



Charlotte County

RFP No. 20260251

Tiki Point Living Shoreline



CUMMINS | CEDERBERG
Coastal & Marine Engineering



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February 23, 2026

Charlotte County Purchasing Division
18500 Murdock Circle, Suite 344
Port Charlotte, Florida 33948

CUMMINS | CEDERBERG
Coastal & Marine Engineering

RE: Tiki Point Living Shoreline; RFP No. 20260251

Dear Selection Committee Members,

Charlotte County, in partnership with the Coastal & Heartland National Estuary Partnership (CHNEP) and the City of Punta Gorda, continues to demonstrate leadership in advancing nature-based solutions that strengthen coastal resilience, restore habitat, and safeguard public waterfront infrastructure along Charlotte Harbor. The Tiki Point Living Shoreline represents a unique opportunity to advance the first man-made living shoreline in Charlotte Harbor from conceptual vision to fully permitted, construction-ready implementation, and serving as a model for future nature-based shoreline projects in the region.

Given the dynamic tidal exchange at the confluence of the Peace River and Charlotte Harbor, our team will apply hydrodynamic and wave modeling, water level analysis, and sediment transport evaluation to inform crest elevations, structural spacing, habitat grading, and adaptive features. This modeling-driven approach allows the living shoreline to respond appropriately to boat wake energy, storm surge, and long-term sea level rise, delivering a defensible, performance-based design.

Cummins Cederberg brings deep expertise in the planning, design, permitting, and construction of living shoreline and hybrid shoreline stabilization projects that balance ecological restoration with flood protection, wave attenuation, stormwater improvements, and public recreational access. ***With more than 350 successful shoreline stabilization and environmental restoration projects completed throughout Florida,*** our team understands the technical, regulatory, and community dynamics required to deliver resilient coastal infrastructure under grant-funded frameworks.

Founded in 2010, Cummins Cederberg has grown into a Florida-based coastal and marine engineering and environmental consulting firm with offices across the state, including a dedicated presence along Florida's Gulf Coast. Our multidisciplinary team routinely delivers projects funded through state and federal grant programs, ensuring compliance with DEP QA Rule Chapter 62-160, F.A.C., federal Quality Assurance Project Plans, and public documentation requirements.

The project will be led by Project Manager Jenna Phillips, who brings more than 20 years of experience in coastal engineering and living shoreline design across Florida's Gulf Coast. She previously led development of a Living Shoreline Guidance Document for CHNEP and the City of Punta Gorda through FDEP Resilient Coastline Program funding. Her experience managing phased design, stakeholder engagement, modeling-informed alternatives evaluation, and agency coordination directly aligns with the scope and schedule requirements of the Tiki Point Living Shoreline.

In Bradenton, Jenna is supporting advancement of the Portosueno Park Living Shoreline, incorporating a living shoreline, fishing piers, and a manatee viewing platform, while leading public outreach, pre-application coordination with regulatory agencies, and permit processing. With the City of St. Pete Beach, she leads the South Maritana Living Shoreline, a grant-funded project protecting approximately 280 linear feet of waterfront. Across these efforts, she has led field investigations, reviewed bathymetric and ecological survey data, developed living and hybrid stabilization alternatives, prepared construction drawings, and coordinated environmental permitting to advance projects from concept through implementation.

Beyond site-specific shoreline projects, Jenna is also leading the **“Working with Nature: Flood Resilience Blueprint” for the Conservancy of Southwest Florida** in the City of Naples. This initiative advances conceptual nature-based and hybrid solutions to address sea level rise, storm surge, and rainfall-induced flooding, complementing existing municipal resilience plans. The project includes development of multiple conceptual alternatives tailored to representative coastal typologies, stakeholder listening sessions and public workshops, GIS-based story mapping for digital outreach, and evaluation of permitting feasibility and implementation pathways. Through this effort, the Cummins Cederberg team is translating resilience strategy into actionable pilot concepts.

To support Charlotte County, CHNEP, and the City of Punta Gorda, we have assembled a multidisciplinary team tailored specifically to this RFQ:

- **Ecosphere** - Ecological subject matter expertise in living shorelines, habitat restoration, resource assessments, and environmental coordination.
- **Chen Moore & Associates** - Civil engineering, stormwater engineering, and landscape architecture, with extensive experience integrating resilient site design and public park infrastructure.
- **Terraquatic** - Topographic and bathymetric surveying, providing high-quality coastal and nearshore data to support design and permitting.
- **Arehna Engineering** - Geotechnical engineering, supporting foundation design, settlement analysis, and constructability for shoreline improvements.

We approach living shoreline projects not as conceptual exercises, but as permit-ready implementation efforts. By designing with agency expectations in mind from day one, we minimize redesign, reduce review cycles, and support predictable schedules toward the March 31, 2027 completion deadline. Together, our team offers comprehensive capabilities in **living shoreline design, coastal engineering, ecological assessment, geotechnical analysis, surveying, stakeholder engagement, and permitting application preparation**. Our team includes former regulatory agency professionals who understand both design performance and permitting expectations. We routinely coordinate with FDEP, USACE, NOAA-NMFS, and FWC under DEP QA Rule Chapter 62-160 and EPA/DEP Quality Assurance Project Plan frameworks.

We appreciate the opportunity to submit our qualifications and look forward to supporting Charlotte County, CHNEP, and the City of Punta Gorda in delivering this important project. Should you have any questions or require additional information, please do not hesitate to contact me at jcederberg@CumminsCederberg.com or 941-364-2424.

Sincerely,
CUMMINS CEDERBERG, INC.



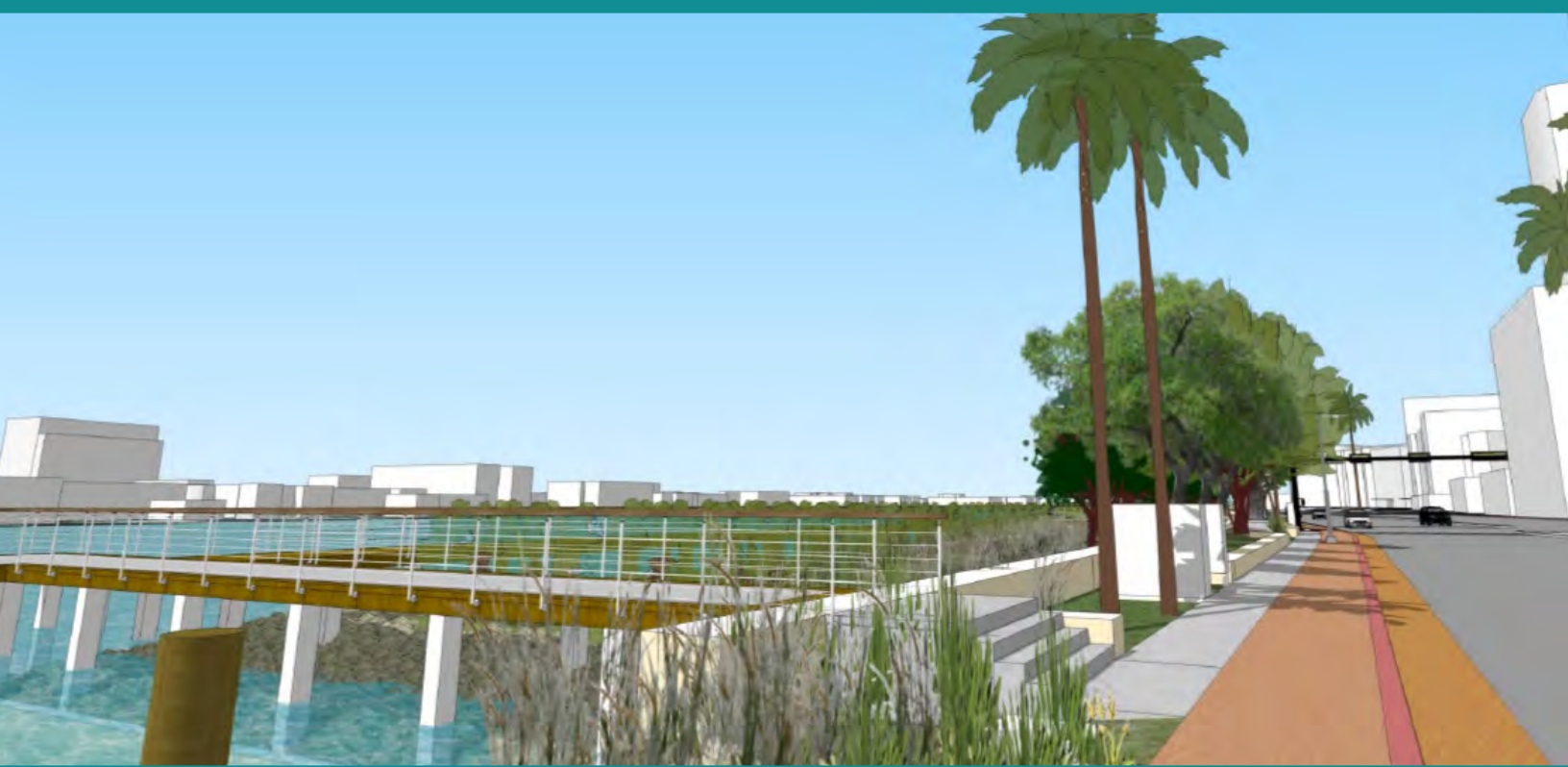
Jannek Cederberg, PE
Principal



Jenna Phillips
Project Manager, Associate Principal

Cummins Cederberg acknowledges receipt of all addenda issued for this solicitation and confirms that all addenda dated on or before February 23, 2026 have been reviewed and incorporated into this proposal.

I.



PROPOSED TEAM

I. PROPOSED TEAM



JANNEK CEDERBERG, PE

Principal-in-Charge

Jannek will serve as Principal-in-Charge providing executive oversight of engineering production, resource allocation, quality management, and milestone review. With more than 23 years of experience in coastal resilience and shoreline stabilization, Jannek brings deep expertise in hydrodynamic and wave modeling, water level analysis, and performance-based shoreline design.

His work emphasizes data-driven evaluation of tidal exchange, storm surge, boat wake energy, and long-term sea level rise to inform defensible living shoreline and hybrid stabilization solutions. Jannek has led modeling and engineering efforts for projects including Beach View Park and Mid Beach Park Living Shorelines (Miami Beach), Currie Park Redevelopment (West Palm Beach), and the Hollywood Tidal Flood Mitigation & Shoreline Protection Program.

His oversight supports technically rigorous, permit-ready design development aligned with project schedule and performance objectives.

JENNA PHILLIPS

Project Manager

Jenna will serve as Project Manager for the Tiki Point Living Shoreline, leading technical oversight, modeling coordination, agency engagement, and phased design development through final permitting. With over 20 years of coastal engineering experience along Florida's Gulf Coast, she specializes in living shoreline design, resiliency planning, flood vulnerability analysis, and hybrid stabilization strategies within dynamic estuarine systems.

Jenna previously led development of a Living Shoreline Guidance Document for CHNEP and the City of Punta Gorda through FDEP Resilient Coastline Program funding, providing direct familiarity with Charlotte Harbor conditions and local regulatory coordination. She is also leading the "Working with Nature: Flood Resilience Blueprint" for the Conservancy of Southwest Florida, advancing nature-based and hybrid solutions addressing sea level rise, storm surge, and rainfall-driven flooding. Her experience integrating modeling-informed alternatives, stakeholder engagement, and grant-supported documentation aligns directly with the Tiki Point project objectives.

MATTHEW TRAMMELL, PE

Lead Designer

Matthew will serve as Lead Designer for the Tiki Point Living Shoreline and will be responsible for preparation of 30%, 60%, 90%, and 100% construction drawings, technical specifications, and supporting permit documentation. He brings extensive experience in shoreline stabilization, beach nourishment, and marine infrastructure projects throughout Florida, with proficiency in numerical modeling, coastal engineering design, and regulatory coordination.

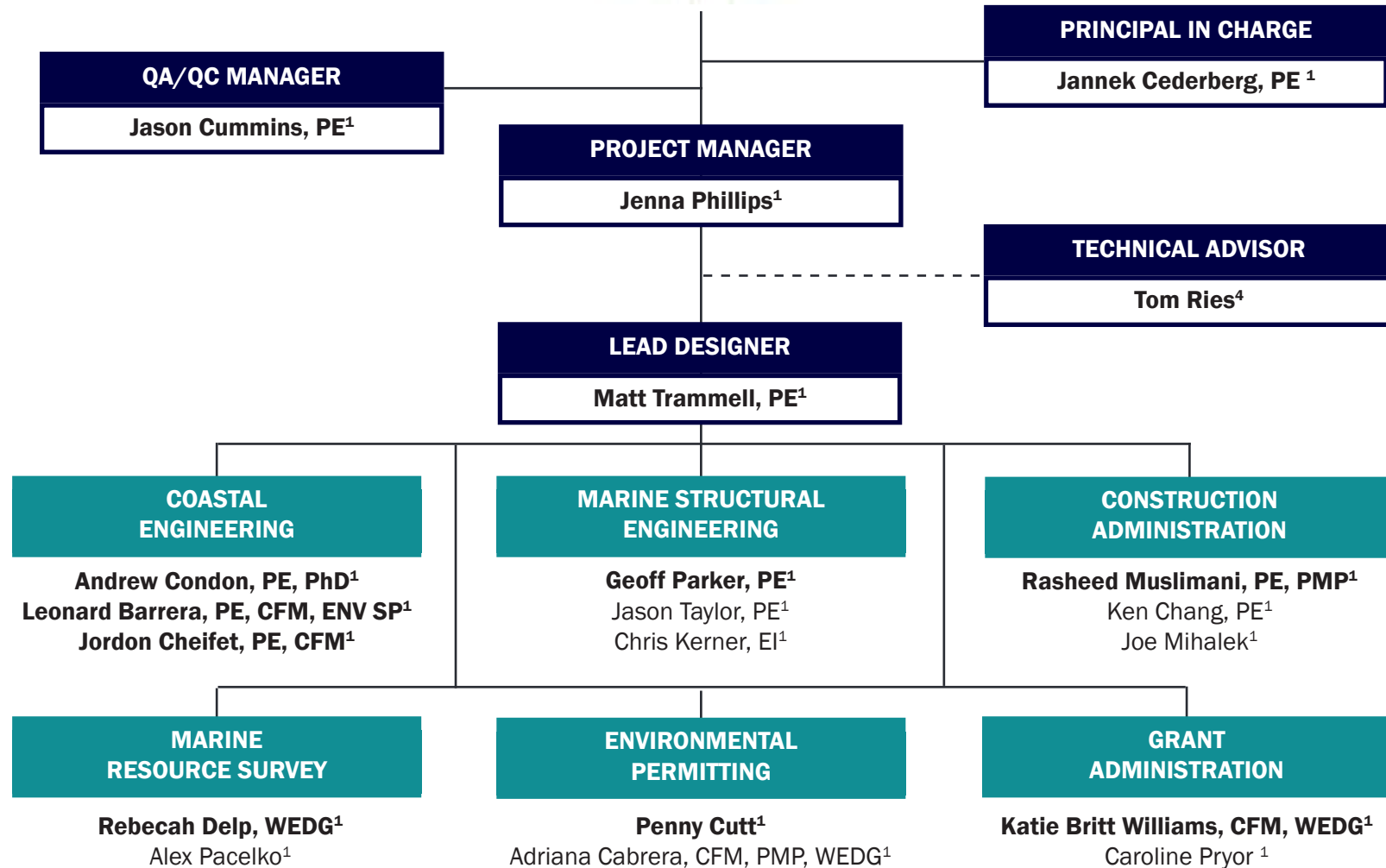
Matthew regularly advances projects from feasibility through final design and construction, preparing detailed drawings and specifications that integrate hydraulic performance, constructability, and long-term shoreline stability. His experience includes Monroe County US-1 Shoreline Stabilization, Pinellas County and Venice Shore Protection Projects, Anna Maria Island and Lido Key Shore Protection Projects, Boggy Bayou Headwaters Restoration, and Norriego Point Shoreline Stabilization.

His technical production leadership supports defensible design development, coordinated permit submittals, and clear construction documentation aligned with project schedule and performance objectives.

ORGANIZATIONAL CHART



Bold indicates key personnel



SUBCONSULTANTS

CIVIL/STORMWATER ENGINEERING
Robert Best, PE²

GEOTECHNICAL ENGINEERING
Jessica McRory, PE, LEED AP³

LANDSCAPE ARCHITECTURE
Tanya McCormick, PLA, AICP, FCP²

SURVEY
Joshua Lee, PSM⁵

1. Cummins Cederberg, Inc.; 2. Chen Moore & Associates; 3. Arehna Engineering; 4. Ecosphere 5. Terraquatic



YEARS OF EXPERIENCE

- 20

TELEPHONE NUMBER

- 941-364-2424

EDUCATION

- MSc Ocean Engineering, Florida Institute of Technology
- BSc Ocean Engineering, Florida Institute of Technology

LICENSES

- Engineer Intern
- Open Water Certified Diver - National Association of Underwater Instructors (NAUI)

PROFESSIONAL AFFILIATIONS

- Coastal, Oceans, Ports, and Rivers Institute (COPRI), ASCE – Policy Committee Chair
- American Society of Civil Engineers – Energy, Environment, and Water Policy Committee Member
- American Shore & Beach Preservation Association – Science & Technology Committee Member
- Western Dredging Association (WEDA)
- WEDA, Education Commission
- Propeller Club, Port Manatee
- Sarasota County Coastal Advisory Committee

Jenna has over 20 years of experience in a broad range of coastal/marine engineering works, including the preparation of feasibility studies, beach management plans, coastal assessments, coastal structure design, resiliency planning and flood vulnerability analyses, numerical modeling, living shoreline/nature-based planning and design, environmental restoration and mitigation, structural assessment and rehabilitation, beach design and renourishment, dredging and dredged material management, and regulatory coordination/permitting in the United States, Puerto Rico, and Caribbean.

She oversees all aspects of coastal and marine engineering projects - including planning, design, permitting, stakeholder outreach, contract administration, bid preparation, construction administration, monitoring and project closeout - with careful attention to detail, budget and project schedule for projects of variable magnitude and size. Jenna has designed a variety of new and rehabilitated marinas and docks, jetties, breakwaters/groins, artificial reefs, navigation channels, mooring fields, and shoreline stabilization projects. She also has experience in designing living shorelines, artificial reef, and nature-based projects.

RELEVANT PROJECT EXPERIENCE

Punta Gorda Climate Adaptation Plan, Punta Gorda, Florida. As project manager, lead a multi-disciplinary team to prepare an update to the City's 2009 Climate Adaptation Plan and create a living shoreline technical guidance document. Performed vulnerability analysis using GIS-based bathtub model, available digital elevation data, and the latest available sea level rise projections published by IPCC. Report identifies vulnerable thresholds and qualitatively delineates areas of vulnerability, as well as recommendations to the City's Comprehensive Plan and coastal management element language. Climate Plan update includes a wide range of micro and macro level adaptation strategies.*

South Maritana Living Shoreline, St. Pete Beach, Florida. Project manager overseeing the St. Pete Beach Living Shoreline Design, which involves coastal engineering, grant-funded planning, and environmental permitting services to enhance and protect approximately 280 linear feet of shoreline in front of three waterfront properties in the Maritana neighborhood of St. Pete Beach. Leading the engineering team in conducting above- and below-water inspections of the seawall, assessing structural components for signs of deterioration, and developing design alternatives incorporating either a living shoreline or a hybrid nature-based solution. The project also includes developing construction drawings based on the selected alternative and ensuring compliance with all necessary permitting regulations.

Town of Longboat Key Seawall, Longboat Key, Florida. Pilot initiative led by Kearns Construction Company in collaboration with the Sarasota Bay Estuary Program (SBEP), with marine engineering and environmental consulting services provided by Cummins Cederberg, Inc. The project involves installing approximately 290 linear feet of 3D-printed reef tiles along the existing bulkhead at Bayfront Park in Longboat Key, Florida. The scope includes

a detailed field assessment of the seawall's structural integrity, a topographic and bathymetric survey, and the development of engineering design documents including structural sections and material specifications.

Portosueno Park Living Shoreline, Bradenton, Florida. Providing marine engineering and environmental services for the park's waterfront to enhance conceptual designs with features such as a living shoreline, fishing piers, and a manatee viewing platform. Efforts will include public outreach, pre-application meetings with the environmental permitting agencies, and permit processing.

Manatee County Oyster Restoration Master Plan, Manatee County, Florida. Working with project team to develop a master plan that outlines technically sound, consensus-based strategies, costs, and recommendations to implement successful oyster restoration in the Manatee River. Plan development includes developing goals and objectives, synthesizing available existing data relative to oyster restoration, field surveying of reference sites and potential restoration sites, compiling a permitting and restoration strategy guide with monitoring recommendations and metrics, and summarizing grant and partnership opportunities.

Citywide Strategic Seawall Capital Improvement Plan, St. Petersburg, Florida. Project Manager responsible for leading the inspection and reporting of approximately 72,000 LF (13.6 miles) of municipal seawalls, including both above and below-water inspections. Developed a GIS database and interactive online dashboard to inventory each city-owned seawall segment, prioritize based on condition rating, and identify a range a green infrastructure and hybrid shoreline replacement strategies. Compiled water level data related to sea level rise and storm events into a coastal analysis report assessing the City's flood risk. Managed the Citywide Strategic Seawall Capital Improvement Plan, prioritizing repairs and replacements with green infrastructure enhancement opportunities based on available funding and resilient solutions, and led community outreach.

Manatee County Vulnerability Assessment & Adaptation Plan, Manatee County, Florida. Project manager and technical lead for Manatee County's Vulnerability Assessment and Adaptation Plan, funded by the FDEP Resilient Florida Grant Program. Conducted detailed analyses of sea level rise, King Tides, storm surge scenarios, and 100-year and 500-year rainfall to assess present and future flood risks. Led coordination with multiple County departments to validate flood analysis and determine local priorities, develop adaptation strategies, support data acquisition and data management for comprehensive spatial analysis. Provided technical support for sensitivity analysis to measure flooding impact on critical assets.

Bal Harbour Village Vulnerability Assessment & Coastal Resilience Plan, Bal Harbour Village, Florida. Project manager and technical lead for town-wide vulnerability assessment under the Resilient Florida grant program. Reviewed coastal and sea level rise analysis using FEMA storm surge and NOAA projections for 2040 and 2070. Conducted critical asset exposure and sensitivity analysis for 8 flood scenarios, producing flood inundation maps and asset-specific flood depth tables. Identified focus areas for future planning and budgeting. Led public workshops, outreach and GIS Story Map development to gather resident feedback.

Bayfront Park Living Shoreline Conceptual Design, Longboat Key, Florida Project manager for conceptual design, engineering design and permitting cost estimate, and supporting documentation for a living shoreline project grant application for the Town of Longboat Key's Bayfront Park on Sarasota Bay.*

Sarasota Resiliency Initiative, Sarasota, Florida. Leading the City of Sarasota's Citywide Resiliency Initiative, a multi-part program to implement the City's Vulnerability Assessment and Adaptation Plan, reduce flood risks, and ensure continuity among resiliency policies related to coastal flooding and sea level rise. Through partial funding from FDEP's Resilient Florida Grant and \$500,000 from WCIND, the City is initiating 3 key resiliency projects for a total of \$6.3M: Bayfront Park Seawall Rehabilitation, Ken Thompson Living Shoreline and Armoring, and Citywide Topographic Mapping. Responsible for development, negotiation and management of grant work plans and contract agreements, maintained project schedules, grant administrative services, and coordination with FDEP, City staff, and consultants. Oversaw grant budget, payment requests, deliverable tracking, and quarterly reporting.



YEARS OF EXPERIENCE

- 20

TELEPHONE NUMBER

- 305-741-6155

EDUCATION

- MS, Coastal and Oceanographic Engineering, University of Florida
- BSc, Civil Engineering, University of Florida

LICENSES

- Florida PE No. 69244

PROFESSIONAL AFFILIATIONS

- American Society of Civil Engineers and Coasts, Oceans Ports & Rivers Institute
- American Shore and Beach Preservation Association
- Florida Shore and Beach Preservation Association
- Society of American Military Engineers
- Florida Engineering Society

Matthew is an experienced coastal engineer with extensive experience across a wide spectrum of shoreline and marine infrastructure projects. His expertise spans feasibility studies, beach management plans, coastal assessments, dredging operations, and the design of coastal structures. He is proficient in numerical modeling, engineering design, and regulatory permitting, and regularly manages projects from concept through construction. Matthew prepares detailed construction drawings and specifications and oversees both large- and small-scale coastal engineering works, ensuring quality and compliance throughout the project lifecycle.

Matthew's work includes comprehensive involvement in beach restoration initiatives, from sand source investigations and sediment transport modeling to storm impact analyses and borrow area assessments. He has designed and monitored inlet and jetty structures, groins, revetments, and habitat restoration features such as breakwaters and artificial reefs and has a strong background in field data collection for water and sediment quality, tides, currents, and storm surge. His portfolio also includes waterfront recreation facilities like piers, marinas, seawalls, and upland amenities such as boardwalks and pavilions. He leads projects through conceptual planning, stakeholder engagement, permitting, construction oversight, and post-construction monitoring, primarily across Florida and the southeastern US.

RELEVANT PROJECT EXPERIENCE

Monroe County US-1 Shoreline Stabilization Planning, Engineering and Design, Monroe County, Florida. Senior Engineer / Technical Lead. Led extensive site visits and investigations with the full design team and performed a detailed value engineering study for the protection of US-1, the only hurricane evacuation route within Monroe County serving the Florida Keys. The value-engineering study outlined the federal authorization requirements and assessed numerous design alternatives through preliminary designs, cost estimates, functionality rankings, lifecycle performance and other parameters to provide a justifiable recommendation for final engineering design and construction.*

Stumphole Revetment Improvements, Gulf County, Florida. As project engineer, conducted an existing conditions assessment and coastal processes and scour analysis of the existing revetment, located along S.R. 30E in Gulf County, Florida, and structural design and permitting of the proposed structure. The project included preparation of a design document which outlined all aspects of the coastal conditions and structural design, permit applications, and supplemental information, which resulted in permit issuance within six months. Construction phase services included the final structural design, preparation of construction plans and specifications for the 1,500-foot revetment, construction oversight, and final certification.*

Puerto Rico Coastal Study, Puerto Rico. Senior Engineer and Technical Lead on the feasibility study (USACE mega-project) to assess island-wide coastal vulnerability. The project included detailed data collection (physical data, environmental surveys, economic data, etc.), numerical modeling, coastal

condition analyses, alternative analyses, preliminary designs, and economic and planning modeling to assess the feasibility and life-cycle economic benefit of various alternatives. Primary alternatives included beach restoration with and without coastal structures (groins and breakwaters), rock revetments, flood walls, coastal retreat, and various combinations of these alternatives. The study ultimately included two innovative approaches for congressional authorization: In San Juan, the recommended plan is two large-scale flood walls to inhibit coastal flooding from future storm events (~\$112M), and in Rincon, the recommended plan is managed coastal retreat (~\$140M). *

Norriego Point Shoreline Stabilization and Recreational Improvements, Destin, Florida. Project manager and EOR for the \$10M shoreline stabilization and restoration improvements on Norriego Point within East Pass. Services included submerged aquatic vegetation surveys, regulatory permitting, conceptual upland recreational facility design, detailed coastal analyses, value and final engineering design, construction drawings and specifications, bid and construction admin, and final certifications. Project components included large-scale T-head breakwaters with sheet pile cores, upland sheet pile walls with concrete caps, dredge/fill design, and dune restoration. Provided project management and QA/QC for the \$5M recreation phase that include extensive ADA boardwalks, restroom, dune walkovers, observation areas, roadway and parking improvements, educational signage and other creations amenities.*

St. George Island Causeway Shoreline Stabilization, Franklin County, Florida. Served as project manager for preliminary engineering design analyses for shoreline stabilization structures at six critically eroding areas along the causeway. Conducted engineering analyses that included structural details, storm protection levels, and cost opinions. Prepared the final preliminary design, obtained regulatory authorizations, and performed QA during bid and construction administration services.*

Beach Restoration Design and Permitting, Bid and Construction Administration, and Post-construction Monitoring Services, Various Locations, Florida. Senior Engineer / Project Manager. Work included beach and borrow area design, numerical wave and sediment transport modeling of various alternatives, geotechnical investigations and analyses, sand compatibility analyses, environmental impact analyses, local, state, and federal agency permitting and coordination; development of project plans and specifications, conducting public workshops, and providing expert witness testimony on multiple occasions. Assisted various government entities with bid administration and construction observation of their beach restoration projects. Work responsibilities include preparation of contract documents, construction plans, and technical specifications; overseeing daily construction observations services, conducting pre-bid and project progress meetings and substantial completion and final inspections; sediment and protected species monitoring programs; reviewing contractor submittals, pay applications, and project surveys; project certification; collection and analysis of monitoring surveys; and preparation and submittal of post-construction reports.*

Okaloosa Veteran's Park Project, Okaloosa County, Florida. Project Manager and EOR for the \$10M coastal restoration, stabilization and recreation improvement project with an existing, large scale (25+ acre) public park. Oversaw data collection and natural resource surveys, and led stakeholder outreach/planning, preliminary engineering design and regulatory permitting. Planning services included concept design, project stakeholders/partners coordination, cost estimating, and scheduling. Waterfront components included a substantial living shoreline with approx. three acres of offshore breakwaters/oyster reefer and salt marsh restoration; 20 ft wide public access pier with wave fence, 22 slips, 400 feet of flexible mooring and terminal gazebo structure; boat ramp improvements; and water access features including a kayak launch and paddle trail. The upland components included over 1.6 miles of upland boardwalks; gazebo structures and observation platforms; at-grade nature trails; increased ADA parking areas; acres of upland wetland and coastal scrub habitat creation and enhancement; an invasive specials removal program; and numerous education components.*

*Services provided from previous firms



YEARS OF EXPERIENCE

- 23

TELEPHONE NUMBER

- 305-741-6155

EDUCATION

- MSc Coastal Engineering, Technical University of Denmark

LICENSES

- Florida PE No. 69839

PROFESSIONAL AFFILIATIONS

- Permanent International Association of Navigation Congress
- Member of PIANC Working group Design and Operational Guidelines for “Superyacht Facilities”
- Danish Society of Hydraulic Engineering
- Florida Association of Environmental Professionals
- Port Everglades Association
- Florida Engineering Society Miami Chapter
- Florida Bar’s Environmental and Law Use Law Section
- Biscayne Watershed Management Advisory Board

As *Principal Engineer*, Jannek is responsible for all engineering production including scheduling, resource allocation, and quality management. He is formally trained as a coastal and marine engineer from the Technical University of Denmark. He has more than twenty years of experience in coastal and marine engineering. Jannek considered an expert in coastal engineering, specifically dealing with sea level rise specializing in vulnerability assessments, focusing on enhancing coastal resilience through detailed data analysis, flood mapping, and strategic planning.

RELEVANT PROJECT EXPERIENCE

Mid Beach Park Seawall Replacement and Living Shoreline, Miami Beach, Florida. Principal engineer for the design of a 590 LF replacement of a seawall with the implementation of a living shoreline to protect the uplands against tidal flooding, enhance stabilization, and bolster waterfront resiliency. Living shoreline planters will be enhance the entire project area, enclosed by a riprap revetment and a steel sheet pile toe wall. Project includes coastal engineering, living shoreline design, benthic survey, permitting due diligence, seawall design, grant research, and boardwalk design.

West 40th Street Seawall Replacement and Living Shoreline, Miami Beach, Florida. Principal engineer for the design of a 256 LF replacement of a seawall with the implementation of a living shoreline to protect the uplands against tidal flooding, enhance stabilization, and bolster waterfront resiliency. Two fishing piers and a floating kayak launch will be installed as well as ecological enhancement will be achieved through the installation of mangrove planters. Project includes coastal engineering, living shoreline design, benthic survey, permitting due diligence, seawall design, grant research and boardwalk design.

Beach View Park Seawall Replacement and Living Shoreline, Miami Beach, Florida. Principal engineer for the design of a 300 LF replacement of a seawall with the implementation of a living shoreline to protect the uplands against tidal flooding, enhance stabilization, and bolster waterfront resiliency. Enhancing the recreational aspect, a boardwalk will be along the central shoreline, seamlessly connecting to the uplands through timber walkways that follow the curvature of the mangrove planters. Project includes coastal engineering, living shoreline design, benthic survey, permitting due diligence, seawall design, and grant research.

Tidal Flood Mitigation and Shoreline Protection, Hollywood, Florida. The project consists of evaluating 22 areas, covering over 10,000 LF of shoreline, along the areas known as North and South Lake in the City of Hollywood. Each area will have specific solutions to address seasonal flooding challenges, which may entail the design and implementation of varied shoreline protection infrastructure such as of living shorelines, rock revetments, and bulkheads, to meet the requirements of the new Broward County ordinance.

Bal Harbour Village Vulnerability Assessment & Coastal Resilience Plan, *Bal Harbour Village, Florida*. Principal engineer for town-wide vulnerability assessment under the Resilient Florida grant program. Oversaw development of a comprehensive asset inventory using statewide, local, and county data, cataloged in a GIS geodatabase per Section 380.093 F.S. Provided QA/QC of critical asset inventory, and associated coastal adaptation strategies.

Manatee County Vulnerability Assessment & Adaptation Plan, *Manatee County, Florida*. Principal engineer for Manatee County's Vulnerability Assessment and Adaptation Plan, funded by the FDEP Resilient Florida Grant Program. Oversaw detailed analyses of sea level rise, King Tides, storm surge scenarios, and 100-year and 500-year rainfall to assess present and future flood risks. Team utilized GIS bathtub models for raster analysis of compound flood scenarios, creating a comprehensive critical asset inventory in a GIS geodatabase per Section 380.093 F.S. Providing QA/QC of critical asset inventory, and associated coastal adaptation strategies.

FDOT D1 Coastal Asset Management, *Collier County, Florida*. Principal engineer responsible for conducting extensive research to assess the vulnerability of coastal assets in FDOT District 1 counties, the first district-wide sea level rise analysis effort for FDOT. The scope included creation of future tidal projections based on evaluating historical tidal measurements and the expected impact of climate change to sea level rise, local to District 1, until the year 2100. These projections were applied in a water level analysis to identify critical low-lying infrastructure throughout the district that is at risk to sea level rise and storm surge.

Dinner Key Marina Breakwaters Mitigation, *City of Miami, Florida*. Principal engineer for resiliency and mitigation improvements to one of the largest public marinas on the east coast of the US. Originally created in the early 1900's, man-made spoil islands have provided protective services to upland areas including the historic Pan Am Seaplane Terminal in the 1930s but have worn over time and sustained considerable damage from Hurricane Irma in 2017. Scope includes restoration, increase in sea level rise resilience and storm protection, recreational enhancements, and consideration of potential additional funding opportunities.

Currie Park Redevelopment, *West Palm Beach, Florida*. Principal engineer for all the waterfront design for the Currie Park Redevelopment project. Project includes marine surveying, engineering design, environmental permitting, and grant implementation support for the waterfront work including rock revetment, living shoreline, boat ramp improvements, kayak launches, new over water piers and boardwalks, and "social" steps down to the water.

Adaptive Redesign of Jose Marti Park, *City of Miami, Florida*. Serving as a model for resilient waterfront parks that can adapt to current and future flood rises associated with climate change and sea level rise, this project explores ways to minimize tidal flood impacts and enhance waterfront access to residents. Led the inundation modeling, and waterfront engineering design, while the Cummins Cederberg team also led the environmental permitting, coordination with FIND, and grant management.

