

CocoCay Utilities, Bahamas

civil engineering



Coastal Systems International, Inc. provided civil engineering services, project management and construction administration services for the infrastructure of a private cruise ship island destination in the Berry Islands of the Bahamas. The island is operated as a day-stop cruise ship destination called CocoCay by Royal Caribbean Cruiselines. Specifically, the infrastructure of the project included the following:

- Site work: earthworks, grading, and roads.
- Buildings: layout of prefabricated steel buildings for the utilities and associated foundation.
- Sewage collection and distribution: lift stations and associated underground piping to package plants with outfall and "grey" water handling.
- Electrical power generation and distribution: diesel generation system with switchgear and distribution with associated transformers.
- Water treatment and distribution: groundwater intakes and reverse osmosis water treatment plants with associated storage, pumps, and distribution system.
- Reclaimed water: toilets and irrigation.
- Solid waste handling and Incineration
- Fuel handling and storage: offshore transfer system for tankers, along with storage for both gas and diesel fuel.
- Fuel distribution with double wall containment and flexible underground piping.

The infrastructure was designed in accordance with the client's master plan and included close coordination with the architect and MEP (Mechanical Electrical Plumbing) engineers for the buildings, cafes, accommodations and other utility loads. The clients preference for using local building materials were high on the list of priorities as was the use of low impact construction methods for environmental reasons. Complete plans and specifications were prepared and permits were processed from the Bahamas regulatory agencies.



Prefabricated Building for Utilities



Utilities During Installation

Client: Royal Caribbean International

Location: Little Stirrup Cay, Bahamas

Date of Completion: 2003

Construction Cost: \$6,000,000

