

All Agency Project Request

2013 - 2015 Biennium

<u>Agency</u>	<u>Institution</u>	<u>Building No.</u>	<u>Building Name</u>
University of Wisconsin	Madison	285-0A-0155	COMPUTER SCIENCES AND STATISTICS
<u>Project No.</u>	14E2U	<u>Project Title</u>	Computer Science & Stats Roof Repl

Project Intent

This project provides investigation and research, pre-design, and design services to replace the plaza deck and roof membrane of Roof Area 27 to provide a watertight membrane, increased insulation, and improve safety. The plaza deck will be evaluated to identify deficiencies, develop design solution alternatives, and recommend appropriate corrective measures.

Project Description

Project work includes replacing the approx.. 2,200 SF plaza deck and roof membrane. All existing concrete pavers, post tensioned concrete slabs, rigid insulation, concrete stairs, and raised metal deck on structural steel studs will be removed to the structural concrete deck below in the 1965 building and to the concrete deck over metal deck in the 1986 addition. The waterproofing membrane will be hot rubberized asphalt applied to the concrete deck and provide a 20- year warranty. An Electric Field Vector Mapping (EFVM) leak detection system will be installed over the membrane and above the EFVM will be a protection board and a drainage mat. Since the 1965 building deck was not insulated, five inches of expanded polystyrene (EPS) 60 psi rigid insulation will be installed above the drainage mat. Where the concrete pavers were originally installed, the space between the concrete deck and the paver surface varied from 12-inches to 22-inches. To achieve the same finish walking surface elevation, this space will be in filled with extruded polystyrene (XPS) 60 psi foam insulation. New concrete stairs will be installed to compensate for deck elevation changes and to correct the rusting from the reinforcing in the nosing. The walking surface over the insulation will be 4-inch thick concrete with exposed aggregate, per the university s design guidelines.

The east face of the one-story 1986 addition will have the flashing removed and elevated to compensate for the new raised deck. Brick will need to be removed to install new thru-wall stainless steel flashing and weep holes. All other galvanized wall flashings will be replaced with stainless steel, including the galvanized cap on the precast north wall panels. A concrete curb will be installed adjacent to the south side deck louver to compensate for the increased deck insulation and new deck elevation.

Guard rails on top of the east side precast walls will require raising due to the new east side deck elevation height. New guard rails will be installed and the north walkway guard rail will be replaced to meet the university design standards and match new stair profiles.

The roof drains will be replaced with new drains to handle the under slab moisture and will be extended to the top walking surface to handle surface drainage. The ladder to the roof of the one story building will be replaced with a new ladder and locked lower guard to provide code compliance. The electrical vault access will be raised on the east end of the plaza deck to accommodate the new adjacent insulated raised deck surface elevation.

The caulking on the one-story building and precast walls will be replaced. The east side exposed concrete foundation wall to have the cementitious coating. The concrete walk surface will be repaired and coated with an elastomeric paint.

Project Justification

The Computer Science deck and Roof Area 27 was constructed in two phases. The original plaza deck constructed in 1965 is leaking and there is evidence of water streaks on the walls, water on the floor of an electrical room below this space, and water stains on the ceiling structure. In 1986, phase 2 was constructed over a portion of the 1965 plaza deck and included installing concrete steps and 24-inch square concrete pavers supported on adjustable pedestals over a water proof membrane. The condition of these supports is unknown, but structural damage due to rust is a concern.

The flashing/counterflashing material is galvanized sheet metal. There are sections where the flashing receiver and counterflashing are rusting and should be replaced, which will require some brick removal and replacement. All other

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counterflashing should be replaced with stainless steel. Alongside the steps, the Ethylene Propylene Diene Monomer (EPDM) waterproofing membrane is unprotected leaving the membrane exposed to potential damage from shovels or foot traffic. The exterior face of the lower plaza concrete foundation wall has been covered with a brushed cementitious material. This coating has numerous spider cracks and has taken on water as observed by areas where the coating is spalling off the wall and staining, and not bonding to the wall.

