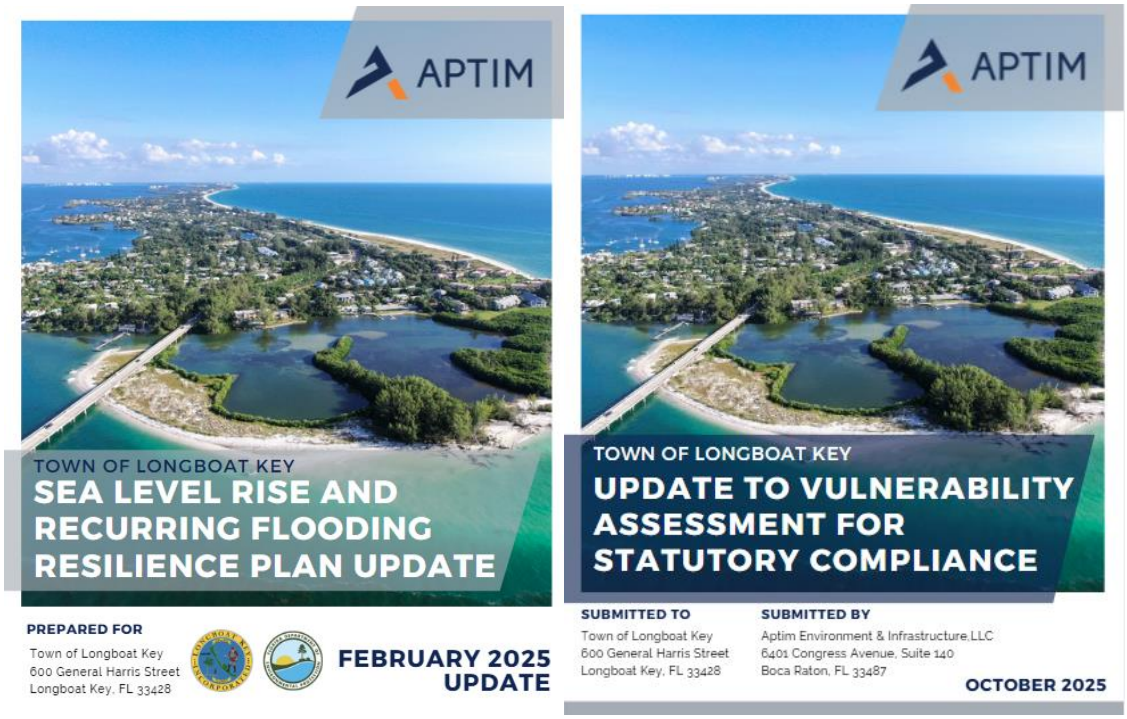
APTIM has maintained a longstanding relationship with the Town, providing a broad range of coastal engineering, environmental, resilience, and infrastructure services since 1995. Within the past ten (10) years, APTIM has supported several Town initiatives, including the **Greer Island Spit Removal and Environmental Restoration Project, vulnerability assessment and adaptation planning efforts**, **Stormwater Atlas, environmental permitting, biological monitoring, surveying, and related engineering services**. These projects have included planning, engineering design, regulatory permitting, environmental resource assessments, construction support, agency coordination, and long-term monitoring activities.



APTIM's Greer Island Mangrove Delineation Project

Under APTIM's ongoing Comprehensive Coastal Engineering Services program,

APTIM has continued to provide multidisciplinary engineering, surveying, geotechnical, biological, permitting, and construction support services to the Town. **The contract value for this program exceeds $7M.**

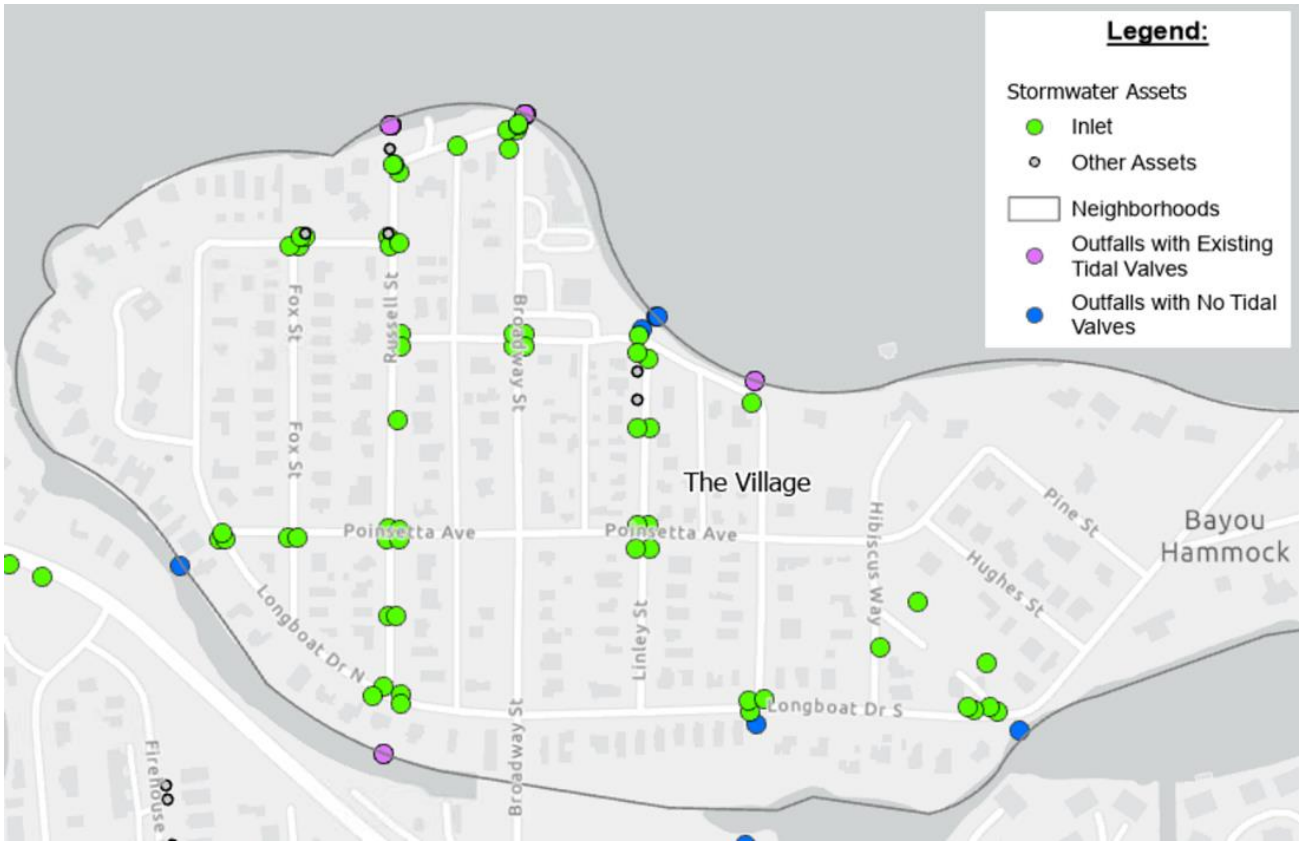


APTIM has completed and updated the Town's Vulnerability Assessments and Adaptation Plans

The projects listed below highlight our experience supporting the Town and our familiarity with its engineering, regulatory, and community priorities, over the last 10 years.

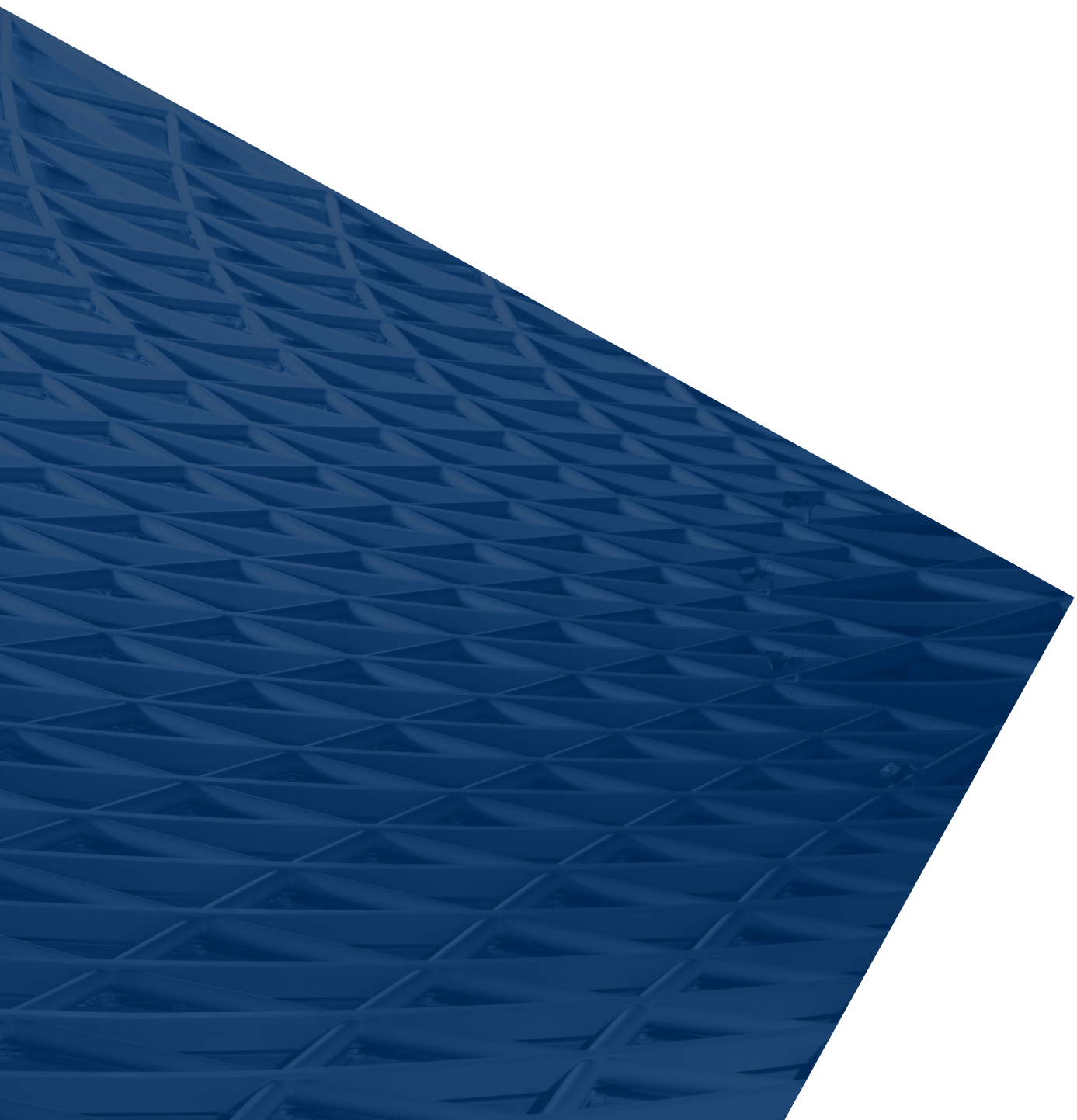
Project	Work Performed	Total Fees Awarded
2025 Islander PAG Repair	Due to Hurricane Helene damage to PAG groins at the Islander Club, APTIM was tasked with returning the groins to pre-storm conditions, which included replacement of deck slabs, development of connections from the deck support beam to the deck slab and incidental reinforced concrete repairs.	$49,735
2024 Greer Island Channel Easement Survey	Hydrographic and topographic survey of spit and environmental assessments supporting overall project	$15,664
Stormwater Atlas / Vulnerability Assessment & Adaptation Planning Projects	Planning, resilience assessments, stormwater evaluations, adaptation planning	$50,819
2024 Island Wide Mangrove Mapping	Aerial analysis to confirm mangrove resources to determine extent of mangrove habitat, field investigations, drone imagery capture	$38,044
2022 Greer Island Spit Construction	Designed removal of spit, supported two emergency dredging operations which maintained a flushing channel into the lagoon	$124,030
Vulnerability Assessment Phase 3	Exposure and sensitivity analysis for the Town’s critical assets under various flooding scenarios	$131,289

Project	Work Performed	Total Fees Awarded
Assess Sea Level Rise and Recurring Storms – Phase 2	Exposure and sensitivity analysis for the Town's critical assets under various flooding changing sea level rise conditions and recurring storms	$120,732
Greer Island Spit Management Emergency Permitting	Permitting coordinated with FDEP for overall project	$52,509
Greer Island Spit Management	Conducted desktop aerial analysis of seagrass, conducted wetlands assessment to delineate mangroves, coordinated with FDEP on seagrass monitoring plan, monitoring was incorporated into permits	$129,915



APTIM's townwide stormwater mapping identified outfalls with and without tidal valves; The Village detail shown

TAB 3. PERSONNEL QUALIFICATION AND EXPERIENCE



PERSONNEL QUALIFICATIONS AND EXPERIENCE

Organizational Chart

The following organizational chart highlights our key personnel along with support staff that will be assigned to the project. Resumes of key personnel begin on the following page.

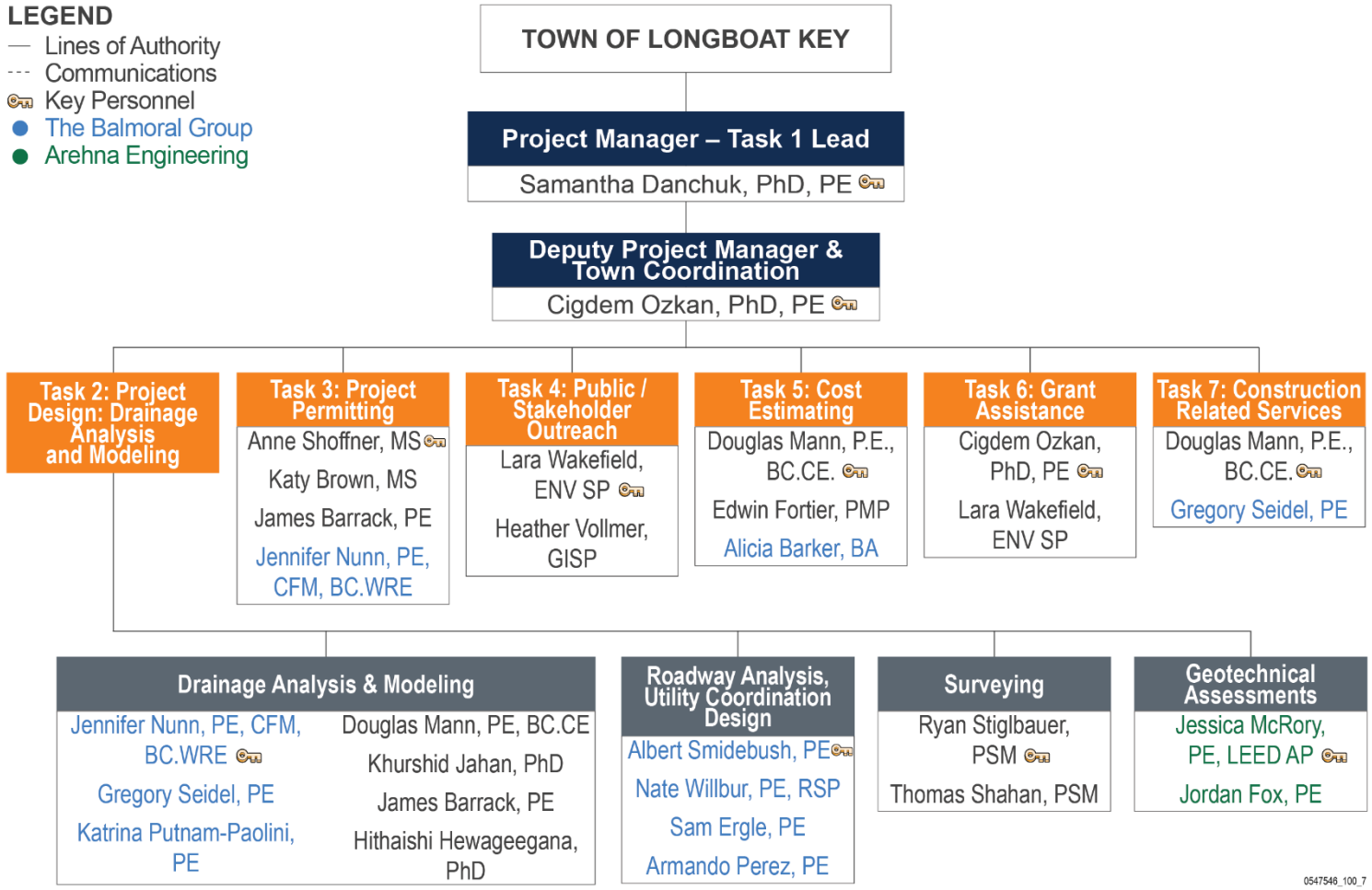


Figure 3-1 Organizational Chart



21 YEARS
EXPERIENCE

Education

- PhD Civil Engineering, Louisiana State University
- MS Environmental Engineering, University of California, Berkeley
- BS Environmental and Civil Engineering, Florida State University

Registrations/Certifications

- Professional Engineer, Civil, Florida
- Waterfront Edge (WEDG) Professional

Highlights

- Former County Asst Chief Resilience Officer, Resilience Capital Program Administrator
- Regional flood modeling, groundwater and future condition planning experience
- Flood mitigation performance evaluation and capital prioritization
- Technical Advisor, Southeast Florida Regional Climate Change Compact
- 15 National Association of Counties Awards for resiliency policies and initiatives
- CCBJ Award for Advancing Best Practices in Coastal Resilience

SAMANTHA DANCHUK, PHD, PE

DIRECTOR OF CRITICAL INFRASTRUCTURE RESILIENCE
Project Manager | APTIM

Professional Summary

Samantha Danchuk, PhD, PE, is APTIM's Director of Critical Infrastructure Resilience (**10 years with APTIM**) with expertise in flood risk assessment, hydrologic and coastal modeling, and mitigation planning and implementation. Her experience includes direct application of MIKE SHE/MIKE 11 regional modeling and future-condition groundwater mapping in Broward County to infrastructure and capital planning, as well as leading flood resilience programs throughout Florida. She specializes in translating regional flood analysis into feasible, prioritized mitigation investments that can advance through funding, design, and implementation.

Relevant Experience

Aptim Environmental & Infrastructure, LLC | Climate Resilience Lead | June 2021–Present, 2009-2014

Project Manager; Longboat Key Resilience Capital Program

Led coastal and groundwater flood-risk analysis and development of prioritized mitigation strategies integrated with capital improvement planning, including drainage, shoreline protection and facility resilience.

Project Manager; Village of Estero Vulnerability Assessment and Adaptation Plan, Estero, FL

Led flood vulnerability assessment, data analysis, stakeholder coordination and risk evaluation and oversaw advanced flood modeling and stormwater planning. Translated results into prioritized drainage and resilience strategies consistent with Resilient Florida requirements.

Lead Engineer; Captiva Island Bayside Adaptation Plan, FL

Evaluated flood vulnerabilities and developed implementable mitigation strategies addressing shoreline, drainage, floodproofing and natural-system opportunities. Evaluated property, environmental and permitting constraints; developed engineering concepts; and supported FEMA benefit-cost and funding analyses to advance priority projects.

Project Manager; City of West Miami Vulnerability Assessment, West Miami, FL

Performing exposure and sensitivity analysis to assess vulnerabilities for critical assets and resources. Project was Resilient Florida grant funded and in compliance with guidance.

Geospatial modeling, hazard analysis, risk calculations and mapping were included. Priority focus was given to schools, drainage infrastructure and parks.

Project Manager; Resilient Florida Planning Grant Tasks & Updates to the Florida Adaptation Planning Guidebook, FL

Led development of statewide guidance, technical standards and performance metrics for evaluating and prioritizing resilience projects funded through Resilient Florida. Established methods for translating vulnerability findings into actionable, fundable mitigation strategies and capital investments.

Rebuild by Design, US Atlas of Disasters

Responsible for data analytics of climate impacts and federal disaster funding by county and state paired with maps of rated return on investment for resilience investments, energy reliability, social vulnerability and estimation of future damage costs. Supported development of website content, presentations, and visuals to deliver unique analysis of national datasets. Engaged with media outlets, federal agencies, and project developers.

Project Manager; Virginia Department of Emergency Management Hazard Mitigation Program

Forty municipalities were identified by VDEM as social or economically vulnerable and prone to stormwater flooding, provided engineering assistance for FEMA Hazard Mitigation Grant Program applications. Assessed feasibility, provided engineering estimates, developed construction schedules, and completed design or modeling as needed. Project scopes varied widely—from demolition cost estimates to hydrologic investigations and full stormwater system design—depending on the needs and readiness of each community. This effort helped underserved municipalities lacking in-house engineering resources develop competitive FEMA applications to secure federal funding for critical flood mitigation projects.

Project Manager; Texas Coastal Plan & Resiliency Study

Evaluation of current state of resiliency through community assessments, risk calculations, ranking priority projects and modeling potential resiliency improvement projects. Also, served as engineer advisor for Texas General Land Office's Technical Advisory Committee discussions which provided basis for legislature report describing coastal priority projects.

Broward County Resilient Environment | Assistant Chief Resilience Officer/ CIP Administrator | 2014–2021

Led regional flood resilience and capital planning initiatives incorporating MIKE SHE/MIKE 11 modeling, future-condition groundwater mapping, rainfall, sea level rise, and drainage conditions.

Broward County Land Use Policy for Future Conditions

Co-developer of policies for minimum tidal flood barrier/ seawall elevation, future groundwater table drainage design elevation, penny transportation projects surtax resilience criteria, adaptation action areas of regional significance and land use resilience criteria for densified redevelopment, extensive outreach.

Broward County Critical Infrastructure Assessment and Countywide Risk Assessment and Resilience Plan

Led initial vulnerability assessment of county assets and resources to future flood risk. Developed scope for $3M assessment and resilience plan project with innovative analysis.



CIGDEM OZKAN, PHD, PE, WEDG

INFRASTRUCTURE RESILIENCE LEAD
Deputy Project Manager & Town Coordination | APTIM

11 YEARS
EXPERIENCE

Education

- PhD, Civil and Environmental Engineering, University of Central Florida
- MS, Civil and Environmental Engineering, University of Central Florida
- BS, Civil Engineering, Middle East Technical University

Registrations/Certifications

- Professional Engineer, Civil, Florida
- Waterfront Edge Design Guidelines (WEDG) Associate

Skills & Experience

- Vulnerability Assessment
- Risk Assessment
- Adaptation & Implementation Planning
- Data Analysis
- FEMA Coastal Flooding

Professional Summary

Cigdem Ozkan, PhD, PE has 11 years of experience **(4 years with APTIM)** investigating innovative solutions to resiliency problems and energy demands through an environmentalist approach. Dr. Ozkan has proven expertise in climate risk assessment, hydrodynamic and stormwater modeling, and emergent technology adoption to enhance decision-making in climate resilience and environmental equity. She is skilled in leading stakeholder engagement, and strategic planning, with a track record of integrating effective solutions into risk mitigation frameworks. She is adept at developing data-driven roadmaps, performance metrics, and regulatory compliance strategies to support infrastructure sustainability and long-term climate resilience. She integrates nature-based solutions with engineered infrastructures to resolve complex environmental challenges.

Relevant Experience

Aptim Environmental & Infrastructure, LLC | Resilience Project Manager | January 2023–Present

Resilience Engineer; Town of Longboat Key Sea Level Rise Flood Hazard Analysis, Town of Longboat Key, FL

As the technical lead, played a key role in identifying hazard scenarios and running vulnerability analysis and quality controlling the result. Developed an adaptation plan to address sea level rise and recurring flooding. The Plan included capability assessments and adaptation strategies such as engineering and construction of public works, policy, and Town ordinance changes.

Resilience Engineer; Village of Estero Vulnerability Assessment and Adaptation Plan, Estero, FL

Technical lead for flood vulnerability assessment, data analysis, stakeholder coordination and risk evaluation and oversaw advanced flood modeling and stormwater planning. Translated results into prioritized drainage and resilience strategies consistent with Resilient Florida requirements.

Project Manager; Town of Belleair Bluff Restoration and Erosion Abatement, FL

Led the planning and execution of a large-scale environmental restoration project, overseeing project scope development, stakeholder coordination, and schedule management. Directed field data collection, erosion analysis, and water quality assessments to identify sustainable mitigation strategies.

Managed project budgeting, reporting, and compliance with regulatory agencies, ensuring alignment with Town of Belleair and SWFWMD objectives. Facilitated interdisciplinary collaboration to develop conceptual design alternatives for bluff stabilization, integrating engineering, environmental, and cost feasibility analyses.

Resilience Engineer; Resilient Florida Adaptation Planning Guidebook and Performance Metrics, FL

Led the efforts to update the FDEP Florida Adaptation Planning Guidebook and development of Resilient Florida Planning Grant Tasks. Coordination with the client, project management for timely deliverables, and organizing and hosting a public workshop with 300 attendees. Contributions involved creating content for the new sections of the guidebook and updating outdated references with current resources and best practices.

Resilience Engineer; Captiva Island Bayside Adaptation Plan, Captiva, FL

Directed the assessment and strategy development to enhance the resilience of Captiva Island's bayside shoreline. Oversaw the evaluation of climate change impacts including rising sea levels and increasing storm intensity and identified vulnerabilities that threaten the island's ecological and infrastructural integrity. Led formulation of both short-term and long-term adaptive strategies, managed the development of engineering plans, and facilitated engagement with private property owners to refine and implement effective resilience measures.

Resilience Engineer; City of Delray Beach, Vulnerability Assessment & Adaptation Plan, Delray Beach

Resilient Florida funded adaptation plan to address flooding across the city, both inland and along the intracoastal. Project included interviews to assess adaptive capacity, public outreach and staff engagement to inform adaptation strategies and plan development.

Resilience Engineer; Okaloosa County Vulnerability Assessment and Adaptation Plan, FL

Technical lead for exposure and sensitivity analysis to assess vulnerabilities for critical assets and resources. Project was Resilient Florida grant funded and in compliance with guidance. Geospatial modeling, hazard analysis, risk calculations and mapping were included.

Resilience Engineer; Escambia County Vulnerability Assessment

APTIM, in collaboration with Jacobs performed exposure and sensitivity analysis to assess vulnerabilities for critical assets and resources. Project was Resilient Florida grant funded and in compliance with guidance. Geospatial modeling, hazard analysis, risk calculations and mapping were included.

Resilience Engineer; City of Pompano Beach Adaptation Plan funded through the State Resilient Florida Program, Pompano Beach, FL

Tasks include guiding development of a Florida Adaptation Planning Guidebook–compliant plan building on the completed flood vulnerability assessment, engaging City departments, stakeholders, and the public to incorporate priorities into strategy development, and translating risk findings into prioritized, funding-ready resilience projects aligned with capital planning, infrastructure management, and state and federal funding opportunities.



25 YEARS
EXPERIENCE

Education

- MS, Marine Environmental Science (emphasis on Coastal Zone Management and Marine Biology), Nova Southeastern University.
- BS Biological Sciences, University of Tennessee

Skills & Experience

- Planning and implementing effective coastal field efforts.
- Data collection and reporting.
- Environmental permitting and compliance.
- Marine habitat characterization of natural and artificial reef communities, endangered species surveys.
- Coral relocation, habitat restoration, and monitoring.

ANNE SHOFFNER

NATURAL RESOURCE MANAGER
Project Permitting | APTIM

Professional Summary

Anne Shoffner has over 25 years of experience **(1 year with APTIM)** in private industry and government providing effective leadership, program management, scientifically sound project execution, and interdisciplinary team coordination in project management, business development, environmental permitting and consulting. She is an experienced marine scientist with over two decades of professional experience working on coastal infrastructure, beach nourishment, habitat monitoring, and restoration projects.

Relevant Experience

Aptim Environmental & Infrastructure, LLC | Natural Resources Manager | December 2025–Present

Environmental Permitting and Biologist; Pelican Harbor Marina Boat Ramp Bulkhead and Pier Replacement Project; Miami, FL 2025-Ongoing

Lead environmental permitter for the replacement of two bulkheads and a fishing pier at a municipal marine in Miami-Dade County. Supported field surveys and developed mitigation plan.

Environmental Consultant; BOEM Coastal Protection Projects; Outer Continental Shelf 2026

Consultant on three Bureau of Ocean Energy Management (BOEM) task orders related to offshore sand resources on the Outer Continental Shelf.

Environmental Consultant; Texas Coastal Monitoring Program; Texas Coastline 2026

Support the Texas General Land Office (GLO) in developing and funding a large-scale coastal monitoring program to comprehensively evaluate current and future coastal restoration and protection projects.

Environmental Permitting; Boca Grande Fishing Pier Rehabilitation, Charlotte County, FL

Lead environmental permitter for the proposed repairs and will require permits from FDEP and USACE for this pier rehabilitation project.

Environmental Permitting; Cocohatchee River Dredging, Collier County, FL 2026

Provide environmental permitting support for a dredging project to improve water conveyance and remove areas of significant shoaling and maintain navigation for residents east of US Highway 41.

GHD Services, Inc., Jupiter, FL; Natural Resources Client Relationship Manager, October 2024–December 2025

Created internal and external relationships to grow the natural resources service line in Florida by leveraging other service lines in the maritime and coastal group, transportation group, and water group. Review of RFQs and RFPs, create technical content for proposals, review draft submittals for accuracy and responsiveness, and provide feedback on completeness. Conduct in-field surveys for coastal construction projects and create quality deliverables for submittal to state and Federal regulatory agencies.

