

# Maryland General Hospital Central Care Expansion

Baltimore, MD



## Key Players

Owner: University of Maryland Medical System  
Construction Manager: Barton Malow Company  
Architect: Hord Coplan Macht  
Structural Engineer: Cagley Associates  
MEP Engineer: Leach Wallace Associates

## Project Overview

Location: Baltimore, Maryland  
Building Size: 96, 534  
Construction Dates: January 2008 - January 2010  
Estimated Project Cost: \$57 million  
Construction Cost: \$33.1 million  
Delivery Method: CM at risk - Lump Sum  
Houses: pharmacy, pre-operative rooms,  
8 operating rooms, 18-bed ICU rooms,  
2 GI suites, a laboratory,

## Mechanical System

- (2) replacement 650 ton, 1,950 GPM cooling towers for additional required capacity
- (2) replacement 650 ton, 1,293 GPM chillers for additional required capacity
- (2) 380 ton air handling units 30,000 & 85,000 CFM
- VAV boxes with reheat coils

## Electrical System

- Electrical:
- 2000A 480/277 Volt 3-phase, 4 wire
  - 500 kVA emergency generator
- Lighting:
- LED lights in ORs for increased brightness
  - Suspended indirect florescent, recessed florescent, recessed downlights

## Architecture

Located just outside the inner harbor in northeast Baltimore the addition includes:

- 6 story courtyard infill
- 4 story vertical expansion on existing 2 story building
- Step backs to create areaways providing patient room daylight

Facade:

- Curtainwall glass at north stairwell and first 3
- Field brick with stone masonry and accent brick

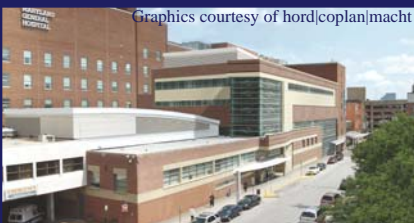
Roof:

- Modified bituminous

## Structural System

- Foundation:
- Drilled caissons in the courtyard infill with spread footings at existing building perimeter
  - Reinforced existing building footings
- Superstructure:
- Structural steel framing with wide flange beams and columns
  - Composite floor system with 3 1/4" 3000 psi reinforced lightweight concrete
  - Reinforced existing columns with welded flange plates
  - Several new columns through existing, occupied space
  - Four braced frames throughout the building to stabilize against wind loads

CPEP Website: <http://www.engr.psu.edu/ae/thesis/portfolios/2009/bwg5000>



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