



PENNSYLVANIA JUDICIAL CENTER

HARRISBURG, PA

BRIAN M. BARNA - STRUCTURAL OPTION

<http://www.arche.psu.edu/thesis/eportfolio/2007/portfolios/BMB200>

GENERAL INFORMATION

ESTIMATED COST: \$90 MILLION

SIZE: 425,000 SQ. FT.

NINE STORIES

COMPLETION DATE: FALL 2008

ARCHITECT: VITETTA

ENGINEER: VITETTA

CONSTRUCTION MANAGEMENT:

HEERY INTERNATIONAL

STRUCTURAL

- COMPOSITE FLOOR SYSTEM WITH 3 1/2" CONCRETE SLAB ON 3" DECK SUPPORTED BY STEEL BEAMS RANGING FROM W16 TO W30
- FLAT ROOF SYSTEM IS SAME AS FLOOR; SLOPED ROOF IS 3" METAL DECK ONLY
- LATERALLY SUPPORTED BY CONCENTRICALLY BRACED STEEL FRAMES IN BOTH DIRECTIONS
- FIBER-REINFORCED CONCRETE SLAB ON GRADE
- PIERS WITH 3-8' DIAMETER AND 9.5' AVG DEPTH
- BEARS ON BEDROCK WITH 30 KSF CAPACITY

LIGHTING

- 3500K FLUORESCENT TUBES, 32 OR 54W
- COURTROOMS FEATURE LUMINOUS BOWL PENDANTS WITH DIMMING BALLASTS
- WALL SCONCES ARE FEATURED IN CORRIDORS AND COURTROOMS

ARCHITECTURAL

- INDIANA LIMESTONE CLADDING
- FEATURES A 5-STORY ATRIUM
- NATURAL LIGHT ENTERS THROUGH A LARGE SKYLIGHT AND CLERESTORY WINDOWS

MECHANICAL

- FAN-POWERED VAV BOXES
- HOT WATER GENERATED THROUGH HEAT EXCHANGER FROM HIGH PRESSURE CITY STEAM
- CHILLED WATER GENERATED THROUGH HEAT EXCHANGER FROM A CENTRAL PLANT
- OUTDOOR AIR TO AHU'S FROM ROOFTOP UNITS
- VAV REFRIGERANT SYSTEM IN SECURITY AND DATA ROOMS

CONSTRUCTION MANAGEMENT

- DESIGN-BID-BUILD WITH MULTIPLE PRIME CONTRACTS
- DEMOLITION OF EXISTING PARKING GARAGE ON SITE
- PROXIMITY OF EXISTING BUILDINGS AND ROADS CREATES A TIGHT SITE

ELECTRICAL

- TWO 12.47KV SERVICE FEEDERS CONVERTED TO 480Y/277V THROUGH A 2500KVA TRANSFORMER
- STANDBY 1500KW DIESEL GENERATOR
- 200A BUS DUCTS ON 480Y/277V POWER RUN VERTICALLY THROUGH BUILDING