



INVITATION FOR BIDS (IFB) F25-7034-39A

Provide and Deliver 450 Ton Chiller Equipment for Kansas City Area Transportation Authority

Date: July 28, 2025

Contact: Kristen Emmendorfer

Telephone: (816) 346-0360

Email: kristene@kcata.org

KANSAS CITY AREA TRANSPORTATION AUTHORITY

INVITATION FOR BIDS (IFB) F25-7034-39A

Provide and Deliver 450 Ton Chiller Equipment for Kansas City Area Transportation Authority

The Kansas City Area Transportation Authority (KCATA) is a bi-state agency offering mass transit service within the greater Kansas City metropolitan area. This Invitation for Bids (IFB) is for Chiller Equipment. The Contractor/Supplier shall be responsible for all transportation costs, tools, equipment, vehicle, provision of driver and offload of equipment at KCATA, supervision of the offload process, attending an inspection of the equipment delivery and review at KCATA, and providing prior to delivery a current insurance certificate per this IFB and containing required language and coverage as described in these terms and conditions.

The scope includes delivery to KCATA of a purchased 450 Ton Chiller. A sample contract of the AIA A152 document to be executed by the KCATA and awarded Contractor upon bid analysis and acceptance is included for review. This solicitation is funded by Federal Transportation Administration (FTA) grants and as such, NO exceptions or negotiations of the terms and conditions contained herein are allowed nor alteration or negotiation of the bid price submitted.

- KCATA staff responsible for assigning potential DBE goals has determined that this solicitation has a **zero percent goal**.
- This is an equipment purchase only. No bid bond is required. See contract terms for further bond(s) information and requirements.
- *KCATA is a tax-exempt organization and will provide to the awarded Contractor/Supplier all tax exemption documents.*

Questions and Requests for Clarification. Questions (technical, contractual, or administrative) must be directed via email to Kristen Emmendorfer at Kristene@kcata.org with copy to mfelts@kcata.org and dadams@kcata.org. Questions and requests for clarifications will be received **until 12:00 Noon Kansas City, Missouri time on July 30, 2025**. KCATA's response to these submissions will be in the form of an Addendum. The Addendum will be posted at www.kcata.org for view.

Submittal Instructions. Bid submittals must be received with all required documents/attachments as stated in the IFB **no later than 1:00 p.m. Central Time on August 1, 2025. For bidders who want to attend, a public opening shall be held in the Breen Building Large Conference Room on August 1, 2025, at approximately 1:05 p.m.**

Kansas City Area Transportation Authority – Procurement Department
Attention – Kristen Emmendorfer
1200 East 18th Street
Kansas City, Missouri 64108
(816) 346-0360

The outside of the sealed bid packet shall be labeled “IFB F25-7034-39A Provide and Deliver 450 Ton Chiller Equipment for Kansas City Area Transportation Authority”. See Section 3.A for additional instructions.

Bids may be hand delivered, sent via overnight carrier, or mailed via USPS. **All hand deliveries must be made through KCATA's Shipping/Receiving Department via secured guard entrance at 1350 East 17th Street, Kansas City, MO, 64108.**

Bids received after the time specified shall not be considered for award. Bids received via electronic mail (e-mail) shall not be considered. Bids not meeting specified delivery and method of submittal will not be opened nor considered responsive.

Wherever a brand name is identified, this is for the purpose of a basis of design, not an endorsement of or inference that this is the product or manufactured good to be procured. KCATA accepts requests for substitutions or approved equals as described within this IFB for this federal grant funded procurement.

Submission of a bid shall constitute a firm offer to KCATA for 90 days from the date of closing. This IFB does not commit the KCATA to award a contract or to pay any cost incurred in preparation of a submittal. Bidders shall read and understand the requirements of this Invitation for Bids covered in the sections listed under the Table of Contents of this document. The KCATA reserves the right to accept or reject any or all bids received, to modify this request, or cancel in part or in its entirety the IFB if it is the best interest of the KCATA.

All contractual agreements valued at \$250,000 or more are subject to final approval by the Kansas City Area Transportation Authority's Board of Commissioners. An official Notice to Proceed with an equipment order shall be provided to Awardee. KCATA assumes no risk or provides no compensation for the preparation of this bid.

Restricted Communications and Conflict of Interest. No person or entity submitting a proposal in response to this IFB nor any officer, employee, agent, representative, relative or Contractor representing such a person (or entity) may contact through any means, or engage in any discussion concerning the award of this contract with any member of KCATA's Board of Commissioners or any employee of KCATA (excluding Procurement staff) during the period beginning on the date of bid issue and ending on the date of the selection of a Contractor. This kind of contact may be grounds for disqualification of the Bidder.

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NO BID REPLY FORM

KANSAS CITY AREA TRANSPORTATION AUTHORITY (KCATA)

INVITATION FOR BIDS (IFB) F25-7034-39A

Provide and Deliver 450 Ton Chiller Equipment for Kansas City Area Transportation Authority

If your company determines that it will not pursue this IFB, please send an email to Kristene@kcata.org including this completed document.

This information will not preclude receipt of future invitations unless you request removal from the Bidders' List by indicating below.

Unfortunately, we must offer a "No Bid" at this time because:

____ 1. We do not wish to participate in the bid process.

____ 2. We do not wish to propose under the terms and conditions of the Invitation for Bid document. Our objections are:

____ 3. We do not feel we can be competitive.

____ 4. We do not provide the services with which Bids are requested.

____ 5. Other:

____ We wish to remain on the Bidders' list for these services.

____ We wish to be removed from the Bidders' list for these services.

COMPANY OR SUPPLIER NAME

SIGNATURE

SECTION 1
BID SCHEDULE

IFB Advertised and IssuedJuly 28, 2025

Questions, Comments and Requests for Clarifications Due to KCATAJuly 30, 2025
12 Noon Kansas City, MO time zone

KCATA’s Response to Questions, Comments and Requests for ClarificationJuly 31, 2025

IFB Closing August 1, 2025
1:00 p.m.

Contract Award/Notice to Proceed August of 2025

This project will be presented to KCATA’s Finance Committee for approval to advance to Board of Commissioners and both of these meetings occur in the month of August.

All times are Central Time

SECTION 2
TECHNICAL SPECIFICATIONS/SCOPE OF WORK

A. Purpose and Background Information.

1. The Kansas City Area Transportation Authority (KCATA, Authority) is the regional transit authority for the Kansas City metropolitan area, operating buses, MAX bus rapid transit, and paratransit services throughout the region; providing approximately 15 million passenger trips annually; managing transit services in Johnson County, Kansas and in the City of Independence and coordinating transit activities throughout the region.
2. The KCATA is seeking qualified firms to provide and deliver to KCATA's Central Complex location at 1350 East 17th Street in Kansas City, Missouri, a 450 Ton Chiller to be used for Building One.

B. Term. The term of this agreement shall be for a period of one year from date of contract award.

C. Technical Specifications. For this invitation for bids, please see the technical specifications provided by Custom Engineering contained herein.

D. Inspection and Acceptance.

KCATA's Facilities and Project Management Teams will be responsible for acceptance of the equipment. Within ten (10) calendar days of receipt of order, the contractor shall understand and agree that all supplies/products and/or services which do not comply with the specifications and/or requirements, or which are otherwise unacceptable or defective may be rejected. KCATA shall have the right to return any such rejected shipment at the contractor's expense for full credit or replacement and to specify a reasonable date (i.e., within five calendar days) by which replacements must be received.

E. Vendor Qualifications. The successful contractor shall have at a minimum the following qualifications:

- Licensed to do business in the state of Kansas and in the state of Missouri.
- Be currently registered as a vendor with KCATA. See Section 3.L for additional information.

F. Delivery / Liquidated Damages.

1. KCATA anticipates delivery **no later than 184 calendar days** after contract execution and Contractor's Notice to Proceed.
2. For the contract awarded, liquidated damages shall be assessed per calendar day for each day that the Equipment is not delivered beyond the anticipated completion date.
 - \$ 500 per day for the first 30 days
 - \$2,500 per day for days 31 and beyond
3. Liquidated damages specified above will be assessed per calendar day from the scheduled completion date until the Equipment is accepted by KCATA.
4. Contractor has no right to damages for any causes of delay by the KCATA. The KCATA's operation requirements are paramount and shall take precedence.
5. A request for adjustment of time shall be forwarded in writing to KCATA's Project Manager as soon as Contractor is aware of circumstances beyond the Contractor's control. Requests shall include a statement of cause and expected time delay. The Project Manager may from time-to-time award extensions to the

contract time justified by delay caused by either the Contractor or KCATA, provide adequate evidence is presented to enable the Project Manager to determine with exactness the extent and duration of delay for each item involved. Time may only be adjusted by Change Order or Contract Amendment.

6. KCATA will suffer financial loss if the Equipment is not delivered and accepted on the date set forth in the contract documents. The Contractor and/or the Contractor's Surety shall be liable for and shall pay KCATA the sums previously identified for each day of delay until the Equipment is accepted. The KCATA is authorized to withhold the sum as indicated above that has been assessed as liquidated damages from monies due the Contractor.

*The project/IFB number for the REBID
is F25-7034-39A*

**PROJECT
MANUAL**

**Kansas City Area Transportation
Authority (KCATA)
KCATA Chiller Replacement - F25-
5001-39A
Kansas City, Missouri**

Prepared by
Custom Engineering, Inc.

1350 E 17th Street
Kansas City Missouri 64108
Project Number A25006

SECTION 000101 - PROJECT TITLE PAGE

PART 1 - GENERAL

1.1 PROJECT MANUAL

A. VOLUME 1.

1. Chiller Replacement.
2. Long Lead Equipment.
3. Kansas City ATA.
4. Kansas City, MO.
5. Owner Project No. F25-5001-39A
6. Architect Project No. A25006.
7. Custom Engineering, Inc.
8. 12760 E US 40 Hwy.
9. Independence, MO 64055.
10. Phone: (816) 350-1473.
11. Website: www.customengr.com.
12. Issued: April 21, 2025.
13. Copyright 2025 Custom Engineering, Inc..

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 000101

DOCUMENT 002113 - INSTRUCTIONS TO BIDDERS

PART 1 - GENERAL

1.1 INSTRUCTIONS TO BIDDERS

- A. Chiller: Provide separate pricing along with lead time for site delivery of chiller for both of the following options.
1. Shipped assembled.
 - a. Assemble and test chiller at factory.
 - b. Ship chiller as assembled for testing to site.
 - c. Coordinate placement of chiller and anchoring in Chiller Room with General Contractor's crane operator and rigging crew.
 - d. Stand down while General Contractor's pipe fitters provide hydronic piping, valves, and specialties connecting chiller to chilled and condenser water system.
 - e. Stand down while General Contractor's pipe fitters provide refrigerant pressure-relief piping and specialties discharging outdoors.
 - f. Stand down while General Contractor's electricians provide power circuits to chiller.
 - g. Stand down while General Contractor's instrumentation installers provide instrumentation for chiller and interface chiller to DDC system.
 - h. Confirm chiller is filled with refrigerant and oil.
 - i. Fill chiller plant with chilled and condenser water.
 - j. Perform startup service and testing of chiller.
 - k. Provide chiller demonstration and training.
 - l. Perform chiller warranty period testing. Provide separate price for 5-year extended warranty.
 2. Shipped disassembled.
 - a. Assemble and test chiller at factory.
 - b. Evacuate refrigerant and drain oil.
 - c. Separate chiller into three major components:
 - 1) Remove compressor.
 - 2) Provide sturdy airtight coverings for all openings into compressor.
 - 3) Package compressor for shipping in totally enclosed crate with bagging.
 - 4) Separate evaporator and condenser shells.
 - 5) Provide sturdy airtight coverings for all openings into evaporator and condenser shells.
 - d. Ship chiller components to site.
 - e. Coordinate placement of major components for reassembly and anchoring in Chiller Room with General Contractor's crane operator and rigging crew.