Cummins Cederberg, Inc., Jupiter, FL; Project Director, October 2019–October 2024

Business development, project estimations, preparation of technical and cost proposals, field surveys, NEPA documentation, and assisting with permitting of coastal and marine projects. Field work includes biological characterization and mapping of natural and artificial reefs, including living shorelines, coral reef, hardbottom and seagrass assessments, habitat restoration and mitigation, and biological monitoring on SCUBA and snorkeling. Worked with private and governmental clients on coastal and marine structural projects such as beach nourishment projects, marina development, port and channel dredging, jetty development and rehabilitation, submarine infrastructure (e.g., cables), bayside parks and piers, artificial reefs, and living shoreline programs.

Marine Scientist; Sawfish Bay Marine Restoration, Jupiter, FL 2021

Marine resource surveying and monitoring to support design, permitting and monitoring of the Town of Jupiter's initiative to restore and enhance the marine environment at Sawfish Bay Park. The Sawfish Bay Marine Restoration is a five-phase multi-year initiative to install a living shoreline, restore marine habitat, improve water quality, and improve the resilience of approximately 7,000 linear feet of shoreline.

Marine Scientist; The Bay Sarasota; Sarasota, FL 2023

In support of a park conservancy, conduct benthic investigations and long-term monitoring in support of a large park development that transformed upland and coastal features into a sustainable bayfront gathering place. Coastal features included a living shoreline, a mangrove bayou, and an ADA-accessible kayak launch. Performed multi-year benthic monitoring assessments to evaluate performance of upland restoration activities including water quality improvements and dredging silts from the mangrove-lined cove (bayou).

Marine Ventures International, Inc., Stuart, FL; Project Manager, July 2017–October 2019

Business development, marketing, proposal development, cost estimations, cost monitoring/financial management, contract reviews, customer relations, and governmental coordination related to permitting and compliance. Provide marine environmental consulting, project management, and technical support for marine field operations and desktop studies supporting various clients in Florida and internationally. Project Management for artificial reef creation in Qatar and seagrass restoration in North Carolina.

Florida Inland Navigation District, Jupiter, FL; Project Manager, October 2016–June 2017

Report directly to the Executive Director; manage environmental projects; support the Administrative Assistant in preparing for the monthly board meetings. Assist the operations manager in field site inspections. Work with external consultants in updating the website, conducting a survey of active commercial waterfront properties.



14 YEARS
EXPERIENCE

Education
- MS, Marine Biology, Nova Southeastern University
- BS, Environmental Science, Fordham University

Registrations/Certifications
- PADI OW Instructor
- Diving Safety Officer
- AAUS Scientific Diver
- Enriched Air Nitrox Instructor
- SEAFAN Bleach Watch
- Friends of Our Florida
- Reefs Member
- FSBPA Member
- SEFCRI Member

Skills & Experience
- Project Management
- Environmental Assessments
- Permitting
- Biological Monitoring
- Data Analysis

KATY BROWN, MS

LEAD MARINE BIOLOGIST
Project Permitting | APTIM

Professional Summary

Katy Brown, MS, has 14 years of experience **(13 years with APTIM)** as a Marine Biologist. She is experienced in biological and environmental science in temperate and tropical environments. Experience includes marine habitat characterization of natural and artificial reef communities, submerged aquatic vegetation surveys, coastal wetland biological surveys, and protected species surveys. She manages the preparation of environmental documents, including NEPA-compliant reports, required to obtain state and federal permits for coastal projects. Ms. Brown is a project manager, coordinates with resource agencies, leads field survey operations, and analyzes and prepares data for final reports and deliverables.

Relevant Experience

Aptim Environmental & Infrastructure, LLC | Lead Marine Biologist **|** May 2013–Present

Senior Marine Biologist; Greer Island and Canal 1A Spit Management Program, Town of Longboat Key, FL 2019-2023

Led and conducted seagrass and wetland surveys in support of the design, permitting, and construction of a sand management (dredging) plan to control the spit migration at Greer Island. Coordinated with FDEP to develop a seagrass monitoring plan to document any unanticipated project impacts and a dune mitigation and monitoring plan to offset unavoidable impacts to salt marsh and mangrove vegetation. Seagrass assessments included conducting historical aerial delineations in ArcGIS and in situ monitoring using DGPS mapping systems. Monitoring included seagrass edge delineations and quantitative quadrat assessments of the seagrass beds.

Senior Marine Biologist; Pelican Harbor Ramp Bulkhead and Fishing Pier Project, Miami-Dade County, FL 2025-Ongoing

Led and conducted an environmental resource investigation in support of the County's goal of reconstructing the 1980's fishing pier and rehabilitating the boat ramp. The investigation included a benthic resource investigation to determine the presence and extent of submerged aquatic vegetation (SAV) and coral resources and wetland delineation. Coordinated a site visit with SFWMD and is currently assisting in the permitting effort for this project.

Senior Marine Biologist; Gasparilla Island Beach Nourishment Project, Lee County, FL 2018-2022

Led the biological hardbottom monitoring effort for the pre-construction and four post-construction monitoring events, which included data collection and management, project

management, agency coordination, report development and submittal of all deliverables.

Senior Marine Biologist; St. Johns County Environmental Assessment, St. Johns County, FL 2025

Project manager and primary author of the Environmental Assessment. Responsible for agency coordination, data compilation, and technical review. The EA was prepared under contract to SJC for adoption by BOEM in support of its decision to issue a negotiated agreement to use OCS sand resources in compliance with NEPA, the Council on Environmental Quality (CEQ) Regulations, and U.S. Department of the Interior (DOI) regulations.

Senior Marine Biologist; Lake Worth Lagoon Seagrass Restoration Project, Palm Beach County, FL 2024-Ongoing

Ms. Brown leads the extensive seagrass monitoring effort which includes qualitative and quantitative in situ assessments over 12 acres. The quantitative data collection includes seagrass quadrat assessments and water quality measurements. Ms. Brown manages the large dataset and prepares the GIS, biological data, and report deliverables. Restoration techniques will be applied to the seagrass plantings in an effort to gain a better understanding of how these techniques may benefit future restoration projects. The seagrass restoration sites shall be monitored for a period of 3 years post-planting to evaluate the success of the restoration efforts.

Senior Marine Biologist; Town of Palm Beach Environmental Impact Statement, Palm Beach County, FL

Supported the preparation of an Environmental Impact Statement in support of NEPA, as well as a Biological Assessment and an Essential Fish Habitat Assessment. Conducted biological characterizations of natural and artificial habitats in support of the project design and permitting.

Senior Marine Biologist; Grand Canal Dredging, Pinellas County, FL 2023-2024

Led and executed the permit-required submerged aquatic vegetation (SAV) surveys for the Grand Canal Dredging Project, conducting the pre-construction survey in 2023 and the post-construction survey in 2024. Collaborated closely with the County and the FDEP to identify appropriate minimization strategies aimed at protecting and monitoring adjacent SAV resources. Additionally, she facilitated updates to the Seagrass Monitoring Plan. FDEP and County staff also participated in the post-construction survey effort.

Project Manager/Senior Marine Biologist; Indian River County Coastal Program, Indian River County, FL 2018-Ongoing

Prepared environmental documents in support of NEPA, Endangered Species Act Section 7 Consultation, and Magnuson-Stevens Fishery Conservation and Management Act. Project manager and leads the biological monitoring effort for the Sector 3 Beach and Dune Nourishment project and the Sector 5 Beach and Dune Restoration project. The monitoring programs for Sector 3 and Sector 5 are extensive and cover over 3 and 7 miles, respectively.

Senior Marine Biologist; Pompano Pier Replacement Project, City of Pompano Beach, Florida 2022

Conducted the characterization studies of the dune vegetation and benthic resources adjacent to and beneath the pier in support of the permit applications, the pre-construction, and each post-construction monitoring event on the nearshore hardbottom and mitigative artificial reef. This included protected species surveys of Acroporid corals and Beach Jaquemontia. Ms. Brown coordinated with the resource agencies and submitted the permit required deliverables.

Senior Marine Biologist; Boca Grand Fishing Pier Rehabilitation, Charlotte County, FL 2025

Led an environmental resource investigation in support of the design and permitting needed to repair the fishing pier approach from storm damages. The investigation included a desktop analysis of historical mangrove and seagrass data, in situ delineations, and characterization of the resources. Led the field data collection, analysis, and report development.



46 YEARS
EXPERIENCE

Education

- MS, Civil Engineering, University of Maryland
- BS, Civil Engineering, University of Maryland

Registrations/Certifications

- Professional Engineer, Florida, License No. 66093
- Hazardous Waste Operations and Emergency Response (HAZWOPER) Certification

Skills & Experience

- Const Quality Management USACE and Navy
- EPA SWMM Model
- Intergraph COGO, Inroads
- Civil 3D
- HydroCAD

JAMES BARRACK, PE, CQM

LEAD CIVIL ENGINEER – AE SERVICES
Drainage Analysis, Modeling and Design QA/QC | APTIM

Professional Summary

James Barrack, PE, has over 46 years of experience in the civil, transportation, and water resources industry **(35 years with APTIM)**. He has ample experience in roadway and stormwater management design, flood risk management, technical design review, civil design and construction planning and implementation, and coastal engineering, coastal and marine hydrographic and geophysical surveying. He is a registered professional engineer in nine states.

Relevant Experience

Aptim Environmental & Infrastructure, LLC, Lead Civil Engineer I February 1991–Present

Senior Civil Engineer; Sanibel Causeway Shoreline Stabilization Project, Lee County, FL

Preliminary roadway and stormwater management design within the park areas of Islands A and B. Evaluated alternative roadway and parking designs to meet County needs. Integrated the parks amenities plan into the civil roadway and parking layouts.

Lead Civil Engineer; Hillsboro Bank Stabilization Project, South Florida Water Management District; Broward and Palm Beach Counties, FL

10.6 miles long and required dredging, repair, and restoration of the canal banks. This project design restored the conveyance to its design capacity. Performed review of the 30% design plans and the documentation reports. The project involved Inland Flood Risk Management.

Civil Site Engineer; USACE New Orleans District Inner Harbor Navigational Canal (IHNC) Lake Borgne Surge Barrier; New Orleans and St. Bernard Parish, LA

Prepared design draft and final as-built drawings. Defined engineering roles for generation and tracking of RFIs. Maintained the submittal register generated from Specs Intact and IFC documents. Reviewed submittal register items, and project controls interaction with the Government RMS/QCS system. Prepared RFI procedures for a first-of-its-kind flood control. Created construction submittals, RFI procedures, and RFI generation.

Norfolk NDRC Ohio Creek Flood Resiliency; City of Norfolk, VA

Lead consultant for providing flood risk management for the 500-year flood event for the Chesterfield Heights neighborhood in Norfolk, VA. The project included construction of 8,400 LF

of levees and pile supported T-walls, two pump stations, utility relocations, new and resurfaced roadways, and a community recreation center at Granby Park.

Fedex Facility, City of Reading PA

The FEDEX facility heavy vehicle parking area experienced a pavement/storm system failure due to a large sinkhole in July 2024. The FEDEX facility was designed and constructed by third parties in 2021. APTIM was requested to investigate areas of concern and probability of infrastructure failure for the FedEx Facility on Aviation Road. APTIM reviewed the Geotechnical Engineering Report, and completed a failure analysis, site visit, conceptual drainage design plans, and provided engineering services support during construction. The sinkhole repair plan and an underground storage gallery (299,000 gal) were proposed. Target construction complete is mid-2027.

Battery Park City Resiliency Project Value Engineer, NYC Office of Management and Budget

A Value Engineering Study was completed to review the 40% design plans for the NW Battery Park City Resiliency Project in Manhattan. The construction cost estimate was $1.64 billion. BPCA seeks to strengthen the flood barriers to protect 125 buildings and 14,000 residents. The flood barrier system included 4,000 feet of flood barrier. The project details included a bridging structure over the PATH tunnel, structural wall elements, piles and foundations, pump stations, storm surge elevations, seepage barriers, and permanent deployable gates (18). Our tasks included value engineering, key issues report, VE suggestions including O+M and CCTV systems, optimizing the size and style of deployable flood gates to maximize redundancy, and review a Test Level 4 vehicle barrier to protect the deployable gates. The VE report was completed on schedule.



JENNIFER NUNN, PE, CFM, BC.WRE

DRAINAGE LEAD

Jennifer Nunn serves as the Vice President of the Water Resources and Stormwater division at The Balmoral Group. She is a Certified Floodplain Manager with a background in land development, specializing in stormwater management and permitting. Jennifer is adept at sourcing the best available data to create models that accurately represent real-world conditions. Her organizational skills enable her to effectively manage project workflow and staffing resources. Additionally, she is proficient in various areas, including analysis, technical writing, and permitting for stormwater facilities. Her expertise also encompasses the design of limited-access, major, and minor roadways; rail design; site layout; collection systems; bridge hydraulics; flood investigations; pond siting analysis; and feasibility studies.

EXPERIENCE:
21 years

REGISTRATION
- FL PE No. 70709
- VA PE No. 53481

EDUCATION
- MSCE, Water Resources, UCF
- BSCE, Univ. of Florida

SOFTWARE
- ICPR v4/StormWise
- CatchmentSIM
- HEC-RAS
- OpenRoads Designer
- ArcGIS, QGIS

AFFILIATIONS
- ASFM, Certified Floodplain Manager No. US-24-13264
- Water Resources Engineer, American Acad. of Water Resources Engineers
- ASCE, East Central Branch, Environmental Water Resources Inst.
- AWRA, Florida
- Florida Engineering Society FELI Class 2023

SELECT PROJECTS

FEMA Hazard Mitigation Grant # 4468-007-R Contract # H0730 – SW Mockingbird Lane
Martin County
- **Description:** Designed three build alternatives for a roadway resiliency project on Mockingbird Lane with cost-benefit analyses and a recommendation and documentation for the preferred solution. Permitting was required through SFWMD, USACE, and FDEP.
- **Unique Issues:** Elevated the roadway to mitigate sea-level rise and meet the requirements of FEMA HMGP funding.
- **Role/Responsibilities:** Served as the Senior Drainage Engineer.

US 1 at Canal Street
FDOT District Five
- **Description:** Drainage modeling and permitting for flood mitigation and additional turn lanes for a four-lane urban project in Volusia County, with permitting through SJRWMD.
- **Unique Issues:** Flood mitigation required a basin diversion to an adjacent outfall, along with flap gates to allow the storm sewer system to empty at low tide for additional volume capacity. The project included baffle box filtration located at an offsite area for stormwater treatment requirements, and was based on a 250-node complex ICPR model to show no increase in flood stages.
- **Role/Responsibilities:** Served as the Project Drainage Engineer.

Floridatown Watershed Management Plan
Santa Rosa County
- **Description:** Performed a watershed evaluation, existing conditions modeling, and watershed management plan (including alternatives analysis) for a 2.5-sq. mile project area in Santa Rosa County.
- **Unique Issues:** Developed a comprehensive drainage and flood level-of-service evaluation of the watershed, including floodplain delineation for the Floridatown neighborhood, which had limited study and analysis. Compiled a detailed study and hydrologic and hydraulic model with over 200 nodes. The watershed evaluation included initial GIS processing using CatchmentSIM, field reconnaissance, and model parameterization. Utilized Stormwise (formerly ICPRv4) to evaluate the existing conditions model with Hurricane Sally as a calibration storm event. Efficiently named model

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JENNIFER NUNN, PE, CFM, BC.WRE
DRAINAGE LEAD

parameters with GIS tools and developed time of concentration calculations. Public involvement included a kickoff notification, website monitoring, cataloging public input and maintenance complaints, and facilitating a public workshop to evaluate existing conditions model results.

- **Role/Responsibilities:** Served as the Project Manager and Engineer of Record for the watershed study.

SR 50 at Maguire Boulevard
FDOT District Five

- **Description:** Drainage analysis for the flood mitigation of the closed stormwater sewer system that outfalls to the Orlando Executive Airport under a District 5 DW Continuing Services Contract.
- **Unique Issues:** Included extensive data collection, original plans, a field review, and city GIS data to verify the contributing area. Utilized ICPR to develop tailwater elevations from the existing parallel outfall system. Performed storm tabulations and a spread analysis to develop a proposed concept for the desired level of service. Challenges included limited right-of-way, major utilities within the corridor, and a history of flooding with a previous patchwork of solutions.
- **Role/Responsibilities:** Served as the Drainage Project Manager and Drainage Engineer of Record.

Nassau County Vulnerability Assessment, Nassau County

- **Description:** Provided the County with detailed flood exposure modeling and assessment of flood risks at locations of critical assets throughout the County.
- **Unique Issues:** Provided a DEP-compliant vulnerability assessment the covered the entire County. Earlier phases of flood risk assessments included regional evaluations of flood exposure. Stakeholder outreach meetings were planned and facilitated to engage communities to learn about known flood risk priority areas or assets. Tasks included assisting with GIS maps and technical report outlining existing and future flood risk from rainfall, sea level rise, and storm surge, developing an interactive, web-based dashboard for viewer critical asset flood risks.
- **Role/Responsibilities:** Served as Drainage Chief Engineer responsible for technical oversight of the 100-year and 500-year floodplain delineation and GIS tool development for the inland flooding extents.

Districtwide Drainage Support Consultant, FDOT District Seven

- **Description:** Supported the District Drainage Department on a multitude of tasks, primarily including drainage connection permit (DCP) reviews.
- **Unique Issues:** Included attending DCP pre-application meetings with the Pinellas County Operations staff; Performing review and approval of DCP applications for the Pinellas and Tampa Operations Centers; Coordination with FDOT staff on inventory and assessment of their flap gate outfalls; Performing flood investigations within Pinellas and Hillsborough Counties and preparing modeling, calculations, and reports with recommendations for FDOT review and acceptance.
- **Role/Responsibilities:** Project Manager responsible for coordinating with subconsultants and the District, maintaining review schedules, and oversight of engineering.

Orange County Low Impact Development (LID) Practices Design Manual
Orange County Environmental Protection Division

- **Description:** Developed two concept plans: a traditional plan as well as a LID concept plan, with associated stormwater calculations serving as a comparison for the LID concepts presented in the manual.
- **Unique Issues:** The technical memorandum detailed the stormwater design of each plan and capital and maintenance costs for comparison purposes. A representative development area within the vicinity of Horizons West, located in west unincorporated Orange County, was selected as the site location. The traditional version of the concept plan utilized a dry retention pond to treat and attenuate runoff from the commercial site and a wet detention and dry retention facility to treat and attenuate runoff from the multi-family site, with pollutant removal provided in the three ponds. Utilized each of the seven practices outlined in the LID design manual in the LID concept plan: pervious pavement, bioretention swales, raingardens, planter boxes, tree box filters, curb cuts and inverted medians, and stormwater harvesting. Proposed two dry retention ponds to assist with water quality, quantity, and nutrient loading criteria.
- **Role/Responsibilities:** As the Project Engineer, was tasked with the preparation of the traditional and LID concept plans and stormwater calculations in coordination with the Orange County LID Practices Design Manual, prepared by Geosyntec Inc. for the Orange County Board of County Commissioners.



LARA WAKEFIELD, MSC, ENV SP, WEDG

RISK MANAGEMENT PROJECT MANAGEMENT
Public/Stakeholder Outreach & Grant Assistance | APTIM

5 YEARS
EXPERIENCE

Education

- MS Risk Analysis, Kings College, London, UK
- BS International Relations, Durham University, Durham, UK

Registrations/Certifications

- Envision Sustainability Professional
- Waterfront Edge (WEDG) Professional

Skills & Experience

- Storm Damage Assessments
- Economic Evaluations
- Climate Resilience Studies

Professional Summary

Lara Wakefield is a skilled professional with 5 years of expertise **(1 year with APTIM)** in climate resilience, environmental planning, and infrastructure risk assessment. She has contributed to projects across public, nonprofit, and research sectors, integrating hazard, vulnerability, and exposure data into strategies for adaptation, planning, and decision-making.

Relevant Experience

Aptim Environmental & Infrastructure, LLC | Risk Management | May 2025–Present

Risk Management Project Manager; Town of Longboat Key Adaptation Plan Update, FL

Provided technical assistance to advance the implementation of prioritized adaptation strategies for the Town of Longboat Key. Analyzed geospatial data to assess the impact of new policy measures and developed recommendations to support compliance monitoring and tracking.

Risk Management Specialist; Village of Estero Comprehensive Vulnerability Assessment, Estero, FL

Supported development of a community-wide assessment of assets under multiple sea level rise and flood scenarios; authored summary memos and supported outreach.

Risk Management Project Manager; Flood Elevation Review & Map Revision, Lafourche Parish, LA

Conducted in-depth analysis of flood elevation data and community floodplain conditions to assess accuracy of FEMA mapping products.

Risk Management Project Manager; Flood Elevation Review & Map Revision, St. Mary Parish, LA

Led technical review of FEMA Flood Insurance Study (FIS) datasets. Identified key variables influencing local flood risk and prepared findings to guide parish strategy for pursuing map revisions.

Pasco County Public Works Environmental Division, New Port Richey, FL, November 2023 - April 2025

Planner II-Resiliency

Integrated resilience planning principles into stormwater management and developed risk assessment frameworks using custom matrices. Managed the Stormwater Management Master Plan Update and supported the Resilient Pasco Strategic Action Plan. Coordinated across departments and external consultants to align planning activities with county resilience goals.



26 YEARS
EXPERIENCE

Education

- MS, Environmental Studies, Florida International University
- BS, Environmental Studies, Stockton University

Registrations/Certifications

- GIS Professional
- GIS Certification Institute
- Certified Florida Master Naturalist

Skills & Experience

- More than 19 years of Ocean/Coastal GIS experience in Florida
- Story Mapping
- ESRI ArcPro
- ESRI ArcGIS Online
- ArcGIS Enterprise Server

HEATHER VOLLMER, GISP

GEOSPATIAL SYSTEMS SENIOR SPECIALIST I
GIS Analysis & Project Website Development | APTIM

Professional Summary

Ms. Heather Vollmer is a GIS professional with 26 years of experience **(20 years with APTIM)** in GIS data mining, engineering and maintenance, remote sensing, spatial analysis, supporting documentation and web app development. She is heavily involved in innovating the application of geospatial technologies to further advance the understanding of coastal management. Ms. Vollmer has been charged with providing geospatial technological support to streamline and improve client projects and deliverables.

Relevant Experience

Aptim Environmental & Infrastructure, LLC, Senior GIS Analyst; October 2006–Present

GIS Analyst; Town of Longboat Key Sea Level Rise Vulnerability Assessment, Town of Longboat Key, FL

Tasked with data mining, creating sea level vulnerability atlases and maps, and analysis of sea level rise impacts to assess potential impacts from sea level rise and recurrent flooding.

GIS Analyst; South Florida Military Installation Multi-Hazard Resilience Review

Collected data for four local military installations across three counties via continuous outreach and research. Analyzed results and produced summary graphics and trends for the exposure, sensitivity, adaptive capacity, and risk analyses.

GIS Analyst; Atlas of Disaster

Analyzing critical infrastructure for hazard vulnerabilities and report documentation and maps. Our new report “Atlas of Disaster” provides a blueprint for equitable climate adaptation planning, offers new funding sources to invest in resilient infrastructure, and provides a framework for better decision-making for government, the private sector, philanthropy

GIS Analyst; Database Development and Management, ASBPA

Working with ASBPA, APTIM designed a comprehensive web app that allows the public to explore the US historical beach nourishment efforts. Database houses years of nourishment, number of projects, etc., with Ms. Vollmer overseeing the GIS database development.

GIS Analyst; Vulnerability Assessments & Adaptation Plans (Mostly Resilient Florida Funded)

Estero, Longboat Key, Captiva, Escambia County, Delray Beach, Juno Beach, North Palm Beach. Ms. Vollmer provided geospatial analysis using python scripts to assess current and future hazard impacts, technical writeups, supporting maps, and public outreach tools such as storymaps.



39 YEARS
EXPERIENCE

Education

- MS, Coastal and Oceanographic Engineering, University of Florida
- B.C.E., Civil Engineering, University of Delaware

Registrations/Certifications

- Professional Engineer, Florida, License No. 44046
- Board Certified in Coastal Engineering by Academy of Coastal Ocean, Port, and Navigation Engineers, ASCE

Skills & Experience

- Completed 50 coastal and marine infrastructure projects

DOUGLAS MANN, PE, BC.CE

CHIEF COASTAL ENGINEER
Cost Estimating, Construction Related Services & Drainage Analysis | APTIM

Professional Summary

Douglas Mann, PE, BC.CE, has worked as a coastal engineer with **APTIM for 39 years**. Experienced in all aspects of coastal engineering including dredge and fill projects for material disposal and beach nourishment, beach and inlet engineering, coastal structure design (including breakwaters, groins, seawalls, jetties, and Permeable Adjustable Groin (PAG) design) as well as marine-related upland structures. Involved in the design of boat ramps, marina renovations, and other boating related projects. Experienced in Joint Coastal permitting, Environmental Resource permitting, and FDEP Coastal Construction Control Line permitting.

Relevant Experience

Aptim Environmental & Infrastructure, LLC | Project Manager | February 1987–Present

Project Manager and Engineer of Record; Permeable Adjustable Groins at the Islander Club Condominium, Town of Longboat Key, FL
Project manager and engineer of record for two permeable adjustable groins to stabilize a long-standing erosion hot spot. (2009-2010). Provided post construction monitoring and analysis of the structures' impact on adjacent beaches (2011-2015). Engineer of record for the design of repairs to two deck elements after the passage of tropical storm Helene (2025).

Project Manager; Greer Island Sand Management Plan, Town of Longboat Key, FL
Designed and permitted a sand management (dredging) plan to control spit migration. Project involved design and USACE permitting of two emergency dredging projects to keep lagoon open while long term management plan could be implemented.

Project Manager; North Shore Road Seawall Return Wall Extension, Town of Longboat Key, FL
Designed and permitted a return wall extension of the existing seawall to protect North Shore Road. Provided construction observations and contract administration to the Town.

Project Manager; Town of Longboat Key Beach Nourishment Project, FL
Project manager and engineer of record for the implementation of the Town's 11-mile-long beach nourishment program. Provided construction engineering services including bidding of project to the Town including a detailed sand quality control and quality assurance program.

Project Manager; North Shore Road Structural Stabilization Project Town of Longboat Key, FL
Project manager and engineer of record for two permeable adjustable groins to stabilize an

erosion hot spot caused by an adjacent inlet. Project included a small truck haul nourishment project.

Project Manager and Engineer of Record; Town of Longboat Key North End Structural Stabilization Project, FL

Project Manager and Engineer of Record for two permeable adjustable groins, a terminal groin, and a small truck fill to stabilize the shoreline adjacent to Longboat Pass.

Project Manager; Town of Longboat Key Canal Maintenance Project, Sarasota County, FL

Project manager for the dredging of 40 canals within the Town of Longboat Key. Determined dredging requirements of the canals while assuring stability of adjacent bulkheads. Provided construction observations and construction contract administration.

Co-Project Manager and Engineer; Longboat Pass Inlet Management Plan, Town of Longboat Key and Manatee County, FL

Co-project manager and engineer for the evaluation of inlet processes and feasibility study of alternatives to improve sand retainage on adjacent shorelines.

Engineer of Record; Cortez Groin Replacement Project, Manatee County FL

Engineer of record for the replacement of permeable groins that are controlling end losses from Federal beach nourishment project and protecting upland emergency evacuation route.

New Pass Terminal Groin Rehabilitation, Sarasota County, FL

Designed the rehabilitation and extension of a small terminal groin adjacent to New Pass. Project stabilized the south end of Longboat Key while allowing small quantities of sand to bypass to the New Pass shoreline.

Engineer of Record; Pelican Harbor Fishing Pier Replacement Project, Miami, FL

Engineer of record for the redesign and permitting of a new ADA compatible fishing pier and two adjacent bulkhead replacements. Due to being within an aquatic preserve, additional review by the FDEP and Miami Dade County will be done.

Project Manager; Broward County Shore Protection Project, Broward County, FL

Project manager for the development of the General Reevaluation Report and Environmental Impact Statement for the County's Segment II and III projects. As part of the Segment II project, an Environmental Assessment and Limited Reevaluation Repot was generated. Through extensive coordination with FDEP, USACE, NMFS and USFWS a hardbottom mitigation plan, biological monitoring plan and a coral relocation plan was developed.

Project Manager; John D. MacArthur State Park Masterplan, Palm Beach County, FL

Retained by FDEP Bureau of Design and Construction to develop masterplan which the state can implement as funding becomes available and design new pedestrian bridge and other infrastructure improvements. Permits were obtained from the South Florida Water Management District and the USACE.

Engineer of Record; Murderkill River Jetties Enhancement Project, DE

Engineer of record for the design and permitting of the rehabilitation of the north and south jetty at the entrance to the Murderkill River. USACE and State permitting was completed along with NMFS species protection and Section 408 for this complicated enhancement project.



