ADDENDUM No. 01

Date: August 22, 2018

To: All Bidders

Project: Katy Church of Christ, Fellowship Hall Renovations & Additions
Katy Church of Christ, Education Building

This Addendum modifies previously issued Drawings and Specifications.

GENERAL

1.01 See attached PDF document titled "Katy Church of Christ Bidding RFI's (2018-08-22)" for answers to RFI questions 001 – 014.

SPECIFICATIONS

1.02 Section 237300 (ION-AIR HANDLING UNITS) - Section 237300 has been added to the specifications for this project.

DRAWINGS

1.03 Fellowship Hall Additions and Renovations - Sheet A0.01 - General Information and Code Analysis – Updated Index of Drawings.

1.04 Fellowship Hall Additions and Renovations - Sheet A0.02 – Egress Plan and Partition Types – Partition types added and revised.

1.05 Fellowship Hall Additions and Renovations - Sheet A1.01 – Demolition Site Plan – Instruction to locate and remove existing 6" PVC underground storm added to plan.

1.06 Fellowship Hall Additions and Renovations - Sheet A1.03 – Site Details – Mock-up wall details added to sheet.

1.07 Fellowship Hall Additions and Renovations - Sheet A2.01 – Demolition Floor Plan – Demolition scope revised. Partial demolition of mechanical mezzanine removed from scope of work. Removal of exterior wall at area of kitchen/storage addition revised.

DRAWINGS CONT.

1.08 Fellowship Hall Additions and Renovations - Sheet A2.02 – Reference Floor Plan – Location of UL-U334 fire rated assembly revised. Detail keys added and/or revised for clarity.

1.09 Fellowship Hall Additions and Renovations - Sheet A2.03 – Dimension Plan – Entire sheet has been revised to correct dimensions.

1.10 Fellowship Hall Additions and Renovations - Sheet A2.04 – Reflected Ceiling Plan – Reference keys added to new details, ceiling heights revised, and finish materials corrected.

1.11 Fellowship Hall Additions and Renovations - Sheet A2.05 - Roof Plan – Building section key added.

1.12 Fellowship Hall Additions and Renovations - Sheet A2.06 – Enlarged Floor Plans – Dimensions corrected, partition at Chapel stage revised, elevation key added.

1.13 Fellowship Hall Additions and Renovations - Sheet A3.01 – Exterior Elevations – Plate heights revised, wall sections keys added.

1.14 Fellowship Hall Additions and Renovations - Sheet A4.01 – Building Sections – Building section added, plate height revised, wall section key added.

1.15 Fellowship Hall Additions and Renovations - Sheet A4.02 – Wall Sections – Entire sheet has been revised to add wall sections, correct detail references and complete annotations.

1.16 Fellowship Hall Additions and Renovations - Sheet A5.01 – Details - Entire sheet has been revised to add details, correct detail references and complete annotations.

1.17 Fellowship Hall Additions and Renovations - Sheet A5.02 – Details - Entire sheet has been revised to add details, correct detail references and complete annotations.

1.18 Fellowship Hall Additions and Renovations – Sheet A6.01 – Interior Elevations – Interior elevation at Chapel stage added. Grommet added to desk in Security Office.

1.19 Fellowship Hall Additions and Renovations – Sheet A7.01 – Door and Window Schedule – Window types added and revised, frame types revised, and door/frame schedule revised.

1.20 Fellowship Hall Additions and Renovations – Sheet S2.01 – Foundation Plan – Dimensions revised.

1.21 Fellowship Hall Additions and Renovations – Sheet S3.01 – Second Floor Framing Plan – Glulam beam detail at main building entry revised.

DRAWINGS CONT.

1.22 Fellowship Hall Additions and Renovations – Sheet S3.02 – Shear Wall Plan – Location of shear walls revised.

1.23 Fellowship Hall Additions and Renovations – Sheet S4.01 – Roof Framing Plan – Roof framing plan revised at Chapel addition.

1.24 Fellowship Hall Additions and Renovations – Sheet S5.01 – Foundation Details – Elevator pit detail revised.

1.25 Fellowship Hall Additions and Renovations – Sheet S5.02 – Foundation Details – Existing slab to new turndown detail revised.

1.26 Fellowship Hall Additions and Renovations – Sheet M2.00 – Mechanical Demolition Plan – Existing mechanical ductwork layout revised.

1.27 Fellowship Hall Additions and Renovations – Sheet M2.01 – Mechanical Floor Plan – Fire dampers in Fellowship hall removed. Existing mechanical ductwork layout revised.

