Detroit Integrated Transportation Campus - Detroit, MI

Shane Goodman

Sponsored By
Barton Malow Company

Construction Management

www.arche.psu.edu/thesis/eportfolio/2008/portfolios/smg5003

Project Team

Owner	- The State of Michigan
Architect	- Barton Malow Design
Structural Engineer	- Desai Nasr Consulting
Mechanical Engineer	- Sellinger Associates
Electrical Engineer	- Berbiglia Associates
General Contractor	- Not Selected

MEP System

HVAC - Two 6,505 CFM Rooftop AHUs to supply operations zone, and two 16,430 CFM Rooftop AHUs to supply non-operations zone. VAV boxes with reheat to control room temperature and save energy.

Plumbing - Two 44 GPM boilers to heat hot water supply and chilled water supplied from city utilities. Sloped sanitary and storm drainage lines.

Power - 1000 kVA 480Y/277V primary feeder
480Y/277V Diesel Generator backup
Series of 3-phase transformers
Three 3-phase 277/480V panel boards
Eleven 3-phase 120/208V panel boards

Lighting - Outdoor surface mounted metal halide lamps. Compact fluorescent lighting of office space

Project Features

Construction Date - October 2008 to October 2009
Overall Project Cost - $12,000,000
Project Size - 2 Floors, 45,097 Total Square Feet
Delivery Method - Design-Bid-Build (Lump Sum Contract)

Architecture

Design Executive - Algis Bublys

Designed to have an urban feel, the DITC is pushed up against the street, and lengthened to run the whole block. Extruding sun shades and a yellow reveal on the facade accentuate the building's length. The building's facade consists of Metal Panels, Glass Curtain Wall and Brick Veneer, and the Roof of Single Ply PVC Roofing Membrane on Rigid Insulation.

Structural System

A Cast in Place Conrete footing and grade beam foundation support a Structural Fame constisting of Wide Flange Structural Steel Columns and Beams with Open Web Joists integrated into the roof support. The First Floor is Concrete Slab on Grade, and the Second Floor and Roof are both Composite Slab on Deck.