Addendum #4

Contract Number: AA14-PR-4863
Speedtype: 144772
Title: Design & Construction Administration for an Electrical Substation and Associated Ductbank & Electrical Work

All vendors responding to this RFB must incorporate these items into their response. Failure to do so may disqualify the vendor.

See attached final responses to vendor questions. There will be no further responses to written questions upon issuance of this Addendum #4.

All other terms and conditions remain the same.

End of Addendum #4

By: John O. Martin
Director of Procurement
71. Who has responsibility to develop the Construction Contract? Can the contract be reviewed prior to submitting this proposal? **UMA prepares the construction contract. Consultant prepares all technical specifications including Summary of Work. To view a sample of a current Chapter 30 project out to bid, please refer to UMA Amherst procurement website and view Project No. UMA 14-03, Project No. 13-000033.**

72. Could you please explain in more detail your expectations of the scope item: “Manage and coordinate the University’s activities during construction phase of assigned projects.” Is the consultant to provide daily detailed direction to and supervision of the activities of the Resident Engineers and Construction Inspectors? **UMA personnel will be under the direction and supervision of the UMA project manager. The intent of this scope item is for the consultant to be available to respond to RFI’s, daily site/construction issues that may arise, submittal review, attend project meetings and perform site visits.**

73. Could you please explain in more detail your expectations of the scope item: “Coordinate and manage project startup, fit out, and system commissioning.” Will a startup contractor be provided, or will the Resident Engineers and University personnel conduct startup activities, or is the consultant to subcontract a startup contractor? Is the consultant to provide daily detailed direction to and supervision of the startup, fit out and commissioning personnel? **The actual startup will be completed by either the installation contractor (General Contractor, GC) and/or the University Utilities Department. The University will be hiring a commissioning agent for this project. The Design Consultant will be responsible to coordinate with all parties involved in the startup.**

74. Please provide a system relaying one-line diagram to help clarify the scope of the relay coordination study, as well as the generator and existing feeder relays modification tasks. **The one line diagram will be provided to the selected Design Consultant.**

75. If a relaying one-line diagram is not available, we would appreciate a summary of the # of relays in the scope, their make and model, and where they are applied. There are four existing WMECO feeders that come into campus. **The 18G1 and 18G2 feeders that come into the Westside Substation/CHP, have GE F60 style protective relays. The 17K3 and 17K7 feeders that come into the Eastside Substation have GE 750 protective relays. These four feeders will be replaced by four feeders from the new Tilson Substation, and these four relays will have to be reconfigured. The relays at the new Tilson substation will also need to be configured, please estimate ten total.**

76. One of the RFP requirements is to “design and install a fiber optic system for remote metering, monitoring, control, and relaying for the system.” This statement would lead us to believe that the University is requesting SCADA work to be done. If this is the case, we request additional details of these requirements, particularly:

a. Is this work limited to the substation only? **The new fiber will be run between the CHP/Westside Substation, and the new Tilson Substation.**
b. Within the substation, will the communications cable be copper (i.e. Ethernet, Serial) or fiber? **The communications within the substation will transition over to copper Ethernet, CAT6.**

c. What protocol will the system be communicating with? DNP, SEL, IEC 61850? **We will need Ethernet communications to tie in the electric meters to our existing Square D Powerlogic system.**

d. Will there be a station computer in the substation? If so, what are the requirements for this computer? Will HMI programming be required? What custom screens and reports are needed and how many points will be monitored on the HMI? **No a station computer will not be necessary at the new Tilson substation.**

e. Is there already a central master station computer already established? If not, will one be required? For a new or existing master station, will HMI programming be required? What custom screens and reports are needed and how many points will be monitored on the HMI? **We will use our existing Powerlogic electric metering system to monitor the new Tilson Substation.**

f. Will any system redundancy be required? **Yes, as the RPF states, there are two transformers, two feeders to each substation, two isolated 14kv substations, etc.**

g. Who is responsible for purchasing routers and switches? **The General Contractor (GC) unless UMA decides to pre-purchase proprietary items.**

h. Are SCADA commissioning services required? **SCADA commissioning services will not be required.**

77. The RFP mentioned that the University has an electric system computer model to use as a basis for the studies and coordination work. In what software is the model based? When was it last updated, and how often is it updated? **We have a very recent load model done with SKM software. The model will be provided to the selected designer.**

