

# The Downtown Family YMCA

## General Project Data

- Owner - YMCA of Metropolitan Detroit
- Construction Manager - Barton Malow Co.
- Architects/Engineers - Smithgroup
- Project cost - \$29 million
- Occupancy type - II-A, Recreational
- Size: 110,000 Square Feet
- Dates of Construction - January '04-December '05
- Project Delivery Method - Construction Management at Risk

## Mechanical

- 5 rooftop air handling units (AHU)
  - 3 are used for general supply, providing 820 CFH each
  - 1 used for laundry at 450 CFH
  - 1 used for the natatorium at 1140 CFH
- 5 separate roof exhaust fans at 1000 CFM each
- Natural gas boilers are used for the heating of water
- Central de-ionized/reverse osmosis water system

## Lighting/Electrical

- The building's main transformer is 1500kVA at 480/277V Y - 3 phase
- The main breaker consists of a 2000AF/2000AT insulated case at 480V, 3HP
- The secondary feeders provide 3000A of current
- The emergency light ballasts are all battery powered
- The entire building generally uses T8 fluorescent lighting - With the help of Detroit electrical services, this project was able to acquire its lighting needs from a single company

## Architectural Features

- There is a climbing wall in the lobby
- Elevated running track over the gym
- Pool in the basement
- The building contains staggered floors, or 'half-levels'
- Decorative CMU masonry and glass facade
- Site conditions give this building a unique 'stepped' shape
- Performing arts theatre

## Structural

- The building rests on drilled caissons at 120+ feet
- The office areas used mainly W18x35 and W18x50 beams
- Lateral bracing was used for the climbing wall in the atrium
- 4000psi lightweight slab on deck with shear studs at 1 per 48" and a 2" metal deck were used for floor construction
- No composite beams were used