11 YEARS
EXPERIENCE

Education
- BS, Construction Management, Louisiana State University

Registrations/Certifications
- Project Management Professional Certification

Skills & Experience
- Analog Real-Time Kinematic (RTK) GPS systems
- Single bean and multibeam sonar systems
- Conventional Land Survey (Total Station, Level)
- Aerial Drone

EDWIN FORTIER, PMP

ESTIMATING MANAGER
Cost Estimating | APTIM

Professional Summary

Edwin Fortier, PMP is a Senior Estimator **(7 years with APTIM)** and works on various projects to research, compile and present estiamtes for Industrial, Government and Environmental business lines.

Relevant Experience

Aptim Environmental & Infrastructure, LLC, Cost Estimator; September 2019–Present

Advanced Work Package Planning & Field Engineer; Shintech Plaquemine VCM3 Mechanical Project, Plaquemine, LA

Plan Advanced Work Packages (AWP) for all disciplines of work including structural steel, equipment, supports, and piping, using Navisworks Simulate and iConstruct to aid in speedy and efficient work with the help of the client provided 3D model. Assist all departments in developing and implementing new processes and procedures for the AWP planning and execution. Transform existing processes and procedures to adapt to the new streamlined AWP methodology. Manage AWP's for release to superintendents/foreman for execution. Manage, track, and update statuses and lookaheads for all upcoming work to identify and mitigate potential issues.

Project Controls Manager; Westlake Chemical-CA Unit Turnaround, Plaquemines, LA

Led night crew on 12-week turnaround and functioned as the project controls manager to track and forecast costs, change management, and schedule throughout the project duration.

Project Controls; Tokai Carbon Phase 1 BOP, Addis, LA

Led project team on Lump Sum and time and material (T&M) projects and responsible for project success both on safe execution and revenue. Also functioned as the project controls manager to track and forecast costs, change management, and schedule throughout the project duration.

Project Controls Manager; Birla Carbon-Air Quality Upgrade, Centerville, LA

Served as Project Controls Manager and forecasted, tracked, and maintained cost and earned value systems for $23mm Birla Carbon Air Quality Upgrade Project.



ALICIA BARKER, B.A.

SENIOR ECONOMIST

Alicia Barker, Senior Economist at The Balmoral Group, experience includes econometric modeling, conducting independent research to substantiate variables and assumptions, and identifying effective alternatives or approaches within a project. She has extensive experience with cost-benefit analysis and is an effective database manager. Ms. Barker has worked extensively with the geographic information software ArcGIS and the economic modeling software LIMDEP, R, and STATA to perform multivariate regression analysis.

EXPERIENCE:
14 years

EDUCATION
- B.A., Economics; Minor, Statistics, University of Central Florida

SOFTWARE
- ArcGIS
- PowerBI
- LIMDEP
- R
- IMPLAN
- Excel, Access, Microsoft Word and PowerPoint

SPECIALTIES
- Economic Market Analysis
- Highway Construction Cost Estimation
- Agricultural Water Use Estimation
- Regression Analysis
- Spatial Analysis
- Cost-Benefit Analysis
- Survey Analysis

RELATED EXPERIENCE

Strategic Resources Evaluation Study (SRES), FL Department of Transportation (FDOT)
Project Manager. Over the last two decades, TBG has assisted FDOT with measuring market capacity, expectations of future pricing, navigating the ever-changing landscape of technology, and how geopolitical events may influence local costs. Project work included supply chain mapping and gap analysis, forecasting bid prices with regression analysis, building construction cost indices consistent with federal methodologies, geospatial mapping, and policy analysis. Tasks included designing econometric models to forecast construction material prices, assessing supply sensitivity across several major material types affecting FDOT's costs and delivery of the Five-Year Work Program. In addition, Alicia managed survey data collection from FDOT supplier participants in multiple industries, conducted interviews with industry contacts and FDOT engineers to better assess market conditions and compare against data trends, and created GIS maps to show location specific changes in material production facility output throughout Florida.

Strategic Resources Evaluation Study (SRES), VA Department of Transportation (VDOT)
Project Manager. Due to rapidly changing market conditions, VDOT had an immediate need for an evaluation of the availability and anticipated market trends for key resources required to deliver ongoing and future infrastructure projects. These key resources include specific materials, labor, and industry's capacity to deliver the program. Tasks included editing and managing survey data collected from VDOT survey participants in multiple industries, conducting geocoding of material supplier locations and desktop activity validation using ArcGIS.

Roadmap to Resiliency, Florida Department of Transportation District One
Senior Economist. The project intent was to identify and classify FDOT assets that are vulnerable to Sea Level Rise and Storm Surge inundation, prepare an inventory, and broadly determine mitigation factors that can be implemented as part of ongoing maintenance and operations of FDOT assets. Tasks included building an ArcGIS database of state-maintained roadways and bridges with associated traffic count data, drainage infrastructure, and environmental attributes.

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ALICIA BARKER, B.A.
SENIOR ECONOMIST

Coastal Resiliency Management Alternatives, Cost-Benefit Analysis
Florida Department of Community Affairs
Research Analyst. This project evaluated the costs and benefits of alternative adaptation strategies for coastal resiliency. The project used economic principles to develop pilot policies for managing and mitigating issues related to coastal resiliency that are suitable for Martin and Okaloosa Counties' comprehensive plans. Parcel-level analysis estimates the change in relative benefits from different policy alternatives over time, and calculates the value of incentives necessary to successfully implement specific policies. Factors included in the analysis range from property values, to impacts on public infrastructure and natural resources. Funded by NOAA, the final deliverable is intended to be a template transferrable to all coastal Florida counties. Tasks included creating parcel specific GIS maps and datasets in the analysis of parcels affected by Coastal High Hazard areas along shorelines. Ran parcel selections based on the effects of economic and spatial impacts such as proximity to public lands, wetlands, and evacuation routes, and census tract. Resulting GIS datasets were further used to analyze a multitude of factors including, but not limited to, parcel value, environmental impacts, and conservation/rolling easement policies for several land use types.

Statewide Resilience Dataset, Florida Department of Environmental Protection (FDEP)
Senior Economist. Identification of all Florida Coastal communities that had completed a flooding and/or sea level rise vulnerability assessment or other similar analysis of the potential effects and extent of flooding and sea level rise on the community's critical assets. Included the collection of all available spatial data and preparation of metadata based on vulnerability assessments, GIS data, and interviews with data providers where needed. This project was expanded to include the assembly of the statewide critical assets database to be used as part of the statewide vulnerability assessment. The statewide database was developed by integrating statewide asset data from numerous sources and included coordination with agencies to identify spatial data for assets. Tasks included assembly of ArcGIS spatial data and QA/QC.

Putnam County Vulnerability Assessment, Putnam County
Senior Economist. This project evaluated inundation risks from storm surge, sea level rise, and rainfall. All critical assets and priority areas in the County were assessed and inundation risks are being quantified. Project included community outreach and steering committee facilitation. A DEP-compliant vulnerability assessment with all supporting data will be provided to support resilience planning and project identification in Putnam County. Tasks included property data collection and analysis, ArcGIS spatial analysis of sea level rise impacts on critical assets, and QA/QC.

Orange County Shingle - Creek Watershed HydroNetwork Development, Orange County
GIS Analyst. This project included the creation of a HydroNetwork Feature Dataset to support the generation of the hydrologic geometric network, which provides the connectivity between features to identify which direction water flows in the Shingle Creek Watershed in Orange County. The project area covers approximately 80.7 square miles of the watershed. Tasks included QC, digitization of primary infrastructure in GIS and incorporation of previously digitized information.

Nassau County Vulnerability Assessment, Nassau County
Senior Economist. This project provided the County with detailed flood exposure modeling and assessment of flood risks at locations of critical assets throughout the County. This provided a Florida Department of Environmental Protection-compliant vulnerability assessment the covered the entire County. Earlier phases of flood risk assessments included regional evaluations of flood exposure. Stakeholder outreach meetings were planned and facilitated to engage communities to learn about known flood risk priority areas or assets. Tasks included managing GIS map preparation and technical report writing to outline current demographics, attributes of existing infrastructure, and other related variables to identify potential conflicts with future vulnerability to coastal changes and comprehensive land use plans. In addition, Alicia prepared materials and conducted public meetings for the final assessment, and performed QA/QC of calculations and mapping.



GREG SEIDEL, P.E.

DRAINAGE QC

Greg Seidel is a Vice President at The Balmoral Group with a wealth of experience in roadway and drainage design. His background encompasses the design of wet and dry systems, collection system design, floodplain mapping, bridge hydraulics, and permitting. Greg provides insight into how projects influence one another and the broader environment. He also performs value-added discipline reviews by evaluating economic factor relationships from hydrologic impacts, engineering, and permitting perspectives. Greg strives to deliver sustainable solutions to Florida's pressing environmental challenges.

EXPERIENCE:
37 years

PROFESSIONAL REGISTRATION
- Florida Professional Engineer No. 47571

SOFTWARE
- ICPR v4/StormWise
- HEC-RAS

EDUCATION
- MSCE, Hydraulics and Hydrology, Lehigh University
- BSCE, Lehigh University

PROFESSIONAL AFFILIATIONS
- American Society of Civil Engineers
- Florida Engineering Society
- American Society of Highway Engineers
- American Water Resources Association
- Winter Park City Commissioner (2015-2020)

SELECT PROJECTS

FEMA Hazard Mitigation Grant # 4468-007-R Contract # H0730 – SW Mockingbird Lane, Martin County

- **Description:** Designed three build alternatives for a roadway resiliency project on Mockingbird Lane with cost-benefit analyses and a recommendation and documentation for the preferred solution. Permitting was required through SFWMD, USACE, and FDEP.
- **Unique Issues:** Elevated the roadway to mitigate sea-level rise and meet the requirements of FEMA HMGP funding.
- **Role/Responsibilities:** Served as Principal-in-Charge.

US 1 at Canal Street, New Smyrna Beach, FDOT District Five

- **Description:** Drainage modeling for the widening and reconstruction of US 1, including raising the roadway to reduce flooding.
- **Unique Issues:** Required a basin diversion from one coastal outfall to an adjacent coastal outfall utilizing flap gates to direct stormwater from one basin to the other, to allow the storm sewer system to empty at low tide for additional volume capacity. Included Baffle Box filtration located at an offsite area to meet stormwater treatment requirements. Designed the system based on a 250-node complex ICPR model to show no increase in flood stages.
- **Role/Responsibilities:** Served as the Project Drainage Engineer.

SR 50 at Maguire Blvd. Drainage Improvements, FDOT District Five

- **Description:** Drainage analysis for the flood mitigation of the closed stormwater sewer system which outfalls to the Orlando Executive Airport under a District 5 DW Continuing Services Contract.
- **Unique Issues:** Included extensive data collection, original plans, a field review, and city GIS data to verify the contributing area. Utilized ICPR to develop tailwater elevations from the existing parallel outfall system. Performed storm tabulations and a spread analysis to develop a proposed concept for the desired level of service. Challenges included limited right-of-way, major utilities within the corridor, and a history of flooding with a previous patchwork of solutions.
- **Role/Responsibilities:** As Chief Engineer, was responsible for technical oversight and alternatives analysis.

Roadmap to Resiliency
FDOT District One

- **Description:** Performed a Phase I analysis of all FDOT assets that may be vulnerable to sea level rise and climate-induced hazards.

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DRAINAGE QC

- **Unique Issues:** Evaluated riverine areas in inland counties for tidal interactions. Performed a GIS analysis of roadway, drainage system, and bridge data and an assessment of combined King Tide, hurricane, and climate mode I impacts.
- **Role/Responsibilities:** As Project Manager, used existing data to manage District costs and prepared a technical memorandum including policy recommendations and operational implications. Suggested data collection to maintain current information on District vulnerability.

SR 31 from Myrtle Slough to South of Desoto County Line
FDOT District One

- **Description:** Roadway reconstruction and resurfacing to improve flood protection for 1.2 miles of a two-lane rural collector in Charlotte County, with permitting through SWFWMD. The work was performed under a District One DW Drainage Continuing Services contract.
- **Unique Issues:** Developed a floodplain model to calibrate for observed flooding during Hurricane Irma (2017) and used Trimble Geo 7x to supplement survey data for modeling purposes.
- **Role/Responsibilities:** As Chief Engineer, was responsible for the design oversight and quality control of improvements to a two-lane undivided minor arterial.

Peer Review of Watershed Management Modeling Results
Southwest Florida Water Management District

- **Description:** Authored the peer review technical document to accompany the detailed basin studies completed with ArcHydro. The review of basins included Gum Swamp and Big Jones Creek (Marion County), Highlands County Lakes (Highlands County), Horse Creek (Hardee County), Upper Peace (Polk County), Whitaker Bayou (Sarasota County), and Homosassa (Citrus County).
- **Unique Issues:** Utilized CatchmentSIM to compare data against the ArcHydro-generated sub-basin delineations and evaluated the effect of the infiltration capacity thickness used in the modeling of the upper soil layers. Reviewed basin boundaries, modeling inputs and assumptions, floodplain shapes, and the evaluation of the 100-year/1-day storm versus 5-day storm.
- **Role/Responsibilities:** As the Project Manager and Lead Engineer, provided the technical review and GIS compliance, and also compiled the peer review memo and comment geodatabase.

SR 710 Stormwater Treatment Area/Regional Pond Feasibility Study, FDOT District One

- **Description:** Feasibility study to determine alternatives to traditional roadway stormwater management for 3.9 miles of new alignment from the L-63N Canal to SR 15 (US 441) in Okeechobee County, performed under a District One DW Drainage Continuing Services contract.
- **Unique Issues:** Facilitated a stakeholder workshop with the FDOT State Drainage Engineer (due to funding precedent and policy implications), FDEP, SFWMD, USACE, Okeechobee County, property owners, utility owners, and FAA. Included research of similar projects statewide and coordination with FDEP and SFWMD to determine BMPs to reduce nutrient loadings such as wetland restoration, Bold and Gold, regional pond, and current STA effectiveness.
- **Role/Responsibilities:** Served as the Project Manager.

SR 72 East of CR 661 to SR 70, FDOT District One

- **Description:** As a follow-up project to the SR 72 Flooding Investigation, created the concept plans for SR 72 from CR 661 to SR 70. The existing roadway typical section consisted of a two-lane, undivided roadway with two 11-foot travel lanes in each direction and an open drainage system. The proposed roadway improvements consisted of raising and relocating the roadway centerline to alleviate roadway overtopping for the 100-year design storm event. The proposed improvements at the intersection of SR 72 and SR 70 are being evaluated for a roundabout alternative. Right-of-way is anticipated for the roadway improvements. Also, raising the profile of SR 70 from CR 661 to the Peace River to create a resilient solution for an SIS corridor is included in the PD&E study.
- **Unique Issues:** Relocated and raised the SR 72 roadway to alleviate a flooding issue and created a new roundabout intersection at SR 72 and SR 70. The project was located in wetlands and on a floodplain. Additional issues included access management and creating pedestrian connectivity
- **Role/Responsibilities:** Chief Engineer providing oversight for the design and PD&E study.



KATRINA PAOLINI, P.E.

DRAINAGE SUPPORT

Katrina Paolini is a Senior Engineer in the Water Resources and Stormwater division at The Balmoral Group, specializing in stormwater management for roadways. Her experience includes designing stormwater management and collection systems for both limited-access and major and minor roads. Katrina is exceptionally skilled in extensive floodplain modeling for limited-access facilities and conducting detailed conveyance calculations. She stays current with the latest trends in hydroplaning risk assessment.

EXPERIENCE:

18 years

PROFESSIONAL REGISTRATION

- Florida Professional Engineer No. 74785

EDUCATION

- BSCE, University of Central Florida

SOFTWARE

- OpenRoads Designer
- CSLE
- CatchmentSIM
- QGIS
- ArcGIS, ESRI Tools
- ICPR v4/StormWise

PROFESSIONAL AFFILIATIONS

- American Society of Civil Engineers

SELECT PROJECTS

US 1 at Canal Street
FDOT District Five

- **Description:** Drainage modeling and permitting for flood mitigation and additional turn lanes for a four-lane urban project in Volusia County, with permitting through SJRWMD.
- **Unique Issues:** Flood mitigation required a basin diversion to an adjacent outfall along with flap gates to allow the storm sewer system to empty at low tide for additional volume capacity. The project included baffle box filtration located at an offsite area for stormwater treatment requirements, and was based on a 250-node complex ICPR model to show no increase in flood stages.
- **Role/Responsibilities:** Served as the Project Drainage Engineer.

FEMA Hazard Mitigation Grant # 4468-007-R Contract # H0730 – SW Mockingbird Lane, Martin County

- **Description:** Designed three build alternatives for a roadway resiliency project on Mockingbird Lane with cost-benefit analyses and a recommendation and documentation for the preferred solution. Permitting was required through SFWMD, USACE, and FDEP.
- **Unique Issues:** Elevated the roadway to mitigate for sea-level rise and meet the requirements of FEMA HMGP funding.
- **Role/Responsibilities:** Served as the Senior Drainage Engineer.

SR 31 from Myrtle Slough to South of DeSoto County Line
FDOT District One

- **Description:** Roadway reconstruction and resurfacing to improve flood protection for 1.2 miles of a two-lane rural collector in Charlotte County, with permitting through SWFWMD. The work was performed under a District One DW Drainage Continuing Services contract.
- **Unique Issues:** Developed a floodplain model to calibrate for observed flooding during Hurricane Irma (2017) and used Trimble Geo 7x to supplement survey data for modeling purposes.
- **Role/Responsibilities:** As the Drainage Engineer, was responsible for assisting with the development of an existing and proposed ICPR model to analyze flooding solutions.

Barry Street Drainage Improvements Analysis
Orange County Roads and Drainage Division

- **Description:** Flood study to evaluate reoccurring flooding located along SR 50 near the Central Florida fairgrounds in Orange County.

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KATRINA PAOLINI, P.E.
SENIOR ENGINEER 1

- **Unique Issues:** The Phase I analysis included data collection, an existing conditions analysis, an alternatives analysis, coordination with SFWMD and FDOT, and the compilation of a technical memorandum presenting the findings. Analyzed the original 2003 Barry Street Drainage Analysis and existing stormwater system to identify bottlenecks in the drainage system and potential improvements to the on-site conveyance system. Also evaluated the SR 50 outfall drainage system and the feasibility of improvements that could reduce flooding within the project area, as well as the feasibility of an upsized outfall connection with Old Winter Garden Road. Compiled a 150-node detailed ICPR model encompassing 166.7 acres of urban area to evaluate the existing condition.
- **Role/Responsibilities:** As the Project Engineer, was responsible for compiling and updating the existing conditions model.

SR 64 at American Car Care Center
FDOT District One

- **Description:** Prepared a complete set of construction drawings to implement recommendations from the flooding investigation developed to help resolve ponding in the driveways and improve pedestrian markings at the American Car Care Center in Manatee County.
- **Unique Issues:** Utilized roadway design experience to assist in difficult negotiations with the property owner to reconfigure the driveway to FDOT criteria.
- **Role/Responsibilities:** As the Engineer of Record, was responsible for the layout of the drainage design and roadway improvements that proposed how to resolve flooding at the American Car Care Center on SR 64. Tasks included preparation of the plans, design of alternative layouts, utility coordination with the department, coordination with the property owner, and the drainage design.

Lyons Road from Norte Lago Drive to Pine Springs Drive
FDOT District Four

- **Description:** LAP reconstruction of half a mile of four-lane, divided, urban arterial in unincorporated Boca Raton in Palm Beach County. Reconstructed Lyons Road to flatten existing horizontal curves and provide super elevation to meet the posted speed of 40 mph, modified lane and median widths to incorporate bicycle lanes, added and improved drainage features to solve significant flooding, and provided new sidewalk construction, ADA upgrades, and signing and pavement marking.
- **Unique Issues:** Implemented project improvements with tight R/W constraints. These included a right-turn lane and water-line modifications for Palm Beach County, a significant number of utilities, and a trench drain system that needed to be contained within the median. Permitting was handled through the Lake Worth Drainage District, with several public meetings required as outreach to stakeholders and involved residents.
- **Role/Responsibilities:** As the Project Engineer, assisted with checking updated utilities for conflicts with drainage structures, updating drainage structure cross-sections, and providing QC for quantities.

SR 45 (US 41/14th Street West) From North of Bayshore Gardens Parkway to South of 60th Ave W
Manatee County, FDOT District One

- **Description:** Drainage design and roadway improvements for a drainage project to resolve flooding at the Showcase Autos property on SR 45 in Manatee County.
- **Unique Issues:** Utilized a trench drain to help with the ponding.
- **Role/Responsibilities:** As the Project Drainage Engineer, tasks included preparation of the plans and specification package, utility coordination with the department, post design services, and the drainage design.

SR 72 Flooding Investigation
FDOT District One

- **Description:** Drainage study during the aftermath of Hurricane Irma (2017) for a districtwide drainage contract. The project was located in DeSoto County.
- **Unique Issues:** Performed ICPR modeling to determine cause and relief for roadway flooding, and alternative modeling scenarios with and without the Peace River tailwater.
- **Role/Responsibilities:** As the Engineer of Record for drainage and signing and pavement marking, tasks included drainage design, a review of utility work schedules, preparation of the signing and pavement marking associated with the pavement reconstruction, and post-design services.



11+ YEARS
EXPERIENCE

Education
- PhD, Environmental Science, University of Rhode Island

Registrations/Certifications
- Hydrology, Post-Baccalaureate

Skills & Experience
- SWMM5.1 and PCSWMM
- ArcGIS 10.7 and Erdas Imagin 9.1
- SOIL and Water Assessment Tool (SWAT)
- MODFLOW, HECRAS, MIKESHEE, FEEFLOW
- MATLAB and R LANGUAGE
- CRS compliance & EC support
- Climate vulnerability & adaptation

KHURSHID JAHAN, PHD

WATER RESOURCES MANAGER
Drainage Analysis & Modeling | APTIM

Professional Summary

Khurshid Jahan, PhD has 11 years of experience **(<1 year with APTIM)** in watershed management, stormwater planning, floodplain analysis, and climate resilience. Dr. Jahan has proven expertise in hydrologic and hydraulic modeling, FEMA flood-hazard analysis, CLOMR/LOMR studies, drainage-system evaluation, and Community Rating System compliance support. She is skilled in developing and reviewing watershed models, assessing flood risk current and future conditions, evaluating critical infrastructure and drainage assets, and translating technical findings into clear reports, maps, and adaptation strategies. Experience includes coordinating with clients, surveyors, regulatory agencies, and community floodplain officials to support permitting, model validation, and regulatory compliance.

Relevant Experience

Aptim Environmental & Infrastructure, LLC, Water Resources Manager; June 2026–Present

Water Resources Manager; St. Mary's Levee District LOMR – St. Mary Levee District

Managed the design / construction of this project in addition to leading interagency coordination and communications with municipalities, parish representatives, and the state, as well as the SMLD to ensure all stakeholders were involved in the design and construction. She also ensures all deliverables are produced in a timely and efficient manner.

Water Resources Manager; City of Pompano Beach Adaptation Plan, FL

Flood-hazard, drainage, and critical-asset information to evaluate exposure, vulnerability, and future-condition risk. Supporting adaptation screening and prioritization, stakeholder coordination, and preparation of technical report

Water Resources Manager; Town of Belleair Bluff Restoration and Erosion Abatement, FL

Led 1D/2D stormwater models to define runoff pathways, flood depths, velocities, overflow, and discharge at bluff outfalls. Comparing existing and proposed conditions; preparing maps, model documentation, technical reports, and adaptation recommendations for upland controls and bluff protection.

JR Evans Engineering, P.A. | Hydrologic/Hydraulic Engineer| Sep 2023-May 2026

FEMA Flood Hazard Analysis, CLOMR/LOMR, and Regulatory Support

FEMA flood-hazard analyses and No-Rise projects using HEC-RAS, StormWise, and SWMM. Evaluated floodplains, BFEs, drainage structures, and survey data; prepared technical reports.

HITHAISHI HEWAGEEGANA, PHD

SENIOR NUMERICAL MODELER
Drainage Analysis & Modeling | APTIM



9 YEARS
EXPERIENCE

Education

- PhD, Coastal Engineering, University of Florida
- MS, Coastal Engineering, Delft University of Technology (TU Delft)

Skills & Experience

- Expertise in coastal process analysis
- Expertise in beach erosion, erosion control structures & re-nourishment modeling
- Expertise in estuarine and intel hydrodynamic modeling
- Expertise in storm & flood modeling
- Expertise in GIS & database management

Professional Summary

Hithaishi Hewageegana, PhD, is a Senior Numerical Modeler **(3 years with APTIM)** specializing in nearshore hydrodynamics and morphodynamic coastal processes. Extensive experience applying advanced, process-based numerical models including Delft3D, XBeach, and SWASH to simulate and resolve complex nearshore problems related to coastal erosion, flooding, estuarine hydrodynamics, sediment transport, and water quality. Expertise spans the development, calibration, and interpretation of high-resolution numerical models to support engineering design, environmental impact assessments, and coastal resilience studies. He is a skilled programmer with strong capabilities in scientific computing and automation, is proficient in GIS-based spatial data processing and analysis, enabling the effective integration of modeling outputs with geospatial datasets for decision-making and reporting.

Relevant Experience

Aptim Environmental & Infrastructure, LLC, Senior Numerical Modeler; March 2023–Present

Numerical Modeler; Sunset Beach Groin Evaluation Project, Pinellas County, FL

Conducted detailed numerical modeling of coastal hydrodynamics and morphodynamics to analyze sediment transport, shoreline evolution, and structural interactions, developing alternatives to conventional beach renourishment strategies and evaluating optimized erosion control structures to improve the resilience and performance.

Numerical Modeler; Pinellas County Sand Key Structural Evaluation, Pinellas County, FL

Coastal process studies to characterize nearshore sediment transport dynamics and shoreline response, supporting feasibility assessments for the design and placement of erosion control and shoreline stabilization structures.

Numerical Modeler; Terrebonne Parish Flood Elevation Review, LA

Flood modeling and data extraction via GIS tools for assessing the feasibility for revisions in FEMA flood insurance study.

Numerical Modeler; St. Mary Parish Flood Elevation Review, LA

Flood modeling and data extraction via GIS tools for assessing the feasibility for revisions in FEMA flood insurance study.

Numerical Modeler; Extreme Wave and Surge Analysis at the Anglin's Fishing Pier, Lauderdale-by-the-Sea

Modeling work in long-term wave transformation and extreme wave analysis statistics at the pier to compute wave forcing on the pier.



ALBERT SMIDEBUSH, P.E.

ROADWAY LEAD

With a strong focus on roadway design, Albert Smidebush has experience that encompasses essential elements such as signage, pavement markings, and effective traffic management for various facilities, from minor roads to major and limited-access highways. Albert also brings valuable insight into signalization and drainage design, further enhancing his capabilities. As the Engineer of Record for numerous resurfacing and traffic operations contracts, he consistently demonstrates his commitment to excellence and successful project outcomes.

EXPERIENCE:
19 years

PROFESSIONAL REGISTRATION
- Florida Professional Engineer No. 73052

EDUCATION
- BSCE, University of Central Florida

CERTIFICATION
- Florida Advanced Work Zone Traffic Control Course

SOFTWARE
- OpenRoads Designer
- Microstation SS10
- AutoTurn
- AASHTOWare
- LRE

PROFESSIONAL AFFILIATIONS
- American Society of Highway Engineers

SELECT PROJECTS

FEMA Hazard Mitigation Grant # 4468-007-R Contract # H0730 – SW Mockingbird Lane, Martin County

- **Description:** Designed three build alternatives for a roadway resiliency project on Mockingbird Lane with cost-benefit analyses and a recommendation and documentation for the preferred solution. Permitting was required through SFWMD, USACE, and FDEP.
- **Unique Issues:** Elevated the roadway to mitigate sea-level rise and meet the requirements of FEMA HMGP funding.
- **Role/Responsibilities:** Served as Roadway QA/QC.

SR 72 from CR 661 to SR 70, FDOT District One

- **Description:** Roadway reconstruction to elevate the roadway profile of SR 72 above the FEMA floodplain in DeSoto County. Included permitting through SWFWMD and signing and pavement marking improvements.
- **Unique Issues:** During design, project scope was revised to include raising the roadway profile of a 1-mile segment of SR 70 and constructing a roundabout at the SR 70/SR 72 intersection.
- **Role/Responsibilities:** Served as the EOR for design and plans production of the roadway and signing and pavement markings component for this drainage improvement project.

SR 31 from Myrtle Slough to South of DeSoto County Line FDOT District One

- **Description:** Roadway reconstruction and resurfacing to improve flood protection for 1.2 miles of a two-lane rural collector in Charlotte County, with permitting through SWFWMD. The work was performed under a District One DW Drainage Continuing Services contract.
- **Unique Issues:** Developed a floodplain model to calibrate for observed flooding during Hurricane Irma (2017) and used Trimble Geo 7x to supplement survey data for modeling purposes.
- **Role/Responsibilities:** Served as the Project Manager/EOR for design and plans production of the roadway component. Additional tasks included preparing two design variations and coordinating with the Department to obtain drainage permits.