78. Is an Arc Flash Study required for the new and existing equipment as a result of the new substation? Are Arc Flash Labels required for the new and existing equipment? **As stated in the RPF an Arc Flash Study is required.**

79. Has the University previously performed a System Stability Study for the generators in order to define the Load Shedding Scheme criteria? Or will the load shedding criteria need to be redefined as part of this project? **We have an existing Solar Load shed system on our Westside Substation, this will have to be modified to reflect the larger capacity of the new Tilson substation.**

80. Should our proposal include onsite soil resistivity testing for the ground grid design or will that be provided by others? **The University expects the design consultant to design the substation to all current codes. If a feature is required by code, then it must be designed accordingly. If a feature supersedes code, then the expectation is that the designer will make recommendation to the University accordingly.**

81. Given that the deadline to respond to questions was extended to 10/22, will the proposal deadline of 10/25 be extended so that we may prepare a proper response according to the information released in the pending addendum? **Per Addendum #3 the bid opening has**
been moved to November 1, 2013. No further questions will be responded to upon issuance of this addendum (Addendum 4).

82. Is there an existing site plan that we could review? See response to Question # 47. UMA will provide available campus and utility maps to the selected consultant. Please note that the RFP has requested that the selected consultant evaluate multiple paths from the new Tilson Substation to the East Substation.

83. Are there any drawings that we could review that would help us to evaluate in more detail the effort it will require to perform the engineering and design work, such as site plans, layouts, etc., relating to the proposed substation and or duct bank locations? See response to Question # 47. UMA will provide available campus and utility maps to the selected consultant.

84. The RFQ notes the transformers are to be rated 50 MVA. Is this a self-cooled rating or ratings with fans applied? These ratings are with fans and oil cooling.

85. Is there a preferred type of control building (e.g. frameless metal, framed metal, concrete block, etc.)? At the present time we are anticipating two modular switchgear buildings.

86. Are there any representative soil borings or a geotechnical report for the area in which the substation is to be installed? The University does have some geotechnical information. This information will be made available to the selected consultant. Additional geotechnical information, borings, etc. may be required for the design of the substation.

87. The design calls for two primary transformer circuit breakers, with tie breakers. This does not fully define the 115 kV general arrangement. Is the 115 kV substation a ring bus, a common bus with a tie breaker, or something else? Radial feeds to each transformer is not the most reliable option. WMECO is designing and constructing the primary arrangement for the transformer primaries.

88. Do the incoming lines require dedicated breakers? The incoming lines will require dedicated breakers.

89. Have any preliminary studies been performed to determine equipment ratings, such as transformer impedance, short-circuit breaker ratings, bus ampacity, etc.? As stated in the RFP these items are to be performed by the selected design team. No preliminary studies have been performed.

90. Does UMass want two 13.8 kV tie breakers given the fact that the two 13.8 kV buses will be in separate buildings? No, UMA anticipates one tie breaker between the two 13.8 kv switchgear modular buildings.
91. Will UMass provide a set of single line diagrams for the existing 13.8 kV system? We have to provide short-circuit analysis and relay settings for the entire 13.8 kV system and this information will be useful for determining scope and cost. **This information will be provided to the selected design consultant.**

92. Does Umass have any power flow data to determine appropriate capacitor bank sizes? **There is no power flow data available.**

93. Does Umass have any preference for equipment/relay manufacturers and types? **The selected design team is expected to follow UMass electrical standards. These can be found on Physical Plant web site:**

http://www.umass.edu/physicalplant/documents/UMA_UEM_Stds.pdf

94. Are there any size constraints for the 115 kV substation yard? **At this time the anticipated size of the substation will be 200 ft x 200 ft.**

95. What is the noise level requirement for the transformers? This will be important information needed to firm up quotations with the transformer manufacturers. **Minimal noise using best available technology, due to close proximity of residents. Shall meet State/local requirements.**

96. There appears to be a discrepancy between the last paragraph in Section II and the Scope in III.A. Section II states that WMECO will provide and install the 115 kV side equipment, but III.A. indicates that the two primary transformer circuit breakers are in the scope. **WMECO will provide and install 115kv side equipment, to include primary circuit breakers and tie breaker.**

End of questions – Addendum 4

By: John O. Martin

Director of Procurement