Miami-Dade County Waterfront Parks Sea Level Rise & Flood Mitigation Roadmap, *Coral Gables, Florida*. Senior project manager for analysis of the impacts of sea level rise on park's infrastructure and operations, as well as flood mitigation concepts for planning and budgeting. Compiled existing survey and LiDAR data to prepare general topographic map; infrastructure condition assessment, remaining service life and adaption feasibility relative to sea level rise; assessment of environmental conditions on site to understand and document current conditions, as it would relate to environmental permitting; conducted an engineering analysis to provide extreme tide water levels; developed flood mitigation concepts and preliminary cost estimates; coordinated stakeholder involvement; and developed an implementation strategy. Project sites included Matheson Hammock, Crandon, Haulover, Virginia Key, Biscayne Shores and Gardens, Blackpoint Marina, and Homestead Bayfront Park.



YEARS OF EXPERIENCE

- 21

TELEPHONE NUMBER

- 305-741-6155

EDUCATION

- MSc Coastal and Oceanographic Engineering, University of Florida
- BSc Civil Engineering, University of Florida

LICENSES

- Florida PE No. 71538

Certifications

- Certified Diver
- FHWA A-NHI 130091 Underwater Bridge Inspection – National Highway Institute and Association of Diving Contractors

PROFESSIONAL AFFILIATIONS

- Urban Land Institute, SE Florida/Caribbean, Member
- American Society of Civil Engineers
- American Institute of Architects
- South Florida Association of Environmental Professionals

Jason is a Principal Engineer with significant experience in inspections, planning, engineering, regulatory permitting and construction of coastal and waterfront development and infrastructure projects in Florida, Caribbean and Latin America. He specializes in the design of marine facilities, shoreline stabilization and coastal structures. Jason is also proficient in the application of numerical models, including the Danish Hydraulics Institute (DHI) MIKE-21 suite of numerical modeling tools, structural analysis tools and Federal State and Local design codes. In addition to his professional achievements, Jason presently serves on the non-profit Board for Bill Baggs Cape Florida State Park.

RELEVANT PROJECT EXPERIENCE

I-395 Baywalk & Pedestrian Bridge, Miami, Florida. Principal engineer overseeing coastal engineering analysis for the design of the I-395 Pedestrian Baywalk Bridge project, which will provide connect bicycles and pedestrians from the Maurice Ferre Park, through the Perez Art Museum Miami and Frost Museum to NE/NW 14th Street along the Biscayne Bay waterfront. Jason established design criteria used to develop a basis for conceptual design alternatives and assisted in the preparation of public outreach, facilitated stakeholder meetings with City commissioner, property owners, and community members.

Las Olas Marina Redevelopment, Fort Lauderdale, Florida. Providing marine engineering and environmental consulting services for the redevelopment of the marina. This project involves an expansion of the existing marina through reclamation of previously filled tidal waters, renovating the marina layout to accommodate megayacht vessels, and new dredging. Services performed are permitting, design, and construction administration.

Indian Creek Village Country Club Vulnerability, Miami-Dade County, Florida. QA/QC to evaluate coastal resiliency of the Club including potential sea level rise, vulnerability assessments and provided recommendations for potential mitigation measures as part of the club's planned upgrades to their property. Conceptual mitigation measures were developed to address points of exposure and enhance the Club's resiliency.

Brickell Key Coastal Resiliency Study, Miami, Florida. An assessment of the existing shoreline and infrastructure was conducted to understand the effects of sea level rise on normal and extreme conditions (hurricanes). This included an inspection of coastal infrastructure to identify vulnerable areas along the entire shoreline perimeter. Analysis of sea level rise and extreme tide events were performed to determine water level design conditions and assess the potential for increased storm impacts. Recommendations for long term planning and mitigation options were provided. Construction documents and environmental permitting was completed for the design, which focused on adapting existing infrastructure to provide a cost-effective solution.

Dinner Key Marina Breakwaters Mitigation, City of Miami, Florida. QA/QC for resiliency and mitigation improvements to one of the largest public marinas on the East Coast of the US. Originally created in the early 1900's, man-made

spoil islands have provided protective services to upland areas including the historic Pan Am Seaplane Terminal in the 1930s but have worn over time and sustained considerable damage from Hurricane Irma in 2017. The scope includes restoration, increase in sea level rise resilience and storm protection, recreational enhancements, and consideration of potential additional funding opportunities.

North District Wastewater Treatment Plant Coastal Resiliency Study, Virginia Key, Florida. Assessment of coastal resiliency for critical infrastructure components in relation to flooding and sea level rise. Analyzed storm surge impacts from historical hurricane events and assessed the potential and magnitude of future impacts. Evaluated the risk and probability of various events.

Sunny Isles Coastal Analysis, Sunny Isles, Florida. Assessment of local sediment transport characteristics and potential shoreline stabilization along Sunny Isles Beach. An evaluation of nearshore coastal processes and sediment transport characteristics in the project vicinity was completed. Based on this assessment, a beach management plan was developed for long-term beach planning.

Storm Surge Protection Wall & Wetland Restoration at Vizcaya Museum & Gardens, Miami, Florida. Site plan for a storm surge protection wall, environmental wetland restoration, and public space. Included grant application, regulatory permitting, and engineering design for marine works. The storm surge wall was designed with reinforced concrete to withstand storm surge and high wave loads associated with tropical storm events.

Dade Boulevard/Collins Canal Shoreline Stabilization & Seawall Replacement, Miami Beach, Florida. Marine engineering and construction drawings for 2,670 LF of shoreline stabilization associated with a linear park and bike path. Structural design includes steel sheet pile and a reinforced concrete cap, including barrier wall connection, and utility crossovers for FPL 69KV oil-filled transmission line.

FDOT A1A Seawall, Indian River County, Florida. Scour and wave load analysis for a proposed seawall for nearly 2 miles of shoreline that experienced significant erosion during Hurricane Mathew. A hydrodynamic MIKE21 model was established to simulate tidal and storm surge flow. A MIKE21 wave model was developed to simulate the wave conditions during extreme events. Scour associated with a 100-year event was determined and appropriate scour protection was designed. Wave loads were calculated for the proposed seawall for extreme event under varying conditions and water levels.

Hillsboro/Deerfield Beach Nourishment, Hillsboro Beach, Florida. Coastal engineering and environmental permit processing for 400k cubic yard beach fill project. Engineering design of beach fill template. Cross-shore sediment transport modeling. Geotechnical investigations and dredge plan for offshore borrow source. Prepared construction drawings and technical specifications.

Fort Zachary Taylor State Park, Key West, Florida. Conducted above and below-water inspections of breakwaters and terminal groin, as well as topographic survey to accurately identify rock displacement and settlement. Provided coastal engineering design and environmental permitting for a truck haul beach fill project.

Village of Key Biscayne Beach Nourishment, Key Biscayne, Florida. Coastal engineering and environmental permitting for a 120,000 cubic yard beach fill and dune restoration project. Conducted beach profile and hydrographic surveys, and performed sand source searches, jet probes, vibracores, and sediment compatibility analysis. Coordination of dune vegetation planting and exotic removal plan.

Fincantieri Shipyard, Jacksonville, Florida. Providing marine engineering services for the shipyard redevelopment project. Principal engineer for the design of nearly 2,000 LF of steel pipe pile bulkhead, mooring dolphins to accommodate the +/- 500 ft long dry dock facility, dredging along the length of the bulkhead, as well as fendering and mooring bollards. Overseeing both design and construction administration, which includes bulkhead replacement, dredging, and mooring dolphins installation. The primary use of this facility will be for the maintenance of U.S. Navy vessels.



YEARS OF EXPERIENCE

- 15

TELEPHONE NUMBER

- 904-517-1372

EDUCATION

- PhD Coastal and Oceanographic Engineering, University of Florida
- BS Environmental Science, Florida Institute of Technology

LICENSES

- Florida PE No. 80492
- Texas PE No. 158799

PROFESSIONAL AFFILIATIONS

- American Society of Civil Engineers
- Western Dredging Association
- Permanent International Association of Navigation Congresses

Drew has over 15 years of experience as a senior coastal and navigation engineer, specializing in planning, engineering analysis, and design of projects across the Southeast United States, the Caribbean, and South America. He has contributed to federal and local initiatives, focusing on navigation projects and coastal storm risk management studies. As a former USACE professional with experience in the Jacksonville District and government research labs such as the Naval Research Laboratory and the USACE Engineer Research and Development Center, Drew combines research and project execution to deliver exceptional solutions in coastal and navigation engineering. His career has honed his ability to implement innovative, sustainable strategies for dynamic coastal environments, designing resilient infrastructure to safeguard communities and ecosystems.

Drew's skills include navigation design, ship simulation, coastal structure design, beach nourishment, flood risk assessments, sea level rise studies, and dredging. He develops numerical models to assess hydrodynamics, sediment transport, and water quality, ensuring optimal solutions for coastal challenges.

RELEVANT PROJECT EXPERIENCE

FDOT Bay County CR2321 PD&E Bridge Hydraulics Report, Bay County, Florida. Sr. Coastal Engineer responsible for PD&E services for County Road 2321 from State Road 77 to State Road 75. A comprehensive Bridge Hydraulics Report is being developed to evaluate existing conditions and future improvements, including potential bridge replacement or widening. Key components include synthesizing watershed data, topography, and bathymetry; conducting hydrologic/hydraulic modeling (DHI MIKE 21) for riverine and hurricane, and storm surge scenarios with sea-level rise; assessing bridge conditions and scour vulnerability per FDOT/FHWA standards; analyzing wave loading impacts on substructures and super structures; comparing design alternatives for hydraulic/environmental compliance; and providing recommendations for drift clearance, debris mitigation, and countermeasures. Deliverables include modeling results, field reviews, and documentation to support permitting and stakeholder coordination.

Miami Harbor Navigation Improvements, USACE, Miami, Florida. Served as the coastal engineer examining navigation improvements, including widening the federal channel. Addressed environmental concerns by modeling indirect impacts from dredging using Delft3D, simulating dredge plume dispersal. Results aided in alternative screening, developing management strategies, and beneficial use alternatives. Additionally, performed ship simulation studies to develop channel improvements.*

Southeast Florida Sediment Morphodynamics Study, USACE, Southeast, Florida. Served as the engineering technical lead on a Regional Sediment Management study evaluating sediment movement along the Southeast Florida coast. This multi-pronged study involved metocean observations, sediment tracers, and numerical modeling across three distinct areas: Lake Worth Inlet, addressing chronic shoaling; Port Everglades, focusing on upcoming dredging and sedimentation concerns; and Miami Dade County,

dealing with limited sand resources and recurring beach nourishment needs. Developed revised sediment budgets for the coast, soon to be published in the Journal of Coastal Research. Collaborated with contractors to conceptualize hydrodynamics and sediment transport based on metocean observations and sediment tracers.*

Miami-Dade County Shore Protection Project, USACE, Miami-Dade County, Florida. Coastal engineer for federal Miami Dade County beaches, assisted in the design of multiple truck haul beach nourishment projects. Conducted feasibility analysis using the cross shore change model CSHORE and the planning model Beach-fx as part of the Miami Dade County Feasibility study. Categorized sediment movement throughout the county and recommended future nourishment plans based on the study’s findings.*

Pinellas County Shore Protection Project, USACE, Pinellas County, Florida. Coastal engineer responsible for the design of the 2017 Pinellas County Shore Protection project. Conducted annual monitoring to assess project performance and document shoreline changes in the county*

Herbert Hoover Dike (HHD) Hurricane Preparedness, USACE, Okeechobee, Florida. Collaborated with the National Weather Service and local emergency management officials to develop a standard operating procedure (SOP) for evaluating potential impacts of storm surge and wave effects on Herbert Hoover Dike and surrounding communities. Evaluated modeling, runup, and overtopping estimates to develop risk assessments for each segment of the dike. Conducted annual training sessions with NWS and emergency management officials to ensure SOP proficiency, which was put into practice during Hurricanes Matthew, Irma, and Dorian. Developed a Delft3D storm surge model for Lake Okeechobee.*

Tampa Harbor Feasibility Study, USACE, Tampa, Florida. Served as the coastal engineer on the study, which aimed to reduce marine transportation costs and operational inefficiencies for ships and improve navigation efficiency within the federal channel. Evaluated coastal engineering activities such as potential salinity and water quality changes, sea level change impacts, ship wake impacts, shoaling changes, and storm surge variations. Worked with the team to explore beneficial use opportunities for the disposal of large quantities of sediment and collaborated on ship simulation to aid navigation design.*

Miami-Dade County Shore Protection Project, USACE, Miami-Dade County, Florida. Coastal engineer for federal Miami Dade County beaches, assisted in the design of multiple truck haul beach nourishment projects. Conducted feasibility analysis using the cross shore change model CSHORE and the planning model Beach-fx as part of the Miami Dade County Feasibility study. Categorized sediment movement throughout the county and recommended future nourishment plans based on the study’s findings.*

Pinellas County Shore Protection Project, USACE, Pinellas County, Florida. Coastal engineer responsible for the design of the 2017 Pinellas County Shore Protection project. Conducted annual monitoring to assess project performance and document shoreline changes in the county*

Brevard County Shore Protection Project, USACE, Brevard County, Florida. Coastal engineer responsible for the design of multiple nourishment projects at Brevard North, Mid, and South Reach, as well as the Canaveral Sand Bypass. Utilized a sand stockpiling methodology in the combined Mid and South Reach nourishment for efficiency, as sand could not be hydraulically pumped onto Mid-Reach. Analyzed cost savings by combining nourishment cycles of Canaveral Sand Bypass with Brevard North Reach projects.*

Navarre Beach Restoration, Santa Rosa County, Florida. Served as project manager, coastal engineer, and resident engineer on the 2016 Navarre Beach Restoration Project. This \$15 million project placed approximately 1.2 million cubic yards of sand along Navarre Beach. Optimized the original design to ensure a successful beach restoration. Collaborated with the contractor during construction to address in-field issues and perform quality control. Reviewed and approved contractor payment claims and completion surveys. Conducted post-construction analysis and detailed the completed project.*



YEARS OF EXPERIENCE

- 12

TELEPHONE NUMBER

- 305-741-6155

EDUCATION

- MSc Ocean Engineering, University of Miami
- BSc Civil Engineering, University of Miami

LICENSES

- Florida PE No. 90872

CERTIFICATIONS

- Waterfront Edge Design Guidelines Associate
- Envision Sustainability Professional
- Federal Aviation Administration Remote Pilot
- Certified Flood Plain Manager

PROFESSIONAL AFFILIATIONS

- American Society of Civil Engineers

Leonard is a coastal engineer with experience in the planning, engineering analysis, and design of coastal and waterfront development projects in Florida, the Caribbean, and Central America. His experience, ranging from project inception to construction, includes field investigations, structural design, inspections, feasibility studies, cost estimates, comprehensive coastal engineering analyses, numerical modeling, structural design, construction drawings, technical specifications, and construction management. He has also conducted beach nourishment projects and developed numerical models for coastal processes and floodplain modification studies throughout Florida.

RELEVANT PROJECT EXPERIENCE

SE 7th Street Bridge Replacement Over Rio Cordova, Fort Lauderdale, Florida. Senior Coastal Engineer responsible for conducting hydraulic and scour analysis to assess bridge vulnerability to coastal hydrodynamic conditions. Utilized results from a 2D hydrodynamic model to evaluate storm surge, wave, and current forces, and analyzed historical hurricane data, FEMA flood maps, and sea level rise trends. Assessed site characteristics, including tidal fluctuations and storm surge propagation through the ICW and canals, and developed scour depth predictions. Calculated hydrodynamic loads on the bridge from waves and currents. Recommended mitigation measures following FDOT guidelines.

FDOT Bay County CR2321 PD&E Bridge Hydraulics Report, Bay County, Florida. Senior project engineer responsible for PD&E services for County Road 2321 from State Road 77 to State Road 75. A comprehensive Bridge Hydraulics Report is being developed to evaluate existing conditions and future improvements, including potential bridge replacement or widening. Key components include synthesizing watershed data, topography, and bathymetry; conducting hydrologic/hydraulic modeling (DHI MIKE 21) for riverine and hurricane, and storm surge scenarios with sea-level rise; assessing bridge conditions and scour vulnerability per FDOT/FHWA standards; analyzing wave loading impacts on substructures and super structures; comparing design alternatives for hydraulic/environmental compliance; and providing recommendations for drift clearance, debris mitigation, and countermeasures. Deliverables include modeling results, field reviews, and documentation to support permitting and stakeholder coordination.

Portosueno Park Living Shoreline, Bradenton, Florida. Providing marine engineering and environmental services for the park's waterfront to enhance conceptual designs with features such as a living shoreline, fishing piers, and a manatee viewing platform. Efforts will include public outreach, pre-application meetings with the environmental permitting agencies, and permit processing.

Town of Longboat Key Seawall, Longboat Key, Florida. Pilot initiative in collaboration with the Sarasota Bay Estuary Program (SBEP). The project involves installing approximately 290 linear feet of 3D-printed reef tiles along the existing bulkhead at Bayfront Park in Longboat Key, Florida. The scope includes a detailed field assessment of the seawall's structural integrity,

a topographic and bathymetric survey, and the development of engineering design documents including structural sections and material specifications.

Mid Beach Park Seawall Replacement and Living Shoreline, Miami Beach, Florida. Engineer of record for the design of a 590 LF replacement of a seawall with the implementation of a living shoreline to protect the uplands against tidal flooding, enhance stabilization, and bolster waterfront resiliency. Living shoreline planters will be enhance the entire project area, enclosed by a riprap revetment and a steel sheet pile toe wall. Project includes coastal engineering, living shoreline design, benthic survey, permitting due diligence, seawall design, grant research, and boardwalk design.

West 40th Street Seawall Replacement and Living Shoreline, Miami Beach, Florida. Engineer of record for the design of a 256 LF replacement of a seawall with the implementation of a living shoreline to protect the uplands against tidal flooding, enhance stabilization, and bolster waterfront resiliency. Two fishing piers and a floating kayak launch will be installed as well as ecological enhancement will be achieved through the installation of mangrove planters. Project includes coastal engineering, living shoreline design, benthic survey, permitting due diligence, seawall design, grant research and boardwalk design.

Manatee County Vulnerability Assessment & Adaptation Plan, Manatee County, Florida. Senior coastal engineer for Manatee County's Vulnerability Assessment and Adaptation Plan, funded by the FDEP Resilient Florida Grant Program. Conducted detailed analyses of sea level rise, King Tides, storm surge scenarios, and 100-year and 500-year rainfall to assess present and future flood risks. Utilized numerical models for analysis of compound flood scenarios (rainfall, king tides, and storm surge), and assisted in creating a comprehensive critical asset inventory in a GIS geodatabase per Section 380.093 F.S.

Bal Harbour Village Vulnerability Assessment & Coastal Resilience Plan, Bal Harbour Village, Florida. Senior coastal engineer for town-wide vulnerability assessment under the Resilient Florida grant program. Developed a comprehensive asset inventory using statewide, local, and county data, cataloged in a GIS geodatabase per Section 380.093 F.S. Reviewed coastal and sea level rise analysis using FEMA storm surge and NOAA projections for 2040 and 2070. Conducted critical asset exposure and sensitivity analysis for 8 flood scenarios, producing flood inundation maps and asset-specific flood depth tables. Identified focus areas for future planning and budgeting. Participated with team in public workshops, outreach and GIS Story Map development to gather resident feedback.

Beach View Park Seawall Replacement and Living Shoreline, Miami Beach, Florida. Engineer of record for the design of a 300 LF replacement of a seawall with the implementation of a living shoreline to protect the uplands against tidal flooding, enhance stabilization, and bolster waterfront resiliency. Enhancing the recreational aspect, a boardwalk will be along the central shoreline, seamlessly connecting to the uplands through timber walkways that follow the curvature of the mangrove planters. Project includes coastal engineering, living shoreline design, benthic survey, permitting due diligence, seawall design, and grant research.

Adaptive Redesign of Jose Marti Park, City of Miami, Florida. Serving as a model for resilient waterfront parks that can adapt to current and future flood rises associated with climate change and sea level rise, this project explores ways to minimize tidal flood impacts and enhance waterfront access to residents. Leonard was responsible for the inundation modeling, and waterfront engineering design, including living shorelines, while the Cummins Cederberg team also led the environmental permitting, coordination with FIND, and grant management.

Tidal Flood Mitigation and Shoreline Protection, Hollywood, Florida. The project consists of evaluating 22 areas, covering over 10,000 LF of shoreline, along the areas known as North and South Lake in the City of Hollywood. Each area will have specific solutions to address seasonal flooding challenges, which may entail the design and implementation of varied shoreline protection infrastructure such as of living shorelines, rock revetments, and bulkheads, to meet the requirements of the new Broward County ordinance. Leonard analyzed tide gauge data to determine tidal prisms, lag time, and water elevation differences. The analysis from this data will be used in the design of the flood mitigation structures.



YEARS OF EXPERIENCE

- 22

TELEPHONE NUMBER

- 561-210-9330

EDUCATION

- MSc Ocean and Resources Engineering, University of Hawaii
- BSc Civil Engineering, Pennsylvania State University

LICENSES

- Florida PE No. 72876

CERTIFICATIONS

- Certified Floodplain Manager
- Certified Video Ray ROV Operator
- Surface Supplied Air Underwater Inspection Certification
- Advanced/Rescue/Nitrox SCUBA

PROFESSIONAL AFFILIATIONS

- Association of State Floodplain Managers, Member
- Florida Floodplain Managers Association, Member

Jordan is a marine and coastal engineer with more than 22 years of technical and project management experience, including coastal engineering, beach nourishment design, waterfront structure design, FEMA coastal floodplain mapping, shoreline restoration/stabilization design, numerical modeling, and marina design. His field experience includes underwater waterfront facility inspections, GIS/GPS data collection and analysis, surveying, and construction administration. Jordan is a registered Professional Engineer in the State of Florida, Alabama, and Texas, as well as a Certified Floodplain Manager.

RELEVANT PROJECT EXPERIENCE

City of West Palm Beach Pilot Seawall Elevation Project, West Palm Beach, Florida. The Pilot Project includes replacement of ~1,700LF of seawall at a higher elevation and adding living shoreline components to support the City's efforts to provide additional protection to upland infrastructure to reduce flooding from sea level rise, storm surge, and wave overtopping. Project manager and EOR responsible for public outreach, concept design, field investigations, engineering design, bidding and construction support services.

Citywide Seawall Assessment, City of Pompano Beach, Florida. Project Manager responsible for leading the engineering condition assessment of 15 City-owned seawalls. The assessment evaluated current condition, estimated remaining design life, and provided preliminary repair and replacement costs to ensure compliance with §151.05 Tidal Flood Barriers. Reconnaissance surveys and engineering dive inspections were completed for approximately 2,900 linear feet of seawalls. LiDAR data was processed to develop a Digital Elevation Map. An inspection report detailed observations, service life estimates, and prioritized recommendations for rehabilitation or replacement, with findings incorporated into the City's Capital Improvement Plan.

Fort Zachary Taylor Historic State Park Beach Renourishment, Key West, Florida. Served as Engineer of Record for a coastal restoration initiative involving the renourishment of approximately 1,400 linear feet of shoreline. Led field investigations and coastal engineering analysis to guide beach design and long-term resilience strategies. Managed environmental permitting, sand analysis, and construction documentation, while providing support during bidding and key construction phases. Collaborated with regulatory agencies to incorporate engineering recommendations into broader coastal management planning.

Curry Hammock Park Beach Restoration, Marathon, Florida. Served as Engineer of Record for a coastal restoration effort involving the renourishment of approximately 1,300 linear feet of shoreline. Led field investigations and coordinated with regulatory agencies to ensure compliance with environmental standards and biological opinions. Finalized engineering designs and construction documents for beach nourishment and headland restoration, and provided support throughout bidding, construction, and project closeout. Conducted site visits and reviewed contractor data to ensure adherence to permit conditions and project specifications.

Sawfish Bay Park Shoreline Improvement, Jupiter, Florida. Providing coastal engineering and environmental permitting services to restore the historic marina basin and protect the shoreline at Sawfish Bay Park. The project includes an engineering inspection of approximately 1,000 linear feet of existing vinyl bulkhead, a flushing analysis study, and a marine resources survey. Coordinated with the Town of Jupiter and regulatory agencies to design sections of living shoreline including mangrove planters, rock revetments, and reef ball units in configurations that will accomplish the Town of Jupiter's goals of increasing coastal resiliency and enhancing natural habitat, while minimizing design and permitting costs. Project manager responsible for overseeing all coastal engineering, environmental permitting, bidding, and construction administration.

Currie Park Redevelopment, West Palm Beach, Florida. Jordon is the EOR for all the waterfront design for the Currie Park Redevelopment project. Project includes marine surveying, engineering design, environmental permitting, and grant implementation support for the waterfront work including rock revetment, living shoreline, boat ramp improvements, kayak launches, new over water piers and boardwalks, and "social" steps down to the water.

Riverside Village Mobile Home Park Shoreline Improvements, Jensen Beach, Florida. Provided structural/coastal engineering design for 480 feet of shoreline stabilization along an eroding shoreline. Project included rock revetment, kayak ramp, bulkhead, overwater viewing platform, and landscape restoration. Services performed included wave load analyses, scour analyses, structural design of composite bulkhead and timber viewing platform, and construction administration. Construction is currently underway. Owner: Sun Communities, Inc., Client: Atwell, LLC. (January 2021 – Present).

Tidal Flood Mitigation and Shoreline Protection, Hollywood, Florida. The project consists of evaluating 22 areas, covering over 10,000 LF of shoreline, along the areas known as North and South Lake in the City of Hollywood. Each area will have specific solutions to address seasonal flooding challenges, which may entail the design and implementation of varied shoreline protection infrastructure such as of living shorelines, rock revetments, and bulkheads, to meet the requirements of the new Broward County ordinance. Jordon has performed upland and in-water engineering site inspections along City owned shoreline to evaluate conditions of existing seawalls and revetments. He has also analyzed tide gauge data to determine tidal prisms, lag time, and water elevation differences. The analysis from this data will be used in the design of the flood mitigation structures.

Kristi House Shoreline Stabilization, Miami, Florida. Provided structural/coastal engineering design for 525 feet of shoreline stabilization along an eroded portion of Wagner Creek. The project included a steel sheet pile bulkhead and armor stones with transition grading to the existing upland parking lot. Services performed included scour analyses, wave load analyses, and structure design. The project is currently in environmental permitting with construction expected to commence in 2021. Owner/Client: Miami-Dade County (Oct. 2019 - Present).

FEMA Coordination, City of Deerfield Beach, Florida. Provided coastal engineering services to support a FEMA storm damage claim from Hurricane Matthew. Prepared and submitted a Storm Impact Assessment Report to FEMA for funding assistance which included a review of pre-and post-storm surveys, volume calculations, and preparation of cost estimates for the project. Processing of the FEMA damage claim is ongoing. Owner/Client: City of Deerfield Beach, (Oct 2016 – Mar 2018).*

Southern Palm Beach Island Comprehensive Shoreline Stabilization, Town of Palm Beach, Florida. Provided coastal engineering support to respond to public comments associated with the USACE Environmental Impact Statement review process. Technical responses were prepared based on a review of the basis of design and technical documentation used to prepare the draft and final EIS documents. Owner/Client: Town of Palm Beach, (Aug 2016 – Jan 2018).*

*Services provided with prior firm



YEARS OF EXPERIENCE

- 23

TELEPHONE NUMBER

- 727-380-1644

EDUCATION

- MSc Civil Engineering, Georgia Institute of Technology
- BSc Civil Engineering, University of Florida
- BSc Biology, Gettysburg College

LICENSES

- Florida PE No. 74043
- Delaware PE No. 22716

PROFESSIONAL AFFILIATIONS

- American Society of Civil Engineers
- Propeller Club
- Member of Pinellas County boating community

Geoff has over 23 years of experience in a wide range marine engineering projects including deepwater port facilities, marinas, coastal structures, offshore oil and gas structures, and shipbuilding across the US, Caribbean, Gulf of Mexico, and overseas. His engineering expertise includes marine structural analysis and design, engineering feasibility studies, structural inspections, structural forensics, marine repair and rehabilitation design, dredging analysis, as well as wind and wave hindcasting.

His expertise includes engineering design, inspections, and damage assessments. He manages all phases of coastal and engineering projects, including client outreach, planning, contract administration, bid preparation, field work, engineering analysis and design, coordination of marine and upland engineering efforts construction administration, and project closeout. Geoff has inspected and designed several existing and new marina facilities, as well as deep water wharves, piers, bulkheads, marine railways, jetties, breakwaters, and ancillary marine structures.

RELEVANT PROJECT EXPERIENCE

Bayfront Park Bulkhead Rehabilitation, Sarasota, Florida. Providing marine engineering, environmental services, and full-service grant management to support the design, permitting, and replacement of approximately 1,500 linear feet of deteriorated bulkhead. Responsibilities include engineering inspection and assessment of the existing bulkhead, as well as serving as the engineer of record for the bulkhead redesign, which involves raising the cap to accommodate projected sea level rise.

Portosueno Park Living Shoreline, Bradenton, Florida. Engineer of record responsible for bulkhead inspections and overseeing the marine engineering for the park's waterfront. These services aim to enhance conceptual designs with features such as a living shoreline, fishing piers, and a manatee viewing platform.

Town of Longboat Key Municipal Dock & Public Pier Replacement, Longboat Key, Florida. Engineer of record overseeing the design and construction administration for the in-kind replacement of municipal dock and public pier structures, including field investigations, design, bid support, and construction administration.

Bradenton Ferry Pier Analysis, Bradenton, Florida. Project Manager for the Bradenton Riverwalk Ferry Pier analysis, leading a comprehensive marine engineering inspection and structural evaluation to determine the pier's suitability for proposed ferry operations and overnight mooring. Directed field investigations, pile integrity testing, and structural capacity analysis, delivering actionable recommendations and cost estimates for rehabilitation or retrofit to accommodate the new 'Manatee Belle' ferry vessel.

Citywide Strategic Seawall Capital Improvement Plan St. Petersburg, Florida. Providing marine engineering services, engineering inspections, and condition ratings to assess and classify the condition of approximately 72,000

linear feet (13.6 miles) of municipal seawalls. This includes considering the impact of rising sea levels and increased severe storm events, understanding the city's vision for seawalls by neighborhood, and prioritizing necessary repairs and/or replacements.

Las Olas Marina, Fort Lauderdale, Florida. Engineer of record for the permitting and engineering design of a 88 slip marina holding vessels up to 250 ft in Fort Lauderdale. Coordinated with USACE, FDEP, and the City of Ft. Lauderdale for the design and permitting of new battered pile supported steel sheet pile bulkheads, mooring and guide piles for floating dock system, and basin dredging. Geo5, SPW911, and CWALSHT softwares were used for the bulkhead design. Allpile software was used for the mooring and guide pile design. Value engineered all elements and worked with contractor to lower costs in extremely volatile construction materials market. Deliverables to the client including permit and construction drawing sets.

Spray Miser Port Tampa, Tampa, Florida. Engineer of record for the engineering design of the replacement of 75 ft. of failed steel pile bulkhead and assisting with permits and contractor bid support.

International Ship Repair Tampa, Tampa, Florida. Engineer of record for the engineering design of the replacement of ~200 ft of failed steel sheet pile bulkhead and assisting with permits and contractor bid support.

Biscayne Point, Miami Beach, Florida. Providing marine engineering design and environmental permitting for the maintenance dredging of ~7,650 LF of residential canal systems. Geoff is the engineer of record for the dredging design and permitting for canals in City of Miami Beach.

Fisher Island Club Residential Marina, Miami, Florida. Engineering analysis of failed concrete panel bulkhead and design of replacement steel sheet pile bulkhead. Coordination of bulkhead replacement with on going marina replacement construction.

Fisher Island Shoreline Assessment, Miami, Florida. Management of inspection of 11,000 LF of shoreline inspection at Fisher Island. The scope included analysis of existing shoreline conditions, recommendations for repair/replacement, as well as cost analyses.

Marina Jack Due Diligence Inspection, Sarasota, Florida. Inspection and condition assessment of 280-slip marina including upland, bulkhead, docks, and utilities.

Jaycee Park Improvements, Cape Coral, Florida. Designed (2) transient 12-slip timber docks with kayak floats as a part of the park improvements project. The scope included field investigations, wind and wave hindcasting, permit coordination, layout, and structural design of fixed timber pier structures as well as guide and mooring piles.

Bella Vista Park Bulkhead, Sunny Isles Beach, Florida. Design of new 130 linear foot bulkhead to stabilize the existing shoreline as part of a park improvement project. The scope included field investigations, permit coordination, layout, and structural design of a concrete panel bulkhead, as well as modifications to existing fixed timber docks.

Island Crowne Condominium Seawall, Daytona Beach, Florida. Design of steel sheet pile seawall to replace existing storm damaged reinforced concrete seawall. The scope included damage assessment, emergency permit coordination, structural design of new seawall, contractor bid assistance, construction administration, and construction engineering inspections.

*Services provided with prior firm



YEARS OF EXPERIENCE

- 15

TELEPHONE NUMBER

- 305-741-6155

EDUCATION

- BSc Civil Engineering, University of Miami
- BSc Architectural Engineering, University of Miami

LICENSES

- Florida PE No. 77704
- Project Management Professional

PROFESSIONAL AFFILIATIONS

- Project Management Institute
- American Society of Civil Engineers
- Construction Association of South Florida
- Miami Technology Group

Rasheed is responsible for construction administration support including design and permitting supervision, budgetary review, production coordination and QA/QC management for all marine and coastal projects. He has over 15 years of experience in construction project management in South Florida. His experience encompasses pre-construction project award, throughout final close out processes.

Rasheed is formally educated in Civil & Architectural Engineering and a registered professional Engineer in the State of Florida. Over his career, Rasheed has been involved with the completion of over 70 construction projects, both marine and land development projects, within the Southeastern U.S.

RELEVANT PROJECT EXPERIENCE

Westlake Park Segment 4, Hollywood, Florida. Providing marine engineering and overseeing construction administration services, this project is part of Broward County Parks and Recreation's initiative to enhance shoreline features and restore the mangrove habitat. Led the design team for installation of 10,000 LF of shoreline crib-breakwater system, performed site inspections, and led marine team for construction management services.

Boca Chica Naval Air Station Boat Ramp Replacement, Key West, Florida. Providing marine engineering and environmental consulting services to replace the existing boat ramp. Led the design team for replacement of 2,300 SF boat ramp and the addition of a floating dock.

Jungle Island Shoreline Stabilization, Miami Beach, Florida. Responsible for construction coordination and site meetings/inspections to complete stabilization for 1,000 feet shoreline. Involved in the design development and planning for future phases of shoreline improvements.

Arlen House, Sunny Isles, Florida. Design of new seawall and rock revetment for over 475 feet of deteriorating seawall replacement. Responsible for bid solicitation, contractor award, review of contractor payment applications, site observations with reports, pile driving logs, RFIs, and inspections.

Eden Isles, Sunny Isles, Florida. Design and new construction of fixed docks and seawalls for 2 condominium buildings. Responsible for bid solicitation, contractor award, review of contractor payment applications, site observations with reports, pile driving logs, RFI's, and inspections.

5th Street Marina, Miami, Florida. Construction manager for stabilization of shoreline and construction of timber platform adjacent to the mooring/breasting dolphins along the Miami River.

2222-2260 NW N River Drive, Miami Beach, Florida. Seawall and dock rehabilitation project. Responsible for bid solicitation, contractor award, review of contractor payment applications, site observations with reports, pile driving logs, RFI's, and inspections.

Sunset Harbour Yacht Club, Miami Beach, Florida. Repairs of concrete slabs, caps and piles for 125 slip yacht marinas. Provided construction administration services to review in accordance with construction documents and environmental permits, specifically the replacement of timber marginal dock and concrete pile/panel repair.

Paraiso Bay Complex, Miami, Florida. Project manager responsible for design optimization, negotiations, production monitoring, QA/QC, and client communication. Daily coordination with client teams and internal teams to deliver foundation products several weeks ahead of schedule. Project central point of contact for daily onsite crew, project vendors, and client representatives. Construction of several buildings during the master project schedule including Gran Paraiso Tower 2 and Parking, Gran Paraiso Parking Garage and Paraiso Bayviews. Project included steel sheet pile installation for excavation depths up to 18-ft and auger-cast pile installation up to 107-ft deep. Project required extreme organization and effective communication as the separate buildings were individual projects operating simultaneously with independent project teams.