- f. Reassemble chiller.
 - g. Stand down while General Contractor's pipe fitters provide hydronic piping, valves, and specialties connecting chiller to chilled and condenser water systems.
 - h. Stand down while General Contractor's pipe fitters provide refrigerant pressure-relief piping and specialties discharging outdoors.
 - i. Stand down while General Contractor's electricians provide power circuits to chiller.
 - j. Stand down while General Contractor's instrumentation installers provide instrumentation for chiller and interface chiller to DDC system.
 - k. Fill chiller with refrigerant and oil.
 - l. Fill chiller plant with chilled and condenser water.
 - m. Perform startup service and testing of chiller.
 - n. Provide chiller demonstration and training.
 - o. Perform chiller warranty period testing. Provide separate price for 5-year extended warranty.
- B. Cooling Tower: Provide separate pricing along with lead time for site delivery of cooling tower for both of the following options.
- 1. Shipped assembled.
 - a. Assemble and test cooling tower at factory. Fan discharge stack, external ladders, and external platforms do not need to be factory assembled and tested.
 - b. Ship cooling tower as assembled for testing to site.
 - c. Coordinate with General Contractor's crane operator and rigging crew the placement of cooling tower on General Contractor provided rooftop support structure.
 - d. Provide cooling tower with fan discharge stack, external ladders, and external platforms.
 - e. Stand down while General Contractor's pipe fitters provide hydronic piping, valves, and specialties connecting cooling tower to condenser water system.
 - f. Stand down while General Contractor's electricians provide power circuits to cooling tower.
 - g. Stand down while General Contractor's instrumentation installers provide instrumentation for cooling tower and interface cooling tower to DDC system.
 - h. Fill chiller plant with condenser water.
 - i. Perform startup service and testing of cooling tower.
 - j. Provide cooling tower demonstration and training.
 - k. Perform cooling tower warranty period testing. Provide separate price for 5-year extended warranty.
 - 2. Shipped disassembled.
 - a. Assemble and test cooling tower at factory. Fan discharge stack, external ladders, and external platforms do not need to be factory assembled and tested.

- b. Separate cooling tower into major components as required to avoid escorted oversize highway designation.
- c. Ship cooling tower components to site.
- d. Coordinate with General Contractor's crane operator and rigging crew the placement of major components for reassembly and anchoring on General Contractor provided rooftop support structure.
- e. Reassemble cooling tower.
- f. Provide cooling tower with fan discharge stack, external ladders, and external platforms.
- g. Stand down while General Contractor's pipe fitters provide hydronic piping, valves, and specialties connecting cooling tower to condenser water system.
- h. Stand down while General Contractor's electricians provide power circuits to cooling tower.
- i. Stand down while General Contractor's instrumentation installers provide instrumentation for cooling tower and interface cooling tower to DDC system.
- j. Filler chiller plant with condenser water.
- k. Perform startup service and testing of cooling tower.
- l. Provide cooling tower demonstration and training.
- m. Perform cooling tower warranty period testing. Provide separate price for 5-year extended warranty.

PART 2 - PRODUCTS (Not Used)
PART 3 - EXECUTION (Not Used)

END OF DOCUMENT 002113

SECTION 236416 - CENTRIFUGAL WATER CHILLERS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Centrifugal water chillers.

B. Related Requirements:

1. Section 284400 "Refrigerant Detection and Alarm" for refrigerant monitors, alarms, supplemental breathing apparatus, and ventilation equipment interlocks.

1.2 DEFINITIONS

- A. COP: Coefficient of performance. The ratio of the rate of heat removal to the rate of energy input, using consistent units for any given set of rating conditions.
- B. DDC: Direct digital control.
- C. EER: Energy-efficiency ratio. The ratio of the cooling capacity given in terms of Btu/h to the total power input given in terms of watts at any given set of rating conditions.
- D. IPLV: Integrated part-load value. A single-number part-load efficiency figure of merit for a single chiller calculated in accordance with the method defined by AHRI 550/590 and referenced to AHRI standard rating conditions.
- E. FL kW/Ton: Full Load Value. A single-number full load efficiency of merit for a single chiller calculated in accordance with the method defined by AHRI 550/590 and referenced to AHRI standard rating conditions.
- F. kVAR: Kilovolt-ampere reactive.
- G. SCCR: Short-circuit current rating.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. Include refrigerant, rated capacities, operating characteristics, furnished specialties, and accessories.
2. Performance at AHRI standard conditions and at conditions indicated.
3. Performance at AHRI standard unloading conditions.
4. Minimum evaporator flow rate.

5. Minimum condenser flow rate.
6. Refrigerant capacity of chiller.
7. Oil capacity of chiller.
8. Fluid capacity of evaporator, condenser.
9. Characteristics of safety relief valves.
10. Minimum entering condenser-fluid temperature.
11. Performance at varying capacities with constant design condenser-fluid temperature. Repeat performance at varying capacities for different condenser-fluid temperatures from design to minimum in 5 deg F increments.
12. Force and moment capacity of each piping connection.
13. Product data indicating compliance with ASHRAE/IES 90.1.

B. Shop Drawings: Include plans, elevations, sections, details, and attachments to other work.

1. Detail equipment assemblies and indicate dimensions, weights, load distribution, required clearances, method of field assembly, components, and location and size of each field connection.
2. Wiring Diagrams: For power, signal, and control wiring.

1.4 INFORMATIONAL SUBMITTALS

- A. Source Quality-Control Certifications: For chillers.
- B. Field quality-control reports.
- C. Sample warranty.

1.5 CLOSEOUT SUBMITTALS

- A. Operation and Maintenance Data: For each chiller to include in emergency, operation, and maintenance manuals.
- B. Instructional Videos: Including those that are pre-recorded and those that are recorded during training.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. For chillers shipped assembled:
 1. Provide sturdy airtight coverings for all chiller openings.
 2. Ship chillers from the factory fully charged with refrigerant and oil.
 3. Ship assembled chiller to site.
- B. For chillers shipped disassembled:
 1. Evacuate refrigerant and drain oil from chiller.
 2. Separate chiller into major components:

- a. Remove compressor. Provide sturdy airtight coverings for all openings into compressor. Package compressor for shipping in totally enclosed crate with bagging.
 - b. Remove VFD and control panel. Package panels in padded shipping box with bagging.
 - c. Separate evaporator and condenser shells. Provide sturdy airtight coverings for all openings into evaporator and condenser shells. Wrap shells with plastic sheeting
3. Ship a full charge of refrigerant and oil in containers separate from chiller.
 4. Ship chiller components to site.

1.7 WARRANTY

- A. Manufacturer Warranty: Manufacturer agrees to repair or replace chillers that fail in materials or workmanship within specified warranty period.
- B. Special Warranty: Manufacturer agrees to repair or replace components of chillers that fail in materials or workmanship within specified warranty period.
 1. Failures include, but are not limited to, the following:
 - a. Complete chiller, including refrigerant and oil charge.
 - b. Parts and labor.
 2. Warranty Period: Five years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Condenser-Fluid Temperature Performance:
 1. Startup Condenser-Fluid Temperature: Chiller is to be capable of starting with an entering condenser-fluid temperature of 40 deg F and providing stable operation until the system temperature is elevated to the minimum operating entering condenser-fluid temperature.
 2. Minimum Operating Condenser-Fluid Temperature: Chiller is to be capable of continuous operation over the entire capacity range indicated with an entering condenser-fluid temperature of 55 deg F.
 3. Make factory modifications to standard chiller design if necessary to comply with performance indicated.
- B. Site Altitude: Chiller is to be suitable for altitude at which installed without affecting performance indicated. Make adjustments to affected chiller components to account for site altitude.
- C. ASHRAE Compliance:

1. ASHRAE 15 for safety code for mechanical refrigeration.
 2. ASHRAE 147 for refrigerant leaks, recovery, and handling and storage requirements.
 3. ASHRAE/IES 90.1.
- D. ASME Compliance: Fabricate and label chillers to comply with ASME Boiler and Pressure Vessel Code: Section VIII, Division 1, as applicable to chiller design. For chillers charged with R-513A, R-515B, or R-1234ze(E) refrigerant, include an ASME U-stamp and nameplate certifying compliance.
- E. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
- F. Comply with requirements of UL Standards & Engagement Inc., and include label by a qualified testing agency showing compliance.
- G. Operation Following Loss of Normal Power:
1. Equipment, associated factory- and field-installed controls, and associated electrical equipment are to automatically return equipment and associated controls to the operating state occurring immediately before loss of normal power without need for manual intervention by an operator when power is restored.
 2. Provide means and methods required to satisfy requirement, even if not explicitly indicated.

2.2 CENTRIFUGAL WATER CHILLERS

- A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
1. Carrier Global Corporation
 2. Trane
 3. YORK; brand of Johnson Controls International plc, Building Solutions North America
- B. Description: Factory-assembled and -tested chiller complete with compressor, compressor motor, compressor motor controller, lubrication system evaporator, condenser, controls, interconnecting unit piping and wiring, and indicated accessories.
1. Multi-Piece Assembly: Disassemble chiller into major assemblies as required by the installation after factory testing and before packaging for shipment.
- C. Compressor-Drive Assembly: Single-stage or multistage, variable- or dynamic-displacement, centrifugal-type compressor driven by an electric motor.
1. Compressor:
 - a. Casing: Cast iron, precision ground.

