



MARINA & WATERFRONT DEVELOPMENT

PLANNING	PERMITTING	ENGINEERING & DESIGN	CONSTRUCTION SERVICES	CONSULTING





APPLIED TECHNOLOGY & MANAGEMENT IS KNOWN THROUGHOUT THE INDUSTRY FOR ITS FULL-SERVICE, TURNKEY APPROACH TO WATERFRONT AND MARINA DEVELOPMENT.

ATM approaches development holistically to generate maximum, sustainable benefits from each project. We believe waterfront projects cannot be engineered effectively without integrating economic, market, and environmental issues. This is key to our business model and critical for both public and private clients.

- Is the return worth the investment?
- Is the market sustainable over time?
- What are the boater trends that affect slip absorption and occupancy?
- Does the budget provide for future dock expansion or replacement?
- Are there additional revenue opportunities that should be considered?
- Does the project meet regulatory requirements, or can it be modified to restore or enhance the local ecosystem?

By addressing these and other issues, ATM's experience-driven planning process results in economically sound and environmentally acceptable development.



SERVICES & capabilities

■ **Market Studies & Business Planning**

Market Analysis

Feasibility Studies

Financial Analyses & Pro Formas

■ **Facility Planning**

Marina Layouts

Upland Programming

■ **Engineering & Design**

Due Diligence

Oceanographic Studies & Surveys

Coastal Structures

- Docks, Piers, & Wharves

- Bulkheads, Revetments, Groins, & Jetties

Construction Services

■ **Environmental Permitting**

Regulatory Approvals

Environmental Studies

EA/EIS

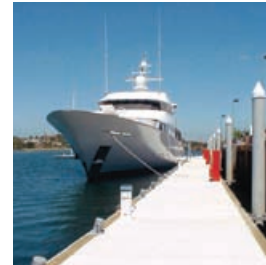
■ **Consulting**

Public-Private Partnerships

Operational Audits

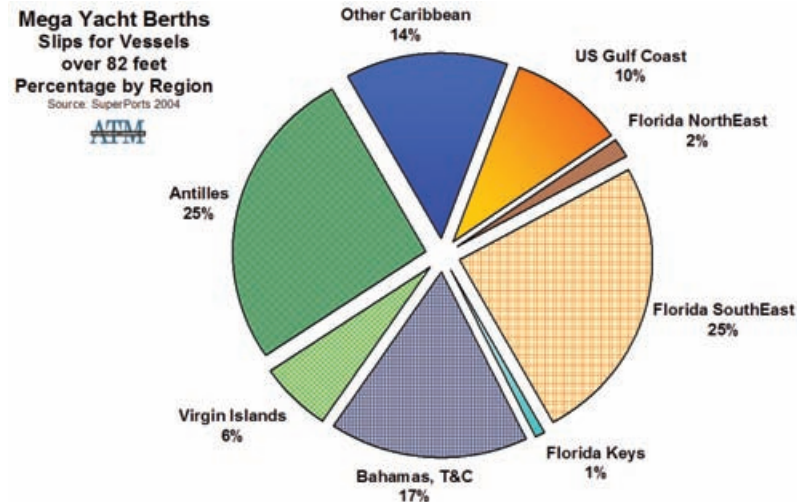
Operations Plans

Financial Management & Capital Financing



MARKET STUDIES & BUSINESS planning

In addition to standard business yardsticks, our engineers and analysts have developed tools specifically designed for the evaluation of marinas. These tools facilitate the assessment of market demand, existing facility value, and potential future performance. Accurate market demand projections provide a clear vision of facility size, characteristics, and amenities needed to attract boaters.



Slips Occupied	100	100	100	149	164	181
Occupancy	83%	83%	83%	75%	83%	91%
Seasonal, average (\$/ft)	\$8.74	\$8.75	\$9.31	\$9.72	\$10.27	\$10.29
Slips Occupied	63	68	68	78	78	78
Live Aboard Fee, (\$/min)	\$88.00	\$88.00	\$92.00	\$92.00	\$96.00	\$96.00
Slips Occupied	55	58	58	67	67	67
Total Slips Absorbed	540	568	568	627	642	659
Occupancy	96%	96%	96%	92%	94%	96%
Absorption of Total Build-Out	79%	83%	83%	92%	94%	96%
Annual Sales						
Transient	25					
	\$0	\$0	\$0	\$0	\$0	\$0

Market position will dictate rate structures and initial capital investment while boater trends, cruising circuits, and seasonality will drive occupancy and slip absorption.