1.28 Fellowship Hall Additions and Renovations – Sheet E1.01 – Electrical Site Plan – Keyed notes corrected.

1.29 Fellowship Hall Additions and Renovations – Sheet E2.01 – 1st Floor Lighting Plan Fellowship – Light fixtures in hallway revised. Light fixture type added at Chapel stage. Keyed note added to plan.

1.30 Fellowship Hall Additions and Renovations – Sheet E2.02 – 1st Floor Power Plan – Electrical outlet added in two locations.

1.31 Fellowship Hall Additions and Renovations – Sheet E5.00 – Schedules – Light fixture type “V” added to schedule. Light fixture type “T” revised.

1.32 Fellowship Hall Additions and Renovations – Sheet P0.00 – Plumbing Symbols and Abbreviations – Fire sprinkler notes removed from sheet.

1.33 Education Building – Sheet A0.01 - General Information and Code Analysis – Updated Index of Drawings.

1.34 Education Building – Sheet A2.01 – Demolition Floor Plan – Demolition scope revised, notes added for clarity.

1.35 Education Building – Sheet A2.02 – Reference Floor Plan – Detail keys and dimensions revised. Instruction to protect building elements scheduled to remain added to sheet.

DRAWINGS CONT.

1.36 Education Building – Sheet A4.01 – Wall Sections & Details - Entire sheet has been revised to add details, correct detail references and complete annotations.

1.37 Education Building – Sheet A8.01 – Schedules – Room finish schedule and finish legend revised. Door/frame schedule revised. Hardware group added. Frame types revised.

1.38 Education Building – Sheet S2.00 – Foundation Plan – Dimensions revised.

1.39 Education Building – Sheet S3.00 – Second Floor Framing Plan – Dimensions revised.

1.40 Education Building – Sheet S4.00 – Roof Framing Plan – Dimensions revised.

1.41 Education Building – Sheet S5.01 – Foundation Details – Elevator pit detail revised.

1.42 Education Building – Sheet S5.02 – Foundation Details – Existing slab to new turndown detail revised.

1.43 Education Building – Sheet S6.01 – Framing Details – Elevator framing details revised.

1.44 Education Building – Sheet S6.02 – Framing Details – Elevator framing details revised.

1.45 Education Building – Sheet M2.00 – Mechanical Demolition Plan – 1st Floor – Keyed notes revised.

1.46 Education Building – Sheet M2.01 – Mechanical Demolition Plan – 2nd Floor – Keyed notes revised.

1.47 Education Building – Sheet E2.00 – 1st Floor Electrical Demo Educational – Electrical demolition keyed notes revised.

1.48 Education Building – Sheet E2.02 – 1st Floor Lighting/Power Plan Educational – Power keyed notes revised.

The above revisions are dated August 22, 2018. Please incorporate them into your proposal documents.

Sincerely,
Slattery Tackett Architects, LLP

Troy Grant

Troy Grant
Associate Architect

See Attachments dated 2018-08-22

Katy Church of Christ Bidding RFI's (2018-08-22)

		Date	Notes
001	Are there any pertinent HVAC Mechanical Specifications for the project available for our use?	8/21/2018	See spec book.
002	Is Trane the only acceptable manufacture of Air Conditioning Equipment allowable?	8/21/2018	See spec book.
003	What is the required routing for the refrigerant piping from the AC unit condensers to the air handling units?	8/21/2018	Resolved in walk thru
004	How will the routing of the thermostat wire be handled in the exposed areas in the Fellowship Hall and the Chapel.	8/21/2018	Route the low voltage in fur downs and walls to nearest accessible ceilings. Where required patch existing walls
005	Is this a warrantied Roof on the complex? If yes will the roofing Contractor be furnishing the roof curbs for the Outside Air Intakes and be installing them or are we to provide the curbs for them to install?	8/21/2018	See specifications for roof warranty. Prefer all roof curbs to be installed by roofing contractor.
006	What are the required duct size for the Fire dampers to Return air Grilles mechanical Key Notes 9 and 10 to AHU-1, 2, 3 shown on drawing M2.01?	8/21/2018	No longer required.
007	Can you provide Specifications or a submittal for the Kitchen Range hood being provided showing duct sizing required for venting?	8/21/2018	7" round duct per manufacturer specification.
008	will the Condensate from the AHU's be run to the interior of the building to local drains or outside of the building? If yes to the exterior will French drains be required to disperse the water?	8/21/2018	Resolved in walk thru
009	Please provide a partition type detail on sheet A0.02 for the 2x8 stud framing Chapel addition exterior wall.	8/23/2018	See Wall Sections.
010	Will the City of Katy "grandfather" accept as is the existing mechanical equipment, installations and materials used on this project?	8/23/2018	We are going into the city with existing equipment reused along with new equipment. We will not have a direction on this until the drawings are reviewed.
011	Will and equipment pad(s) be pour in place for the new condensing units? MEP subcontractor can provid the layout with manufacturers required clearance if needded.	8/23/2018	See condensing unit detail for concrete pad requirements. Provide either poured in place or premanufactured pads. Spacing should be by finalized equipment manufacturer.
012	Will motorized dampers be required for the outside air being furnished to each air handling unit? (this is a City of Houston requirement)	8/23/2018	Manual dampers are fine.
013	Please provide BAS controls requirement and/or company.	8/23/2018	No BAS system. Only thermostat control.
014	The exisitng Fellowship building roof vents are scheduled for demo to allow for the building connection. Please specify new venting requirements. Recommend ridge vent.	8/23/2018	Ridge vent is specified.