- b. Impeller: High-strength cast-aluminum or cast-aluminum alloy on carbon- or alloy-steel shaft.
- 2. Drive: Direct- or gear-drive, open or hermetic design, using an electric motor as the driver.
 - a. Gear Drives:
 - 1) For chillers with oil-lubricated gear drives, provide single- or double-helical gear design continuously coated with oil while chiller is operating.
 - 2) Gears must comply with American Gear Manufacturer Association standards.
 - b. Drive Coupling: For chillers with open drives, provide flexible disc with all-metal construction and no wearing parts to ensure long life without the need for lubrication.
 - c. Seals: Seal drive assembly to prevent refrigerant leakage.
- 3. Compressor Motor:
 - a. Continuous-duty, squirrel-cage, induction-type, two-pole motor with energy efficiency required to suit chiller energy efficiency indicated.
 - b. Factory mounted, aligned, and balanced as part of compressor assembly before shipping.
 - c. Motor is to be of sufficient capacity to drive compressor throughout entire operating range without overload and with sufficient capacity to start and accelerate compressor without damage.
 - d. For chillers with open drives, provide motor with totally enclosed enclosure.
 - e. Provide motor with thermistor or RTD in each of three-phase motor windings to monitor temperature and report information to chiller control panel.
 - f. Provide motor with thermistor or RTD to monitor bearing temperature and report information to chiller control panel.
- 4. Vibration Balance: Balance chiller compressor and drive assembly to provide a precision balance that is free of noticeable vibration over the entire operating range.
 - a. Overspeed Test: At least 20 percent above design operating speed.
 - b. Vibration Limits: Velocities not to exceed 0.15 inch/s and 0.8 mil peak to peak on all axes.
- 5. Service: Easily accessible for inspection and service.
 - a. Compressor's internal components are to be accessible without having to remove compressor-drive assembly from chiller.
 - b. Provide lifting lugs or eyebolts attached to casing.
- 6. Capacity Control: Modulating, variable-inlet, guide-vane assembly combined with hot-gas bypass, if necessary, to achieve performance indicated.

- a. Maintain stable operation that is free of surge, cavitation, and vibration throughout range of operation. Configure to achieve most energy-efficient operation possible.
 - b. Operating Range: From 100 to 5 percent of design capacity.
 - c. Condenser-Fluid Unloading Requirements over Operating Range: Drop-in entering condenser-fluid temperature of 2.5 deg F for each 10 percent in capacity reduction.
 - d. Chillers with variable-frequency controllers must modulate compressor speed with variable-inlet, guide-vane control to achieve optimum energy efficiency.
 - e. Avoid use of hot-gas bypass if other options are available to achieve performance indicated. Apply hot-gas bypass in accordance with ASHRAE/IES 90.1 and governing codes.
7. Oil Lubrication System: Consisting of pump, filtration, cooler, factory-wired power connection, and controls.
 - a. Bearings, gears, and other rotating surfaces are to be lubricated at all operating, startup, coast down, and standby conditions, including power failure.
 - b. Manufacturer's standard method to remove refrigerant from oil.
 - c. Oil filter to be the easily replaceable cartridge type, minimum 0.5-micron efficiency, with means of positive isolation while servicing.
 - d. Refrigerant- or water-cooled oil cooler.
 - e. Factory-installed and pressure-tested piping with isolation valves and accessories.
 - f. Oil compatible with refrigerant and chiller components.
 - g. Positive visual indication of oil level.
- D. Refrigeration:
 1. Refrigerant:
 - a. Type:
 - 1) R-513A; ASHRAE 34, Class A1.
 - 2) R-514A; ASHRAE 34, Class B1.
 - b. Compatibility: Chiller parts exposed to refrigerants are to be fully compatible with refrigerants, and pressure components are to be rated for refrigerant pressures.
 2. Refrigerant Flow Control: Manufacturer's standard refrigerant flow-control device satisfying performance requirements indicated.
 3. Pressure Relief Device:
 - a. Comply with requirements in ASHRAE 15, ASHRAE 147, and applicable portions of ASME Boiler and Pressure Vessel Code, Section VIII, Division 1.
 - b. Select and configure pressure relief devices to protect against corrosion and inadvertent release of refrigerant.

- c. Where dual pressure relief devices are installed in series, provide a sensor with indicator between devices to indicate refrigerant release past first device.
 - d. For Chillers Using R-514A or R-1233zd(E): Manufacturer's standard offering complying with ASHRAE 15 and ASHRAE 147.
 - e. For Chillers Using R-513A, R-515B, or R-1234ze(E): ASME-rated, spring-loaded, pressure relief valve; single- or multiple-reseating type. Provide pressure relief valve(s) for each chiller heat exchanger. Provide condenser with dual valves, one being redundant and configured to allow either valve to be replaced without loss of refrigerant.
4. Refrigeration Transfer: Provide service valves and other factory-installed accessories required to facilitate transfer of refrigerant from chiller to a remote refrigerant storage and recycling system. Comply with requirements in ASHRAE 15 and ASHRAE 147.
5. Refrigerant Isolation for Chillers Using R-513A, R-515B, or R-1234ze(E):
 - a. Factory install isolation valves in the compressor discharge line to the condenser and the refrigerant liquid line leaving the condenser to allow for isolation and storage of full refrigerant charge in the chiller condenser shell.
 - b. Suction side of compressor from evaporator is to have an isolation valve to allow for isolation and storage of full refrigerant charge in the chiller evaporator shell.
6. Purge System:
 - a. For chillers operating at sub-atmospheric pressures using R-514A or R-1233zd(E) refrigerant, factory install an automatic purge system for collection and return of refrigerant and lubricating oil and for removal of noncondensables, including, but not limited to, water, water vapor, and noncondensable gases.
 - b. System is to be of thermal purge design, refrigerant or air cooled, and equipped with a carbon filter that includes an automatic regeneration cycle.
 - c. Factory wire to chiller's main power supply and system complete with controls, piping, and refrigerant valves to isolate the purge system from the chiller.
 - d. Construct components of noncorrodible materials.
 - e. Controls are to interface with chiller control panel to indicate modes of operation, set points, data reports, diagnostics, and alarms.
 - f. Efficiency of not more than 0.02 lbs. of refrigerant per pound of air when rated in accordance with AHRI 580.
 - g. Operation independent of chiller in accordance with ASHRAE 147.
7. Positive-Pressure System:
 - a. For chillers operating at sub-atmospheric pressures using R-514A refrigerant, factory install an automatic positive-pressure system.
 - b. During nonoperational periods, positive-pressure system is to automatically maintain a positive pressure for atmosphere in the refrigerant-pressure vessel of not less than 0.5 psig adjustable up to a pressure that remains

- within the vessel design pressure limits.
- c. Provide factory-wired system including controller, electric heat, pressure transmitter, or switch.

E. Evaporator:

1. Description: Shell-and-tube design, with water in tubes and refrigerant surrounding tubes within shell. Shell is separate from condenser.
2. Shell Material: Carbon-steel rolled plates with continuously welded seams or seamless pipe.
3. Designed to prevent liquid refrigerant carryover from entering compressor.
4. Evaporator must have sight glass or other form of positive visual verification of liquid-refrigerant level.
5. Tubes:
 - a. Individually replaceable from either end and without damage to tube sheets and other tubes.
 - b. Mechanically expanded into end sheets and physically attached to intermediate tube sheets.
 - c. Material: Copper.
 - d. Nominal OD: Manufacturer's choice.
 - e. Minimum Wall Thickness: Manufacturer's choice.
 - f. External Finish: Manufacturer's standard.
 - g. Internal Finish: Enhanced or smooth.
6. End Tube Sheets: Continuously welded to each end of shell; drilled and reamed to accommodate tubes, with positive seal between fluid in tubes and refrigerant in shell.
7. Intermediate Tube Sheets: Installed in shell and spaced along length of tube at intervals required to eliminate vibration and to avoid contact of tubes resulting in abrasion and wear.
8. Flow Sensor: Thermal dispersion type, factory calibrated for Project-specific application.

F. Condenser:

1. Description: Shell-and-tube design, with water in tubes and refrigerant surrounding tubes within shell. Shell is to be separate from evaporator.
2. Shell Material: Carbon-steel rolled plates with continuously welded seams or seamless pipe.
3. Designed to prevent direct impingement of high-velocity hot gas from compressor discharge on tubes.
4. Condenser is to have sight glass or other form of positive visual verification of refrigerant charge and condition.
5. Tubes:
 - a. Individually replaceable from either end and without damage to tube sheets and other tubes.
 - b. Mechanically expanded into end sheets and physically attached to intermediate tube sheets.

- c. Material: Copper.
 - d. Nominal OD: Manufacturer's choice.
 - e. Minimum Wall Thickness: Manufacturer's choice.
 - f. External Finish: Manufacturer's standard.
 - g. Internal Finish: Enhanced or smooth.
- 6. End Tube Sheets: Continuously welded to each end of shell; drilled and reamed to accommodate tubes, with positive seal between fluid in tubes and refrigerant in shell.
 - 7. Intermediate Tube Sheets: Installed in shell and spaced along length of tube at intervals required to eliminate vibration and to avoid contact of tubes resulting in abrasion and wear.
 - 8. Flow Sensor: Thermal dispersion type, factory calibrated for Project-specific application.

G. Insulation:

- 1. Closed-cell, flexible elastomeric thermal insulation complying with ASTM C534, Type I for tubular materials and Type II for sheet materials.
 - a. Thickness: 3/4 inch.
- 2. Adhesive: As recommended by insulation manufacturer.
- 3. Factory-applied insulation over all cold surfaces of chiller capable of forming condensation. Components include, but are not limited to, evaporator shell and end tube sheets, evaporator water boxes including nozzles, refrigerant suction pipe from evaporator to compressor, cold surfaces of compressor, refrigerant-cooled motor, and auxiliary piping.
 - a. Apply adhesive to 100 percent of insulation contact surface.
 - b. Before insulating steel surfaces, prepare surfaces for paint, and prime and paint as indicated for other painted components. Do not insulate unpainted steel surfaces.
 - c. Seal seams and joints to provide a vapor barrier.
 - d. After adhesive has fully cured, paint exposed surfaces of insulation to match other painted parts.
 - e. Manufacturer has option to factory or field insulate chiller components installed in multiple pieces to reduce potential for damage during installation.
 - f. Manufacturer has option to factory or field insulate water boxes and nozzles to reduce potential for damage during installation.
- 4. Field-Applied Insulation:
 - a. Components that are not factory insulated are to be field insulated to comply with requirements indicated.
 - b. Manufacturer must be responsible for chiller insulation whether factory or field installed, to ensure manufacturer is the single point of responsibility for chillers.
 - c. Manufacturer factory-authorized service representative is to instruct and

- d. supervise installation of field-applied insulation.
- d. After field-applied insulation is complete, paint insulation to match factory-applied finish.

H. Electrical:

1. Factory installed and wired, and functionally tested at factory before shipment.
2. Single-point, field-power connection to circuit breaker. Minimum SCCR in accordance with UL 508 is to be as required by electrical power distribution system, but not less than 65,000 A.
 - a. Branch power circuit to each motor, electric heater, dedicated electrical load, and control, with circuit breaker having SCCR to match main disconnecting means.
 - 1) NEMA AB 1, motor-circuit protector (circuit breaker) with field-adjustable, short-circuit-trip set point.
 - b. NEMA ICS 2-rated motor controller for auxiliary motors, hand-off-auto switch, and overcurrent protection for each motor. Provide variable-frequency controller for each variable-speed motor furnished.
 - c. Control-circuit transformer with primary and secondary side fuses.
3. Terminal blocks with numbered and color-coded wiring to match wiring diagram. Spare wiring terminal block for connection to external controls or equipment.

