October 8, 2013

Request for Qualifications for Building Mock-Up Testing Services
Art Building Replacement – Construct New Facility (#0194401)

The University of Iowa, located in Iowa City, Iowa, intends to retain the services of a qualified Testing Laboratory Firm to provide Mock-up Testing Services for the Art Building Replacement – Construct New Facility project. Interested and qualified firms are invited to submit a written Statement of Qualifications to provide testing services for this project. This is a qualifications based selection process. Fee proposals are not required at this time.

General

The University intends to construct a new Art Building Facility of approximately 126,000 gross square feet. In June 2008, record floods damaged major portions of the University of Iowa campus. One of the heavily damaged buildings was the Art Building East complex located at 120 North Riverside Drive. After considering repair and replacement options the decision was made to replace the building. The site for the Art Building Replacement Facility is located at a higher elevation at 109 River Street.

The facility includes teaching studios, graduate studios, faculty offices, a sixty seven seat classroom, galleries and studio support rooms. The project is a 3.0 NC LEED project with a goal of attaining at least a silver certified level of design. The commissioning process shall comply with the US Green Building Council’s LEED-NC program for both Fundamental Commissioning and Enhanced Commissioning.

The primary project Design and Construction team firms are:

Steven Holl Architects   New York, New York
BNIM Architects   Des Moines, Iowa
J.C. Higgins & Associates, Inc.  Wausau, Wisconsin
Kdent, Inc.  Monett, Missouri
Miron Construction Company, Inc.  Cedar Rapids, Iowa

Scope of Work

The primary role of the successful Firm is to provide an off-site testing facility, test equipment, and professional personnel for the purpose of testing the project building mock-up structure. This structure is to be constructed by the Building Contractor on the Testing Laboratory’s premises, and shall be removed by the Building Contractor upon completion of testing activities. The Testing Laboratory will host this process at its designated facility, will provide structural framework(s) to support the mock-up, perform tests, record and report results. The Testing Laboratory shall participate in problem-solving or resolving non-conformance or deficiencies, though those responsibilities reside with the General Contractor and Design Consultants.
Information describing the desired Testing Laboratory services is included in the attached document:

University of Iowa – Art Building Replacement
Mock-Up Test Procedure and Information

Building envelope systems to be incorporated in the mock-up model include the following:

- Architectural Metal Panels
- Channel Glass
- Aluminum Windows
- Sloped Glazing Skylight
- Weather Barrier Membrane

Refer to attached plan sheet A-660 titled Mock-Up Drawings for a rendering of the intended mock-up structure. Only the structure described as the Envelope Mock-Up is included in this off-site testing.

Statement of Qualifications

Each Firm is expected to submit a fully detailed response, which adequately describes the advantages and benefits the University would realize by selecting the Firm. The required documentation of expertise and qualifications outlined in this request are intended to primarily serve as a general guide for each statement of qualifications, with the minimum requirements listed.

Through this Request for Qualification process, a single Firm will be selected to provide testing services for this project. The University may at its option, require oral presentations if deemed necessary, whichever is in the University’s best interest.

Firms will be selected to interview on the basis of materials submitted for review by the University of Iowa, along with an expression of interest in providing services for the project with the time limitations defined. A demonstrated ability to handle a project similar to that described above will be important to the selection process. The submission should include, as a minimum:

- Cover letter including firm contact information.
- A list of the firm’s proposed project team members (including sub consultant team members), their roles and qualifications related to this project.
- A list of similar projects successfully completed by the firm.
- A detailed description of the firm’s quality control procedures. This should address quality in documentation as well as in the testing process.
- Brief description of the firm’s understanding of the assignment, a description of how the firm will approach the assignment.
- Compensation for testing services and facilities may be a lump sum fee, or other structured means of reimbursement as the parties may agree. Responders are
to provide a discussion of usual rates and fees for facilities, equipment, labor and testing, including a discussion of how these might be applied to this project.

- Discuss unit costs for retesting and laboratory time.
- The current anticipated start date for mock-up construction and testing is February 15, 2014. Discuss availability of testing facilities at this time, and address flexibility of scheduling.
- Describe any special considerations or requirements that the Testing Laboratory considers pertinent.

Submit Response Package to:

The University of Iowa  
Facilities Management/Planning Design and Construction  
200 University Services Building  
Iowa City, IA 52242-1922  
Attention: Charles Saxton

Limit Statement of Qualifications to 12 pages (6 double-sided sheets) plus team member resumes and cover letter. Firms interested in providing services for this project should also submit, by email, all the requested material in a single *.pdf file format, to both:

Charles Saxton, Charles-Saxton@uiowa.edu  
John Rutherford, John-Rutherford@uiowa.edu

The materials must arrive no later than 12:00 PM (noon) on Wednesday, October 16, 2013 to be considered. Firms from which additional information is requested will be contacted. All firms expressing an interest in the project will be notified of the recommendations of the University’s selection as those decisions are reached.

