

Dearborn Science Building and Computer Information Science Building Renovation



Project Description

The project will create updated laboratory and classroom space for the Department of Natural Sciences within the Science Building. In order to accomplish this, approximately 20,000 gross square feet will be added to the building to create state-of-the-art laboratory spaces, a new elevator, loading dock core, and mechanical penthouse. The exterior walls will be extended and constructed in an energy-efficient manner to allow the entire building project to exceed standard energy performance by more than 30 percent. In addition, the project proposes a complete renovation of the existing building (approximately 80,000 gross square feet) for laboratories and classrooms. The project will also upgrade infrastructure that is shared with the adjacent Computer Science Building. Although there will be a temporary loss of some adjacent parking spaces during construction, there will be no permanent impact on parking from this project.

Energy Efficiency Measures

- The building's design and systems include a number of energy efficient features that allow for an estimated 40% energy savings compared with an energy code compliant building as defined in ASHRAE 90.1-2007 Appendix G
- Increased insulation in foundation walls, exterior walls and roof assemblies
- High-performance glazing for increased thermal performance
- External shading devices to limit heat gain
- Increase thermostat 'deadband' to limit equipment cycling
- Magnetic chillers reduces maintenance and improves efficiency
- Energy recovery system captures and re-uses energy and humidity that would be lost to the atmosphere
- Variable drives on equipment allows for equipment to conserve energy when demand is low
- Heat pumps use recovered heat from chillers to supplement space heating requirements
- Long life, energy efficient LED light fixtures
- Occupancy sensors to turn off lights when spaces are un-occupied
- Increased inspections during construction to identify deficiencies in the building envelope

Other Sustainability Features

- Utilization of the existing building structure
- Expansion situated on previously developed site
- Project site located near public and U-M bus routes to encourage use of public transit
- No new parking provided on site to encourage use of alternative transportation
- Bike racks provided on site to encourage use of alternative transportation
- Landscaping is designed to have only native & adaptive plants and minimal irrigation
- Plumbing fixtures in the building to be low-flow fixtures and dual flush toilets
- Chemical free cooling tower water treatment
- HVAC condensate used for cooling tower make-up
- Regional materials used wherever possible
- The use of low-VOC paints, flooring, adhesives and sealants