

1050 K Street

Malory J. Faust · Mechanical Option · Senior Thesis 2006-2007



Mechanical System:

- 30,000 CFM Dedicated Outdoor Air Energy Recover Unit
- VAV air handling unit on each floor
- Electric reheat coils on VAV terminal units in perimeter zones
- Chilled water cooling coils served by (2) 115 ton rotary scroll chillers
- Heat rejection provided by a (2) cell induced draft open cell cooling tower
- Plate & frame heat exchanger for free cooling

Electrical System:

- Primary distribution supplied by PEPCO
- (1) High voltage circuit to be stepped down to secondary distribution
- Power distributed at 480Y/277 V via switchboard in the main electrical room
- Panels are located on alternate floors to provide power to house HVAC, lighting, and receptacles
- 75 kVA transformer provides 120/208 V to necessary loads
- 750 kW diesel generator provides power for lighting, elevators, stair pressurization fans and other essential equipment

LEED CS Highlights:

- Systems designed to provide a 16% energy reduction over ASHRAE requirements
- No potable water used for landscape irrigation
- Water use reduced by 30% by utilizing low usage fixtures

Architectural Background:

- 143,000 SF office building in Washington, DC
- Primarily office space with retail on the first level
- 11 above grade levels & 4 below grade levels for parking
- North & West facades clad in a low-e curtain wall
- Intensive & extensive green roof systems
- Landscape irrigation provided by stormwater & condensate collection systems.
- LEED Core & Shell Gold Rating
- Open floor plans for tenant flexibility

Project Team

- Owner: The Lenkin Company, The Tower Companies
- Contractor: The Lenkin Company
- Architect: Hickok Cole Architects
- Structural Engineer: Tadjer Cohen Edelson Association
- MEP Engineer: Vanderweil Engineers
- Civil Engineer: Timmons Group
- Curtain Wall Consultant: CDC

Construction Data

- Start Date: December 2006
- Proposed Finish Date: December 2009
- Design-Bid-Build