One of the more valuable tools in marina planning is ATM's marina-specific pro forma analysis that predicts income and expenses over time (usually 10 years). Multiple "what if" scenarios can be quickly evaluated by combining the estimated construction costs, market data, income opportunities, and the costs of doing business into a single numerical tool.

This proprietary tool can also be used to predict the effects of:

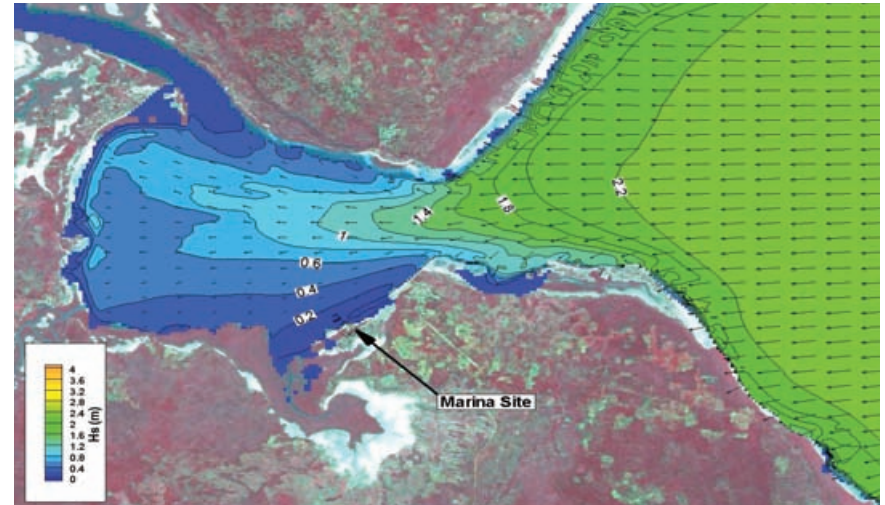
- Phasing Construction
- Using Alternative Construction Materials
- Increasing Staffing
- Slowing the Absorption of the Proposed Slips

In this way, both project feasibility and a recommended course are determined up front.

FACILITIES PLANNING & layout

When laying out a new marina or improving an existing facility, ATM goes beyond basic marina design practices. Working as an integrated team with developers, land planners, architects, and public agencies, we provide unique, physically viable layout solutions that integrate client vision, market factors, and practical engineering principles. The resulting facilities effectively balance aesthetic requirements and operational effectiveness.

Our planning and design experience covers the full spectrum of waterfront facilities ranging from private marinas to resort developments to revitalized urban waterfronts.



MARINE

engineering & design

Marine structures pose uncommon challenges for the developer and the engineering team. These structures must be designed to survive unpredictable and extreme pressures from:

- Loads
- Storms
- Waves
- Tides
- Currents
- Winds



Structures must endure constant wet-dry cycles and a corrosive environment. Additionally, marine structures have an impact upon local hydrodynamics, sediment transport, and marine habitat.

ATM's coastal and structural engineers are experienced in addressing the challenges of marine structure development and placement. Our extensive working knowledge of coastal environments and practical experience gives us a unique understanding of the site-specific needs of coastal structures and their effect on natural systems.

Leading lending institutions call on ATM's expertise to conduct comprehensive due-diligence inspections for risk assessment on marine structures and to evaluate marina facilities being considered for their portfolios.

ENVIRONMENTAL PERMITTING &

consensus building

The popularity of waterfront living and recreation has put increasing pressure on coastal resources all over the world. Access to the water is at a premium, and new development must be balanced against the unplanned destruction of natural areas.

ATM approaches every marina and brownfield waterfront project with the philosophy that responsible waterfront development sustains and enhances our shared natural coastal resources. Our clients learn that projects don't have to be an either/or proposition.

With mutual objectives, innovation, and solid science and engineering, we negotiate regulatory issues with the authorities and provide solutions that both meet client goals and allow them to take pride in the environmental aspects of their projects.



INTERNATIONAL

experience

ATM's team of marina and development experts have planned, designed and/or engineered more than 600 marina projects supporting both public and private interests throughout the world, providing feasibility, design, permitting, environmental consulting, and/or construction consultation services.

