



PROPOSAL – Town of Prescott Valley Civic Center

(Mohave JOC #09D-PMAC2-0902)

From: Pueblo Mechanical and Controls, Inc.

Date: May 24, 2010

Attn: Gene Ulibarri
Town of Prescott Valley
7501 E. Civic Circle
Prescott Valley, Arizona 86314
(928) 759-3073, (928) 759-5514 fax gulibbarri@pvaz.net

Dear Gene,

Pueblo Mechanical and Controls is pleased to provide the following scope for the Civic Center.

Equipment:

- (1) American Auto-Matrix Integra IT-500 Integration Platform
 - JAVA-based graphical user interface accessible from any web-browser with no proprietary software
 - Open systems protocols including BACnet, LonWorks, Modbus and OPC
 - Complete high level functionality including alarming, trending, scheduling, and custom sequencing
 - Provide and Install new equipment
 - Includes all electrical connections and networking
 - Map all points into IT-500 controller and setup a user friendly interface that can be used to easily change setpoints, scheduling and acknowledge alarms.
 - Graphics will utilized ACAD floor plans provided by owner
- (81) SBC-VAV controllers – variable air volume controllers
 - SBC—STAT2 wall sensors
 - Belimo Actuator with feedback
 - Provide and Install new equipment
 - Includes all electrical connections and networking to controllers
- (4) Trane RTU interface for existing rooftops
 - Scheduling On/Off
 - Warm-up & Night set-back control
 - Discharge Air setpoint control
 - Re-commission of unit to ensure sequence of operation is correct outlined below
- Existing communication will re-used where possible
- Rooftop units will be programmed to allow as much of the gas heat available to provide the necessary warm-up temperature during the heating season and therefore minimize the overall use of the VAV electric heat strips.
- Provide end-user with a dedicated PC for which to access the system.
- Owner Training – 8 hours (usable at the owners discretion)
- Warranty – 2 years & Installation and Operation Manuals

ALL PRICES QUOTED ABOVE ARE GOOD FOR 30 DAYS

Mohave Contracts #09D-PMAC2-0902 (JOC) and #05G-PMAC-0608

AZ State Contract #EPS060026-16 GPPCS Contract #06-14-10

6771 E. Outlook Dr. • Tucson, AZ 85756 • Office - (520) 545-1044 • Fax - (520) 545-1048
www.pueblo-mechanical.com • AZ LIC: K-39 # ROC176640 • AZ LIC: B-01 # ROC173953



Sequence of Operation

Standard economizer dry bulb change over has five field selectable temperatures 55, 63, 67, 70, 73° F. The economizer option allows cooling utilizing outdoor air when the temperature is below the specified dry bulb setpoint (73° ±2° F factory setting). The air is drawn into the unit through modulating dampers. The ECA modulates the economizer dampers from minimum position to full open based on a 1.5° F around the supply air temperature setpoint for variable air volume applications. If the Mixed Supply Air Sensor (MAS) senses that supply air temperature is too cold, the dampers are held in their current position until the supply air temperature rises, or begin to modulate toward the minimum position if the supply air temperature continues to drop. The economizer control allows fully integrated cooling operation between the compressor(s) and the economizer when needed to satisfy the cooling setpoint. The RTRM will not allow a compressor to operate until the economizer dampers have been fully open for at least three minutes. The RTRM evaluates the rate of temperature change during this delay and will energize compressor(s) as needed to maintain temperatures within setpoint deadbands. The power exhaust fan(s) comes on based on the position of the of the exhaust fan setpoint potentiometer. The setpoint is factory set at 25%. The exhaust fan(s) will come on anytime the economizer damper position is equal to or greater than the exhaust fan setpoint. Physical damper blade "stops" that limit the amount of exhaust airflow by limiting the maximum opening of the damper blades. These stops (sliding brackets secured with wing-nuts) are present under the rain hood on the non-modulating power exhaust option. There is one stop on each side of each damper. The practical range of blade position control is between 1.5" and 4.0" blade opening. The damper is wide-open at 4.0". The stops on each side of a damper must be in the same position, such that the damper blade connecting member contacts the stops at the same time. The modulating power exhaust actuator is a slave to the position of the economizer damper actuator such that the power exhaust dampers proportionally follow or track the fresh air damper position. The proportional offset between the dampers is adjusted under the rain hood by hole position selection of the power exhaust actuator jack shaft on the damper linkage arm.

We Exclude The Following:

- Repair or replacement of any existing device to be found inoperable.

Complete material, service, and labor sub total:	\$82,327.48
Mandated applicable taxes (5.642%):	\$ 4,644.92
Bonding [If required]:	\$ 1,304.59

Total Cost: **\$88,276.99**

We look forward to providing this important service please call if you have any questions.

Sincerely,

Chuck Hink
 (602) 621-1914 cell (520) 545-1048 fax
chuck@pueblo-mechanical.com

Acceptance of Proposal: The above prices, specifications and conditions are satisfactory and are hereby accepted. You are authorized to do the work as specified.

Name	Signature	Date
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*All Mohave projects over \$33,689 must be individually bonded, projects under this amount is at the discretion of the customer, by accepting this proposal you agree to waive bonding for this project. If you require bonding please contact Pueblo Mechanical immediately and we will provide quote for the bonding amount.

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