I. Variable-Frequency Controller:

1. Motor controller is to be factory mounted and wired on the chiller to provide a single-point, field-power termination to the chiller and its auxiliaries.
2. Description: NEMA ICS 2; listed and labeled in accordance with UL 508 as a complete unit and arranged to provide variable speed by adjusting output voltage and frequency.
3. Enclosure: Unit mounted, NEMA 250, Type 1, with hinged full-front access door with lock and key.
4. Integral Disconnecting Means: Door-interlocked, NEMA AB 1, instantaneous-trip circuit breaker with lockable handle. Minimum SCCR in accordance with UL 508 is to be as required by electrical power distribution system, but not less than 65,000 A.
5. Technology: Pulse width modulated (PWM) output with insulated gate bipolar transistors; suitable for variable torque loads.
6. Controller is to consist of a rectifier converter section, a digital/analog driver regulator section, and an inverter output section.
 - a. Rectifier Section: Full-wave diode bridge that changes fixed-voltage, fixed-frequency, ac line power to a fixed dc voltage. Silicon controller rectifiers, current source inverters, and paralleling of devices are unacceptable. Rectifier is to be insensitive to phase rotation of the ac line.
 - b. Regulator: Full digital control of frequency and voltage.
 - c. Inverter Section: Change fixed dc voltage to variable-frequency, variable ac voltage for application to a squirrel-cage motor. Inverter is to produce a

sine-coded, PWM output waveform and conduct no RFI back to the input power supply.

7. Output Rating: Three phase, with voltage proportional to frequency throughout voltage range.
8. Operating Requirements:
 - a. Input AC Voltage Tolerance: 460-V ac, plus 10 percent or 506 V maximum.
 - b. Input frequency tolerance of 60 Hz, plus or minus 2 Hz.
 - c. Capable of driving full load, without derating, under the following conditions:
 - 1) Ambient Temperature: Zero to 40 deg C.
 - 2) Relative Humidity: Up to 95 percent (noncondensing).
 - 3) Altitude: Up to 3300 ft.
 - d. Minimum Efficiency: 96 percent at 60 Hz, full load.
 - e. Minimum Displacement Primary-Side Power Factor: 95 percent without harmonic filter; 98 percent with harmonic filter.
 - f. Overload Capability: 1.05 times the full-load current for seven seconds.
 - g. Starting Torque: As required by compressor-drive assembly.
 - h. Speed Regulation: Plus or minus 1 percent.
 - i. Isolated control interface to allow controller to follow control signal over a 10:1 speed range.
 - j. To avoid equipment resonant vibrations, provide critical speed lockout circuitry to allow bands of operating frequency at which controller is to not operate continuously.
 - k. Capable of being restarted into a motor coasting in either the forward or reverse direction without tripping.
9. Internal Adjustability Capabilities: Integral to controller or through chiller control panel.
 - a. Minimum Output Frequency: 6 Hz.
 - b. Maximum Output Frequency: 60 Hz.
 - c. Acceleration: Two seconds to a minimum of 60 seconds.
 - d. Deceleration: Two seconds to a minimum of 60 seconds.
 - e. Current Limit: 30 percent to a minimum of 100 percent of maximum rating.
10. Self-Protection and Reliability Features: Subjecting the controller to any of the following conditions must not result in component failure or the need for replacement:
 - a. Overtemperature.
 - b. Short circuit at controller output.
 - c. Ground fault at controller output. Variable-frequency controller is to be able to start a grounded motor.
 - d. Open circuit at controller output.
 - e. Input undervoltage.
 - f. Input overvoltage.

- g. Loss of input phase.
 - h. Reverse phase.
 - i. AC line switching transients.
 - j. Instantaneous overload, line to line or line to ground.
 - k. Sustained overload exceeding 100 percent of controller-rated current.
 - l. Starting a rotating motor.
11. Motor Protection: Controller is to protect motor against overvoltage and undervoltage, phase loss, reverse phase, overcurrent, overtemperature, and ground fault.
12. Automatic Reset and Restart:
- a. Capable of three restarts after controller fault or on return of power after an interruption and before shutting down for manual reset or fault correction.
 - b. Controller is to be capable of automatic restart on phase-loss and overvoltage and undervoltage trips.
13. Visual Indication: On face of controller enclosure or chiller control enclosure, indicating the following conditions:
- a. Power on.
 - b. Run.
 - c. Overvoltage.
 - d. Line fault.
 - e. Overcurrent.
 - f. External fault.
 - g. Motor speed (percent).
 - h. Fault or alarm status (code).
 - i. DC-link voltage.
 - j. Motor output voltage.
 - k. Input kilovolt amperes.
 - l. Total power factor.
 - m. Input kilowatts.
 - n. Input kilowatt-hours.
 - o. Three-phase input voltage.
 - p. Three-phase output voltage.
 - q. Three-phase input current.
 - r. Three-phase output current.
 - s. Output frequency (Hertz).
 - t. Elapsed operating time (hours).
 - u. Diagnostic and service parameters.
14. Operator Interface: At controller or chiller control panel; with start-stop and auto-manual selector with manual-speed-control potentiometer.
15. Control Signal Interface:
- a. Electric Input Signal Interface: A minimum of two analog inputs (0 to 10 V or 0/4-20 mA) and six programmable digital inputs.
 - b. Manufacturer has option to incorporate control signal interface into chiller control panel.

16. Active Harmonic Distortion Filter:
 - a. Factory mounted and wired to limit total voltage and current distortion to 5 percent.
17. Cooling: Air, refrigerant, or water cooled.
- J. Accessory Control Relays:
 1. Control Relays: Auxiliary and adjustable time-delay relays.
 2. Devices are to be factory installed in controller enclosure unless otherwise indicated.
- K. Chiller Capacity Control Interface: Equip chiller with adaptive control logic to automatically adjust the compressor motor speed and the compressor pre-rotation inlet vane position independently to achieve maximum part-load efficiency in response to sensor inputs that are integral to the chiller controls.
- L. Controls:
 1. Description: Standalone and microprocessor based, with all memory stored in nonvolatile memory, so that reprogramming is not required on loss of electrical power.
 2. Enclosure: Unit mounted, NEMA 250, Type 1, hinged or lockable, factory wired with a single-point, with field-power connection and a separate control circuit.
 3. House factory-installed wiring outside of enclosures in a NFPA 70-approved raceway.
 4. Operator Interface: Multiple-character digital or graphic display with dynamic update of information and with keypad or touch-sensitive display located on front of control enclosure. In either imperial or metric units selectable through the interface, display the following information:
 - a. Date and time.
 - b. Operating or alarm status.
 - c. Fault history with not less than last 10 faults displayed.
 - d. Set points of controllable parameters.
 - e. Trend data.
 - f. Operating hours.
 - g. Number of chiller starts.
 - h. Outdoor-air temperature or space temperature if required for chilled-water reset.
 - i. Entering- and leaving-fluid temperatures of evaporator and condenser.
 - j. Difference in fluid temperatures of evaporator and condenser.
 - k. Fluid flow of evaporator and condenser.
 - l. Fluid-pressure drop of evaporator and condenser.
 - m. Refrigerant pressures in evaporator and condenser.
 - n. Refrigerant saturation temperature in evaporator and condenser shell.
 - o. Compressor refrigerant suction and discharge temperature.
 - p. Compressor bearing temperature.
 - q. Motor bearing temperature.

- r. Motor winding temperature.
 - s. Oil temperature.
 - t. Oil discharge pressure.
 - u. Phase current.
 - v. Percentage of motor-rated load amperage.
 - w. Phase voltage.
 - x. Demand power (kilowatts).
 - y. Energy use (kilowatt-hours).
 - z. Power factor.
 - aa. For chillers equipped with variable-frequency controllers and harmonic filters, include the following:
 - bb. Output voltage and frequency.
 - cc. Voltage THD for each phase.
 - dd. Supply current TDD for each phase.
 - ee. Inlet vane position.
 - ff. Controller internal ambient temperature.
 - gg. Heatsink temperature.
 - hh. Purge suction temperature if purge system is provided.
 - ii. Purge elapsed time if purge system is provided.
5. Control Functions:
- a. Manual or automatic startup and shutdown time schedule.
 - b. Entering and leaving chilled-water temperatures, control set points, and motor load limits. Evaporator-fluid temperature is to be reset based on outdoor-air temperature.
 - c. Current limit and demand limit.
 - d. Condenser-fluid temperature.
 - e. External chiller emergency stop.
 - f. Variable evaporator flow.
 - g. Thermal storage.
 - h. Heat reclaim.
6. Manually Reset Safety Controls: The following conditions are to shut down chiller and require manual reset:
- a. Low evaporator pressure or temperature; high condenser pressure.
 - b. Low evaporator-fluid temperature.
 - c. Low oil differential pressure.
 - d. High or low oil pressure.
 - e. High oil temperature.
 - f. High compressor-discharge temperature.
 - g. Loss of condenser-fluid flow.
 - h. Loss of evaporator-fluid flow.
 - i. Motor overcurrent.
 - j. Motor overvoltage.
 - k. Motor undervoltage.
 - l. Motor phase reversal.
 - m. Motor phase failure.
 - n. Sensor- or detection-circuit fault.

- o. Processor communication loss.
 - p. Motor controller fault.
 - q. Extended compressor surge.
 - r. Excessive air-leakage detection for chillers using R-514A or R-1233zd(E) refrigerant.
- 7. Trending: Capability to trend analog data of up to five parameters simultaneously over an adjustable period and frequency of polling.
- 8. Security Access: Provide electronic security access to controls through identification and password, with at least three levels of access: view only; view and operate; and view, operate, and service.
- 9. Control Authority: At least four conditions: Off, local manual control at chiller, local automatic control at chiller, and automatic control through a remote source.
- 10. Communication Port: RS-232 port, USB 2.0 port or higher, or equivalent connection capable of connecting a printer and a notebook computer.
- 11. DDC System Interface: Factory install hardware and software to enable system to monitor, control, and display chiller status and alarms.
 - a. Hardwired I/O Points:
 - 1) Monitoring: On-off status, common trouble alarm.
 - 2) Control: On-off operation, chilled-water, discharge temperature set-point adjustment.
 - b. Communication Interface: ASHRAE 135 (BACnet) communication interface is to enable control system operator to remotely control and monitor the chiller from an operator workstation.
 - 1) Control features and monitoring points displayed locally at chiller control panel are to be available through the control system, including, at a minimum, the following:
 - a) Start-stop command from remote source.
 - b) Unit control source, local, analog, digital or modem.
 - c) Chiller control panel start-stop.
 - d) Accumulated operating hours.
 - e) Accumulated starts.
 - f) Compressor motor status.
 - g) Unit operation code.
 - h) Unit safety fault code.
 - i) Unit cycling fault code.
 - j) Chilled-water pump status.
 - k) Chilled-water flow proof.
 - l) Chilled-water entering temperature.
 - m) Chilled-water leaving temperature.
 - n) Chilled-water leaving temperature set-point adjustment from remote source.
 - o) Condenser(s) water entering temperature.
 - p) Condenser(s) water leaving temperature.
 - q) Evaporator refrigerant pressure.