We have been providing environmental and engineering services to the international community for more than 25 years. ATM's specialized expertise in international development includes coastal engineering, environmental engineering and science, marina and waterfront development, design evaluation, surveying and mapping, and ecological protection and mitigation, as well as assistance with marketing and financing. ATM professionals have long been associated with the Urban Land Institute (ULI) and routinely work with project lenders and financiers.

We have directed marina construction projects worth hundreds of millions of dollars over the last few years, including Yacht Haven Grande, the most advanced joint marina and upland facility in the Americas. We direct projects in the Caribbean, Europe, Asia, and beyond, including long-term comprehensive plans and multiple marinas in Dubai.



The Bahamas

Abaco

Abaco Inn
Gorda Cay Disney
Great Guana Cay
Angelfish Point
Sandy Point Marina

Andros Island

AUTEC Shallow Water Range Cable Installation,
Little Stirrup Cay, Berry Islands/Andros Island
Fresh Creek Marina, Andros Town
Morgan's Bluff

Berry Islands

Chub Cay Resort Development, Chub Cay
Norwegian Cruise Lines, Big Stirrup Cay
Chub Cay Shoreline Analysis
Hoffmans Cay
Whale Cay

Bimini Islands

Bimini Bay Resort and Marina
Bimini Inlet, North Bimini Island
Brown's Marina, North Bimini

Grand Bahama Island

Old Bahama Bay
Discovery Bay
Freeport Harbor
Isle of Allura
The Cove at Port Lucaya
Grand Bahama Resort

Silver Point, Lucaya
Ritz-Carlton
Gold Rock Creek
Ginn Sur Mer Resort, West End

Eleuthera Islands

Hatchet Bay Marina
Unicorn Cay
Windermere Club
Winding and Half Sound Bay
Davis Harbor
Seashells at Cotton Bay
Royal Island Development
The Cove Marina, North Eleuthera
Sky Beach Club

Exuma Islands

Crab Cay Development
Emerald Bay Marina, Great Exuma
Normans Cay Marina Resort, Exuma Cays
Bonfish Marina, February Point
Royal Cay, Little Exuma

Long Island

Port Yuma Cruise Destination, Clarence Harbor
Long Island Resorts, Stella Maris
Diamond Crystal Properties

Mayaguana Island

Mayaguana Development

New Providence

Atlantis Resort, Paradise Island
Athol Island Golf Course, Paradise Island
Ocean Club and Golf Course Renovation, Paradise Island
Rose Island Resort, Rose Island
Shell Bahamas Offshore Mooring Facility at Clifton Pier
Aqua Dyer Open Ocean Aquaculture Facility, Salt Cay
Ocean Bay, Nassau
Ocean Club Marina, Paradise Island
South Ocean Property

