

ARCHITECT'S ADDENDUM

ADDENDUM NUMBER: 003

DATE: 11-01-2017

RE: Kane County KBC Circuit Clerk RTU Replacements

PREPARED BY: David Allen

Cordogan, Clark & Associates

CCA Project No.: 17382

To: Prospective Bidders

Subject: Addendum No. 003 to the Construction Documents for the Kane County KBC Circuit Clerk RTU Replacements.

This Addendum forms a part of the Construction Documents and modifies the original Construction Documents, dated October 23, 2017. Acknowledge receipt of this Addendum in space provided on the Bid Form. Failure to do so may subject Bidder to disqualification.

THE FOLLOWING ITEMS ARE TO BE INCLUDED IN THE PROPOSAL.

Clarifications To The Specifications:

1. Add Specification Section 230800 – Commissioning of HVAC in its entirety.

Clarifications To The Drawings:

1. Sheet 2.0: Add the installation of RTU-18 in the existing location of RTU-16. Connect to existing services as required for operation.
2. Sheet 3.0: Add the following to rooftop unit schedule; TRANE (EXISTING MFR), YCD180B4HAHA (EXISTING MODEL), RTU-16 (EXISTING TAG), RTU-18 (NEW TAG), TRANE YHD180G4RHA (MODEL), 15 TON 3-STAGE (TONNAGE), 5,250 (DESIGN AIRFLOW), 0.75 (DESIGN ESP), 80 (COOLING EDB), 67 (COOLING EWB), 55.5 (LAT DB), 54.9 (LAT WB), 138.8 (GROSS SENSIBLE CAPACITY), 175.1 (GROSS TOTAL CAPACITY), 95 (AMBIENT TEMP), 12 (EER @ AHRI), 15 (IEER RATING), 55 (HEATING EAT), 104 (HEATING LAT), 280 (OUTPUT CAPACITY MBH), 460/60/3 (VOLTAGE), 33 (MCA), 45 (MOP), 2598 (MAX UNIT OPERATING WEIGHT), & 4 (COMMENTS).

Request for Information:

1. For bonding purpose, what is the budgetary numbers for the scope of work proposed?
Response: Cordogan, Clark, and Associates, Inc will not release the architectural and engineering cost estimates.

Attachments: 230800 – Commissioning of HVAC

END OF ADDENDUM NO. 003

SECTION 230800 - COMMISSIONING OF HVAC

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes commissioning process requirements for HVAC&R systems, assemblies, and equipment.

1.3 DEFINITIONS

- A. Commissioning Plan: A document that outlines the organization, schedule, allocation of resources, and documentation requirements of the commissioning process.
- B. CxA: Commissioning Authority.
- C. HVAC&R: Heating, Ventilating, Air Conditioning, and Refrigeration.
- D. Systems, Subsystems, Equipment, and Components: Where these terms are used together or separately, they shall mean "as-built" systems, subsystems, equipment, and components.

1.4 INFORMATIONAL SUBMITTALS

- A. Certificates of readiness.
- B. Certificates of completion of installation, prestart, and startup activities.

1.5 CONTRACTOR'S RESPONSIBILITIES

- A. Perform commissioning tests at the direction of the CxA.
- B. Attend construction phase controls coordination meeting.
- C. Attend testing, adjusting, and balancing review and coordination meeting.

- D. Participate in HVAC&R systems, assemblies, equipment, and component maintenance orientation and inspection as directed by the CxA.
- E. Provide information requested by the CxA for final commissioning documentation.
- F. Provide measuring instruments and logging devices to record test data, and provide data acquisition equipment to record data for the complete range of testing for the required test period.

1.6 CxA'S RESPONSIBILITIES

- A. Provide Project-specific construction checklists and commissioning process test procedures for actual HVAC&R systems, assemblies, equipment, and components to be furnished and installed as part of the construction contract.
- B. Direct commissioning testing.
- C. Verify testing, adjusting, and balancing of Work are complete.
- D. Provide test data, inspection reports, and certificates in Systems Manual.

1.7 COMMISSIONING DOCUMENTATION

- A. Provide the following information to the CxA for inclusion in the commissioning plan:
 - 1. Plan for delivery and review of submittals, systems manuals, and other documents and reports.
 - 2. Identification of installed systems, assemblies, equipment, and components including design changes that occurred during the construction phase.
 - 3. Process and schedule for completing construction checklists and manufacturer's prestart and startup checklists for HVAC&R systems, assemblies, equipment, and components to be verified and tested.
 - 4. Certificate of completion certifying that installation, prestart checks, and startup procedures have been completed.
 - 5. Certificate of readiness certifying that HVAC&R systems, subsystems, equipment, and associated controls are ready for testing.
 - 6. Test and inspection reports and certificates.
 - 7. Corrective action documents.
 - 8. Verification of testing, adjusting, and balancing reports.

