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Public Works

City Transit  
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MEMORANDUM

Equipment Maintenance  
Roadway Maintenance  
Collection & Drainage  
Building & Grounds  
Engineering

To: Gregg Mandsager, City Administrator  
CC: Fran Donelson, Secretary  
FROM: Randy Hill, Public Works Director  
DATE: September 28, 2015  
RE: Muscatine Art Center/Museum HVAC Design Proposal

INTRODUCTION:

An Energy Conservation Study for the Muscatine Art Center/Museum was completed in December 10, 2013. The purpose of the study was to review existing heating, ventilation and air conditioning (HVAC) systems to determine what system modifications and upgrades would enhance system efficiencies and reliability of operation.

BACKGROUND:

As a result of the study several HVAC system options were presented that would increase overall energy efficiency and create an environment that has stable humidity levels necessary for storage of moisture sensitive pieces of art or other artifacts. The consultant, AJ Associates, recommended the variable refrigerant flow (VRF) system. The VRF heat pump system is coupled with a geothermal loop heat exchanger. This system will provide a sophisticated humidity control system. Window replacement/upgrade was also recommended for the Art Center. In August 2015 A-One Geothermal performed a "40 hour formation thermal conductivity test" at the Art Center. The test results indicate the proposed field has a very good potential for providing a cost effective heat transfer medium.

RECOMMENDATION/RATIONALE:

AJ Associates has provided the City with a Proposal for Professional Services Agreement for the design of the geothermal HVAC Upgrade for the Art Center and Museum. Their design fee is equal to nine (9%) per cent of construction costs. The Scope of Work includes:

- a. Preparation of mechanical and electrical systems construction drawings
- b. Design using the Variable Refrigerant Flow system and window replacement
- c. Preparation of the Project manual

**"I remember Muscatine for its sunsets. I have never seen any  
on either side of the ocean that equaled them" — Mark Twain**

- d. Bidding, shop drawings, on-site review
- e. Provide substantial completion review and punch list
- f. Preparation of "As-Builts", pay applications and change orders.
- g. (See Attached)

Staff recommends entering into a Design Agreement with AJ Associates for the HVAC upgrades and the Muscatine Art Center & Museum.

**BACKUP INFORMATION:**

- 1. Copy of A&J Associates Proposal
- 2.
- 3.
- 4.



August 28, 2015  
Proposal for Consulting Engineering Services

City of Muscatine, Muscatine, Iowa

*Muscatine Art Center and Museum*  
HVAC Replacement and Miscellaneous Window Renovations  
A&J #201310.01

## SCOPE OF WORK

A&J Associates PC (A&J) proposes to provide consulting engineering services for City of Muscatine for the construction of HVAC replacement and miscellaneous window replacement/upgrades to the Muscatine Art Center and Museum located in Muscatine, Iowa as described below.

1. The basis of agreement between A&J and City of Muscatine for consulting engineering services will be this executed proposal.
2. Registered Professional Engineers from A&J will sign and seal the construction documents.
3. A&J's basic scope of work includes the development and completion of the construction drawings and the preparation of specification sections.
4. A&J's basic services scope of work includes:
  - a. Preparation of mechanical and electrical systems construction drawings for:
    - i. HVAC Replacement
    - ii. Plumbing incidental to the HVAC replacement
    - iii. Fire Protection incidental to the HVAC replacement
    - iv. Fire Alarm incidental to the HVAC replacement
    - v. Electrical Power distribution incidental to the HVAC replacement
    - vi. General construction/Architectural construction incidental to the HVAC replacement
    - vii. Window replacement/upgrade for the Art Center only
    - viii. HVAC system to utilize a geothermal loop field heat exchanger located under the parking lot
  - b. The project's scope of work includes:
    - i. HVAC replacement shall be a variable refrigerant flow system identified as Option 1BB in the "Energy Conservation Study" performed by A&J Associates, dated December, 2013.
    - ii. Window replacement/upgrade for the Art Center only
  - c. Preparation of the Project manual with appropriate specification sections.
  - d. Bidding and negotiation period services including preparation of any required /applicable addenda to bidding documents and review of contractor's bids.
  - e. Shop drawing and submittal review
  - f. Performing on-site review and preparing observation reports. A&J personnel will attend periodic construction coordination meetings and will make on-site observation visits ten (10) times during the construction period. It is assumed that the construction period will be no longer than 10 months.
  - g. Provide substantial completion review and punch list and final closeout review.
  - h. Preparation of "as-built" construction documents from contractor's mark-ups.
  - i. Processing contractor's pay applications
  - j. Preparation of and processing of change orders

## WORK EXCLUDED

The following items are not part of A&J's scope of work or design responsibility:

- LEED Design or Accreditation services
- Value Engineering
- Acting as construction coordinator
- Participating in any energy conservation rebate analysis program provided by the serving Utility companies. The energy rebate analysis design fees are reimbursed by the utility company and are considered extra design scope.