Rum Cay Island

Rum Cay Marina, Rum Cay

San Salvador Island

Preliminary Marine Facilities Siting Assessment



Turks & Caicos Islands

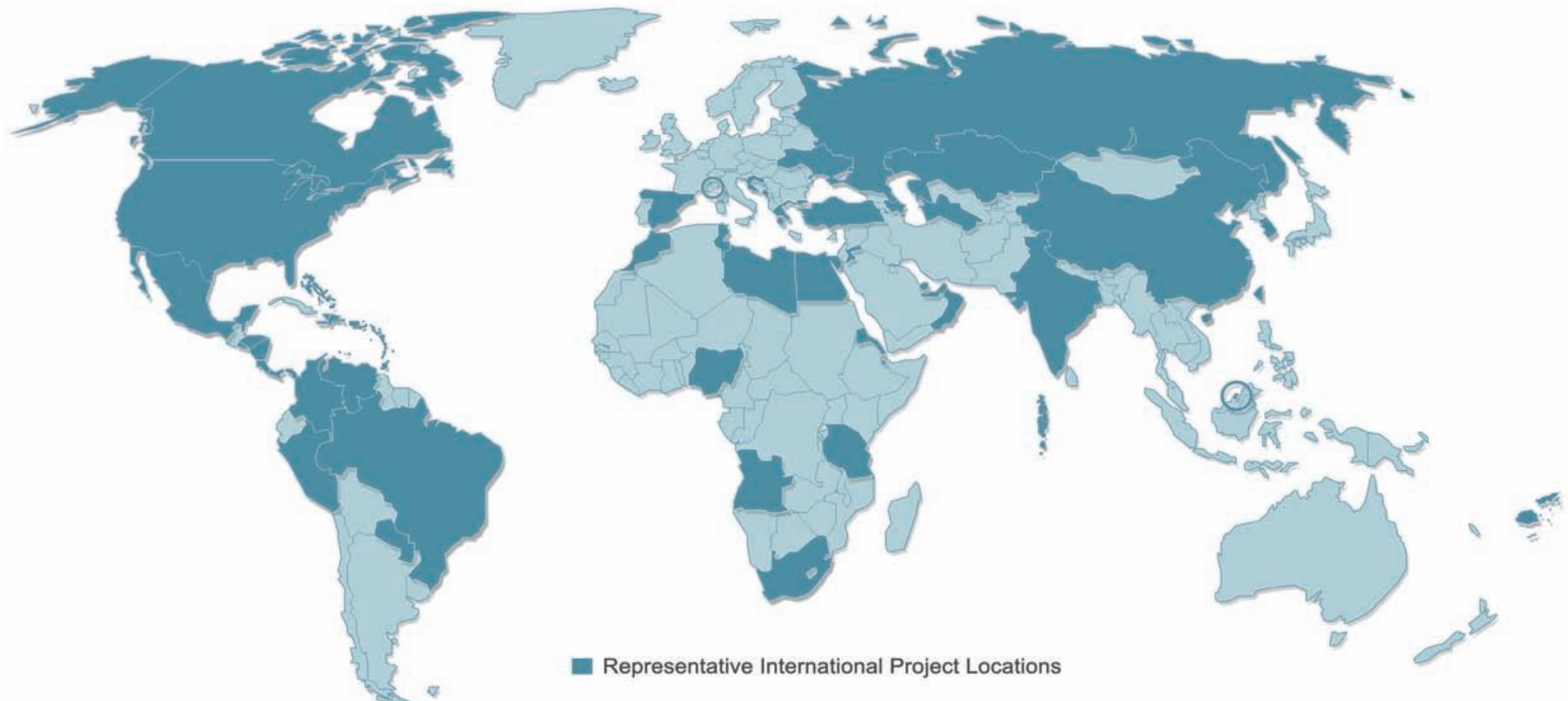


- West Caicos Marina, Providenciales
- Taylor Bay, Providenciales
- Aquatic Centre Ltd., Providenciales
- Cooper Jack Marina, Providenciales
- Cotton Bay Ltd., Providenciales
- Grace Bay Beach, Providenciales
- Leeward Canals, Providenciales
- Leeward Resort, Providenciales
- The Meridian Club, Pine Cay
- Amanyara, Northwest Point, Providenciales
- Provident Ltd., Providenciales
- Provo Power Company, Providenciales
- Saadet Ltd., Providenciales
- St. James Marina, Providenciales
- Turtle Cove Marina, Providenciales
- Water Cay Club Resort, Water Cay
- Cruise Ship Facility, Grand Turk
- Mare Bello Resort Development, North Caicos
- Caicos Marina and Boatyard, Providenciales
- Long Bay Hills, Providenciales
- Tuscany at Grace Bay, Providenciales
- Sand Dollar, Grand Turk
- Public Inner Harbours, Grand Turk
- Mare Bello Development LLC, Middle Caicos
- Parrot Cay Private Development, Parrot Cay
- South Caicos (CMK), S. Caicos

Caribbean Islands

Yacht Haven Grande, St. Thomas, USVI
Nanny Cay Marina, BVI
El Conquistador, Puerto Rico
Ponce Hilton Resort, Puerto Rico
Palmas del Mar, Puerto Rico
Westin Roco Ki Resort, Dominican Republic
Ocean World, Puerto Plata, Dominican Republic
Dolphin Quest, Southampton Princess Hotel, Bermuda
Cayman Palace, Grand Cayman
Cap Juluca, Anguilla
Four Seasons Resort, Nevis
Gift Plantation, St. Lucia
Marriott Castle Harbour Resort, Bermuda
Ritz-Carlton, Grand Cayman
Graeme Hall Swamp, Barbados
Grande Anse Estate, St. Lucia
Ariel Sands Resorts, Bermuda
Scrub Island, BVI
Sonesta Resort, Anguilla
Thatch Cay, USVI
Fairmont Hotels, Bermuda
Altamer Resort, Anguilla
Beef Island, Tortola, BVI
Virgin Gorda Yacht Harbor, BVI
Antigua Yacht Club, Antigua
Simpson Bay Yacht Club, St. Maarten
Rodney Bay Marina, St. Lucia
Christophe Harbor, St. Kitts
Port George, Grenada
North Sound Yacht Club, Virgin Gorda, BVI
Port-au-Prince, Haiti





