Maritime & Seashore

CMA
ARCHITECTS &
ENGINEERS LLC

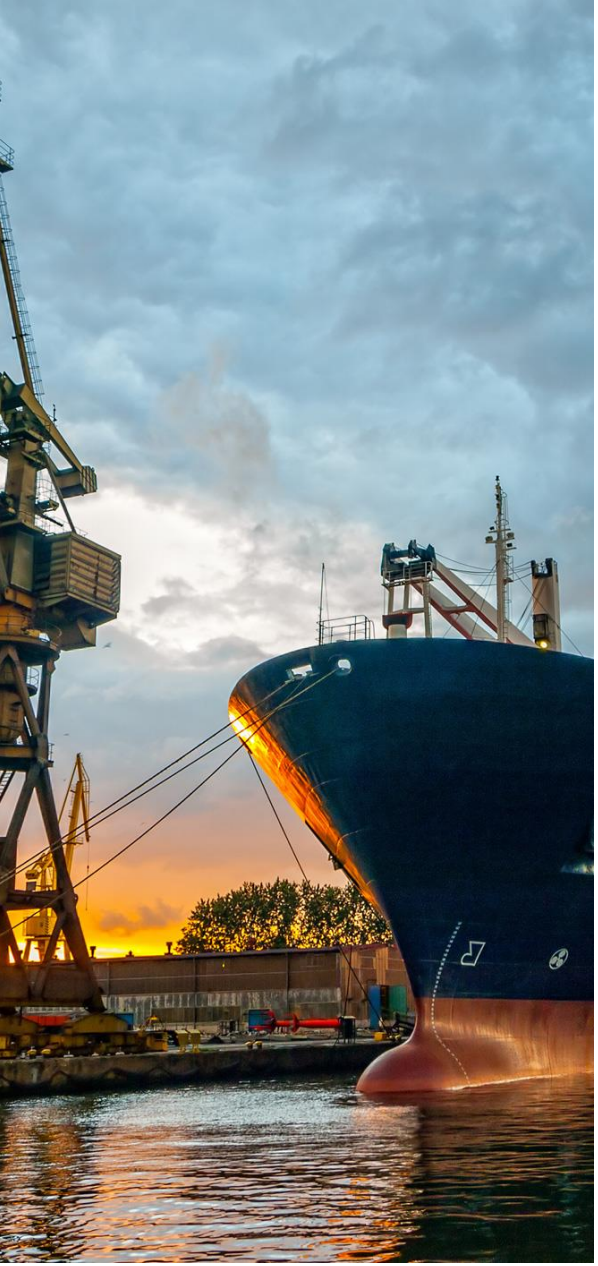
Specialized Services

In addition to the regular architecture and engineering services which includes project and construction management as well as permitting, CMA can provide our clients with vast experience coordinating/managing specialized studies such as:

- Invertebrate Relocation
- Bathymetry
- Wave Studies
- Coastal Erosion

Futhermore, our in-house team are familiarized with the permitting and endorsement procedures for this sensitive area, which provides a valuable asset to the projects viability and design process. Agencies include:

- PR Department of Natural Resources
- US Corps of Engineers



Sample of Work

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Palmas del Mar Yacht Club

Humacao, PR

Description

The project includes 158 boat spaces and other associated facilities at Palmas del Mar complex. Designed to fit mega-yachts up to 175ft. Each slip was designed to proved a home port which included pump out service, 240V electric system dockside and in-slip diesel fuel service.

Phase I of the project included the dredging of 11,500 cubic meters at the area where the

marina was constructed later. Phase II of the project consisted of the construction of 201 parking spaces and the installation of the necessary infrastructure to operate the Yacht Club.