**ASSUMPTIONS FOR DETERMINING FEE**

A&J proposes to do the basic services scope of work as described above based on the following assumptions and clarifications:

- City of Muscatine will provide A&J with architectural floor plans in electronic format. The drawings will be in the Auto-Cad format.
- The HVAC replacement and window replacement will be bid together as one bid package.
- City of Muscatine will perform all printing, copying and distribution of all drawings and specifications.
- Personnel from A&J and City of Muscatine will meet periodically with the user group or other owner/user representatives during the design phase to formally discuss the project status and exchange information on a formal basis. Informal information exchange can occur on a daily basis through mail, telephone, fax or email means.
- There will be one General Contractor with applicable subcontractors for the project.
- A&J proposes to use Douglas J. Steinmetz, AIA as the Architectural consultant for historical preservation and window replacement.

**DELIVERABLES**

A&J will provide City of Muscatine with the following deliverables during the project duration.

- Completed construction drawings in the Auto-Cad format plotted on vellum for printing and/or in electronic format via "E-Mail".
- One paper copy of completed project manual
- Intermediate issue of the construction drawings as needed for review by City of Muscatine or the Users. These will be submitted in the Auto-Cad format via "E-Mail".
- Shop drawing review of contractor's submittals.
- Field observation reports of the items observed during visits to the site during the construction period.
- Punch lists at the point of substantial completion.

**SCHEDULE**

The schedule for the project is assumed to be approximately as follows:

- Start design work To be determined
- Finish Construction Documents To be determined
- Substantial Completion To be determined

**FEES AND EXPENSES**

The proposed fees for consulting engineering services will be a fixed fee equal to nine percent (9.0%) of the cost of construction.

"Cost of construction" will be the actual cost of construction as determined by bids or negotiations with contractors, absolute value of additive and deductive change orders and alternates taken. Cost of construction of alternates not taken will be determined by multiplying the value of the alternate by 80% to reflect the design work completed through bidding or pricing.

Any additional services work outside the scope of work described above will be billed and compensated at the following listed hourly billing rates. Any additional services work outside the scope of work described above will be performed only with prior direction to proceed from City of Muscatine.

Senior Engineer time	\$100.00/Hr.	Clerical time	\$50.00/Hr.
Engineer time	\$ 85.00/Hr.	Drafting Production	\$65.00/Hr.
Designer/Technician time	\$ 70.00/Hr.	Specification Production	\$70.00/Hr.
Architectural Consultant	\$125.00/Hr.		

Travel expenses for additional services to destinations outside of the Iowa City area when directed by City of Muscatine will be billed at the rate of \$0.58/mile for automobile travel.

Travel and other expenses for basic services are included in the basic services fee.

Any other reimbursable expenses for additional services work will be billed and compensated at A&J's direct costs.

The following are reimbursable expenses:

- Printing or reproduction of construction documents or shop drawings for review or use by City of Muscatine, the Owner, contractors or bidders.
- Long distance telephone calls, postage, freight or handling of documents.

### **PROJECT CONTACTS**

1. City of Muscatine Randy Hill
2. A&J Victor A. Amoroso, PE

### **TERMS AND CONDITIONS**

#### **Payments:**

Terms of payment to A&J shall be net 30 days after initial billing invoice date. A&J will bill each month of the duration of the project.

#### **Standard of Care:**

Services provided by A&J under this Agreement will be performed in a manner consistent with that degree of care and skill ordinarily exercised by members of the same profession currently practicing under similar circumstances.

#### **Drawings, Specifications, Other Documents – WORK PRODUCT**

Drawings, Specifications and other documents including those in electronic form, prepared by A&J are WORK PRODUCT for use solely with respect to this Project. Unless otherwise provided, A&J shall be deemed the author and owner of A&J's Work Product and shall retain all common law, statutory and other reserved rights, including copyrights.

