



Project Description

Jackson Health System, one of the nation's largest public health systems, launches in August 2016 an ambitious \$1.8 billion, 10-year capital plan to transform the hospital into a modernized, patient-centered healthcare system. The "Jackson Miracle-Building Bond Program" includes major construction projects, renovation of existing facilities, technology upgrades, cutting-edge equipment, and infrastructure improvements.

Kline Engineering & Consulting was able to contribute with its structural strengthening expertise to the new Critical Care Pavilion at Jackson Memorial. This DTC bed tower project includes an 80,500 square-foot, three-story tower expansion on top of the existing Ira C. Clark Diagnostic Treatment Center (DTC) Intensive Care Unit.

Our team designed a carbon fiber reinforced polymer (CFRP) strengthening solution to increase total moment demand of 75 ft-k of the DTC roof due to a new stair opening in the existing 11" RC slab at level 4.

Carbon fiber is one of the strongest man-made materials in the world and can be effectively used to enhance the serviceability and ultimate strength of concrete structures. KLINE, understanding the properties and limitations of FRP, developed a design without aesthetic impact of the original design.



Jacksonville, FL

CAPABILITIES

- Evaluation & Restoration

Developer/Owner:

Jackson Health System

Architect:

HKS Architects, INC.

General Contractor:

Turner Construction, LLC

Project completion:

2021

Industry:

Healthcare

Project type:

NEW CONSTRUCTION

Expansion

CFRP strengthening