- r) Condenser(s) refrigerant pressure.
- s) Evaporator refrigerant saturation temperature.
- t) Condenser(s) refrigerant saturation temperature.
- u) Refrigerant discharge temperature.
- v) Refrigerant level.
- w) Refrigerant liquid level set point.
- x) Oil pressure differential.
- y) Oil sump pressure.
- z) Oil pump pressure.
- aa) Oil sump temperature.
- bb) High-speed thrust bearing proximity position.
- cc) High-speed thrust bearing proximity reference.
- dd) Motor current percent of full-load amps.
- ee) Motor current Phase A.
- ff) Motor current Phase B.
- gg) Motor current Phase C.
- hh) Motor current set-point adjustment from remote source.
- ii) Motor bearing shaft end vibration.
- jj) Motor bearing opposite shaft end vibration.
- kk) Motor bearing shaft end temperature.
- ll) Motor bearing opposite shaft end temperature.
- mm) Motor average winding temperature.
- nn) Variable-frequency controller selection, auto or fixed.
- oo) Variable-frequency controller output voltage.
- pp) Variable-frequency controller input power, rate.
- qq) Variable-frequency controller input power, consumption.
- rr) Variable-frequency controller DC bus voltage.
- ss) Variable-frequency controller inverter link current.
- tt) Variable-frequency controller output frequency.
- uu) Variable-frequency controller internal ambient temperature.
- vv) Variable-frequency controller converter heatsink temperature.
- ww) Variable-frequency controller harmonic filter installed, true or false.
- xx) Harmonic Filter THD at maximum voltage, percent.
- yy) Harmonic filter total demand distortion at maximum current, percent.
- zz) Harmonic filter total supply kVA.
- aaa) Anti-recycle time remaining.
- bbb) Liquid line solenoid.
- ccc) Pre-rotation vanes position.
- ddd) Adaptive capacity control valve surge map installed, true or false.
- eee) Adaptive capacity control new surge point, true or false.
- fff) Adaptive capacity control surge type, pressure differential or current.
- ggg) Adaptive capacity control surge count.
- hhh) Adaptive capacity control PRV position.
- iii) Adaptive capacity control output frequency.

M. Finish:

1. Paint chiller, using manufacturer's standard procedures, except comply with the following minimum requirements:
 - a. Provide at least one coat of primer with a total dry film thickness of at least 1.5 mils.
 - b. Provide at least one coat of alkyd-modified, vinyl enamel finish with a total dry film thickness of at least 2 mils.
 - c. Paint surfaces that are to be insulated before applying the insulation.
 - d. Paint installed insulation to match adjacent uninsulated surfaces.
 - e. Color of finish coat is to be manufacturer's standard.

N. Accessories:

1. Flow Switches:
 - a. Chiller manufacturer is to furnish a switch for each evaporator and condenser and verify field-mounting location before installation.
 - b. Paddle Flow Switches:
 - 1) Vane operated to actuate a double-pole, double-throw switch, with one pole field wired to the chiller control panel and the other pole field wired to the DDC system for HVAC.
 - 2) Contacts: Platinum alloy, silver alloy, or gold-plated switch contacts with a rating of 10 A at 120-V ac.
 - 3) Pressure rating equal to pressure rating of heat exchanger.
 - 4) Construct body and wetted parts of Type 316 stainless steel.
 - 5) House switch in a NEMA 250, Type 4 enclosure constructed of die-cast aluminum.
 - 6) Vane length to suit installation.
 - c. Pressure-Differential Switches:
 - 1) Construction: Wetted parts of body and trim constructed of Type 316 stainless steel.
 - 2) Performance: Switch is to withstand, without damage, the full-pressure rating of the heat exchanger applied to either port and exhibit zero set-point shift due to variation in working pressure.
 - 3) Set Point: Screw type, field adjustable.
 - 4) Electrical Connections: Internally mounted screw-type terminal blocks.
 - 5) Switch Enclosure: NEMA 250, Type 4.
 - 6) Switch Action: Double-pole, double-throw switch, with one pole field wired to the chiller control panel and the other pole field wired to the DDC system for HVAC.
2. Vibration Isolation:
 - a. Chiller manufacturer is to furnish vibration isolation for each chiller.
 - b. Neoprene Pad:
 - 1) Two layers of 0.375-inch- thick, ribbed- or waffle-pattern neoprene

- 2) pads separated by a 16-gauge, stainless steel plate.
- 2) Fabricate pads from 40- to 60-durometer neoprene.
- 3) Provide stainless steel square bearing plate to load the pad uniformly between 20 and 40 psig with a 0.12- to 0.16-inch deflection.

c. Spring Isolator:

- 1) Stable in operation and designed for not less than 30 percent reserve deflection beyond actual operating conditions.
- 2) Design isolators so that the K_x/K_y ratio will be 1.0 or more for stability.
- 3) Provide PVC or neoprene-coated springs and hot-dip, galvanized-steel components. Provide aluminum components that are etched and painted. Provide nuts, bolts, and washers that are zinc electroplated.
- 4) Isolators are to be adjustable and with an open spring, having one or more coil springs attached to a top compression plate and a baseplate.
- 5) An elastomeric pad with a minimum thickness of **0.25 inch** is to be bonded to the baseplate.
- 6) Spring assembly is to be removable and fit within a welded-steel enclosure consisting of a top plate and rigid lower housing, which serves as a blocking device during installation.
- 7) Isolated restraining bolts are to not be engaged during normal operation and are to connect the top plate and lower housing to prevent the isolated equipment from rising when drained of fluid.
- 8) Select isolators for a nominal 1-inch deflection.
- 9) Integrate seismic restraints in applications that require seismic requirements.

2.3 SOURCE QUALITY CONTROL

- A. AHRI Certification: Certify chiller in accordance with "Water-Cooled Chiller Certification Program."
- B. Factory test and inspect evaporator and condenser in accordance with ASME Boiler and Pressure Vessel Code: Section VIII, Division 1.
- C. For Chillers using R-513A, factory test and inspect evaporator and condenser in accordance with ASME Boiler and Pressure Vessel Code: Section VIII, Division 1.
- D. For Chillers using R-514A, factory test and inspect evaporator and condenser in accordance with ASME Boiler and Pressure Vessel Code: Section VIII, Division 1. Pressure test fluid side of heat exchangers, including water boxes, to 1.5 times the rated pressure. Pressure proof test refrigerant side of heat exchangers to a minimum of 45 psig. Vacuum and pressure test for leaks.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine chillers before installation. Reject chillers that are damaged.
- B. Examine roughing-in for equipment support, anchor-bolt sizes and locations, piping, control and electrical connections to verify actual locations, sizes, and other conditions affecting chiller performance, maintenance, and operations before equipment installation.
 - 1. Chiller locations indicated on Drawings are approximate. Determine exact locations before roughing-in for piping and control and electrical connections.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION OF CENTRIFUGAL WATER CHILLERS

- A. Coordinate sizes and locations of concrete bases with actual equipment provided. Cast anchor-bolt inserts into bases.
- B. Equipment Mounting:
 - 1. 1. Install chillers on cast-in-place concrete equipment bases.
 - 2. Comply with requirements for vibration isolation devices specified in Section 230548.13 "Vibration Controls for HVAC."
- C. Maintain manufacturer's recommended clearances for service and maintenance.
- D. Maintain clearances required by governing code.
- E. Chiller manufacturer's factory-trained service personnel are to charge chiller with refrigerant and fill with oil if not factory installed.
- F. Install separate devices furnished by manufacturer and not factory installed.
 - 1. Chillers shipped in multiple major assemblies are to be field assembled by chiller manufacturer's factory-trained service personnel.

3.3 PIPING CONNECTIONS

- A. Comply with requirements for piping specified in Section 232113 "Hydronic Piping," Section 232116 Hydronic Piping Specialties," and Section 232300 "Refrigerant Piping." Drawings indicate general arrangement of piping, fittings, and specialties.
- B. Where installing piping adjacent to chillers, allow space for service and maintenance.
- C. Evaporator-Fluid Connections:

1. Connect to evaporator inlet with shutoff valve, flexible connector, thermometer, and plugged tee with pressure gauge.
2. Connect to evaporator outlet with shutoff valve, balancing valve, flexible connector, thermometer, plugged tee with shutoff valve and pressure gauge, and drain connection with valve.
3. Make connections to chiller with a flange or mechanical coupling.

D. Condenser-Fluid Connections:

1. Connect to condenser inlet with shutoff valve, flexible connector, thermometer, and plugged tee with pressure gauge.
2. Connect to condenser outlet with shutoff valve, balancing valve, flexible connector, thermometer, plugged tee with shutoff valve and pressure gauge, and drain connection with valve.
3. Make connections to chiller with a flange or mechanical coupling.

E. Refrigerant-Pressure Relief Device Connections:

1. For chillers installed indoors, extend separate vent piping for each chiller to the outdoors without valves or restrictions.
2. Comply with ASHRAE 15.
3. Connect to chiller pressure relief device with flexible connector and dirt leg with drain valve.

F. For chillers equipped with a purge system, extend separate purge vent piping for each chiller to the outdoors. Comply with ASHRAE 15 and ASHRAE 147.

G. Connect each chiller drain connection with a drain valve, which is full size of drain connection.

3.4 ELECTRICAL POWER CONNECTIONS

- A. Connect wiring in accordance with Section 260519 "Low-Voltage Electrical Power Conductors and Cables."
- B. Ground equipment in accordance with Section 260526 "Grounding and Bonding for Electrical Systems."
- C. Install nameplate for each electrical connection, indicating electrical equipment designation and circuit number feeding connection. Nameplate is to be laminated phenolic layers of black with engraved white letters at least **1/2 inch** high. Locate nameplate where easily visible.

3.5 CONTROLS CONNECTIONS

- A. Install control and electrical power wiring to field-mounted control devices.
- B. Connect control wiring between chillers and other equipment to interlock operation as required to provide a complete and functioning system.

- C. Connect control wiring between chiller control interface and DDC control system for remote monitoring and control of chillers. Comply with requirements in Section 230923 "Direct Digital Control (DDC) System for HVAC."
- D. Install nameplate on face of chiller control panel indicating the control equipment designation serving chiller and the I/O point designation for each control connection. Nameplate is to be laminated phenolic layers of black with engraved white letters at least **0.5 inch** high.

3.6 STARTUP SERVICE

- A. Engage a factory-authorized service representative to perform startup service.
 - 1. Complete installation and startup checks in accordance with manufacturer's written instructions.
 - 2. Verify that refrigerant charge is sufficient and chiller has been leak tested.
 - 3. Verify that pumps are installed and functional.
 - 4. Verify that thermometers and gauges are installed.
 - 5. Operate chiller for run-in period.
 - 6. Check bearing lubrication and oil levels.
 - 7. Verify that refrigerant pressure relief device is vented outside.
 - 8. Verify proper motor rotation.
 - 9. Verify static deflection of vibration isolators, including deflection during chiller startup and shutdown.
 - 10. Verify and record performance of fluid flow and low-temperature interlocks for evaporator and condenser.
 - 11. Verify and record performance of chiller protection devices.
 - 12. Test and adjust controls and safeties. Replace damaged or malfunctioning controls and equipment.
- B. Inspect field-assembled components, equipment installation, piping, controls and electrical connections for proper assembly, installation, and connection.
- C. Visually inspect chiller for damage before starting. Repair or replace damaged components, including insulation. Do not start chiller until damage that is detrimental to operation has been corrected.
- D. Prepare test and inspection startup reports.