Four Seasons Hotel at The Surf Club, Surfside, Florida. Project manager responsible for design optimization, negotiations, production monitoring, QA/QC, and client communication. Project central point of contact for daily onsite crew, project vendors, and client representatives. Construction of (2) new condominiums and (1) parking garage. Project included auger-cast pile installation up to 131-ft deep with work around an existing historical building to be preserved and incorporated through the new construction. The two condos and parking garage were built with separate client teams requiring extra coordination with internal teams to deliver the products in a productive and safe manner.

Miami Frost Science Museum (MSM), Miami, Florida. Project manager responsible for design optimization, negotiations, production monitoring, QA/QC, and client communication. Project central point of contact for daily onsite crew, project vendors, and client representatives. Was responsible for second phase of work to connect MSM to the Miami Art Museum.

Palm Beach Solid Waste Authority, Palm Beach, Florida. Project manager responsible for design optimization, negotiations, production monitoring, QA/QC, and client communication. Project central point of contact for daily onsite crew, project vendors, and client representatives. Deep foundation installation for (5) different buildings to provide a completely new Biomass Power Facility in Palm Beach. Project involved multiple installation crews working simultaneously which required extensive coordination with our client, suppliers and internal teams to deliver the project.

MasTec Headquarters, Coral Gables, Florida. Site manager responsible for daily management activities including production monitoring, coordination with building managers, architects, EOR, subcontractor supervision, weekly progress reports and tracking, costs collections and evaluations. Over 35,000 SF interior renovation project with (3) floors of corporate office space and (1) employee café/ dining floor. This project required delicate coordination with the property management team and the client with other floors being active during construction. Heightened attention to detail to coordinate fabrication and installation of custom-made finishes and company signature features.

Oliver Peoples, Miami, Florida. Site manager responsible for daily management activities including production monitoring, coordination with building managers, architects, EOR, subcontractor supervision, weekly progress reports and tracking, costs collections and evaluations. Work directly with Owner Representation daily to aggressively push project schedule and minimize punch list items. Complete interior renovation of 1,500 SF tenant space for a pop-up shop organized by Oliver Peoples luxury sunglasses. Project was completed in a compressed schedule of 3-weeks to accommodate product inventory delivery schedule, store retail set-up and grand opening.

AMICON Construction, Miami, Florida. Site manager for various development projects including the reconstruction of MasTec HQ in Coral Gables. Daily management activities also included production monitoring, coordination with building managers, architects, EOR, subcontractor supervision, weekly progress reports and tracking, costs collections and evaluations. *

* Services provided with prior firm



YEARS OF EXPERIENCE

- 6

TELEPHONE NUMBER

- 727-380-1644

EDUCATION

- MPS Tropical Marine Ecosystem Management, Rosenstiel School for Marine and Atmospheric Science, University of Miami
- BS Biology, Minor Marine Science, Wittenberg University

CERTIFICATIONS

- Waterfront Edge Design Guidelines (WEDG) Associate
- PADI Rescue Diver
- Nitrox Diver
- DAN Oxygen First Aid for Scuba Diving Injuries
- American Academy of Underwater Sciences (AAUS) Scientific Diver Certified, University of Miami 2017, AAUS Compliant
- Motorboat Operator Certification (MOCC)
- SFAEP Wetland Delineation Training

PROFESSIONAL AFFILIATIONS

- America Academy of Underwater Sciences (AAUS), Individual Member
- Florida Association of Environmental Professionals (FAEP)

Rebecah is a senior environmental scientist who has expertise in marine biology and environmental permitting. She is responsible for performing aquatic and terrestrial biological assessments, writing technical and analytical reports, and assisting with local, state, and federal environmental permitting. Her professional expertise focuses on local, FDEP, SFWMD, and USACE regulatory requirements.

Rebecah specializes in projects focusing on environmental compliance, benthic marine resource mapping and monitoring, habitat restoration and mitigation, coral relocation, and scientific report writing. She is an experienced diver and knowledgeable in Florida and Caribbean species identification. She plays a pivotal role in developing strategies for environmental conservation and sustainability. Additionally, she actively engages in community outreach and education to promote awareness of marine and environmental issues.

RELEVANT PROJECT EXPERIENCE

Sunken Island Benthic Resource Survey, Tampa Harbor, Florida. Sr. Marine Scientist responsible for leading the 2023 preliminary benthic survey and 2024 pre-construction benthic survey of the submerged lands on the south side of Sunken Island and a portion of Bird Island (approx. 135 acres), in support of the U.S. Army Corps of Engineers' proposed dredged material placement area within the Sunken Island beneficial use area. The purpose of the 2024 survey was to update the 2023 survey by delineating any submerged aquatic vegetation (SAV) and produce a geo-referenced map that shows the spatial distribution of all benthic resources within the refined survey area. The field scope included delineation and geo-referenced mapping of submerged aquatic vegetation (SAV), utilizing SCUBA/snorkel surveys, Braun-Blanquet quadrat sampling, and habitat characterization. Informed by a desktop review and prior survey data, biologists executed transects, reconnaissance swims, and spot checks to assess habitat conditions and species presence. Deliverables included a benthic resources survey report with spatial data outputs to guide project planning and minimize ecological impacts.

South Maritana Living Shoreline, St. Pete Beach, Florida. Project manager responsible for leading conceptual design development, environmental permitting due diligence, pre-application meetings with regulatory agencies, and permitting for a project looking to enhance and stabilize approximately 280 linear feet of shoreline with failing seawalls along three single-family properties. The intent of design development is to provide hybrid shoreline stabilization/living shoreline options that provide enhanced resiliency and ecological function when compared to a typical seawall replacement, and can be utilized by neighboring properties with similar existing conditions. The project will need to incorporate newly passed tidal barrier flood elevation requirements that are almost 2 ft higher than existing grade.

Citywide Strategic Seawall Capital Improvement Plan, St. Petersburg, Florida. Responsible for regulatory permitting due diligence and summary of permitting requirements for potential repair/replacement options for ~72,000 LF (13.6 miles) of municipal seawalls that were assessed and

classified by condition by Cummins Cederberg engineers. This strategic seawall capital improvement plan includes considerations for rising sea level and increased severe storm events, understanding the City's vision for the seawalls by neighborhood and downtown waterfront district, development of a GIS database for the seawalls, development of a coastal design toolbox, prioritization of repairs and/or replacements based on available funding, maintenance of a project website, grant support, and making recommendations for changes to local seawall ordinances.

Jose Marti Park Waterfront Adaptation Project, Miami, Florida. The City of Miami received a FIND grant to perform a waterfront adaptation project at Jose Marti Park in order to improve the park to be more resilient to future flooding due to sea level rise. Rebecah performed a drop-camera survey within the Miami River to assess presence of submerged marine resources within the proposed project footprint. She also assisted in the complex permitting efforts by preparing application package materials for Miami-Dade County DERM, SFWMD, and the USACE. Permitting efforts consisted of formal pre-application meetings, a 1957 Butler Act Disclaimer, sovereign submerged lands lease application, adherence to the Miami-Dade County Manatee Protection Plan, a restrictive covenant, and BCC coordination. Additionally, the project became the first WEDG verified project in Florida, which Rebecah assisted in gathering necessary criteria requirements. (October 2019 – Ongoing)

Portosueno Park Living Shoreline, Bradenton, Florida. Performed a marine resources survey for the park's waterfront to inform conceptual designs of waterfront improvements to include a living shoreline, fishing piers, and a manatee viewing platform. Worked with Manatee County and the project team to implement applicable living shoreline components into project design. Efforts will include public outreach, pre-application meetings with the environmental permitting agencies, and permit processing. (August 2023 – Ongoing)

Manatee County Oyster Restoration Master Plan, Manatee County, Florida. Worked with project team to develop a master plan that outlines technically sound, consensus-based strategies, costs, and recommendations to implement successful oyster restoration in the Manatee River. Plan development includes developing goals and objectives, synthesizing available existing data relative to oyster restoration, field surveying of reference sites and potential restoration sites, compiling a permitting and restoration strategy guide with monitoring recommendations and metrics, and summarizing grant and partnership opportunities. (September 2023 – Ongoing)

The Bay Park Sarasota Benthic Survey and Habitat Mapping, Sarasota, Florida. Conducted habitat surveys, characterization and mapping of seagrass, coral, and mixed habitats within the proposed nearshore construction area of The Bay Park – Phase 1 Site Development in Sarasota, Florida. The survey was performed to characterize and map the distribution of marine resources west of the restored "ecological shoreline" and prospective upland redevelopment efforts. The survey was planned to gather baseline data prior to the proposed stormwater drainage modifications and removal of fine-grained sediment from the adjacent wetlands and anticipated construction of the Sunset Pier. Future efforts include detailed coral mapping, development of a long-term monitoring program, and potential mitigation. (May 2020 – Ongoing)

Crandon Park & Haulover Park Sea Level Rise Flooding Mitigation Studies, Miami, Florida. Managed project team to assess coastal resiliency and create a sea level rise road map and action plan. The study included compiling existing survey data, including LiDAR survey data, performing site assessments to analyze existing infrastructure and environmental conditions at the park, conducting engineering analyses on sea level rise projections and local tidal data in order to predict future water levels, performing inundation mapping using existing elevation data to gage flooding vulnerability, creating flood mitigation concepts and recommendations, and providing preliminary costs estimates of recommended improvements. A final sea level rise flooding mitigation study report was provided to Miami-Dade County Parks, Recreation, and Open Spaces for their internal use and future infrastructure implementation schedule planning. Proposed improvements recommended by 2040, totaling over \$190M between the two parks, were included in the report. (June 2019 – January 2020)



YEARS OF EXPERIENCE

- 30

TELEPHONE NUMBER

- 954-880-1646

EDUCATION

- Dual MSc Marine Biology and Coastal Zone Management, Nova Southeastern University (Pending Capstone Review)
- BSc Agricultural Operations Management, University of Florida

CERTIFICATIONS

- Advanced Open Water Scuba
- DAN (First Aid, CPR, AED & Oxygen)
- U.S. Power Squadron Safe Boat Operation Certification

PROFESSIONAL AFFILIATIONS

- Broward County Marine Advisory Committee, Appointed Member
- Pompano Beach Marine Advisory Board, Appointed Member, Vice-Chair
- Pompano Beach Zoning Board of Appeals, Appointed Member
- South Florida Association of Environmental Professionals
- Treasure Coast Florida Association of Environmental Professionals

Penny has 30 years of experience in the fields of environmental monitoring, assessment, planning and regulatory permitting to support the firms' commitment to sustainability. She applies this project management experience to ensure timeliness and accuracy of deliverables for projects being managed. Penny can quickly evaluate complex scientific information and communicate it to lay leaders for decision-making purposes. She has a proven track record negotiating complex technical issues, particularly regarding aquatic and coastal ecosystems. The first half of Penny's career was in the public sector administering federal, state, and county environmental regulatory programs. This government expertise has been paramount to her success in the more recent half of her career assisting public and private clients in the private sector.

RELEVANT PROJECT EXPERIENCE

Tidal Flood Mitigation & Shoreline Protection, Hollywood, Florida. Project manager for tidal flood mitigation across 22 city owned shoreline segments inclusive of parks, a marina, right of way shorelines, and segments of roadway. Engineering assessments, environmental surveys, and concept development have been performed. An additional seagrass mapping survey was conducted prior to permit application in the 17 project sites with proposed in-water work in 2022. Mapping was conducted for three species of seagrass (*Halophila johnsonii*, *Halodule decipiens* and *Halodule wrightii*). A basemap and report were prepared for both years. The remaining scope of services includes above and below water engineering assessments, coastal and marine engineering, mangrove surveys, environmental permitting, bidding assistance, and construction administration.

Citywide Living Shoreline Site Viability Assessment, Miami Beach, Florida. Project Manager for the assessment 10 city owned sites and ranked the top 3 to develop designs for living shorelines. Responsibilities included managing the analysis of 118 City-owned shoreline segments to select locations for living shorelines to increase the stabilization and resiliency of waterfront property and increase community engagement with the waterfront. Ten City-owned shoreline segments were identified for field investigations to assess viability for development of living shorelines. Deliverables involved marine resource survey report, grant funding evaluation, and site suitability report. Conceptual designs were developed for the top three ranked sites, and findings were presented to the City

The Bay Park Redevelopment, Sarasota Florida. Senior Director. Responsibilities include overseeing environmental permitting, permit compliance, biological assessments and monitoring, and grant funding for 53-acre waterfront park, including monitoring 43-acres of submerged land in Sarasota Bay. Project includes \$65M in improvements to remove extensive impervious area through stormwater retrofits, resilient living shorelines, water quality improvements, habitat restoration, provision of public access, and educational components. Environmental permitting through SWFWMD and USACE for various Project elements including public fishing pier, mangrove

bayou dredging, and resilient shoreline improvements. Supporting municipal meetings for project approvals; secured and managing \$19M in grant funding for various project elements. Deliverables include Marine Resource Survey Reports, Environmental Permits, and Grant Compliance deliverables.

One Brickell Shoreline Stabilization, Miami, Florida. Senior director providing strategic oversight and direction for shoreline stabilization and grandfathering of historical vessel use. Historical vessel use must be documented to authorize mooring on sovereign submerged lands within the Biscayne Bay Aquatic Preserve and to grandfather use pursuant to the Manatee Protection Plan. Existing shoreline stabilization includes a seawall with two sections of riprap revetment. Historical research involved documenting historical use by vessels and documenting that the riprap revetments were cut from uplands and are therefore not part of the Biscayne Bay Aquatic Preserve to allow for new bulkhead alignment at the toe of the revetments, in line with the adjacent bulkhead segments, rather than at Mean High Water.

River Landing Docking Facility and Shoreline Stabilization, Miami, Florida. Senior director managing design and permitting of docking facility and shoreline stabilization at mixed use upland development and park site on privately owned and Miami-Dade County owned parcels. Project includes slips for powerboats and non-motorized vessels, as limited by the Manatee Protection Plan. Shoreline stabilization includes a seawall faced with riprap, as well as a mangrove planter. Phased project requires permitting from Miami-Dade County DERM, FDEP, and USACE.

The Bay Park, Sarasota, Florida. The Bay is an environmental, resilient revitalization of 52 acre public waterfront park in downtown Sarasota. Senior director overseeing all aspects of project including biological assessments and monitoring, grant funding, and environmental permitting. Provided consulting support to project team towards modification of City zoning code to allow for public access dock. Managing annual benthic monitoring surveys including 43 acres of submerged lands within Sarasota Bay offshore of Centennial Park and the Van Wezel Properties and mangrove assessments. Project is proceeding in phases including sunset pier (in permitting), ADA accessible kayak dock (completed), mangrove windowing and exotic vegetation removal (completed), dredging of mangrove bayou (completed), centennial canal dredging, shoreline stabilization and transient docks (in permitting), resilient shoreline design (in design), and Hog Creek restoration (in design). Permits are being processed in phases through the SWFWMD and USACE. Secured \$11.6M in grant funding to date, with additional grant applications in process, to fund resilient project element, stormwater improvements, and public access structures.

Tidal Flooding Mitigation and Shoreline Protection, City of Hollywood, Florida. Senior director managing the City of Hollywood project to mitigate tidal flooding across 22 City owned shoreline segments inclusive of parks, a marina, and right-of-way shorelines. Project team includes subconsultants providing survey, geotechnical engineering, civil engineering, landscape architecture, and public outreach. Cummins Cederberg conducted engineering assessments, seagrass surveys, mangrove surveys, tide measurements, LiDAR review and processing, upland and submerged land ownership research, inundation mapping, and developed design specifications. Conceptual designs were prepared and presented to various City Departments and the public for project input. A total of \$14.1M in grant funding was secured to supplement the City's GO Bond to fund design, permitting, and construction of all 22 project sites. Permit drawings are being prepared based on the conceptual designs and feedback from the City and Broward County, State, and USACE authorizations will be secured.

Citywide Living Shoreline Site Viability Assessment, City of Miami Beach, Florida. Senior director managing project to assess ten City owned shoreline segments and rank them for potential development of living shorelines. Assessment included marine resource surveys, mangrove surveys, and grant funding evaluation, as well as extensive desktop analysis of available information. Conceptual designs were developed for the top three ranked sites and findings were presented to the City. Currently awaiting authorization to proceed with engineering design and permitting.

*Services provided with prior firm



YEARS OF EXPERIENCE

- 11

TELEPHONE NUMBER

- 850-852-0095

EDUCATION

- MSc Natural Resource Conservation, University of Florida
- BA Environmental Science & Policy, Florida State University

CERTIFICATIONS

- Certified Floodplain Manager
- WEDG Associate

PROFESSIONAL AFFILIATIONS

- UF IFAS Natural Resource Leadership Fellow, Class XVII
- Florida Floodplain Managers Association, Member
- Board Member of Tallahassee Chapter, Florida Association of Environmental Professionals
- American Water Resource Association, Member
- City of Tallahassee Environmental Review Board
- Leadership Tallahassee Graduate

Katie has more than 11 years of technical and project management experience, including coastal waterfront management, integrated watershed restoration efforts, grant writing and management, policy coordination and environmental regulatory permitting throughout the state of Florida. Her field experience includes water quality monitoring, wetland surveying, and site compliance inspections.

She has worked for the Florida Department of Environmental Protection (FDEP) managing water quality projects statewide and coordinating wetland and stormwater watershed improvements for local municipalities. Katie has also worked as a Florida Department of Transportation (FDOT) NEPA Project Coordinator reviewing FDOT projects for environmental impacts. She specialized in permitting during the project research and development phase, specifically working on endangered species and water resource concerns.

RELEVANT PROJECT EXPERIENCE

City of Sarasota Bay Resiliency Initiative, Sarasota, Florida. Leading the administration of the \$2M grant from FDEP along with supplemental funding from WCIND. Deputy project manager role supporting and managing the project budget, schedules and project milestones. Project includes supporting the planning, design, and construction of a replacement seawall and implementing living shoreline and other nature based solutions along City owned shorelines. Project also includes soliciting a contractor to upgrade Citywide topographic mapping, aerial, and mobile LiDAR data.

Currie Park Redevelopment, City of West Pam Beach, Florida. Coordinated grant application for Currie Park Redevelopment project and sea level rise adaptation project. Coordinated with the FDEO to receive a CDBG-mitigation grant through the US Department of Housing and Urban Development. Led the environmental assessment to meet federal grant requirements. Currently managing grant administration and regular communicating with City staff.

Jose Marti Park Waterfront Adaptation Project, Miami, Florida. The City of Miami received a FIND grant to perform a waterfront adaptation project at Jose Marti Park to improve the park to be more resilient to future flooding due to sea level rise. Ms. Williams also assisted in the complex permitting efforts by preparing application package materials for Miami-Dade County DERM, SFWMD, and the USACE. She also coordination the complex requests for additional information associated with the applications. Permitting efforts also consisted of formal pre-application meetings, a 1957 Butler Act Disclaimer, sovereign submerged lands lease application, adherence to the Miami-Dade County Manatee Protection Plan, ROW permitting, and BOCC coordination. Additionally, the project aims to be the first WEDG-certified project in Florida.

Island Crowne Seawall & Boardwalk Repairs, Daytona Beach, Florida. Leading the permit process for applying for and obtaining FDEP CCCL permit for a 300 LF section of storm-damaged seawall along the Atlantic Ocean shoreline. The scope included a visual assessment of the structural components (e.g., cast-in-place concrete seawall, upland concrete deck) and

identified any deterioration including cracks, displacement, corrosion, or voids. The services performed also included preparing and submitting a reimbursement request to the FDEP to support the construction costs, seeking funding through the FDEP Hurricane Restoration Reimbursement Program.

1800 Atlantic Avenue CCCL Permitting, Key West, Florida. Permit lead for applying and processing and FDEP CCCL permit for shoreline stabilization for a multi-family condominium in Key West. The project includes providing adequate shore protection to the upland development with a softer shoreline solution. The permit has been obtained and the project is in construction.

Nova Southeastern University Waterfront Improvements, Fort Lauderdale, Florida. Assisting with environmental permitting, impact analysis, and policy support for Nova Southeastern University (NSU) regarding the proposed Port Everglades channel dredge expansion project. This project involves feasibility for dredging a berth, retrofitting the wharf and groin, realigning the marina basin channel, and negotiating with the USACE, Navy, USCG, County, and Port authorities.

Shoreline and Seawall Shoreline Vulnerability, St. Petersburg, Florida. Deputy project manager role on implementation of the project. Leading the grant management of the FL Commerce (FDEO) Mitigation planning grant(\$900,000) that is supporting the majority of the project funding to draft a Strategic Seawall Capital Improvement Plan for improvements to 71,900 LF of seawalls to mitigate against adverse impacts from future natural and man-made disasters. The Plan will review existing seawall conditions, develop design criteria and concepts to improve flood protection and erosion control, and establish a strategy to implement prioritized projects.

Apalachee Regional Vulnerability Assessment, Apalachee Region, Florida. Provided stakeholder outreach, managed the County and ARPC contact list, and coordinated with the ARPC for GIS data. Funded through a Resilient Florida grant, the report illustrated and quantified the exposure and sensitivity of critical and regionally significant assets to tidal, SLR, and coastal storm surge flooding for 9 counties in the Apalachee region.

Tidal Flood Protection Ordinance, City of Hollywood, Florida. Project management support for the Broward County Model ordinance for tidal flood barriers. The purpose of this review was to ensure the new ordinance was adaptable to the current and future conditions of the City of Hollywood. After coordination with the City, two public hearings, and a presentation to the City, the ordinance was accepted.

County Shoreline Resiliency Planning, Palm Beach County, Florida. Project management support to update County's local mitigation strategy (LMS). Updates to the strategy included updating the priority list to include sea level rise adaptation strategies for publicly owned seawalls. LMS applications were approved and added to the County's LMS.

Riverside Village Shoreline Improvements, Jensen Beach, Florida. Project manager responsible for change of environmental permitting for shoreline improvements including bulkhead replacement, shoreline stabilization, living shoreline design, kayak ramp, and mangrove planting.

The Bay Park, Sarasota, Florida. Led application development and conducting ongoing grant administration of over \$17M across 6 grants to design, permit and construct a living shoreline, vegetated stepped floodwall, raise a portion of the park road, and restore the hydrology of Hog Creek at the Bay Park.

Bal Harbour Coastal Program Management, Village of Bal Harbour, Florida. Provided ongoing coastal management support for the Village including development of a Village-wide dune restoration plan, permitting and design of a beach nourishment project, providing drone aerial surveys of the Village shoreline, and representing the Village on the Bakers Haulover Inlet Technical Advisory Committee.



THOMAS F. RIES
PRINCIPAL INVESTIGATOR

Ecosphere Restoration
Institute, Inc
non-profit organization

EDUCATION
Bachelor of Science, Biology/Geology (Minor),
1983
University of South Florida

AREAS OF SPECIALIZATION

- Public/Private/Partnerships
- Grant Solicitation/Management
- Habitat Restoration
- Living Shorelines
- Remote Sensing and Mapping

SUMMARY OF EXPERIENCE

Mr. Ries' 40+ years of experience is comprised of managing and restoring natural ecosystems. He formulated innovative public/private/partnerships (P3s) resulting in award winning projects. He has designed over 150-habitat restoration projects ranging from a 1-acre spring restoration to regionally significant ecosystem restoration efforts covering thousands of acres and some of the sites were bestowed with 33 environmental awards.

PROFESSIONAL ORGANIZATIONS

FL Association of Env. Professionals
Tampa Bay Association Env. Professionals
Tampa Bay & Sarasota Bay Estuary Programs
Technical Advisory Committee (TAC)

CONTINUING ED/CERTIFICATIONS

Postgraduate Courses: Florida Vascular Plant ID, Field Botany, Advanced Hydrogeology, Environmental & Occupational Health Law, and Marine Zoology 1990-1993, **USF**
U.S. Coast Guard Captain's License

NOTEWORTHY ECOSPHERE PROJECTS

Palmetto Preserve Habitat Restoration
This award-winning restoration project was made possible by Mr. Ries' offer to obtain a grant to purchase coastal lands for the City of Palmetto. Once purchased, Mr. Ries solicited assistance from SWFWMD's SWIM program, and their crews constructed this habitat restoration project. Mr. Ries designed, permitted, and provided construction management of the project. This project resulted in the creation and enhancement of 24 acres of mangrove forest.

Newman Branch Fisheries Restoration
This project is the first-ever public-private partnership (P3) that included the SWFWMD. This P3 consisted of 7 completed phases working on TECO's land holdings. Over the past 20 years we have restored over 100 acres of estuarine and freshwater wetlands, all of which are perpetually preserved via a conservation easement. June 2025, we just completed phase 8, a living shoreline and tidal creek restoration effort.

Steward Middle School Living Shoreline
This Hillsborough River project entailed the implementation of a living shoreline along 2,200 linear ft. of eroded shoreline, which was completed in 2009. In 2022, Ecosphere helped to secure funds to also create a freshwater wetland to enhance stormwater treatment for the river.

ecoSPHERE
Restoration Institute, Inc.

Lost River Preserve Habitat Restoration

This abandoned former fish farm with over 200 stagnant ponds was covered with exotic vegetation; it was 1 of only 3 NOAA-ARRA funded projects in FL and resulted in over 70 acres of coastal ecosystem restoration.

MacDill AFB Mangrove/Saltern Restoration

This unique partnership began in 2012 when Ecosphere entered into a formal cooperative agreement with the AFB to assist and foster coastal restoration projects. Over 1,085 mosquito ditching spoil mounds removed, restoring over 250 acres of mangrove & salterns.

Thomas Tract Ecosystem Restoration

Ecosphere secured a USFWS grant to help restore this 25-acre former fish farm which will complete the habitat restoration effort within the "Kitchen" area of Hillsborough Bay. Project objectives include tarpon spawning habitat and includes a 1-acre Monarch butterfly garden.

Ulele Springs "Day Lighting" Project

This unique project entailed the restoration of a natural spring run to the river. In the late 1890s, Tampa used these 2 natural springs to provide water to residents, which ended in the 1930s when the spring runs were piped to the river. Mr. Ries researched this site and secured over \$864K in grants from: USFWS, NOAA, SWFWMD, FDEP, TBEP, & EPC to restore this spring run to the river

FDEP Statewide Seagrass Restoration

In 2022 Ecosphere was awarded a \$5,000,000 state-wide contract to install over 100 acres of seagrass to restore seagrass beds and feed starving manatees. In addition, this contract creates two aqua-cultural centers to provide seagrass for additional plantings on both coasts of Florida.

Hillsborough River Living Shoreline Project

In 2024, Ecosphere convinced 3 adjacent waterfront residents to implement a nature-based shoreline stabilization project. This Living Shoreline provides a firsthand example for the adjacent waterfront landowners.

FWC Living Shoreline Demo Project

Ecosphere secured grant funding (FWC, EPC, & TBEP) to implement 5 shoreline stabilization designs from grey to green. This project provides an opportunity for waterfront residents to see firsthand what each treatment looks like. FWC placed signage along this shoreline and uses this space as part of their educational programs.

HONORS / AWARDS

- 2025 Newman Branch Creek Living Shoreline was bestowed with the Env. Planning & Design Award
- 2024 Ignacio Haya Living Shoreline won the Natural Resources & Environment Award from the Tampa Bay Regional Planning Council
- 2016 Newman Branch Phase II Habitat Restoration Project. Environmental Project of the Year 2016
- 2015 Newman Branch Phase II Habitat Restoration Project. 2nd Place in the Environmental Category 2015
- 2015 The National Fish Habitat Partnership (NFHP) unveiled its list of 10 "Waters to Watch" for 2015, Ulele Springs was nominated by SE Aquatic Resources.
- 2014 Water Works Park/Ulele Springs Project, Charles A. McIntosh, Jr. Award of Distinction for the 2014 Future of the Region Awards from the Tampa Bay Regional Planning Council.
- 2014 Ulele Springs Restoration & Living Seawall, "Urban Excellence Awards – Public Sector Project" from the Tampa Downtown Partnership.
- 2013 Thomas Ries was recognized in Washington D.C. by the Environmental Law Institute as the winner of the coveted National Wetlands Conservation and Restoration.
- 2013 Ulele Springs Restoration Project, "Golden Mangrove Award" from Tampa Bay Estuary Program.
- 2008 Newman Branch Fisheries Habitat Restoration Project, Environmental Excellence Award from the Hillsborough Co. Planning Commission.
- 2004 Wolf Branch Creek Restoration Project, National Association of County Parks, "2004 Environmental Award".
- 2002 Palmetto Estuary Preserve, "First Place - Future of the Region Award" from the Tampa Bay Regional Planning Council.





Rob Best, P.E. is a Principal Engineer for CMA. Rob has over 20 years of experience, specializing in project management, study, design, and construction services in the areas of land development, stormwater, utilities, and transportation. This includes the analysis, design, and permitting of site developments, stormwater systems/components, water distribution systems, wastewater collection systems, water reuse systems, and roadways. Rob's expertise includes grading design; site evaluation; stormwater analysis, design, and permitting; hydraulic analysis; master planning and demand analysis; design of watermains, gravity sewers, force mains, pump stations, and treatment plant components; signing and pavement marking design; and transportation corridor evaluations.

Project Experience:

Portosueno Park Improvements Project. Manatee County. The overall Project includes engineering design and permitting for replacement of an existing deteriorated bulkhead along the northern portion of the park basin with a more natural, hybrid living shoreline approach to stabilize the embankment in the vicinity of proposed bulkhead removal. The project also includes design of new reconfigured upland parking spaces/orientation, a pedestrian path, pile supported fishing piers, and an upland observation platform. The project requires consideration of existing drainage conditions, upland runoff and stormwater management and an upland civil site plan. Cummins Cederberg retained CMA to provide the following services:

- Provide civil engineering and stormwater design relative to upland stormwater runoff, drainage conditions, upland parking, site development and grading.
- Conduct conceptual level design and planning for upland proposed park improvements specific to parking, drainage, stormwater, and grading.
- Develop a preliminary engineering design and site plan coordination.
- Produce engineering drawings and an Opinion of Probable Construction Cost at each 30%, 75%, 100%, and Final Construction Document project milestones.
- Conduct drainage analysis and prepare technical summary memorandum describing design conditions.
- Provide regulatory support for preparation and processing of the Southwest Florida Environmental Resource permit application.
- Provide Final site plan design, technical specifications, and construction documents sufficient for bidding and construction.
- Participation in regular progress meetings and provide regular project progress updates regarding milestone schedule.

Sarasota Bay Resiliency Initiative - Bayfront Park Seawall. City of Sarasota. The overall Project includes professional engineering services associated with the proposed replacement of 1,500 linear feet of bulkhead for the Sarasota Bayfront Park Bulkhead Rehabilitation Project, located at Bayfront Park, 5 Bayfront Dr, Sarasota, Sarasota County, Florida. Cummins Cederberg is retaining CMA to provide civil engineering, landscape architecture, and site electrical and lighting engineering services. The project scope includes raising the upland Park grade to meet the proposed cap elevation of +4.0' NAVD88, replacing in-kind the existing hardscape along the proposed bulkhead footprint, providing tree collars/protection for arborist identified trees, and electrical and lighting upgrades as required by the City.

Hire Date

10/07/2019

Years of Experience: 21

Years with other firms: 16

Education

Master of Science, Environmental Engineering, University of Massachusetts at Amherst, 2005

Bachelor of Science, Civil and Environmental Engineering, University of Massachusetts at Amherst, 2002

Registration

Professional Engineer, Florida, 69875, 2009

Professional Affiliations

American Society of Civil Engineers (Florida Section Past President, 2025-2026)

Florida Engineering Society

Certifications

FDOT Advanced TTC Course Certificate

North Beach Stormwater Pump Stations Study. City of Clearwater. This work order is for CMA to begin assisting the city with the design and construction of stormwater improvements for the following roadways: Bruce Avenue, Carlouel Drive (stormwater system connection to the Bruce Avenue pump station), Laurel Street, Mango Street, Gardenia Street, and Verbena Street. Improvements will generally follow the recommendations outlined in the 2022 North Beach Stormwater Master Plan. The scope of services will include document research/review, preapplication meeting with the Southwest Florida Water Management District (SWFWMD), and the development of an associated technical memorandum and refined concept exhibits.

Currie Park Phase II - Architectural and Engineering Services. City of West Palm Beach. CMA is leading the redevelopment of Currie Park for the City of West Palm Beach, enhancing the 13.6-acre waterfront park to improve community health, welfare, and economic vitality. Following the completion of Phase I, which included visioning, public engagement, and securing \$16.74 million in grant funding, Phase II will add new amenities such as a waterfront promenade, living shoreline, sports courts, native gardens, and a destination playground while preserving key existing features.

Lakeland Fire Station #8. City of Lakeland. The project involves the development of a 1-story, 3-bay (future 4th bay) fire station for the City of Lakeland Fire Department at the corner of Sleepy Hill Road and Mall Hill Drive in Lakeland, FL, on a 2.3-acre site. CMA will provide civil engineering and landscape architecture services, overseeing phases including schematic design, design development, construction documents, site planning, permitting, bidding (CMAR coordination), construction administration, and additional site meetings.

Gaines Park - Community and Tennis Center. City of West Palm Beach. The project scope assumes total renovation of the community center including the demolition and reconstruction of significant portions of the current building, as well as the design of a new tennis center incorporating six (6) tennis courts and four (4) to six (6) pickle ball courts. CMA's scope of work includes preparation of the project site plan; civil design; utilities design and permitting; landscape design; and supporting permitting and construction administration services. CMA assumes the project will require new utility connections to the buildings, pedestrian connection adjustments, resurfacing and restriping of the existing parking areas; hardscape, landscape, wayfinding, and irrigation improvements; and modification of the stormwater infrastructure.

SIXT Rent A Car MCO - Phase 1 Due Diligence. Demattei Wong Architecture. The project consists of performing preliminary research for the SIXT Rent A Car MCO in the southern area of Greater Orlando Aviation Authority's (GOAA) Orlando International Airport (MCO). The project is anticipated to include fleet vehicle parking/staging, general administration offices, shop area, parts department and storage/technician lockers and restroom, carwash/miscellaneous storage/offices, and a fueling/defueling station with an underground fuel tank. CMA will provide due diligence services to investigate design considerations and the local regulatory criteria pertaining to civil engineering and landscape architecture. CMA anticipates the research to involve a review of record drawings and as-builts for utilities in the vicinity of the project, as well as coordination with the Orlando Utilities Commission and Orange County Utilities; a review of the existing GOAA's MCO master drainage permit (through the South Florida Water Management District (SFWMDD)) and the process for developing additional property, and identifying the general site permitting process and schedule of steps needed for paving, drainage, utilities and landscaping if required.

Lakewood Ranch Reclaimed Water Main and Booster Pump Station. Braden River Utilities. The project consists of the design, permitting, and construction administration services of the proposed reclaimed water main and booster pump station (BPS) for Braden River Utilities (BRU) within the Northeast Sector of the Lakewood Ranch development in Manatee County. The proposed water main consists of approximately 3,500 linear feet of 16-inch pipeline along SR 70 and approximately 12,000 linear feet of 16-inch pipeline along Bourneside Blvd. from SR 70 to Rangeland Pkwy. The 16-inch pipe size was verified by updating limited hydraulic modeling as part of this project. The new BPS is proposed to be located adjacent to Kent Lake at the intersection of SR 70 and White Eagle Blvd. The required capacity of the BPS was determined as part of this project, addressing the needs of the existing and proposed master plan buildout development within Lakewood Ranch/the BRU service area. The reclaimed water main will be installed in both FDOT and County ROW via open cut. The permitting agencies for this project include FDOT, Manatee County, and SWFWMD.



