



Project Description

The Michigan Memorial Phoenix Laboratory Addition and Second Floor Renovation project will create modern research laboratory space to support the Michigan Memorial Phoenix Energy Institute. A renovation of approximately 10,000 gross square feet is planned that will create state-of-the-art laboratory spaces for energy-related research, as well as construction of an addition of approximately 10,000 gross square feet for the institute's administrative functions. As part of this project, the building's electrical substation, which has exceeded its useful life, will be replaced.

Energy Efficiency Measures

The Michigan Memorial Phoenix Lab Addition and Renovation design focuses on maximizing energy efficiency and incorporates numerous energy conservation measures including:

- Insulating existing exterior walls impacted by the project that are not currently insulated.
- Utilizing space occupancy sensors on the ground and upper floor common spaces to reduce run hours for the central station air handling units.
- Maximum insulation in foundation walls, exterior walls, under slab, and roof assemblies.
- Use of increased inspections, including infrared scans during construction to identify missing insulation, gaps in the enclosure, and other wall/roof assembly deficiencies.
- Energy efficient windows/glazing for increased thermal performance.
- External shading of curtain wall glazing.
- High efficiency lighting throughout with daylight sensors for spaces with fenestration.
- Occupancy sensors to control lighting in offices, bathrooms, corridors, and conference rooms.
- Increase thermostat deadbands (the gap between the heating setpoint and cooling setpoint during which no conditioning is provided).

Other Sustainability Features

- No new parking will be provided on site (to reduce pollution and land development impacts).

- The use of water conserving plumbing fixtures including low flow toilets, urinals and shower heads will reduce water consumption by over 20%.
- Daylighting and views will be provided for over 75% of the spaces in the building.
- Use of low VOC materials including adhesives, sealants, paints, coatings, and carpet systems.
- Use of an Erosion and Sedimentation Control Plan during construction to reduce pollution from construction by controlling soil erosion, waterway sedimentation, and airborne dust generation
- The addition is constructed on a previously developed site in lieu of a green field site.
- The project is sited on public and UM bus routes, encouraging use of public transit
- Energy efficient transformers
- Use of select sustainable materials (eg steel structure, terrazzo flooring)
- Use of regional and local materials where possible (eg stone and brick)

Project Data

- Budget: \$11.1 M
- Schedule: Completion scheduled for Spring 2013
- Square Feet: 10,000 gross sq. ft. addition and 10,000 gross sq. ft. renovation