Upon execution of this Agreement, A&J grants to City of Muscatine a nonexclusive license to reproduce A&J Work Product for purposes of designing, bidding, construction administering, using and maintaining the Project, provided that City of Muscatine shall comply with all obligations, including prompt payment of all sums when due, under this Agreement. Such license shall permit City of Muscatine to include A&J's Work Product in a similar nonexclusive license to the Owner in the Prime Agreement, authorizing the Owner and the Owner's contractors and consultants to reproduce applicable portions of A&J's Work Product solely for the purpose of constructing, using and maintaining the Project. Any termination of this Agreement prior to completion of the Project shall terminate this license. Upon such termination, City of Muscatine shall refrain from making further reproductions of A&J's Work Product and shall return to A&J within seven days of termination all originals and reproductions in City of Muscatine's possession or control. If and upon that date A&J is adjudged in default of this Agreement, the foregoing license shall be deemed terminated and replaced by a second, nonexclusive license that permits City of Muscatine and the Owner through City of Muscatine, to continue to use and to reproduce A&J's Work Product and to authorize other similarly credentialed design professionals to reproduce and where permitted by law, to make changes, corrections or additions to A&J's Work Product, solely for the purposes of completing, using and maintaining the Project. Any such changes to A&J's Work Product shall be at City of Muscatine's sole risk and without liability to A&J. If City of Muscatine is adjudged in default of the Prime Agreement, A&J upon written request of the Owner shall grant a nonexclusive license to the Owner to reproduce A&J's Work Product solely for the purpose of completing, using and maintaining the Project. In such event, the Owner shall not make changes in A&J's Work Product without written permission.

Except for the licenses granted above no other license or right shall be deemed granted or implied under this Agreement. City of Muscatine shall not assign, delegate, sublicense, pledge or otherwise transfer any license granted herein to another party without the prior written agreement of A&J. Submission or distribution of A&J's Work Product to meet official regulatory requirements or for similar purposes in connection with the Project is not construed as publication in derogation of the reserved rights of A&J. City of Muscatine shall not use A&J's Work Product for future additions or alterations to this Project or for other projects, unless City of Muscatine obtains the prior written agreement of A&J. Any unauthorized use of A&J's Work Product shall be at City of Muscatine's sole risk and without liability to A&J.

City of Muscatine and A&J shall not make changes in each other's Work Product without written permission of the other party.

A&J shall maintain on file and make available to City of Muscatine design calculations for this part of the Project, and shall furnish copies thereof to City of Muscatine on request.

**Fee for Service**

This agreement is based on "fee for service". City of Muscatine shall pay for services rendered by A&J Associates in accordance with other conditions specified in this agreement. If City of Muscatine refuses to pay or stops paying for services performed by A&J, A&J may stop design work under this agreement without incurring any breach of contract liability for stopping this work. A&J will resume work upon resumption of payment of fees for services provided.

**Termination or Suspension**

If City of Muscatine suspends the Project, A&J shall be compensated for services performed prior to notice of such suspension. When the project is resumed, A&J shall be compensated for expenses incurred in the interruption and resumption of A&J's services. A&J's fees for the remaining services and the time schedules shall be equitably adjusted.

If City of Muscatine suspends the Project for more than 90 cumulative days for reasons other than the fault of A&J, A&J may terminate this Agreement by giving not less than fourteen (14) days' written notice.

Either party may terminate this Agreement upon not less than fourteen (14) days' written notice should the other party fail substantially to perform in accordance with the terms of this Agreement through no fault of the party initiating the termination.

City of Muscatine may terminate this Agreement upon not less than seven (7) days' written notice to A&J for City of Muscatine's convenience and without cause.

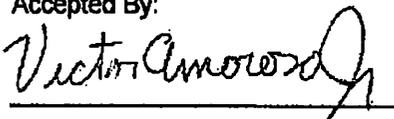
In the event of termination not the fault of A&J, A&J shall be compensated for services performed prior to termination, together with reimbursable expenses then due and all termination expenses as defined below.

Termination expenses are in addition to compensation for A&J's services and include expenses directly attributable to termination for which A&J is not otherwise compensated.

**Design Proposal Changes**

This design proposal may be changed only by written amendment to the proposal. A&J will not proceed with the work described under such amendments unless authorized to do so by City of Muscatine. Such authorization will be in the form of written acceptance of the amendment. In the case of "time is of the essence" changes during the construction period authorization may be by means other than formal written directives to be followed by City of Muscatine's written approval.

Accepted By:



Victor A. Amoroso Jr., PE  
A&J Associates PC  
365 Beaver Creek Centre, Suite B  
North Liberty, IA 52317  
319-626-4719  
vic@ajengineers.net

Accepted By:

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City of Muscatine Public Works Department  
City of Muscatine  
1459 Washington St.  
Muscatine, Iowa 52761

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