

All Agency Project Request

2013 - 2015 Biennium

<u>Agency</u>	<u>Institution</u>	<u>Building No.</u>	<u>Building Name</u>
University of Wisconsin	Oshkosh	285-0F-9920	Utility - Site Mechanical

<u>Project No.</u>	13I2M	<u>Project Title</u>	Steam/Cond Pit A2-Clow Renv
---------------------------	-------	-----------------------------	-----------------------------

Project Intent

This project provides field investigation and research, pre-design, and design services to renovate steam and condensate return utility services from pit A2 to the Clow Social Science Center building.

Project Description

This project will renovate or replace, and possibly relocate, failing steam pits A2 and A2A and approximately 235 feet of underground steam/condensate concrete box conduit system between Pit A2 and Clow. The two pits and connecting box conduit systems were originally installed in 1965.

The consultant will analyze the site of the existing service to Clow and determine the lowest cost, least disruptive routing for new services and pit locations including the option to keep the services in their present location and repair or replace systems to bring them up to present day standards and life expectancy. The consultant will also consider long term site development plans when considering routing, repair and/or replacement options.

Steam pit A2 provides access to isolation valves and anchor steel where the Clow branch service piping connects to the campus steam and condensate mains located along the east side of Algoma Boulevard. Pit A2A provides access to anchor steel, isolation valves and a steam trap station where the Clow steam and condensate services change directions en-route to the building connection. Per the original installation plans, there is approximately 140 LF of 6-inch High Pressure Steam (HPS) piping and 3-inch Pumped Condensate Discharge (PCD) piping installed within a concrete box conduit system between Pit A2 and A2A, and approximately 95 feet of 4-inch High Pressure Steam piping and 2-inch Pumped Condensate Discharge piping installed within a concrete box conduit system between Pit A2A and the Clow Social Science building. The pumped condensate discharge piping was removed and/or abandoned-in-place between pit A2 and A2A when minor box conduit repairs were made in 2010.

Project Justification

The steam pits and box conduit systems and have been exposed over the past 48 years to steam leaks and groundwater infiltration containing road and side-walk winter treatment chemicals resulting in reinforcement steel corrosion and subsequent concrete cracking and spalling within the pits. Over the same period, conduit box moisture exposure has degraded the piping insulation thermal efficiency and corroded piping support steel. Additionally, the structural steel used to anchor piping within the pits is badly corroded and in need of replacement. The valves, trap system and piping within the pits are at the end of their life cycles.

Pit A2 is located on the route of the main steam distribution loop serving the northern part of the campus. In addition to the tie-ins for the branch services to the Clow building, the campus steam and condensate distribution systems pass through the pit. Therefore, failure of pit A2 would disrupt the steam distribution system impacting the northern campus building and process heating systems.

Due to the removal or abandonment of the pumped condensate discharge piping to Clow (between pit A2 and A2A), the condensate return from Clow is pumped through the adjoining Nursing building. Although this project does not include replacement or repair of the steam and condensate services to the Nursing building, those services were installed in 1968 and do not have much remaining life due to exposure of high ground water and several box conduit flooding events in the past. Therefore, long-term reliance on the Nursing condensate return system is not prudent for the condensate return from Clow.

Both Clow and Nursing are currently being renovated. Since these building are adjoined, the long term intent is that both buildings be served by one HVAC heating system. At this time, the Clow renovation plans include work to interconnect to the Nursing steam and condensate systems thereby providing operating flexibility to serve both buildings with steam and

All Agency Project Request

2013 - 2015 Biennium

condensate services from Clow. The service interconnections will permit deferment or cancellation of a repair/replacement project to address the Nursing services, saving substantial cost.

A/E Consultant Requirements

A/E Selection Required?

Consultants should have specific expertise and experience in the design and coordination of district heating, steam/condensate distribution systems as part of a design team. Work includes site surveys, acquiring field data, and verifying as-built conditions to assure accurate development and production of 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 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:		
Construction Total:-		
Contingency:	15%	
A/E Design Fees:	8%	
DFD Mgmt Fees:	4%	
Equipment/Other:		
		\$952,000

Funding Source

GFSB - Utilities Repair & Renovation [Z080]	\$0
PRSB - Utilities Repair & Renovation [T570]	\$0
Agency/Institution Cash [AGF0]	\$14,600
Gifts	\$0
Grants	\$0
Building Trust Funds [BTF]	\$15,300
Other Funding Source	\$0
	\$29,900

Project Schedule

- SBC Approval: 02/2014
- A/E Selection: 11/2013
- Bid Opening: 05/2014
- Construction Start: 07/2014
- Substantial Completion: 11/2014
- Project Close Out: 05/2015

Project Contact

- Contact Name: Steven A. Arndt
- Email: <arndt@uwosh.edu>
- Telephone No.: (920) 424-3102 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.

<i>All project work will be coordinated through campus physical plant staff to minimize disruptions to daily operations and activities.</i> | <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? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

All Agency Project Request

2013 - 2015 Biennium

Hazardous materials abatement is not anticipated on this project. Comprehensive environmental 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?

The project involves repairs to the steam/condensation distribution system serving the Clow facility. The building will be without central heat during the project.

5. Will the project impact the heating plant, primary electrical system, or utility capacities supplying the building? If yes, to what extent?

Yes, the project will directly affect the heating capacities serving the Clow complex. The project will increase the supply of heat to the facility.

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.

No, but the Clow Renovation Project, will commence at the same time as this work is being done. Project # 1112E. That work will occur near this project, but not in this projects work area.

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.

Yes, work is confined to the summer months as the heating system must be functional during the heating season.

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?

The project will marginally improve the function and reduce costs of the facilities operational and maintenance budget.

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.

All Agency Project Request

2013 - 2015 Biennium

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.