3.7 WARRANTY PERIOD TESTING

- A. Within one month(s) of warranty period expiration, perform testing, analysis, and reporting indicated for each chiller.
- B. Oil Analysis:
 - 1. Take oil sample and solicit services of a third-party testing agency, specializing in such analysis, to perform oil analysis.
 - 2. Submit analysis results and recommendations to Owner.

C. Refrigerant Analysis:

1. Take refrigerant sample and solicit services of a third-party testing agency, specializing in such analysis, to perform refrigerant analysis.
2. Submit analysis results and recommendations to Owner.

D. Site Access and Scheduling:

1. Contact Owner to schedule testing at least 30 days in advance of testing.
2. Make mutually agreeable schedule adjustments to accommodate Owner's request for testing.
3. Review, with Owner, requirements for visitors in advance of testing.
4. Comply with Owner requirements for visitors while on-site.

3.8 DEMONSTRATION

A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain chillers. Video record the training sessions and provide electronic copy to Owner.

1. Instructor must be factory trained and certified.
2. Provide not less than four hours of training.
3. Train personnel in operation and maintenance and to obtain maximum efficiency in plant operation.
4. Provide instructional videos showing general operation and maintenance that are coordinated with operation and maintenance manuals.
5. Obtain Owner sign-off that training is complete.
6. Owner training is to be held at Project site.

END OF SECTION 236416

SECTION 236514.14 - OPEN-CIRCUIT, INDUCED-DRAFT, CROSSFLOW COOLING TOWERS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes factory-assembled, open-circuit, induced-draft, crossflow cooling towers.

1.2 DEFINITIONS

- A. SCCR: Short-circuit current rating.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product.
 - 1. Include rated capacities, pressure drop, fan performance data, rating at selected points indicated, and furnished specialties and accessories.
 - 2. Maximum flow rate.
 - 3. Minimum flow rate.
 - 4. Pressure required at cooling tower supply piping connections.
 - 5. Drift loss as percent of design flow rate.
 - 6. Sound:
 - a. Sound pressure levels for operation with fan off, fan at minimum speed, and design speed. If sound requirements are indicated at a specific distance, submit performance using same distance for comparative analysis.
 - 7. Performance curves for the following:
 - a. Varying entering-water temperatures from design to minimum in five-degree temperature increments.
 - b. Varying ambient wet-bulb temperatures from design to minimum in five-degree temperature increments.
 - c. Varying water flow rates from design to minimum in increments of 10 percent of flow rate difference between design and minimum flow rates.
 - d. Varying fan operation from design to minimum speed in 10 percent speed increments, and with fan off.
 - 8. Fan airflow at design conditions, brake horsepower, and drive losses (indicated in horsepower and percent of brake horsepower).
 - 9. Fan motor electrical characteristics including, but not limited to, speed, voltage, phase, hertz, amperage, efficiency, and power factor at 100, 75, 50, and 25

- percent of nameplate horsepower.
10. Electrical power requirements for each cooling tower component requiring power.

B. Shop Drawings:

1. Manufacturer's drawings of assembled cooling towers, control panels, sections, and elevations.
2. Assembled unit dimensions.
3. Diagram showing each separate piece requiring field assembly.
4. Shipped sub-assembly dimensions and weights for field assembly.
5. Assembled unit weight without water.
6. Operating weight and load distribution.
7. Unit vibration isolation.
8. Required clearances for maintenance and operation.
9. Sizes and dimensioned locations of piping and wiring connections.
10. Diagrams for power, signal, and control wiring.

C. Delegated-Design Submittal: For cooling tower support structure indicated to comply with performance requirements and design criteria, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

1. Detail fabrication and assembly of support structure.
2. Vibration Isolation Base Details: Detail fabrication including anchorages and attachments to structure and to supported equipment.
3. Design Calculations: Calculate requirements for selecting vibration isolators and wind restraints and for designing vibration isolation bases.

1.4 INFORMATIONAL SUBMITTALS

- A. Field Test Reports: Include startup service reports.
- B. Field quality-control reports.
- C. Sample Warranty: For special warranty.

1.5 CLOSEOUT SUBMITTALS

- A. Operation and Maintenance Data: For each cooling tower to include in emergency, operation, and maintenance manuals.
- B. Instructional Videos: Including those that are prerecorded and those that are recorded during training.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Coordinate requirements for multi-piece assembly for shipment. Limit the number of separate pieces for field installation to as few as possible.

- B. If factory assembly of multiple pieces is required for testing or other reasons, disassemble cooling tower into major assemblies as required by installation before packaging for shipment.
 - 1. Clearly label each separate package with a unique designation and include assembly instructions for complete cooling tower.
- C. Install seals on gear-drive assemblies to eliminate oil leakage during shipment if shipped with oil.

1.7 WARRANTY

- A. Special Warranty: Manufacturer agrees to repair or replace the following components of cooling towers that fail in materials or workmanship within specified warranty period:
 - 1. All components of cooling tower.
 - 2. Warranty Period: Five years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 OPEN-CIRCUIT, INDUCED-DRAFT, CROSSFLOW COOLING TOWERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. Baltimore Aircoil Company
 - 2. EVAPCO, Inc
 - 3. Marley; a brand of SPX Cooling Technologies, Inc.

2.2 PERFORMANCE REQUIREMENTS

- A. Delegated Design: Engage a qualified professional engineer, as defined in Section 014000 "Quality Requirements," to design cooling tower support structure and wind restraints, including comprehensive engineering analysis.
- B. Structural Performance: Cooling tower and support structure shall withstand the effects of loads and stresses within limits and under conditions indicated according to the IBC.
- C. ASHRAE/IES 90.1 Compliance: Applicable requirements in ASHRAE/IES 90.1.
- D. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
- E. Operation Following Loss of Normal Power:
 - 1. Equipment, associated factory- and field-installed controls, and associated

electrical equipment and power supply connected to backup power system shall automatically return equipment and associated controls to the operating state occurring immediately before loss of normal power without need for manual intervention by an operator when power is restored either through a backup power source, or through normal power if restored before backup power is brought on-line.

2. Include means and methods required to satisfy requirement even if not explicitly indicated.

F. Vibration:

1. Rotating assemblies shall be dynamically balanced to achieve a balance level of "good" while complying with industry-standard requirements for cooling towers.
2. Critical speed shall be at least 115 percent of design speed.

2.3 DESIGN ARRANGEMENT

- A. Crossflow design with airflow from two sides and induced-draft, top-mounted axial fan and gravity distribution basin.

2.4 CASING AND FRAME

- A. Casing Material: Galvanized steel, ASTM A653/A653M, G235 coating.
- B. Frame Material: galvanized steel, ASTM A653/A653M, G235 coating.
- C. Hardware: Galvanized or stainless steel.
- D. Joints and Seams: Sealed watertight.
- E. Welded Connections: Sealed watertight.

2.5 COLLECTION BASIN

- A. Factory-Assembled Collection Basin:
 1. Material: Stainless steel, Grade 304.
 2. Hardware: stainless steel.
 3. Joints and Seams: Sealed watertight.
 4. Welded Connections: Sealed watertight by continuous welds.
 5. Removable stainless-steel strainer with openings smaller than nozzle orifices.
 6. Overflow and drain connections.
 7. Makeup-water connection.
 8. Outlet Connection: Configured to mate to ASME B16.5, Class 150 flange.

2.6 COLLECTION BASIN MAKEUP-WATER ASSEMBLY

A. Electric/Electronic, Collection Basin Water-Level Controller with Makeup-Water Valve:

1. Enclosures: NEMA 250, Type 4.
2. Sensor: Solid-state controls with multiple electrode probes and relays factory wired to a terminal strip to control makeup-water valve, low- and high-level alarms, and output for shutoff of pump on low level.
3. Electrode Probes: Stainless steel.
4. Water Stilling Chamber: Stainless steel, Grade 304.
5. Electrical Connection Requirements: 120-V ac, single phase, 60 Hz.

2.7 COLLECTION BASIN HEATER

A. Electric Heater:

1. Stainless-Steel Electric Immersion Heaters: Installed in a threaded coupling on the side of the collection basin.
2. Heater Control Panel: Mounted on the side of each cooling tower cell.
3. Enclosure: NEMA 250, Type 4.
4. Magnetic contactors controlled by a temperature sensor/controller to maintain collection basin water-temperature set point. Water-level probe shall monitor cooling tower water level and de-energize the heater when the water reaches low-level set point.
5. Control-circuit transformer with primary and secondary side fuses.
6. Terminal blocks with numbered and color-coded wiring to match wiring diagram.
7. Single-point, field-power connection to a circuit breaker and heater branch circuiting complying with NFPA 70.
8. Factory Wiring Method: Metal raceway for factory-installed wiring outside of enclosures, except connections to each electric basin heater shall be liquid tight conduit.
 - a. Raceway shall be corrosion-resistant stainless steel or PVC coated steel.

2.8 GRAVITY WATER DISTRIBUTION BASIN

A. Design: Non-pressurized design with head of water level in basin adequate to overcome spray nozzle losses and designed to evenly distribute water over fill throughout the flow range indicated.

1. Material: stainless steel.
2. Location: Over each bank of fill with easily replaceable plastic spray nozzles mounted in bottom of basin.
3. Inlet Connection: Configured to mate to ASME B16.5, Class 150 flange.
4. Fasteners: stainless steel.
5. Joints and Seams: Sealed watertight.
6. Welded Connections: Sealed watertight by continuous welds.
7. Partitioning Dams: Same material as basin to distribute water over the fill to minimize icing and achieve proper operation while operating throughout the flow

range indicated.

- a. Manufacturer has option to use individual nozzle cups in lieu of partitioning dams to achieve operation within flow range (design to minimum) indicated.
8. Removable Panels: Same material as basin to completely cover top of basin. Secure panels to basin with removable stainless-steel hardware. Panels reinforced to accommodate service personnel walking on the panels without resulting in permanent deflection and damage.
9. Single-Inlet, Field Pipe Connection: PVC pipe arranged to achieve balancing of flow within cooling tower cell without the need for additional balancing valves. Pipe each cooling tower cell internally to a single, field connection suitable for mating to ASME B16.5, Class 150 flange and located on the side unless otherwise indicated.

2.9 FILL

- A. Materials: PVC, with maximum flame-spread index of 25 according to ASTM E84.
- B. Minimum Thickness: 15 mils, before forming.
- C. Fabrication: Fill-type sheets, fabricated, formed, and bonded together after forming into removable assemblies that are factory installed by manufacturer.
- D. Fill Material Operating Temperature: Suitable for entering-water temperatures up through 120 deg F.
- E. Hardware: stainless steel.