All questions shall be directed to:

Charles Saxton, Senior Construction Manager  
Telephone: 319-335-5496  
E-mail: Charles-Saxton@uiowa.edu  
Cell: 319-631-2349
Provide testing facilities to support the building mockup structure, simulated floor slab, surrounding enclosure, and provide professional mock-up testing services for the Art Replacement Building in accordance with the following test methods and applicable bid documents. No pretesting shall be permitted without the Architect or Consultant present.

1. **PRELOAD (ASTM E330)**
   Positive differential (inward acting) 50% design load, held for a minimum of ten (10) seconds, and then released.

2. **STATIC AIR INFILTRATION/EXFILTRATION TEST (ASTM E283)**
   Test the mockup at a positive static pressure differential of 6.24 psf; testing should include a separate air test for each system within the mockup. Conduct a total mockup air infiltration and exfiltration test with tare bag at both 1.56 and 6.24 psf.

3. **STATIC and CYCLIC WATER PENETRATION TEST (ASTM E331)**
   Perform static and cyclic (4 cycles) water penetration tests on the wall system with a water application rate of 5 gal/hr/ft² at a pressure differential of 10.0 psf.

4. **DYNAMIC WATER PENETRATION (AAMA 501.1)**
   Perform a fifteen (15) minute water penetration test on the system with a water application rate of 5 gal/hr/ft² and dynamic air stream equivalent to static pressure of 10.0 psf.

5. **UNIFORM STRUCTURAL DESIGN LOAD TEST (ASTM E330)**
   Each load shall be held as follows:
   - 50% Positive Design Load (10 seconds)
   - 100% Positive Design Load (60 seconds)
   - 50% Negative Design Load (10 seconds)
   - 100% Negative Design Load (60 seconds)

6. **INTERSTORY DIFFERENTIAL VERTICAL MOVEMENT TEST (AAMA 501.7)**
   Three (3) complete cycles shall be performed in the vertical direction at top of Channel Glass only; Vertical movement will be 1" down, then back to zero, 1" up, and then back to zero (one cycle). Not required for the skylight.

7. **REPEAT STATIC AIR INFILTRATION/EXFILTRATION TEST (ASTM E283)**
   Repeat Test No. 2 as stated above.

8. **REPEAT WATER PENETRATION TEST (ASTM E331)**
   Repeat Test No. 3 as stated above.

9. **REPEAT DYNAMIC WATER PENETRATION (AAMA 501.1)**
   Repeat Test No. 4 as stated above.
10. UNIFORM STRUCTURAL OVER LOAD TEST (ASTM E330)

Permanent deformation of the system shall be measured and recorded at 1.5 x design pressure.

Each load shall be held for 10 seconds as follows:
- 75% Positive Design Load
- 150% Positive Design Load
- 75% Negative Design Load
- 150% Negative Design Load

Performance Requirements:

Air infiltration – Per ASTM E283 – Glazed Fenestration
Allowed: 0.06 dfm/sq.ft. at a static pressure differential of 6.24 lbs/sq.ft.

Air infiltration – Per ASTM E283 – Opaque Wall
Allowed: 0.04 dfm/sq.ft. at a static pressure differential of 1.57 lbs/sq.ft.

Water Resistance – Per ASTM E331 or AAMA 501.1
Allowed – No water penetration at a 10 psf test pressure.

Structural Tests: Test loads in positive and negative directions at a pressure of 24 psf at main field areas and 44 psf at corner zones (within 18’-4” of corner). Test duration are to be 60 seconds minimum. Allowable deflections are to be l/180 for all glass, glass channels and all supporting frame members. Panel veneers are allowed to deflect to l/60 of its vertical dimension.

Structural Overload Tests: No evidence of material failure, structural distress, or permanent deformation or set of framing members exceeding 2 percent of span is allowed.

Information for Responders:

a. For purposes of the mockup, the building concrete structure will be simulated with precast concrete panels or studs with sheathing provided and erected by the Building Contractor.
b. Testing Laboratory to provide steel structure at Channel Glass to simulate the exterior floor slab.
c. Skylight mockup will be a separate mockup (not on top of the main mockup). Skylight should set on top of a curb and allow for visual inspection during the test.
d. Roofing will not be included on the mockup; test lab will be responsible for sealing the top of the mockup chamber.
e. All testing and retesting shall be documented and reported by the test lab.
f. The University reserves the right to delete Vertical Movement Test (Test No. 6 above).
g. Deflections to be measured at both interior and exterior for all structural tests.
h. Closely observe, monitor and report behavior of perforated metal panel at its cantilever over window opening.