

9/29/2015

BOARD OF REGENTS OF THE UNIVERSITY OF WISCONSIN SYSTEM

I.3. Capital Planning and Budget Committee

Thursday, October 8, 2015  
9:00 a.m.-10:30 a.m.  
Gordon Dining and Event Center  
770 West Dayton Street, 2<sup>nd</sup> floor  
Overture Room  
Madison, Wisconsin

- a. Approval of the Minutes of the September 10, 2015 Meeting of the Capital Planning and Budget Committee
- b. UW System: Authority to Construct All Agency Maintenance and Repair Projects [Resolution I.3.b.]
- c. Report of the Associate Vice President
  1. State Building Commission Actions
  2. Other Updates
    - Introduction to the New Geographic Information System(GIS )

Authority to Construct All Agency  
Maintenance and Repair Projects,  
UW System

CAPITAL PLANNING AND BUDGET COMMITTEE

Resolution:

That, upon the recommendation of the President of the University of Wisconsin System, authority be granted to construct various maintenance and repair projects at an estimated total cost of \$7,998,000 (\$2,517,800 General Fund Supported Borrowing and \$5,480,200 Agency Cash).

**THE UNIVERSITY OF WISCONSIN SYSTEM**

**REQUEST FOR  
BOARD OF REGENTS ACTION  
OCTOBER 2015**

**INSTITUTION:** University of Wisconsin System

**PROJECT REQUEST:** Authority to Construct various maintenance and repair projects at an estimated total cost of \$7,998,000 (\$2,517,800 General Fund Supported Borrowing and \$5,480,200 Agency Cash).

**UTILITY REPAIR AND RENOVATION**

INST	PROJ. NO.	PROJECT TITLE	GFSB	PRSB	CASH	GIFT/GRANT	TOTAL
LAX	15I2E	Campus Steam Meters Installation			\$502,000		\$502,000
MSN	13E1E	ARS Blaine Dairy Manure System Repairs			\$3,000,000		\$3,000,000
PLT	15A1Z	Pits 2/5/7/18/19 Steam and Condensate Repl	\$2,517,800		\$1,978,200		\$4,496,000
URR SUBTOTALS			\$2,517,800		\$5,480,200		\$7,998,000

	GFSB	PRSB	CASH	GIFT/GRANT	TOTAL
OCTOBER 2015 TOTALS	\$2,517,800		\$5,480,200		\$7,998,000

**PROJECT DESCRIPTION:**

**Utility Repair and Renovation Requests**

LAX – Campus Steam Meters Installation (\$502,000): This project installs new steam supply meters in eighteen buildings (Angel Hall, Archaeology Building, Center for the Arts, Coate Hall, Cowley Hall, Drake Hall, Graff Main Hall, Hutchison Hall, Laux Hall, Mitchell Hall, Morris Hall, Murphy Library, Reuter Hall, Sanford Hall, Wentz Hall, Wimberly Hall, Wing Technology Center, and White Hall) that communicate with the campus automation system. Project work includes installing new digital steam meters in nine academic buildings and nine student residence halls.

All central steam production and fuel usage is tracked in order to charge Program Revenue facilities for their usage. A manual calculation is done based on condensate meter readings. These meters are manually read each month by Physical Plant staff. This method is flawed since it cannot account for leaking traps, loss of condensate from food production, and inefficient equipment. To ensure Program Revenue buildings are paying their fair share of utility costs, digital electrical meters will be installed on all buildings during fiscal year 2016 and chilled water meters are currently being calibrated and connected to the building automation system under a separate maintenance contract. Installing new digital steam supply meters will provide the campus with accurate utility metering for all major central utilities.

The Physical Plant currently spends 200 hours annually reading antiquated analog meters and conducting manual calculations of usage. This labor expense will be eliminated when the campus automation system produces reports with accurate utility usage that can be used by the

Business Office for billing purposes. By eliminating the time to manually read meters, staff can focus on the backlog of maintenance work orders and preventive maintenance tasks. This project will also provide an accurate diagnostic tool as condensate and steam meter readings can be compared for anomalies.

