

Walter Reed National Military Medical Center



Bethesda, MD

Construction Team:

Owner - Naval Facilities Engineering Command
Architect - HKS Inc.
General Contractor - Clark/Balfour Beatty,
A Joint Venture
Mechanical Engineer - Southland Industries
Structural Engineer - Cagley & Associates
Plumbing Engineer - Southland Industries
Electrical Engineer - M.C. Dean

Project Information:

Size - 598,895 sf
Occupancy - Medical/Office
Cost - \$641 Million
Delivery - Design-Build
Duration - July 2008 to November 2010

Structural System:

-Building A uses a two way flat plate concrete structural superstructure and spread footing foundation. The concrete thickness is 9" and is thickened around structural columns an additional 8"-11"
-Building B uses an all steel superstructure with a concrete slab on metal deck and drilled piers with spread footings for the foundation. Steel beam sizes range from W8 to W33

Lighting System:

-2x4 direct/indirect fluorescent fixtures with two F32 T8 lamps
-Recessed down lights with CFL's
-Task lighting for medical procedures

Architecture:

-Two new buildings are being constructed flanking the existing 1940's era tower
-The building facade is comprised of precast concrete panels and Centria panels above windows
-Building A houses Children's Health, Cancer Treatment Center, Neurology, and Physical Therapy
-Building B houses Operating Rooms, Patient Bedrooms, and The Ambulance Receiving Center

Mechanical System:

-100% Outdoor Air CAV supply
- Eleven custom 50,000 CFM AHU's supply both buildings
-Three 1,000 ton centrifugal chillers and two heat recovery chillers
-Dedicated packaged AHU for the pool in Building A
-Campus steam is reduced for use in domestic hot water and heating hot water
-75 psig steam is supplied to a humidification steam generator

Electrical System:

-13.2 KV is switched to 480/277 V 3-phase 4-wire
-Both buildings have dedicated switchgears for rooms with life safety requirements
-Two new generators will supply both buildings with emergency power

Justin Herzing

Mechanical Option

CPEP SITE: <http://www.engr.psu.edu/ae/thesis/portfolios/2010/jmh5093/>