

FAIRCHILD TROPICAL GARDENS WATER & SEWER - MASTER PLAN & RAINFOREST EXHIBIT

Client Name: *Fairchild Tropical Gardens*

Type of Service: *Water & Sewer Master Plan and Rainforest Exhibit*



Analysis and Design

- Prepared construction documents for the proposed waterway (artificial creek), associated pumping/piping systems, pedestrian pathways, and bridge crossing(s) within the proposed Rainforest Exhibit depicted in the preliminary site plan prepared by Fairchild Tropical Garden
- Assisted the architectural consultant during preparation of the final site plan depicting the proposed improvements to include a preliminary grading scheme for the new pathways and waterway cross sections necessary for submittal to the City of Coral Gables Architectural Review Board
- Designed the final grading plan for the proposed pathways based on the preliminary grading scheme and materials approved by the Board
- Provided the structural design and calculations for the proposed three bridge crossings based on the layout and materials selected and provided by the Architect
- Provided the hydraulic design and drawings of the new waterway, including calculation of flow rates, velocities, slopes, channel cross-sections, hydraulic jumps, and culvert crossings necessary to satisfy the Water and Sewer Upgrade needed/desired effect of the waterway and its unique features such as waterfalls and pools within the proposed route
- Designed a private pump station including mechanical, structural, electrical components and associated piping system required to satisfy the proposed waterway's hydraulic needs.

Regulatory Process

- Assisted Client in obtaining approvals from the regulatory agencies having jurisdiction over the project. Our services included preparation and submittal of permit applications and drawings to the City of Coral Gables and Miami-Dade County Department of Environmental Resources Management.

Bidding & Construction Services

- Responded to Bidders Request for Additional Information (RFI) and participated in the clarification of the construction documents.
- Reviewed shop drawings and reviewed as-built drawings prepared by the Contractor for substantial conformance with the approved construction documents. Perform field inspections at critical stages of construction

Water and Sewer Analysis & Report

- Reviewed all pertinent information including the 1994 Master Plan, the 1998 Fairchild Strategic Plan, and anticipated growth projections
- Reviewed the current water and sewer systems, identified the existing and future facilities that will require potable, fire, and irrigation services plus sanitary sewer disposal systems
- Researched the costs and feasibility of upgrading the current on-site septic system versus connecting to a public sewage collection system, including related water distribution and fire protection systems
- Analyzed all the information gathered, evaluate different water and sewer improvements options and determined the most efficient and cost effective method for water service and sewage disposal.