Mexico & Central America

Puerto Los Cabos, San José del Cabo, Mexico
Puerto Cancún, Cancún, Mexico
Puerto Careyes, Mexico
Isla Blanca, Cancún, Mexico
Huatulco Resort, Mexico
Chalacatepec, Jalisco, Mexico
Holbox, Quintana Roo, Mexico
Marina Costa Baja, LaPaz, Mexico
Los Micos Resort, Bahía de Tela, Honduras
Port Royal Resort, Roatan, Honduras
Eco Desarrollo Papagayo, Costa Rica
Carara Resort Marina, Costa Rica
Bahía Escondida, Costa Rica
Hacienda San Alfredo, El Salvador
San Juan del Sur Marina, Nicaragua
Escameca Grande, Nicaragua
Fort Sherman Marina, Panama
Fort Amador, Panama
Playa Corona, Panama
Boca del Drago Bocas del Toro, Panama
Brisas Amador, Amador Causeway, Panama
Las Perlas, Panama

South America

Cartagena Convention Center Marina, Colombia
EcoLand Resort, PI, Brazil
Isla San Francisco, Asunción, Paraguay
Caracas Bay Master Planning, Curaçao
Marina Due Diligence, La Guaira, Venezuela

Canada

Port of Quebec, Quebec City, Quebec
Big Bay Point Resort, Barrie, Ontario

Europe

Koncha Zaspá Resort, Kiev, Ukraine
Marina de Cope, Murcia, Spain
Bodrum, Turkey
Sibenek, Croatia
Gocök, Turkey
Monte Carlo, Monaco

Asia

Nine Dragons Resort Marina, Shanghai, China
Quingdao Marina, Quingdao, China
Silk Island and Silk Bay Projects, Guangdong, China
Fashion Island, Hainan, China
Jisepo Port Waterfront Marina, South Korea
Cabo de Rama Resort, Goa, India
Hulhule Resort Marina, Malé, Maldives

Middle East

Anchor Marina, Palm Jumeirah, Dubai
Palm Jumeirah Mega Yacht Marina, Dubai
Crescent A & E Marinas, Palm Jebel Ali, Dubai
Al Seef & Baniyas Marinas, Dubai Creek
Jewel of the Creek, Dubai Creek
Dubai Festival City, Dubai Creek

Dubai Promenade
Dubai Waterfront Phase 3
Dubai Marina Phase 3
Saraya Islands Resort, Ras Al Khaimah
Coral Island Resort, The World Islands, Dubai
Pavilion Marina, Dubai Maritime City
Harbour Marina, Dubai Maritime City
Mamzar Island Marina, Palm Deira, Dubai
Marina A, Palm Deira, Dubai
IGY Palm Diera DIC Marina, Dubai
Al Harf Resort, Mussandam, Oman
Al Aqr Resort, Oman
Marina Bander Al Rowdha, Muscat, Oman
Abu Dhabi Marine Sports Club, Abu Dhabi
Najmat Marina at Reem Island, Abu Dhabi
Jumeirah Beach Hotel Marina, Dubai
Channel Basin Marina, Palm Deira, Dubai
First Complex Marina, Palm Deira, Dubai
Central Park Marina, Palm Deira, Dubai
Michael Schumacher Tower, Abu Dhabi
Sowwah Water Taxi Stops, Abu Dhabi
Ayla Resort Marina, Aqaba, Jordan
Al Khayaal Resort Marina, Oman

Africa

Ariana Waterfront Development, Tunis, Tunisia
Port of Cabinda, Angola
Port Ghalib, Marsa Alam, Egypt
Misr El Alamein, Egypt
Kiswere Harbour, Tanzania
Taghazout, Morocco

MARINAS

Dubai, UAE

ATM's Middle East operation was opened in October 2005 when Island Global Yachting (IGY) was offered the exclusive contract for the development and operations of Nakheel's marina properties in Dubai. As IGY's engineering and consultancy arm, ATM initiated the planning, feasibility, and engineering studies for the proposed development of approximately 40,000 berths on the three Palm Islands, Dubai Waterfront, the Arabian Canal, Dubai Creek, and along the Dubai coastline. The engineering design packages were also completed for Anchor Marina and Palm Jumeirah Megayacht Marina as well as several facilities on Palm Deira. ATM has also completed marina planning and feasibility work, coastal studies, and infrastructure design projects for several World Islands projects, and the planning and design of Festival Marina in Dubai Festival City.

