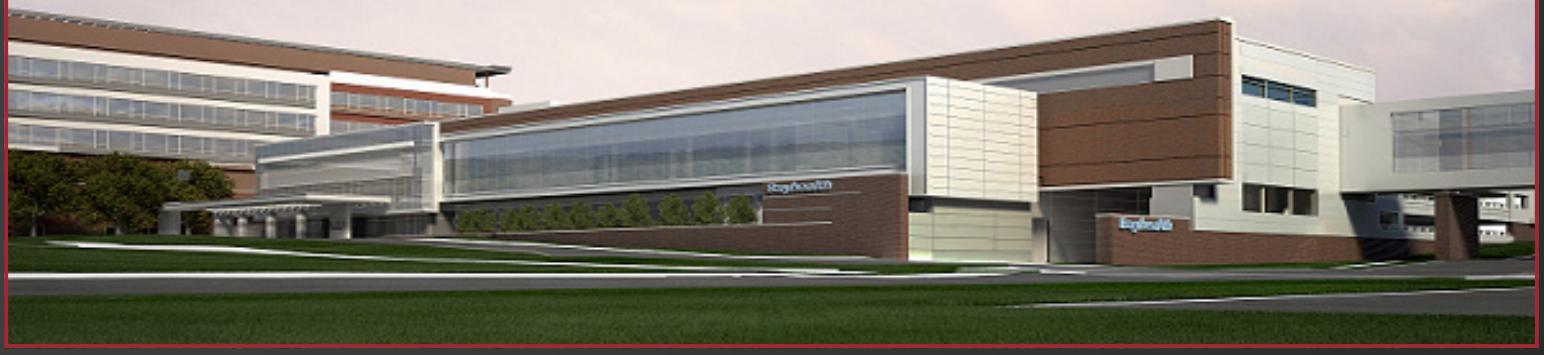
Bayhealth Medical Center Expansion Phase 2

640 S State St. Dover, DE

Christopher Barron

Construction Management



Project Overview

Owner: Bayhealth Medical Center inc

Architect: Becker Morgan Group inc.

Engineer: EwingCole

GC: Whiting-Turner

Total Height: Varies 2-4 floors (68 ft total)

Building Area: 226,271 sq ft

Contract Type/Cost: GMP 65 million

Construction Dates: Jan 2009—Nov 2011

Mech/Electrical

⇒ Mechanical

4 VAV units (48,000-17,500 CFM)

3 CV-VFD (135,00-2,875 CFM)

5 water tube boilers with 10,050 MBH output

3 centrifugal water-cooled chillers with 1450 ton capacity

⇒ Electrical

2 sets of main service switch gear with 2500/3325 KVA, 3Ø,60Hz

Emergency system with 2 3125 KVA, 3Ø,60Hz

generators

Architectural Features

⇒ Room types

emergency department, oncology (both chemo and radiation), heliport, security, pharmacy, diagnostic imaging, and shell space.

⇒ Building Façade

mix of red brick, metal panels, and glass curtain wall system. The Pavilion's architecture matches the brick-work and glass curtain walls of the existing structure, but employs more glass and metal panels, giving it a more modern look.

Structural System

⇒ Foundation

5" reinforced SOG that is tied into grade beams along the exterior, and 114 16" diameter reinforced auger cast piles that are embedded 20'-30' into the ground.

⇒ Framing

50 ksi steel braced column and frame system

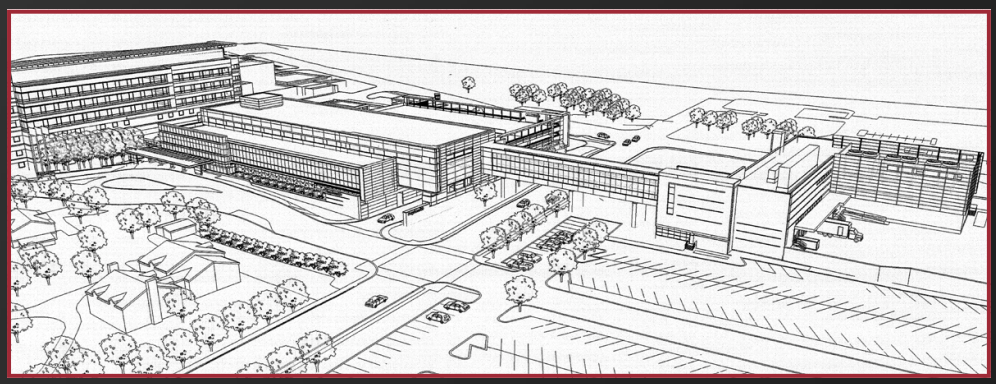
⇒ Floor System

4.5" thick normal weight concrete on 20 gauge composite decking

3.25" thick light weight concrete on 18 gauge composite decking

⇒ Roof

4.5" thick normal weight concrete on a 18 gauge composite metal decking. Roof build up is comprised of tapered 3" rigid insulation covered with a single ply EPDM membrane.



EwingCole Architects Engineers Interior Designers Planners

WT Whiting-Turner

Becker Morgan Group

Penn State 1855

http://www.engr.psu.edu/ae/thesis/portfolios/2011/crb5084/index.html