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ALBERT SMIDEBUSH, P.E.
ROADWAY LEAD

SR 15 (US 441) New Outfall and Pond Design
FDOT District One

- **Description:** Drainage design for constructing a new outfall, pond, and drainage improvements to alleviate a significant flooding problem at the existing SR 15 (US 441) intersection with SW 21st Street in Okeechobee County.
- **Unique Issues:** Constructed an additional cross drain through the intersection and connected it to the existing SR 15 storm sewer system with proposed pipe to the new stormwater pond. Also included drainage improvements along SW 21st Street. With the pond outfalling to the existing Hendry Ditch, a proposed perpetual easement was required over the ditch. Hendry Ditch outfalls to Taylor Creek.
- **Role/Responsibilities:** Served as the Project Manager/Roadway EOR for the design and 3D plan production for this drainage improvement project. Additional tasks included coordinating with stakeholders on right-of-way acquisition and addressing utility conflicts.

SR 15 (US 441) Inlet and Pipe Replacement
FDOT District One

- **Description:** Drainage design and plans production to replace a failing drainage system within the SR 15 (US 441) and 4th Street intersection in Okeechobee County.
- **Unique Issues:** Constructed bulb-outs for pedestrian safety and maintained existing drainage patterns without the need for pavement reconstruction.
- **Role/Responsibilities:** As the Project Manager/Roadway EOR, tasks included utility conflict resolution, MOT layout and drainage structure review, curb ramp layouts, QC, and meetings.

SR 29 from 1st Street to 9th Street
FDOT District One

- **Description:** For this pedestrian safety improvement project in Collier County, reconstructed existing bulb-outs, constructed a new signal, installed RRFBs at mid-block crossings and roadway lighting, and made minor drainage improvements.
- **Unique Issues:** Included designing individual details for 24 bulb-outs, using trench drains in bulb-outs and at the bottom of curb ramps to maintain drainage, coordinating with locals on the design of banner arms on light poles, and coordinating with the Department on locating a potential Indian burial site within project limits.
- **Role/Responsibilities:** Served as the Project Manager/EOR for the design and plans production. Additional tasks included coordinating with stakeholders to address preferences of the local municipality and utility conflicts.

SR 60 at Willow Oak Road
FDOT District One

- **Description:** Intersection improvement project converting an open median to a directionalized median opening in Polk County. Included milling and resurfacing, roadway widening of the left-turn lanes and side streets, as well as drainage improvements.
- **Unique Issues:** To maintain drainage, special details were provided indicating specific cross-slope transitions and point elevations.
- **Role/Responsibilities:** Served as the Manager/EOR for design and plans production of the roadway and signing and markings components.

SR 66 from Hardee County Line to West of US 27
FDOT District One

- **Description:** Roadway resurfacing of 9.1 miles of a two-lane rural and urban roadway in Highlands County. Included roadway widening to provide bicycle keyholes, a new right-turn lane, and replacing four cross drains and a traffic monitoring station.
- **Unique Issues:** Tasked with adding a right-turn lane during Ph. IV plan review. To accommodate the right-turn lane, designed a combination of an open and closed drainage system to maintain drainage.
- **Role/Responsibilities:** Served as the Project Manager/EOR for design and plans production of the roadway and signing and pavement marking components. Additional tasks included preparing two design exceptions and two design variations.



NATE WILLBUR, P.E., RSP

ROADWAY QC

Nate Willbur has extensive experience in the transportation engineering field. He has a diverse range of experience as a Program Manager, Project Manager, Deputy Project Manager, engineer of record, and Designer on a variety of transportation projects ranging from sidewalk improvements, rural and urban milling and resurfacing, multi-lane capacity improvements, and innovative intersection design. He has signed and sealed component sets such as roadway, maintenance of traffic, signing and pavement marking, and signalization plans.

EXPERIENCE:

21 years

PROFESSIONAL REGISTRATION

- Florida Professional Engineer No. 72236
- Roadway Safety Professional, Level 1 (RSP[1]), 2022
- FDOT Advanced Maintenance of Traffic (MOT), 2022

EDUCATION

- BSCE, University of Florida
- MBA, University of Florida

SOFTWARE

- ORD
- Microstation

PROFESSIONAL AFFILIATIONS

- Florida Engineering Society – Central Florida President
- American Society of Highway Engineers
- American Water Resources Assn. Florida Section

SELECT PROJECTS

FEMA Hazard Mitigation Grant # 4468-007-R Contract # H0730 – SW Mockingbird Lane, Martin County

- **Description:** Designed three build alternatives for a roadway resiliency project on Mockingbird Lane with cost-benefit analyses and a recommendation and documentation for the preferred solution. Permitting was required through SFWMD, USACE, and FDEP.
- **Unique Issues:** Elevated the roadway to mitigate sea-level rise and meet the requirements of FEMA HMGP funding.
- **Role/Responsibilities:** Served as Roadway QA/QC.

Miccosukee Road over Branch of Alford Arm Bridge Replacement Design FDOT District Three

- **Description:** Bridge replacement project of Miccosukee Road over Branch of Alford Arm, which was an off-system bridge with narrow R/W.
- **Unique Issues:** Tight working areas required a unique TTCP with different barrier types based on phasing. This was an off-system project, so it had enhanced reviews from local agencies.
- **Role/Responsibilities:** Served as the Roadway QA/QC Engineer.

Multilane Design of SR 20 in Walton County, FDOT District Three

- **Description:** Widened SR 20 from West of City Hall to Black Creek Boulevard in Walton County.
- **Unique Issues:** The project involved widening SR 20 in Walton County. There were three typical sections: one urban section, one rural section, and a bridge section. The project included a bridge replacement and an alternative intersection design at SR 20 and US 331. This was a widening project that involved R/W acquisition. The design included profile and alignment optimizations to improve safety and reduce costs.
- **Role/Responsibilities:** Served as the Roadway EOR for the line and grade, and QC engineer for the 30% and 60% submittals.

Ridgemoor Boulevard at Brooker Creek Bridge Replacement FDOT District Seven

- **Description:** Bridge replacement for Ridgemoor Boulevard over Brooker Creek.
- **Unique Issues:** The bridge at Ridgemoor was a developer-constructed, voided-slab bridge. It was rated as scour-critical and moved up on the state's replacement list. As part of the project, Ridgemoor was one of two access points for a large residential area. The design included detours, one-way/one-lane

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NATE WILLBUR, P.E., RSP
ROADWAY QC

flagger operations, and enhanced public involvement. Held multiple meetings with residents and emergency responders to determine the optimal working times and phasing for the project.

- **Role/Responsibilities:** Served as the Project Manager and Senior Engineer.

Hickory Street Complete Streets from New Haven Ave to NASA Blvd (LAP)
City of Melbourne

- **Description:** The project was a complete street renovation for approximately 1 mile. The project added buffered bike lanes, on-street parking, bike bailouts, impervious pavement at the park areas, nine mid-block crossings, two roundabouts, and an upgraded signal. Three typical sections were included: a two-way, two-lane urban section, parkway sections, and a three-lane section. The project included widening, reconstruction, adding sidewalks, and bicycle paths. Multiple City water and sewer lines were designed and relocated.
- **Unique Issues:** Special utility coordination, two roundabout designs, and proximity to a hospital made this project unique. One of the roundabouts occurred at the entrance to a hospital. Close coordination with adjacent medical facilities and fire stations was necessary to ensure continuous operation of all emergency operations. The project also involved close coordination with all stakeholders and the landscape architect.
- **Role/Responsibilities:** As the Roadway and Utility Engineer, was responsible for preparing the roadway design plans and utility relocation plans.

US 98 Dade City Bypass from US 301 to US 301 (DB), FDOT District Seven

- **Description:** This design-build project converted an existing two-lane rural section of US 98 bypass to a four-lane divided urban section. The project included adding a shared-use path, intersection improvements, two roundabouts, speed management, pedestrian and bicycle accommodations, enhanced TTCP, pavement designs, and drainage upgrades.
- **Unique Issues:** The corridor had a high truck traffic volume, with the design and TTCP having to accommodate substantial truck traffic, including detours. The project also had muck that had to be remediated as part of the widening. Enhanced utility coordination and work by a highway contractor were also part of this project. Close coordination with the UAOs and Dade City for relocations was paramount. The project included R/W acquisition. Phasing plans for the contractor were created to help advance work while waiting for final acquisition. Finally, there were intersection changes and enhancements associated with the River Road intersection, with a new grading plan and layout developed to enhance circulation in the area.
- **Role/Responsibilities:** Served as the Roadway EOR, Deputy Project Manager, and design lead for the entire project. Also served as the ATC engineer developing and presenting ATCs during the acquisition phase.

US 41 from Hernando/Citrus County Line to Rip Terrace
FDOT District Seven

- **Description:** This milling and resurfacing project included intersection improvements in Floral City along with drainage improvements for drainage complaints in Floral City.
- **Unique Issues:** The key issues on the project included saving trees designated as historic and coordinating with local stakeholders to ensure a proper drainage fix was in place. In some areas, small scales were dug in, and in others we placed new inlets to carry water from the road.
- **Role/Responsibilities:** As the Project Engineer, responsibilities included local coordination, roadway design, and drainage design.

SR 500/US 441 at CR 42 Intersection Safety Improvements
FDOT District Five

- **Description:** The purpose of this project was to implement the US 441/SR 500 at CR 42 Safety Study recommendations and to provide safety improvements to reduce crashes at the intersection. The improvements include the following: replacing the single diagonal span signal with a box span signal, evaluating and replacing existing signage and pavement markings, designing new lighting for the intersection, and completing minor drainage adjustments for the new signals. The project also included completing a smart signal design for wireless connection to the D5 traffic management center.
- **Unique Issues:** The project was set as a safety project to reduce crashes at the intersection of US 441 and CR 42.
- **Role/Responsibilities:** Provided QA/QC, including reviewing roadway, MOT, and signal designs.



SAMUEL ERGLE, P.E.

ROADWAY SUPPORT

Samuel Ergle is a dedicated Engineer at The Balmoral Group, specializing in roadway, signing, and pavement marking design and plan production for FDOT, FTE, and CFX projects. With a deep understanding of FDOT manuals and design standards, Sam expertly applies his knowledge to drive practical analysis and high-quality plan production. He is a trusted team member, able to conduct thorough evaluations and deliver precise calculations and innovative designs for The Balmoral Group's projects.

EXPERIENCE:

7 years

PROFESSIONAL REGISTRATION

- Florida Professional Engineer No. 98948

EDUCATION

- University of Florida, BSCE

CERTIFICATION

- FDOT Advanced Maintenance of Traffic (MOT), 2026

SOFTWARE

- Microstation
- OpenRoads Designer
- GuideSign
- AASHTOWare

PROFESSIONAL AFFILIATIONS

- American Society of Highway Engineers

SELECT PROJECTS

FEMA Hazard Mitigation Grant # 4468-007-R Contract # H0730 – SW Mockingbird Lane, Martin County

- **Description:** Designed three build alternatives for a roadway resiliency project on Mockingbird Lane with cost-benefit analyses and a recommendation and documentation for the preferred solution. Permitting was required through SFWMD, USACE, and FDEP.
- **Unique Issues:** Elevated the roadway to mitigate sea-level rise and meet the requirements of FEMA HMGP funding.
- **Role/Responsibilities:** Served as Roadway designer.

SR 72 East of CR 661 to SR 70, FDOT District One

- **Description:** Roadway reconstruction to elevate the roadway profile above the FEMA floodplain in DeSoto County. Included permitting through SWFWMD as well as signing and pavement marking improvements.
- **Unique Issues:** The previous PSR identified a proposed wet detention pond site to treat and attenuate additional impervious area. Unique basic criteria were required for the Ocklawaha watershed. The proposed conveyance was to be a closed storm sewer system in accordance with Orange County criteria. CR 545 was largely unsigned, with just one confirming marker posted along the northbound and three references along the southbound.
- **Role/Responsibilities:** Helped to develop typical sections and assisted in plans production and QC.

SR 15 (US 441) New Outfall and Pond Design, FDOT District One

- **Description:** Drainage design for constructing a new outfall, pond, and drainage improvements to alleviate a significant flooding problem at the existing SR 15 (US 441) intersection with SW 21st Street in Okeechobee County.
- **Unique Issues:** Constructed an additional cross drain through the intersection and connected it to the existing SR 15 storm sewer system with proposed pipe to the new stormwater pond. Also included drainage improvements along SW 21st Street. With the pond outfalling to the existing Hendry Ditch, a proposed perpetual easement was required over the ditch. Hendry Ditch outfalls to Taylor Creek.
- **Role/Responsibilities:** Assisted with modifying drainage alignment, drainage structure sheets, curb ramp modeling, ditch cross sections, pedestrian detail, TCP quantities, and QC.

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SAMUEL ERGLE, P.E.
ROADWAY SUPPORT

SR 31 from Myrtle Slough to South of DeSoto County Line
FDOT District One

- **Description:** Roadway reconstruction and resurfacing to improve flood protection for 1.2 miles of a two-lane rural collector in Charlotte County, which included permitting through SWFWMD. The work was performed under a District One DW Drainage Continuing Services contract.
- **Unique Issues:** Developed a floodplain model to calibrate for observed flooding during Hurricane Irma (2017) and used Trimble Geo 7x to supplement survey data for modeling purposes.
- **Role/Responsibilities:** Provided updates to cross sections and TTCP.

SR 15 (US 441) Inlet and Pipe Replacement, FDOT District One

- **Description:** Drainage design and plan production to replace a failing drainage system within the SR 15 (US 441) and 4th Street intersection in Okeechobee County.
- **Unique Issues:** Constructing bulb-outs for pedestrian safety was included, and existing drainage patterns were maintained without needing pavement reconstruction.
- **Role/Responsibilities:** Assisted with the MOT plans, modeling for the curb ramps, drainage design, and pavement markings design.

SR 10 (US 90) from Jackson County Line to Bates Street, FDOT District Three

- **Description:** Milling and resurfacing of one mile of two-lane, undivided, rural minor arterial roadway in the City of Chattahoochee in Gadsden County. Improvements included ADA upgrades, minor drainage repairs, signing, pavement marking, pedestrian signals, and lighting at signalized intersections and midblock crosswalks.
- **Unique Issues:** Coordinated extensively with the Department and the City of Chattahoochee to incorporate streetscape features such as bulb-outs and decorative lighting. Identified and provided design solutions to areas of existing ponding and substandard sidewalk width.
- **Role/Responsibilities:** Responsibilities included preparation of the existing typical section package, assisting with the design of streetscape features such as bulb-outs, designing curb ramps, laying out the pavement markings, and designing guide signs for the project.

SR 103 (Lane Ave) from SR 208 (Wilson Blvd) to SR 228 (Normandy Blvd), FDOT District Two

- **Description:** RRR project along 2.5 miles of SR 103 in urban Duval County. A typical section consisted of two travel lanes in each direction separated by a two-way, left-turn lane, curb and gutter with concrete sidewalk on both sides of the roadway. The project included milling and resurfacing, sidewalk/ADA improvements, temporary traffic control, utility coordination, signing and pavement marking, signalization, and intersection lighting improvements.
- **Unique Issues:** A utility design component required extensive local agency and department coordination. Replaced two aging segments of JEA water main: one 3,200 LF segment of 12-inch ductile iron pipe and one 1,200 LF segment of asbestos cement pipe (hazardous material). Included a tree protection plan to protect adjacent trees from impact due to water main removal/placement. Produced a site-specific traffic control plan for the two water main improvement locations.
- **Role/Responsibilities:** Responsibilities included evaluation of existing conditions, preparation of the typical section package, quantity calculations, general plans production for roadway, and signing and pavement marking component plan sets.



ARMANDO PEREZ, P.E.

ROADWAY SUPPORT & UTILITY COORDINATION

Armando Perez supports the roadway division at The Balmoral Group with his understanding of roadway, signing, and pavement marking design for minor, major, and limited-access roadways. His experience includes PD&E and traffic studies, plans production, and utility coordination. Armando's in-depth knowledge of Florida and federal reference manuals and design standards is a testament to his expertise. His ability to multitask while maintaining a keen eye for detail makes Armando an important asset in meeting project deadlines and supplying quality client deliverables.

EXPERIENCE:
11 years

PROFESSIONAL REGISTRATION
- Florida Professional Engineer No. 88734

EDUCATION
- BSCE, University of Central Florida

SOFTWARE
- Open Roads Designer
- Civil3D
- AutoTurn
- GuideSign

PROFESSIONAL CERTIFICATIONS
- FDOT Temporary Traffic Control

PROFESSIONAL AFFILIATIONS
- American Society of Highway Engineers

SELECT PROJECTS

FEMA Hazard Mitigation Grant # 4468-007-R Contract # H0730 – SW Mockingbird Lane, Martin County

- **Description:** Designed three build alternatives for a roadway resiliency project on Mockingbird Lane with cost-benefit analyses and a recommendation and documentation for the preferred solution. Permitting was required through SFWMD, USACE, and FDEP.
- **Unique Issues:** Elevated the roadway to mitigate sea-level rise and meet the requirements of FEMA HMGP funding.
- **Role/Responsibilities:** Served as Roadway designer.

SR 72 from CR 661 to SR 70 and SR 70 from CR 661 to the Peace River FDOT District One

- **Description:** PD&E study to evaluate the 429 and intersection improvements of 0.6 miles of SR 72 and 0.5 miles of SR 70 in DeSoto County. A typical section consisted of a two-lane, undivided roadway with two 11-foot travel lanes in each direction and an open drainage system. Proposed improvements included raising and relocating the roadway centerline to alleviate roadway overtopping for a 100-year design storm event and a roundabout at the intersection (with right-of-way anticipated as a solution).
- **Unique Issues:** Several major utilities crossed the corridor at the intersection of SR 70 and SR 72, including transmission and gas lines. Contamination sites and right-of-way acquisition concerns limited the ability to relocate utilities.
- **Role/Responsibilities:** As the Utility Coordinator for the project, responsibilities included establishing contact with UAOs through Sunshine 811, facilitating requests for information for each affected utility, and documenting dispositions. All findings were summarized in the Utility Assessment Technical Memorandum.

Casselton Drive from SR 436 (Semoran Boulevard) to Greencastle Boulevard, City of Casselberry

- **Description:** Provided roadway, TTCP, and signing and pavement marking design for a 0.5-mile-long road diet project within the City of Casselberry in Seminole County. The project reduced the existing 48-foot-wide pavement to a 22-foot-wide, two-lane undivided roadway. Modifications included the resurfacing of existing pavement, storm drain collection system replacement, reconstructing curb and gutter, signing and pavement marking, water main replacement, and landscaping.
- **Unique Issues:** Designed using AutoCAD Civil3D, the very flat terrain required special roadway and gutter profiles to ensure drainage. Replaced the existing

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ARMANDO PEREZ, P.E.
ROADWAY SUPPORT & UTILITY COORDINATION

west side sidewalk with an 8-foot meandering shared-use path, and added sidewalk on the east side.

- **Role/Responsibilities:** Responsibilities included developing the horizontal and vertical roadway geometry, evaluating the cross slope along the corridor, developing cross-slope correction and overbuild details, evaluating the need for super-elevated sections, and designing parallel parking spaces and sidewalks per ADA requirements. Civil3D Corridor modeling was utilized to ensure efficient compatibility and integration with proposed drainage improvements. Other responsibilities included laying out pavement markings and signing, developing pavement design for reconstruction areas, and developing median openings for utility trucks. General plan production tasks included quantity take-offs and cost estimates.

Lyons Road from Norte Lago Drive to Pine Springs Drive
FDOT District Four

- **Description:** LAP reconstruction of half a mile of four-lane, divided, urban arterial in unincorporated Boca Raton in Palm Beach County. Reconstructed Lyons Road to flatten existing horizontal curves and provide super elevation to meet the posted speed of 40 mph, modified lane and median widths to incorporate bicycle lanes, added and improved drainage features to solve significant flooding, and provided new sidewalk construction, ADA upgrades, and signing and pavement marking.
- **Unique Issues:** Implemented project improvements with tight R/W constraints. These included a right-turn lane and water-line modifications for Palm Beach County, a significant number of utilities, and a trench drain system that needed to be contained within the median. Permitting was handled through the Lake Worth Drainage District, with several public meetings required as outreach to stakeholders and involved residents.
- **Role/Responsibilities:** Responsibilities included assisting with the development of the horizontal and vertical alignment, including special details and profiles, developing the super-elevation transitions along the corridor, guide sign designs, and signing and pavement marking layout per county, FDOT, and AASHTO standards. Other tasks included analyzing underground and overhead utilities based on both verified vertical and horizontal locates and as-builts to determine roadway and drainage design conflicts, as well as identifying utility relocates. General plan production tasks included quantity take-offs and cost estimates.

Avalon Road (CR 545) From Florida Turnpike to West Colonial Drive (SR 50), Orange County

- **Description:** Final engineering design for the urban widening of a two-lane, undivided roadway to a four-lane, divided roadway in Orange County. Included utility coordination, drainage design and plans, signing and pavement marking, and a MOT, with permitting through SJRWMD.
- **Unique Issues:** The previous PSR identified a proposed wet detention pond site to treat and attenuate additional impervious area. Unique basic criteria were required for the Ocklawaha watershed. The proposed conveyance was to be a closed storm sewer system in accordance with Orange County criteria. CR 545 was largely unsigned, with just one confirming marker posted along the northbound and three references along the southbound.
- **Role/Responsibilities:** As the Utility Coordinator for the project, responsibilities included establishing contact with UAOs through Sunshine 811, facilitating requests for information for each affected utility, documenting dispositions, phone and email record keeping, scheduling utility design meetings, reviewing utility conflict matrices, and facilitating utility work schedules. Other responsibilities included laying out the signing and pavement markings and mod.



RYAN STIGLBAUER, PSM

GEOMATICS LEAD
Surveyor | APTIM

8 YEARS
EXPERIENCE

Education

- BS, Ocean Engineering, Florida Atlantic University

Registrations/Certifications

- Licensed Professional Survey and Mapper, License No. LS7679
- Engineer in Training

Skills & Experience

- Real-Time Kinematic GNSS systems
- Single beam and multibeam sonar systems
- Conventional Land Survey (Total Station, Level)
- Aerial drone surveys

Professional Summary

Ryan Stiglbauer is a Geomatics Manager and Professional Surveyor and Mapper for APTIM **(4 years with APTIM)**. Experience includes geodetic control, topographic, boundary, and construction stakeout surveys, coastal and marine applications including offshore, nearshore, and inlet bathymetric surveys, survey control reconnaissance, dune and vegetation mapping, and pre-cable route and pipeline depth of cover surveys. Proficient in reducing and analyzing data using programs such as Hypack/Hysweep, Applanix POSPAC, ArcGIS, Golden Surfer, and AutoCAD Civil3D to draft and analyze the project area. Involved on projects on federal and state government properties, military bases, and private spaceflight installations.

Relevant Experience

Aptim Environmental & Infrastructure, LLC, Geomatics Lead; June 2022–Present

Surveyor of Record; Estero Elevation Certificates, Lee County, FL

Managed a large-scale FEMA Elevation Certificate program for the Village of Estero, supporting the community's flood resilience and vulnerability assessment initiatives. Directed survey planning, field operations, and quality control for residential, condominium, commercial, and historic structures located throughout the Village. Oversaw multiple survey crews conducting RTK GNSS and differential leveling surveys to determine finished floor elevations, lowest adjacent grades, machinery and equipment elevations, lowest horizontal structural members, and other FEMA required certification data. Led development and review of Elevation Certificates in accordance with FEMA and NFIP requirements, coordinated resolution of complex flood zones and Base Flood Elevation determinations, and worked directly with Village staff and floodplain managers throughout the review process.

Project Surveyor; Belleair Bluff Restoration Survey, Belleair, FL

Led a topographic survey along a heavily vegetated steep bluff along a park and roadway in Pinellas County, FL. Multiple surveys were performed using RTK GNSS to map the topography along several cross-sections of the bluff to capture data for an erosional analysis from the roadway into seagrass beds at the base of the bluff. Ground water wells and stormwater outfalls were located as part of this survey. Oversaw aerial drone surveys performed to identify the vegetation along the bluff.

Project Surveyor; Pompano Beach/Lauderdale-by-the-Sea Erosion Control Line, Broward County, FL

Provided erosion control line (ECL) surveying and mapping services along approximately 3.2 miles of shoreline in Pompano Beach and Lauderdale-by-the-Sea. Services included boundary

research, monument evaluation, field surveying, legal description preparation, exhibit development, and coordination with coastal engineers and regulatory agencies.

Project Surveyor; 2025 Coquina Beach/Longboat Pass Design Level Topographic and Hydrographic Survey, Manatee County, FL

Provided topographic and hydrographic surveying services for the Coquina and Longboat Pass FEMA Storm Damage Repair project in Manatee County, Florida, in support of post-storm physical monitoring and FDEP permit compliance. Services included comprehensive beach, nearshore, and offshore profile surveys extending from FDEP monuments collected between November 3 and November 5, 2025. Deliverables included signed and sealed survey reports, plan-view mapping, beach profile plots, hydrographic survey exhibits for Longboat Pass and the Passage Key borrow areas, and FDEP-formatted digital data prepared in accordance with Chapter 5J-17, F.A.C., FEMA requirements, and FDEP coastal monitoring standards.

Surveyor of Record; Manchester Waterway Dredging, Charlotte County, FL

Managed hydrographic and topographic surveying services supporting design and permitting of a multi-canal maintenance dredging project. Directed field operations, survey control, bathymetric data collection, and geospatial deliverable development for Lewis Creek, Christopher Canal, Knox Canal, Bay Harbor Canal, and Sweet Bay Canal. Oversaw acquisition and processing of channel cross-sections, shoreline features, navigational structures, and mean high water line information used to develop dredging plans, estimate sediment volumes, support regulatory permitting, and establish pre-construction conditions for future dredging operations. Coordinated closely with engineers and County staff to ensure information met the requirements for design, permitting, and construction-phase implementation.

Surveyor of Record; Fisher Island NE Revetment Topographic Survey, Miami-Dade County, FL

Provided topographic surveying services for the northeast revetment shoreline at Fisher Island to support coastal engineering evaluation and design efforts. Survey included detailed mapping of existing shoreline features, riprap revetment geometry, benches, walkways, palms, and adjacent site improvements, along with approximate mean high water delineation. Field data were collected using RTK GNSS methods tied to National Geodetic Survey control, referenced to the Florida State Plane Coordinate System (NAD83/2011) with elevations based on NAVD 88. Deliverables included plan-view topographic exhibits suitable for coastal analysis and revetment rehabilitation planning, prepared to support engineering coordination and regulatory review.

Surveyor of Record; Manatee County, FL Beach Renourishment Easement Sketch and Description

Supported the preparation of a detailed sketch and legal description of coastal easements in Manatee County, Florida, the work documented the location and extents of easement areas associated with FDEP Range Monuments R-11.5 through R-36 along the shoreline. Responsibilities included spatial data compilation, easement mapping, and development of clear, recordable plan views using GIS-based mapping to support regulatory coordination, property documentation, and long-term coastal management efforts.

Project Surveyor; Delray Beach Seawall Replacement Project, Palm Beach County, FL

Lead Project Surveyor for detailed topographic survey of seawalls and adjacent park spaces. Survey located drainage structures, irrigation structures, valves, sidewalks, curbs, paver sidewalks, bait/fish cleaning stations, pavilions, trees, using RTK-GPS and Leica TCR805 Total Station.



8 YEARS
EXPERIENCE

Education

- MS, Geosciences with focus on Coastal Geology, Florida Atlantic University
- BS, Geology, Florida Atlantic University

Registrations/Certifications

- Licensed Professional Surveyor and Mapper, License No. LS7687
- Scuba Diver
- AAUS diver in training
- PADI/Enriched Air Nitrox Diver
- Class A CDL Driver's License

Skills & Experience

- Proficient with hydrographic and topographic data collection, processing, and deliverables along with 3D laser scanning

THOMAS SHAHAN, PSM

GEOMATICS MANAGER
Surveyor | APTIM

Professional Summary

Thomas Shahan is a Geomatics Manager and Professional Surveyor and Mapper for APTIM. He has experience **(8 years with APTIM)** in coastal and marine applications including offshore, nearshore, and dune profile surveys, inlet bathymetric surveys, conventional survey data collection, survey control reconnaissance, dune and vegetation mapping, checking and setting of control, sand sampling and analysis, and biological dive surveys. He is proficient in reducing and analyzing data using programs such as Hypack's Single Beam Editor, ArcGIS, AutoCAD Civil 3D and surfer to determine environmental and morphological changes of the project area.

Relevant Experience

Aptim Environmental & Infrastructure, LLC, Geomatics Lead; July 2018–Present

Project Surveyor; Pompano Beach & Lauderdale-By-The-Sea ECL, Broward County, FL

Served as Surveyor for the Erosion Control Line (ECL) survey, assisting with pre-survey control reconnaissance to locate and evaluate NGS monuments for use as horizontal and vertical control. Following field operations, conducted QA/QC reviews, and prepared CAD mapping deliverables in accordance with FDEP ECL survey requirements.

Project Surveyor; Town of Longboat Key Sea Level Rise Flood Hazard Analysis, Town of Longboat Key, FL

Surveyor who assisted in locating storm drains, outfall pipes, inflow structures, and related infrastructure, then compiled and mapped this information to support the analysis of flooding and sea level rise impacts. These efforts contributed to the broader coastal management and planning work conducted for the Town.

Project Surveyor; Enercon ExxonMobil ElectroPhos Pond Survey, Polk County, FL

Served as Project Surveyor for the topographic and hydrographic survey of the ExxonMobil ElectroPhos Pond in Polk County, FL. Responsibilities included collecting GNSS and single-beam bathymetric data along 28 cross-sectional profiles, processing the data in HYPACK, and generating final deliverables including a survey report and GIS maps.