Tanya McCormick, PLA, AICP, FCP is a principal landscape architect and certified planner. She is a member of ASLA, APA, and FRPA. She has over 18 years of experience providing landscape architecture and planning services in the state of Florida for public and private sector clients. She is proficient in Florida's plant palette and Florida-Friendly Landscaping™ principles and applies this proficiency to prepare aesthetic and functional landscape designs. At CMA, Tanya frequently works on multi-disciplinary teams including architects, civil engineers, structural engineers and environmental resource planners. She has worked with private developers and clients providing design services for commercial and retail developments, corporate offices, private healthcare facilities, private education institutions, and community planning and large scale residential and streetscape developments. She has worked with public clients and municipalities to provide parks and recreation design, playground design, public housing design, streetscape and ROW landscape design, City and County wide analysis and inventory services, master planning services, and design review and permitting services.

Project Experience

Sarasota Bay Resiliency Initiative - Bayfront Park Seawall. City of Sarasota.

The overall Project includes professional engineering services associated with the proposed replacement of 1,500 linear feet of bulkhead for the Sarasota Bayfront Park Bulkhead Rehabilitation Project, located at Bayfront Park, 5 Bayfront Dr, Sarasota, Sarasota County, Florida. Replacement design includes raising the bulkhead concrete cap elevation to +4.0' NAVD88.

Cummins Cederberg is retaining CMA to provide civil engineering, landscape architecture, and site electrical and lighting engineering services. The project scope includes raising the upland Park grade to meet the proposed cap elevation of +4.0' NAVD88, replacing in-kind the existing hardscape along the proposed bulkhead footprint, providing tree collars/protection for arborist identified trees, and electrical and lighting upgrades as required by the City.

Doctors Lake Park Redevelopment. Clay County Parks and Recreation. 0.8-acre waterfront park featuring a fishing pier, pavilion, paddleboard rentals, and picnic areas. CMA is providing engineering and landscape architecture services for site improvements, including a new pier, kayak launch, roadway, parking, pavilions, walking trail, and landscaping.

Eagle Harbor Sports Complex Redevelopment. Clay County Parks and Recreation. The Eagle Harbor Soccer Complex, located at 4387 Lakeshore Drive in Clay County, is a 29-acre sports and soccer facility offering youth soccer camps, summer camps, and clinics. Site amenities include soccer fields, pavilions, a concession building, and a playground. Due to persistent flooding concerns, CMA is evaluating the existing site conditions and redesigning the paving, grading, and drainage systems to mitigate these issues. The project also includes site investigation and landscape architectural services to restore turf playing fields. CMA is providing engineering and landscape architecture services for the design, permitting, and construction administration of the site improvements.

Omega Park CUA Connection. Clay County Parks and Recreation. Omega Park is located at 4317 County Road 218, Middleburg, Florida. Omega Park is a 16-acre community park, amenities include seven baseball fields, two football fields, tennis courts, restroom, covered pavilion, parking, concession building and playground. The park currently utilizes a septic system and well water. CMA

Hire Date

10/29/2018

Years of Experience: 18

Years with other firms: 11

Education

Bachelor of Science, Landscape Architecture, University of Florida, 2009

Registration

Registered Landscape Architect, Florida, LA6667243, 2015

Professional Affiliations

American Planning Association
American Society of Landscape Architects
Florida Recreation and Park Association

Certifications

AICP Certified Planner
FCP Certified Florida CPTED Practitioner

contracted to connect the park's facilities to the Clay County Utility Authority (CCUA) utilities on County Road 218. The existing septic tank, well and backflow preventor will be abandoned. CMA to design new water service, sewer laterals, grinder lift station forcemain and associated restoration. CMA shall perform the design, permitting, bidding and construction administration services.

Parks and Recreation System Master Plan. Indian River County. CMA served as a key subconsultant to PROS Consulting in developing a comprehensive system-wide master plan for Indian River County's Parks, Recreation, and Conservation Department. CMA conducted site assessments for each of Indian River County's 32 parks. CMA performed the assessments/existing conditions analysis, provided improvement recommendations, and produced a capital improvement plan, prioritized based on the site assessments. Each of the parks were assigned a rating based on the following criteria: Proximity, access & linkages comfort and image uses, activity & sociability Buildings & architecture. The NRPA 3 Pillars - Health/Wellness, Conservation, & Social Equity. Each of these ratings reflects a total average score per park as well as a total average score of the parks system as a whole. Additionally, CMA worked along with Indian River County to prepare assessments reports for 22 conservation sites. These reports summarized the health and vitality of these conservation lands and the resources that they provide to the community.

Currie Park Phase II - Architectural and Engineering Services. City of West Palm Beach. CMA is leading the redevelopment of Currie Park for the City of West Palm Beach, enhancing the 13.6-acre waterfront park to improve community health, welfare, and economic vitality. Following the completion of Phase I, which included visioning, public engagement, and securing \$16.74 million in grant funding, Phase II will add new amenities such as a waterfront promenade, living shoreline, sports courts, native gardens, and a destination playground while preserving key existing features.

Multiple Playgrounds Redevelopments. Miami Dade County Parks, Recreation, and Open Spaces. CMA is providing site planning, playground design, hardscape design, landscape and planting design, and irrigation design for five (5) playground redevelopments across Miami Dade County. The projects include playgrounds located at Highland Oaks Park, Glenwood Park, Area 226 Park, The Women's Park, and Oak Grove Park. These playgrounds vary in size and serve multicultural neighborhoods. The designs, which follow the County's nature-based criteria, will enhance each park's natural features while creating inclusive, ecologically mindful spaces.

Oriole Park Redevelopment. City of Margate. CMA lead a multi-disciplinary team and provided design, permitting, and construction administration for the redevelopment of Oriole Park located at 7055 N.W. 1st Street, Margate, FL 33063. The facility is owned and operated by the City of Margate. The redesign was funded by the general obligation parks bond approved in 2018. The project converted a single use baseball park into a neighborhood park with two sports fields, one multi-purpose field and open space, playgrounds, splash pad, fitness area, walking trail, security fencing, landscaping, and site lighting.

Centennial Park Design Criteria Package. City of Margate. Design Criteria Package for Centennial Park to include: new covered playground and surfacing, new covered exercise area and surfacing, new restroom facility and shade pavilion, new athletic courts (basketball, tennis and pickleball courts), new parking, walking trail, landscape & irrigation, site amenities (benches, trash receptacles, bike racks, etc).

2500 Jupiter Park Drive Conceptual Site Planning. Loxahatchee River District. CMA shall provide professional services for planning, engineering, environmental assessments, architecture, and landscape architecture for the conceptual planning of proposed facilities at Loxahatchee River Environmental Control District's (LRECD) 160-acre regional wastewater facility and administration site. The scope of work includes environmental assessments, regulatory reviews, extensive coordination with staff for desired site needs and optimization of operations, massing studies, and conceptual site plans. Passive recreation will be a component of the proposed site plans and associated funding opportunities to support it. A sustainability and resiliency effort will also be conducted. Both the existing and proposed site will be reviewed in terms of site security and vulnerability.



Contact Information

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jmcroy@arehna.com

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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

Lemon Bay/Wildflower Preserve in Charlotte County, Florida The purpose of this project was to obtain information concerning the site and subsurface soil conditions for habitat restoration for the Water Management District. Ms. McRory responsibilities included project oversight, field and laboratory coordination, geotechnical analysis, and site recommendations.

Cape Haze Ecological Restoration, Charlotte County, Florida AREHNA performed geotechnical engineering services for this project consisting of a planned ecological restoration with proposed trails. Ms. McRory served as the Principal Engineer responsible for field and laboratory coordination and testing programs.

Ignacio Haya Park Living Shoreline Revetment (Seawall), Hillsborough County, Florida AREHNA provided geotechnical engineering and materials testing services for this project. The purpose of our geotechnical study was to obtain information on the general subsurface soil conditions for the design of a proposed living shoreline revetment on the eastern shoreline of the Hillsborough River, south of W. Hillsborough Avenue and west of River Boulevard in Hillsborough County, Florida.

Southwest Florida Water Management District General Engineering Contract, SWFWMD District, Florida, The project consisted of the geotechnical support for various projects for the Water Management District. Projects have included Lemon Bay Habitat Restoration, Roger Park Tampa and Rogers Park Hernando County. Scopes have included infiltration testing, SPT Borings, auger borings and laboratory test programs. Ms. McRory serves as the contract manager for this contract.

Key Vista Nature Park Shoreline and Restoration Project Pasco, Florida This project will stabilize the banks along Rocky Creek, improve access to trails, improve the shoreline kayak launch, dredge material from the creek that has accumulated due to erosion of the shoreline, and improve water flow into and out of the Sleepy Lagoon Bayou. Also included are new observation piers and improved trails. Ms. McRory served as the Project Manager.

Ding Darling Seawall and Water Control Structures, Sanibel, Florida The project site was located in the Ding Darling National Wildlife Refuge on Sanibel Island, Florida. The purpose of our geotechnical study was to obtain information on the general subsurface conditions at the proposed project site. Arehna performed Standard Penetration Test (SPT) borings adjacent to the existing seawall.

FDEP Weeki Wachee Spring State Park – Seawall and Pond, Hernando County, Florida AREHNA provides geotechnical services for this project which is currently occupied by the Weeki Wachee Springs Water Park. Proposed construction includes a new seawall, two stormwater ponds, and four new boardwalks. Ms. McRory serves as the Project Manager on this County contract.

Jessica A. McRory, PE, LEED AP

National Wildlife Refuge Picayune Strand Restoration Project, Naples, Florida Ms. McRory serves as the Project Manager for this restoration project which involves plugging 48 miles of canals, removing 260 miles of crumbling roads, constructing three major pump stations, and restoring more than 55,000 acres of natural habitat.

Lake Jesup Nutrient Reduction and Flow Enhancement Project, Sanford, Seminole County, Florida This project which includes 1,169 acres of District-owned within the Lake Jesup conservation area. The project consists of a recirculating wetland treatment system made up of ponds and wetlands that will capture and treat nutrient laden lake water pumped from Lake Jesup. The purpose is to remove phosphorus and nitrogen from the pumped inflows and thereby treating in-lake nutrients. Ms. McRory Services as the contract manager for geotechnical services.

Joe's Creek Drainage and Bank Stabilization Improvements, Pinellas County Surface Water, Geotechnical & Environmental Contract, Pinellas County, Florida Ms. McRory managed geotechnical explorations performed on several projects for drainage improvement projects and new utility placement. Tasks have included drilling, sampling and evaluation of proposed surface water retention facilities.

West River Redevelopment Living Shorelines and Multi-use Pathway, Tampa, Florida This project consists of improvements along multi-use paths to include site work, new/rehabilitated pavement, guard rails and pedestrian railing, lighting, landscaping, and seawall/shoreline repair or restoration. The project completes gaps in a 12.2 mile multi-use pathway and installing enhanced crossing features at major roadways. Ms. McRory provides project oversight, coordinates field and laboratory testing, geotechnical analysis, soils parameters and site recommendations.

Lake Parker SW Basin, City of Lakeland, Florida The project included the design of new construction for an earthen berm with concrete overflow structures to enclose a portion of the southwest portion of Lake Parker in Lakeland, Florida. Construction of the berm involved a combination of driving sheet piles to remove upper muck layers and deeper ground improvement. The purpose of the geotechnical exploration was to obtain information concerning the site and subsurface conditions in the areas of the proposed berm construction. Ms. McRory was responsible for client interface, processing task orders, geotechnical evaluations and reporting.

Watershed Drainage Improvement Projects, Grass & Flag Pond Outlet, Tampa, Florida AREHNA provided geotechnical engineering services for task order contract. Scope included drainage improvements, soil sampling and field testing and provided design recommendations. Ms. McRory coordinated and oversaw drilling and laboratory testing programs and performed engineering analysis and reporting.

Anclote River Dredge Material Management Area, Tarpon Springs, Florida The purpose of our geotechnical study was to obtain information on the general subsurface conditions and identify potential risk of karst activity for the proposed Anclote River Dredge Material Management Area. The previous dredge material has been removed and the berms have been degraded. Ms. McRory is responsible for field and laboratory coordination and oversight of the geotechnical and materials testing for this project.

J.N. "Ding" Darling National Wildlife Refuge Seawall, Sanibel, Florida The project consists of the design and construction of a new seawall to replace an existing seawall. Geotechnical exploration and analysis was performed to facility design and construction recommendations at the project site. Ms. McRory coordinated and oversaw drilling and laboratory testing programs and performed engineering analysis and reporting.

Ulele Springs Restoration (Water Works), Tampa, Florida Ms. McRory was the Client Manager responsible for initial coordination and oversight of the geotechnical investigation for the design of the natural spring restoration. This project includes the restoration and enhancement of an existing spring located in the Tampa Water Works Park, in Tampa, Florida. The project includes widening the existing spring by excavating a littoral shelf on the south side and replacing the existing piped outfall to the Hillsborough River with a 100-foot diameter semicircular pool and 200-foot-long creek. AREHNA provided geotechnical exploration and engineering services in support of the design.

Coastal Protection/Living Shoreline/36th Ave Seawall Repair, Pinellas County, Florida This project consisted of replacing approximately 30 LF of the existing concrete seawall with approximately 30 LF of a new living shoreline. Responsibilities included project oversight, field and laboratory coordination, site recommendations, analysis and reporting.

Placido Bayou Shoreline Restoration, St. Petersburg, Florida The lakes are located to the south and north of the intersection of Placido Parkway Loop and Quintana Place NE in St. Petersburg, Florida. AREHNA conducted geotechnical investigation to obtain information on the general subsurface conditions at the proposed project site. Ms. McRory provided site recommendations on natural methods for stabilizing the lake shorelines.



Joshua Lee, PSM
President

PROFESSIONAL PROFILE:

Joshua has over 25 years of experience in surveying and mapping. He has a diverse background covering a multitude of disciplines within the field. He has planned, performed and processed final deliverables for numerous styles of surveys such as Hydrographic (single beam and multi-beam bathymetry), Topographic, Boundary, Geotechnical Investigations, As-Built Record, Construction Layout, and Quantity Surveys.

REGISTRATION:

*Florida Professional Surveyor and Mapper
No. LS 7322*

EDUCATION:

*Palm Beach Atlantic University
University of Florida*

**YEARS WITH
TERRAQUATIC, INC: 2**

**TOTAL YEARS OF
EXPERIENCE: 25+**

RELEVANT EXPERIENCE

Project Name & Location: Town of Palm Beach Perpetual Easements

Project Dates: March - May 2024

Contact Person: Mike Jenkins, PhD, PE

Contact Phone: (561) 472-2144

Project Role: Project Surveyor

Project Description: The objective of this project was to establish a perpetual construction easement and create a corresponding sketch for multiple properties along the Atlantic coastline in support of beach nourishment projects. The project involved conducting limited boundary work to geolocate the easement and mapping the dune vegetation line and the mean high water line.

Project Name & Location: Palm Beach County Annual Physical Beach Monitoring Surveys

Project Dates: 2020 - Present

Contact Person: Steven Howard, PE

Contact Phone: (904) 717-8367

Project Role: Project Surveyor

Project Description: The annual beach monitoring survey of the Palm Beach County coastline is a comprehensive program that encompasses multiple tasks. These tasks include upland and offshore data collection, verification of profile control, plan view & profile charts, and digital data formatted according to FDEP standards. The beach profile monitoring data collection process begins at each profile control station, extending landward to the limits defined in the FDEP manual and seaward to identify all significant changes, such as vegetation, dunes, boardwalks, pavement, sand or rock, and changes in grade exceeding six inches. The monitoring also extends approximately one mile offshore. Profile control verification involves the reconnaissance of all historic profile monumentation and second-order control, accompanied by photographs of each monument and cardinal directions taken on the beach at each profile line.

Project Name & Location: Jupiter Inlet & Vicinity, Bathymetric & Topographic Survey

Project Dates: April 2023 & September 2025

Contact Person: Joseph B. Chaison, PE, Jupiter Inlet District

Contact Phone: (561) 746-2223

Project Role: Project Surveyor

Project Description: A comprehensive survey of the Atlantic Ocean was conducted from R-110 in Martin County south to R-40 in Palm Beach County, including the Jupiter Inlet, the Intracoastal Waterway from the Martin County line south to Donald Ross Road, and the Loxahatchee River north to the Martin County line, northwest to Island Way bridge, and southwest to Loxahatchee River Road bridge. The primary objective of this survey was to develop a surface model for drainage and storm surge studies. The survey involved the use of multibeam sonar in deep areas, single beam sonar in shallow areas, and a conventional topographic survey of the beach along the R-Lines to capture the dune elevations.

Brian Lewis

Project Manager

PROFESSIONAL PROFILE:

Brian has over 23 years of experience in topographic surveys, boundary surveys and geodetic control surveys. His experience also includes hydrographic surveys and remote sensing surveys such as a side scan sonar, magnetometer, sub-bottom profile survey and UAS Mapping surveys. Prior projects include work for such agencies as the Florida Department of Transportation, the U.S. Army Corps of Engineers, the Florida Department of Environmental Protection and numerous counties and municipalities. He is directly responsible for the coordination and management of field technicians and data collection methods.

Certifications:

Certified Survey Technician Level III; No. 0413-4644

ND Land Survey Intern No. 13526

YEARS WITH TERRAQUATIC, INC: 9

TOTAL YEARS OF EXPERIENCE: 23+

RELEVANT EXPERIENCE

Project Name & Location: Town of Palm Beach Annual Physical Beach Monitoring Surveys

Project Dates: 2020 - Present

Contact Person: Mike Jenkins, PhD, PE, ATM

Contact Phone: (530) 472-2144

Project Role: Project Manager / Senior CAD Technician

Project Description: The annual beach monitoring survey of the Town of Palm Beach coastline is a comprehensive project encompassing various tasks. These tasks include upland and offshore data collection from range lines R68 to R135, verification of profile control, plan view & profile charts, and digital data formatted according to FDEP standards. The beach profile monitoring data collection process begins at each profile control station, extending landward to the limits defined in the FDEP manual and seaward to identify all significant changes, such as vegetation, dunes, boardwalks, pavement, sand or rock, and changes in grade exceeding six inches. The monitoring also extends approximately one mile offshore. Profile control verification involves the reconnaissance of all historic profile monumentation and second order control, accompanied by photographs of each monument and cardinal directions taken on the beach at each profile line.

Project Name & Location: Town of Plam Beach R102 to R107 Erosion Control Line

Project Dates: November 2020

Contact Person: Mike Jenkins, PhD, PE, ATM

Contact Phone: (530) 472-2144

Project Role: Project Manager / Senior CAD Technician

Project Description: The scope of work involved conducting a study of the mean high water line and creating a map for the Erosion Control Line (ECL). The objective was to extend the existing ECL from range monument R-102 to R-106.5 (intermediate range monument). The ECL map included the location of the mean high water line, the most recent recorded ORB and Page of the adjacent upland property deed of record, an overlay of the approximate property line obtained from the PBC property records, a background aerial image, and a legal description of the ECL highlighting its relationship to the nearest published second order control station.

Project Name & Location: Town of Palm Beach, Mid-Town Seawall Replacement Project

Project Dates: October 2020

Contact Person: Michael Barnett, PE, D.CE, GHD

Contact Phone: (251) 300-1250

Project Role: Project Manager / Senior CAD Technician

Project Description: The project required a thorough topographic survey of the eastern right of way and the adjacent beach area along South Ocean Boulevard from Gulfstream Road, approximately half a mile north, to Royal Palm Way. The purpose of the survey was to support a coastal construction control line permit for the replacement of the existing seawall. It involved detailed mapping of the existing seawall and parapet, as well as the precise locations of various features such as structures, dune crossovers, public access ramps, private access tunnel, signs, curb & gutter, sidewalks, landscaping, etc., within the eastern right of way extending to the zero foot contour line. Additionally, the survey included documenting cross sections of the beach at one hundred foot intervals and determining the precise locations of the dune vegetation.

SUBCONSULTANT TEAM

The Cummins Cederberg team includes **Florida-registered professional engineers, regulatory specialists, and marine scientists** with extensive experience in **living shoreline design, coastal engineering, ecological assessment, environmental permitting, and construction-ready plan development**. With an exclusive focus on the coastal and marine environment, our portfolio includes **shoreline stabilization, waterfront parks, living shorelines, and urban working waterfronts** similar in scale and complexity to the Tiki Point project.

We have assembled a highly collaborative, multidisciplinary team to deliver the full scope of services outlined in this RFP, led by Project Manager Jenna Phillips, a senior coastal and marine engineer specializing in shoreline resilience and nature-based solutions. Our long-standing relationships with key subconsultants—many spanning more than 15 years—demonstrate our ability to coordinate effectively, maintain schedule, and deliver consistent, high-quality results for public-sector clients.



Chen Moore & Associates brings deep expertise in civil and stormwater engineering, as well as landscape architecture, to support resilient adaptation planning. With extensive experience across Southwest Florida, CMA specializes in flood protection, infrastructure assessment, and sustainable stormwater solutions that align with Resilient Florida requirements. Their team's capabilities in pumping station design and rehabilitation are critical for managing stormwater, mitigating flood risks, and enhancing the County's long-term resilience.



Terraquatic is a Florida-based surveying firm specializing in hydrographic (single- and multi-beam) and topographic surveying for coastal and waterfront projects. Since 2004, Terraquatic has supported large-scale shoreline, marine, and infrastructure projects for agencies such as the U.S. Army Corps of Engineers, Florida Department of Transportation, and Water Management Districts. Their services include high-order geodetic control, photogrammetry, mean high water demarcation, and specialty hydrographic surveys—providing accurate, defensible data critical to living shoreline design, permitting, and construction.



AREHNA Engineering, Inc. is a geotechnical engineering and materials testing firm with an experienced staff of engineers, who work closely with clients and project design teams, carefully consider project information, and provide the most cost-effective solutions to the challenges faced on each project.



Ecosphere Restoration Institute is a Tampa Bay-based nonprofit with a proven record in innovative conservation. Since 2003, **Ecosphere has delivered 88 restoration projects, restoring over 400 acres of critical habitat, enhancing more than 3,200 acres in Hillsborough County, and creating 54 living shorelines spanning 3+ miles.** Ecosphere expertise in Public-Private Partnerships has leveraged \$23 million in grants and matching funds through collaborations with federal agencies, local governments, industry leaders, businesses, and community volunteers.

FIRMS LICENSES

Ron DeSantis, Governor
Melanie S. Griffin, Secretary

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Melanie S. Griffin, Secretary

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CHANG, KENWAY
2851 DOUGLAS RD.
UNIT 810
MIAMI FL 33145

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WEST PALM BEACH FL 33406

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BARRERA ALLEN, LEONARD ANDREW
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UNIT 206
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SPECIAL INSPECTOR NUMBER: 7025320

TAYLOR, JASON S.
3245 MCDONALD
MIAMI FL 33133

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Tennessee Board of
Architectural and Engineering Examiners

By this certificate he knows that
Christopher Lee Kerner

has satisfactorily demonstrated knowledge of engineering fundamentals and is hereby recognized as an
Engineer Intern

Issued and attested by the seal of the State of Tennessee this 6th day of December, 2013.

Certificate No. 31801

ASSOCIATION OF STATE
FLOODPLAIN MANAGERS, INC.
CERTIFICATION BOARD OF REGENTS

By this certificate I hereby certify to the provisions of the charter for the
(CERTIFIED FLOODPLAIN MANAGER PROGRAM)

Jordon P. Cheifet, CFM
IS DULY REGISTERED AS AN

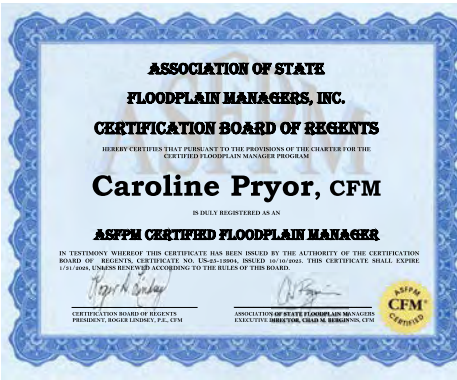
ASFPM CERTIFIED FLOODPLAIN MANAGER

IN FURTHER MENTION THIS CERTIFICATE HAS BEEN ISSUED BY THE AUTHORITY OF THE CERTIFICATION BOARD OF REGENTS, CERTIFICATE NO. 18-06-0465, FILED: 10/14/2018. THIS CERTIFICATE SHALL EXPIRE 12/31/2024, UNLESS RENEWED ACCORDING TO THE RULES OF THIS BOARD.

ROBERT H. LINDSEY, P.E., CFM PRESIDENT, BOGUE INDUSTRIES, P.L.L.C.

ASSOCIATION OF STATE FLOODPLAIN MANAGERS
EXECUTIVE DIRECTOR, CHAD M. BERGONZI, CFM

ASFPM
CFM
CERTIFIED



WATERFRONT EDGE DESIGN GUIDELINES



Waterfront Alliance verifies that
Danielle Irwin
Has attained the designation of
WEDG Associate

by completing the WEDG Professionals course on September 24 and 25, 2020 and attaining a satisfactory exam score, demonstrating an understanding of WEDG best practices for resilient, ecologically-sound, and accessible waterfront design.

Cortney Worrall
Cortney Worrall
President & CEO
Waterfront Alliance
October 5, 2020

CREDENTIAL ID: WEDG-Assoc-2020
DATE ISSUED: 5 OCT 2020
VALID THROUGH: 5 OCT 2024



FLORIDA ASSOCIATION OF ENVIRONMENTAL PROFESSIONALS – SOUTHWEST CHAPTER

CERTIFICATE OF COMPLETION
is presented to

ALEX PACELKO

For completing a 2-day, Uniform Mitigation Assessment Method (UMAM) workshop on October 24 and 25, 2024
(1.0 CEU)



Matthew F. Miller
MATTHEW F. MILLER, P.W.S.
INSTRUCTOR

10/25/2024
DATE

State of Florida Department of State

I certify from the records of this office that CUMMINS CEDERBERG, INC. is a corporation organized under the laws of the State of Florida, filed on March 16, 2010, effective March 17, 2010.

The document number of this corporation is P10000023540.

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 6, 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 Sixth day of January, 2026*



[Signature]
Secretary of State

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Detail by Entity Name

Florida Profit Corporation
CUMMINS CEDERBERG, INC.

Filing Information

Document Number	P10000023540
FEI/EIN Number	27-2129033
Date Filed	03/16/2010
Effective Date	03/17/2010
State	FL
Status	ACTIVE

Principal Address

201 Alhambra Circle
Suite 601
Coral Gables, FL 33134

Changed: 02/01/2024

Mailing Address

201 Alhambra Circle
Suite 601
Coral Gables, FL 33134

Changed: 02/01/2024

Registered Agent Name & Address

CEDERBERG, JANNEK
201 Alhambra Circle
Suite 601
Coral Gables, FL 33134

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Licensee Information

Name:	CUMMINS CEDERBERG, INC. (Primary Name)
Main Address:	201 ALHAMBRA CIRCLE SUITE 601 CORAL GABLES Florida 33134
County:	DADE

License Information

License Type:	Engineering Business Registry
Rank:	Registry
License Number:	29062
Status:	Current
Licensure Date:	04/02/2010
Expires:	

Special Qualifications Qualification Effective

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Licensee Information

Name	CHEN MOORE AND ASSOCIATES, INC. (Primary Name)
Main Address	506 W. CYPRUS CREEK ROAD BLDG FORT LAUDERDALE, Florida 33309
County	BROWARD

License Information

License Type	Engineering Business Registry
Rank	Registry
License Number	4593
Status	Current
Licensure Date	01/09/1987
Expires	

Special Qualifications

Qualification Effective	
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THE PROFESSIONAL ENGINEER HEREIN IS LICENSED UNDER THE PROVISIONS OF CHAPTER 471, FLORIDA STATUTES

BEST, ROBERT WILLIAM JR.
1255 WILKINSON STREET
ORLANDO FL 32803

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**State of Florida
Department of State**

I certify from the records of this office that CHEN MOORE AND ASSOCIATES, INC. is a corporation organized under the laws of the State of Florida, filed on November 7, 1986.

The document number of this corporation is J41454.

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

[Signature]
Secretary of State

Tracking Number: 7625556101CC

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BOARD OF LANDSCAPE ARCHITECTURE


THE LANDSCAPE ARCHITECT HEREIN HAS REGISTERED UNDER THE PROVISIONS OF CHAPTER 481, FLORIDA STATUTES

MCCORMICK, TANYA LYNN DOUGLAS
905 BUGLE BRANCH WAY
ST. JOHNS FL 32259

LICENSE NUMBER: LA6667243
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Licensee

Name: **AREHNA ENGINEERING, INC.** License Number: **28410**

Rank: **Registry** License Expiration Date:

Primary Status: **Current** Original License Date: **02/19/2009**


Related License Information


License Number	Status	Related Party	Relationship Type	Relation Effective Date	Rank	Expiration Date
68440	Current, Active	MCRORY, JESSICA ANN	Registry	02/19/2009	Professional Engineer	02/28/2027

State of Florida


Woman Business Certification

AREHNA Engineering, Inc.

Is certified under the provisions of
287 and 295.187, Florida Statutes, for a period from:
06/30/2025  06/30/2027



Pedro Allende
Florida Department of Management Services



Office of Supplier Development
 4050 Esplanade Way, Suite 380
 Tallahassee, Florida 32399
 850-487-0915
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Florida Department of Agriculture and Consumer Services
Division of Consumer Services
Board of Professional Surveyors and Mappers
2005 Apalachee Pkwy Tallahassee, Florida 32399-6500
800HELPFLA(435-7352) or (850) 488-2221

January 28, 2025

JOSHUA LEE
1218 GEORGIA AVE
WEST PALM BEACH, FL 33401-6628

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SUBJECT: Professional Surveyor and Mapper License # LS7322

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

The license appears below and is valid through February 28, 2027.

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

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



Florida Department of Agriculture and Consumer Services
Board of Professional Surveyors and Mappers

LS7322

Professional Surveyor and Mapper
JOSHUA LEE

IS LICENSED under the provisions of Ch. 472 FS
Expiration date: February 28, 2027

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

License No.: **LS7322**
Expiration Date: February 28, 2027

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

JOSHUA LEE
1218 GEORGIA AVE
WEST PALM BEACH, FL 33401-6628

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.



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

License No.: **LB7324**
Expiration Date: February 28, 2027

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

TERRAQUATIC INC
1220 TANGELO TER STE A12
DELRAY BEACH, FL 33444-1286

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II.



PROPOSED MANAGEMENT TEAM

II. PROPOSED MANAGEMENT PLAN

A. Team Organization

Cummins Cederberg has assembled a multidisciplinary team of coastal engineers, marine structural engineers, ecologists, geotechnical specialists, surveyors, modelers, GIS specialists, and permitting professionals to deliver the Tiki Point Living Shoreline project. Because living shoreline projects require seamless integration of engineering, ecological restoration, regulatory coordination, and stakeholder engagement, our team operates under a unified management framework that maintains alignment across all disciplines from project initiation through final construction documents.

Our team organization is designed to function as an extension of County staff, providing clear communication channels, defined responsibilities, and transparent reporting throughout the project lifecycle.

PROJECT MANAGER

Project Manager Jenna Phillips brings more than 20 years of specialized experience in coastal and marine engineering, with a strong focus on shoreline stabilization, living shoreline design, and coastal resilience planning. Her expertise includes feasibility studies, vulnerability and sea level rise assessments, nature-based and hybrid shoreline solutions, and management of grant-funded design and permitting projects. Jenna has led numerous high-profile resilience initiatives across Florida, including the Punta Gorda Climate Adaptation Plan, Punta Gorda Seawall Alternatives Study, Citywide Strategic Seawall Capital Improvement Plan for St. Petersburg, and the Sarasota Resiliency Initiative. She is highly experienced in coordinating multidisciplinary teams, regulatory agencies, and stakeholders to advance complex shoreline projects from concept through design and permitting, making her well-suited to lead the Tiki Point Living Shoreline project.



1. Program Management, Scheduling, and Logistics

Program Management Framework (Roles, Authority, Decision-Making)

Cummins Cederberg utilizes a structured program management framework that clearly defines roles, authority, and decision-making pathways at the outset of the project. Jenna Phillips, Project Manager, will serve as the County's single point of contact and the central authority for day-to-day program management decisions. She is responsible for overall scope oversight, schedule and budget tracking, resource allocation, task delegation, QA/QC implementation, and coordination among all internal disciplines and subconsultants.

This management structure supports accountability, timely decision-making, and compliance with County and regulatory requirements while maintaining alignment across engineering, permitting, ecological, and stakeholder engagement efforts. Jenna's experience delivering living shoreline and coastal resilience projects, including work in Southwest Florida and Charlotte Harbor-adjacent communities, positions her to effectively manage project logistics, anticipate coordination challenges, and resolve issues efficiently throughout design and permitting.

Schedule Development and Control

At project initiation, we will develop a detailed baseline schedule identifying milestones, agency coordination points, modeling tasks, field investigations, permit submittals, and deliverable deadlines. The schedule will be updated at major milestones and reviewed internally on a weekly basis.

Critical-path items are closely monitored, and high-priority tasks are flagged for targeted check-ins to proactively address risks that could affect schedule or budget. This disciplined tracking process minimizes delays and supports predictable project progression.

Cost Control and Budget Management

Cost control is integrated into each phase of design development. Opinion of Probable Construction Cost (OPCC) estimates will be prepared and updated at the 30%, 60%, 90%, and 100% design milestones. Each estimate will incorporate current regional bid data for living

shoreline construction, material pricing trends, marine access considerations, and contingency appropriate to the design phase.

An internal independent cost review will be conducted prior to each submittal to verify quantities, unit pricing assumptions, and alignment with available grant funding. Design decisions that materially affect cost—such as reef crest elevations, material selection, or footprint adjustments—will be evaluated collaboratively with the County to maintain alignment with budget constraints.

This structured cost tracking approach reduces the risk of late-stage redesign, supports grant compliance, and promotes predictable procurement outcomes.



Cummins Cederberg designed and permitted the Curry Hammock State Park Beach Restoration project in coordination with FDEP, bringing the restoration into compliance with environmental regulations

Staffing and Resource coordination

Cummins Cederberg’s fully staffed offices in Sarasota and St. Petersburg will be devoted to this project through its entire lifecycle, while our other offices across Florida will also contribute, as we work seamlessly between our office locations using file-sharing, conference software, and other online tools. Our tiered management structure provides clarity of responsibility and redundancy of coverage. Senior technical staff remain actively engaged at key milestones to provide oversight and strategic guidance. Staffing levels are calibrated to workload demands so that appropriate expertise is available during modeling, design development, permitting preparation, and QA/QC review phases.

Field, site, and access logistics

Early coordination with County staff and agency partners will confirm site access routes, staging locations, marine access considerations, and construction constraints specific to Tiki Point. Site investigations and walkthroughs will document existing conditions, shoreline tie-ins,

Tiki Point Living Shoreline RFP No. 20260251

Cummins Cederberg | *Trusted on the Coast. Proven in Practice.*

utilities, bathymetry, and ecological resources. These findings will inform both design development and constructability planning.

Construction access, turbidity control staging, vessel draft limitations, and protection of adjacent public amenities will be evaluated beginning in conceptual design to avoid downstream conflicts.

Communication Coordination

Consistent communication is central to our management philosophy. The Program Manager will maintain routine contact with Charlotte County via email, phone, virtual platforms, and in-person meetings as appropriate. Coordination meetings will include structured agendas, action-item logs, and documented summaries to maintain accountability and clarity.

Our team utilizes Microsoft Teams, Zoom, Outlook, and secure cloud-based document systems to support real-time collaboration, version control, and secure data management across office and field environments.

Deliverable Management

A formal QA/QC process is integrated at every phase of project development. Senior engineers and subject-matter experts conduct technical reviews to verify accuracy, regulatory alignment, constructability, and internal consistency across plans, calculations, and cost estimates.