SECTION 23 73 00

AIR HANDLING UNITS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. The requirements of the General Conditions, Supplementary Conditions, Division 1, Division 20, and Drawings apply to all Work herein.

B. Requirements of the following Division 20-28 Sections apply to this section:
   1. Scope of Work - Section 23 05 01
   2. Start-up, Testing, Adjusting, and Balancing - Section 23 05 93

1.02 SCOPE

A. General: Furnish and install factory built air handling units as specified, scheduled, and shown on the Drawings.

B. Types: Air handling units shall be of the following basic types and are scheduled on the Drawings with these abbreviated designations:
   1. "SZBT" - represents a single zone blow-through unit.
   2. "BTMZ" - represents a multizone blow-through unit.
   3. "HDT or VDT" - represents horizontal or vertical draw-through units.
   4. “HVU” - represents a heating and ventilating unit.
   5. "RTU" - represents a roof mounted externally protected air handling unit.
   6. "FCU" - represents fan and coil units. All fan and coil units are horizontal type unless they appear in the schedule as "VFCU", in which case a vertical unit is required.

C. Related Sections: Other Division 20-28 Sections contain requirements related to the work of this Section. These may include, but not be limited to, the following sections:
   1. Electronic Variable Speed Drives - Section 20 05 14
   2. Motors and Controllers - Section 20 05 13
   3. Noise and Vibration Isolation - Section 20 05 48
   4. Air Filtering - Section 23 41 10
   5. Start-up, Testing, Adjusting, and Balancing - Section 23 05 93
   6. Fans - Section 23 34 10

1.03 QUALITY ASSURANCE

A. Manufacturers: If they comply with these specifications and requirements, products of the following manufacturers will be acceptable:
   1. Fan Coil Units:
      a. First Company
      b. Carrier
      c. Trane
      d. Temtrol
      e. McQuay
      f. International
      g. RECO
      h. York/JCI
      i. Enviro-Tee

PART 2 - PRODUCTS

2.01 EQUIPMENT FEATURES

A. General: Each unit shall be equipped complete with casing, centrifugal fans, coils, fan motors and drives, insulation, drain pans, filters and shall comply with the minimum requirements indicated herein.

B. SHEAVES AND BELTS

1. Variable pitch motor sheaves shall be furnished from the factory on all belt driven equipment. After the proper speed has been determined and all balancing is complete and accepted, variable sheaves shall be replaced with fixed sheaves.
2. The motor sheaves shall be Browning Type LVP or MVP cast iron adjustable type with double locking features. Sheaves shall be adjustable as close to 10% above and below the rated fan selection rpm as possible. If it complies with these specifications, sheaves shall be manufactured by Browning, Woods, Dodge or an approved equal.
3. Fan sheaves shall be of the non-adjustable type with removable machine bushings and shall be machined on all surfaces. Sheaves shall be cast iron. If it complies with these specifications, sheaves shall be manufactured by Browning, Woods, Dodge or an approved equal.
4. Fan drives shall be selected with a minimum belt horsepower. Belt ratings shall be in accordance with "Engineering Standards for Multiple V-Belt Drives".
5. Belts shall be standard V-grooved type suitable for the service intended. If it complies with these specifications, belts shall be manufactured by Gates, Goodyear, Browning or an approved equal.

