George Granger Brown Memorial Laboratories Renovation

Project Description

The approximately 220,000-gross-square-foot George Granger Brown Memorial Laboratories building was constructed in 1958 and houses the chemical, civil, materials sciences, and mechanical engineering departments. The project will upgrade the entire building's fire detection, alarm and emergency power systems. Throughout the majority of the building, there will be a deep infrastructural renewal updating heating, ventilation, air conditioning, electrical, plumbing, roof, windows, and interior finishes. The renovation will also create approximately 25,000 square feet of state-of-the-art academic and instructional spaces.

Energy Efficiency Measures

- The building’s design and systems include a number of energy efficient features that allow for an estimated 38% energy savings compared with an energy code compliant building as defined in ASHRAE 90.1-2007 Appendix G
- High-performance glazing systems for increased thermal performance
- Increased insulation in roof assemblies
- High efficiency HVAC system
- Lab exhaust recovery with water-to-water Runaround System
- Pre-heat outside air make-up to labs with North Campus Chilled Water Loop
- Increased thermostat “dead band” for Offices and Classrooms (5° to 7°)
- Occupancy sensors to turn off HVAC when spaces are un-occupied
- Reduced overall lighting power density
- Energy efficient light fixtures
- Occupancy sensors to turn off lights when spaces are un-occupied

Other Sustainability Features

- Maintain 95% of the existing structural walls, floors and roof
- Project site located near public and U-M bus routes to encourage use of public transit
- Close proximity to basic services such as banks, theaters and restaurants to encourage building occupants to walk instead of drive
- Reduced water consumption through the use of dual flush water closets, low flow urinals and reduced flow sinks
- Re-use of furniture and equipment in several areas
- Construction waste to be diverted from landfills when possible
- Wood used on project to be FSC certified
- Low-VOC adhesives, sealants, paints, flooring, and composite materials