Deliverables will be prepared as clear, complete, bid-ready documents intended to reduce construction uncertainty, minimize change orders, and maintain alignment with the established project budget.

2. Geotechnical Analysis

Geotechnical evaluation will inform foundation performance, settlement potential, shoreline stability, and constructability considerations specific to Tiki Point’s estuarine environment. Subsurface investigations will include vibracores or other appropriate methods to characterize sediment stratigraphy organic content, shear strength, and underlying bearing strata.

Given the location at the confluence of the Peace River and Charlotte Harbor, subsurface conditions are anticipated to include soft estuarine sediments with variable consolidation characteristics. Laboratory testing and field classification will evaluate bearing capacity, consolidation potential, and long-term settlement behavior that may

influence crest elevations, sill stability, and intertidal bench performance.

Geotechnical findings will be integrated directly into the design of oyster reef elements, riprap transitions, seawall tie-ins, and any hybrid structural components. Particular attention will be given to:

- Scour potential at structure toes
- Lateral stability under storm conditions and with vessel wake loading
- Settlement impacts on living shoreline elevations
- Interface conditions between existing seawall structures and new nature-based elements

This analysis supports resilient design elements that account for tidal loading, storm surge, and projected sea level rise while minimizing long-term maintenance and performance risks. By integrating geotechnical findings early in design development, we reduce the likelihood of post-permit design adjustments and improve construction predictability.

3. Engineering & Design

Cummins Cederberg manages engineering and design through a phased, milestone-driven process that integrates coastal engineering, ecological constraints, modeling, and permitting requirements.

Structured Milestone-Driven Design Process

The project will advance through defined design milestones, with each phase incorporating progressively refined modeling results, agency input, stakeholder feedback, and updated cost opinions. Internal QA/QC reviews and interdisciplinary coordination meetings occur at each milestone to maintain technical integrity and regulatory consistency.

Integrated Technical Coordination

Our Project Manager leads coordination among coastal engineers, ecologists, geotechnical engineers, surveyors, and permitting specialists. Early in the process, key design criteria—wave climate, bathymetry, sediment transport behavior, ecological resource constraints, navigation requirements, and constructability limitations—are established.

Design elements such as oyster reef layouts, intertidal benches, mangrove planting zones, and structural transitions are reviewed collaboratively to align hydraulic performance, habitat enhancement, maintenance

considerations, and public access needs.

Modeling- and Data-Driven Design

Engineering decisions will be grounded in site-specific data, including geotechnical investigations, topographic and bathymetric surveys, and coastal process assessments. Hydrodynamic and wave modeling will be used to refine crest elevations, feature spacing, footprint dimensions, and nature-based element configurations.

This data-driven methodology produces a resilient, stable shoreline system capable of delivering measurable ecological uplift while minimizing impacts to navigation, adjacent infrastructure, and existing marine resources.

Anticipated Site-Specific Design Considerations at Tiki Point

The Tiki Point shoreline presents several site-specific design considerations that will directly inform engineering development:

- **Existing Seawall Interface:** The project must integrate nature-based elements with an existing vertical seawall and Harborwalk promenade while protecting structural integrity and avoiding undermining.
- **Public Promenade and Safety:** Construction staging, feature elevations, and shoreline geometry must maintain ADA access, public safety, and visual aesthetics along Harborwalk.
- **Vessel Wake and Harbor Exposure:** Although partially sheltered, the site experiences boat wake and storm-driven wave exposure from Charlotte Harbor. Wave attenuation elements will be sized using site-specific modeling to address both daily conditions and storm events.
- **Soft Estuarine Sediments:** Anticipated fine-grained sediments may influence settlement behavior and reef sill stability.
- **Navigation and Access Constraints:** Offshore footprint must avoid navigation impacts and maintain appropriate waterward clearances.
- **Ecological Resource Constraints:** Seagrass, benthic habitat, and wildlife passage spacing will guide reef spacing and elevation selection.
- **Sea Level Rise Adaptation:** Design crest elevations and planting zones will incorporate adaptive capacity to accommodate projected sea level rise scenarios consistent with regional planning guidance.

By identifying these constraints early, our design process proactively integrates engineering performance, ecological uplift, regulatory compliance, and public use considerations into a cohesive shoreline solution.

Early and Continuous Agency Coordination

Design development will occur in parallel with regulatory coordination. Early meetings with FDEP, USACE, NMFS, FWC, and applicable Water Management District staff will identify potential constraints such as sovereign submerged lands requirements, seagrass avoidance, wildlife passage spacing, construction timing windows, and navigation considerations.

Agency input will be incorporated directly into design refinements to reduce the likelihood of redesign or permit delays.

Stakeholder Integration into Design

Engineering decisions will be paired with structured stakeholder engagement to reflect community values and public use patterns specific to Tiki Point. Visual renderings, exhibits, and digital StoryMaps will communicate design intent and expected benefits. Feedback will be documented and incorporated into subsequent design phases to support community and agency alignment.

Constructability and Phasing Planning

Constructability analysis begins at conceptual design and continues through final documents. Construction sequencing, staging plans, turbidity controls, and protection of adjacent amenities will be developed in coordination with permitting staff to maintain compliance and resource protection throughout implementation.

Quality Assurance /Quality Control

QA/QC is implemented at every stage, including technical review of calculations, drawings, specifications, cost estimates, and regulatory documentation. Senior discipline leads provide oversight to maintain Cummins Cederberg’s standards for technical excellence and clarity.

Deliverable Management & Grant Compliance

If grant-funded components apply, deliverables will comply with all applicable task requirements, formatting standards, and ADA/Section 508 accessibility guidelines. Drawings, reports, and supporting graphics will be delivered in both PDF and native formats to support County review, permitting submittals, and procurement.

4. Permitting Preparation

Cummins Cederberg manages permitting through an integrated, parallel design-permitting process that aligns regulatory approvals with final construction documents.

Because shoreline permitting in Florida involves complex coordination among engineering, ecological, and property considerations, regulatory engagement begins during conceptual design and continues throughout development.

Pre-application meetings with FDEP, USACE, NMFS, FWC, and applicable agencies will identify jurisdictional considerations, sovereign submerged lands requirements, ESA constraints, and navigation impacts early in the process.

Our permitting workflow follows a structured chain of responsibility:

- The Permit Support team prepares application narratives, impact analyses, benthic documentation, and supporting exhibits.
- The Permit Lead conducts detailed regulatory and technical review to verify consistency between engineering and permitting documentation.
- Senior regulatory leadership evaluates jurisdictional strategy, confirms avoidance and minimization documentation, and oversees agency coordination.

When Requests for Additional Information (RAIs) are issued, we coordinate directly with agency staff to clarify expectations and resolve questions efficiently prior to resubmittal.

Following permit issuance, we implement a compliance tracking system that documents pre-construction, construction-phase, and post-construction requirements. Responsible parties, submittal deadlines, and monitoring obligations are clearly identified to support a seamless transition from permitting into construction and long-term compliance.

Integrated Risk Reduction & Project Delivery Confidence

Cummins Cederberg’s structured management framework, milestone-driven design process, integrated permitting strategy, and disciplined QA/QC protocols collectively reduce technical, regulatory, and budgetary risk. By aligning engineering performance, ecological objectives, stakeholder expectations, and agency requirements from project initiation through final design, we deliver resilient, constructible living shoreline solutions that are defensible, fundable, and implementable within the established schedule and budget.

III.



TEAM'S EXPERIENCE

III. TEAM'S EXPERIENCE

1. Living Shoreline Projects

Cummins Cederberg brings extensive experience in the planning, design, permitting, and construction support of living shoreline and hybrid stabilization projects across the state. Our work blends shoreline protection, ecological enhancement, public access, and long-term adaptability into unified systems tailored to Florida's urban waterfronts and estuarine environments.

Our design philosophy is site-driven and layered. We evaluate coastal processes, sediment dynamics, regulatory frameworks, constructability constraints, and stakeholder priorities at the micro-reach scale. From this analysis, we develop integrated systems that may include offshore oyster reef attenuation structures, low-crested sills, riprap toe protection, intertidal terraces, and targeted mangrove or marsh plantings.

Cummins Cederberg, along with trusted partners **Arehna**, **Ecosphere**, and **CMA**, have successfully delivered numerous waterfront park rehabilitation and enhancement projects that integrate ecological restoration with resilient shoreline protection, including:

- **Manatee County Oyster Restoration Master Plan, Manatee County.** Developed a countywide restoration framework including historic habitat analysis, water quality assessment, climate stressor evaluation, and prioritization of 45 candidate sites.
- **Currie Park Redevelopment, Palm Beach County (alongside CMA).** A resilient waterfront destination featuring a public promenade, enhanced recreation amenities, and a living shoreline integrated with

native landscapes to strengthen coastal resiliency and public access.

- **Crandon Park Living Shoreline, Miami.** Stabilized shoreline using native limestone, mangroves, and marsh grasses to reduce erosion and enhance habitat. Florida's first WEDG-Certified project.
- **Jose Marti Park Adaptive Redesign, Miami.** Designed and permitted a resilience-focused urban living shoreline requiring USACE coordination.
- **Bayfront Park Living Wall, Longboat Key.** Designed and permitted a living seawall system incorporating reef tiles for shoreline stabilization
- **Lemon Bay/Wildflower Preserve, Charlotte County (Arehna).** Provided geotechnical engineering services, materials testing, and site recommendations for habitat restoration on his 80-acre preserve located on the Cape Haze peninsula.
- **Alligator Creek Charlotte Harbor Buffer Preserve Habitat Restoration, Charlotte County (Ecosphere).** Assisted the SWIM Program and FDEP in developing a comprehensive restoration plan for this 1,600-acre parcel on the eastern shoreline of Charlotte Harbor, restoring wetland function through exotic vegetation removal, mosquito ditch backfilling, and re-grading to restore historic sheet flow and saltern systems.

In addition to shoreline treatments, we design nature-based upland buffers, including dune systems, mangrove transition zones, spoil island restoration, and boardwalk integrations. Our living shoreline portfolio reflects a consistent commitment to engineering rigor, environmental stewardship, regulatory efficiency, and constructable, climate-resilient solutions tailored to Florida's dynamic coastlines.



2. Coastal Engineering & Design Projects

Cummins Cederberg maintains a comprehensive coastal engineering portfolio spanning traditional hard infrastructure and innovative hybrid systems. Our engineers are experienced in coastal processes analysis, numerical modeling, structural design, environmental impact evaluation, monitoring, construction administration, inlet management, and marine infrastructure design.

We recognize that historic baselines no longer define present or future conditions. For projects such as Tiki Point—located at a harbor confluence with public infrastructure and marina interface—this forward-looking approach is essential. We routinely design for compound flooding, vessel wake, sea level rise projections, and long-term settlement and performance in soft estuarine sediments. Sea level rise, storm intensification, and compound flooding increasingly shape coastal performance criteria. Our designs reflect these realities, incorporating adaptive capacity and long-term resilience into every phase of project development.

Experience Highlights:

- **Comprehensive Coastal Engineering Expertise:** Breakwaters, revetments, artificial reefs, hybrid shoreline systems, port bulkheads, marina infrastructure, and tidal flood mitigation improvements.
- **Resilience Integration:** Engineer of Record for the City of Hollywood Tidal Flood Mitigation Program and Currie Park Redevelopment.
- **Marine Structural Engineering for Living Shorelines:** Seawalls, pile-supported structures, piers, floating boardwalks, and hybrid systems such as the living 3D seawall at Jose Marti Park.
- **High-Energy Shoreline Solutions:** Designed more than 140 seawalls utilizing durable, sustainable materials in high-exposure environments.
- **Underwater Engineering & Inspection:** Ten OSHA-compliant engineer divers conducting inspections, assessments, and constructability evaluations.

Full Project Lifecycle Delivery: Services spanning feasibility analysis and field investigations through final design, permitting, bidding support, and construction oversight.

Tiki Point Living Shoreline RFP No. 20260251

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3. Stakeholder Engagement & Public Education Projects

Successful living shoreline projects—particularly along highly visible public waterfronts—depend on structured stakeholder engagement, transparent communication,



Public outreach meeting led by Cummins Cederberg Principal Engineer Jannek Cederberg at Matheson Hammock Park, engaging community members on living shoreline concepts and waterfront resilience strategies

and accessible technical information.

Cummins Cederberg has delivered structured, transparent, and community-supported outreach programs across Florida. Our approach aligns with CHNEP and FDEP Resilient Florida outreach principles, translating complex coastal science and engineering concepts into clear, accessible messaging for residents, decision-makers, and agency partners.

Experience Highlights:

- **Public Communications Materials:** technical exhibits, renderings, animations, StoryMaps, and educational graphics.
- **Technical Facilitation:** Presentation of coastal modeling results, resilience metrics, and design alternatives in accessible formats.
- **Private Waterfront Coordination:** Engagement with HOAs, condominium associations, marina operators, and waterfront property managers.
- **Multi-Agency Coordination:** Collaboration with FDEP, USACE, NOAA/NMFS, CHNEP, FDOT, GINS, and municipal partners.
- **Representative Engagement Projects:** Veterans Park, Jose Marti Park, Miami River Living Shoreline,

Miami Beach Living Shoreline Program, and Sarasota Bayfront initiatives.

4. Permitting Application Preparation Projects/Tasks

Cummins Cederberg maintains one of Florida's most experienced coastal regulatory teams, with decades of experience securing federal, state, and local authorizations for nature-based shoreline systems, hybrid stabilization projects, and coastal upland improvements.

Our permitting professionals include former FDEP Deputy Directors, former USACE Section Chiefs, and former state and federal permit reviewers. This direct regulatory experience provides unique insight into agency expectations, review pathways, and interagency coordination processes. We proactively identify jurisdictional constraints, anticipate agency concerns, and structure applications to minimize Requests for Additional Information (RAIs) and compress review timelines.

Our permitting workflow and monitoring programs align with DEP QA Rule 62-160 and EPA/FDEP Quality

Assurance Project Plan (QAPP) requirements referenced in State grant work plans.

Experience Highlights:

- **Comprehensive Permitting Expertise:** Environmental Resource Permits (ERP), USACE Section 404/10 authorizations, ESA coordination with NMFS/USFWS, sovereign submerged lands authorizations, coastal construction control line permits, and local development approvals.
- **Complete Permit Package Preparation:** Alternatives analyses, avoidance and minimization documentation, mitigation strategies, pre-application coordination, and interagency negotiations.
- **Recent Living Shoreline Authorizations:** Crandon Park, Jose Marti Park, Miami River, Miami Beach shoreline parks, and multiple Sarasota Bay projects.
- **Marine Resource Assessment Capabilities:** Thirteen scientific divers conducting benthic habitat mapping, seagrass surveys, coral relocation, oyster substrate evaluation, and post-construction monitoring.
- **Sensitive Resource Permitting:** Experience within national seashores, aquatic preserves, critical habitat, and other protected coastal environments.

**1ST WEDG
VERIFIED
PROJECT IN
FLORIDA**

Jose Marti Park Adaptive Redesign Project



Experience

Summary

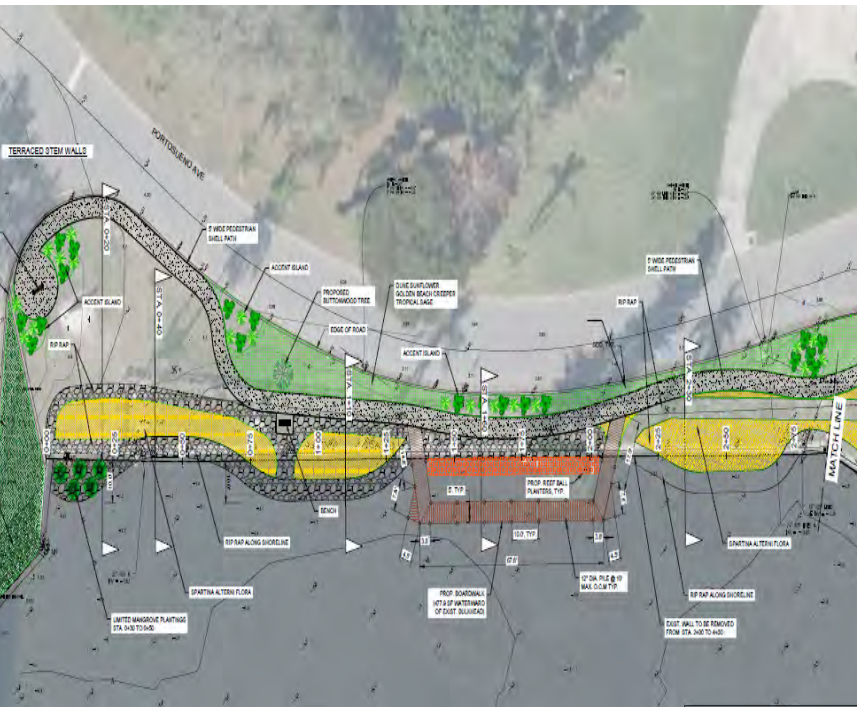
The following pages include a comprehensive collection of our current and successfully completed living shoreline projects. Each project profile highlights our approach, from initial site assessment and design through to construction and final inspection. We detail the unique challenges faced, the innovative solutions implemented, and the tangible benefits delivered to the local community. This portfolio not only underscores our technical expertise and commitment to quality but also illustrates our ability to deliver projects on time and within budget, consistently exceeding client expectations. Through these examples, we demonstrate our proven track record and depth of our experience in seawall engineering.

Shoreline Assessment, design, permitting
 Unique environmental conditions
 Design, permitting, implementation technology
 Approaches to enhance efficiency
 Grant funded
 Public outreach

Portosueno Park Living Shoreline & Waterfront Improvements, Bradenton	●	●	●	●		
South Maritana Living Shoreline, St. Pete Beach	●	●	●	●	●	●
Manatee County Oyster Restoration Master Plan, Manatee County			●			
City of Sarasota Resiliency, Sarasota	●	●			●	●
Citywide Strategic Seawall Capital Improvement Plan, St. Petersburg	●	●	●	●		●
Conservancy of Southwest Florida Resiliency Blueprint, Southwest	●	●		●		●
Beach Park Seawall Replacement & Living Shoreline, City of Miami Beach	●	●	●	●	●	
Currie Park Redevelopment and Living Shoreline, City of West Palm Beach	●	●	●	●	●	●
Tidal Flood Mitigation & Shoreline Protection, Living Shorelines, Hollywood	●	●	●	●	●	●
Sawfish Bay Park Living Shoreline, Town of Jupiter	●	●	●	●	●	●
Riverside Village Living Shoreline, Jensen Beach	●	●	●	●		●
Citywide Living Shoreline Viability Assessment, City of Miami Beach	●	●		●		
FDEP Living Shoreline Database, Statewide	●	●		●		
North Beach Park Tidal Flood Mitigation & Living Shoreline, Hollywood	●	●	●	●	●	●
Adaptive Redesign of Jose Marti Park, Miami	●	●	●	●	●	●
Mid Beach Park Seawall Replacement & Living Shoreline, City of Miami Beach	●	●	●	●	●	
West 40th Street Seawall Replacement & Living Shoreline, City of Miami Beach	●	●	●	●	●	
Crandon Marina Living Shoreline, Key Biscayne	●	●	●	●		
Jungle Island Shoreline Stabilization, Miami	●	●	●	●		

Portosueno Park Living Shoreline and Waterfront Improvements

Bradenton, Florida



Cummins Cederberg has been contracted by Manatee County to provide marine engineering and environmental consulting services for waterfront improvements. The County received funding through the RESTORE Act to restore the park shoreline along the northern marina basin. The project includes removal of an existing deteriorating bulkhead to install a living shoreline along ~600 LF. The living shoreline has been designed to provide environmental habitat, enhance recreational access to the waterfront and accommodate rising sea levels. The design will also include a manatee viewing platform, a pedestrian walking path, improved ADA parking areas, a pedestrian boardwalk and overwalk fishing platforms.

Scope:

- Living shoreline design
- Marine engineering
- Bathymetric survey
- Marine resource survey
- Public outreach
- Environmental permitting
- Seawall inspection and removal
- Bidding and construction administration

Our marine biologists conducted a qualitative marine resource survey to identify potential seagrasses, oysters, and other marine resources of significance along the shoreline. An environmental survey report was prepared summarizing the findings of the survey.

Based on the field investigations, our engineers developed 3 conceptual living shoreline designs that included a combination of rip rap, oyster balls, segmented rock sills, mangrove planters, vegetated planters, and living wall panels design to stabilize the shoreline and accommodate upland stormwater drainage. Cummins Cederberg will develop the final design, construction documents and an opinion of probable construction costs for the selected design option.

The design team supported County staff and facilitated an onsite public stakeholder engagement meeting to review all 3 conceptual design options. Upon completion of the design, Cummins Cederberg will perform bidding and construction administration support services.

South Maritana Living Shoreline

St. Pete Beach, Florida

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Coastal & Marine Engineering



Cummins Cederberg is providing coastal engineering, grant-funded planning, and environmental permitting services to enhance and protect approximately 280 linear feet (LF) of shoreline in front of three waterfront properties in the Maritana neighborhood of St. Pete Beach.

The engineering team conducted above- and below-water inspections of approximately 280 LF of seawall. The inspection included a visual assessment of the structural components (e.g., cap, panels, piles) to identify signs of deterioration (e.g., cracking, spalling, displacement, undermining) in relation to the potential reuse in the nature-based living seawall design.

Based on the findings, Cummins Cederberg's engineers will develop two design alternatives incorporating either a living shoreline or a hybrid nature-based solution. These designs will consider future water levels, including high tides and sea-level rise, and will be presented in plan views overlaid on available aerial imagery. Cummins Cederberg will develop construction drawings based on the selected alternative.

Simultaneously, the environmental team at Cummins Cederberg is ensuring the project complies with all necessary permitting regulations. Given the project's location within the Tampa Bay Aquatic Preserve, the environmental team is collaborating with the City of St. Pete Beach and regulatory agencies such as the Pinellas County Water and Navigation Section, the Florida Department of Environmental Protection (FDEP), and the U.S. Army Corps of Engineers (USACE) to meet all environmental requirements are met.

Scope:

- Coastal engineering
- Environmental permitting
- Marine engineering
- Living shoreline design
- Above and below inspection

Conservancy of Southwest Florida Resilience Blueprint Southwest, Florida

CUMMINS | CEDERBERG
Coastal & Marine Engineering

The Conservancy of Southwest Florida, a prominent non-profit organization committed to safeguarding the region’s natural environment and quality of life, is addressing the growing challenge of flooding in the City of Naples. Rising sea levels, storm surge, and rainfall-induced events threaten both coastal and inland areas, requiring innovative solutions beyond traditional infrastructure. To meet this challenge, the Conservancy is launching the “Working with Nature: Flood Resilience Blueprint,” a strategic initiative designed to complement existing city resilience plans with conceptual nature-based and hybrid solutions.

Scope:

- Coastal engineering
- GIS story map
- Stakeholder engagement
- Data collection
- Conceptual designs

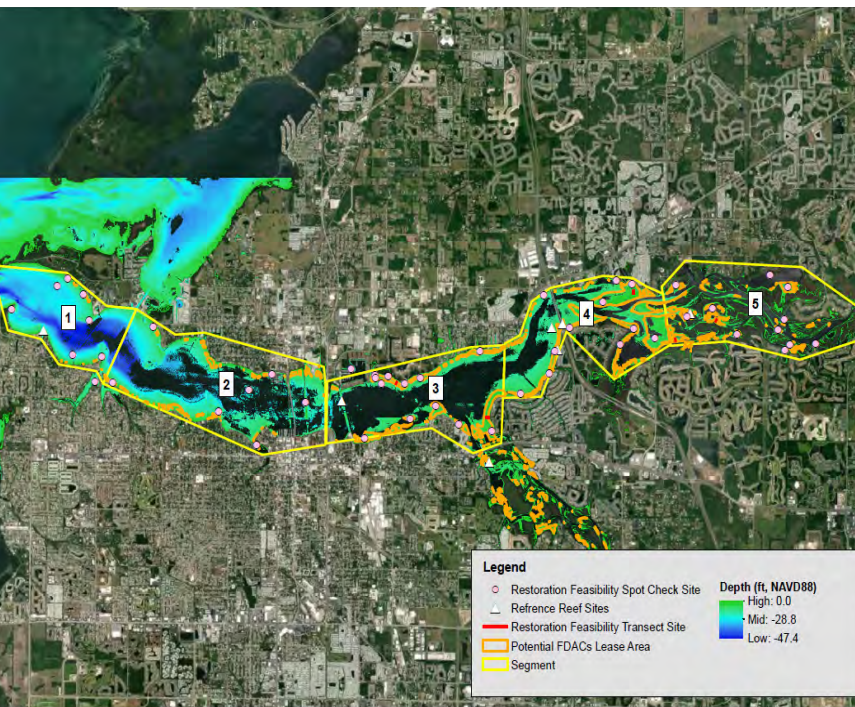
Cummins Cederberg is leading the technical development of this Blueprint. Their work includes comprehensive data collection and analysis, identification of representative area typologies, and the creation of up to six conceptual designs tailored to local conditions. The project also features robust stakeholder engagement through listening sessions and public workshops, the development of a GIS Story Map for digital outreach, and a detailed Blueprint Report that reviews local policies, permitting feasibility, and highlights potential pilot projects.

Through this effort, the Conservancy gains a high-level guidance document that empowers both public and private stakeholders, including neighborhoods and condo associations, to pursue resilient adaptation strategies. The Blueprint provides actionable recommendations, visual materials for outreach, and a foundation for future site-specific design and engineering. Ultimately, this work supports the Conservancy’s mission to protect southwest Florida’s land, water, and wildlife for current and future generations, representing a proactive step toward a more resilient and sustainable Naples community.

Manatee County Oyster Restoration Master Plan

Bradenton, Florida

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Coastal & Marine Engineering



Cummins Cederberg provided marine engineering and environmental consulting services specific to development of an Oyster Restoration Master Plan for Manatee County, with a focus on the Manatee River. This project was in collaboration with the Manatee County Ecological and Marine Resources Division within the Natural Resources Department of Manatee County. This plan was intended to guide large-scale oyster habitat restoration and to identify and prioritize project areas to achieve a goal of restoring oyster habitats in the Manatee River.

The team conducted a desktop review to gather and synthesize available existing data relative to oyster restoration efforts within the County and greater Tampa Bay region. This review included, but was not limited to, historical resources documenting the presence and extent of oysters within Manatee County; chemical (e.g., salinity, DO, pH) characteristics of the Manatee River; existing biological data (i.e., previously conducted and published field data and/or biological assessments for seagrasses, listed species, oyster and other wildlife occurrence data); physiographic data (e.g., water quality, LiDAR and bathymetric data, tidal records, sea level rise projections); and local knowledge regarding human uses and potential human use conflicts.

A team of marine scientists visited natural oyster reef sites along the Manatee River via snorkel to analyze and identify success criteria at those locations, which helped inform prioritization of 45 future potential restoration sites that were subsequently surveyed.

The team evaluated permitting and restoration strategies to develop a guide aimed at informing future oyster restoration efforts. This guide included federal and state regulatory permitting challenges (e.g., submerged lands ownership

Scope:

- Field data collection
- Desktop due diligence
- Marine resource survey
- Restoration strategies & suitability
- Siting analysis and prioritization
- Master planning
- Permitting feasibility

issues, marine resource setback requirements, impact limitations); suggested regulatory approaches; siting metrics for selecting and prioritizing restoration sites; considerations for future climate changes (e.g., rising water levels, changing temperatures and salinity gradients, acidification); and a sampling of restoration techniques, materials, and methods. Funding and partnership opportunities were also identified. All information was compiled into a Manatee County Oyster Restoration Master Plan, which served as a living document for future oyster restoration efforts within the County.

City of Sarasota Resiliency Initiative

Sarasota, Florida

CUMMINS | CEDERBERG
Coastal & Marine Engineering



The City of Sarasota contracted with Cummins Cederberg to facilitate and support Sarasota's Citywide Resiliency Initiative, which is a multi-part program aimed to support implementation of the City's Vulnerability Assessment and Adaptation Plan, mitigate and reduce flood risks, and provide continuity among resiliency policies and programs associated with coastal flooding and sea level rise. The City received a Florida Department of Environmental Protection (FDEP) Resilient Florida Grant for \$2,588,000, as well as a \$500,000 grant from the West Coast Inland Navigation District (WCIND) Grant for implementation of three key City projects:

1. Bayfront Park Seawall Rehabilitation
2. Ken Thompson Living Shoreline and Armoring
3. Citywide Topographic Mapping

Cummins Cederberg supported the City in drafting the FDEP Resilient Florida Implementation grant work plan and contract agreement in accordance with the grant application. Our grant specialists worked closely with the City staff to serve as the City's representative to develop, review, and maintain the overall project schedule inclusive of all three projects. A detailed schedule of milestones and deliverables was developed as part of the grant work plan. This scope included workplan and agreement revisions as well as grant agreement amendments needed with FDEP as the projects progress.

Our team is responsible for grant administrative services, including preparation of match support documentation and tracking, development of the required FDEP and WCIND Quarterly Reports. Cummins Cederberg provided ongoing coordination

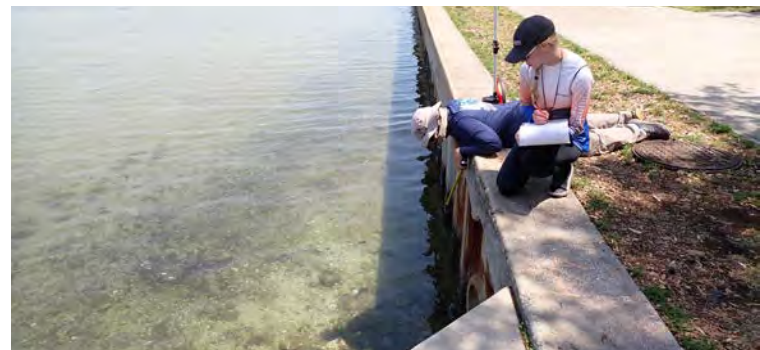
Scope:

- Grant administration
- Grant compliance support
- Project management
- Resiliency planning and policy review
- Stakeholder engagement
- Procurement support
- Citywide LiDAR data support

and correspondence with the FDEP grant manager, City staff, and the consultant teams contracted to perform the Citywide Topographic Mapping and the Ken Thompson Park projects. Support with FDEP payment requests, grant budget coordination, and deliverable tracking is included in this task.

Citywide Strategic Seawall Capital Improvement Plan St. Petersburg, Florida

CUMMINS | CEDERBERG
Coastal & Marine Engineering



Cummins Cederberg is providing coastal and marine engineering services to assess and classify the condition of approximately 72,000 LF (13.6 miles) of municipal seawalls. This strategic seawall capital improvement plan includes considerations for rising sea level and increased severe storm events, understanding the City's vision for the seawalls by neighborhood and downtown waterfront district, development of a GIS database for the seawalls, development of a coastal design toolbox, prioritization of repairs and/or replacements based on available funding, maintenance of a project website, grant support, and making recommendations for changes to local seawall ordinances.

Our team of engineers began with comprehensive above- and below-water inspections for all the City's municipal seawalls, documenting the condition of each existing seawall in detail. Following these inspections, the team is compiling a comprehensive report of findings, highlighting critical areas needing immediate attention and those requiring long-term maintenance.

Based on the findings described in the comprehensive report, Cummins Cederberg is developing the strategic capital improvement plan that outlines priority projects with an actionable roadmap to support the City's implementation for improved resiliency against present coastal conditions and future flood risks. This plan will prioritize seawall repairs and replacements, align improvements with available funding sources, and incorporate sustainable and resilient design principles to ensure the seawalls can withstand future climate challenges.

Additionally, we are working to provide recommendations for updating local seawall ordinances to enhance regulatory frameworks and promote best practices in coastal engineering.

Scope:

- Coastal engineering
- Grant support
- Above and below water inspections
- GIS database
- Seawall design
- Capital improvement plan
- Public outreach
- Local ordinance update

Jungle Island Shoreline Stabilization

Miami, Florida

CUMMINS | CEDERBERG
Coastal & Marine Engineering



Jungle Island is a zoological park, situated on the northern extent of Watson Island, within the Biscayne Bay Aquatic Preserve. Cummins Cederberg was retained to design, permit, and provide construction administration services for shoreline stabilization (phase 1) and a new docking facility (phase 2). As part of the design and permitting process for the shoreline stabilization, Cummins Cederberg marine biologists conducted a coastal vegetation and marine resource survey along 1100 linear feet of unconsolidated shoreline. Seagrasses and several mangroves were documented within the project area.

Scope:

- *Engineering inspection*
- *Shoreline stabilization*
- *Biological assessment*
- *Dock design*
- *Construction plans*

Cummins Cederberg designed a 1,008 linear foot rock revetment consisting of 1.5-foot diameter boulders. The revetment was design to avoid and minimize impacts to resources to the maximum extent practicable by keeping the waterward limits of the revetment above the MHWL and meandering around mangrove roots and trunks. Cummins Cederberg calculated the area of mangrove trimming and root impacts required to construct the rock revetment. Cummins Cederberg secured environmental permits from the U.S. Army Corps of Engineers (USACE), Florida Department of Environmental Protection (FDEP), and Miami-Dade County Division of Environmental Resources Management (DERM). Construction is complete.

The new docking facility, currently under permit review, consists of two docks and four slips (1 slip for water taxi/ ferry use and 3 slips for public day docking). There is vast seagrass coverage throughout the project site and the site is subject to the Miami- Dade County state approved manatee protection plan (MPP). Cummins Cederberg designed the docking facility to follow the MPP and avoid and minimize impacts to seagrasses. Mitigation is being required to offset impacts to seagrass that cannot be avoided in the form of shallow shoal

protection. Cummins Cederberg identified a nearby shallow shoal with seagrass and prop scarring to serve as a mitigation site. A UMAM (“Universal Mitigation Assessment Method”) was conducted and a mitigation and monitoring plan was prepared for the installation of “Caution Shallow Water” Florida Fish and Wildlife Conservation Commission (FWC) approved markers will be installed and the shoal monitored for no further impact. The FDEP permit has been secured. The DERM permit is pending submittal of final documents and the USACE permit is pending completion of USFWS consultation.

Citywide Shoreline Viability Index

City of Miami Beach, Florida

CUMMINS | CEDERBERG
Coastal & Marine Engineering



Cummins Cederberg analyzed 118 City-owned shoreline segments to select locations for living shorelines to increase the stabilization and resiliency of waterfront City property and increase community engagement with the water. The analysis was conducted through an extensive review of current and historical aerial imagery and seawall inspection reports. Each site was assigned a score based on factors such as cost efficiency, constructability, wave exposure, and the age of the current structure, to obtain a list of the ten most viable sites to incorporate living shorelines.

An environmental resource survey and engineering site visit were conducted for each of the ten viable sites for living shorelines to refine the list. Cummins Cederberg worked with the City to select the three optimal locations for living shoreline development based on these assessments. The three selected sites are West 40th Street, Mid-Beach Park, and Beach View Park.

Cummins Cederberg also conducted research to evaluate grant funding opportunities for each of the three living shoreline projects. The City successfully obtained grants to support the construction of the living shoreline projects for the three sites.

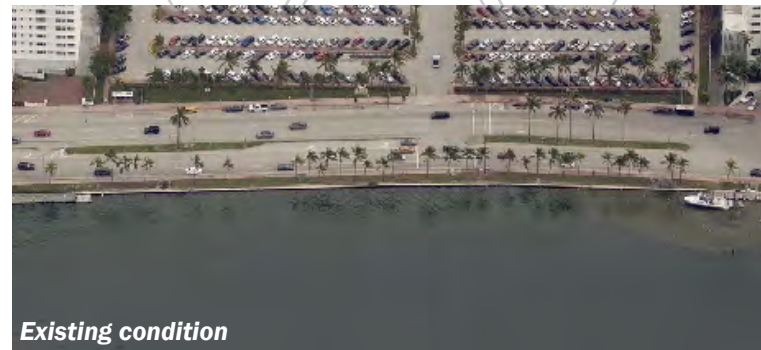
Scope:

- Coastal engineering
- Living shoreline design
- Benthic surveys
- Permitting due diligence
- Seawall design
- Grant research
- Pier design
- Kayak launch
- Boardwalk design

Mid Beach Park Seawall Replacement and Living Shoreline

Miami Beach, Florida

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Coastal & Marine Engineering



Existing condition



Cummins Cederberg is providing coastal engineering and environmental consulting services to the City of Miami Beach to improve Mid-Beach Park's seawall and living shoreline to increase the elevation of the shoreline, provide environmental benefits, increase resiliency of waterfront City property, and increase community engagement with the water.

