

Straumann USA

Andover, MA



Project Information

Building Size: 153,000 sq. ft.
Stories: (2) First Floor and Mezzanine Levels
Occupancy: Office, Light Manufacturing,
Dental Operator, Training Area
Delivery Method: Design-Bid-Build
Construction Dates: May 2004 - May 2005
Project Cost: \$10.6 million

Project Team

Building Owner: The Brickstone Companies
Building Tenant: Straumann USA
Architect: Burt Hill Kosar Rittleman
Structural Engineer: Atlantic Engineering
MEP Engineer: H.F. Lenz Company

Architecture

- Features an 80,000ft² dental implant manufacturing area and a 35,000ft² dental training area
- Exterior curtain wall comprised of insulated windows and spandrel glass infills
- Accent wall consisting of similar glass panels clearly defines the main southern entrance to the building
- A courtyard located in the center of the building along with several skylights allow daylight into many of the interior spaces
- Roof is a single ply mechanically fastened EPDM rubber roof membrane over rigid insulation on a steel deck



Structural System

- Continuous poured concrete footings at the perimeter
- Individual columns are supported by spread footings
- 1st floor slab on grade and 2nd floor metal decking with a 5" poured slab.
- Superstructure is supported by wide flange steel columns
- Open web steel joists support the roof

Electrical/Lighting Systems

- 2 - 35kVA utility services supplied to the building
- 2 - 2,500 kVA utility owned transformers feed 2 main distribution switchgear lines.
- 2 UPS's serve the data storage area
- Backup power is supplied by a 250kW diesel fueled life safety generator
- Primarily 2 x 4 lamp parabolic recessed and indirect hanging strip fixtures with T5 lamps and energy efficient electronic ballasts

Mechanical System

- A VAV system of 10 rooftop air handlers ranging from 6,400 cfm to 33,000 cfm supplies conditioned air
- Hot water fin tube radiators supply perimeter heating
- 9 CRAC units with rooftop air cooled condensing units serve the data storage areas.
- 2 gas fire tube boilers produce building steam which is supplied directly to the rooftop AHU steam heating coils
- Chilled water is supplied to the rooftop AHU cooling coils by 3 chillers of 350, 500, and 750 tons
- 750 and 680 ton cooling towers reject heat from the chilled water loop



Kevin Kaufman

<http://www.arche.psu.edu/thesis/eportfolio/2007/portfolios/KWK130/index.htm>

The Pennsylvania State University

Mechanical Option

Architectural Engineering