

All Agency Project Request

2009 - 2011 Biennium

<u>Agency</u>	<u>Institution</u>	<u>Building No.</u>	<u>Building Name</u>
University of Wisconsin	Green Bay	285-0D-2031A	UNIVERSITY UNION - ADDN
<u>Project No.</u>	10E3B	<u>Project Title</u>	University Union AHU-4 Repl

Project Intent

This project replaces one air handling unit (AHU-4) that serves the kitchen, marketplace, and dining/club rooms. The outside air intake will be modified and the eight kitchen hood exhaust systems will be retrofitted with variable volume controls to reduce energy consumption.

Project Description

Project work includes replacement of AHU-4 (31,500 CFM) on the ground floor; demolition of the air handling unit, pneumatic controls, ductwork and pipe connections; installation of the new air handling unit and direct digital control devices; and installation of new ductwork and piping connections. The air handling unit's outside air intake will be relocated from the loading dock area to a higher elevation to improve the quality of the outside air. The air handling unit will have a variable frequency drive (VFD) and VFDs will be added to all kitchen exhaust fans to modulate airflow based on occupancy and kitchen hood usage by installing optic sensors for smoke/vapor detection and temperature sensors in each kitchen hood. The project work may require minor modifications to the air distribution system which includes ductwork, air diffusers, and reheat coils additions/relocations. Building systems will be air balanced and commissioned to designed conditions.

Project Justification

AHU-4 is original to the 1977 construction of the University Union and serves 28,863 GSF of the total 104,913 GSF. There have been three additions to the University Union and the only modification to the unit, the installation of a VFD on the return fan, was made in 2008 during the third addition. The steam heating coil is in very poor condition, has been repaired numerous times over the years, and would require replacement if this project were not completed.

The University Union has always been in a negative pressure condition to the Concourse System and thus other campus buildings connected to the Concourse System. A simple air balance calculation using record drawings indicates that there was a negative air balance of 5,300 CFM after the 1991 addition which then increased to 13,200 CFM after the 2008 addition. This amount of required make-up air is causing air balance issues in other areas of the building and in other campus buildings connected to the University Union.

The addition of VFDs on the air handling unit and kitchen exhaust fans, including providing optic and heat sensors inside the kitchen hoods, will help improve air flow throughout the kitchen, marketplace, and dining/club rooms while reducing energy consumption when food service is not at peak performance. When the building spaces are properly balanced and commissioned, overall building performance and occupant indoor air quality will improve.

A/E Consultant Requirements

Consultants should have specific expertise and experience in the design and coordination of institutional or commercial HVAC/mechanical systems and controls design and replacement as part of a design team. Work includes site surveys, acquiring field data, and verifying as-built conditions to assure accurate development of design and bidding documents, 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.

A/E Selection Required?

Commissioning

- Level 1
 Level 2

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Project Budget

Construction Cost:		\$373,000	
Haz Mats:		\$0	
Construction Total:		\$373,000	
Contingency:	15%	\$56,000	
A/E Design Fees:	8%	\$29,800	
DFD Mgmt Fees:	4%	\$17,200	
Equipment/Other:		\$0	
		\$476,000	

Funding Source

	<u>Total</u>
GFSB - <input type="checkbox"/>	\$0
PRSB - <input type="checkbox"/>	\$0
Agency/Institution Cash [AGF0]	\$476,000
Gifts	\$0
Grants	\$0
Building Trust Funds [BTF]	\$0
Other Funding Source	\$0
	\$476,000

Project Schedule

SBC Approval: 12/2010
 A/E Selection: 01/2011
 Bid Opening: 03/2012
 Construction Start: 05/2012
 Substantial Completion: 08/2012
 Project Close Out: 12/2012

Project Contact

Contact Name: Paul H. Pinkston
 Email: <pinkstop@uwgb.edu>
 Telephone No.: (920) 465-2373 x

Project Scope Consideration Checklist

- | | <u>Y</u> | <u>N</u> |
|---|-------------------------------------|-------------------------------------|
| 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. | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Is the project an extension of another authorized project? If so, provide the project #... | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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 available on Wisconsin's Asbestos & Lead Management System (WALMS) < http://walms.doa.state.wi.us/ >. | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 4. Will the project impact the utility systems in the building and cause disruptions? If yes, to what extent?

AHU-4 supplies all outside air to the original building. | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 5. Will the project impact on the utility capacities supplying the building? If yes, to what extent? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 6. Will the project impact the heating plant or the primary electrical system supplying the campus or institution? If yes, to what extent? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 7. Have you identified the WEPA designation of the project...Type I, Type II, or Type III?

Type III. | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

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8. Is the project affected by historic status?
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.
- Projet were be limited to summer session.