Our team of marine biologists conducted an environmental resource survey at the site to identify and assess potential seagrasses, corals, or other marine resources of significance. Based on the results of the environmental resources survey, our engineers developed a design for the replacement of 590 LF section of seawall with the implementation of a living shoreline. The design includes three fishing piers, the inclusion of a central viewing platform, and a perimeter boardwalk with ADA access. Additional shade trees are provided landward of the living shoreline, and a widened sidewalk to improve pedestrian circulation through the area.

The design aimed to safeguard upland areas against tidal flooding, enhance shoreline stabilization, and bolster waterfront resiliency. The proposed living shoreline solution included the installation of specialized planters to promote ecological diversity, enclosed by a combination of riprap revetment and a sheet pile toe wall. A proposed living shoreline solution included the installation of specialized planters incorporating red and black mangroves along with coastal marsh grasses that will enhance the entire project area, enclosed by a riprap revetment and a sheet pile toe wall. The design features a perimeter boardwalk with ADA access walkways to the boardwalk and a central fishing pier as an additional amenity to connect residents with the living shorelines and the water.

As the project is funded by a Resilient Florida Grant, Cummins Cederberg is also supporting the City with the completion of a SLIP study for the living shoreline.

Tiki Point Living Shoreline RFP No. 20260251

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Scope:

- Coastal engineering
- Seawall design
- Grant support
- Living shoreline engineering design
- Living shoreline permitting
- Benthic surveys
- Boardwalk design
- Pier design

Beach View Park Seawall Replacement and Living Shoreline

Miami Beach, Florida

CUMMINS | CEDERBERG
Coastal & Marine Engineering



Existing condition



Cummins Cederberg is providing coastal engineering and environmental consulting services to the City of Miami Beach to improve Beach View Park's seawall and living shoreline to increase the elevation of the shoreline, provide environmental benefits, increase resiliency of waterfront City property, and increase community engagement with the water.

Our team of marine biologists conducted an environmental resource survey at the site to identify and assess potential seagrasses, corals, or other marine resources of significance. Subsequently, our engineers developed a design for the replacement of 300 LF section of seawall with the implementation of a living shoreline. The design aimed to safeguard upland areas against tidal flooding, enhance shoreline stabilization, add environmental features, and bolster waterfront resiliency.

The proposed living shoreline solution included the installation of specialized planters incorporating red and black mangroves along with coastal marsh grasses that will enhance the entire project area, enclosed by a riprap revetment and a sheet pile toe wall. The design also includes enhancement of the area immediately landward of the living shoreline with the addition of coastal hammock upland trees and the widening of the existing sidewalk to provide better pedestrian circulation. The design features a perimeter boardwalk with ADA access walkways to the boardwalk and a central fishing pier as an additional amenity to connect residents with the living shorelines and the water.

As the project is funded by a Resilient Florida Grant, Cummins Cederberg is also supporting the City with the completion of a SLIP study for the living shoreline.

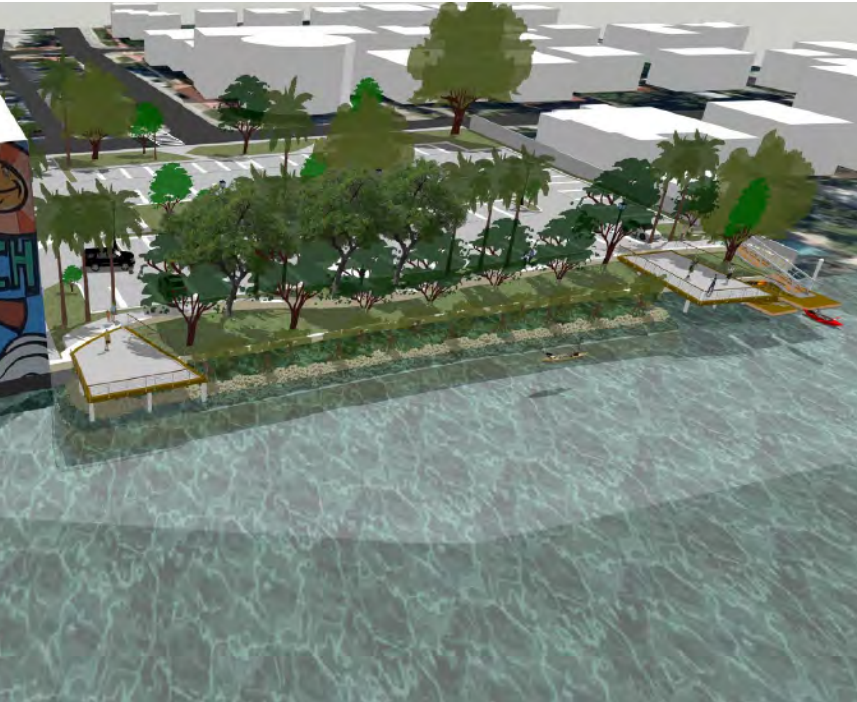
Scope:

- Coastal engineering
- Seawall design
- Grant support
- Living shoreline engineering design
- Living shoreline permitting
- Benthic surveys
- Boardwalk design
- Pier design

West 40th Street Seawall Replacement and Living Shoreline

Miami Beach, Florida

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Coastal & Marine Engineering



Existing condition



Cummins Cederberg is providing coastal engineering and environmental consulting services to the City of Miami Beach to improve West 40th Street's seawall and living shoreline to increase the elevation of the shoreline, provide environmental benefits, increase resiliency of waterfront City property, and increase community engagement with the water.

Our team of marine biologists conducted an environmental resource survey at the site to identify and assess potential seagrasses, corals, or other marine resources of significance.

Following the environmental resource survey, our engineers developed a design for the replacement of 256 LF section of seawall with the implementation of a living shoreline to protect the uplands against tidal flooding, enhance stabilization, add environmental value, and bolster waterfront resiliency. Two fishing piers and a floating kayak launch will be installed as well as ecological enhancement will be achieved through the installation of mangrove planters.

As the project is funded by a Resilient Florida Grant, Cummins Cederberg is also supporting the City with the completion of a SLIP study for the living shoreline.

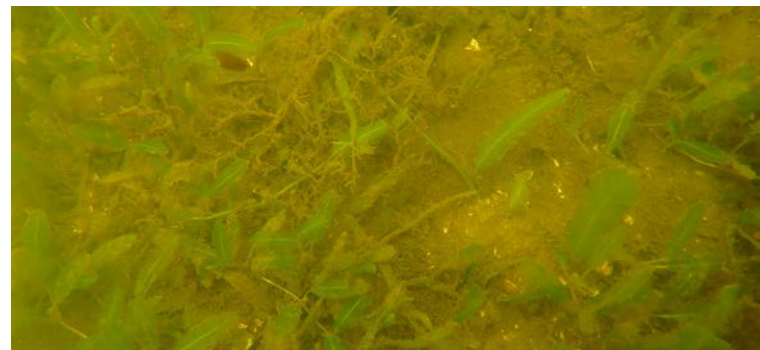
Scope:

- Coastal engineering
- Seawall design
- Grant support
- Living shoreline engineering design
- Living shoreline permitting
- Benthic surveys
- Fishing pier design
- Kayak launch design

Currie Park Redevelopment

City of West Palm Beach, Florida

CUMMINS | CEDERBERG
Coastal & Marine Engineering



Currie Park is a 16 acre City of West Palm Beach (City) owned public park situated along the western shoreline of the Lake Worth Lagoon. The purpose of this project is to redevelop Currie Park into a celebrated landmark for public health, welfare and economic vitality while building flood resilience.

The proposed upland improvements include the addition of a café and resiliency hub, tennis and pickleball courts, event lawn, playground, splash pad, fitness lawn, and associated parking and drainage improvements. Several in-water improvements are proposed, including, bulkhead demolition, rock revetment and sill construction, living shorelines, boat ramp and associated staging dock repair/replacements, new overwater boardwalks and a fishing pier, a new kayak lift and launch, an elevated perched beach, and excavation of uplands to create a cove area stabilized by limestone stepped seating (“social stairs”) down to the water.

PHASE I MASTER PLAN

Cummins Cederberg completed Phase I master planning for the Currie Park Redevelopment project. A bathymetric survey, preliminary coastal analysis, environmental feasibility concept development, and grant opportunity research were conducted, as well as the preparation of a marina implementation strategy.

Field Investigations

Marine engineering inspection, and marine resource surveying were conducted to evaluate the current conditions at the project site. The marine engineering inspection assessed the condition and lifespan of existing structures, providing crucial information for project analysis and design. The marine resource survey documented seagrass at the project site. This data informed the design process, enabling the team to avoid and minimize potential impacts to seagrass.

Scope:

- Bathymetric Survey
- Marine engineering inspection
- Preliminary coastal analysis
- Environmental feasibility
- Grant research and funding
- Marina implementation strategy
- Engineering design and construction plans
- Environmental permitting
- Sovereign submerged lands lease
- Opinion of probable cost development
- Grant administration

Coastal Analysis

Cummins Cederberg evaluated site-specific hydrodynamic and wave conditions of the project area to identify coastal parameters necessary to inform the structural analysis of the waterfront and over water engineering design. Design criteria values for sea level rise, king tides, currents, coastal storms (e.g., waves and surge), and winds were summarized in a Coastal Analysis Report and utilized in the waterfront and over water design.

Permitting Feasibility Study & Concept Development

Extensive permitting due diligence research was conducted to identify the anticipated challenges, potential risks of resource impacts, and other points of interest that may arise during regulatory permit processing with the local, state, and federal environmental agencies. Cummins Cederberg coordinated pre-application meetings with the relevant agencies and summarized the due diligence findings and results of the pre-application meetings in a final Permitting Feasibility Report. This information was used to guide the concepts the design team presented to the City.

Grant Opportunity Research

Working with the City, Cummins Cederberg assisted in successfully securing a \$16M grant from the Florida Department of Economic Opportunity to be used to implement the master plan.

PHASE II PROJECT IMPLEMENTATION

Cummins Cederberg is currently finishing up the environmental permitting, engineering design, and construction plans. A Statewide Environmental Resources Permit (SWERP) from the Florida Department of Environmental Protection (FDEP) authorizing the surface water management system was secured in 2022. The FDEP permit for the in-water works was issued April 2024. The USACE permit is anticipated to be issued in the summer of 2024. The engineering plans are about 95% complete and construction is anticipated to commence fall of 2024.

To meet the project goal while complying with site constraints, a few different living shoreline concepts are being implemented along the shoreline. They include a rock sill with pipe planters for mangroves; a concrete planter imbedded into the rock revetment for saltmeadow cordgrass; various sized reef balls for oyster recruitment; and three living shorelines to be constructed with clean sandy material, stabilized with a sheet pile toe wall and rock, for planting red mangroves and cordgrasses (smooth and saltmeadow species). The total planting space is 16,400 square feet.

Tidal Flood Mitigation and Shoreline Protection

City of Hollywood, Florida

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Coastal & Marine Engineering



Cummins Cederberg is assisting the City with their Tidal Flooding Mitigation and Shoreline Protection project. The scope includes evaluation of 22 City owned shoreline segments along 10,000+ ft. of shoreline within North Lake, South Lake, and the ICW. Conceptual designs have been prepared for each shoreline segment to provide site specific solutions to address tidal flooding. Concepts include living shorelines, rock revetments, and bulkheads and are consistent with the new City and County tidal flood barrier ordinances.

Our team of marine biologists completed a benthic resource survey of the submerged lands adjacent to the 22 project areas. The survey was conducted using SCUBA during the seagrass growing season and identified important protected resources. Resources observed included shoal grass, paddle grass, and Johnson's seagrass. This survey informed project design to ensure impacts to these important resources are avoided and minimized to the maximum extent practicable and will support environmental permit applications. Biologists also assessed the vegetation to identify protected and invasive species along the 22 project areas. Native vegetation will be protected, and exotic vegetation will be eradicated as part of project implementation.

Engineering inspections were conducted above and below water to assess the current condition of the 22 shoreline segments. These inspections informed design of tidal flood barriers that meet the City and County Codes and will be sufficient to protect the shorelines against sea level rise that is reasonably anticipated to occur during the design life of these structures. Tide gauges were deployed in North Lake, South Lake, and the Hollywood Marina to determine tidal prisms, lag time, and water level elevation differences between each lake and the

Scope:

- Marine resource survey
- Coastal wetland surveys
- Above and below water
- Structural engineering assessments
- Coastal engineering assessments
- Environmental permitting
- Grant application and administration
- Engineering design
- Construction administration
- Ordinance development

ICW. This information was utilized for design of tidal flood barriers for the project sites. This project will enable the City to mitigate the severe flooding that occurs during king tides and sea level rise in the neighborhoods surrounding North and South Lakes.

Cummins Cederberg secured a \$13.9M Resilient Florida Grant to supplement the City's GO Bond funding for project implementation. The conceptual designs were presented during a public meeting to solicit input and the designs have been reviewed with relevant departments within the City. Upon selection of project elements for each site, Cummins Cederberg will prepare permit drawings and applications to secure environmental regulatory permits for the proposed projects.

Sawfish Bay Park Shoreline Improvements

Jupiter, Florida

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Coastal & Marine Engineering



As part of a multi-year environmental restoration project of a historic marina basin, Cummins Cederberg is helping the Town of Jupiter implement living shoreline elements at Sawfish Bay Park to provide habitat and shoreline of the upland municipal park. Cummins Cederberg completed an engineering inspection of approximately 1,000 LF of existing vinyl bulkhead, a flushing analysis study, and a marine resources survey of the marina basin.

Our coastal engineers and environmental permitting experts coordinated with the Town of Jupiter and regulatory agencies to design sections of living shoreline including mangrove planters, rock revetments, and reef ball units in configurations that will accomplish the Town of Jupiter's goals of increasing coastal resiliency and enhancing natural habitat, while minimizing design and permitting costs.

Cummins Cederberg has secured Federal and State authorizations for the Phase I pilot area, and for Phase II of the multi-year project. The Sawfish Bay Park project will improve the experience of park visitors, increase the resiliency of the existing bulkhead, and restore ecological function and water quality.

The project is currently in the construction for Phase II, which includes the installation of living shoreline and reef balls within the basin. The Town partnered with a local student group to create and install the reef balls as part of a community outreach and education activity. Future phases include filling the basin to adjacent grades to promote seagrass growth, creating wetlands, installing a breakwater, additional mangroves planters, and new fishing platforms.

Scope:

- Coastal engineering
- Environmental permitting
- Environmental resource survey
- Flushing analysis
- Marine resource survey
- Grant support
- Construction administration

Riverside Village Shoreline Stabilization

Jensen Beach, Florida

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Coastal & Marine Engineering



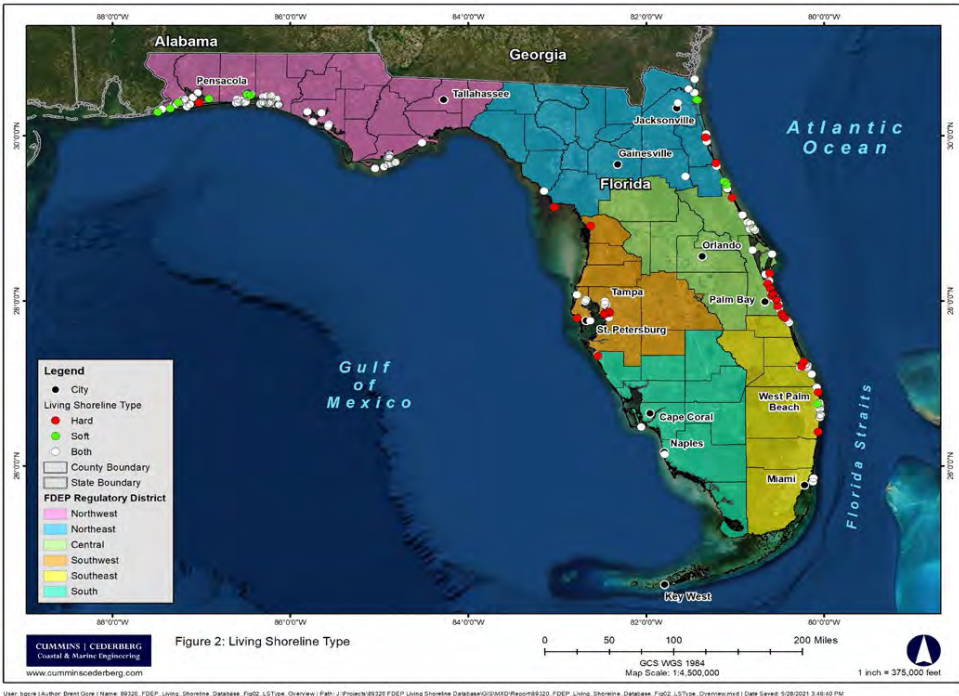
Cummins Cederberg was contracted to perform coastal engineering services including design, permitting, and construction administration for the rehabilitation/replacement of the existing shoreline stabilization structures and a new observation pier associated with the construction of new upland residences.

Cummins Cederberg designed multiple green and gray enhancements including a bulkhead, revetment, mangrove living shoreline, and kayak ramp to increase shoreline resiliency while meeting the vegetation restoration requirements of the Martin County Shoreline Protection Zone. These solutions not only completed the goal of improved shoreline stabilization, but did so in a way to benefit the environment and while meeting the client's desires for stronger protection against storm conditions.

Scope:

- *Engineering design*
- *Environmental support*
- *Shoreline stabilization*
- *Stakeholder engagement*
- *Construction administration*

FDEP Living Shoreline Database Statewide



The project entailed Cummins Cederberg developing an Excel database of state-permitted living shorelines from 2010 – Present for FDEP. Cummins Cederberg conducted a QA/QC review to ensure proper formatting of data in the spreadsheet (location, permit number, etc.). Cummins Cederberg will assist the Client in coordinating with the USACE to request the federal permits that match the listing of state permits in the database.

Scope:

- Environmental permitting
- Data base creation
- Living shorelines

Cummins Cederberg also assisted the Client and the Florida Fish and Wildlife Conservation Commission (FWC) in adding greater functionality to the map and search features on the website <http://floridalivingshorelines.com/>, which is hosted and maintained by FWC. To build out this database we led meetings with each agency and their office of technology/IT department as needed to ensure the data complies with agency standards. Upon completing this project, we presented the Client with a GIS Geodatabase with metadata, the living shoreline permit database, maps and charts summarizing the living shoreline project information, contact information from our outreach efforts, and a summary memorandum of work done.

Jose Marti Park Adaptive Redesign

City of Miami, Florida

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Coastal & Marine Engineering



The redesign of this 13-acre, multi-use recreational space on the Miami River explores ways in which the park can minimize tidal flood impacts to the surrounding neighborhood, adapt to sea level rise, and enhance waterfront access to residents. Given its physically and socially vulnerable location between the Miami River and Little Havana, a low lying, low-income Hispanic community, a participatory design process emphasizing community goals is critical for success.

The proposed work includes a floating boardwalk, providing access for direct water engagement and a 360-degree view with the Miami River on one side of the boardwalk and living shoreline planters on the landward side. The living shoreline and resilient seawall accommodate multiple goals of increasing shoreline stabilization and improving ecosystem services. The waterfront engineering design also includes a water taxi slip for potential water-based commuter services to create a more interconnected transportation option to Miami Beach and other possible locations around the Biscayne Bay.

The Jose Marti Park Adaptive Redesign will serve as a model for resilient waterfront parks that can adapt to current and future flood risks associated with climate change through the lenses of economy, ecology, and equity. Cummins Cederberg is responsible for the inundation modeling, waterfront engineering design, environmental permitting, and grant management. The project integrates nature-based solutions and community-driven design to enhance long-term resilience while preserving cultural and recreational value. It also aims to support regional climate adaptation goals and inspire similar efforts across Florida's vulnerable coastal communities. Jose Marti Park is Florida's first WEDG-verified project, recognized for meeting high standards in sustainable waterfront design and climate resilience.

Scope:

- Bathymetric survey
- Engineering inspection
- Waterfront design
- Marine resource survey
- Tidal flooding mitigation
- Environmental permitting
- Grant funding opportunities

Crandon Marina Living Shoreline

Miami, Florida

CUMMINS | CEDERBERG
Coastal & Marine Engineering



Cummins Cederberg provided shoreline stabilization via riprap revetment and living shoreline planters to address erosion concern observed on the north shoreline of Crandon Marina. The stabilization incorporated natural solutions, which enhanced environmental habitat, and increased biodiversity.

The shoreline stabilization was required as part of the overall master plan for Crandon Park. The overall purpose of the proposed project was to stabilize the shoreline from erosion, prevent sediment buildup, enhance mangrove vegetation and protect the areas designated for natural resource protection by performing the following activities:

- Install native limestone rock revetment to stabilize the northern shoreline and western shoreline to reduce erosion
- Stabilize the shoreline by mangrove enhancement and planting

Scope:

- *Environmental permitting*
- *Engineering design*
- *Cost estimates*
- *Bidding assistance*
- *Construction administration*

IV.



PROJECT CONTROL

IV. PROJECT CONTROL

A. Schedule

1. Techniques to Assure Schedule Adherence

At project kickoff, we establish a detailed, task-level baseline schedule tied directly to project deliverables and regulatory milestones. The schedule is actively managed throughout the project using Deltek Vantagepoint, which provides real-time visibility into staffing, progress, hours, and budget performance.

Key schedule control techniques for the Tiki Point project include:

- **Early execution of critical path activities**, including regulatory due diligence, bathymetric and topographic surveys, and environmental field assessments, to reduce downstream permitting and design risk.
- **Parallel task execution**, such as conducting permitting pre-application meetings while design development is underway, compressing overall delivery time.
- **Early environmental and regulatory risk identification**, including benthic, vegetation, and seagrass surveys, performed at the outset to minimize Requests for Additional Information (RAIs) during FDEP and USACE review.
- **Seasonally informed scheduling guarantees surveys and resource assessments** are completed within required environmental windows and avoid seasonal delays common to living shoreline projects.
- **Structured coordination and action tracking**, including bi-weekly technical working sessions and monthly progress meetings with documented agendas, action items, and follow-up responsibilities.

This framework allows early identification of schedule risks, implementation of corrective measures before delays occur, and disciplined on-time delivery of all project milestones and regulatory submittals.

2. Schedule Control & Responsibility

To support the above approach, we implement the following technical controls:

- **Work Breakdown Structure (WBS) and Baseline**

Schedule: A detailed WBS linked to task durations, dependencies, and critical path logic is developed at project initiation and maintained throughout the project.

- **Real-Time Progress Tracking:** Deltek Vantagepoint is used to track hours, deadlines, staffing, and resource loading, enabling proactive schedule adjustments when needed.
- **Integrated Permitting and Design Workflow:** Regulatory coordination, environmental surveys, and preliminary engineering are advanced concurrently to reduce permitting timelines and avoid redesign.
- **Regular Progress and Risk Reviews:** Progress meetings and risk logs support timely decisions, accountability, and momentum across all disciplines.

The Project Manager, Jenna Phillips, serves as the primary authority for schedule management, including day-to-day coordination, progress tracking, and reporting. Jenna is supported by a distributed leadership structure that secures accountability across all technical areas. Critical path activities—including survey scheduling, modeling execution, and permit submittals—are reviewed weekly to no milestone drift occurs.

B. COST

1. COST CONTROL TECHNIQUES

Our cost management approach is closely integrated with design development and permitting to support cost-effective, constructible solutions. Key cost control techniques include:

- **Opinions of Probable Construction Cost (OPCC)** prepared at the 30%, 60%, and 90% design stages.
- **Early value engineering**, including evaluation of hybrid and nature-based shoreline alternatives to balance performance and cost.
- **Real-time budget tracking** using Deltek Vantagepoint to monitor labor, budget burn, and cost-to-complete.
- **Alignment of design and permitting** requirements to minimize redesign and avoid permit-driven cost escalation.
- **Clear scope definition and early risk identification** to reduce unforeseen conditions and change orders.
- **Application of local and regional experience** to avoid constructability issues in constrained waterfront environments.

These techniques reduce change orders, support competitive bidding, and maintain alignment with County budget expectations.

2. Proven Ability to Control Costs

Cummins Cederberg consistently delivers living shoreline and coastal infrastructure projects within established budgets, including:

- Miami Beach Living Shoreline Projects (Mid-Beach, West 40th Street, Beach View), where iterative cost modeling supported grant compliance and controlled construction costs.
- Portosueno Park (Manatee County), where multiple alternatives were evaluated with OPCCs to allow selection of a design aligned with available funding.
- Additional living shoreline and resilience projects of similar scale and regulatory complexity delivered throughout Florida (could add another example/ case study here).

This consistent track record demonstrates disciplined cost forecasting, early value engineering, and proactive scope management—key to delivering the Tiki Point project within available grant funding.

3. Cost Control Responsibility

Cost control is led by the Project Manager, Jenna Phillips, supported by our Finance and Grant Administration Staff, who confirm compliance with CHNEP, BABA, and IJA funding requirements and cost eligibility. This structure allows us to safeguard financial discipline throughout design, permitting, and construction support.

Our team of marine science and engineers performing a preliminary assessment at one of the City of Miami Beach's living shoreline prioritization sites during a flooding event

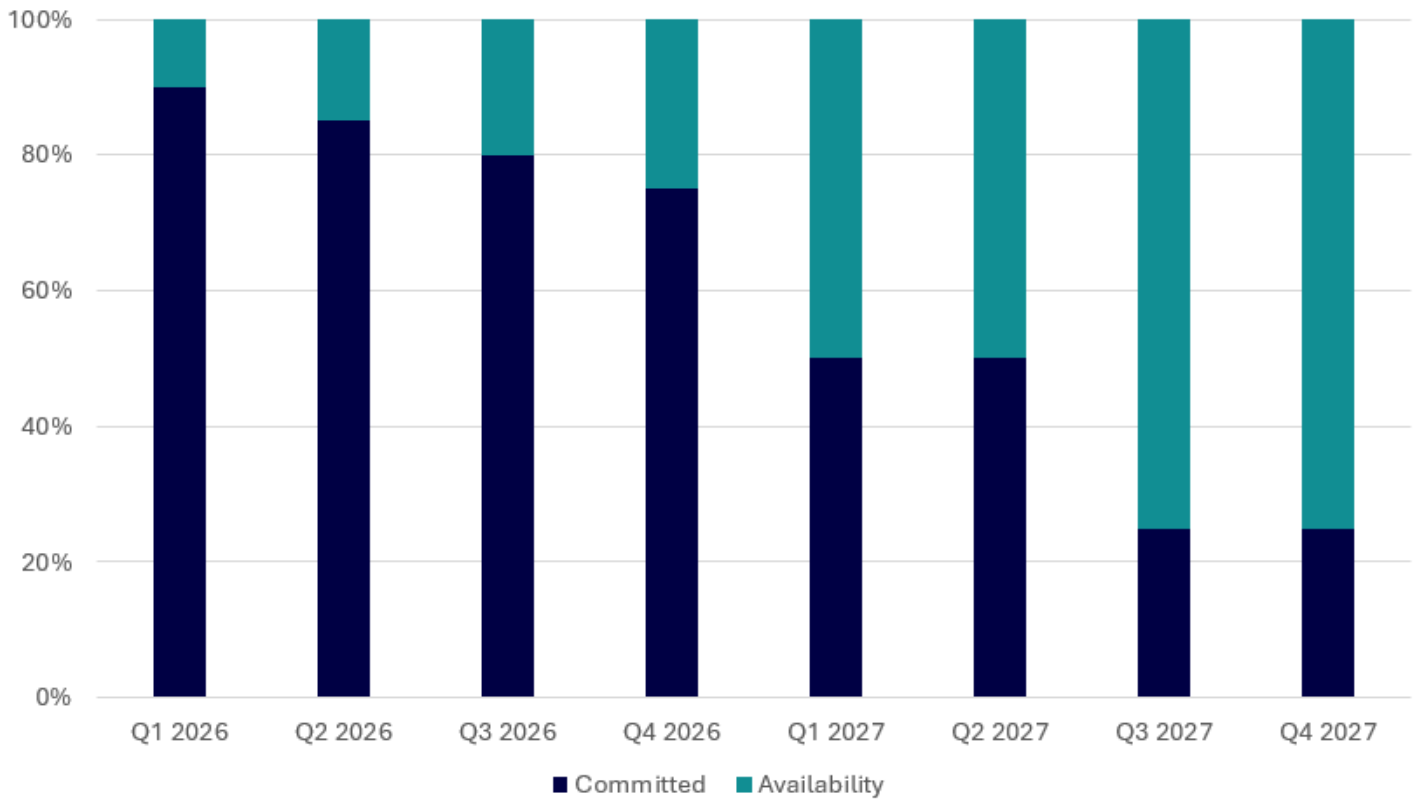


C. Recent, Current, & Projected Workload

Cummins Cederberg maintains a fully staffed coastal and marine engineering practice capable of supporting concurrent complex projects without compromising schedule or quality. Our workload capacity includes:

- 80+ professionals across coastal engineering, environmental science, permitting, construction administration, and structural engineering.
- Multiple offices throughout Florida, allowing flexible resource allocation and responsiveness.
- Concurrent delivery of major coastal programs, including Miami Beach living shorelines, Sarasota Bay Estuary Program projects, and Resilient Florida grant initiatives, all maintained within schedule.

Our workload and staffing are actively managed using Deltek Vantagepoint to facilitate adequate resource availability and uninterrupted delivery of County projects.



V.



PROPOSED DESIGN APPROACH

V. PRESENT PROPOSED DESIGN APPROACH FOR THIS PROJECT

1. Design Philosophy

Cummins Cederberg proposes a resilient, layered living shoreline solution for approximately 845 linear feet of Harborwalk at Tiki Point, located at the confluence of the Peace River and Charlotte Harbor. The design will reduce wave energy and shoreline erosion, enhance habitat and water quality through oyster and mangrove systems, maintain Harborwalk views and public access, and function as a replicable model supporting the County's adaption and comprehensive plans and Coastal & Heartland National Estuary Partnership's (CHNEP) mission.

Our approach builds upon the 2018 Jacobs Technical Memorandum by integrating documented field conditions, previously evaluated alternatives, and agency and stakeholder input into a refined, performance-based design strategy. Rather than applying a uniform shoreline treatment, we will evaluate site-specific micro-reaches along Harborwalk to address variations in water depth, sediment conditions, wave exposure, public access constraints, and marina interface requirements.

The proposed living shoreline will incorporate field proven, layered components that work together as a system.

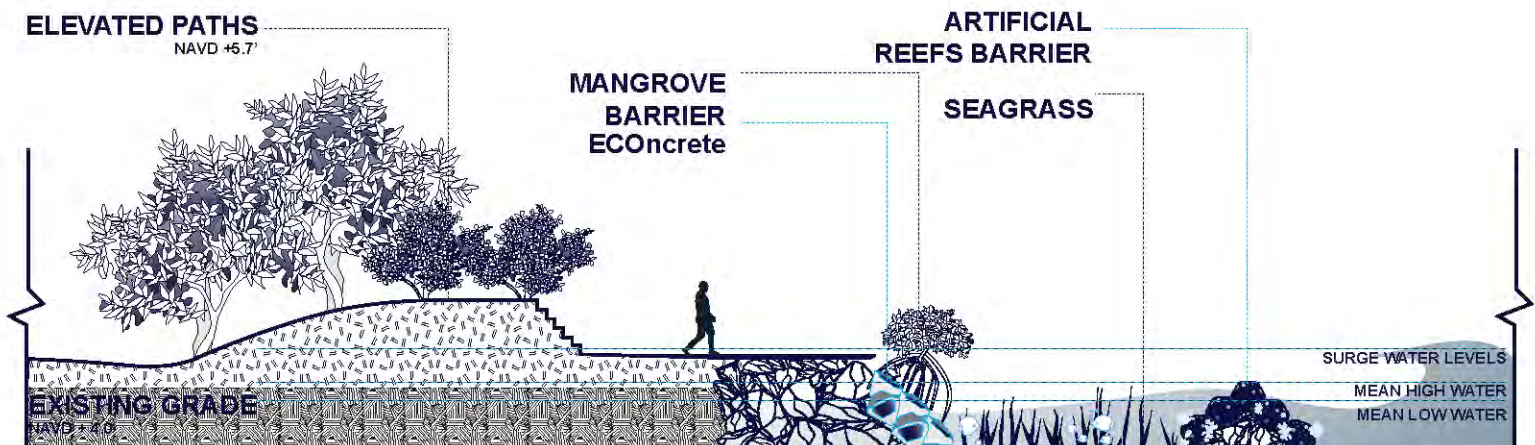
These may include:

- Nearshore oyster attenuation features to reduce incident wave energy and promote habitat uplift,
- Selective low-crested rock sills or riprap benches to establish stable intertidal elevations,
- Targeted mangrove or marsh plantings where light, energy, and substrate conditions support long-term viability,
- Transitional elements at seawall tie-ins to prevent flanking and undermining

Each element will be strategically configured to preserve vessel maneuvering envelopes for the future marina, maintain clear public viewsheds along Harborwalk, and minimize conflicts with navigation and recreational use. Crest elevations, spacing, and material gradation will be informed by hydrodynamic analysis and geotechnical evaluation to support long-term structural stability and ecological performance. This integrated, layered strategy aligns with the County's goal of implementing a model living shoreline project that can inform broader programmatic efforts and reflects Cummins Cederberg's extensive experience delivering similar systems throughout Florida.

Our design philosophy emphasizes multiple lines of defense. Offshore and nearshore attenuation features will

Layered living shoreline configuration demonstrating engineered habitat features designed to attenuate wave energy and enhance ecological function.



reduce wave energy before it reaches the shoreline, while intertidal habitat zones will stabilize sediments, improve water quality, and provide ecological uplift. This integrated strategy balances coastal engineering performance with habitat function, ensuring that infrastructure protection and environmental enhancement operate together rather than in conflict.

Adaptability is central to the design. The system will be developed to accommodate projected sea level rise, potential future marina modifications, and evolving public access needs. Features will be configured to allow incremental enhancement or expansion over time without requiring wholesale reconstruction, supporting long-term resiliency and fiscal responsibility.

Throughout design development, solutions will be advanced collaboratively with the County, CHNEP, and regulatory agencies to support technical defensibility,

constructability, and grant compliance. The result will be a resilient, low-maintenance, and aesthetically cohesive living shoreline that protects public infrastructure while enhancing the ecological value of this highly visible waterfront setting.

Project implementation and monitoring will be conducted in accordance with DEP QA Rule 62-160 and the EPA/FDEP Quality Assurance Project Plan requirements referenced by CHNEP and included in the State grant Work Plan. All public-facing materials will follow CHNEP and FDEP branding guidelines and will be prepared as ADA/Section 508-compliant PDFs to support accessibility and consistency with grant requirements.