Surveyor; Fisher Island NE Revetment Topographic Survey, Dade County, FL

Supported a topographic survey of the northeast shoreline revetment at Fisher Island conducted to provide mapping and survey information for coastal engineering evaluation and rehabilitation planning. Assisted with project coordination activities, including tracking schedules, facilitating

communication between survey and engineering teams, and supporting deliverable development. Contributed to the preparation of CAD mapping and topographic exhibits by compiling survey data, drafting shoreline features and site improvements, and assisting with quality control reviews.

Hydrographic Surveyor; Crandon Park Marina Basin Survey, Dade County, FL

Hydrographic surveyor and captain for APTIM under contract with Cummins and Cederberg to conduct a bathymetric and topographic survey of a marina basin at Crandon Park on Key Biscayne in Miami, Florida. Multibeam sonar was used to acquire full coverage of the basin. Sediment probes were also utilized on this project to help determine the thickness of the sediment in the basin to refusal.

Project Surveyor; Boca Grande Fishing Pier Rehabilitation, Pinellas County, FL

Supported the survey portion of the pier rehabilitation in an oversight role. He reviewed the topographic data collected along the pier access walkway and entry road, checking the field crews' coverage, control, and feature locations to confirm the information met the needs of the engineering team. His work included tracking survey progress, reviewing cross-sections and shoreline points, and verifying that utilities and site features were accurately documented. The reviewed data was then incorporated into a Civil 3D drawing used for the engineering assessment and design phase of the project.

Geomatics Manager; Shell Key, Grand Canal & Pass-A-Grille – Year 1 Monitoring Topographic and Hydrographic Survey; Pinellas County, FL

Oversaw geomatics operations involving RTK GNSS control reconnaissance, upland and nearshore beach profiles, and offshore bathymetric surveying across multiple FDEP monument networks. Guided field crews through all survey phases, including control verification, extended-rod GNSS nearshore work, and single-beam sonar acquisition. Managed integration of GNSS data, HYPACK-processed soundings, sound velocity data, and tide observations to produce accurate merged cross sections and XYZ datasets. He also directed final data reduction, quality review, and the preparation of certified maps, profiles, and digital deliverables.

Project Surveyor; Belleair Bluff Restoration Survey, Pinellas County, FL

Supported the Belleair Bluff restoration effort by managing data review, coordinating survey tasks, and providing technical guidance to field crews performing the topographic and drone surveys. Work included reviewing RTK GNSS data collected along bluff cross-sections, validating coverage for the erosional analysis, and assisting with interpretation of aerial imagery used to identify vegetation along the bluff. Also collaborated with project managers and field staff to keep deliverables aligned with project needs and analysis requirements.

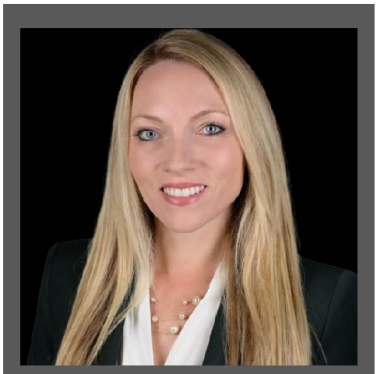
Field Chief and Project Surveyor; South Lake Worth Inlet Seawall Replacement Project, Palm Beach County

Lead Project Surveyor for the detailed topographic survey of seawalls and adjacent park spaces. Survey located drainage structures, irrigation structures, valves, sidewalks, curbs, paver sidewalks, bait/fish cleaning stations, pavilions, trees, etc., using RTK-GPS and Leica TCR805 Total Station. Analyzed data and created AutoCAD maps to be used for engineering and designing the new seawalls.

Jessica McRory, PE, LEED AP

SENIOR GEOTECHNICAL ENGINEER

AREHNA | Engineering, Inc.



Contact Information

813.944.3464
jmcrory@arehna.com

5012 W. Lemon Street
Tampa, Florida 33609

Licenses

Professional Engineer
Florida Registration No. 68440, 2008

LEED Accredited Professional

Experience

23 years total
17 years at AREHNA

Education

Master of Science, Civil Engineering,
Geotechnical Concentration
University of South Florida, 2004

Bachelor of Science, Civil Engineering
University of South Florida, 2003

Career Summary

Ms. McRory has managed the geotechnical aspects of testing, design and construction for over a thousand engineering projects over the last 23 years. Her involvement has included analysis and evaluation of soil conditions pertaining to new construction design, as well as ongoing construction projects. Project experience has ranged from task order contracts to large FDOT projects. Other responsibilities have included coordinating geotechnical field and laboratory testing, as well as construction materials testing services. Evaluations have included soil and groundwater conditions, determining soil bearing capacity and consolidation characteristics and analyzing the performance of various types of foundation systems. Ms. McRory has provided recommendations for shallow foundations, various ground improvement techniques and deep foundation systems including driven piles, drilled shafts and augercast piles.

Project Experience

Buttonwood Neighborhood Drainage Improvements, Longboat Key, Florida This project consists of the reconstruction of Buttonwood Drive and associated drainage improvements. The purpose of the geotechnical study was to evaluate the general subsurface conditions at the project site and provide engineering recommendations to support the roadway reconstruction and drainage design. The scope of services included subsurface exploration, laboratory testing, and geotechnical analysis to assess soil and groundwater conditions relevant to the proposed improvements. Ms. McRory was responsible for coordinating field investigations, reviewing subsurface data, and developing geotechnical recommendations for design and construction.

Captiva Island Stormwater Study-Mitigate Flooding, Lee County, Florida The purpose of our geotechnical study was to evaluate the general subsurface conditions at four project sites. Ms. McRory provided project oversight, performed the geotechnical analyses, and developed site-specific recommendations to support the proposed construction projects.

City of Anna Maria-SWFWMD Co-Funded Drainage Improvements, SWFWMD Florida This project consisted of the design, permitting, and construction of stormwater retrofit improvements to enhance the quality of stormwater discharging into the Bay. The drainage basin encompasses approximately 75 acres of urban watershed tributary to Tampa Bay. The project site was located along various streets within the City of Anna Maria, Florida. Ms. McRory served as the Contract Manager, providing overall project oversight, quality control, coordination of geotechnical services, and technical review throughout the design and construction phases of the project.

Casey Key Shoreline Protection Project, CEI, Sarasota, Florida AREHNA is currently providing Construction Engineering and Inspection (CEI) services for this project, which consists of the reconstruction and shoreline stabilization of North Casey Key Road and the adjacent shoreline. Ms. McRory serves as the Contract Manager, providing overall project oversight, quality control, client coordination, and management of CEI activities to ensure compliance with project plans, specifications, and regulatory requirements.

Clearwater North Beach Stormwater and Tidal Improvements, Clearwater, Florida Ms. McRory provided geotechnical engineering services for this project, which consisted of the installation of new gravity storm sewers, including wet well structures, pump stations, and generator pads. Her responsibilities included project oversight, field and laboratory coordination, geotechnical analysis, and site recommendations to support the proposed improvements.

Tidal Flooding Mitigation & Shoreline Protection. CEI, Hollywood, Florida AREHNA is providing Construction Engineering and Inspection (CEI) services for this project, which includes improvements at twelve locations throughout the City. The work consists of approximately 7,200 linear feet of steel sheet pile installation, 8,000 linear feet of concrete pile caps, 2,000 linear feet of roadway and

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Jessica A. McRory, PE, LEED AP

shared-use path reconstruction or elevation improvements, and associated earthwork activities. Ms. McRory's responsibilities included construction oversight, quality assurance, documentation, and coordination to ensure compliance with project plans and specifications.

Lower Peninsula Stormwater Improvements Project – Southeast Region Design-Build, Tampa, Florida This project consisted of the construction and relocation of more than 10,000 linear feet of stormwater infrastructure, including box culverts, pipes, laterals, inlets, and interconnections, extending through a stormwater pond and discharging to Hillsborough Bay. Ms. McRory's responsibilities included developing the geotechnical scope of services and cost estimates, coordinating utility clearances and boring locations, performing geotechnical analyses, and preparing geotechnical engineering reports to support the design and construction of the proposed improvements.

Culvert and Pump Station Rehabilitation Projects, Hillsborough County, Florida This task order contract consists of stormwater culvert, cross drain, and side drain improvements; stormwater pump station rehabilitations; and roadway and drainage improvements. Ms. McRory serves as the Contract Manager and is responsible for project oversight, quality control, coordination of field explorations and laboratory testing, and geotechnical analyses. She also provides engineering recommendations for site preparation, design, and construction to support the successful delivery of the projects under the contract.

Southeast Seminole Heights Flood Relief, Tampa, Florida Ms. McRory serves as the Project Manager for this project, located within the Seminole Heights neighborhood. The project consists of the design and construction of approximately 16,000 linear feet of box culverts and various-sized stormwater pipelines, as well as the replacement of water distribution and transmission mains. Additional improvements include associated utility construction, sidewalks and raised crosswalks, bicycle facilities such as bike boxes and shared lane markings, and on-street parking enhancements. Her responsibilities include project management, client coordination, quality control, oversight of technical services, and support throughout the design and construction phases.

Geotechnical Engineering & Soils & Materials Testing Services (Prime), Manatee County, Florida AREHNA serves as the Prime Consultant under this contract, providing geotechnical engineering and construction materials testing services for a variety of County projects. As Contract Manager, Ms. McRory is responsible for overall project oversight, coordination of field and laboratory testing activities, client communication, and the development of geotechnical recommendations to support project planning, design, and construction.

Stormwater Continuing Services Contract, Hillsborough, County, Florida Ms. McRory serves as the geotechnical Project Manager on this County contract that supports drainage and stormwater improvement projects. Multiple stormwater tasks have been completed County-Wide for this contract. Field explorations have included Seasonal High Groundwater determination, Standard Penetration Test borings, auger borings, installation of piezometers, permeability testing and laboratory classification testing. AREHNA has closely coordinated with the design teams to ensure that deadlines are met.

Miscellaneous Professional Services for Stormwater Management, Transportation & Bridge Improvement Services, St. Petersburg, Florida Ms. McRory served as the Project Manager for geotechnical engineering services on multiple transportation, bridge replacements and seawall rehab and replacement projects under this task order contract. Services included drilling and laboratory testing, engineering analysis and reporting. Ms. McRory was responsible for assisting with coordination and performing quality oversight for the project.

District-Wide Geotechnical and Materials Testing, District One, Florida Ms. McRory serves as a Senior Geotechnical Engineer and Contract Manager for this task-order contract. Tasks have included pavement coring, data collection, resurfacing, widening, bridge projects and geotechnical engineering support of in-house design projects.

Upper Peninsula Watershed Improvements (Phase I – Springlake Outfall), Tampa, Florida This project involved the design of a large box culvert system to alleviate flooding in the Euclid/Vasconia area of South Tampa. A geotechnical exploration was conducted along the proposed alignment and at the outfall location to characterize subsurface conditions and support design development. Field exploration activities were carefully coordinated to minimize maintenance of traffic (MOT) requirements and reduce impacts to nearby residents. Ms. McRory served as the Project Manager for geotechnical services, overseeing field investigations, coordinating subsurface explorations, managing geotechnical analyses, and providing engineering recommendations to support the project's design and construction.

Miscellaneous Professional Services for Stormwater Management, Transportation & Bridge Improvement Services (Roadways, Drainage, Structural, Civil and Traffic Engineering), Pinellas County, Florida Ms. McRory is currently providing support for multiple transportation projects under this task order contract for Stormwater Management, Transportation, and Bridge Improvement Services. AREHNA has performed geotechnical engineering services for a variety of transportation and bridge replacement projects. Services have included subsurface explorations, drilling and laboratory testing, geotechnical engineering analyses, and preparation of engineering reports and recommendations.

Jordan Fox, P.E.

SENIOR GEOTECHNICAL ENGINEER

AREHNA | Engineering, Inc.



Contact Information

813.944.3464
jfox@arehna.com
5012 W. Lemon Street
Tampa, Florida 33609

Licenses

Professional Engineer
Florida Registration No. 87472, 2019

Experience

11 years total
1 year at AREHNA

Education

Master of Science, Civil Engineering
Geotechnical Engineering Focus
Georgia Institute of Technology, 12/2014

Bachelor of Science, Civil Engineering
Ohio State University, 5/2013

Career Summary

Mr. Fox serves as a Senior Geotechnical Engineer for Arehna Engineering. He has over 11 years of experience working on Geotechnical, Environmental, and Materials Testing projects throughout west-central Florida. Project experience includes roadway soil surveys, miscellaneous structures, bridge projects, water/wastewater treatment facility expansions, utility installation projects, pavement evaluations, and sinkhole investigations. His expertise includes planning and executing site investigations, site characterization, shallow and deep foundation analysis, pavement evaluation and design, slope stability analysis, evaluation of earth retaining structures, and sinkhole remediation. His experience includes management of several task-based continuing services contracts throughout the State of Florida.

Project Experience

Buttonwood Neighborhood Drainage Improvements, Longboat Key, Florida This project consists of the reconstruction of Buttonwood Drive and associated drainage improvements. The purpose of the geotechnical study was to evaluate the general subsurface conditions at the project site and provide engineering recommendations to support the roadway reconstruction and drainage design. The scope of services included subsurface exploration, laboratory testing, and geotechnical analysis to assess soil and groundwater conditions relevant to the proposed improvements. Mr. Fox was responsible for coordinating field investigations, reviewing subsurface data, and developing geotechnical recommendations for design and construction.

Transportation Design General Engineering Services and Support, Hillsborough County, Florida Mr. Fox performs geotechnical investigations and construction materials testing services under this contract. The scope of work includes intersection improvements, new traffic signals, Intelligent Transportation Systems (ITS) signal interconnections, road diet projects, Project Development and Environment (PD&E) studies, complete streets improvements, roadway widening, resurfacing and reconstruction, drainage improvements, box culvert installations, and bridge rehabilitation and replacement projects. His responsibilities include planning and executing subsurface investigations, overseeing drilling and laboratory testing programs, performing geotechnical analyses, and providing engineering recommendations to support the design and construction of transportation infrastructure improvements.

Clearwater North Beach Stormwater and Tidal Improvements, Clearwater, Florida Mr. Fox is providing geotechnical engineering services for this project, which involves the installation of new gravity storm sewer systems, including wet well structures, pump stations, and generator pads. His responsibilities include planning and coordinating subsurface investigations, overseeing field explorations and laboratory testing, performing geotechnical analyses, and developing foundation, earthwork, and construction recommendations to support the design and construction of the proposed stormwater infrastructure improvements.

Stormwater Treatment Area 1 West Expansion, Palm Beach, Florida This project served to construct a man-made wetland to filter nutrients from surrounding agriculture areas before reaching the Everglades. Provided Geotechnical Support Services during construction, Materials Testing and Field Services, and Laboratory Testing Services. This included geotechnical review of soil borings and onsite material, soil profiling of deep excavations to support changed conditions onsite, vibration monitoring, and reporting during surface rock blasting and construction-induced vibrations. Additional services include QC of Construction Materials Testing for soil proctors and gradations of embankment materials, field density testing of compacted embankment materials, concrete sampling/testing and compressive strength testing, assistance reading and interpreting project specifications, review and revision of the Requests for Information (RFIs) to the Owner. Mr. Fox served as Project Engineer on this project as was responsible for review and approval of field density tests, proctor results, and compressive strength testing.

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Jordan Fox, PE

Eloise Loop Rd. Drainage Improvements – Polk County, Florida This project provided geotechnical engineering services for drainage improvements along Eloise Loop Road aimed at mitigating recurring flooding. The scope included subsurface investigations consisting of Standard Penetration Test (SPT) borings, hand auger borings, and Double Ring Infiltrometer (DRI) testing to evaluate subsurface conditions and soil infiltration characteristics. The project supported the design and construction of a stormwater pond, reinforced concrete stormwater piping, and drainage ditch improvements. Mr. Fox coordinated field exploration activities, logged soil borings, performed soil classification, assigned and reviewed laboratory testing, and prepared soil boring logs. He also evaluated Seasonal High Groundwater Table (SHGWT) elevations and analyzed soil infiltration rates to support geotechnical recommendations and stormwater design requirements. His responsibilities included technical oversight of field and laboratory programs and preparation of geotechnical findings and recommendations for the project.

District-Wide Geotechnical and Materials Testing, Districts One and Seven, Florida Scope of work has included pavement coring and geotechnical support of in-house design projects. Mr. Fox has been responsible for geotechnical exploration and laboratory testing, soil classifications, geotechnical engineering recommendations and report preparation.

Balm Riverview Road at Rhodine Road Intersection Improvements, Hillsborough County, Florida This project included safety improvements at the intersection of Balm Riverview Road and Rhodine Road. Planned improvements included the addition of a turn lane, mast arm signals, and a stormwater pond. Mr. Fox planned and executed a site investigation including hand auger borings, pavement cores, Dynamic Cone Penetration (DCP) tests, Double-Ring Infiltrometer (DRI) tests, and Standard Penetration Test (SPT) borings. Geotechnical analysis included providing soil parameters to support the design of the mast arm signals, infiltration rates to assist with the stormwater pond design, and pavement and subgrade soil stiffness information to support the planned roadway improvements. Mr. Fox served as the Project Manager for this project.

SR 82 Intersection Safety Improvements (000005-2), District One, Lehigh Acres, Florida This project consisted of safety improvements at the intersection of SR 82 and Alabama Road. Improvements include widening along Alabama Road to facilitate a dedicated turn lane and construction of mast arm signals. Mr. Fox provided Geotechnical services to support the design of the proposed improvements. Services included performing a Roadway Soil Survey along Alabama Road, and SPT soil borings relative to the proposed mast arm locations. Recommendations were provided on the suitability of the in-situ soils along Alabama Road for use as embankment materials, and design soil parameters for drilled shaft foundation design.

Polk County Resurfacing – Polk County, Florida Mr. Fox served as the Project Manager for an evaluation of several local and collector roads throughout Polk County that were experiencing distress from elevated groundwater levels. A subsurface investigation consisting of 90 pavement cores, with associated DCP tests, and hand auger borings was completed. Appropriate rehabilitation recommendations including mill and resurface, FDR, and reconstruction were provided for each road based on site conditions.

Mt. Pisgah Rd. Bridge Repair – Polk County, Florida Performed geotechnical evaluation to support emergency foundation repairs for the Mt. Pisgah Road bridge following scour and undermining caused by Hurricane Ian. Supported design of a proposed crutch bent by providing soil parameters for lateral pile analysis, axial capacity curves for multiple driven pile sections, environmental classifications, and median particle diameter (D50) for scour evaluation. Planned and executed the subsurface investigation, characterized subsurface conditions, and developed axial capacity recommendations for alternative deep foundation systems.

Hillsborough County Local Roads Resurfacing FY22 & 23, Hillsborough County, Florida This project included the evaluation of 34 local roads totaling approximately 90 lane miles to support the County's Road Resurfacing and Reconstruction Program. Retrieved and evaluated a total of 190 pavement cores to evaluate the condition, layering, and thickness of the roadway section; performed Dynamic Cone Penetrometer (DCP) testing at each core location to evaluate the strength of the subgrade soils; and advanced hand auger borings into the subgrade materials to retrieve samples for classification and laboratory testing. Pavement rehabilitation recommendations including milling and resurfacing, Full-Depth Reclamation (FDR), and/or reconstruction were provided for each road. Mr. Fox was responsible for coordinating all field activities including permitting, utility clearance, scheduling coring crews, and coordination of temporary traffic control; classifying subgrade soils and documentation of extracted pavement cores; evaluation of DCP data and determination of design LBR and Resilient Modulus values for design.

N. County ATMS – Pinellas County, Florida This project included the installation of closed-circuit television (CCTV) poles and dynamic messaging signs (DMS) at nine locations throughout Pinellas County. Performed a subsurface investigation consisting of Standard Penetration Test (SPT) borings and to provide design and construction recommendations to support the installation of the ATMS elements. Mr. Fox coordinated maintenance of traffic (MOT) efforts during the execution of the subsurface investigation and utilized SPT-N values and empirical correlations to estimate soil parameters to support the design of the DMS and CCTV poles.

Anticipated Level of Participation on the Project

Project Manager

With the vision and experience to lead this project, **Samantha Danchuk, PhD, PE**, will serve as **Project Manager,** overseeing all activities from initiation through implementation alignment. Dr. Danchuk is a recognized leader in Florida resilience, bringing over 20 years of experience spanning coastal engineering, resilience planning, and program delivery, including seven (7) years as Broward County's Assistant Chief Resilience Officer and Capital Program Administrator and as a consultant, 13 years delivering coastal projects across nine states.

Dr. Danchuk has been a **statewide leader in Adaptation Action Area (AAA) policy and implementation, supporting development of Florida's first AAA Guidebook (2014), leading AAA designation within the Broward County Land Use Plan for Areas of Regional Significance, and advancing AAA-designated implementation projects in Fort Lauderdale including drainage, backflow prevention, and water and sewer improvements tied to redevelopment.** She also supported AAA strategy through the Southeast Florida Regional Climate Change Compact Regional Climate Action Plan, aligning regional priorities with local implementation. With APTIM, she **led the update of the Florida Resilient Florida Adaptation Planning Guidebook, establishing current State standards under Florida Statute 380.093.**

Availability of Key Personnel

APTIM's proposed key personnel are committed to providing the leadership, technical expertise, and responsiveness necessary to successfully deliver the Town's Phase 4 Drainage Improvements. The team has been structured to provide appropriate resources throughout each phase of the assignment, including project management, drainage analysis and modeling, design, surveying and easement support, utility coordination, geotechnical services, permitting, property restoration, and public and stakeholder outreach. These disciplines directly align with the services identified for the Phase 4 project.

Key personnel will remain actively engaged throughout the duration of the project, with responsible engineers providing technical oversight and coordination of their respective disciplines. APTIM's project management approach includes regular discipline coordination, milestone readiness reviews, and documented quality checks to maintain continuity and support timely decision-making as the project advances.

APTIM has the depth of resources and multidisciplinary capabilities to provide the Town with a responsive team throughout the project, while maintaining the involvement and continuity of the key personnel identified in this proposal.

SUBCONSULTANTS

APTIM has assembled a team **(Figure 3-2)** that combines national technical expertise through our partnership with **The Balmoral Group, providing drainage/stormwater experience** and **AREHNA Geotech, providing geotechnical experience**.



Figure 3-2 The APTIM Team

The Balmoral Group (TBG), a **Woman-Owned Business Enterprise (WBE),** specializing in engineering and economics consulting. Founded in 2004 on the philosophy, "the knowledge you need, the integrity you trust™", the firm applies expertise in civil engineering, hydrologic and hydraulic analysis, geospatial modeling, data science, economics, and planning to complex land and water management issues.

TBG employs 60 professionals, including water resources and transportation engineers, GIS specialists, data scientists, economists, and planners, with its headquarters in Winter Park, Florida, and additional offices in Tallahassee, Seattle, Sydney, and Brisbane. TBG's interdisciplinary structure allows project teams to draw directly from engineering, GIS, data science, planning, and economics staff as needed.

Relevant Drainage/Stormwater Experience

TBG provides comprehensive drainage and stormwater engineering services for Florida's public agencies, including hydrologic and hydraulic modeling, flood investigations, stormwater collection and conveyance design, outfall improvements, roadway reconstruction, environmental permitting, and stakeholder coordination. Their experience includes coastal and inland settings where improvements must address existing flooding while protecting adjacent properties, maintaining access, and accommodating utility and right-of-way constraints. TBG combines field reconnaissance, GIS analysis, and detailed modeling with practical design to develop constructable solutions that address immediate drainage deficiencies and long-term resilience.

Their **relevant experience** includes serving as prime consultant for SW Mockingbird Lane in Martin County, where they evaluated alternatives and designed roadway and drainage improvements to address recurring tidal flooding and sea level rise within a constrained residential corridor. The project integrated public outreach, utility and coastal engineering, permitting, and FEMA Hazard Mitigation Grant Program requirements.

As prime consultant for the Floridatown Watershed Management Plan in Santa Rosa County, TBG developed a detailed Stormwise/ICPR4 model calibrated against Hurricane Sally, evaluated flood mitigation alternatives, and engaged residents through public input and a community workshop. For the US 1 at Canal Street project in New Smyrna Beach, TBG designed

storm sewer improvements to address sunny day flooding utilizing an additional bypass conveyance system and flap gate. Together, these projects demonstrate their ability to translate complex flooding conditions into coordinated drainage solutions responsive to agency requirements and community needs.

AREHNA | Engineering, Inc.

AREHNA Engineering, Inc. is a **geotechnical engineering** and construction materials testing firm with a highly experienced team of engineers and technical professionals dedicated to delivering practical, cost-effective solutions tailored to each project's unique challenges. Their experience encompasses thousands of assignments throughout Florida, including stormwater and drainage improvements, roadways, bridges, complete streets, water and wastewater facilities, pipelines, parks, trails, and pedestrian and bicycle infrastructure projects.

AREHNA has **successfully provided geotechnical engineering services under numerous contracts for Longboat Key, Sarasota County**. Through this experience, their team has developed a thorough understanding of County requirements, procedures, and local subsurface conditions. In addition to their County experience, they support numerous continuing services contracts for FDOT, municipalities, and other public agencies throughout Florida, allowing them to effectively assist clients from project planning and design through construction.

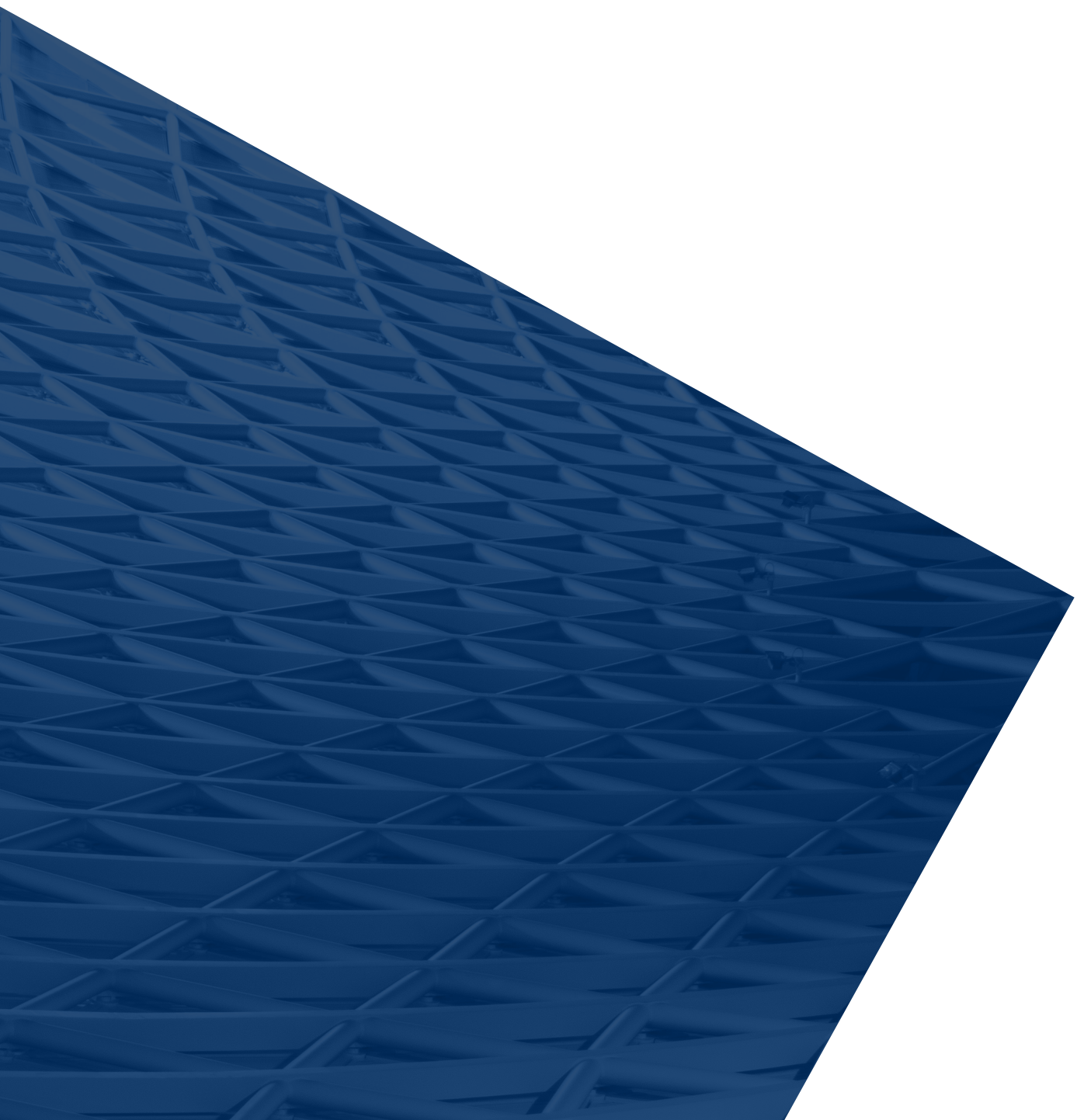
AREHNA is **prequalified with FDOT in Work Groups 9.1, 9.2, 9.3, 9.4.1, 9.4.2, 9.5, and 10.3** and maintains a full-service geotechnical and construction materials testing laboratory that is AASHTO-accredited, USACE-validated, and FDOT-approved. Their in-house resources include three drill rigs and four pavement coring rigs, providing the flexibility to rapidly mobilize, maintain schedule control, and efficiently meet aggressive project timelines while minimizing costs.

