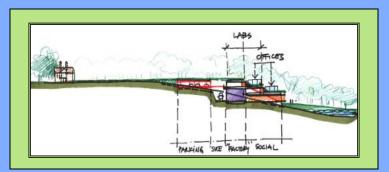
HOWARD HUGHES MEDICAL INSTITUTE AT JANELIA FARM

Ashburn, VA

ARCHITECTURE

- ♦ World Class Biomedical Research Facility to promote unconstrained scientific research.
- ♦ 546,436 SF, 3-story building carved into a hillside overlooking the Potomac River.
- Triple-glazed glass façade and green roof.



PROJECT INFORMATION

- ♦ Owner: Howard Hughes Medical Institute.
- **♦ Architect**: Rafael Vinoly.PC.
- **♦ PM:** Jacobs Facilities, Inc.
- ♦ MEP: Burt Hill Kosar Rittleman Assoc.
- ♦ Structural: Thorton Tomasetti Engr.
- ♦ Delivery Method: Fast-Track Bid-Build.
- **Estimated Building Cost:** \$500 Million.





MECHANICAL SYSTEM

- ♦ 44,828 MBH total heating load.
- \diamondsuit 5,479 ton total cooling load.
- ♦ VAV with reheat coils in all spaces.
- ♦ (1) 50,210 MBH & (2) 30,125 MBH boilers.
- ♦ (2) 28,339 & (1) 1,251 MBH heat exchangers.
- \diamondsuit (7) 1,200 ton chillers & one back up.
- ♦ \$3.5M Operating Cost.

ELECTRICAL SYSTEM

- Primary 34.5kV, 600A, 3Φ, 3 wire service from Old Dominion Electric.
- 4 Substations with VPI 3000kVA dray transformers step down to 277/480V, 3Φ, 4 wire service.

STRUCTURAL SYSTEM

- ♦ 6 in to 24 in Concrete Slab Floor.
- ♦ Reinforced Concrete and Masonry Walls.
- ♦ Structural and Post-Tensioned Beams and Columns.
- Structural Glass windows in the garden courtyards/atriums.

JULIE THORPE

MECHANICAL OPTION

♦ www.arche.psu.edu/thesis/eportfolio/current/portfolios/jat280/ ♦