PART 2 - EXECUTION

2.1 TESTING PREPARATION

- A. Certify that HVAC&R systems, subsystems, and equipment have been installed, calibrated, and started and are operating according to the Contract Documents.

- B. Certify that HVAC&R instrumentation and control systems have been completed and calibrated, that they are operating according to the Contract Documents, and that pretest set points have been recorded.
- C. Certify that testing, adjusting, and balancing procedures have been completed and that testing, adjusting, and balancing reports have been submitted, discrepancies corrected, and corrective work approved.
- D. Set systems, subsystems, and equipment into operating mode to be tested (e.g., normal shutdown, normal auto position, normal manual position, unoccupied cycle, emergency power, and alarm conditions).
- E. Inspect and verify the position of each device and interlock identified on checklists.
- F. Check safety cutouts, alarms, and interlocks with smoke control and life-safety systems during each mode of operation.
- G. Testing Instrumentation: Install measuring instruments and logging devices to record test data as directed by the CxA.

2.2 Testing AND BALANCING VERIFICATION

- A. Prior to performance of testing and balancing Work, provide copies of reports, sample forms, checklists, and certificates to the CxA.
- B. Notify the CxA at least 10 days in advance of testing and balancing Work, and provide access for the CxA to witness testing and balancing Work.
- C. Provide technicians, instrumentation, and tools to verify testing and balancing of HVAC&R systems at the direction of the CxA.
 1. The CxA will notify testing and balancing Subcontractor 10 days in advance of the date of field verification. Notice will not include data points to be verified.
 2. The testing and balancing Subcontractor shall use the same instruments (by model and serial number) that were used when original data were collected.
 3. Remedy the deficiency and notify the CxA so verification of failed portions can be performed.

2.3 GENERAL TESTING REQUIREMENTS

- A. Provide technicians, instrumentation, and tools to perform commissioning test at the direction of the CxA.
- B. Scope of HVAC&R testing shall include entire HVAC&R installation, from central equipment for heat generation and refrigeration through distribution systems to each conditioned space. Testing shall include measuring capacities and effectiveness of operational and control functions.

- C. Test all operating modes, interlocks, control responses, and responses to abnormal or emergency conditions, and verify proper response of building automation system controllers and sensors.
- D. The CxA along with the HVAC&R Contractor, testing and balancing Subcontractor, and HVAC&R Instrumentation and Control Subcontractor shall prepare detailed testing plans, procedures, and checklists for HVAC&R systems, subsystems, and equipment.
- E. Tests will be performed using design conditions whenever possible.
- F. The CxA may direct that set points be altered when simulating conditions is not practical.
- G. If tests cannot be completed because of a deficiency outside the scope of the HVAC&R system, document the deficiency and report it to the Owner. After deficiencies are resolved, reschedule tests.
- H. If the testing plan indicates specific seasonal testing, complete appropriate initial performance tests and documentation and schedule seasonal tests.

2.4 HVAC&R systems, subsystems, and equipment Testing Procedures

- A. HVAC&R Instrumentation and Control System Testing: Field testing plans and testing requirements are specified in Section 230900 "Instrumentation and Control for HVAC" and Section 230993 "Sequence and Operations for HVAC Controls." Assist the CxA with preparation of testing plans.
- B. Energy Supply System Testing: Provide technicians, instrumentation, tools, and equipment to test performance of gas and hot-water systems and equipment at the direction of the CxA. The CxA shall determine the sequence of testing and testing procedures for each equipment item and pipe section to be tested.
- C. Refrigeration System Testing: Provide technicians, instrumentation, tools, and equipment to test performance of chillers, cooling towers, refrigerant compressors and condensers, heat pumps, and other refrigeration systems. The CxA shall determine the sequence of testing and testing procedures for each equipment item and pipe section to be tested.
- D. HVAC&R Distribution System Testing: Provide technicians, instrumentation, tools, and equipment to test performance of air, steam, and hydronic distribution systems; special exhaust; and other distribution systems, including HVAC&R terminal equipment and unitary equipment.

END OF SECTION 230800