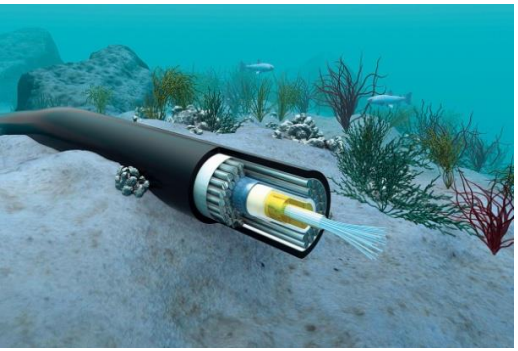
San Antonio Bridge

San Juan, PR

Description

Spanning over the San Antonio Channel, this bridge connects Old San Juan and its dock area with the remaining San Juan Municipality. It was constructed in 1924 to carry a new highway serving the dock area of the San Juan islet. It was erected parallel to existing railroad and trolley bridges and was designed and built respectively by Rafael Nones and Robert Prann, both renowned engineers, is listed in Puerto Rico's Inventory of Historic Bridges as an exceptional beam bridge due to its monumental style (total length; number of spans and decorative elements).

CMA interacted closely with PRHTA's staff during the planning, design and construction process. Special attention was given to the finishing details, providing balconies and luminaries in harmony with the environment and natural resources around the area. Furthermore, CMA was awarded a recognition by the College of Engineers and Surveyors of PR (CIAPR) for Outstanding Civil Engineering Project for the design of the San Antonio Bridge.



Isleta Marina Electrical Upgrades

Fajardo, PR

Description

CMA provided design services for the replacement of the submarine electrical cable line that provides electrical power to the Isleta Marina island residential development. Isleta Marinas was built in

This project was made in coordination with the Puerto Rico Electric and Power Authority (PREPA).

Paseo de la Real Marina

Aguadilla, PR

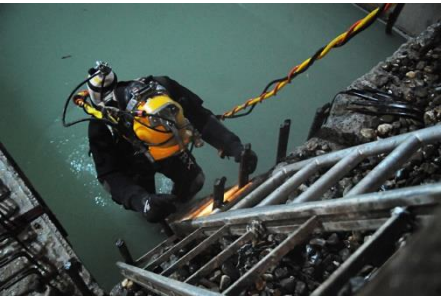
Description

Rehabilitation of 1.5 miles along PR-442 and PR-440 – a 12 acres strip - in the municipality's sea front with three main objectives: costal protection, improve roadway access by improving the Cacula Bridge, and provide areas for public enjoyment.

To activate the urban fabric by providing a boat ramp, kiosks, gathering areas, access to/from the beach for surfers and fishermen and ample sidewalks that serves as a promenade.

For this $23M investment, CMA provided design, construction and permitting services for the two phases of the project. Specialized studies, such as wave and bathymetry (to name a few), to ensure the success of the project.

In 2015, this project received the Outstanding Engineering Project Award by the Puerto Rico College of Engineers and Land Surveyors and Cemex.