C. UNIT CASINGS
1. General: Unit casing shall be double-wall with solid metal liner. Casing shall be fabricated of 18 gauge exterior and 22 gauge interior, heavy-gauge steel reinforced and braced with steel angles. Sectionalized casing shall consist of separate fan and coil sections. Metal parts of casing and all accessories, with exception of coil, shall be chemically cleaned, phosphatized and given protective enamel finish or shall be constructed of mill galvanized steel. All joints between casing sections shall be gasketed effectively to create an airtight construction. Provide unit with minimum 6" base rails continuous through unit perimeter with structural cross supports at a minimum of 36" o.c. throughout the length of the air handling unit.
2. Coil Sections: Coil sections shall completely enclose all return bends, coil headers, and coil connections. Units with multiple coils shall have a minimum of 12" between coil faces for coils up to 48" wide, and minimum 24" between coil faces for coils over 48" wide for access, inspection, and cleaning.
3. Drain Pans: The drain pan shall be 18 gauge 304 stainless steel, shall fully extend under the coil section to at least 12” beyond the coil, and shall be of double wall construction with 5/8" foam insulation and a vapor barrier between the pans. Inner pan shall have a factory applied corrosion resistant anti-microbial coating. Drain pan shall be sloped in all planes to the drain connection to prevent accumulation of standing water.
4. Access Doors: Access doors shall be provided such that each fan and each side of each coil are accessible for inspection and cleaning. Units with ducted return air require access doors to the upstream side of the inlet coil for draw through units and inlet fan for blow through units. Doors shall be insulated to the same specifications as the unit casing. The smallest dimension allowable on any door shall be 18" clear opening, and each door shall be at least 3/4 square foot in area. Refer to the Drawings for additional access door requirements. Access doors shall be 304 stainless steel hinged and provided with Ventlok Style 100 (smallest dimension 18" or less) or Style 140.
5. Insulation: Plenum, fan, and coil sections shall have minimum R-13 foam insulation.
6. Plenum Sections: Provide inlet and discharge plenum sections where shown. Plenum sections shall be insulated and constructed as for other sections.
7. Internal Isolation: Units shall be provided with internal spring isolators. Isolator minimum deflection shall be 2.0" for motors up to 15 HP, and 3.0" for motors 20 HP and larger.
8. Air handling unit shall be tested and documented to leak no more than 1% unit design flow at 8" positive. Engineer may select one (1) unit at their discretion, to test in the field.
9. Provide all access sections and fan sections with a metal flooring suitable for walking.

D. FANS

1. Centrifugal fans shall be double width, double inlet, multi-blade type with either forward-curved, airfoil or backward incline blades. All fan blades shall be of aluminum construction.
2. Bearings shall be grease lubricated ball bearings selected for an average life of 200,000 hours operating at design conditions. Internally-mounted ball bearings shall be furnished with extended grease lines terminated with Zerk fitting. Permanently lubricated bearings are not acceptable.
3. Fan shafts shall be of one-piece design either solid or hollow tube with swedge solid ends. Two-piece shafts will not be acceptable. Fans shall not be cantilevered. Fans shafts shall not pass through their first critical speed as fan comes up to rated rpm.

E. MOTORS: Fan Motors shall be open dripproof, 3-phase, 1750 rpm type. Refer to Section 20 05 13 for additional motor requirements.

F. VARIABLE FREQUENCY DRIVES: Variable frequency drives shall comply with the requirements of Section 20 05 14.

G. FILTERS:
1. Provisions for installing unit-mounted filters shall be furnished by the air handling unit manufacturer. Access to filters shall be provided at each end of the filter section to allow for ducted return air applications. Filter access doors shall be hinged with latches as described herein for “access doors”.
2. Refer to the filter schedule on the Drawings for the type of filters required and to Section 23 41 10 for actual filter media specifications. Refer to AHU schedule for location of filters.

H. NOISE: Units shall be quiet in operation and, in combination with construction shown on the architectural drawings, shall not cause noise levels in the space greater than those shown in Section 23 05 02, Design Criteria.

I. REFRIGERANT COILS
1. DX cooling coils shall have copper tubes with aluminum fins, mechanically bonded to the tubes. Coils for use with dual condensing units shall have two full face refrigerant circuits. A factory installed thermal expansion valve shall be provided for each circuit.
2. Coils shall be factory pressure tested under water at 225 psig with air.
3. Coil face velocities shall not exceed 500 fpm unless otherwise noted on the Drawings.

