North Beach Recreational Corridor, Florida

civil engineering

The North Beach Recreational Corridor (NBRC) Project links fifteen (15) oceanfront blocks in the North Beach District of the City of Miami Beach. The $6 million path will be integrated into the greater alternative transportation trail system of the City and region to connect businesses, residential areas, schools, parks and beaches. This multi-purpose public access corridor traverses along the western edge (upland side) of the beachfront sand dunes. The project will energize the coastal areas between 64th Street and 79th Street by encompassing:

- Three (3) public parks (Allison, Band Shell & North Shore)
- The Ocean Terrace Business District
- Private residences in the Altos Del Mar neighborhood
- Two (2) miles of coastal dune improvements and beach access point enhancements
- Connections to businesses on Collins Avenue

This project represents completion of a significant phase of the City's state-approved Beachfront Management Plan. Coastal Systems International, Inc. planned, designed, and secured coastal regulatory permits for the project, along with EDAW, a subconsultant who provided planning and landscape architectural services. Preliminary designs were completed with renderings and public meetings held to present and receive feedback regarding initial design concepts. The project team worked with the City, property owners, and other interested parties to establish a "vision" for the project. A Basis of Design Report was prepared to document the project approach.

A coastal engineering analysis was conducted to evaluate potential coastal storm impacts to the path based on Florida Department of Environmental Protection (DEP) coastal construction criteria. Innovative path materials consisting of colored, frangible concrete and a cement-stabilized sand base were developed along with a custom-designed light fixture that combines compliance with stringent marine turtle lighting restrictions, public safety criteria and convenient maintenance. Dune restoration plans were developed to remove exotic species, add native, salt-tolerant dune vegetation, and increase the dune profile for greater storm protection. The plan introduces palms, sea grape and silver buttonwood trees at select locations along the path to provide shade. Temporary and permanent irrigation are also incorporated into the design.

Coastal construction permits from the DEP for the path and dune enhancements were successfully negotiated; specific engineering and environmental criteria that were addressed include structural design adequacy and confirmation of no net adverse impact to the beach/dune system, adjacent properties, native salt-tolerant vegetation, and marine turtles.

Client:	City of Miami Beach
Location:	Miami Beach, Florida
Date of Completion:	2009
Construction Cost:	$ 6M