



# FDA CDRH Laboratory

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Senior Thesis, Spring 2006  
Structural Option

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# FDA-CDRH LABORATORY

## SILVER SPRING, MARYLAND

### PROJECT TEAM

- **Architect:** Kling in Assoc. w/ RTKL
- **Structural Engineer:** Kling
- **MEP:** RTKL
- **Interiors:** Kling
- **Site:** Greenhorne & O'Mara
- **Owner:** GSA
- **GC:** Tompkins Construction
- **CM:** Heerey-Tishman

### ARCHITECTURE

- **Height:** Central core w/ 5th floor penthouse, four story main structure, one floor below grade
- **Façade:** Many decorative aluminum and sheet metal panels, large panels of glazing & horizontal sunshields enclose the main edifice
- **High Bay Laboratory:** Located on West side, includes a decorative curved metal roof

### STRUCTURAL

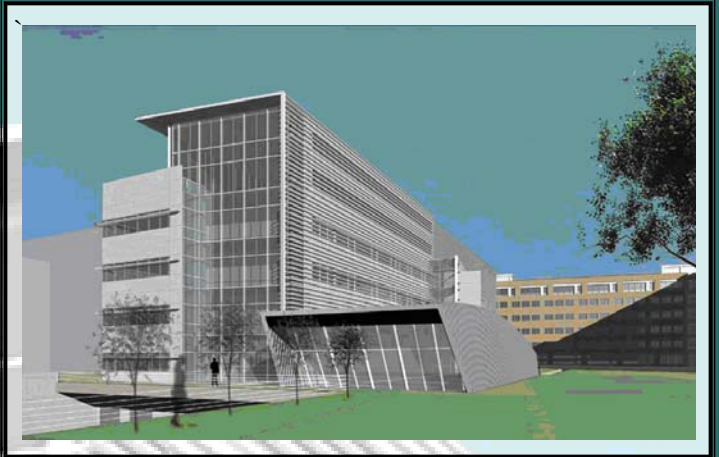
- **Foundation:** Step footing with spread footing below columns
- **Superstructure:** One-way cast-in-place concrete w/ monolithic poured columns & beams
- **Floors:** One-way concrete pan-joint system w/ overall depth of 520mm
- **Roof:** Typical W-shape steel w/ concrete deck
- **Unique protection:** Progressive collapse beams

### MECHANICAL

- **Cooling:** Four main Air Handling Units (23596CMF/Unit) in penthouse, each equipped with enthalpy wheel
- **Heating:** Two 300KW electric boilers (457Kg/Hr Steam/Unit) in penthouse

### CONSTRUCTION MANAGEMENT

- **Building placement:** Coincides with campus Service tunnel & bridge
- **Crane:** Pick up Located near site entrance & accessible for entire site
- **Excavation:** Sloped pit to reduce potential for collapse
- **Leed rating:** Silver



### PROJECT OVERVIEW

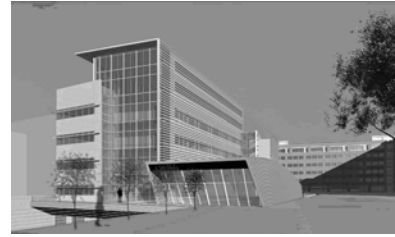
- **Purpose:** Center For Devices & Radiological Health Laboratory & Office Building on the new US Food And Drug Administration's White Oak Consolidation Campus.
- **Cost:** \$63 Million
- **Delivery Method:** Design-Bid-Build
- **Size:** 139,805 Sq Ft
- **Major Building Code:** IBC 2000
- **Start Date:** March 22, 2005
- **Finish Date:** November 1, 2006

### LIGHTING/ELECTRICAL

- **Main Power:** 300/3990KVA Converted to 480/270KVA
- **Building Service:** 208/120V, 480Y/270V, & as-sorted specialty values such as 380Y/220V
- **Lab and office Lighting:** linear fluorescent troffers & linear under-cabinet fluorescent
- **Hall Lighting:** incandescent & compact fluorescent downlights
- **Main Laboratory Lighting:** incandescent and fluorescent High Bay luminaires

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**FDA CDRH Laboratory**  
Silver Spring, Maryland



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