A/E Consultant Requirements

A/E Selection Required?

Consultants should have specific expertise and experience in the design and coordination of roofing systems, exterior building envelope renovation/restoration, and masonry construction within institutional environments as part of a design team. Work includes report of existing roofing conditions, site surveys, acquiring field data, and verifying as-built conditions to assure accurate development of design and bidding documents, drafting roof plans and details, and production of necessary design and bidding documents. Consultants should indicate specific projects from past experience (including size, cost, and completion date) in their letter of interest and when known, include proposed consulting partners and specialty consultants.

The consultant will verify project scope, schedule, and budget estimates, and recommend modifications as required to complete the specified project intent. The consultant will prepare a pre-design document to establish an appropriate project scope, budget, and schedule prior to the university seeking authority to construct from the Board of Regents and State Building Commission.

Commissioning

- Level 1
 Level 2

Project Budget

Construction Cost:	\$	
Haz Mats:	\$0	
Construction Total:	\$	
Contingency: 15%	\$	
A/E Design Fees: 8%	\$	
DFD Mgmt Fees: 4%	\$	
Equipment/Other:	\$0	
	\$320,000	

Funding Source(s)

	<u>Total</u>
GFSB - Facilities Maintenance & Renovation [Z060]	\$0
PRSB - []	\$0
Agency/Institution Cash []	\$0
Gifts	\$0
Grants	\$0
Building Trust Funds [BTF]	\$8,100
Other Funding Source	\$0
	\$8,100

Project Schedule

SBC Approval: 03/2015
 A/E Selection: 07/2014
 Bid Opening: 05/2015
 Construction Start: 06/2015
 Substantial Completion: 08/2015
 Project Close Out: 12/2015

Project Contact

Contact Name: Chris Velie
 Email: <cvelie@fpm.wisc.edu>
 Telephone: (608) 263-3018 x

Project Scope Consideration Checklist

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1. Will the building or area impacted by the project be occupied during construction? If yes, explain how the occupants will be accommodated during construction.
All project work will be coordinated through campus physical plant staff to minimize disruptions to daily operations and activities.
2. Is the project an extension of another authorized project? If so, provide the project #...

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3. Are hazardous materials involved? If yes, what materials are involved and how will they be handled?
Hazardous materials abatement is not anticipated on this project. Comprehensive building survey inventory data is not available on Wisconsin's Asbestos & Lead Management System (WALMS) <<http://walms.doa.state.wi.us/>>.
4. Will the project impact the utility systems in the building and cause disruptions? If yes, to what extent?
5. Will the project impact the heating plant, primary electrical system, or utility capacities supplying the building? If yes, to what extent?
6. Are other projects or work occurring within this project's work area? If yes, provide the project # and/or description of the other work in the project scope.
7. Have you identified the WEPA designation of the project...Type I, Type II, or Type III?
Type III.
8. Is the facility listed on a historic register (federal or state), or is the facility listed by the Wisconsin Historical Society as a building of potential historic significance? If yes, describe here.
9. Are there any other issues affecting the cost or status of this project?
10. Will the construction work be limited to a particular season or window of opportunity? If yes, explain the limitations and provide proposed solution.
Project work is seasonal. Preferred project work schedule should be limited to late spring, summer, and/or early fall months if possible.
11. Will the project improve, decrease, or increase the function and costs of facilities operational and maintenance budget and the work load? If yes, to what extent?
Completion of this project will decrease operational maintenance costs.
12. Are there known code or health and safety concerns? If yes, identify and indicate if the correction or compliance measure was included in the budget estimate, or indicate plans for correcting the issue(s).
13. Are there potential energy or water usages reduction grants, rebates, or incentives for which the project may qualify (i.e. Focus on Energy <<http://www.focusonenergy.com>> or the local utility provider)? If yes, describe here.
14. If this is an energy project, indicate and describe the simple payback on state funding sources in years and the expected energy reduction here.