As a certified **Women-Owned Business Enterprise (WBE)**, and **FDOT Small Business Enterprise (SBE)**, AREHNA combines the responsiveness of a local firm with the technical expertise, equipment, laboratory capabilities, and personnel necessary to successfully deliver projects of all sizes and complexity.



Hurricane Milton's Impacts on Longboat Key, October 2024.
Photo courtesy of the Town of Longboat Key's Facebook page.

TAB 4. PROJECT APPROACH



PROJECT APPROACH

APTIM will lead Phase 4 as an integrated roadway, drainage, resilience, permitting, and stakeholder engagement effort, with The Balmoral Group (TBG) providing stormwater modeling, drainage and roadway design, utility coordination, and cost estimating support, and AREHNA providing geotechnical services. The team will advance the Town's existing planning work into a practical, permit-ready, bid-ready design within 12 months of notice to proceed. The approach will treat roadway elevation, drainage performance, tidal influence, private-property impacts, construction access, and long-term maintenance as connected design.

Compound flooding **(Figure 4-1)** is a key challenge for Longboat Key as a barrier island, including the Village Phase 4 area along Longboat Drive South, Cedar Street, and Jackson Way, where low roadway elevations, tidal influences, and limited drainage capacity can contribute to recurring flooding. During elevated tides, restricted gravity discharge can increase roadway ponding and delay drainage recovery. Phase 4 will address these interconnected flooding mechanisms through coordinated roadway and drainage improvements while incorporating **water-quality enhancements**, including **evaluation of a saltwater-marsh concept** within the unimproved Cedar Street right-of-way.

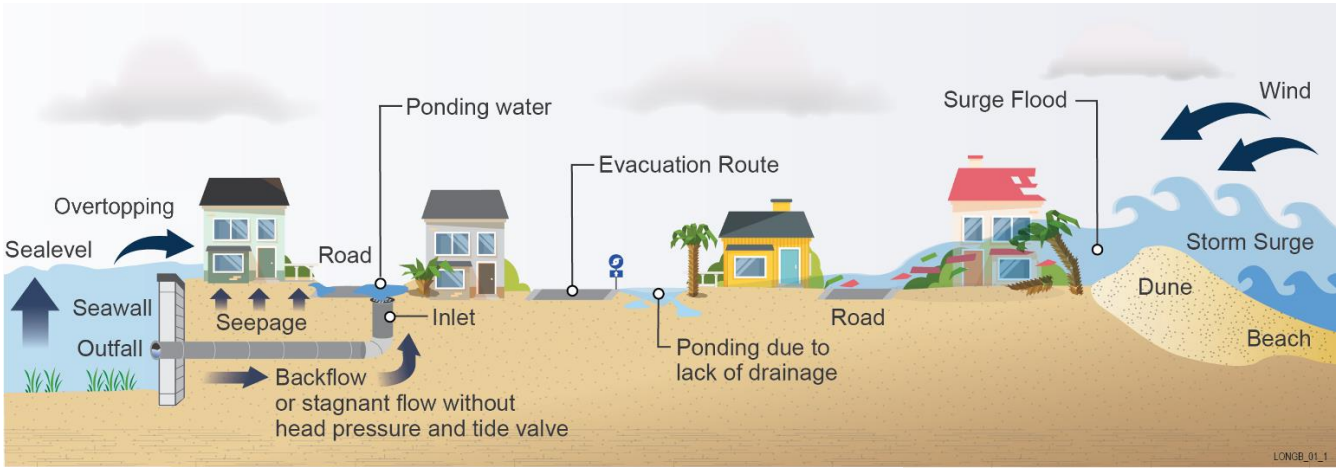


Figure 4-1 Compound Flooding

Build on the Town's Existing Analysis and Local Experience

We have reviewed the Town's October 2024 Longboat Key Village Stormwater Analysis in detail. As the first course of action, we will request the ICPR4/StormWise model files to QC the results before building on them. The early effort will focus on confirming the information that controls final design and identifying the remaining decisions needed to move efficiently into detailed design, permitting, and construction documentation.

Phase 4 includes Longboat Drive South between Cedar Street and Jackson Way and a portion of Cedar Street, including the unimproved right-of-way west of Longboat Drive South. The prior stormwater analysis identifies the lowest drainage grate elevation of approximately 1 foot NAVD88 and the lowest elevation on Jackson Way of approximately 1.5 feet NAVD88. It also identifies two separate outfall concerns: **the Longboat Drive South/Cedar Street outfall lacks backflow protection and was previously reported as partially blocked; the Jackson Way outfall adjacent to a private seawall may have reduced capacity**. These existing conditions will be verified during design.

Other recent Longboat Key drainage and roadway projects also provide useful local lessons. The Norton Street project demonstrates the importance of setting roadway grades with careful consideration of adjacent finished-floor elevations, driveway conditions, and restoration needs. The Buttonwood project reinforces the value of coordinating roadway, drainage, backflow control, environmental requirements, and property impacts as one integrated design. Phase 4 will apply these lessons to Longboat Drive South between Cedar Street and Jackson Way and the unimproved Cedar Street right-of-way, including roadway access, outfalls, water quality, and adjacent-property considerations.

Technical Ability to Perform the Scope of Services

The seven tasks below follow the RFP's Scope of Services, with APTIM responsible for technical integration and discipline coordination.

Task 1. Project Management

APTIM's Project Manager, Samantha Danchuk, will manage the assignment from project initiation through closeout, with responsibility for scope, schedule, budget, quality, risk, invoicing, and communication with the Town. One integrated work plan will coordinate drainage, roadway, survey, utilities, geotechnical, environmental services, permitting, outreach, estimating, grant support, and construction-related services.

At kickoff, the team will confirm with Town staff the project limits, design goals and criteria, budget and funding requirements, and required deliverables. Ongoing coordination will include regular design meetings, focused technical discussions, and milestone reviews. The Project Manager will maintain an action and decision log with assigned responsibilities and due dates. Status updates will summarize completed work, upcoming decisions, budget status, permitting and utility issues, and risks to the 12-month delivery. Invoicing will be tied to the approved scope and documented progress.

Task 2. Project Design

APTIM and TBG will design and develop construction documents that clearly translate the roadway, drainage, utility, property, and permitting requirements into buildable plans and specifications. The design package **(Figure 4-2)** will include **new drainage infrastructure as feasible, or capacity improvements for existing ones, proposed roadway profiles, typical sections, cross sections, grading and driveway details, drainage interfaces, signing and pavement markings, temporary traffic control, quantities, and technical specifications.** If advanced, the Cedar Street saltwater marsh will include grading, stabilization, planting, maintenance-access, and establishment requirements in the bid and permit documents.

2a. Survey

APTIM's survey team knows the Town's terrain and infrastructure firsthand, having surveyed the community for multiple projects. That familiarity, backed by an **extensive inventory of existing survey data, gives us a running start** in targeting the information needed to advance design. Upon notice to proceed, **we will promptly mobilize to close data gaps, update topographic and bathymetric information, and coordinate underground utility mapping.** Our fieldwork will verify critical low points along Longboat Drive South between Cedar Street and Jackson Way, including the unimproved right-of-way west of Longboat Drive South, intersection elevations, driveway and garage thresholds, outfalls, and drainage structures. We will also identify potential conflicts with water, sewer, force mains, gas, electrical and communications infrastructure, manholes, and valve boxes, giving the design team the information needed to resolve constraints early and reduce construction surprises.

Survey will establish finished-floor and garage thresholds, driveway profiles, roadway crowns and edges, inlet rims and inverts, outfall and shoreline low-point elevations, and the unimproved right-of-way west of Longboat Drive South.

2b. Construction and Drainage Easement Design and Establishment

APTIM will identify temporary construction-access and permanent drainage easements as roadway grades, drainage layouts, driveway tie-ins, outfalls, utilities, and restoration limits develop.

For work beyond the public right-of-way, survey and design data will define easement limits and exhibits for Town discussions with property owners. **Early coordination with property owners and getting their buy-in will prevent property permissions** from delaying 90% or final design.

2c. Drainage Analysis

APTIM will evaluate compound flooding within the Phase 4 drainage system, focusing on the interaction of rainfall runoff, elevated tidal tailwater, outfall backflow, and overland tidal intrusion. The analysis will assess how elevated receiving-water levels restrict gravity discharge, increase pipe surcharge, and prolong roadway ponding. Key performance measures will include roadway flooding depth and duration, inlet capture, pipe capacity and storage, hydraulic grade line, outfall performance, and drainage recovery.

The analysis will address the Longboat Drive South/Cedar Street outfall and the Jackson Way outfall separately. At Longboat Drive South/Cedar Street, the team will verify the existing pipe condition and geometry, confirm the prior blockage has been fully resolved, evaluate backflow protection, and determine whether rehabilitation, replacement, upsizing, or other outfall improvements are warranted. At Jackson Way, the team will verify the outfall condition, hydraulic connection, relationship to the private seawall, maintenance access, and any limitations associated with barnacles, debris, or reduced effective capacity.

Pipe improvements will be evaluated for conveyance and temporary storage during elevated tides when gravity discharge is limited. Backflow-control alternatives will consider hydraulic performance, head loss, debris exposure, device location, inspection and servicing access, and long-term maintenance. The team will also evaluate opportunities to direct runoff through the proposed Cedar Street marsh **(Figure 4-2)** for water quality treatment while maintaining positive drainage and preventing tidal backflow or transferred flooding.

Cedar Street Saltwater-Marsh Concept Evaluation

The APTIM team will evaluate a saltwater marsh within the unimproved Cedar Street right-of-way west of Longboat Drive South to improve stormwater quality while maintaining positive drainage. The design will assess runoff pathways, sediment retention, available treatment area, tidal influence, and potential water quality benefits.

Marsh grading will be coordinated with roadway elevations, outfalls, and backflow controls to prevent unintended tidal intrusion. Survey and environmental review will establish the marsh footprint, shoreline conditions, utilities, and property constraints.

APTIM's qualified Marine Biologist Katy Brown will evaluate native salt-tolerant vegetation options and select suitable alternatives based on tidal exposure, salinity, inundation frequency, water quality benefits, and maintenance needs. Final plans will address grading, planting, erosion control, establishment, monitoring, replacement planting, and storm-damage restoration consistent with permit requirements.



Figure 4-2 Conceptual Cedar Street Saltwater-Marsh Elevation

2d. Drainage Modeling

The Balmoral Group will lead the Phase 4 drainage modeling effort using the Town's existing Village ICPR4/StormWise model as the starting point. Rather than rebuilding the model, the team will verify and update the Phase 4 components needed for design. This will include surveyed roadway elevations, drainage structures, pipe and inlet information, outfalls, check valves, and the drainage connections along Longboat Drive South, Cedar Street, Jackson Way, and the unimproved Cedar Street right-of-way.

TBG's experience on SW Mockingbird Lane, SR 72 west of Arcadia, and US 1 at Canal Street provides useful perspective for this work because those projects involved many of the same issues present in Phase 4: low-lying roadway flooding, roadway profile changes, stormwater retrofits, utility constraints, and tidal/backflow conditions. That experience will help focus the modeling on the design decisions that matter most for Longboat Key.

The Town's October 2024 Village stormwater analysis will serve as the technical basis for the evaluation. The analysis identifies **MHHW at approximately 0.8 feet NAVD88, an observed high tide of approximately 2.8 feet NAVD88**, and evaluation of the 25-year/24-hour rainfall event under elevated tailwater conditions. At project initiation, APTIM and TBG will confirm with the Town the tidal and tailwater conditions to be carried into final design, including the appropriate sea-level-rise consideration.

With the design basis confirmed, the model will be used to compare existing and proposed conditions and test how roadway grading, drainage improvements, and tidal controls work together. For Phase 4, the approximately 1.0-foot NAVD88 roadway elevation and 1.5-foot NAVD88 Jackson Way elevation will be treated as existing-condition reference elevations rather than proposed design grades. Roadway elevations will be tested together with inlet and pipe improvements, backflow controls, outfall restoration, and the proposed Cedar Street drainage improvements.

The evaluation will focus on hydraulic grade line, roadway ponding, inlet capture, pipe storage

and surcharge, outfall discharge, and the time required for the system to recover as tide levels fall. The preferred alternative will be selected based on overall system performance and checked to confirm that the proposed improvements do not shift flooding to adjacent streets, future phases, or private property.

The updated ICPR4/StormWise model will evaluate **compound flooding under normal and elevated tidal conditions, including current and future sea-level-rise conditions**. Existing and proposed conditions will be compared to assess flood reduction, drainage recovery, and potential impacts to adjacent properties.

2e. Private Property Restoration APTIM will evaluate proposed roadway and drainage improvements against finished-floor elevations, garage thresholds, driveway profiles, and existing yard drainage so the design can be advanced without creating unintended impacts to adjacent properties.

Property restoration requirements will be developed using survey information and field observations, with attention to landscaping, hardscape, driveway features, and other improvements affected by construction. Lessons from the Town's Norton Street project reinforce the importance of documenting existing frontage conditions and coordinating restoration needs before construction.

For locations where roadway elevation affects driveway transitions **(Figure 4-3)**, APTIM will develop targeted cross sections to evaluate driveway slope, vehicle clearance, garage access, and changes in surface-drainage direction. The team will document existing frontage conditions and identify property-specific restoration needs early enough to coordinate temporary construction access, permanent improvements, and any required easements before final design. Proposed grading will also be checked to confirm that runoff is not redirected toward adjacent buildings or low areas.

The design will also consider practical construction access to affected properties so restoration requirements can be clearly incorporated into the plans and specifications..

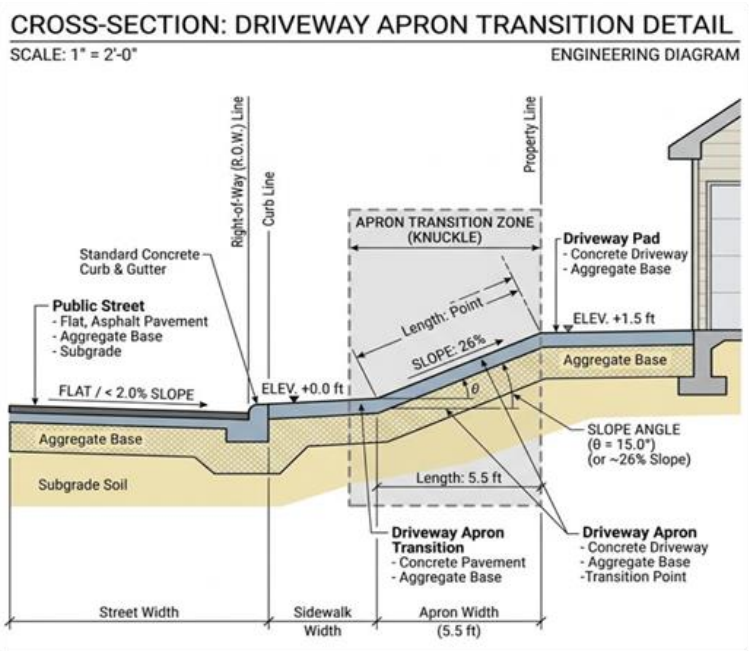


Figure 4-3. Roadway Elevation and Property Transition (Measurements shown are not exact and will be finalized during the design phase)

2f. Utility Location and Restoration

APTIM's surveying team will coordinate utility location and restoration with support from TBG. The team will maintain a utility conflict matrix identifying the facility, available location information, proposed impact, responsible owner, resolution, and required completion date. Critical crossings will receive verification before design decisions are locked in. Restoration details will address pavement, driveway materials, landscaping, and adjusted appurtenances within the authorized limits of work.

Early coordination with utility owners, surveyors, and locating services will help confirm the location of facilities that may affect the roadway and drainage improvements. These may include water mains, sanitary sewer and force mains, gas lines, electrical and communication facilities, manholes, and valve boxes.

Any utility adjustment or protection needed for the proposed improvements will be coordinated before final roadway grades and drainage alignments are completed. The design will also address restoration of pavement, driveways, landscaping, utility appurtenances, and continuity of service.

2g. Geotechnical Services

AREHNA will lead geotechnical engineering efforts to support roadway elevation, pavement design, drainage improvements, and construction planning. Based on the USDA/NRCS Soil Survey for Manatee County, the Phase 4 area is mapped primarily as Canaveral fine sand, with seasonal groundwater generally ranging from approximately 1.5 to 6 feet below existing grade. These shallow-groundwater conditions may affect roadway earthwork, drainage excavations, fill placement, marsh grading, and construction sequencing.

AREHNA's investigation will evaluate pavement subgrade conditions, groundwater levels, excavation requirements, suitability of onsite soils for reuse, and potential settlement associated with proposed roadway grade increases. The investigation will also address foundation support and corrosion considerations for drainage structures and appurtenances. Because existing roadway, utility, and residential development may have introduced localized fill and variable subsurface conditions, field investigation will be used to confirm conditions that cannot be defined by published soil information alone.

The findings will be incorporated into the roadway and drainage design to develop project-specific recommendations for pavement support, earthwork, dewatering, soil stabilization, fill placement, and drainage structure installation. These recommendations will help the team select appropriate pavement and reconstruction treatments for the shallow-groundwater coastal environment and reduce avoidable construction risks.

Task 3. Project Permitting

APTIM will manage permitting alongside the roadway and drainage design so regulatory requirements are addressed as design decisions are made. At the start of the project, the team will confirm the permits and agency coordination needed for the proposed improvements and develop a permitting schedule that supports the 12-month design schedule.

The permitting review will focus on the work proposed for Phase 4, including roadway elevation, drainage improvements, outfall work, backflow controls, utility adjustments, and the Cedar Street saltwater-marsh concept, as well as any work that may extend outside the existing right-of-way or affect tidal waters. Depending on the final design, coordination may be needed with SWFWMD, FDEP, Manatee County, FDOT, USACE, and other agencies identified during design.

APTIM already has experience working with the Town on environmental permitting and agency coordination, including FDEP coordination, emergency permitting, environmental assessments, biological monitoring, and construction support for Longboat Key projects. This familiarity will help the team identify likely permitting issues early and avoid waiting until final design to address them.

The Town's other drainage and resiliency projects also show the importance of keeping permitting and funding requirements coordinated. Buttonwood required SWFWMD ERP coordination together with HMGP and FDEM compliance review. Phase 4 will follow the same principle by keeping permit requirements, design changes, and funding conditions aligned as the project advances.

APTIM will review proposed design changes with the Town when they could affect permitting, environmental commitments, or the approved project scope. Agency comments and permit conditions will be addressed as the design advances and incorporated into the final plans and specifications, so the bid documents remain consistent with the approved permits and funding requirements.

Task 4. Public/Stakeholder Outreach

APTIM will use public and property-owner outreach as a direct input to design. Through the Town's preferred communication process, the team will meet with affected residents to understand recurring flooding, access concerns, driveway conditions, and other site-specific issues that may influence the proposed improvements.

APTIM will coordinate directly with affected property owners to review proposed roadway and drainage improvements, identify temporary construction and permanent drainage easement needs, and address property-specific concerns before final design. Clear plan, profile, and cross-section exhibits will be used to explain the proposed improvements and support informed discussions with residents.

Public meetings and project updates will be coordinated around key design milestones so residents understand how the project is progressing and where input can still influence the design. APTIM will support the Town with meeting materials, graphics, responses to questions, and project-website content that clearly communicates the proposed improvements, schedule, and upcoming decisions.

Task 5. Cost Estimating

APTIM will lead development of the Engineer's Opinion of Probable Cost (EOPC) throughout Phase 4, with TBG providing specialized estimating and economic support. Cost considerations will be integrated into roadway, drainage, utility, property restoration, and constructability decisions to maintain alignment with the Town's budget objectives.

Cost-saving opportunities will be evaluated through use of existing Town data, targeted investigations, early identification of design constraints, and appropriate pavement treatments. TBG will assess pavement overbuild and rehabilitation alternatives where feasible, comparing construction costs, implementation impacts, long-term performance, and maintenance requirements with full reconstruction.

Estimates will incorporate project-specific quantities, current construction pricing, and costs associated with roadway elevation, pavement and drainage improvements, outfall and backflow controls, utility adjustments, property restoration, Cedar Street saltwater-marsh improvements, traffic control, construction access, permitting, and contingencies. Building on the Town's previous Village stormwater analysis, APTIM will refine estimates as survey data, design quantities, utility conflicts, restoration limits, and construction sequencing are established.

TBG brings more than 20 years of estimating and economic analysis experience, including adaptation cost evaluations in Key West and Monroe County. Its FDOT and VDOT experience

includes assessment of bid-price trends, material costs, labor and equipment availability, industry capacity, and supply constraints.

The EOPC will be updated at the 60%, 90%, and final design milestones and reconciled with bid quantities and specifications to provide a defensible basis for the Town's construction budget.

Task 6. Grant Assistance

APTIM will integrate grant requirements into the Phase 4 design process to maintain funding eligibility throughout design, permitting, bidding, construction support, and project closeout. The team will follow applicable federal reimbursement requirements, including 2 CFR Part 200 and FEMA Public Assistance guidance, and advise the Town on funding-related considerations as the project advances.

APTIM will maintain documentation of the approved scope, cost estimates, schedule, design milestones, permitting status, and key decisions. Changes affecting the funded scope, environmental commitments, cost, schedule, or reimbursement eligibility will be identified early and coordinated with the Town before implementation.

The team will also support grant applications and future funding opportunities by preparing project narratives, benefit descriptions, cost estimates, schedules, exhibits, and other required technical information, including documentation for Cedar Street saltwater-marsh improvements, if advanced. APTIM will coordinate with the Town on potential funding through FEMA mitigation programs, FDEM, SWFWMD, and the Local Mitigation Strategy.

Recent Town projects provide relevant lessons in coordinating design and funding requirements. Norton Street secured grant funding for design and construction, while Buttonwood involved HMGP-funded design, FDEM compliance review, and construction funding. APTIM will apply these lessons to maintain consistency among design, permitting, and grant documentation.

During construction and closeout, APTIM will support reimbursement requests, funding-agency reviews, approved scope changes, updated cost and schedule records, and technical documentation required for final grant closeout.

Task 7. Construction Related Services

APTIM will maintain continuity from final design through bidding and construction, carrying the design intent for roadway elevations, drainage, utilities, property restoration, and tidal controls into implementation. During bidding and construction, APTIM and the appropriate technical disciplines will respond to bidder questions, prepare clarifications and addenda, review submittals and RFIs, and confirm consistency among plans, quantities, specifications, and bid items. The team will also clarify design intent and evaluate unforeseen conditions or proposed changes for potential impacts on drainage performance, adjacent properties, permit conditions, and grant requirements.

Field coordination will address roadway and driveway elevations, drainage structures, pipes and outfalls, backflow controls, utilities, restoration, temporary drainage, and Cedar Street marsh planting and establishment requirements, if advanced. Construction sequencing will maintain residential and emergency access, refuse collection, deliveries, pedestrian movement, and drainage between work stages.

At completion, APTIM will support as-built review, project certification, permit closeout and monitoring, and grant/project closeout as authorized. Outstanding technical and restoration issues will be tracked to resolution, with final records consistent with the completed work.

Lessons learned regarding drainage performance, constructability, property impacts, and maintenance will be documented to inform future Village improvements.

Implementation Schedule and Key Milestones

APTIM will manage Phase 4 to deliver a complete bid-ready package within 12 months of notice **(Figure 4-4)** to proceed. Survey, roadway and drainage design, utility coordination, environmental evaluation, permitting, estimating, and property coordination will advance in parallel where dependencies allow. The schedule establishes clear decision points at 30%, 60%, and 90% design so major issues are resolved before final design.

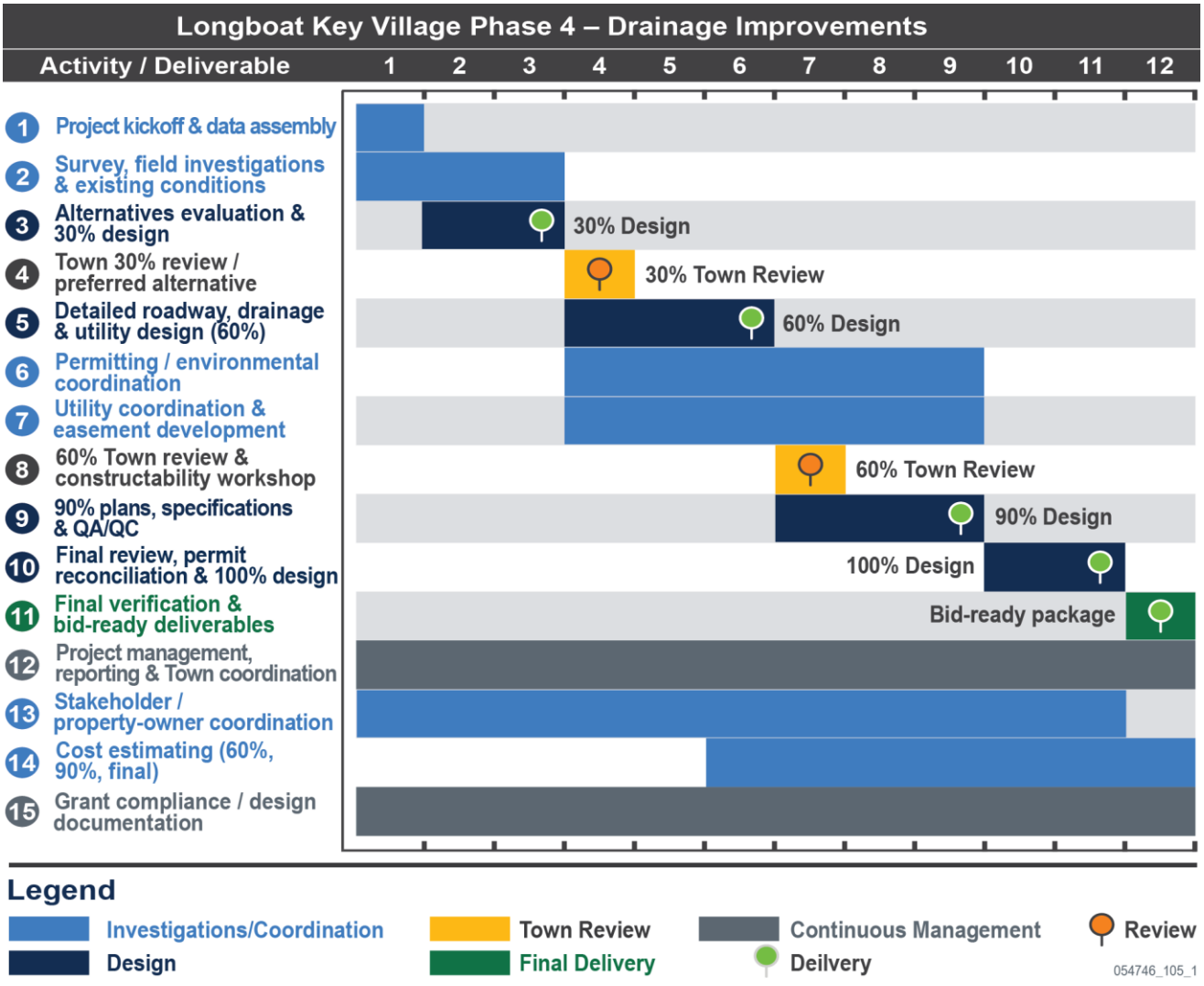


Figure 4-4: **Implementation Schedule**

Manage Approvals as Part of the Delivery Schedule

The Month 12 commitment is a design delivery milestone; it does not represent completion of construction. Timely Town decisions, access for investigations, utility owner responses, and agency reviews are key dependencies. We will seek permit determinations early and manage applications toward clearance before final delivery. If an external approval threatens bid readiness, the project manager will promptly identify the responsible party, decision needed, schedule effect, and recovery options for the Town.

Track the Critical Path and Deliver a Usable Bidding Package

The project manager will maintain a logic-based schedule identifying dependencies, responsible leads, review durations, and decision dates. Weekly internal reviews will assess progress against deliverables and the next four weeks of work. Monthly reporting to the Town will show completed milestones, upcoming decisions, budget status, and threats to the critical path. Survey gaps, permit comments, utility conflicts, and property permissions will be tracked in one action register with an owner and due date.

When an activity falls behind, we will evaluate targeted recovery measures such as reallocating available staff, prioritizing controlling survey locations, advancing unaffected plan components, or holding a focused decision meeting. The final package will include coordinated plans, technical specifications, bid quantities, an engineer's construction cost estimate, and required design and permit documentation. TBG will coordinate technical content with the Town's procurement requirements and clearly distinguish any authorized bid-phase support from the 12-month design effort.

The final package will include coordinated plans, technical specifications, bid quantities, an engineer's construction cost estimate, and required design and permit documentation. TBG will coordinate technical content with the Town's procurement requirements and clearly distinguish any authorized bid-phase support from the 12-month design effort.