2.10 DRIFT ELIMINATORS

- A. Material: FRP or PVC; with maximum flame-spread index of 25 according to ASTM E84.
- B. UV Treatment: Inhibitors to protect against damage caused by UV radiation.
- C. Configuration: Multipass, designed and tested to reduce water carryover to 0.005 percent of design flow rate indicated.
- D. Location: Integral to fill.
- E. Hardware: stainless steel.

2.11 AIR INLET

- A. Air-Intake Louvers:
 1. Material: PVC.

2. UV Treatment: Inhibitors to protect against damage caused by UV radiation.
3. Louver Blades: Arranged to uniformly direct air into cooling tower, to minimize air resistance, and to prevent water from splashing out of tower during all modes of operation including operation with fans off.
4. Location: Integral to fill.

2.12 FAN AND DRIVE ASSEMBLY

A. Axial Fan: Balanced at the factory.

1. Blade Material: Aluminum.
2. Hub Material: Aluminum.
3. Fan Shaft: Corrosion resistant.
4. Fan Shaft Bearings: Self-aligning ball or roller bearings with moisture-proof seals and premium, moisture-resistant grease suitable for temperatures between minus 20 and plus 300 deg F. Bearings designed for an L-10 life of 100,000 hours.
5. Bearings Grease Fittings: Extended lubrication lines to an easily accessible location.

B. Belt Drive:

1. Service Factor: 1.5 based on motor nameplate horsepower.
2. Sheaves: Fan and motor shafts shall have taper-lock sheaves fabricated from corrosion-resistant materials.
3. Belt:
 - a. Multiple V-belt design with a matched set of belts.
 - b. One-piece, multi-grooved, solid-back belt.
4. Belt Material: Oil resistant, non-static conducting, and constructed of neoprene polyester cord.
5. Belt-Drive Guard: Comply with OSHA regulations.
6. Two-Motor, Single-Fan Drive:
 - a. Two single-speed motors per fan, one sized for full speed and load and the other sized for 67 percent of full-load speed.
 - b. Each motor shall have belt drive and be configured for operation when other motor fails.
 - c. Controls and wiring same as two-speed, two-winding motor.

C. Gear Drive: Right angle, reduced speed, and designed for cooling tower applications according to CTI STD 111. Motor and gear drive shall be aligned before shipment.

1. Gear Drive and Coupling Service Factor: 2.0 based on motor nameplate horsepower.
2. Housing: Cast iron, with epoxy or polyurethane finish, beveled high-strength steel gears continuously bathed in oil, and with lubrication to other internal parts at all operating speeds.
3. Mounting: Directly mounted to fan hub and connected to motor so motor shaft is

- in horizontal position.
- 4. Operation: Able to operate both forward and in reverse. Able to operate throughout entire speed range from design speed indicated down to 10 of design speed.
- 5. Drive-to-Motor Connection: Close coupled to motor using a flexible coupling.
- 6. Drive Shaft Material: Corrosion resistant, and fitted with flexible couplings on both ends.
- 7. Drive Guards: Exposed shaft and couplings shall have guards according to OSHA regulations.
- 8. Extend oil fill, drain, and vent to outside of cooling tower casing using galvanized-steel or stainless-steel piping. Include oil-level sight glass.

D. Fan Motor:

- 1. Comply with NEMA MG 1 unless otherwise indicated.
- 2. Description: NEMA MG 1, Design B, as required to comply with capacity and torque characteristics; medium induction motor.
- 3. Capacity and Torque Characteristics: Sufficient to start, accelerate, and operate connected loads at designated speeds, at installed altitude and environment, with indicated operating sequence, and without exceeding nameplate ratings or considering service factor.
- 4. Motor Enclosure: Totally enclosed fan-cooled (TEFC) and with epoxy or polyurethane finish.
- 5. Rotor: Random-wound, squirrel cage.
- 6. Energy Efficiency: Comply with ASHRAE/IES 90.1.
- 7. Service Factor: 1.15.
- 8. Temperature Rise: One class lower than insulation rating.
- 9. Insulation: Class H.
- 10. Variable-Speed Motors: Inverter-duty rated per NEMA MG 1, Section IV, "Performance Standard Applying to All Machines," Part 31, "Definite-Purpose, Inverter-Fed, Polyphase Motors."
- 11. Motor Base: Adjustable, or other suitable provision for adjusting belt tension.
- 12. Motor Shaft Grounding: Motors shall be controlled through variable-frequency controllers with shaft grounding system to protect motor bearings from induced voltage. Drag on motor shaft due to shaft ground system shall be less than 0.5 percent of motor nameplate horsepower.

E. Hardware: Galvanized or stainless steel.

2.13 AIR DISCHARGE

A. Velocity Recovery Fan Discharge Stack:

- 1. Design: Tapered and expanded for velocity recovery and improved energy efficiency.
- 2. Material: FRP or material matching casing.
- 3. Stack Height: Fabricated to extend above fan deck at least 5 feet unless otherwise indicated.
- 4. Service Access: Fabricated of multiple segments to facilitate removal of fan and

- drive components from overhead.
- 5. Stack Termination: Wire-mesh, polymer-coated, galvanized-steel or stainless-steel screens; segmented into multiple removable pie sections and complying with OSHA regulations.

B. Hardware: Galvanized or stainless steel.

2.14 ELECTRICAL POWER

A. Factory Install: A disconnect switch for each fan motor.

1. Locate in a convenient and field-accessible location within sight of motor.
2. Installation shall comply with NFPA 70.
3. Wire, Conduit, and Enclosures:
 - a. Minimum Conduit Size: 0.75 inch.
 - b. Materials: Corrosion resistant and constructed of stainless steel or PVC coated steel.
 - c. Motor Termination: Liquid tight conduit, not to exceed 36 inches long.
 - d. Supports: Support conduits, boxes, and enclosures using corrosion-resistant fastening hardware constructed of stainless steel.
 - e. Wire:
 - 1) Copper, rated for 600-V, solid wire for size No. 10 AWG and smaller and stranded wire for larger sizes.
 - 2) Minimum Wire Size: .
 - 3) Each circuit shall have a ground wire.
 - 4) Install wire in conduit.
 - f. Boxes, Condulets, and Enclosures: NEMA 250, Type 4.

B. Disconnect Switches:

1. Specification Grade: "Heavy Duty Type"; "quick-make," "quick-break" construction.
2. Three pole, fused.
3. 600 V rated.
4. Minimum SCCR: As required by electrical power distribution system, but not less than 65,000 A.
5. Enclosure: NEMA 250, .
6. Operating handle shall be of box-mounted type that directly drives switch mechanism.
7. Disconnect switch shall use a flange-operated visible blade that is close coupled to a vertical-lift-type handle that achieves a positive visible indication of disconnect with cover open or closed.
8. Disconnect switch shall have a defeatable, front-accessible, mechanical interlock to prevent opening of cover when switch is in "ON" position, and to prevent turning switch "ON" when the door is open.
9. Include a solid neutral as required by authorities having jurisdiction.
10. Disconnect switch shall have a ground lug for ground wire termination.

11. Operating handle shall be lockable in open position.
12. Horsepower rated.
13. Feed through or double lugged.

2.15 CONTROLS

- A. Vibration Switch: For each fan drive.
 1. Enclosure: NEMA 250, Type 4X.
 2. Vibration Detection: Sensor with a field-adjustable, acceleration-sensitivity set point in a range of 0 to 1 g and frequency range of 0 to 3000 cycles per minute. Cooling tower manufacturer shall recommend switch set point for proper operation and protection.
 3. Switch shall have manual-reset button hardwired connection to fan motor electrical circuit.
 4. Switch shall have field connection to a control system hardwired connection to fan motor electrical circuit.
 5. Switch shall, on sensing excessive vibration, signal an alarm for connection to control system and shut down the fan.
- B. Gear-Drive, Oil-Level Switch: Low-oil-level warning switch for connection to control system.
 1. Switch shall, on reaching a low-oil-level set point recommended by cooling tower manufacturer, signal an alarm through control system.

2.16 SERVICE ACCESS

- A. Doors:
 1. Large enough for personnel to access cooling tower internal components from both cooling tower end walls.
 2. Doors shall be hinged with handles operable from both sides of the door.
 3. Door materials shall match casing.
 4. Hinges and handles shall be corrosion resistant.
- B. External Ladders with Safety Cages: galvanized-steel fixed ladders with ladder extensions to access external platforms and top of cooling tower from adjacent grade without the need for portable ladders. Comply with 29 CFR 1910.27.
- C. External Motor Platforms with Handrails: galvanized-steel bar grating.
- D. Handrail: galvanized steel complete with kneerail and toeboard, around external platforms and top of cooling tower. Comply with 29 CFR 1910.23.
- E. Hardware: Galvanized steel when connecting galvanized-steel components; stainless steel when connecting other materials.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine cooling towers before installation. Reject cooling towers that are damaged.
- B. Before cooling tower installation, examine roughing-in for tower support, anchor-bolt sizes and locations, piping, controls, and electrical connections to verify actual locations, sizes, and other conditions affecting cooling tower performance, maintenance, and operation.
 - 1. Cooling tower locations indicated on Drawings are approximate. Determine exact locations before roughing-in for piping, controls, and electrical connections.
 - 2. Verify sizes, locations, and anchoring attachments of structural-steel support structures.
 - 3. Verify sizes and locations of roof curbs, equipment supports, and roof penetrations with actual equipment.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. Install cooling towers on support structure.
- B. Equipment Mounting:
 - 1. Comply with requirements for vibration isolation devices specified in Section 230548.13 "Vibration Controls for HVAC."
- C. Install anchor bolts to elevations required for proper attachment to supported equipment.
- D. Maintain manufacturer's recommended clearances for service and maintenance.
- E. Maintain clearances required by governing code.
- F. Loose Components: Install components, devices and accessories furnished by manufacturer, with cooling tower, that are not factory mounted.
 - 1. Loose components shall be installed by Contractor under supervision of manufacturer's factory-trained service personnel.

3.3 PIPING CONNECTIONS

- A. Piping installation requirements are specified in other Sections. Drawings indicate general arrangement of piping, fittings, and specialties.
- B. Where installing piping adjacent to cooling towers, allow space for service and

maintenance.

- C. Install flexible pipe connectors at pipe connections of cooling towers mounted on vibration isolators.
- D. Install drain piping with valve at cooling tower drain connections and at low points in piping.
- E. Connect cooling tower overflows and drains, and piping drains, to sanitary sewage system.
- F. Makeup-Water Piping:
 - 1. Comply with applicable requirements in Section 221116 "Domestic Water Piping."
 - 2. Connect to makeup-water connections with shutoff valve, plugged tee with pressure gage, flow meter, and drain connection with valve and union.
- G. Supply and Return Piping:
 - 1. Comply with applicable requirements in Section 232113 "Hydronic Piping" and Section 232116 "Hydronic Piping Specialties."
 - 2. Connect to entering cooling tower connections with shutoff valve, strainer, balancing valve, thermometer, plugged tee with pressure gage, flow meter, and drain connection with valve.
 - 3. Connect to leaving cooling tower connection with shutoff valve thermometer, plugged tee with full port ball valve for portable field instruments, and drain connection with valve.
 - 4. Make connections to cooling tower with a flange.