2. Anticipated Problems & Solutions

Anticipated Challenges	Our Solution
Deep water adjacent to seawall (4–7 ft) limits natural marsh/mangrove zones.	Utilize offshore oyster attenuation features, low-crested sills, or riprap benches to create stable intertidal elevations suitable for mangrove recruitment.
Soft, unconsolidated sediments prone to settlement.	Conduct geotechnical probing and settlement analysis to inform embedment depth, toe protection, and material gradation.
Long fetch and northwest exposure drives wave climate.	Perform site-specific hydrodynamic modeling to optimize crest elevations, porosity, and feature spacing.
Sawfish critical habitat triggers NOAA consultation.	Early NOAA/NMFS coordination; incorporate structural gaps and avoid nearshore fill where feasible.
Future marina interface.	Maintain maneuvering envelopes through modeling of vessel turning radii.
High public visibility and Harborwalk use	Low-profile, aesthetically cohesive features; interpretive signage; preservation of viewsheds.
Sovereign submerged lands & permit pathway (NP27 vs IP).	Pre application with FDEP/USACE/NOAA NMFS to confirm authorization path
Grant/QA deliverables and public records compliance. records compliance.	Align all data review and submittals with DEP QA Rule 62 160 and CHNEP grant standards.



A view of Bayfront Park in Longboat Key, where Cummins Cederberg led the installation of 3D-printed reef tiles as part of a Living Seawall pilot project to enhance shoreline resilience and marine habitat.

3. Innovation in Engineering & Design

Our approach integrates proven living shoreline components with performance-based modeling, constructability planning, and habitat-forward design to create a system that is resilient, regulatory-compliant, and replicable.

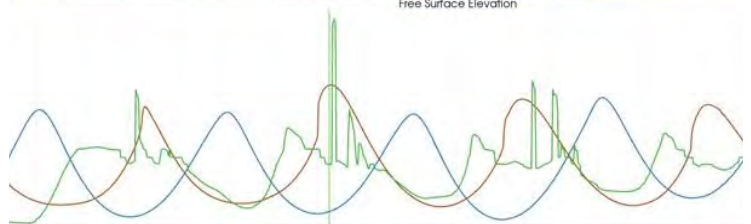
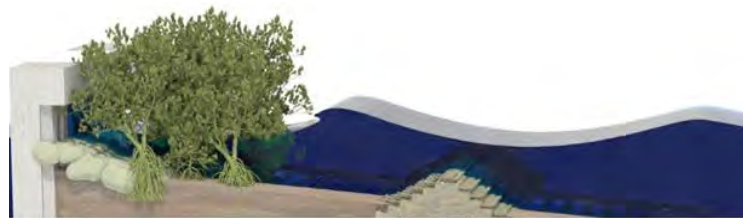
Where practicable, the design will prioritize natural materials and structural gradation over synthetic components, managing settlement through bearing design, stone interlock, and staged construction that promotes natural accretion and biological colonization.

All GIS deliverables and metadata will adhere to the Resilient Florida GIS Data Standards, ensuring consistency with statewide vulnerability and resilience datasets.

Layered, hybrid living shoreline tailored to micro reaches:

- **Hybrid Living Shoreline**
Tailored solutions by micro-reach, including mangrove modules, two-row oyster arrays in marina-adjacent areas, and an arc-shaped oyster field protecting the beach pocket, grounded in the Jacobs Technical Memorandum and refined through detailed design and agency and partner input.
- **Data-Driven Performance and Adaptability**
Coupled hydrodynamic and geomorphic modeling will optimize crest elevations and porosity to reduce wave energy while maintaining sediment transport and ecological connectivity, with built-in adaptability to accommodate sea level rise.
- **Constructability with Natural Materials**
Designs avoid geotextiles where practicable, managing settlement through gradation, bearing design, stone keys, and staged placement to promote long-term stability, natural accretion, and biological colonization.

- **Habitat-Forward Design**
Oyster-friendly materials, habitat roughness, and engineered gaps support fish and sawfish passage, while mangrove planting systems are matched to site-specific light and energy conditions—advancing CHNEP habitat and water quality goals.
- **Standards-Based GIS Integration**
All GIS data and metadata will comply with Resilient Florida GIS Data Standards, ensuring seamless integration with State datasets and long-term monitoring efforts.



This figure presents results from a high-fidelity numerical model for Dinner Key in Miami, evaluating how a hybrid natural-structural coastal protection system modifies wave dynamics and resulting surface elevation patterns across the layered configuration

Living & Nature-Based Shoreline Stabilization & Coastal Upland Buffers

Our team offers unmatched experience in the design, engineering, permitting, and construction of living shoreline and nature-based coastal features. Cummins Cederberg have delivered numerous waterfront park rehabilitation and enhancement projects that integrate ecological restoration with shoreline protection, including

Sarasota Bayfront Park, Town of Longboat Key's Bayfront Park, Currie Park in West Palm Beach, Jose Marti Park in Miami, and Crandon Park in Miami. In the City of Hollywood, we partnered on a tidal flood and shoreline protection initiative incorporating nature-based solutions along over 20,000 LF of City-owned shoreline. Designs included site-specific solutions (living shorelines, rock revetments, and bulkheads) consistent with new City and County tidal flood barrier ordinances developed by our Resilience Planning & Policy team.

Our work also includes direct experience creating coastal upland buffers that provide an essential landward transition zone between restored shorelines and upland development. These buffers often incorporate native dune vegetation, mangroves, spoil islands, and elevated boardwalks to enhance ecological function, improve stormwater filtration, and increase recreational access. At a North Lake neighborhood keyhole park in Hollywood, our design raised the shoreline and incorporated mangrove plantings and natural spoil islands for surge protection, coupled with boardwalks to maintain community access.

Project Manager Jenna Phillips brings extensive Gulf Coast expertise, including development of a Living Shoreline Guidance Document for the Coastal & Heartland National Estuary Program and the City of Punta Gorda through FDEP Resilient Coastline Program funding. She has designed a variety of living and hybrid nature-based shorelines with upland buffer enhancements for the City of Sarasota and Sarasota County at Bird Key Park, Nokomis Beach Park, Indian Shores, and Ted Sperling Park.

Integrated Marine Structural Engineering for Living Shorelines

Many living shoreline projects in Florida benefit from incorporating structural components for long-term performance in high-energy or urban waterfronts. Our structural engineering team brings unmatched expertise in designing and inspecting seawalls, piers, bulkheads, docks, floating boardwalks, and other waterfront features that can complement and protect restored shorelines. We frequently integrate hybrid solutions, such as the living 3D seawall and floating boardwalk at Jose Marti Park in Miami, that provide wave attenuation, protect vegetated shoreline plantings, and enhance public access.

Our team includes 10 engineer divers (seven licensed Florida Professional Engineers) capable of performing OSHA-compliant underwater structural inspections to assess service life, repair needs, and underlying coastal process impacts. By combining coastal engineering, ecological restoration, and marine structural design, our

shoreline projects achieve multiple goals: stability, habitat enhancement, flood mitigation, and community benefit; while meeting engineering requirements for decades to come.

4. Public and Stakeholder Engagement

We will deliver the full suite of outreach products required in the RFP, all branded with CHNEP logo and produced as accessible PDFs suitable for online posting:

- Planned Project Fact Sheet
- Planned Project Article
- Two Public Workshops with attendee lists and photos
- Educational Video
- PowerPoint presentations
- Finished Project Fact Sheet and Article

We will upload agendas, minutes, and deliverables into CHNEP's Wrike project space per the RFP. Engagement will start with a joint kickoff and two workshop events tailored to Harborwalk users, adjacent park managers, businesses, and environmental groups, using photorealistic renderings and StoryMap style visuals to show alternatives, viewshed effects, and anticipated habitat response. Feedback will flow into 30/60/90% design refinements.



Project Manager, Jenna Phillips, leading a public outreach meeting where we provided project overview and solicited feedback using public comment cards, interactive web-based surveys, and interactive poster board breakout sessions.

Our public and stakeholder engagement approach for the Tiki Point Living Shoreline builds on Cummins Cederberg's proven experience delivering coastal resilience and living shoreline projects across Florida. Engagement will begin with early coordination meetings with regulatory agencies and project partners to establish project goals, identify constraints, and clarify permitting pathways, supporting efficient decision-making and minimizing downstream delays. The team will support Charlotte County in conducting public workshops and stakeholder meetings using clear visualizations, interactive materials, and accessible explanations of technical concepts to encourage meaningful community input. Transparency

will be maintained through ArcGIS StoryMaps, web-based updates, and interactive feedback tools throughout design, permitting, and construction.

Given the project’s high visibility adjacent to public parks and the Harborwalk, the team will apply an engagement model successfully used for the City of Miami Beach Living Shoreline Program. This approach includes public meetings, open houses, and interactive workshops that educate stakeholders on nature-based shoreline solutions and provide opportunities to review conceptual alternatives, ecological enhancements, and site access considerations. As demonstrated in Miami Beach and the José Martí Park Adaptive Redesign, stakeholder input will be directly incorporated into design refinement to align the project with community priorities, public access goals, and environmental stewardship values.

For Tiki Point, this model will be implemented through close coordination with Charlotte County, CHNEP, adjacent park managers, Harborwalk users, local environmental organizations, and nearby residential and business stakeholders.

Engagement will include:

- **Initial stakeholder listening sessions** to understand community priorities and concerns early in the project.
- **Public workshops featuring conceptual alternatives**, ecological enhancement strategies, and shoreline access considerations.
- **Clear visual renderings and interactive exhibits** to support informed discussions about living shoreline features, viewshed changes, habitat improvements, and recreational connectivity.
- **Digital engagement tools**, including project webpages, StoryMaps, surveys, and periodic progress updates consistent with the County’s and CHNEP’s communication standards.
- **Ongoing coordination with permitting agencies** to align regulatory expectations and community values remain aligned during design refinement.

This integrated, transparent, and participatory approach allows the Tiki Point Living Shoreline to be shaped by engineering and environmental best practices as well as meaningful local input, resulting in a project the County, CHNEP, and community members can proudly support.

5. Project Management

Project Approach

Cummins Cederberg proposes a phased approach to project implementation:

Phase I will include site assessments, technical review of monitoring, stakeholder coordination, and preliminary design development.

Phase II will encompass regulatory permitting, final design, and construction-phase services.

The scope of work primarily focuses on the engineering and ecological design and permitting services required to advance the project. In addition to these core services, Cummins Cederberg will provide project management throughout the entire lifecycle—from the kick-off meeting through post-construction closeout, to seamless coordination and delivery. Our grants team is available to support grant administration and construction funding efforts upon request, offering added value to the project team.

Our approach to the Tiki Point Living Shoreline project is structured to meet the CHNEP expectations, support the City of Punta Gorda’s project goals, and maintain full compliance with grant requirements, permitting standards, and public facing deliverables. The workflow is organized to follow the sequence of Tasks 1–5 as defined in the RFP, promoting transparency, consistent communication, and technically defensible products at each stage of the project.



Task 1: Kickoff and Monthly Coordination Meetings

Immediately upon receiving Notice-to-Proceed, our team will coordinate an



TASK 1: KICKOFF & MONTHLY COORDINATION MEETINGS



TASK 2: INDEPENDENT TECHNICAL REVIEW OF MONITORING



TASK 3: KICKOFF MEETING, STAKEHOLDER ENGAGEMENT, & PUBLIC EDUCATION



TASK 4: PROJECT DESIGN



TASK 5: PERMITTING APPLICATION PREPARATION

in-person kickoff meeting with the County, CHNEP, and City of Punta Gorda representatives, and their project consultants. The kickoff will:

- Confirm scope, design expectations, and permitting strategy
- Validate milestone and grant deadlines
- Establish communication protocols
- Identify key decision points and data needs

This meeting aligns all parties begin the project aligned around a clear and consistent project management approach.

Following the kickoff, we will host monthly coordination meetings (virtual unless otherwise requested). Prior to each meeting, our team will prepare a customized agenda and any supporting materials required for technical or administrative review. Within one week of each meeting, we will provide detailed meeting minutes documenting decisions made, input received, actions assigned, and next step timelines.

Meeting documentation and monthly progress summaries will be uploaded to the CHNEP Wrike platform to maintain a transparent project record. Monthly progress bullets will summarize completed work, upcoming tasks, and any issues requiring action.

Initial Site Assessment: A clear understanding of existings conditions is critical to minimizing scope creep and maintaining schedule control.

Our site investigation will include:

- Assessment of existing shoreline structures and ties to adjacent properties
- Documentation of utilities, outfalls, upland vegetation, and access constraints
- Evaluation of construction staging feasibility

Findings will be summarized in a technical memorandum to guide design development.

Field capabilities include:

- Topographic and bathymetric surveys tied to NAVD88 and local tidal datums
- Geotechnical borings and subsurface evaluation
- Structural condition assessments (docks, seawalls, fender systems)
- In-house dive team inspections with photographic documentation
- Marine resource mapping (seagrass, oysters, hardbottom), including seasonal considerations
- UAV-based photogrammetry and elevation modeling
- Tethered underwater drone video documentation



Task 2: Independent Technical Review of Monitoring

Our team will conduct a comprehensive technical review of all pre construction monitoring data prepared under the FDEP Resilient Florida Grant requirements, including bathymetry, aquatic resource mapping, and compliance documentation. Each dataset will be evaluated for completeness, consistency with FDEP QA Rule Chapter 62 160, accuracy, methodology, and suitability for use in design and permitting.

We will produce three reports addressing:

1. Sufficiency of field surveys including bathymetry, aquatic resources, and other required datasets.
2. Compliance of monitoring materials with applicable permitting and QA documentation standards.
3. Completeness and clarity of monitoring data and graphical analyses to confirm alignment with the monitoring scope, grant requirements, and QA standards.

This review will confirm that all monitoring information informing the project's engineering and permitting phases is technically sound, defensible, and ready for regulatory scrutiny.

Geotechnical Investigation

Working in coordination with Cummins Cederberg, Arehna Engineering, Inc. will provide geotechnical engineering and investigation support for the project. Together, our team will obtain geotechnical borings to characterize subsurface conditions along the project shoreline and support the design of shoreline stabilization and living shoreline features. A thorough understanding of site-specific soil conditions including the presence of organic materials, highly cemented sands, or hard limestone is critical to developing an economical, constructible design that minimizes construction impacts and delays.

Arehna's geotechnical investigations will evaluate foundation support conditions, including considerations for drivability and performance of deep foundation elements where required, and will address methods to reduce vibration impacts to adjacent properties and upland infrastructure. Their team brings extensive familiarity with local geologic conditions throughout Charlotte County and has completed thousands of geotechnical and materials testing projects for shoreline restoration, parks, roadway and infrastructure improvements, and water and stormwater facilities for Charlotte County, FDOT, FDEP, Water Management Districts, and municipalities statewide. A signed and sealed geotechnical investigation report will be prepared to support design development, permitting, and construction.

Topographic/Bathymetric Survey

Topographic and bathymetric data form the foundation of successful coastal and waterfront project design. Cummins Cederberg has partnered with Terraquatic to provide comprehensive upland and nearshore topographic and bathymetric surveying services for the project area. Terraquatic specializes in hydrographic surveying, including single-beam and multi-beam bathymetry, as well as topographic, boundary, and geodetic control surveys necessary to support engineering design, ecological assessment, and permitting. Their team brings extensive experience supporting large-scale coastal and marine projects for agencies such as the U.S. Army Corps of Engineers, Florida Department of Transportation, Water Management Districts, and local governments throughout Florida. Terraquatic offers a full suite of services—including photogrammetry, construction stakeout and as-builts, mean high water (tidal) demarcation surveys, utility location, and specialty hydrographic services such as side-scan sonar, sub-bottom profiling, magnetometer surveys, and diver inspections—ensuring accurate, defensible data collection. Their ability to mobilize quickly supports responsive field deployment, including pre- and post-storm surveys, and provides high-quality datasets essential for design development, permitting, and potential FEMA or insurance documentation.



Task 3: Kickoff Meeting, Stakeholder Engagement, and Public Education

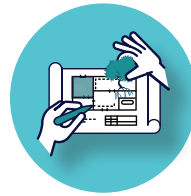
We will begin with a stakeholder engagement kickoff meeting to coordinate messaging, finalize outreach objectives, and integrate CHNEP and City priorities. Our team will prepare and facilitate two public workshops, using clear graphics, simple explanations of ecological benefits, and visual representations of living shoreline concepts. These workshops will provide opportunities for residents, resource managers, and community groups to learn about the project, offer feedback, and understand expected outcomes.

To support CHNEP's education and outreach mission, we will prepare a complete suite of communication materials, including:

- Planned project fact sheet describing the living shoreline concept and its benefits
- Planned project article for distribution at the project's outset
- Educational video introducing the project
- PowerPoint presentation(s) for workshops and stakeholder briefings

- Finished project fact sheet and final article, updated at project completion
- Workshop attendee lists and photographic documentation for both public events

All materials will be prepared in formats suitable for public dissemination and online posting, meeting CHNEP accessibility and branding requirements.



Task 4: Project Design

Our design team will prepare a complete, phased design package for the Tiki Point Harborwalk Living Shoreline including: updated engineering drawings, supporting calculations, estimated quantities, and revised cost estimates reflecting the current level of development. Throughout this phase, we will also research required permits and document all permit considerations that must be addressed prior to construction.

Conceptual Design

Following site assessment and data review, we will develop conceptual alternatives for review. Each concept will include:

- Renderings and plan-view layouts
- Order-of-magnitude cost estimates
- Preliminary permitting pathway
- Implementation schedule

Alternatives will be evaluated for constructability, resilience, habitat benefit, and lifecycle cost.

Engineering and Design of the Living Shoreline

Cummins Cederberg will advance the selected conceptual designs into preliminary and final designs for environmental permitting and construction. Our approach considers all elements of a project, from offshore and nearshore features to upland infrastructure, and will be tailored to the specific needs of this project.

During final design, Cummins Cederberg will develop construction phasing plans, detailed engineering drawings, technical specifications, and bid-ready contract documents. Design deliverables will be prepared at key milestones:

- Schematic Design (SD)
- Design Development (DD)
- Construction Documents (CD)

At each stage, we will engage with County staff and stakeholders to incorporate input into the design and that site-specific access, safety, and phasing requirements are addressed. Each milestone submittal will also include

a constructability review and an updated Opinion of Probable Cost (OPC), inclusive of materials, mobilization, environmental controls, surveying, and site restoration.

Design considerations will include:

- Evaluation of wave climate and vessel wake exposure
- Analysis of sediment transport and shoreline response
- Identification and evaluation of material sources
- Geotechnical investigations to support structural foundations, bearing capacity and settlement control
- Topographic, bathymetric, and hydrographic surveying and analysis
- Coordination with adjacent jurisdictions or stakeholders on shared resources or boundary considerations
- Habitat enhancement and long-term accretion potential access, staging, and safety requirements]
- Preparation of environmental documentation and impact assessments to support permitting
- Preparation and submittal of required local, state, and federal permit applications
- Construction oversight planning and monitoring program development support in pursuing external funding sources (e.g., FEMA, FDEP, USACE, etc.), as applicable

Upland Site Plan and Civil Engineering

Chen Moore and Associates (CMA) will provide civil engineering and landscape architecture services to integrate the living shoreline seamlessly with the upland park, pedestrian access, and adjacent infrastructure. Their role is focused on hydraulic compatibility, constructability, and long-term resiliency.

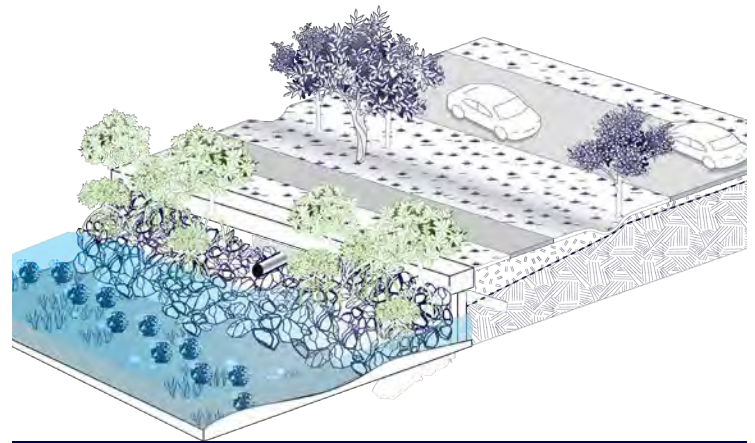
CMA will begin with a focused due diligence effort, including site verification, review of existing utilities and stormwater infrastructure, evaluation of drainage patterns, and confirmation of applicable floodplain criteria. This early coordination allows upland grading and shoreline elevations to function together without creating unintended ponding, runoff concentration, or impacts to adjacent properties.

The upland civil design will include a coordinated grading plan tied directly to final shoreline elevations. Stormwater flow paths will be evaluated and refined as needed to maintain positive drainage during routine rainfall events and elevated tidal conditions. Where appropriate, transitional grading or low-profile berm features will be incorporated to reduce nuisance flooding risk while

preserving visual connectivity to the waterfront.

CMA will also design pedestrian connections and boardwalk extensions to maintain ADA-compliant access between upland amenities and shoreline features. Particular attention will be given to durable coastal materials, smooth transitions between hardscape and living shoreline elements, and compatibility with the surrounding neighborhood context.

A resilient coastal planting plan will complement the shoreline design, utilizing native species adapted to tidal fluctuation and salt exposure. Plant selections will reinforce sediment stability, enhance habitat value consistent with CHNEP goals, and minimize long-term maintenance requirements.



Stormwater outfalls can be integrated into a living shoreline using vegetated swales and filter marshes, as shown in this typical section. These nature-based features help maintain drainage, improve water quality, and stabilize the shoreline—supporting both ecological function and infrastructure resilience.

Design advancement will occur in coordination with Cummins Cederberg at 30%, 60%, and 90% milestones. Each submittal will include updated plans, key sections and details, and an Opinion of Probable Construction Cost. All documentation will be prepared to satisfy applicable local, state (FDEP), and federal (USACE) permitting requirements.

CMA and Cummins Cederberg will operate as an integrated team throughout the process, coordinating shoreline stabilization, upland drainage, public access, and flood resilience as a unified system. This coordinated approach reduces regulatory risk, improves constructability, and supports long-term project performance.



Task 5: Permitting Application Preparation

This project is a joint effort between CHNEP and the City of Punta Gorda, with distinct but coordinated responsibilities assigned to each party. Cummins

Cederberg will be responsible for design advancement and construction permitting associated with the living shoreline improvements. The City of Punta Gorda will manage procurement and permitting activities associated with monitoring and construction implementation.

To support seamless execution, our team will coordinate closely with the City's consultants throughout all phases of the project.

Cummins Cederberg will prepare and process all federal, state, and local permits required for construction of the final living shoreline design. This includes Environmental Resource Permit (ERP) authorization through FDEP or SWFWMD, as applicable, and authorization from the U.S. Army Corps of Engineers pursuant to Sections 10 and 404.

This task specifically addresses permits associated with:

- In-water work
- Shoreline stabilization features
- Fill placement or grading
- Associated upland improvements included in the final design

Our permitting effort will be coordinated with the City to maintain consistency with:

- City Task 3: FDEP Quality Assurance Plan
- City Task 4: Permitting for pre-construction monitoring

The City's monitoring permit will focus on authorization for pre-construction survey and data collection activities. Our permitting effort will focus on construction authorization for the final design. Early coordination between these efforts allows monitoring data to be collected within approved footprints and directly incorporated into construction permit submittals.

The City of Punta Gorda will:

- Procure and manage the monitoring contractor (City Task 1)
- Conduct City-led kickoff and coordination meetings (City Task 2)
- Prepare the FDEP Quality Assurance Plan (City Task 3)

- Obtain necessary permits for pre-construction monitoring activities (City Task 4)

Cummins Cederberg will coordinate closely with the City and its monitoring consultant on the following:

- Monitoring scope aligns with design data needs
- Survey control and datum references are consistent
- Collected data meets QA standards necessary for construction permit submittals
- Regulatory messaging remains consistent across both permitting tracks

All draft permit packages will be provided in Word and PDF format, ensuring the City and its selected construction contractor can seamlessly submit them along with associated fees. Our environmental permitting team consists of regulatory experts who provide unparalleled experience in local, state, and federal coastal permitting, comprehensive mitigation design and monitoring, NEPA documentation, Endangered Species Act Section 7 consultation, and Essential Fish Habitat Assessments. This expertise has served to expedite regulatory reviews, negotiate reviewer requests for additional information, and maintain frontline knowledge of regulatory changes.

Notably, Cummins Cederberg is directly involved in policy development of a new FDEP Living Shoreline General Permit for the implementation of more streamlined permitting for projects that fall outside of the exemption criteria. Our team has been involved with several projects in Charlotte County and are familiar with the regulatory requirements for Florida Department of Environmental Protection (FDEP)/Southwest Florida Water Management District (SWFWMD) and the U.S. Army Corps of Engineers (USACE) with similar scope. The FDEP or SWFWMD will serve as the lead State permitting agency, depending on the extent of upland improvements. Charlotte County relies on State and Federal agencies to provide guidance on proper guidelines for the construction of new and replacement seawalls or other shoreline protection methods.

The following steps briefly outline the permitting process, and the role Cummins Cederberg will play in assisting with permitting:

- Cummins Cederberg will perform a detailed regulatory due diligence review.
- Conduct pre-application meetings with regulatory agencies to discuss permitting feasibility relative to the proposed Project.
- Prepare state and federal permit application packages for County and CHNEP review and signature. These permit applications will incorporate

pre-application meeting agency feedback and detailed descriptions of the project design along with a cover letter that highlights relevant project elements.

- **Permit Processing:** Cummins Cederberg will maintain regular communication with agency staff and respond promptly to Requests for Additional Information (RAIs).
- **Permit Compliance:** Upon receipt of permit authorization, Cummins Cederberg will prepare a permit summary letter and compliance checklist for subsequent use in the bidding and construction phase.

Our permitting approach emphasizes environmental stewardship and regulatory efficiency. We anticipate no significant impacts to marine or coastal resources; however, if minor impacts are unavoidable, we will design the project to be self-mitigating to the extent practicable, or otherwise work with the regulatory agencies, County, and CHNEP to develop a mitigation plan, if necessary. Cummins Cederberg’s extensive experience with coastal permitting in Florida supports a permit process handled with precision, transparency, and a commitment to advancing the project’s ecological and resilience goals.

Pre-Application Meetings

Cummins Cederberg will prepare for and participate in pre-application meetings with the FDEP or SWFWMD and the USACE to discuss permitting feasibility relative to the proposed living shoreline. Discussions will include, but are not limited to, existing conditions at the Project site, historical upland use, proposed in-water activities, sovereign submerged lands authorization, in-water resources and species utilization of the site, etc. We will also meet with CHNEP and Charlotte County departments (e.g., Public Works and Stormwater, Development Services), as necessary, so proposed designs align with local regulations and requirements. Agency feedback from the pre-application will be documented in a meeting summary and utilized to refine project design and subsequent permit application packages.

State Permit Application & Processing

Cummins Cederberg will lead the preparation and processing of the Statewide Environmental Resource Permit (ERP) with the State agency (FDEP or SWFWMD) for the Tiki Point Living Shoreline project. Our permitting team will develop a comprehensive application package that includes an environmental narrative, best management practices (BMPs), anticipated construction means and methods, and all supporting documentation required

under Chapter 62-330, F.A.C. We will also manage up to two Requests for Additional Information (RAIs), maintaining open communication with agency reviewers to facilitate a timely and efficient permitting process. In coordination with project stakeholders, all materials will be reviewed and approved by CHNEP and the County prior to submission to FDEP or SWFWMD.



Marine scientists conducted a benthic survey at The Bay Park in Sarasota to document seagrass, coral, and other marine resources along the seawall and seafloor—supporting environmentally responsible dredge planning and regulatory permitting

USACE Permit Application & Processing

Cummins Cederberg will manage the preparation and submission of the USACE permit application pursuant to Section 10 of the Rivers and Harbors Act and Section 404 of the Clean Water Act. This includes coordinating and documenting pre-application meetings, preparing a comprehensive environmental narrative, and assembling all required supporting materials such as construction methods, best management practices (BMPs), and consultation checklists. Our team will also respond to up to two Requests for Additional Information (RAIs), ensuring that all documentation is reviewed and approved by the CHNEP and the County prior to submission.

Permitting does not end at authorization. During construction, we remain available to support compliance documentation, respond to agency inquiries, and verify that field conditions remain consistent with permitted plans.

Our permitting approach emphasizes early coordination, technical defensibility, and proactive risk management — ensuring regulatory compliance while maintaining project schedule and ecological objectives.

VI.



EXAMPLES OF
ACCOMPLISHED PROJECTS

EXAMPLES OF ACCOMPLISHED PROJECTS

1. Crandon Marina North Living Shoreline Miami, Florida

Cummins Cederberg provided shoreline stabilization at Crandon Marina using a combination of native limestone riprap revetment and living shoreline planters to address erosion along the north shoreline as part of the Crandon Park Master Plan. The project stabilized the shoreline to reduce erosion and sediment migration into the marina basin while incorporating nature-based solutions to enhance habitat and biodiversity.



Contributing to the coastal restoration and ecosystem resilience at Crandon Park, one of our marine scientists can be seen planting mangroves along the marina's living shoreline as part of our construction support

Engineering & Living Shoreline Design

Engineering and living shoreline design integrated traditional shoreline stabilization with nature-based solutions, combining native limestone riprap revetment with living shoreline planters, mangrove enhancement, and wave attenuating features. Design alternatives were evaluated to meet Crandon Park Master Plan requirements while avoiding impacts to mangroves, seagrasses, and designated wildlife protection areas.



Our living shoreline design at Crandon Park has helped the shoreline combat erosion and wave attenuation for long-term protection for a prominent municipal park in Miami.

Public & Stakeholder Coordination

Project coordination was conducted in close collaboration with Miami-Dade County Parks, Recreation and Open Spaces, balancing shoreline stabilization, habitat protection, and recreational use in alignment with the County's long-term vision for the park.

Permitting & Regulatory Coordination

Permitting coordination included Miami-Dade County regulatory agencies, FDEP, and the U.S. Army Corps of Engineers, with timelines integrated into the project schedule from the conceptual design phase to support an 18-month delivery estimate.

Design alternatives were intentionally developed to avoid and minimize impacts to mangroves, seagrasses, and protected wildlife areas, reducing mitigation exposure and facilitating efficient agency review. Anticipated permitting durations were incorporated into the overall project schedule to maintain realistic delivery expectations.

Schedule Control

Project scheduling accounted for environmental permitting durations, with overall delivery estimated at approximately 18 months. By identifying agency requirements and review timelines during conceptual design, the team aligned technical development with regulatory sequencing and reduced downstream delay risk.

Cost Control

Cost control was achieved through an alternatives-based approach that assessed construction costs and potential grant funding opportunities alongside each design option.

Challenges	Solutions
Active erosion along the eastern northern and central western shorelines was contributing to sedimentation in the marina basin.	Native limestone revetments and, where feasible, offshore breakwaters combined with mangrove planting were incorporated to stabilize exposed reaches and reduce sediment supply.
Mangrove and seagrass resources created permitting risk and potential mitigation exposure.	Structures were sited to avoid high-density resource areas, and limestone rock was selected to limit sediment burial and align with agency preferences.
Seagrass presence and a Least Tern Protected Natural Area restricted available footprint along the western shoreline, limiting excavation and construction.	The western shoreline was stabilized primarily with revetment, while mangrove planting and breakwater-supported habitat expansion were concentrated along the northern shoreline where sheltered conditions improved feasibility.

Living shoreline stabilization using native limestone and mangrove plantings to protect infrastructure and improve ecological function in Miami, Florida



2. Currie Park Redevelopment West Palm Beach, Florida

The Currie Park Redevelopment project involves transforming a 16 acre City of West Palm Beach waterfront park along the Lake Worth Lagoon into a resilient, multi use public destination. Cummins Cederberg provided master planning, coastal and marine engineering, environmental permitting, and grant support for extensive upland and in water improvements, including living shorelines, rock revetment, boardwalks, piers, boat ramp repairs, and habitat enhancement. The project integrates flood resilience, nature based shoreline solutions, and improved public access while supporting recreational amenities and long term environmental sustainability.



Engineers on site at Currie Park during construction, coordinating waterfront improvements and living shoreline implementation as part of the park's resilient redevelopment

Engineering & Living Shoreline Design

The engineering design for the Currie Park Redevelopment integrated coastal resilience, habitat enhancement, and public waterfront access along the Lake Worth Lagoon. Cummins Cederberg developed site specific coastal design criteria and implemented multiple living shoreline typologies, including rock sills with mangrove pipe planters, mangrove planters stabilized by rock breakwater or steel sheet pile wall, elevated planters for marsh grasses, reef balls to support oysters, and a sandy perched beach. These nature based shoreline systems were engineered to address erosion, mitigate sea level rise and tidal conditions, and enhance long term ecological function while supporting the park's recreational and resilience goals. Additionally, Cummins Cederberg designed a large fishing pier with ADA features that connects to a flowing boardwalk through the living shoreline elements, kayak launches and an amphitheater with social steps to the water.

Public & Stakeholder Coordination

Public and stakeholder coordination for the Currie Park Redevelopment was conducted in close collaboration with the City of West Palm Beach to align project goals with community needs, public use, and long term resilience objectives. The project's master planning process balanced recreational programming, waterfront access, environmental enhancement, and flood resilience, ensuring proposed improvements were compatible with park operations and the City's vision. Ongoing coordination supports phased implementation, grant funding alignment, and delivery of a resilient waterfront park that serves public health, welfare, and economic vitality goals.

Permitting & Regulatory Coordination

Permitting and regulatory coordination for the Currie Park Redevelopment was initiated early and integrated into both master planning and project implementation. Cummins Cederberg conducted extensive permitting due diligence, coordinated pre application meetings with state, and federal agencies, and documented anticipated regulatory challenges in a Permitting Feasibility Report to guide design decisions. This proactive approach supported timely permit issuance, including an Individual Florida Department of Environmental Protection (FDEP) Statewide Environmental Resource Permit (SWERP) for the in water works, a separate FDEP SWERP for the surface water management system, a Sovereign Submerged Lands Lease, and a Department of the Army Individual Permit.

Schedule Control

Project phasing and scheduling were established early through a structured master planning and implementation approach. Phase I included site investigations, coastal analysis, permitting feasibility, and grant research to inform realistic timelines. Phase 2 consisted of design and permitting, bidding and construction. Understanding that approvals for the in-water works would take much longer than the surface water management system to secure, environmental permitting was phased accordingly so that upland construction would not get held up by the in-water construction. This was achieved by securing separate FDEP Individual SWERP permits for the in-water works and the surface water management system. We were able to do this by proposing and implementing a construction buffer to show the two scopes of work were independent of one another.

The FDEP SWERP Permit for the surface water management system was secured January 2023, the FDEP SWERP Permit for the in water works in February 2024, the Department of the Army permit was secured in April 2025, and the Sovereign Submerged Lands Lease in April 2025. Construction documents were completed October 2024 and construction commenced in June 2025.

Cost Control

Cost control was achieved through early development of opinions of probable cost during master planning and by aligning design decisions with grant eligibility and funding strategies. Cummins Cederberg supported grant research and application that resulted in the successful award of over \$20 million from five different grants, including a \$16 million Florida Commerce Community Development Block Grant-Mitigation, which significantly offset project implementation costs. Phased design and permitting allowed the City to advance improvements incrementally while maintaining budget control and minimizing financial risk associated with regulatory and constructability constraints.