Proposer's Accessibility for Meetings, Communications, Coordination, and Supervision

APTIM understands that responsive communication and consistent coordination are essential to the successful delivery of the Town's Phase 4 roadway, drainage, and water quality improvements. Cigdem Ozkan, PhD, PE, Deputy Project Manager and Town Coordination Lead, will serve as the Town's primary point of contact for day-to-day coordination and communications, facilitating meetings, project discussions, information exchange, and coordination among the Town, APTIM's technical team, and subconsultants.

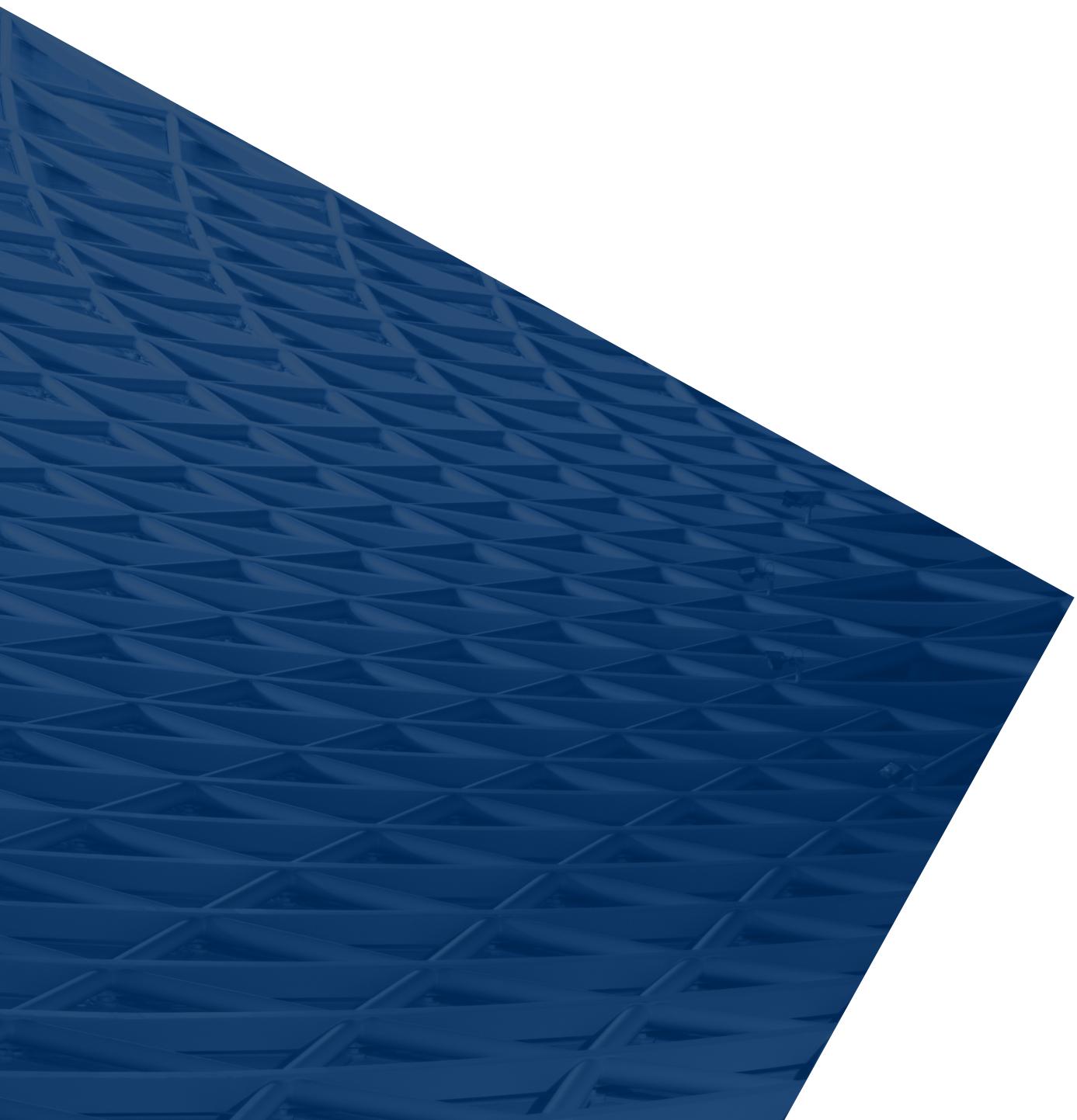
Samantha Danchuk, PhD, PE, will serve as Project Manager, providing overall project leadership, direction, and supervision. These roles are consistent with APTIM's proposed project organization. The team will maintain regular coordination meetings, milestone reviews, and focused technical discussions to address design, permitting, utility, and property-related issues. Key decisions, action items, and responsibilities will be documented and tracked through resolution.

Together, Dr. Danchuk and Dr. Ozkan will provide the Town with accessible and consistent project leadership throughout the assignment, with Dr. Ozkan managing routine coordination and Dr. Danchuk overseeing technical integration, project performance, and timely delivery of the final design.



Hurricane Milton's Impacts on Longboat Key, October 2024.
Photo courtesy of the Town of Longboat Key's Facebook page.

TAB 5. INTERACTIONS WITH TOWN AND REGULATORY AGENCY STAFF



INTERACTIONS WITH TOWN & REGULATORY AGENCY STAFF

Summary Supporting Qualifications of the Proposed Key Personnel

APTIM's proposed team combines project management, drainage and resilience engineering, environmental permitting, grant assistance, utility coordination, surveying, and construction-related expertise aligned with the Town's Phase 4 scope. **Samantha Danchuk, PhD, PE, will serve as Project Manager, supported by Cigdem Ozkan, PhD, PE, as Deputy Project Manager and Town Coordination Lead and Anne Shoffner, MS, as Project Permitting Lead.**

The team brings relevant Florida regulatory and funding experience. Cigdem Ozkan led updates to the Florida Department of Environmental Protection (FDEP) Florida Adaptation Planning Guidebook and development of Resilient Florida Planning Grant tasks and has managed work for the Town of Belleair involving regulatory coordination and alignment with Southwest Florida Water Management District (SWFWMD) objectives. APTIM secured a $60,000 FDEP Resilient Florida Program grant for the Town of Belleair Vulnerability Assessment and is coordinating permit applications and agency responses as that work advances. Anne Shoffner brings more than 25 years of environmental permitting, consulting, program management, and coastal infrastructure experience, including dredging-related permitting, environmental documentation, and technical deliverables for state and federal agencies.

Proposers Ability to Work with Town Staff

APTIM offers the Town an important advantage: continuity and institutional knowledge developed through a working relationship dating to 1995. APTIM has supported the Town with coastal engineering, surveying, geotechnical, environmental, stormwater, resilience, and planning services. Recent assignments have included vulnerability assessment and adaptation planning, stormwater-related studies, environmental permitting, biological monitoring, surveying, engineering, and construction support.

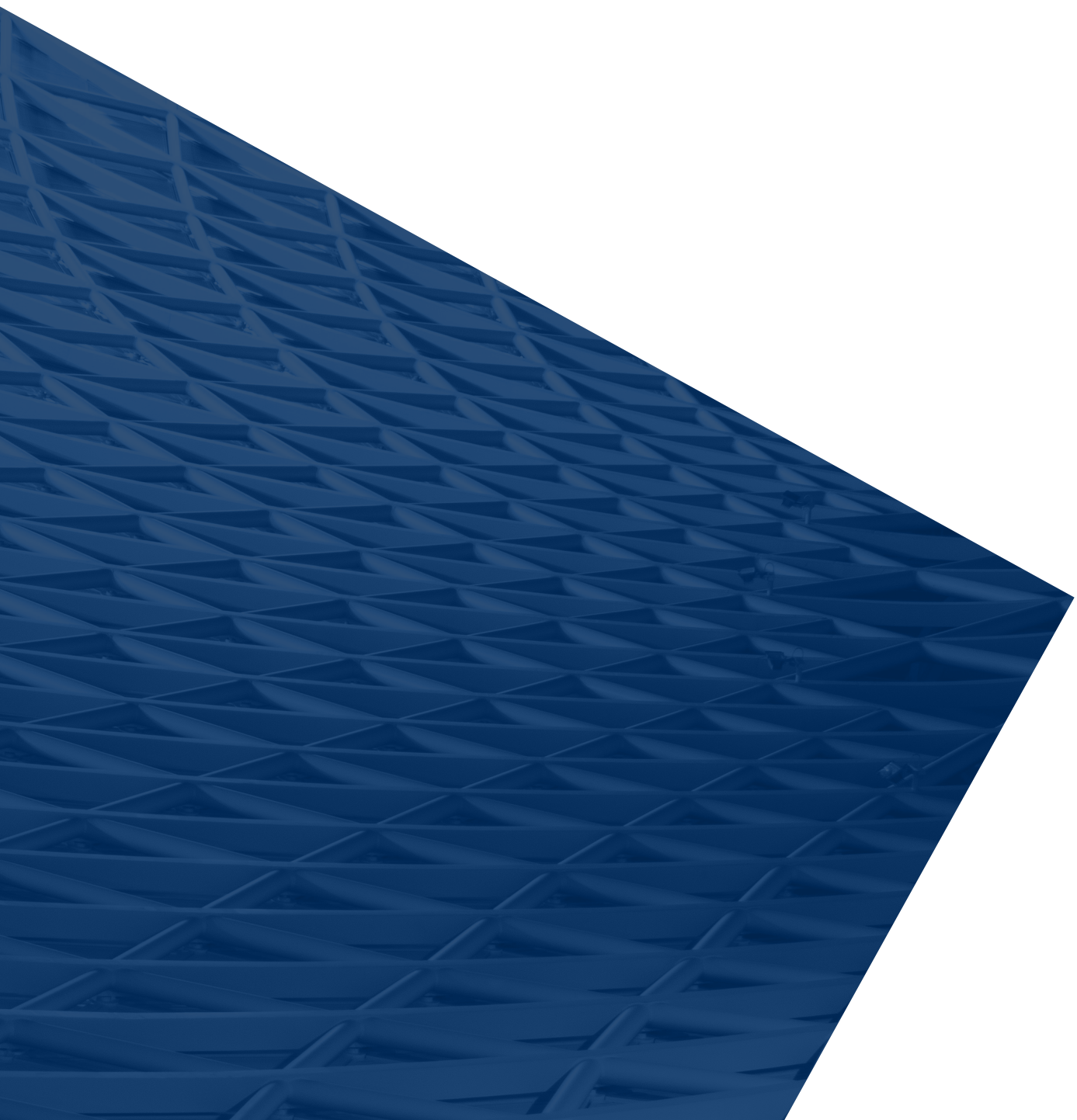
For Phase 4, Samantha Danchuk will provide overall project leadership, while Cigdem Ozkan will coordinate directly with Town staff and APTIM's technical disciplines. This structure supports timely coordination of drainage and roadway design, utilities, survey, geotechnical work, permitting, stakeholder outreach, grant assistance, cost estimating, and construction-related services.

Proposers Knowledge of Permitting Process

APTIM will integrate permitting with design from the beginning so regulatory requirements are considered as roadway, drainage, utility, environmental, and construction decisions are made. Our Florida experience includes coordination with FDEP, SWFWMD, FDOT, water management districts, and state and federal environmental agencies.

For Phase 4, APTIM will identify permitting requirements early, coordinate applications and supporting documentation, facilitate agency consultation, address review comments, and maintain permitting coordination through design and construction. The team can also support NEPA documentation and federal technical deliverables, as required.

TAB 6. CERTIFIED MINORITY BUSINESS ENTERPRISE

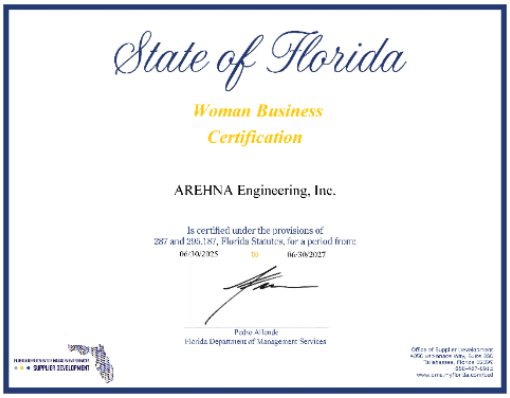


CERTIFIED MINORITY BUSINESS ENTERPRISE

APTIM is committed to encouraging meaningful participation by qualified minority- and woman-owned businesses. Our approach is demonstrated through the inclusion of certified Women-Owned Business Enterprise (WBE) firms as integral members of our project team, providing specialized services that directly support the Town's Phase 4 Drainage Improvements.

APTIM has engaged **The Balmoral Group (TBG)** to provide **drainage and stormwater services** and **AREHNA Engineering, Inc.** to provide **geotechnical engineering services**. Both firms are WBE's, with AREHNA also serving as an FDOT Small Business Enterprise (SBE). By assigning these firms substantive technical roles within their respective areas of expertise, APTIM provides meaningful opportunities for WBE participation in the performance of the Town's desired services.

APTIM will foster an inclusive project delivery environment by integrating our WBE subconsultants into the overall project team and coordinating their work with our engineering and project management disciplines throughout the services they are assigned to perform. This approach allows APTIM to support WBE participation while assembling a team with the specialized capabilities necessary to successfully serve the Town.



State of Florida

Woman Business Certification

AREHNA Engineering, Inc.

Is certified under the provisions of 287 and 280.187, Florida Statutes, for a period from:

06/30/2025 to 06/30/2027

Pedro Allende
Florida Department of Management Services



State of Florida

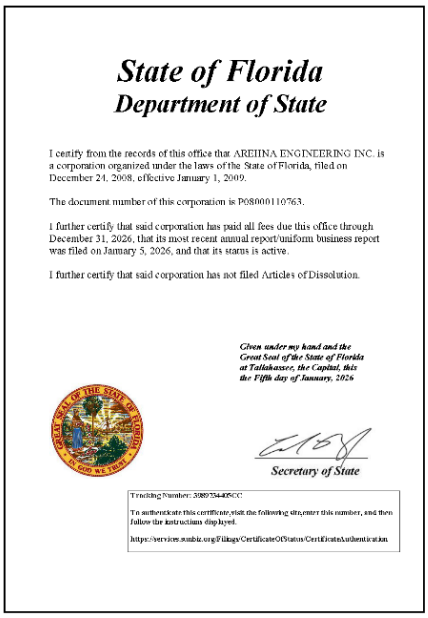
Woman Business Certification

The Balmoral Group LLC

Is certified under the provisions of 287 and 280.187, Florida Statutes, for a period from:

02/19/2025 to 06/30/2027

Pedro Allende
Florida Department of Management Services



State of Florida
Department of State

I certify from the records of this office that AREHNA ENGINEERING INC. is a corporation organized under the laws of the State of Florida, filed on December 24, 2008, effective January 1, 2009.

The document number of this corporation is P08000110763.

I further certify that said corporation has paid all fees due this office through December 31, 2026, that its most recent annual report/uniform business report was filed on January 5, 2026, and that its status is active.

I further certify that said corporation has not filed Articles of Dissolution.

Given under my hand and the Great Seal of the State of Florida at Tallahassee, the Capital, this the Fifth day of January, 2026

Secretary of State

Tracking Number: 3089754405CC

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

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



State of Florida
Department of State

I certify from the records of this office that THE BALMORAL GROUP, LLC is a limited liability company organized under the laws of the State of Florida, filed on August 5, 2004.

The document number of this limited liability company is L04000058339.

I further certify that said limited liability company has paid all fees due this office through December 31, 2026, that its most recent annual report was filed on January 14, 2026, and that its status is active.

Given under my hand and the Great Seal of the State of Florida at Tallahassee, the Capital, this the Fourteenth day of January, 2026

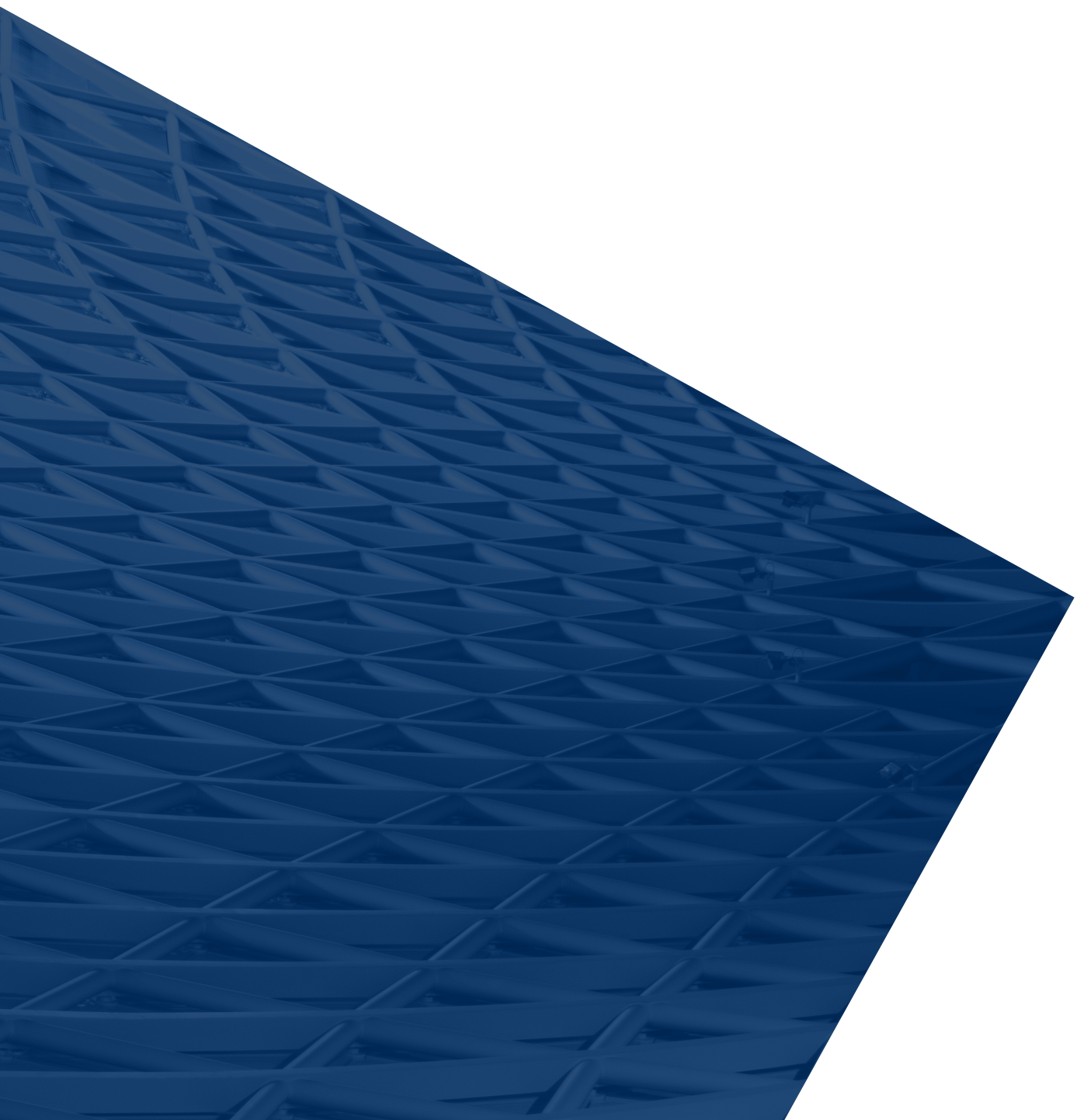
Secretary of State

Tracking Number: 7091485765CC

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

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

TAB 7. IS THE PROPOSER A LOCAL FIRM?



IS THE PROPOSER A LOCAL FIRM?

NO

APTIM does not maintain its headquarters or a local office within Manatee or Sarasota County. APTIM's office supporting this engagement is in Boca Raton, Florida.

Although APTIM does not qualify as a "local firm" under the Town's definition, APTIM has substantial experience serving the Town of Longboat Key and other Florida governmental agencies.

Our project team is structured to provide responsive service to the Town and will draw upon APTIM personnel and resources necessary to successfully deliver the Phase 4 Drainage Improvements.

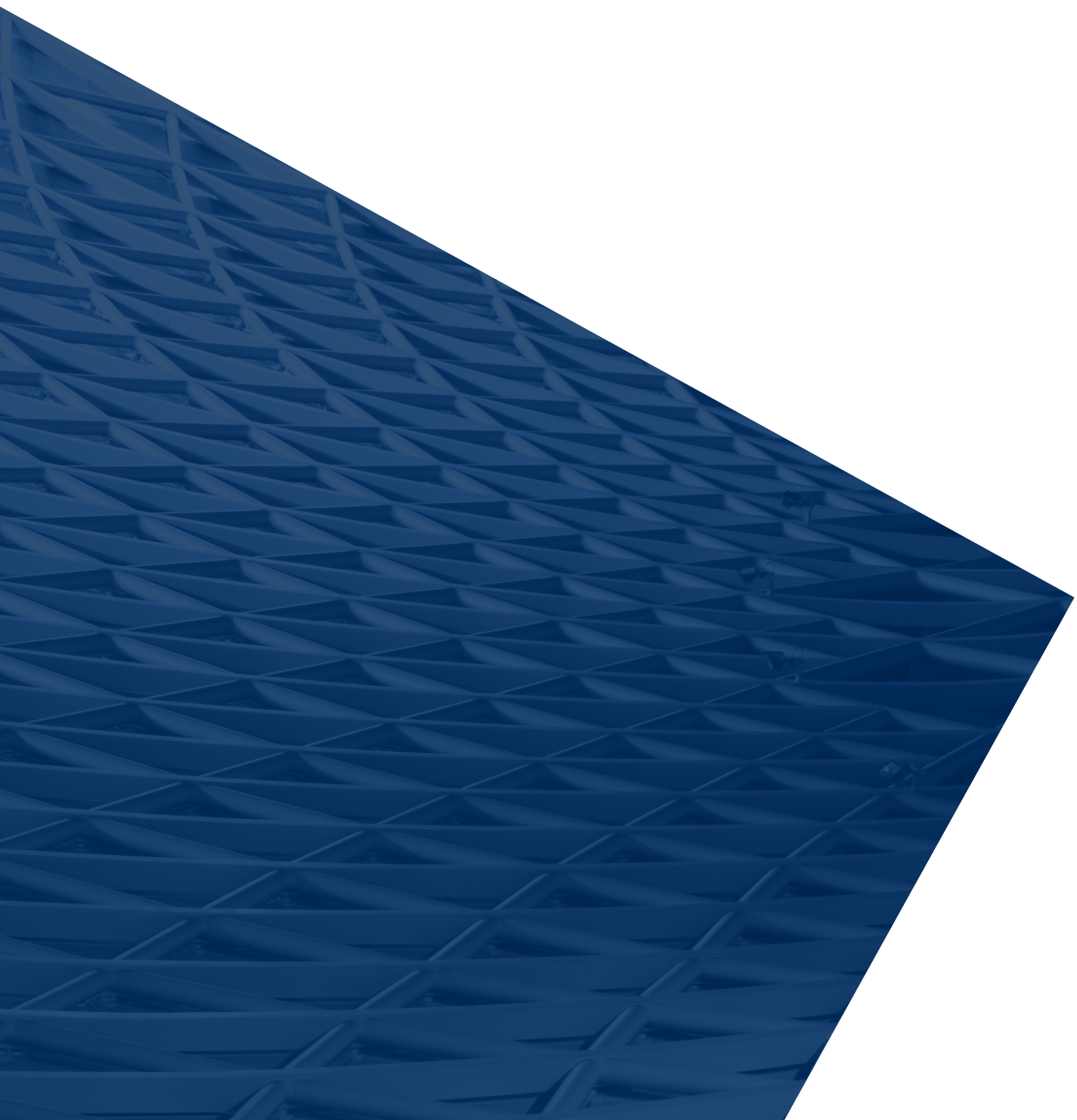
Headquarters: 1200 Brickyard Lane, Suite 202
Baton Rouge, LA 70802
225-932-2500

Local Office in Manatee or Sarasota County: None
Number of Personnel at Local Office: N/A
Florida Office Supporting the Project: Boca Raton, Florida



Hurricane Milton's Impacts on Longboat Key, October 2024.
Photo courtesy of the Town of Longboat Key's Facebook page.

TAB 8. SURVEYS OF PAST PERFORMANCE



SURVEYS OF PAST PERFORMANCE

Below are surveys from past clients for the projects identified under Tab 2.

TOWN OF LONGBOAT KEY

RFP 27-004 LONGBOAT KEY VILLAGE PHASE 4 DRAINAGE IMPROVEMENTS DESIGN & PERMITTING

Proposer Information		Client/Reference Information
From: Cigdem Ozkan		To: Ashley Linda Avis Bernal
Company: Aptim Environmental & Infrastructure, LLC		Company: Town of Belleair
Phone: 321.978.6989		Phone: 727 647 7487
Email: cigdem.ozkan@aptim.com		Email: abernal@townofbelleair.net

Performance Survey of (project name):	Bluff Restoration and Erosion Abatement
Cost of Services: Phase 1: $269,000 Phase 2&3: $446,000	Date Completed: Phase 1: 2025 Phase 2&3: Ongoing

Client:

Rate each of the criteria on a scale of 1 to 10, with 1 representing that you were very unsatisfied (and would never hire the company again) and 10 representing that you were very satisfied (and would hire the company again). Please rate each of the criteria to the best of your knowledge. If you do not have sufficient knowledge of past performance in a particular area, leave it blank. Once completed, return survey to the Proposer.

Criteria	Unit	Score
1. Ability to manage cost	(1 – 10)	10
2. Ability to maintain project schedule (complete/on-time/early)	(1 – 10)	10
3. Quality of workmanship	(1 – 10)	10
4. Professionalism and ability to manage	(1 – 10)	10
5. Ability to effectively manage final close-out process and quality control	(1 – 10)	10
6. Ability to clearly and openly communicate with all staff and general public	(1 – 10)	10
7. Ability to resolve issues promptly	(1 – 10)	10
8. Ability to follow protocol and adherence to regulations and industry standards	(1 – 10)	10
9. Ability to maintain proper documentation	(1 – 10)	10
10. Ability to offer innovative and creative solutions	(1 – 10)	10
11. Had proper resources and personnel by which to get the project done	(1 – 10)	10
12. Ability to identify and mitigate project risks effectively and successfully	(1 – 10)	10
13. Overall client satisfaction and comfort level in hiring	(1 – 10)	10

Ashley Linda Avid Bernal
Printed Name of Reference

Signature of Reference

PERFORMANCE SURVEY QUESTIONNAIRE

TOWN OF LONGBOAT KEY

RFP 27-004 LONGBOAT KEY VILLAGE PHASE 4 DRAINAGE IMPROVEMENTS DESIGN & PERMITTING

Proposer Information		Client/Reference Information	
From:	Samantha Danchuk	To:	David Willems
Company:	Aptim Environmental & Infrastructure, LLC	Company:	Village of Estero
Phone:	561.532.5882	Phone:	239 221 5035
Email:	samantha.danchuk@aptim.com	Email:	willems@estero-fl.gov

Performance Survey of (project name):	Comprehensive Vulnerability Assessment		
Cost of Services:	$495,500	Date Completed:	July 2026

Client:

Rate each of the criteria on a scale of 1 to 10, with 1 representing that you were very unsatisfied (and would never hire the company again) and 10 representing that you were very satisfied (and would hire the company again). Please rate each of the criteria to the best of your knowledge. If you do not have sufficient knowledge of past performance in a particular area, leave it blank. Once completed, return survey to the Proposer.

