



CITY OF ANTIGO

PUBLIC WORKS COMMITTEE MEETING

MULTI-PURPOSE ROOM

Wednesday, August 24, 2016

CITY HALL

6:00 PM

Call to Order

Discussion and Action May Occur on Any of the Following Agenda Items:

1. Request to Waive Bidding Process and to Consider Proposal from Schulz Heating and Cooling for the Replacement of the Existing Air Handling Unit Serving the Lab at the Wastewater Treatment Plant
2. Fleet Farm Meter
3. Request for Four Way Stop Sign at Seventh Avenue and Dorr Street

Any Other Matters Authorized by Law to be Considered

Adjournment

Upon reasonable notice, efforts will be made to accommodate disabled individuals through appropriate aids and services. For additional information, contact Jaime Horswill, 700 Edison Street, Antigo, Wisconsin 54409. (715) 623-3633 extension 100. Members of and possibly a quorum of members of other governmental bodies may be in attendance to gather information. Any governmental body other than that specifically referred to above will take no action.

DATE MAILED: August 18,2016

JIM DARLING



To: Mayor and City Council
From: Mark Desotell, Director of Administrative Services
Date: August 24, 2016
Re: Request to Waive Bidding Process and to Consider Proposal from Schulz Heating and Cooling for the Replacement of the Existing Air Handling Unit Serving the Lab at the Wastewater Treatment Plant

The existing 5-ton roof-mounted air handling unit serving the lab at the wastewater treatment plant needs to be replaced as it currently has failed. Estimates for its repair along with its age/condition dictate the replacement of the unit. In researching our replacement options, it was noted that the design criteria for the lab requires exchanging the air for quality purposes at a rate of 1 cubic foot per minute (cfm) per square foot of floor space (Approximately 700 cfm required based on the size of the lab). The existing HVAC system is inefficient as there is no heat recovery capability and the exchange rate for air quality causes air in the lab space to be “turned over” at a rate of +/- 8 times per hour.

Staff from IAI and the City engaged several local contractors to research a system that would continue to address the air quality standards while providing greater energy efficiency. Additionally, we also engaged an outside vendor to solicit an engineered solution; they were unable to meet the time-frame needed to get the unit replaced prior to the upcoming heating season. One vendor declined due to current workload; another was not able to provide a 2-stage unit and the third provided a systems engineer to visit the plant. The system being proposed by staff from IAI and the City is the engineered solution option.

The proposed system will convert the design from a roof top mounted unit to a gas-fired plenum mounted unit above the suspended ceiling near the lab. A condenser will remain on the roof. The proposed replacement will be more efficient, provide a heat recovery system and operate with lab occupancy sensors reducing the overall amount of energy consumed. This system will also help to assure compliance with an additional criteria required for maintaining lab temperatures at a constant rate with only a degree or two of fluctuation. Continued reliance on the building’s boiler to provide re-heat through a coil was ineffective at balancing lab temperatures. Finally, an air exchange rate of 200 cfm during unoccupied periods in the lab will help reduce the corrosive effects to other features.

I am asking the Committee to provide an exception to the bidding process under the Special Purpose portion of the City’s Purchasing Policy, to transfer the 2016 budgeted Wastewater CIP funds of \$20,000 (Item WWI-16 Driveway Upgrade) for this purpose and to approve the quote (see attached) from Schulz Heating and Cooling in the amount of \$18,150 to replace the current system.