Challenges	Solutions
Sensitive marine resources (seagrass) within the project area created impact-avoidance constraints for waterfront and in-water design.	The living shoreline elements and perched beach have the largest footprint. To resolve this, we designed a toe wall instead of a full sloping rock breakwater to protect the new living shorelines in proximity to seagrass. This provided the maximum possible planting area in a reduced footprint and brings the planting area closer to the boardwalk for a better user experience.
Meeting grant deadlines during construction.	Understanding that approvals for the in-water works would take much longer than the surface water management system to secure, environmental permitting was phased accordingly so that upland construction would not get held up by the in-water construction. This was achieved by securing separate FDEP Individual SWERP permits for the in-water works and the surface water management system. We were able to do this by proposing and implementing a construction buffer to show the two scopes of work were independent of one another.
Complex permitting environment with anticipated risks and potential resource-impact issues across state, and federal regulatory review.	Cummins Cederberg conducted extensive permitting due diligence, held pre-application meetings with agencies, and documented findings in a Permitting Feasibility Report to guide concept selection and reduce regulatory uncertainty during processing.
Balancing Interests (public viewshed, water access, educational features and enhancing habitat without impacting existing resources)	Engage stakeholders early on, incorporate mangrove window trimming into permit to maintain desired viewshed, strategic engineering to reduce living shoreline footprint and maximize planting space.
The project required design criteria tailored to site-specific coastal processes (e.g., sea level rise, king tides, currents, storms/waves/surge, winds) to support resilient waterfront and over-water structural design.	The team performed a site-specific coastal analysis and compiled design criteria in a Coastal Analysis Report used to inform structural analysis and the waterfront/over-water engineering design.
A broad set of in-water improvements (bulkhead demolition, revetment/sill construction, living shorelines, boat ramp repairs, boardwalks/piers, kayak launch, perched beach, and a new cove area with stabilized “social stairs”) increased engineering and permitting complexity.	The project was advanced through a structured approach that included Phase I master planning (field investigations, feasibility, concept development) followed by Phase II implementation (permitting, engineering design, construction plans) to manage scope complexity in an organized progression.

Challenges	Solutions
Funding availability can be a limiting factor for implementing a large waterfront park redevelopment and resilience program.	Cummins Cederberg performed grant opportunity research and assisted the City in successfully securing over \$20 million from five different grants, including a \$16 million Florida Commerce Community Development Block Grant-Mitigation, which significantly offset project implementation costs.
Living shoreline design to prevent impacts to manatees	Manatees have been known to get stuck in living shorelines and breakwaters. Typically, the agencies require 5 foot gaps every 75 feet. Due to the desired length of living shoreline and habitat and aesthetic goals, we instead designed the top of breakwater to a minimum of 2.5 ft above the MHWL, to prevent manatees from accessing the living shoreline and getting stuck during an outgoing tide.
Proprietary authorization – Part of the project falls within a dedication subject to a restriction and part of the project is outside of the Dedication and required a sovereign submerged lands lease. The challenge was identifying the correct lease boundary based on a complex proprietary history at the project site.	We confirmed with the Division of State Lands (DSL) that the submerged and filled submerged lands within the Dedication are state-owned sovereign lands subject to Chapter 18-21, F.A.C. (SSL Management Rule). Activities within the Dedication have already received proprietary authorization and therefore are not included in the proposed pre-empted area, which applies only to project components occurring on sovereign submerged lands. In coordination with DSL, we determined the lease alignment should be waterward of the Dedication rather than along the MHWL. Given the nature of the boardwalks, shoreline stabilization, and living shoreline elements, DSL advised the Project be processed as a fee-waived lease for the City, eligible for administrative approval without BOT action because it is well below the 150,000-SF delegation threshold.

Construction of the Currie Park Redevelopment in West Palm Beach, integrating living shorelines, rock revetments, and resilient waterfront infrastructure to enhance public access and coastal resilience



3. Portosueno Park Living Shoreline & Waterfront Improvements Bradenton, Florida

The Portosueno Park Living Shoreline project involves restoration of approximately 600 linear feet of shoreline along the northern marina basin at Portosueno Park in Bradenton, Florida. Cummins Cederberg was contracted by Manatee County to provide marine engineering and environmental consulting services funded through the RESTORE Act, including removal of a deteriorating bulkhead and installation of a living shoreline. The project integrates habitat enhancement, recreational access improvements, and shoreline resilience to accommodate rising sea levels, while adding public amenities such as a manatee viewing platform, pedestrian pathways, additional sitting areas, and a boardwalk.



Cummins Cederberg marine scientist and coastal engineer conducting field investigations to support living shoreline design and environmental permitting.

Engineering & Living Shoreline Design

The engineering and living shoreline design for Portosueno Park replaces an aging seawall with a nature based shoreline stabilization system tailored to site conditions and public use objectives. Based on bathymetric surveys, marine resource assessments, and field investigations, Cummins Cederberg developed three conceptual living shoreline alternatives incorporating combinations of riprap, oyster balls, segmented rock sills, mangrove planters, vegetated planters, and living wall panels. These systems were engineered to stabilize the shoreline, support habitat creation, manage upland stormwater drainage, and accommodate future sea level rise, while enhancing safe public access to the waterfront.

Public & Stakeholder Coordination

Tiki Point Living Shoreline RFP No. 20260251

Cummins Cederberg | *Trusted on the Coast. Proven in Practice.*

Public and stakeholder coordination was a key component of the Portosueno Park Living Shoreline project. Cummins Cederberg supported Manatee County staff and facilitated an on site public stakeholder engagement meeting to present and review all three conceptual living shoreline design options. This collaborative process allowed stakeholder input to be incorporated into design selection while balancing environmental restoration goals, recreational access, and long term shoreline resilience.

Permitting & Regulatory Coordination

Permitting and regulatory coordination for the Portosueno Park Living Shoreline project was integrated into the design process from the outset. Cummins Cederberg conducted marine resource surveys to identify seagrasses, oysters, and other resources of significance and prepared an environmental survey report to inform permitting strategies. Environmental permitting was coordinated to support removal of the existing bulkhead and construction of living shoreline features, with design alternatives developed to avoid and minimize impacts while meeting regulatory requirements for work in a public waterfront setting.

Schedule Control

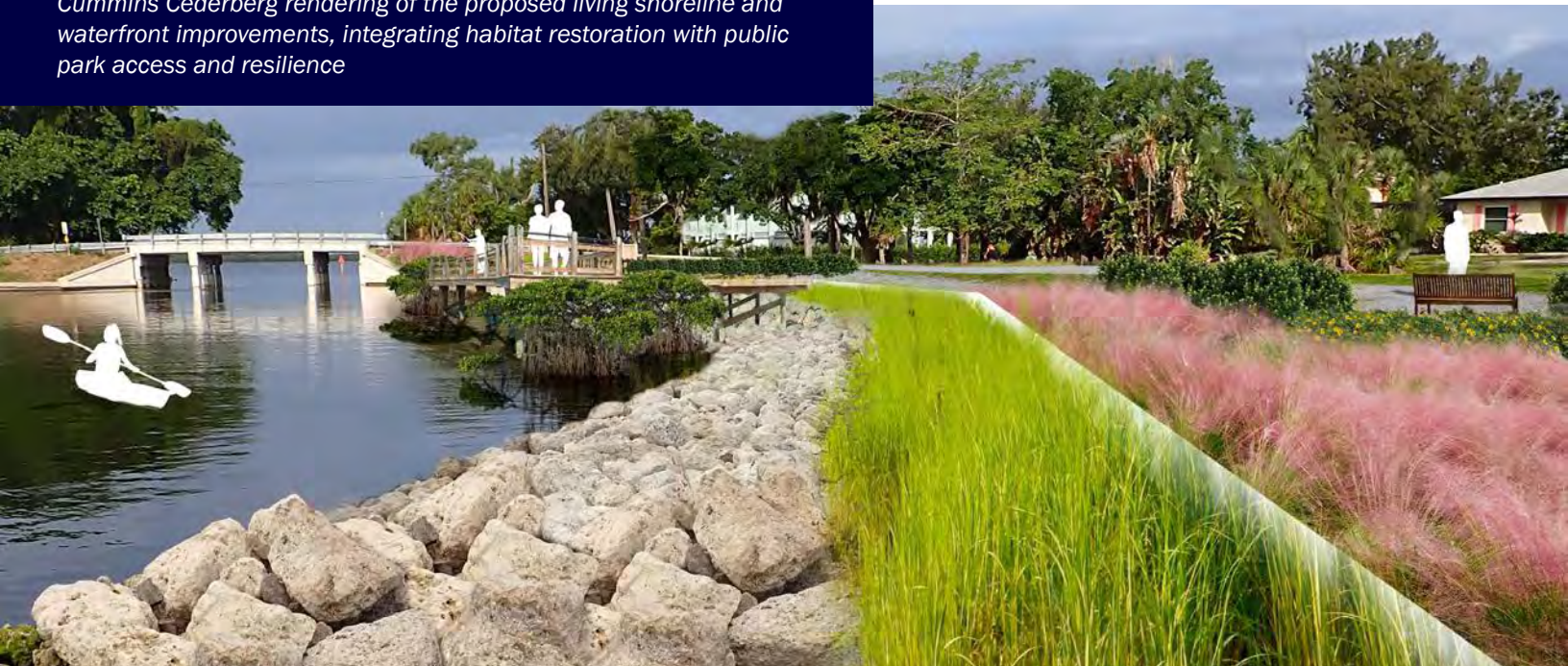
Project delivery was structured to advance field investigations, conceptual design, stakeholder engagement, and permitting in parallel. The phased approach—from conceptual alternatives through final design, construction documents, and bidding—supports alignment between regulatory review, funding requirements, and construction sequencing.

Cost Control

Cost control is supported through development of multiple conceptual design alternatives and preparation of an opinion of probable construction cost for the selected option. The project's RESTORE Act funding framework and competitive bidding process further support budget transparency and cost effective implementation.

Challenges	Solutions
Environmental permitting requirements introduce specific regulatory constraints and timeline challenges for grant-funded projects operating under strict funding deadlines.	Cummins Cederberg conducted pre-application meetings with regulatory agencies to obtain early feedback and proactively address potential concerns regarding the proposed scope of work, and during permit review provided detailed technical documentation to demonstrate that the project design was structurally sound, ecologically responsible, and resilient. Final permits were issued after only one Request for Additional Information (RAI) from the agencies.
The project needed to balance environmental restoration with public access and recreation in a County park setting located adjacent to single-family residences.	The living shoreline design integrates habitat features with public amenities such as a manatee viewing platform, pedestrian paths, and a boardwalk. A public outreach meeting was held to inform adjacent residents of the project and to gather feedback and potential concerns for consideration in the final design.
Selecting an appropriate living shoreline approach required evaluating multiple stabilization strategies under site specific conditions.	Cummins Cederberg developed three conceptual design alternatives and facilitated stakeholder review to support informed selection of the final design.

Cummins Cederberg rendering of the proposed living shoreline and waterfront improvements, integrating habitat restoration with public park access and resilience



4. South Maritana Living Shoreline St. Pete Beach, Florida

Cummins Cederberg provided engineering and permitting services to enhance and protect approximately 280 linear feet of residential shoreline along South Maritana Drive through development of a living or hybrid shoreline system.

Engineering & Living Shoreline Design

Our team performed detailed above- and below-water inspections of the existing seawall, including structural assessment of caps, panels, and piles. The evaluation identified deterioration such as cracking, displacement, and undermining, and determined which structural elements could be reused within a nature-based retrofit.

Based on these findings, we developed two conceptual alternatives:

- A living shoreline solution incorporating habitat features and shoreline stabilization
- A hybrid nature-based system integrating structural reinforcement with ecological enhancements
- Both alternatives were designed to:
 - Address projected high tide conditions and sea level rise
 - Improve long-term shoreline resiliency
 - Optimize reuse of viable structural components
 - Minimize environmental impacts

Designs were prepared in plan view over aerial imagery to clearly communicate shoreline limits, environmental considerations, and construction footprint to regulators and property stakeholders.

Public & Stakeholder Coordination

Because the project serves multiple private properties and is grant-funded, coordination was essential to align owner expectations, funding requirements, and municipal resiliency objectives. We worked closely with property owners and City staff to evaluate alternatives and define a preferred approach that balanced cost, constructability, and environmental benefit.

Permitting & Regulatory Coordination

Our environmental team coordinated early with:

- Pinellas County Water and Navigation Section
- Florida Department of Environmental Protection (FDEP)
- U.S. Army Corps of Engineers (USACE)

Permitting strategy focused on minimizing impacts through shoreline footprint reduction and structural reuse, positioning the project for streamlined review under applicable exemptions or general permits where feasible.

Schedule Control

- Early structural inspections to inform feasible alternatives
- Concurrent engineering and permitting coordination
- Concept-level alternatives prepared to accelerate owner and agency decision-making

Cost Control

- Evaluation of seawall reuse to reduce demolition and reconstruction costs
- Development of scalable alternatives aligned with available grant funding
- Design solutions that minimize mitigation and environmental compliance costs



Living shoreline design incorporating habitat features and shoreline stabilization

Challenges	Solutions
Aging seawall with uncertain structural capacity.	Conducted comprehensive structural inspection to determine reuse potential and avoid unnecessary full replacement.
Balancing resiliency upgrades with private property constraints.	Developed hybrid concepts that improved shoreline performance without significantly expanding the construction footprint.
Multi-agency permitting requirements.	Initiated early coordination and designed within regulatory thresholds to reduce review time and minimize permitting risk.

VII.



EXPERIENCE &
CAPABILITIES

VII. EXPERIENCE & CAPABILITIES

1. Advance Geotechnical & Topographic Survey

Cummins Cederberg has partnered with Arehna to provide geotechnical investigation services supporting living shoreline and hybrid stabilization systems. Subsurface borings and sediment characterization will evaluate bearing capacity, consolidation potential, shear strength, and settlement behavior associated with soft estuarine sediments typical of Charlotte Harbor. For living shoreline elements such as oyster sills, riprap benches, and potential toe walls, geotechnical data will inform embedment depth, toe stability, scour resistance, and long-term settlement performance.



Arehna Engineering provided geotechnical engineering support for the West River Redevelopment and Complete Streets project, contributing to living shoreline and seawall restoration along approximately 12 miles of multimodal infrastructure improvements in Tampa, Florida

High-resolution topographic and bathymetric surveys form the foundation of hydrodynamic modeling, intertidal elevation design, and permitting documentation. Cummins Cederberg has teamed with Terraquatic to provide rapid-response survey capabilities, who bring over two decades of experience in delivering precise surveying and mapping services throughout the state of Florida. Terraquatic's extensive portfolio includes projects that navigate the complexities of coastal environments, demonstrating their capability to adapt to the unique challenges presented by the City's shoreline.

2. Ecological Assessment

Our ecological team brings extensive experience conducting estuarine habitat assessments, permitting surveys, and biological evaluations for nature-based shoreline projects throughout Southwest Florida. Work will be completed in accordance with FDEP, USACE, NOAA/NMFS, CHNEP, and DEP QA Rule 62-160 data requirements.

The ecological assessment will include:

- Benthic resource mapping, including oysters, barnacles, SAV (if present), macroalgae, and substrate composition;
- Mangrove assessment, documenting natural recruitment, species composition, tidal zonation, and stress indicators;
- Wildlife and protected species evaluation, including considerations for smalltooth sawfish critical habitat, managed species, wading bird foraging habitat, and manatee use patterns;
- Water quality and site condition documentation, including turbidity sources, shading effects, and sediment mobility indicators;
- Intertidal and subtidal habitat characterization to guide oyster module placement, mangrove planting zones, and intertidal bench elevations;
- Impact avoidance and minimization strategy, aligning with FDEP and USACE permitting pathways.

All ecological data will be incorporated into baseline maps and technical memoranda supporting conceptual design, alternatives analysis, permitting applications, and stakeholder communications. Assessment data will inform siting, footprint sizing, habitat uplift targets, and future monitoring metrics.

Joining Cummins Cederberg's team on this project is Tom Reis, founder of the Ecosphere Restoration Institute, a non-profit organization with deep roots in the Tampa Bay region and an outstanding track record of success in living shorelines and other conservation techniques. Tom has facilitated over 80 projects that have restored more than 400 acres of critical habitats and enhanced over 3,200 acres in Hillsborough County alone. Fostering dozens of living shoreline projects, Tom and his team have restored over 3 miles of eroded coastlines. Tom's Charlotte County experience is extensive and includes:

- **Charlotte Harbor Shoreline Mapping Project, Charlotte and Lee Counties** – Performed QA/QC for the Tidal Charlotte Harbor Shoreline Condition project, verifying vegetation species and shoreline conditions at 500 locations through visual and field verification.
- **Hurricane Charley Mangrove Damage Assessment, Charlotte County** – Identified and quantified tree canopy damage caused by Hurricane Charley, including damage typing and quality control assessment of the mapping effort.
- **Lemon Bay Preserve Habitat Restoration, Charlotte County** – Designed the restoration of a former 80-acre golf course along Lemon Bay, securing SWFWMD funding to expand tarpon nursery areas, create oligohaline conditions for recreationally important fish and avifaunal species, and improve stormwater runoff discharging into the Preserve.



Ecosphere Restoration founder Tom Ries installing oyster reef materials as part of hands-on living shoreline restoration to enhance coastal habitat and resilience

Tom’s broader regional experience further includes overseeing preparation of the Living Shoreline Guidance Document for the Sarasota Bay Estuary Program, providing municipalities and private landowners with design options for shoreline stabilization throughout the SBEP watershed. Ecological findings will directly inform avoidance, minimization, and habitat uplift strategies incorporated into design and permit documentation.

3. Development of Shovel-Ready Engineering Plans & Cost Estimates

Cummins Cederberg will deliver a fully constructible, permit-informed, bid-ready design package integrating geotechnical data, ecological constraints, hydrodynamic modeling, and regulatory requirements into a coordinated construction document set.

The final design package will include:

- Detailed grading plans, plan/profile sheets, and cross sections for hybrid living shoreline elements
- Structural details for oyster reef modules, riprap benches, sheet pile or toe walls (if required), and integrated boardwalk or upland improvements
- Construction staging plans, sequencing narratives, and erosion/turbidity control measures
- Technical specifications aligned with State and Federal funding requirements
- A detailed Opinion of Probable Cost (OPC), updated at each milestone

Cost Control Strategy

Cost control is embedded throughout design development:

- Early geotechnical and survey integration to reduce change orders
- Evaluation of hybrid versus fully nature-based alternatives to optimize
- Reuse of viable structural elements where feasible
- Milestone-based cost updates to maintain alignment with grant funding and CIP budgets

By advancing a coordinated, permit-informed design, we minimize redesign risk and position the project as truly “shovel-ready” upon funding authorization.

4. Permitting & Pre-Application Agency Coordination

Permitting will proceed concurrently with design to streamline agency review and reduce schedule risk. Our team will prepare complete permit application packages for submittal to:

- Florida Department of Environmental Protection (FDEP)
- U.S. Army Corps of Engineers (USACE)
- NOAA/NMFS (as applicable)
- Local regulatory agencies

Pre-Application Strategy

To reduce review cycles and avoid late-stage redesign, we will:

- Conduct pre-application coordination meetings with FDEP and USACE
- Present conceptual alternatives early to confirm regulatory pathways
- Identify potential resource impacts (SAV, mangroves, EFH, protected species)
- Confirm mitigation or avoidance strategies prior to final design
- Permit applications will include engineering drawings, environmental assessments, impact analyses, construction sequencing, and compliance documentation consistent with State and Federal grant requirements.
- This proactive coordination approach has consistently shortened review durations and reduced Requests for Additional Information (RAIs) on similar Gulf Coast living shoreline projects. Our team's regulatory experience—including former agency reviewers—allows us to anticipate RAI triggers and structure applications to reduce review cycles.

5. Project Management, Meetings, & Stakeholder Coordination

Under the leadership of Project Manager Jenna Phillips, our team will implement a structured, transparent management framework tailored to complex coastal resilience projects.

Jenna will serve as the single point of contact for the City, CHNEP, regulatory agencies, and project stakeholders. She will lead an integrated technical team of coastal engineers, ecologists, geotechnical consultants, surveyors, and permitting specialists to align efforts across all disciplines.

Core Project Management Responsibilities

- Day-to-day coordination and schedule management
- Oversight of technical integration across engineering and environmental disciplines
- Grant compliance tracking and reporting (DEP Work Plan 22SRP69)
- Preparation of agendas, meeting summaries, and action item logs
- Risk identification and mitigation planning
- QA/QC coordination with senior technical reviewers

Our approach delivers technically sound, grant-compliant deliverables submitted on schedule.

Meeting Facilitation & Presentation Development

Consistent with DEP requirements, our team will organize and document:

- Project kickoff meeting
- Monthly coordination meetings
- Technical work sessions
- Public workshops and stakeholder meetings
- Construction-phase coordination meetings (if authorized)

We will prepare ADA/508-compliant materials, including renderings, diagrams, plan overlays, and visual simulations to clearly communicate shoreline concepts to non-technical audiences.

Stakeholder Engagement & Response to Comments

Living shoreline projects in visible public settings require early, structured, and documented stakeholder engagement to prevent opposition and permitting delay.

Our team has extensive experience working with HOA boards, condominium associations, and multi-owner waterfront stakeholders. We understand how to:

- Align design schedules with association meeting cycles
- Address concerns regarding viewsheds, access, property values, and construction impacts
- Present technical information in clear, accessible language
- Document and respond formally to stakeholder and agency comments

At Tiki Point and similar projects, this proactive engagement strategy has minimized opposition, built consensus, and reduced permitting delays.

All stakeholder and agency comments will be tracked at each milestone, with formal written responses incorporated into design refinements and permit resubmittals.

Schedule Management & Risk Mitigation

We will develop and maintain a detailed project schedule aligned with:

- DEP grant task deadlines
- City Capital Improvement Plan milestones
- Seasonal environmental windows (SAV, wildlife timing restrictions)
- Agency review durations
- Procurement and construction sequencing

Early identification of permitting constraints, ecological timing windows, and funding deadlines allows us to proactively adjust task sequencing and avoid critical path delays.

Quality Assurance & Subconsultant Coordination

Our QA/QC framework pairs technical rigor with grant-compliant documentation.

Senior QA/QC oversight will include:

- Cross-disciplinary milestone reviews
- Verification of regulatory compliance
- Review of cost estimates and constructability

- Confirmation of ADA and documentation requirements

We will manage all subconsultants (geotechnical, survey, ecological) to maintain full compliance with DEP Exhibit H documentation standards, including procurement records, field documentation, and audit-ready deliverables.

Through integrated engineering, early regulatory coordination, disciplined schedule and cost control, and proactive stakeholder engagement, Cummins Cederberg will deliver a technically defensible, grant-compliant, shovel-ready living shoreline project that minimizes regulatory risk, maintains schedule certainty, and advances long-term coastal resiliency objectives for Charlotte County.

Cummins Cederberg offers deep construction-phase expertise in coastal and waterfront projects, from bidding and contractor selection to inspections and closeout. Our team includes former marine contractors and engineers who align construction practices with long-term resilience and performance goals.



VIII.



VOLUME
OF WORK

VIII. VOLUME OF WORK

Cummins Cederberg has not had the pleasure of working with Charlotte County and we have full availability to dedicate our staff and resources to the Tiki Point Living Shoreline project. We look forward to the opportunity to work with Charlotte County on this and future projects.

IX.



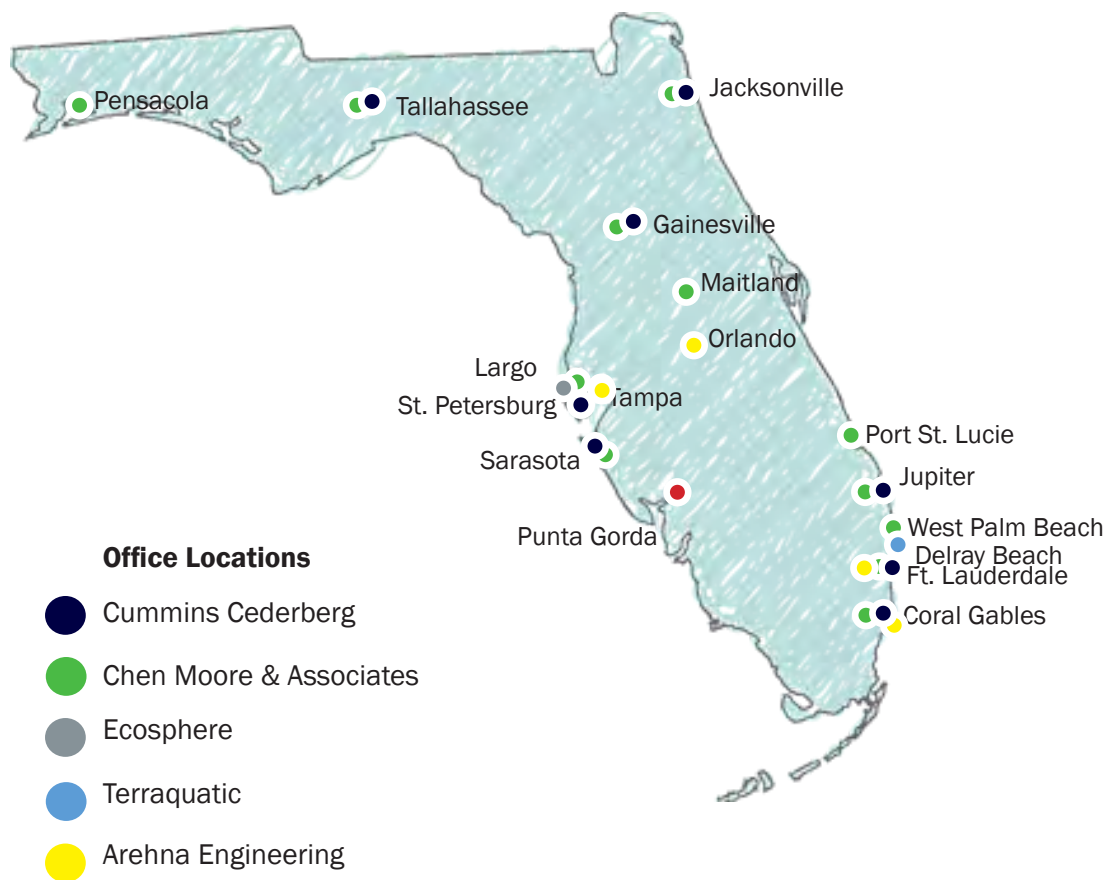
LOCATION

LOCATION

Cummins Cederberg maintains a strong statewide presence, with offices in St. Petersburg and Sarasota, providing close geographic proximity to Punta Gorda and Charlotte County. This proximity allows our team to mobilize quickly, conduct efficient site visits, and maintain consistent in-person coordination throughout planning, permitting, design, and construction.

With additional offices in Miami (Coral Gables), Fort Lauderdale, Jupiter, Tallahassee, Jacksonville, and Gainesville, our firm brings both local accessibility and statewide capacity. Our staff lives and works across South Florida, the Gulf Coast, and Central Florida, giving us region-specific familiarity with coastal processes, regulatory environments, and municipal priorities relevant to Charlotte Harbor.

Our subconsultant team further strengthens this local responsiveness. Chen Moore & Associates, Ecosphere, Terraquatic, and Arehna maintain Florida offices with similar geographic coverage, creating a regionally aligned, multidisciplinary team capable of providing reliable, on-site support and timely coordination from concept development through construction.



X.



LITIGATION

X. LITIGATION

February 23, 2026

Charlotte County
18500 Murdock Circle, Suite 344
Port Charlotte, FL 33948

RE: Litigation Statement

Dear selection committee members,

Cummins Cederberg, Inc. has not been involved in any judgments, claims, arbitration proceedings or suits pending that have been initiated by or against the Proposer in the past five (5) years.

Sincerely,
Cummins Cederberg, Inc.



Jannek Cederberg, PE
Principal

XI.



MINORITY
BUSINESS

XI. MINORITY BUSINESS

Cummins Cederberg recognizes and values diversity within and outside of our organization. As a Florida certified small business with over 80 employees, many of our employees are members of a minority group and half our professional staff are women.

To further demonstrate our commitment, **Arehna Engineering, Inc.** is a Woman-Owned Business Enterprise (WBE) certified by the State of Florida;

At Cummins Cederberg, we strive to create an inclusive environment where every voice is heard and valued, driving us toward collective growth and excellence.





CUMMINS | CEDERBERG Coastal & Marine Engineering

MIAMI (Headquarters)
201 Alhambra Circle, Suite 601
Coral Gables, Florida 33143

FORT LAUDERDALE
888 S. Andrews Ave., Suite 206
Fort Lauderdale, Florida 33316

JUPITER
140 Intracoastal Pointe Drive, Suite 208
Jupiter, Florida 33477


ST. PETERSBURG
111 2nd. Ave. NE, Suite 1100
St. Petersburg, FL 33701

SARASOTA
1491 2nd Street, Suite E
Sarasota, Florida 34236


GAINESVILLE
225 SW 7 Terrace, Suite 10
Gainesville, Florida 32601

JACKSONVILLE
61.11 Gazebo Park Place, Suite 222
Jacksonville, Florida 32241

TALLAHASSEE
336 E College Ave., Suite 201
Tallahassee, Florida 32301

 www.CumminsCederberg.com

 info@CumminsCederberg.com

 +1 305 741 6155

**PART IV - SUBMITTAL FORMS
PROPOSAL SUBMITTAL SIGNATURE FORM**

1.	Project Team Name and Title	Years experience	City of office individual will work out of for this project	City individual's office is normally located	City of individual's residence
	Jannek Cederberg, PE, Principal in Charge	23	Coral Gables	Coral Gables	Coral Gables
	Jason Cummins, PE, QA/QC Manager	21	Coral Gables	Coral Gables	Coconut Grove
	Jenna Phillips, Project Manager	19	Sarasota	Sarasota	Sarasota
	Matt Trammell, PE, Lead Designer	20	Tallahassee	Tallahassee	Destin
	Geoff Parker, PE, Marine Structural	23	St. Petersburg	St. Petersburg	St. Petersburg
	Jason Taylor, PE, Marine Structural	28	Coral Gables	Coral Gables	Miami
	Andrew Condon, PE, Coastal Eng.	15	Jacksonville	Jacksonville	St. Augustine
	See supplemental page for other team-members				
2.	Magnitude of Company Operations				
	A) Total professional services fees received within last 24 months:			\$ 23,268,008	
	B) Number of similar projects started within last 24 months:			173	
	C) Largest single project to date:			\$ 2,646,110	
3.	Magnitude of Charlotte County Projects				
	A) Number of current or scheduled County Projects			None	
	B) Payments received from the County over the past 24 months (based upon executed contracts with the County).			\$ NA	
4.	Sub-Consultant(s) (if applicable)	Location	% of Work to be Provided	Services to be Provided	
	Chen Moore and Assoc.	Fort Lauderdale	15%	Landscape arch. & Civil/stormwater	
	Arehna	Miami	5%	Geotechnical	
	Terraquatic	Delray Beach	7%	Survey	
	Ecosphere	Largo	3%	Technical advisor	
5.	Disclosure of interest or involvement: List below all private sector clients with whom you have an active pending contract and who have an interest within the areas affected by this project. Also, include any properties or interests held by your firm, or officers of your firm, within the areas affected by this project.				
	Firm NA	Address			
	Phone #	Contact Name			
	Start Date	Ending Date			
	Project Name/Description	NA			

NAME OF FIRM Cummins Cederberg, Inc
(This form must be completed and returned)

6. Minority Business:

Yes X No

The County will consider the firm's status as an MBE or a certified MBE, and also the status of any sub-contractors or sub-consultants proposed to be utilized by the firm, within the evaluation process.

Comments or Additional Information:

Arehna is a WBE registered in the state of Florida.

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

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

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

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

Addendum No. 1 Dated 1/30/2026 Addendum No. 2 Dated 2/12/2026 Addendum No. Dated

Addendum No. Dated Addendum No. Dated Addendum No. Dated

Type of Organization (please check one): INDIVIDUAL () PARTNERSHIP ()
 CORPORATION () JOINT VENTURE ()

Cummins Cederberg, Inc. 305-741-6155
Firm Name Telephone
NA 27-2129033
Fictitious or d/b/a Name Federal Employer Identification Number (FEIN)

201 Alhambra Circle, Suite 601
Home Office Address

Coral Gables, Florida 33143 16
City, State, Zip Number of Years in Business

1491 2nd Street, Suite E. Sarasota, Florida 34236
Address: Office Servicing Charlotte County, other than above

Jenna Phillips, Project Manager 941-364-2424
Name/Title of your Charlotte County Rep. Telephone

Jannek Cederberg, President
Name/Title of Individual Binding Firm (Please Print)

 2/18/2026
Signature of Individual Binding Firm Date

jcederberg@cumminscederberg.com
Email Address

(This form must be completed & returned)

CUMMINS CEDERBERG TEAM MEMBERS, SUPPLEMENTAL PAGE

Name & Title	Years Experience	City of Office Individual will work out of for this project	City Individual's office is normally located	City of Individual's residence
Chris Kerner, Marine Structural Engineer	5	St. Petersburg	St. Petersburg	St. Petersburg
Leonard Barrera, PE, Senior Coastal Engineer	12	Coral Gables	Coral Gables	Miami
Jordon Cheifet, PE, Senior Coastal Engineer	22	Jupiter	Jupiter	West Palm Beach
Rasheed Musilimani, PE, Construction Administration Lead	15	Coral Gables	Coral Gables	South Miami
Ken Chang, PE, Construction Administration	7	Coral Gables	Coral Gables	Miami
Joe Mihalek, Construction Administration	2	St. Petersburg	St. Petersburg	St. Petersburg
Rebecah Delp, Sr. Marine Resource Survey & Environmental Permitting	6	St. Petersburg	St. Petersburg	St. Petersburg
Alex Pacelko, Marine Resource Survey	5	St. Petersburg	St. Petersburg	St. Petersburg
Penny Cutt, Environmental Permit	30	Fort Lauderdale	Fort Lauderdale	Pompano Beach
Danielle Irwin, Environmental Permitting	24	Tallahassee	Tallahassee	Tallahassee
Katie Britt Williams, Grant Administration	11	Tallahassee	Tallahassee	Tallahassee
Caroline Pryor, Grant Administration	6	Tallahassee	Tallahassee	Tallahassee

**HUMAN TRAFFICKING AFFIDAVIT
for Nongovernmental Entities Pursuant To FS. §787.06**

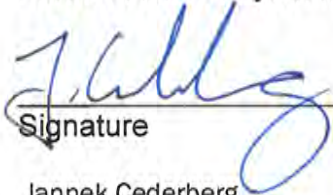
Charlotte County Contract #20260251

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

1. I am over the age of 18 and I have personal knowledge of the matters set forth except as otherwise set forth herein.
2. I am an officer or representative of the Nongovernmental Entity and authorized to provide this affidavit on the Company's behalf.
3. Nongovernmental Entity does not use coercion for labor or services as defined in Section 787.06, Florida Statutes.
4. This declaration is made pursuant to Section 92.525, Florida Statutes. I understand that making a false statement in this declaration may subject me to criminal penalties.

Under penalties of perjury, I declare that I have read the foregoing Human Trafficking Affidavit and that the facts stated in it are true.

Further Affiant sayeth naught.



Signature

Jannek Cederberg

Printed Name

President

Title

Cummins Cederberg, Inc.

Nongovernmental Entity

2/3/2026

Date

END OF PART IV

NAME OF FIRM Cummins Cederberg, Inc.
(This form must be completed and returned)

DRUG FREE WORKPLACE FORM

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

1. Publish a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance is prohibited in the workplace and specifying the actions that will be taken against employees for violations of such prohibition.
2. Inform employees about the dangers of drug abuse in the workplace, the business's policy of maintaining a drug-free workplace, any available drug counseling, rehabilitation, and employee assistance programs, and the penalties that may be imposed upon employees for drug abuse violations.
3. Give each employee engaged in providing the commodities or contractual services that are under bid a copy of the statement specified in subsection (1).
4. In the statement specified in subsection (1), notify the employees that, as a condition of working on the commodities or contractual services that are under bid, the employee will abide by the terms of the statement and will notify the employer of any conviction of, or plea of guilty or nolo contendere to, any violation of Chapter 893 or of any controlled substance law of the United States or any state, for a violation occurring in the workplace no later than five (5) days after such conviction.
5. Impose a sanction on or require the satisfactory participation in a drug abuse assistance or rehabilitation program if such is available in the employee's community, by any employee who is so convicted.
6. Make a good faith effort to continue to maintain a drug-free workplace through implementation of this section.

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



Proposer's Signature

2/3/2026

Date

NAME OF FIRM Cummins Cederberg, Inc
(This form must be completed and returned)