Criteria	Unit	Score
1. Ability to manage cost	(1 – 10)	10
2. Ability to maintain project schedule (complete/on-time/early)	(1 – 10)	10
3. Quality of workmanship	(1 – 10)	10
4. Professionalism and ability to manage	(1 – 10)	10
5. Ability to effectively manage final close-out process and quality control	(1 – 10)	10
6. Ability to clearly and openly communicate with all staff and general public	(1 – 10)	10
7. Ability to resolve issues promptly	(1 – 10)	10
8. Ability to follow protocol and adherence to regulations and industry standards	(1 – 10)	10
9. Ability to maintain proper documentation	(1 – 10)	10
10. Ability to offer innovative and creative solutions	(1 – 10)	10
11. Had proper resources and personnel by which to get the project done	(1 – 10)	10
12. Ability to identify and mitigate project risks effectively and successfully	(1 – 10)	10
13. Overall client satisfaction and comfort level in hiring	(1 – 10)	10

David Willems
Printed Name of Reference

Signature of Reference

PERFORMANCE SURVEY QUESTIONNAIRE

TOWN OF LONGBOAT KEY

RFP 27-004 LONGBOAT KEY VILLAGE PHASE 4 DRAINAGE IMPROVEMENTS DESIGN & PERMITTING

Proposer Information		Client/Reference Information	
From:	Doris Otero	To:	Cynthia Buisson
Company:	Aptim Environmental & Infrastructure, LLC	Company:	City of Delray Beach
Phone:	561.685.7272	Phone:	561.243.7196
Email:	doris.otero@aptim.com	Email:	fuentesc@mydelraybeach.com

Performance Survey of (project name):	Delray Beach Seawall Replacement and Repair		
Cost of Services:	$368,233.60	Date Completed:	Started 2024-ongoing

Client:

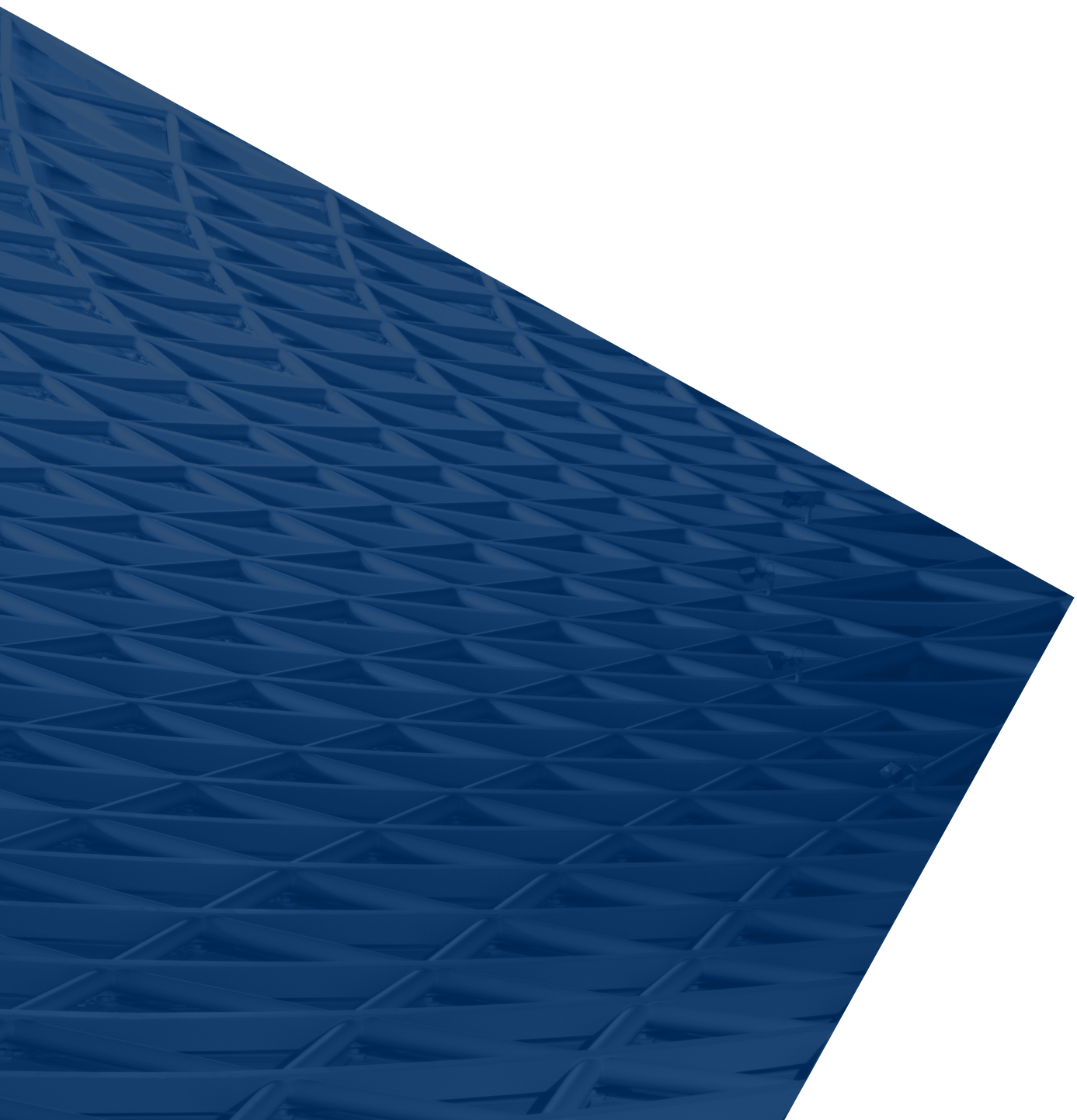
Rate each of the criteria on a scale of 1 to 10, with 1 representing that you were very unsatisfied (and would never hire the company again) and 10 representing that you were very satisfied (and would hire the company again). Please rate each of the criteria to the best of your knowledge. If you do not have sufficient knowledge of past performance in a particular area, leave it blank. Once completed, return survey to the Proposer.

Criteria	Unit	Score
1. Ability to manage cost	(1 – 10)	10
2. Ability to maintain project schedule (complete/on-time/early)	(1 – 10)	10
3. Quality of workmanship	(1 – 10)	10
4. Professionalism and ability to manage	(1 – 10)	10
5. Ability to effectively manage final close-out process and quality control	(1 – 10)	9
6. Ability to clearly and openly communicate with all staff and general public	(1 – 10)	10
7. Ability to resolve issues promptly	(1 – 10)	10
8. Ability to follow protocol and adherence to regulations and industry standards	(1 – 10)	10
9. Ability to maintain proper documentation	(1 – 10)	10
10. Ability to offer innovative and creative solutions	(1 – 10)	10
11. Had proper resources and personnel by which to get the project done	(1 – 10)	10
12. Ability to identify and mitigate project risks effectively and successfully	(1 – 10)	10
13. Overall client satisfaction and comfort level in hiring	(1 – 10)	10

Cynthia Buisson
Printed Name of Reference

Signature of Reference

TAB 9. FORMS



FORMS

TOWN OF LONGBOAT KEY FLORIDA

RFP 27-004 LONGBOAT KEY VILLAGE PHASE 4 DRAINAGE IMPROVEMENTS – DESIGN & PERMITTING

SUBMITTED PROPOSAL FORM

The undersigned Proposer declares that the only person or parties interested in this RFP as principals are those named herein, that this proposal is made without any understanding, contract, or connection with any other person, firm, or corporation providing a proposal for the same purpose and that this proposal is in all respects fair and without collusion or fraud. The Proposer understands that this proposal must be manually signed in ink, otherwise it will be considered unresponsive and subject to rejection.

The undersigned Proposer represents that the Proposer accepts, and that this proposal complies with, the RFP Documents; that Proposer has carefully examined the RFP Documents for the requested services. Proposer affirms that Proposer has carefully examined the location of the requested services and, from its own investigations, is satisfied as to the nature and location of the services, the character, quality, and the quantity of materials, the kind and extent of equipment and other facilities needed for the performance of the services, the general and local conditions and all difficulties that may be encountered, and all other items which may, in any way, affect the services or its performance.

The undersigned Proposer proposes, and agrees if this proposal is accepted, that it will contract with the Town to provide all necessary machinery, tools, software, labor, apparatus, and other means necessary to do all the services, and furnish all the materials and equipment specified or referred to in the RFP Documents in the manner and time herein prescribed, and according to the requirements of the Town as therein set forth.

Under provisions of Chapter 112, Florida Statutes, Proposer must disclose with proposal the name of any officer, director, or agent who is also an employee of the Town of Longboat Key. Proposer must disclose on an attachment (provided by Proposer) entitled "Submitted Bid Conflict of Interest" the name of any Town employee who owns, directly or indirectly, a five percent (5%) or more interest in the Proposer's firm or any of its branches, or in the firm of any subcontractor to this proposal. Absence of such an attachment represents Proposer's certification of no such employee.

Proposer acknowledges receipt of the following addenda issued during the solicitation period; the cost of which, if any, is included in proposal pricing. If an addendum is issued, the addendum acknowledgement below must be completed or the issued addendum must be signed and submitted with the proposal package at the time and due date of the proposal.

Addendum #_1___ Addendum Date: 11/5/2026

Addendum #_____ Addendum Date: _____

Addendum #_____ Addendum Date: _____

Addendum #_____ Addendum Date: _____

The undersigned Proposer understands that the Town reserves the right to reject any or all proposals and to waive any informalities and minor irregularities in any proposal. The Proposer agrees that this proposal shall be good and may not be withdrawn for a period of one hundred twenty (120) days after the scheduled RFP opening.

Having carefully examined the RFP Documents, Proposer agrees to the terms contained therein and proposes to furnish all labor, material, and equipment for the entire services (including mobilization and demobilization, if applicable), and to execute an agreement for services and any and all bonds, insurance certifications, and other instruments or documents as specified or included in the RFP Documents and will completely perform the services in strict accordance with the terms of the RFP Documents.

The undersigned Proposer acknowledges that services to be performed shall conform to all Town codes and regulations. Services must be accomplished in a professional manner and meet all standards of any professional trade requiring a license and or permit.

Samantha Danchuk
(Authorized Signature)

Samantha Danchuk
(Printed name)

Name of Proposer: Aptim Environmental & Infrastructure, LLC

Address: 6401 Congress Avenue, Suite 140

City: Boca Raton State: FL Zip: 33487

Phone: 561.532.5882

Email: samantha.danchuk@aptim.com

Type of Organization:

_____Sole Proprietorship _____Partnership _____Non-Profit _____Sub-Chapter
_____Joint Venture _____Corporation X LLC _____LLP
_____Publicly Traded _____Employee Owned

State of Incorporation: Louisiana

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ACKNOWLEDGEMENT OF FIRM, IF A CORPORATION

STATE OF Florida COUNTY OF Palm Beach

The foregoing instruments was acknowledged before me this

11/5/2026 By: Samantha Danchuk
(Date) (Name of officer or agent, title of officer or agent)

On behalf of the corporation, pursuant to the powers conferred upon said officer or agent by the corporation. He/she personally appeared before me at the time of notarization and is personally known to me or has produced _____ as identification and did certify to have knowledge of the matters stated in the foregoing instrument and certified the same to be true in all respects.

Subscribed and sworn to (or affirmed) before me this 5th day of November 2026

Tracie H. McCauley Commission Number: HH 805454
(Official Notary Signature and Notary Seal)

Notary Public State of Florida
Tracie H. McCauley
My Commission HH 805454
Expires 8/19/2030

Tracie H. McCauley Commission expiration date: 8/19/2030
(Name of Notary typed, printed or stamped)

ACKNOWLEDGEMENT OF FIRM, IF A PARTNERSHIP

STATE OF _____ COUNTY OF _____

The foregoing instruments was acknowledged before me this

_____ By: _____
(Date) (Name of acknowledging partner or agent)

On behalf of the partnership, pursuant to the powers conferred upon said officer or agent by the corporation. He/she personally appeared before me at the time of notarization and is personally known to me or has produced _____ as identification and did certify to have knowledge of the matters stated in the foregoing instrument and certified the same to be true in all respects.

Subscribed and sworn to (or affirmed) before me this _____

_____ Commission Number: _____
(Official Notary Signature and Notary Seal)

_____ Commission expiration date: _____
(Name of Notary typed, printed or stamped)

ACKNOWLEDGEMENT OF FIRM, IF AN INDIVIDUAL

STATE OF _____ COUNTY OF _____

The foregoing instruments was acknowledged before me this

_____ By: _____
(Date) (Name acknowledging)

Who personally appeared before me at the time of notarization and is personally known to me or has produced _____ as identification and did certify to have knowledge of the matters stated in the foregoing instrument and certified the same to be true in all respects.

Subscribed and sworn to (or affirmed) before me this _____

_____ Commission Number: _____
(Official Notary Signature and Notary Seal)

_____ Commission expiration date: _____
(Name of Notary typed, printed or stamped)

36

TOWN OF
LONGBOAT KEY

Kari L. Kennedy, CPPB
Procurement Manager
Procurement Division
501 Bay Isles Road
Longboat Key, Florida 34228
kkennedy@longboatkey.org

RFP 27-004 LONGBOAT KEY VILLAGE PHASE 4 DRAINAGE IMPROVEMENTS – DESIGN AND PERMITTING

ADDENDUM #1

Subject: REVISED BID SUBMITTAL DUE DATE; QUESTIONS AND ANSWERS

Date: November 5, 2026

ALL CONSULTANTS MUST ACKNOWLEDGE RECEIPT OF THIS ADDENDUM BY SIGNING BELOW AND SUBMITTING THIS EXECUTED DOCUMENT WITH THE PROPOSAL.

Consultants are hereby notified that this Addendum shall become part of the submitted proposal and the subsequent documents, if applicable.

The following items are issued to add to, modify, and clarify the RFP and all associated documents. Proposals shall conform to the additions and revisions listed herein. These items shall have full force and effect as the RFP and all associated documents.

Consultants Name: Aptim Environmental & Infrastructure, LLC

Address: 6401 Congress Avenue, Suite 140, Boca Raton, FL 33487

Phone : 561.532.5882

Email: samantha.danchuk@aptim.com

Authorized Signature: Samantha Danchuk

Printed Authorized Name: Samantha Danchuk

CLARIFICATION:

C1. Revised bid submittal due date: The bid submittal due date has been revised from Monday, November 9, 2026, 2:00PM to **Thursday, November 12, 2026, 2:00pm.**

QUESTIONS AND ANSWERS:

Q1. May proposers request a completed performance survey from the Town of Longboat Key for prior services provided to the Town? If so, please confirm the appropriate process and point of contact, consistent with the solicitation's communication restrictions.

Answer: Performance surveys cannot be completed by the Town.

Q2. May one or two of the three project descriptions required under Tab 2 feature projects performed by a proposed subconsultant? If so, should the prime submit performance surveys under Tab 8 for separate (but relevant) projects performed by the prime?

Answer: The consultant submitting must have performed as the prime on the project.

Q3. Can you please clarify if the proposal needs to be ADA Compliant?

Answer: The proposal does not need to be ADA Compliant.

Q4. Can you please clarify if signatures need to be original manual for the original proposal?

Answer: Signatures can be electronic.

Q5. Is there grant funding identified for this project?

Answer: Yes.

Q6. Can we reuse Performance Questionnaire Surveys from previous Town of Longboat Key proposals to limit repeated outreach to clients?

Answer: If the previous performance survey includes the same questions as the current survey, a previous survey may be submitted to limit repeated outreach.

Q7. Page 10, Section 4.1, 3rd paragraph: Proposals must be prepared in at least 12-point font on 8.5" x 11" white paper, with pages sequentially numbered.

A. The RFP requires at least 12-point font. Does this minimum apply to all text in tables, charts, graphics, figures, captions, and the organizational chart, or may smaller type be used for those elements when needed for legibility?

Answer: Smaller or larger font may be used for those elements.

B. May the one-page organizational chart be submitted on 11-by-17-inch paper, folded to fit the binder, or must it be 8.5-by-11 inches?

Answer: 11 X 17 is permissible.

Q8. Pages 11-13, Section 4.2, Tabs 1–7:

A. For the stated limits in Tabs 1–5 on pages 11-12, do licenses, required forms, reference surveys, and other appendices count toward the page limits, or may they be included outside the tab limits? Please also clarify whether a cover page or tab divider counts toward the applicable limit.

Answer: Licenses, extra forms, reference surveys, appendices do not count towards the applicable limit.

B. No page limits have been provided for Tab 7 on page 13; can you please provide the page limit for this section.

Answer: If no page limit has been provided, there is no page limit.

Q9. Page 12, Section 4.2, Tab 3.C, parts 1) and 2): The page requirements for Tab 3 only indicate one page for the organizational chart and a two-page per resume page limit. How many pages can be allocated to respond to 3.C, 1) Services for which the sub-contractor may be involved; and 3.C, 2) A brief description of experience outlining their qualifications to perform the identified services?

Answer: If no page limit has been provided, there is no page limit.

Q10. Page 14, Section 4.2, Tab 9: Please confirm if the following form are only required for Prime firm/Proposer, or if any are required from subcontractors/subconsultants as well.

- Submitted Proposal Form
- Public Entity Crimes Form
- Acknowledgment of Firm Form
- Drug Free Workplace Certification Form
- Equal Employment Opportunity Form
- Minority Business Statement of Good Faith Efforts
- Human Trafficking Affidavit
- Compliance with Foreign Entity Laws Affidavit
- Completed and signed W-9

Answer: Only the submitting firm is required to completed the listed documents.

Q11. For the proposer signature requirement, will the Owner accept a corporate resolution or other documentation authorizing an individual to sign on behalf of the proposer, in lieu of the signer being listed as an authorized officer?

Answer: Yes.

Q12. Tab 1 – Executive Summary is limited to 4 pages, #D is asking for any judgements, claims, arbitration proceeding or suits, the size of this could vary on pages, will this count towards the page count for this section?

Answer: No.

PUBLIC ENTITY CRIMES FORM
(MUST BE COMPLETED AND SUBMITTED WITH PROPOSAL)

SWORN STATEMENT UNDER 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 to Town of Longboat Key
[print name of public entity]

by Samantha Danchuk
[print individual's name and title]

For Aptim Environmental & Infrastructure, LLC
[print name of entity submitting sworn statement]

whose business address is: 6401 Congress Avenue, Suite 140

City, State and Zip Boca Raton, FL 33487

and (if applicable) its Federal Employer Identification Number (FEIN) is 77-0589932

(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 misrepresentations.

3. I understand that "convicted" or "conviction" as defined in Paragraph 287.133(1)(b), 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 1, 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:

   1. A predecessor or successor of a person convicted of a public entity crime: or

   2. 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 crime. The term "affiliate" includes those officers, directors, executives, partners, shareholders, employees, members, and agents 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 or 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)I, Florida Statutes, 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.

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

X Neither the entity submitting this sworn statement, nor any of its officers, directors, executives, partners,

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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 1, 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 1, 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 1, 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 THE FORM TO THE CONTRACTING OFFICER FOR THE PUBLIC ENTITY IDENTIFIED IN PARAGRAPH 1 (ONE) ABOVE IS FOR THAT PUBLIC ENTITY ONLY AND, THAT THIS FORM IS VALID THROUGH DECEMBER 31 OF THE CALENDAR YEAR IN W HICH 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 CATEGORY TWO OF ANY CHANGE IN THE INFORMATION CONTAINED IN THIS FORM.

By:_____
Signature of Authorized Representative

State of Florida

County of Palm Beach

The foregoing instrument was acknowledged before me this 5 day of November, 2026,

by Samantha Danchuk, who is personally known to me or has produced

_____, as identification and who did (did not) take an oath and who acknowledged

before me that he executed the same for the purposes therein expressed on behalf of said firm.

Notary Public: _____

My Commission Expires: 8/19/2030

Notary Public State of Florida
Tracie H. McCauley
My Commission HH 605464
Expires 8/19/2030

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DRUG FREE WORKPLACE CERTIFICATION
(MUST BE COMPLETED AND SUBMITTED WITH PROPOSAL)

In order to have a drug free workplace program, a business shall:

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

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

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

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

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

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

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

PROPOSER: Aptim Environmental & Infrastructure, LLC
Print Name of Entity

By: _____
Signature of Authorized Representative

Samantha Danchuk, Climate and Coastal Resilience Lead
Printed Name and Title of Authorized Representative

11/5/2026
Date

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Drug Free Workplace Certification, page 2 of 2

State of Florida

County of Palm Beach

The foregoing instrument was acknowledged before me this 5 day of November, 2026,

by Samantha Danchuk, who is personally known to me or has produced

_____,as identification and who did (did not) take an oath and who

acknowledged before me that he executed the same for the purposes therein expressed on behalf of said firm.

Notary Public: Tracie H McCauley

My Commission Expires: 8/19/2030

Notary Public State of Florida
Tracie H. McCauley
My Commission HH 805454
Expires 8/19/2030

EQUAL EMPLOYMENT OPPORTUNITY
(MUST BE COMPLETED AND SUBMITTED WITH PROPOSAL)

The Town of Longboat Key is an Equal Opportunity/Affirmative Action Employer.

Pursuant to Executive Order 11346 as amended, you are advised that under the provisions of government contracting, Contractors and Subcontractors are obliged to take affirmative action to provide equal employment opportunity without regard to race, creed, color, national origin, age or sex.

CERTIFICATION BY PROPOSED PRIME OR SUBCONTRACTOR
REGARDING EQUAL EMPLOYMENT OPPORTUNITY

This certification is authorized pursuant to Executive Order 11246, Part II, Section 203(b), (30 F. R. 12319-15). Any Proposer or prospective contractor, or any of the proposed subcontractors, shall state as an initial part of the bid or negotiations of the contract whether it has participated in any previous contract or subcontract to the equal opportunity clause; and, if so, whether it has filed all compliance reports due under applicable instructions.

Where the certification indicated that the prime or subcontractor has not filed a compliance report due under applicable instruction, such contractor shall be required to submit a compliance report.

PROPOSER: Aptim Environmental & Infrastructure, LLC
Print Name of Entity

By: _____
Signature of Authorized Representative

1. Proposer has participated in a previous contract or subcontract, subject to the Equal Opportunity Clause:

   YES___ NO X

2. Compliance Reports were required to be filed in connection with such contract or subcontract:

   YES___ NO X

   If YES, state what reports were filed and with what agency. _____

3. Proposer has filed all compliance reports due under applicable instructions:

   YES___ NO X

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MINORITY BUSINESS STATEMENT OF GOOD FAITH EFFORTS
(MUST BE COMPLETED AND SUBMITTED WITH PROPOSAL)

The Legislature finds that there is evidence of a systematic pattern of past and continuing racial discrimination against minority business enterprises and a disparity in the availability and use of minority business enterprises in the state procurement system. It is determined to be a compelling state interest to rectify such discrimination and disparity. Based upon statistical data profiling this discrimination, the Legislature has enacted race-conscious and gender-conscious remedial programs to ensure minority participation in the economic life of the state, in state contracts for the purchase of commodities and services, and in construction contracts. The purpose and intent of this section is to increase participation by minority business enterprises accomplished by encouraging the use of minority business enterprises and the entry of new and diversified minority business enterprises into the marketplace. (Section 287.09451, Florida Statutes)

The Proposer states that an endeavor to meet the minority business enterprise procurement goals under Section 287.09451, Florida Statutes for all Town projects as assigned will be met.

PROPOSER:
Aptim Environmental & Infrastructure, LLC
Print or type name of entity

By: Samantha Dh
Signature
Samantha Danchuk
Print or type name
Climate and Coastal Resilience Lead
Print or type title
11/5/2026
Date

HUMAN TRAFFICKING AFFIDAVIT - S. 787.06, FLORIDA STATUTES

(MUST BE COMPLETED AND SUBMITTED WITH PROPOSAL)

Before me, the undersigned authority, personally appeared Samantha Danchuk, hereinafter referred to as the "Affiant," who after being duly sworn hereby swears or affirms as follows:

1. Affiant is over eighteen years of age. The following information is given from Affiant's own personal knowledge.
2. Affiant is an officer or representative of Aptim Environmental & Infrastructure, LLC, a non-governmental entity, hereinafter referred to as the "Entity." Affiant is authorized to provide this affidavit on behalf of the Entity.
3. Affiant hereby attests, under penalty of perjury, that the Entity does not use coercion for labor or services as defined in s.787.06, Florida Statutes.

FURTHER AFFIANT SAYETH NOT.

Signature of Affiant

By: Samantha Danchuk

For: Aptim Environmental & Infrastructure, LLC

As its: Climate and Coastal Resilience Lead

Dated: 11/5/2026

Sworn to (or affirmed) and subscribed before me by means of ☒ physical presence or ☐ online notarization, this 5 day of November, 2026, by Samantha Danchuk, on behalf of Aptim Environmental & Infrastructure, LLC, who is personally known to me or who has produced _____ as identification.

Print Name: Tracie H. McCauley
Notary Public of the State of Florida

My Commission Expires: 8/19/2030

Notary Public State of Florida
Tracie H. McCauley
My Commission HH 805454
Expires 8/19/2030

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AFFIDAVIT OF COMPLIANCE WITH FOREIGN ENTITY LAWS
(MUST BE COMPLETED AND SUBMITTED WITH PROPOSAL)

The undersigned, on behalf of the contractor listed below ("Entity"), hereby attests under penalty of perjury as follows:

1. Entity is not owned by the government of a foreign country of concern as defined in Section 287.138, Florida Statutes. (Source: § 287.138(2)(a), Florida Statutes)

2. The government of a foreign country of concern does not have a controlling interest in Entity. (Source: § 287.138(2)(b), Florida Statutes)

3. Entity is not organized under the laws of, and does not have a principal place of business in, a foreign country of concern. (Source: § 287.138(2)(c), Florida Statutes)

4. Entity is not owned or controlled by the government of a foreign country of concern, as defined in Section 692.201, Florida Statutes. (Source: § 288.007(2), Florida Statutes)

5. Entity is not a partnership, association, corporation, organization, or other combination or persons organized under the laws of or having its principal place of business in a foreign country of concern, as defined in Section 692.201, Florida Statutes, or a subsidiary of such entity. (Source:§ 288.007(2), Florida Statutes)

6. Entity is not a foreign principal, as defined in Section 692.201, Florida Statutes. (Source: § 692.202(5)(a)(1), Florida Statutes)

7. Entity is in compliance with all applicable requirements of Sections 692.202, 692.203, and 692.204, Florida Statutes.

8. (Only applicable if purchasing real property) Entity is not a foreign principal prohibited from purchasing the subject real property. Entity is either (a) not a person or entity described in Section 692.204(1)(a), Florida Statutes, or (b) authorized under Section 692.204(2), Florida Statutes, to purchase the subject property. Entity is in compliance with the requirements of Section 692.204, Florida Statutes. (Source: §§ 692.203(6)(a), 692.204(6)(a), Florida Statutes)

9. The undersigned is authorized to execute this affidavit on behalf of the Entity.

Date: 11/5, 2026 Signature: _____

Entity: Aptim Environmental & Infrastructure, LLC Name: Samantha Danchuk

Title: Climate and Coastal Resilience Lead

State of Florida, County of Palm Beach

The foregoing instrument was acknowledged before me this 5 day of November 2026 who is personally known to me or as produced as identification and who did (did not) take an oath and who acknowledge before me that he executed the same for the purposes therein expressed on behalf of said corporation.

NOTARY PUBLIC: _____

Typed Name: Tracie H. McCauley

Commission Expires: 8/19/2030

Notary Public State of Florida
Tracie H. McCauley
My Commission HH 805454
Expires 8/19/2030

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Form **W-9**
(Rev. March 2024)
Department of the Treasury
Internal Revenue Service

Request for Taxpayer Identification Number and Certification

Go to *www.irs.gov/FormW9* for instructions and the latest information.

Give form to the requester. Do not send to the IRS.

Before you begin. For guidance related to the purpose of Form W-9, see *Purpose of Form*, below.

Print or type. See *Specific Instructions* on page 3.

1 Name of entity/individual. An entry is required. (For a sole proprietor or disregarded entity, enter the owner's name on line 1, and enter the business/disregarded entity's name on line 2.)

APTIM CORP

2 Business name/disregarded entity name, if different from above.

APTIM ENVIRONMENTAL & INFRASTRUCTURE, LLC (77-0589932)

3a Check the appropriate box for federal tax classification of the entity/individual whose name is entered on line 1. Check only **one** of the following seven boxes.

☐ Individual/sole proprietor ☑ C corporation ☐ S corporation ☐ Partnership ☐ Trust/estate

☐ LLC. Enter the tax classification (C = C corporation, S = S corporation, P = Partnership) . . . . .

Note: Check the "LLC" box above and, in the entry space, enter the appropriate code (C, S, or P) for the tax classification of the LLC, unless it is a disregarded entity. A disregarded entity should instead check the appropriate box for the tax classification of its owner.

☐ Other (see instructions)

4 Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3):

Exempt payee code (if any) 5

Exemption from Foreign Account Tax Compliance Act (FATCA) reporting code (if any)

(Applies to accounts maintained outside the United States.)

3b If on line 3a you checked "Partnership" or "Trust/estate," or checked "LLC" and entered "P" as its tax classification, and you are providing this form to a partnership, trust, or estate in which you have an ownership interest, check this box if you have any foreign partners, owners, or beneficiaries. See instructions . . . . . ☐

5 Address (number, street, and apt. or suite no.). See instructions.

1200 BRICKYARD LANE, SUITE 202

Requester's name and address (optional)

6 City, state, and ZIP code

BATON ROUGE, LA 70802

7 List account number(s) here (optional)

Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the instructions for Part I, later. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN*, later.

Note: If the account is in more than one name, see the instructions for line 1. See also *What Name and Number To Give the Requester* for guidelines on whose number to enter.

Social security number

			–			–				

or

Employer identification number

8	2	–	0	8	8	9	8	1	6

Part II Certification

Under penalties of perjury, I certify that:

1. The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and
2. I am not subject to backup withholding because (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and
3. I am a U.S. citizen or other U.S. person (defined below); and
4. The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

Certification instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and, generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions for Part II, later.

Sign Here **Signature of U.S. person** Christopher Bai **Date** 1/2/2026

General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

Future developments. For the latest information about developments related to Form W-9 and its instructions, such as legislation enacted after they were published, go to *www.irs.gov/FormW9*.

What's New

Line 3a has been modified to clarify how a disregarded entity completes this line. An LLC that is a disregarded entity should check the appropriate box for the tax classification of its owner. Otherwise, it should check the "LLC" box and enter its appropriate tax classification.

New line 3b has been added to this form. A flow-through entity is required to complete this line to indicate that it has direct or indirect foreign partners, owners, or beneficiaries when it provides the Form W-9 to another flow-through entity in which it has an ownership interest. This change is intended to provide a flow-through entity with information regarding the status of its indirect foreign partners, owners, or beneficiaries, so that it can satisfy any applicable reporting requirements. For example, a partnership that has any indirect foreign partners may be required to complete Schedules K-2 and K-3. See the Partnership Instructions for Schedules K-2 and K-3 (Form 1065).

Purpose of Form

An individual or entity (Form W-9 requester) who is required to file an information return with the IRS is giving you this form because they

Cat. No. 10231X Form **W-9** (Rev. 3-2024)