



ST. CHARLES  
SINCE 1834

## AGENDA ITEM EXECUTIVE SUMMARY

Title: Recommendation to approve Mechanical Improvements at Police Building

Presenter: Peter Suhr

*Please check appropriate box:*

	Government Operations	X	Government Services 09.24.12
	Planning & Development		City Council
	Public Hearing		

Estimated Cost:	\$37,568	Budgeted:	YES	X	NO	
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If NO, please explain how item will be funded:

**Executive Summary:**

For several years, city staff within the Police facility has occasionally endured extreme heat conditions within their work environment during the winter months. The aging mechanical system does not currently provide cooling controls and therefore, at times, can become uncomfortably hot in the offices and training room. Our mechanical service provider, Service Mechanical, with assistance from City staff has tried several, less expensive and less intrusive alternative modifications, unfortunately with dismal results.

Based on the recommendations from Service Mechanical, staff has budgeted and is proposing to add 100% outdoor air economizers to two (2) separate air handling unit's serving the Police Station. The modifications to the existing mechanical system will provide the needed cooling controls during the winter months for the Training Room, Investigations Offices and some Administrative Offices.

**Attachments:** *(please list)*

Proposal from Service Mechanical Industries  
Bid Waiver

**Recommendation / Suggested Action** *(briefly explain):*

Staff recommends approval of mechanical improvements to the Police Facility, waiving the bid procedure and awarding the work to Service Mechanical Industries in an amount not to exceed \$37,568.

*For office use only:*

*Agenda Item Number: 6.b*

Monday, September 10, 2012

Mr. Tony Whittaker  
City of St. Charles  
2 E. Main St.  
St. Charles, IL 60174

**Re: Adding 100% Outdoor Air Economizer to 2 Air Handling Unit's serving the St. Charles Police Station**

Dear Mr. Whittaker:

After meeting on August 16<sup>th</sup> with the St. Charles Police Department and the St. Charles Building Department, we identified the work to be done in priority order. It was determined that the Training Room and Investigations Offices would be the first area's to be addressed.

However, there is still the issue of if relief air will be required (and this can't be answered until the project is submitted to the building department for review.) In order for us to provide an accurate price, we must assume that these relief air options will be required. In light of this uncertainty, we have proposed the work to be completed this year in 2 different ways.

- OPTION #1- Only complete the Training Room work. The totals would be the same as originally proposed, and would save approximately 1/3 of the total project budget for this year. The dollars saved this year would be applied towards completing the remaining work next year.
- OPTION #2- We will modify our proposed design of the economizer for the Investigations Offices, eliminating several of the motorized actuators and dampers. In place of this digitally controlled sequence, we will install a gravity damper (probably in a main hallway) ducted to the roof that will allow building pressure to relieve itself as necessary, without any electrical or mechanical input. These design modifications are made solely for cost savings. This option will reduce your overall cooling effectiveness when in economizer mode, because instead of bringing in 100% outdoor air, it will probably be more like 80% or 90% outdoor air.

Below are both options pricing and project scope.

**Option #1**

**Training Room (AHU #4)**

Under this proposal we will provide the following:

- Provide the appropriate engineering and permit drawings to submit to the city for permit approval
- Remove a 20'-0" section of duct above the training room that is currently connected to the outdoor air louver. This section of duct is too small to accommodate the volume of air required and must be replaced.
- Remove the existing louver that is currently used to bring in outdoor air

(Adding 100% Outdoor Air Economizer to 4 Air Handling Unit's serving the St. Charles Police Station.)

- Install a new 20'-0" section of duct sized to accommodate 100% outdoor air intake
  - This duct will extend out of the building on the east wall, 1<sup>st</sup> floor, where the existing louver is located. It will turn down on the exterior face of the wall
- Burglar or Safety bars will be installed in this duct where the duct penetrates the exterior wall. This will allow the safety bars to be anchored to the building.
- Insect screen will be used at the duct's exterior opening to prevent insects and small animals from entering the building or using the duct for a nest site.
- Install motorized dampers in the return air duct and the outdoor air duct to control the amount of outdoor air and return air circulating in the system. The dampers will be controlled by a stand-alone controller mounted on the air-handling unit, and will be tied into the thermostat controlling this space.
- Install (1) louver and gravity damper in the training room to provide relief air. (This louver will be installed in place of one of the existing windows).
  - **No framing, drywall, patching, painting or decorating is included.**

The above work for Training Room (AHU #4) will be performed for the net sum of:

**\$21,621.00 – Twenty One Thousand Six Hundred Twenty One Dollars and 00/100**

## **Option #2**

### **Training Room & Investigations Offices (AHU #4 & #5)**

Under this proposal we will provide the following:

- **Training Room (AHU #4)**
- Provide the appropriate engineering and permit drawings to submit to the city for permit approval
- Remove a 20'-0" section of duct above the training room that is currently connected to the outdoor air louver. This section of duct is too small to accommodate the volume of air required and must be replaced.
- Remove the existing louver that is currently used to bring in outdoor air
- Install a new 20'-0" section of duct sized to accommodate 100% outdoor air intake
  - This duct will extend out of the building on the east wall, 1<sup>st</sup> floor, where the existing louver is located. It will turn down on the exterior face of the wall
- Burglar or Safety bars will be installed in this duct where the duct penetrates the exterior wall. This will allow the safety bars to be anchored to the building.
- Insect screen will be used at the duct's exterior opening to prevent insects and small animals from entering the building or using the duct for a nest site.
- Install motorized dampers in the return air duct and the outdoor air duct to control the amount of outdoor air circulating in the system. The dampers will be controlled by a stand-alone controller mounted on the air-handling unit, and will be tied into the thermostat controlling this space.

(Adding 100% Outdoor Air Economizer to 4 Air Handling Unit's serving the St. Charles Police Station.)

- Install (1) louver and gravity damper in the training room to provide relief air. (This louver will be installed in place of one of the existing windows).
- **Investigations Offices (AHU #5)**
- Remove the existing window in the 2<sup>nd</sup> floor west mechanical room.
- Install a new custom louver in this window opening
- Insect screen will be used to prevent insects and small animals from entering the building through this louver.
- Duct from the top half of the new louver to the return duct in the 2<sup>nd</sup> floor west mechanical room
  - This duct will be wrapped with insulation to reduce cold transmission into the building and to prevent condensation from forming on the duct.
- Install motorized dampers in the outdoor air duct only (of AHU #5) to control the amount of outdoor air circulating in the system. The dampers will be controlled by the air handling unit.
- Install a gravity damper, ceiling grille and associated duct in the hallway outside of the Investigations Offices for relief air
  - This will be a relief duct sized for both the Investigations and the Administration Offices.

The above work for the Training Room and Investigations Offices (AHU #5 & #1) will be performed for the net sum of:

**\$37,568.00 – Thirty Seven Thousand Five Hundred Sixty Eight Dollars and 00/100**

This proposal will carry a one (1) year warranty from the date of completion of the work.

The above work will be performed during normal working hours, Monday through Friday, excluding holidays.

This proposal **does not include** the following:

- Permits and permit fees.
- Taxes (this facility is assumed to be tax exempt)

Payment Terms: Net (30)

If I can answer any additional questions please don't hesitate to contact me at (630) 217-7099.

This proposal is valid for thirty- (30) days.



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SUITE 100

SCHAUMBURG

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AN ILLINOIS CORPORATION

heating

air conditioning

energy management

www.servicemechanical.com

(Adding 100% Outdoor Air Economizer to 4 Air Handling Unit's serving the St. Charles Police Station.)

Sincerely,

Service Mechanical Industries, Inc.

Patrick Cesario  
Sales Engineer

Accepted for: \_\_\_\_\_

By: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_ / \_\_\_\_ / \_\_\_\_

**REQUEST FOR WAIVING BID PROCEDURE**

We request the City Council to waive the bid procedure and accept the quotation (requiring two-thirds City Council vote) submitted by:

Service Mechanical Industries  
50 E. Commerce Drive, Suite 100  
Schaumburg, IL 60173

For the purchase of: Mechanical System Repair/ Modification Work.

At a cost not to exceed: \$ 37,568

Reason for the request to waive the bid procedure: Service Mechanical is our preferred vendor for mechanical work on our facilities and has been under contract with the City for over ninth years. Service Mechanical is the most qualified contractor for this works and has proven to be the most cost effective with this type of work. For several years, Service Mechanical has helped us to troubleshoot and adjust the mechanical system at the Police Station. The work proposed is a continuation of several projects in the past which Service Mechanical has been involved with.

Other Quotations Received: None

Date: 9/24/2012

Requested by: \_\_\_\_\_

Department Director: \_\_\_\_\_

Purchasing Manager: \_\_\_\_\_

Committee Chairman: \_\_\_\_\_

**THIS REQUEST FORM MUST BE SIGNED BY ALL PARTIES PRIOR TO REQUESTING COMMITTEE APPROVAL FOR WAIVING OF THE BID PROCEDURE. REQUESTS FORWARDED DIRECTLY TO THE CITY COUNCIL (AND BYPASSING COMMITTEE) MUST BE SIGNED BY ALL PARTIES PRIOR TO REQUESTING CITY COUNCIL APPROVAL. SUCH REQUESTS ARE TO BE OF AN EMERGENCY NATURE WHERE TIME IS OF THE ESSENCE.**