ATM has provided marina consulting services to a number of developers in Dubai, Abu Dhabi, and the other Emirates as well as for Middle East clients in Oman, Qatar, Bahrain, Egypt, and Jordan. These clients include: EMAAR, Limitless, Nakheel, Saraya, and many others. ATM's Dubai office remained active through the world-wide financial crisis and provides our clients in the Middle East and Asia with specialized marina, coastal, environmental, and water resources engineering services to developers, A/E partners, and government clients.





CHRISTOPHE HARBOUR MARINA St. Kitts, West Indies

The Christophe Harbour Resort Project involves the creation of a harbor, lagoon, and islands within the Little Salt Pond and Great Salt Pond on the Southeastern Peninsula of St. Kitts. ATM is providing multiple services in support of the project including coastal and marine engineering, water quality modeling, and marina planning, design, and construction observation. When completed, the Christophe Harbour Resort will feature a state-of-the-art megayacht marina capable of accommodating vessels up to 300 ft LOA, a Mediterranean-inspired marina village, luxury hotels, various upscale residential products, as well as a Fazio signature golf course.

NORTH SOUND YACHT CLUB Virgin Gorda, BVI

ATM was retained to support a new marina facility in North Sound, Virgin Gorda, BVI. The project site is located within a deepwater bay within the heart of the British Virgin Islands cruising grounds. The facility was designed to provide megayacht berthing associated with the prestigious Oil Nut Bay development, and complement the 11 villas and marina village on the hillside adjacent to the marina. ATM performed facility planning and developed layout alternatives and phasing options, preliminary engineering design, and upland program recommendations. The Client proceeded with a floating dock option, relying on ATM for development of floating dock performance specifications and design and construction phase consulting.





PUERTO LOS CABOS

San José Del Cabo, BCS, Mexico

ATM was selected to provide full-service marina and coastal engineering consulting for a private development near San José del Cabo. The development property fronts the Sea of Cortez and will offer a state of the art marina (up to 500 slips at full buildout) in conjunction with golf courses, hotels, commercial and retail offerings, a Mexican village, an eco-park, and a variety of residential sites. The marina is operational and dock construction is underway for additional phases.

ATM's creative marina design enabled a number of different areas targeted for different users. The basin shape was driven by natural features and careful and aesthetically valuable integration with the future land program elements around it. The basin increases the value of the upland development by creating more waterfront property, thereby resulting in a better financial return overall at buildout. The resort's official website states "the new marina at Puerto Los Cabos is probably Baja California's biggest construction project in a generation."



Photo Courtesy of EDSA



YACHT HAVEN GRANDE

St. Thomas, USVI

Setting a new standard in luxury marinas, Yacht Haven Grande in St. Thomas, USVI, is the ultimate yachting destination. As the primary marina consultant to Island Global Yachting (IGY) for the marina restoration project, ATM evaluated the market for the proposed facility, developed a design layout based on market demand, assessed the financial viability for the proposed restorations, designed the project, and observed construction.

Results of ATM's analyses included identification of the pertinent market factors and forces projected to drive the demand, absorption, and physical features of the facility. Seasonal projections, slip rate sensitivity and absorption projections also were incorporated to result in a market-driven marina layout.



Phase One

- 48-slip dedicated megayacht facility
- 5,193 linear feet of dock space
- 80,000 square feet of retail space
- 31,000 square feet of office space
- 4 waterfront restaurants
- Exclusive private yacht club
- 12 luxury condominiums
- In-slip high-speed communications
- Up to 600 amps of 3-phase power
- High-speed in-slip fueling and fuel dock
- 24-hour security

Phase Two

- 70-room hotel
- 40,000 square feet of additional retail space
- Additional restaurants
- 25,000 square-foot conference center
- 130 additional slips in marina
- Water-based theme park
- Outdoor recreational facilities