ATM Port Facilities Assessment

Various Locations, PR

Description

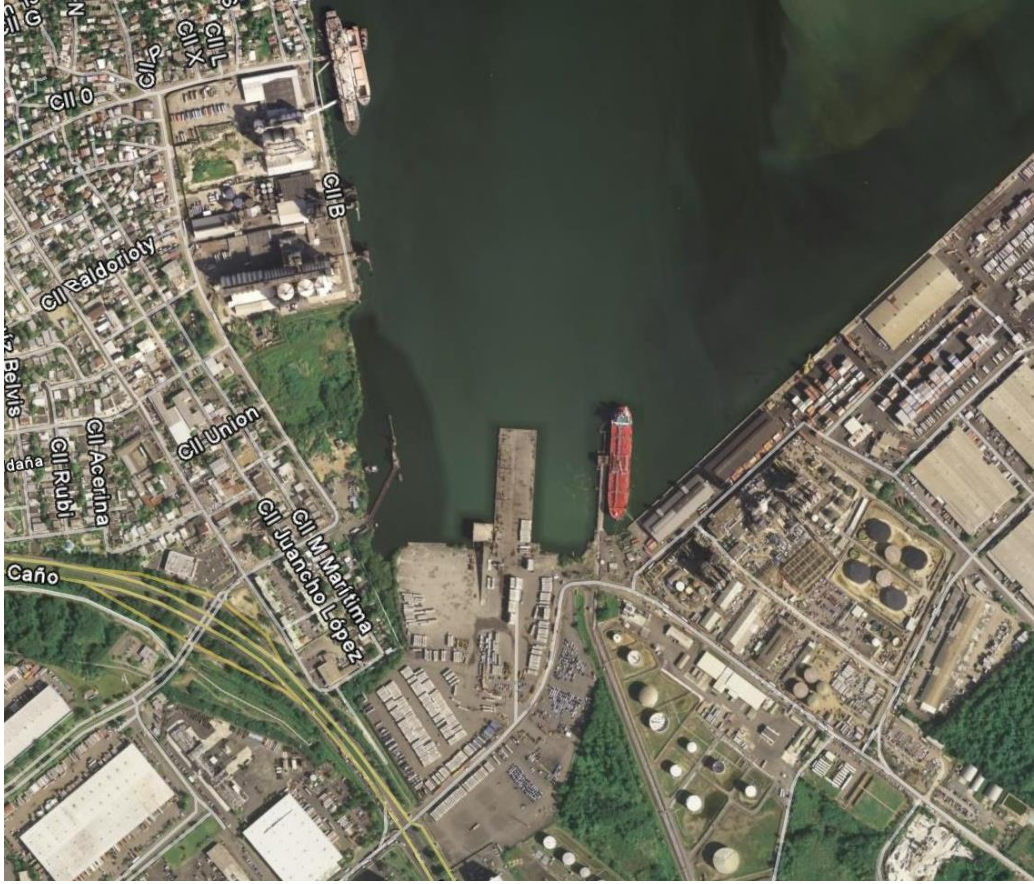
CMA performed in-depth structural assessment and safety system audit of the existing cargo and passenger piers, docks, wharfs and marine terminals operated by and/or located at PRPA facilities located at: Isla Grande Maintenance Yard, San Juan (Acuaexpreso-Old San Juan), Fajardo and Vieques Piers, Docks, Wharfs and Marine Terminals. As part of the structural assessment and safety system audit, CMA determine the structural integrity of the facility and load bearing capacity of the piers in their present condition and develop a construction opinion of probable costs for repairs and/or replacement alternatives.

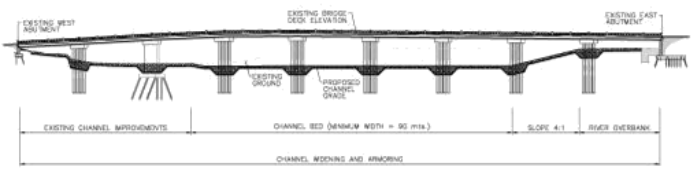
Cataño Oil Dock

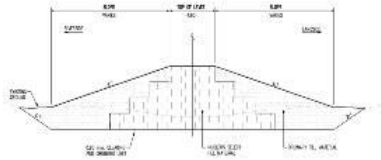
Cataño, PR

Description

CMA was responsible for the structural assessment, safety audit and recommendations on rehabilitation schemes of the dock that extends 515ft over the waterway with dolphin docking supports at each side for vessel docking. Additional inspections included the concrete deck, supporting beams and pipe rack at the south end of the dock that extend 328ft over the waterway, supporting pile caps and piles and a 29ft high steel platform at the center of the dock with an approximate floor area of 1800ft2 for unloading of the material goods from the vessels.







La Plata River Flood Control

Toa Baja/Dorado, PR

Description

CMA was contracted by USACE to design this project. It begins at the mouth of the river and ends 150 meters north of PR-165's Dorado Bridge. The project's main features are the channel, the west levee and its spur dike, the east levee foundation, the two disposal areas, and the wetland mitigation with an estuarine lagoon. The estimated project cost is $56.3 million. Construction began in October 2010 and is estimated to take 790 calendar days to complete.

Ponce Marina

Ponce, PR

Description

Development of a master plan and the preliminary design – including civil and architectural design - for a mixed use complex within a 80 acre parcel in the Canas district of Ponce.

Among the features this development would provide its users are: a 250 slip marina, 50 guestroom hotel, club house, commercial spaces and recreational facilities.

PR-686 Rehabilitation

Vega Baja, PR

Description

The project consist of the reconstruction of a 300 meters segment of state road PR-686 waterfront damaged due to wave action.

A total cost of $1.5M, this project reestablished the sector's roadway access and provided a new ample sidewalk for the community's enjoyment of the waterfront.



Full Architectural-Engineering Services under one roof…