J. ELECTRIC HEATING COILS
1. Heating Elements: Heating elements shall be finned tubular open-wire type, high grade 80/20 nickel chromium with ceramic insulators and supported in a galvanized steel frame. Element wires shall not glow when operating at rated capacity. Heaters over 47 inches in any dimension shall have protective screens on the inlet side. All stages of all heater coils shall extend across the entire unit cross section regardless of the number of separate coils in the cross-section.
2. Protection: Heaters shall have disc type automatic reset thermal cut-outs for primary protection and fusible links for secondary protection as required to meet UL and NEC requirements. Both devices shall be serviceable through terminal box without removing heating element from the unit.
3. Control Panel: Provide an integral control panel with flush mounted access door on the unit side. All unit controls and electrical connections shall be installed in an internally insulated factory wired control panel with a hinged and gasketed U.L. listed, dust tight cover. Controls shall include, but not be limited to, fusing for all stages, mercury step control contactors, primary and secondary fused control power transformer and differential air pressure switch. All components shall be factory wired such that only field connections for electrical power and external electrical controls will be required. An accurate wiring diagram shall be permanently attached to the inside of the Control Panel Door.
4. Disconnect Switches: Disconnect switches shall be furnished and installed under Division 26.

5. Codes and Standards: Heaters shall be UL listed and labeled for zero clearance installation and shall meet all applicable NEC requirements. Heater coils to be given 2000 volt dielectric test.
6. Capacity Control: Heater capacity shall be a minimum of 4 stages.

2.02 FAN AND COIL UNITS

A. Furnish and install fan coil units of the size and capacity scheduled on the Drawings. All units shall be UL approved and rated in accordance with ARI Industry Standard 441.

B. Unit casing shall be fabricated of 18 gauge galvanized steel. The fan and motor assembly shall be easily removable for service. Units shall have 1" supply and return duct collars.

C. Cabinet shall be horizontal or vertical enclosed type and shall have 18 gauge steel panels acoustically and thermally insulated with 1/2" faced glass fiber insulation meeting NFPA-90A. Exposed panels shall be bonderized and finished with a baked primer and a finish coat of enamel.

D. Coils shall comply with the requirements for air handling unit coils.

E. Electrical Connections: Provide fan coil units designed for single electrical power feed and complying with all applicable NEC and UL requirements and all other applicable Codes and Standards. Units shall have a factory installed junction box with the fan motor disconnect and electric heating coil disconnect wired to the junction box. Provide unit-mounted fused disconnect switches with factory wiring from the load side of the disconnect switch to the fan motor and electric heating coil. The only field wiring shall be to the line side of the junction box. Refer to Division 26 for fuse and disconnect specifications. Fuses shall be sized for a nominal 125% of full load amperes of the load served.

F. Fans shall be of the centrifugal, forward-curved, direct-drivetype. Fan wheels shall be statically and dynamically balanced. Fan wheels shall be statically and dynamically balanced. Fan wheels and housings shall be galvanized steel.

G. Unit shall be furnished with a drain pan fabricated of 18 gauge galvanized steel lined on the interior surfaces with 1/2" fire retardant closed cell foam. A 7/8" OD sweat fitting shall be provided for primary drain connection. A 1/2" OD overflow secondary drain connection shall be provided. Pans shall extend under all wet areas including coils and valves. Refer to Section 23 05 10 for auxiliary drain pan construction specifications.

H. Filters for all units shall be 1" throw-away glass fiber cartridge type.

PART 3 - EXECUTION

3.01 SUBMITTALS

A. Submittals shall include, but not be limited to, the following information:
1. Catalog cut sheets for all air handling units, fan and coil units and condensing units, clearly marked to show unit size, capacity, coil connections, motor location, construction, and insulation.
2. Data and catalog cut sheets for insulation, adhesives, anti-microbial mastic, etc.
3. Fan curves with selection point clearly marked.
4. Specific sound power levels radiated and radiated sound power levels at design operating conditions for each unit. Plot these on an NC criteria curve. Unit discharge noise levels at design operating condition.
5. Motor data required in Section 20 05 13.
6. Additional information as required by Section 20 05 03, Basic Division 20-28 Requirements.

3.02 INSTALLATION

A. Air handling units shall be installed where shown on the Drawings.

B. Refer to Section 20 05 05 for equipment pad requirements and to Section 20 05 48 for vibration isolation.

C. Elevate units sufficiently to allow proper installation of the condensate drain P-trap detail shown on the Drawings.

END OF SECTION