United States

Alabama

SaltAire Marina, Mon Louis

Delaware

Indian River Inlet Marina, Rehoboth Beach

Florida

Miami Beach Marina, Miami

Virginia Key, Miami

Ft. Pierce City Marina, Ft. Pierce

Halifax Harbor Marina, Daytona

Stock Island Marina, Key West

Laishley Park Marina, Punta Gorda

Old Port Cove Marina, North Palm Beach

TerraPointe East Nassau Dev., Nassau County

Clearwater Municipal Marina, Clearwater

Sebastian Inland Harbor, St. Augustine

San Marco Marina, Jacksonville

Dolphin Reef Marina, Jacksonville

Municipal Marina, Madeira Beach

Amelia Island Yacht Club, Amelia Island

Marineland Marina, Marineland

Fernandina Harbor, Fernandina Beach

Timber Island, Carrabelle

E.D. Holdings Marinas, Statewide

Naples City Marina, Naples

Palatka Waterfront Redevelopment, Palatka

Legendary Marine, Destin

Bay Point Marina, Panama City

Okee Tantie Marina & Campground, Okeechobee

Northeast Marina, East Palatka

Madeira Towers Marina, Daytona Beach Shores

Georgia

Golden Isles Marina, Brunswick

Thunderbolt, Savannah

Oxbow Meadows, Columbus

Liberty Harbor, Brunswick

Kilkenny Creek Marina, Richmond Hill

Aqualand Marina, Flowery Branch

Fort Gordon Marina, Columbia County

Kentucky

Marina at English Park, Owensboro

Louisiana

Amite River Mariners Club, Port Vincent

Tickfaw River Mariners Club, Killian

Maryland

Canton Crossing Marina, Baltimore

Bay Bridge Marina, Stevensville

Massachusetts

Marina Bay, Boston

Provincetown Marina, Provincetown

Michigan

Bay Harbor Marina, Bay City

Mississippi

Pascagoula Harbor Marina, Pascagoula

North Carolina

Cypress Landing, Chocowinity

Gum Thicket Marina, Oriental

Albemarle Plantation, Edenton

Southport Marina, Southport

Arlington, Arapahoe

Marina at the Pamlico, Washington

Washington Drystack, Washington

Daniels Point Marina, Arapahoe



New Jersey

Liberty Landing, Newark
 Seaboard Landing, Penns Grove

New York

Pier 57, Manhattan
 Montauk Yacht Club & Resort, Long Island
 Gratwick Park Marina, North Tonawanda
 Frink Marina Site, Clayton

Oklahoma

Pier 51, Mannford

Rhode Island

41° North, Newport
 Quonset Redevelopment, Newport
 Weaver Cove Marina, Melville
 New England Boatworks, Melville

South Carolina

Harbour Town Yacht Basin, Hilton Head
 Windmill Harbor, Hilton Head
 Big House Landing, Palmetto Bluff
 Beaufort City Marina, Beaufort
 Lady's Island, Beaufort County
 Charleston City Marina, Charleston
 Bristol Marina, Charleston
 Cooper River Marina, Charleston
 Seabreeze Marina, Charleston
 Litchfield Marina, Litchfield
 Georgetown Harborwalk Marina, Georgetown
 The Reserve at Lake Keowee, Lake Keowee

Crickett Cove, Little River
 Grande Dunes, Myrtle Beach
 Megayacht Marina, Port Royal
 St. Johns Yacht Harbor, Charleston
 Mariners Cove, Little River
 Osprey Marina, Myrtle Beach
 Daniel Island Marina, Charleston
 Fretmac/Keowee Drystack, Sunset
 Kiawah River Plantation, Johns Island
 Lakewilde Plantation, Ellore
 Charleston Harbor Pilots Assoc., Charleston
 Charleston Harbor Marina, Charleston

Tennessee

Tennessee National, Loudon
 Lockett Marina, Gallatin

Texas

Ingleside Marina, Ingleside
 Caracol Marina, Port O'Connor
 Lake Country Marina, Ft. Worth
 Emerald Point, Austin
 Tawakoni Marina, Lake Tawakoni
 Canyon Lake Marina, Canyon Lake
 Hurst Harbor Marina, Lake Travis
 Newport Marina, Mustang Island

Virginia

Washington Sailing Marina, Alexandria
 Harbor Station Marina, Dumfries
 Bluff Point, Northumberland County
 Kerr-Bugs Island Lake Marina, Clarksville



Dubai, UAE
Gainesville, FL
Jacksonville, FL
St. Augustine, FL
West Palm Beach, FL
Charleston, SC
Hilton Head, SC



ATM is a marine, coastal, environmental, civil, and water resources engineering firm that specializes in marina and waterfront development, coastal engineering, beach restoration, environmental permitting, hydrological modeling, wetland permitting and management, and site/civil development. Founded in 1984, we serve public and private clients throughout the world.

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