MSN – Agricultural Research Station Blaine Dairy Manure Handling System Repairs (\$3,000,000): This project replaces the manure handling system at the Blaine Dairy site to correct deficiencies, meet the requirements of the Confined Animal Feeding Operation (CAFO) Wisconsin Pollutant Discharge Elimination System (WPDES) permit, and satisfy the 2013 Notice of Violation by the Wisconsin Department of Natural Resources (WDNR). Project work includes abandoning the main waste storage facility and replacing it with a new 9.5 million gallon concrete lined, water tight, waste storage lagoon. A mechanical sand separation system will be constructed along with a manure transfer system connecting the barns, the sand separation system, and the waste storage lagoon. A lift station will also be constructed to transport waste water from the calf feeding operations to the sand separation system. The current waste storage system will be abandoned.

There have been several leaks in the manure system force main since 2009, with the latest being in February 2013 and resulting in the release of 300,000 gallons of liquid manure that flowed overland onto the neighboring farm to the south. There is also ongoing concern with freezing of the main flush line and the overall capacity of the system. In 2013, a facilities needs study of the manure handling system evaluated the overall system capacity, the integrity and sizing of the force main and lift station, cold weather protection for the system, and the need for spill prevention measures. The study also addressed other identified shortcomings and made recommendations with budget estimates for the necessary repairs, replacements, and upgrades. This request is based on that study and will resolve the deficiencies.

PLT – Steam Pits 2/5/7/18/19 Steam and Condensate Utility Replacement (\$4,496,000): This project replaces underground central steam and condensate utilities serving 17 buildings and 1,071,432 GSF to assure reliability and correct known deficiencies. Project work includes replacing ~1,655 LF of steam and condensate utility lines and five steam pits located along the project area. The steam and condensate utilities to be replaced are contained in either concrete box conduit (~1,133 LF), cast iron conduit (~210 LF), or direct buried, insulated piping systems (~312 LF). Where necessary, new utility lines will connect to the inside of the buildings being served. All replacement utilities will be installed in new concrete box conduit. Site restoration work, including roadway repair at the Pit 18 to Pit 19 street crossing, pedestrian walkway repairs, and turf/landscaping repair or replacement, will be completed as needed.

Failure of one or more utility segments would have catastrophic impact on operation of as many as 17 major buildings. The 2011 Comprehensive Campus Master Plan assessed the steam distribution system, which consists of mainly welded steel piping within a buried concrete box conduit system. There are portions of the pipe that are installed in direct buried, insulated piping systems. These sections of the distribution system were installed between 1952 to 2003. The portions of the distribution system that are more than 50 years old have reached and exceeded their expected useful life and are causing maintenance and operational issues. The newer sections of the system are also in poor condition and require replacement. The segment of piping from Pit 2 to the Center for the Arts has a segment with a 5-foot drop that allows condensate to settle, causing pipe deterioration.

**PROJECT JUSTIFICATION:**

UW System Administration continues to work with each institution to develop a comprehensive campus physical development plan, including infrastructure maintenance planning. After a thorough review and consideration of All Agency Project proposals and infrastructure planning issues submitted, as well as the UW All Agency Projects Program funding targets set by the Division of Facilities Development, this request represents high priority University of Wisconsin System infrastructure maintenance, repair, renovation, and upgrade needs. This request focuses on existing facilities and utilities, targets the known maintenance needs, and addresses outstanding health and safety issues. Where possible, similar work throughout a single facility or across multiple facilities has been combined into a single request to provide more efficient project management and project execution.

**BUDGET AND SCHEDULE:**

General Fund Supported Borrowing.....	\$ 2,517,800
Program Revenue Supported Borrowing.....	5,480,200
Gifts and Grants.....	0
Agency Cash.....	\$ <u>0</u>
<b>Total Requested Budget .....</b>	<b>\$ 7,998,000</b>

**PREVIOUS ACTION:** None.