Schulz Heating & Cooling Ltd.
Commercial, Industrial, Farm & Home

TERRENCE SCHULZ, PRESIDENT
 W8976 County Road D
 Antigo, WI. 54409

PHONE 715-627-7160
 FAX 715-623-2738
www.schulzheat.com

*Member of the Wisconsin Geothermal Association
 International Ground Source Heat Pump Association (IGSHPA) Accredited
 North American Technician Excellence (NATE) Certified in Ground Source Heat Pumps*

Mark Desotell
 Director of Administrative Services
 700 Edison Street
 Antigo, WI 54409

25 July 2016

Waste Water Treatment Plant Office Lab HVAC;

We propose to provide a highly efficient system for this area and alleviate problems with the current system. The first problem listed was the corrosion present that is associated with the waste water treatment plant. The previous ventilation systems relied solely on exhaust with outside air being pulled into the lab, but this system was not used, either due to the high cost of operating the exhaust, and, or the inability of the system to handle the temperature variations of the outside air being introduced into the small 750 sq. ft. lab. Some corrosion is present in the area, attributable to lack of ventilation into the lab/office area. Designing large amounts of exhaust/fresh air is non-productive if the costs of operation or temperature swings in the occupied area are not reasonable.

To provide adequate ventilation, we are proposing to provide a 700 cfm air to air Heat Recovery Ventilator that can recover up to 80% of the temperature difference between outgoing and incoming air. This heat recovery unit, HRV, will operate as the occupied ventilation, either by timer or light switch for the 1 cfm per square foot during occupied times. During unoccupied times, ventilation will switch to a 200 cfm HRV to maintain 24 hour, 7 days a week ventilation which will prevent buildup of corrosive fumes in the lab area.

Heating and cooling will be provided by a very high efficiency 2 stage 95% furnace mounted above the ceiling of the break area/restrooms with the high efficiency condenser on the roof. The current RTU has a gas efficiency of less than 80% and a cooling efficiency of an estimated 8 SEER, while the new cooling unit will be a 17 SEER unit, consuming less than half the electricity. New insulated metal duct will replace the dilapidated and ill-fitting fiberglass duct present. Existing grilles and registers will be cleaned and installed back in place.

We will remove the existing RTU and install a permanent insulated cap over the curb. The required openings for fresh air will be installed through this cap and existing exhaust curbs will be utilized as necessary.

Installed cost of new system and duct; \$18,150.00.

This system is very similar to the system we designed and installed at the street department several years ago. The problem with that system was the office was extremely negative on air,

Attachment: Antigo Waste Water Plant Lab, HVAC Replacement - August 2016 (1110 : WWTP Air Handling Unit Replacement)

which pulled the vehicle exhaust and dirt in from the truck and equipment garage, resulting in the office walls and ceiling tile needing to be cleaned, painted, and tiles replaced on an annual or every few year basis. By providing a balanced intake exhaust ratio, purposely keeping the office slightly in positive pressure, the problem was alleviated. By using the heat exchange, and utilizing high efficiency equipment, estimated heating savings was in excess of 30%.

Corrosion is a major concern in this application; employee welfare is also, as always a consideration. With this system, both issues are addressed as well as efficiency. The operation of the exhaust and fresh air will be economical to operate at the 700cfm level, when the lab is in use, plus the second, smaller 200cfm HRV will maintain fresh air and exhaust on a lower level when the 700cfm HRV is not operating. Both HRV's recover approximately 80% of the energy or heat being removed from the interior area into the Make Up Air.

Acceptance of Proposal;

The above price, specifications, and conditions are satisfactory and are hereby accepted. I understand that a payment of 50% of the entire installation cost is due before work will begin. I also understand that payment of the balance is due in full upon completion of the installation, if payment is not made in full I will be subject to finance charges and/or legal fees and/or be pursued through all legal measures to collect the balance due. I understand the aforementioned and approve the installation by Antigo Refrigeration & Heating Ltd. D.B.A. Schulz Heating & Cooling Ltd.

Signature Approving Installation: _____ Date:_____



To: Mayor and City Council
From: Bob Piskula, Street Commissioner
Date: August 24, 2016
Re: Fleet Farm Meter

Water meter hook up at fleet farm against pse rules was told in the past to allow. We have been doing it. We have not allowed it for others and this year we had some thing happen would suggest we stop hooking up and they would have to add correct plumbing