3.4 ELECTRICAL POWER CONNECTIONS

- A. Connect field electrical power source to each separate electrical device requiring field electrical power. Coordinate termination point and connection type with Installer.
- B. Comply with requirements in Section 260519 "Low-Voltage Electrical Power Conductors and Cables" for wiring connections.
- C. Comply with requirements in Section 260526 "Grounding and Bonding for Electrical Systems" for grounding connections.
- D. Install nameplate for each electrical connection indicating electrical equipment designation and circuit number feeding connection. Nameplate shall be laminated phenolic layers of black with engraved white letters at least 1/2 inch high. Locate nameplate where easily visible.

3.5 CONTROLS CONNECTIONS

- A. Install control and electrical power wiring to field-mounted control devices.

- B. Connect control wiring between cooling towers and other equipment to interlock operation as required to achieve a complete and functioning system.
- C. Connect control wiring between cooling tower control interface and control system for HVAC for remote monitoring and control of cooling towers. Comply with requirements in Section 230923 "Direct Digital Control (DDC) System for HVAC."
- D. Install label at each termination indicating control equipment designation serving cooling tower and the I/O point designation for each control connection. Comply with requirements in Section 260553 "Identification for Electrical Systems" for labeling and identifying products and installations.

3.6 FIELD QUALITY CONTROL

- A. Manufacturer's Field Service: Engage a factory-authorized service representative to test and inspect components, assemblies, and equipment installations, including connections.
- B. Perform tests and inspections with the assistance of a factory-authorized service representative.
- C. Tests and Inspections: Comply with CTI ATC 105.
- D. Cooling towers will be considered defective if they do not pass tests and inspections.
- E. Prepare test and inspection reports.

3.7 STARTUP SERVICE

- A. Engage a factory-authorized service representative to perform startup service.
- B. Inspect field-assembled components, equipment installation, and piping; controls; and electrical connections for proper assemblies, installations, and connections.
- C. Obtain performance data from manufacturer.
 - 1. Complete installation and startup checks according to manufacturer's written instructions and perform the following:
 - a. Clean entire unit including basins.
 - b. Verify that accessories are properly installed.
 - c. Verify clearances for airflow and for cooling tower servicing.
 - d. Check for vibration isolation and structural support.
 - e. Lubricate bearings.
 - f. Verify fan rotation for correct direction and for vibration or binding and correct problems.
 - g. Adjust belts to proper alignment and tension.
 - h. Verify proper oil level in gear-drive housing. Fill with oil to proper level.
 - i. Operate variable-speed fans through entire operating range and check for

- harmonic vibration imbalance. Set motor controller to skip speeds resulting in abnormal vibration.
 - j. Check vibration switch setting. Verify operation.
 - k. Verify water level in tower basin. Fill to proper startup level. Check makeup-water-level control and valve.
 - l. Verify operation of basin heater and control.
 - m. Verify that cooling tower air discharge is not recirculating air into tower or HVAC air intakes. Recommend corrective action.
 - n. Replace defective and malfunctioning units.
- D. Start cooling tower and associated water pumps. Follow manufacturer's written starting procedures.
- E. Prepare a written startup report that records the results of tests and inspections.

3.8 ADJUSTING

- A. Set and balance water flow to each tower inlet.
- B. Adjust water-level control for proper operating level.
- C. Adjust basin heater control for proper operating set point.

3.9 DEMONSTRATION

- A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain cooling towers.
 - 1. Video record the training sessions.
 - 2. Instructor shall be factory trained and certified.
 - 3. Perform not less than 4 hours of training.
 - 4. Train personnel in operation and maintenance and to obtain maximum efficiency in plant operation.
 - 5. Perform instructional videos showing general operation and maintenance that are coordinated with operation and maintenance manuals.
 - 6. Obtain Owner sign-off that training is complete.
 - 7. Owner training shall be held at Project site.

END OF SECTION 236514.14

SECTION 3
BID INFORMATION/INSTRUCTIONS

A. Bid Submittal.

1. The bid, along with all other accompanying documents and materials submitted by the bidder, will be deemed to constitute the entire bid. The bidder shall promptly furnish any additional information requested relative to its bid.
2. Firms shall submit one (1) original bid, including all accompanying documents, in a sealed envelope. DO NOT USE SPIRAL BOUND OR ANY EDGING THAT IMPEDES THE ABILITY to easily search for required document submissions. (3-ring binder or clips are allowed). The bid may be submitted via USPS, courier, or hand delivery to:

Kristen Emmendorfer, Procurement Director
IFB – F25-7034-29A
KCATA – C/O Shipping and Receiving
1350 East 17th Street
Kansas City, Missouri 64108

3. The package must be sealed and labeled with the IFB number and Project Title.
4. Bidders please include a USB drive, without password protection, containing all bid documents.
5. In person deliveries are to be made to KCATA's Shipping/Receiving Department which is accessed through KCATA's secured entrance at 17th & Forest Avenue, Kansas City, Missouri. Bids submitted to or delivered to other locations at KCATA may be considered late and non-responsive.
6. Proposals received via electronic mail (email) will not be considered.
7. Bids received before the bid closing time will be kept securely sealed until the expiration of the due date and time.

B. Reservations.

1. KCATA reserves the right to waive informalities or irregularities in bids, to accept or reject any or all bids, to cancel this IFB in part or in its entirety, and to re-advertise for bids if it is in the best interest of the Authority. KCATA shall be the sole judge of what is in its best interest with respect to this IFB.
2. KCATA reserves the right to make multiple awards if it is in the best interest of the Authority.
3. The Authority reserves the right to reject bids that alter the Bid Response Form or otherwise take exception to the bid requirements. Bidders may submit alternative bids along with a complete description of the proposed alternative; however, the decision to accept or reject such alternative is entirely at the sole discretion of the Authority.
4. This IFB does not commit KCATA to award a contract, to pay any cost incurred in preparation of a bid, or to procure a contract for services.

C. Approved Equals.

1. Wherever brand, manufacturer, or product names are used, they are included only for the purposes of establishing a description of minimum quality of the requested item unless otherwise specified. This inclusion is not to be considered as advocating or prescribing the use of any particular brand or item or product. However, approved equals or better must be pre-approved by the Buyer. ***All requests for approved***

equals shall be received in writing by no later than 30, 2025, addressed to Kristene@kcata.org with copy to Project Manager Lee Barnes @ LBarnes@kcata.org KCATA's acceptance or rejection of a request for an approved equal will be published on www.kcata.org via Addendum attached to the procurement opportunity announcement.

2. **All requests for approved equals shall be provided to KCATA in writing. See attached document for use.** Any changes to the specifications will be made by addendum.
3. When an approved equal is requested, the Bidder shall provide evidence about the product to the KCATA, exhibiting that the proposed substitute or approved equal, shall furnish sufficient technical data, test results, etc. to enable the KCATA to determine whether the Bidder's product is or is not equal to specifications and minimum salient characteristics of the equipment to be procured.

D. Protests.

1. The following protest procedures will be employed for this procurement. For the purposes of these procedures, "days" shall mean business days of KCATA administrative personnel which are days other than a Saturday, Sunday or legal holidays observed by KCATA for such administrative personnel. Protests may be accepted electronically (email or facsimile) as long as the transmission is dated.
 - a. **Pre-Submittal.** A pre-submittal protest is received prior to the bid due date. Pre-submittal protests must be received by the Authority, in writing and addressed to KCATA's Director of Procurement, no later than five (5) days before the bid closing date.
 - b. **Post-Submittal/Pre-Award.** A post-submittal/pre-award protest is a protest against making an award and is received after receipt of bids but before award of a contract. Post-submittal protests must be received by the Authority, in writing and addressed to KCATA's Director of Procurement, no later than five (5) days after the bid closing date.
 - c. **Post-Award.** Post-Award protests must be received by the Authority, in writing and addressed to KCATA's Director of Procurement, no later than five (5) days after the date of the Notice of Intent to Award.
2. Protests shall include, at a minimum:
 - The name and address of the protesting party and its relationship to the procurement sufficient to establish that the protest is being filed by an interested party;
 - Identity of the contact person for the protester, including name, title, address, telephone, and email address. If the contact point is a third-party representing the protester, the same information must be provided, plus a statement defining the relationship between the protester and the third party;
 - Identification of the procurement and whether it is identified as Pre-Submittal, Post-Submittal/Pre-Award or Post-Award for the purpose of protest;
 - A description of the nature of the protest, referencing the portion(s) of the solicitation or contract (if awarded) involved;
 - Identification of the provision(s) of any law, regulation, or other governance upon which the protest is based;
 - A complete discussion of the basis for the protest, including all supporting facts, documents, or data;
 - A statement of the specific relief requested; and
 - A notarized affirmation by the protester (if an individual) or by an owner or officer of the protester (if not an individual) as to the truth and accuracy of the statements made in the protest submittal.
3. The Director of Procurement shall respond in writing within five (5) days from the date of the written request. If the protester is not satisfied with the response of Director of Procurement, the protester may appeal in writing to KCATA's Chief Financial Officer within five (5) days from the date of the Director of Procurement's response.

4. The Chief Financial Officer will decide if the protest and the appeal (if any) have been given fair and reasonable consideration, or if additional consideration is warranted. The Chief Financial Officer's response will be provided within ten (10) days after receipt of the request. The Chief Financial Officer's decision is final and no further action on the protest shall be taken by the KCATA.
5. By written notice to all parties, KCATA's Director of Procurement may extend the time provided for each step of the protest procedures, extend the date of notice of award, or postpone the award of a contract if deemed appropriate for protest resolution.
6. Protesters shall be aware of the Federal Transit Administration's (FTA) protest procedures with the FTA Regional Office (ref: FTA Circular 4220.1F) If federal funding is involved, FTA will review protests from a third party only when: 1) a grantee does not have a written protest procedure or fails to follow its procedure or fails to review a complaint or protest; or 2) violations of specific federal laws or regulations have occurred.
7. An appeal to FTA must be received by FTA's regional office within five (5) working days of the date the protester learned or should have learned of KCATA's decision. Protests shall be addressed to: Regional Administrator, FTA Region 7, 901 Locust, Room 404, Kansas City, Missouri, 64106.

E. Omissions and Form of Contract.

1. Omissions. The Contractor will be responsible for providing all services, equipment, facilities, and functions which are necessary for the safe, reliable, efficient, and well-managed operation of the program, within the general parameters described in this IFB, and consistent with established industry practices, regardless of whether those services, equipment, facilities, and functions are specifically mentioned in this IFB or not. The bidder should clearly identify any omissions to the requirements set forth in the IFB.
2. Form of Contract. A **sample** copy of the standard KCATA contract is attached to this IFB as Attachment A. The standard contract terms and conditions outline various legal and administrative duties and responsibilities assumed by persons or organizations contracting with KCATA. It contains terms and conditions affecting the successful performance of the procurement. **Bids shall not stipulate any conditions or exceptions to the bid package or addenda.** The successful bidder will be expected to execute this contract.

F. Authorization to Bid.

1. Sealed bids shall be signed by an official authorized to commit the company into entering into a contract with KCATA.
2. If an individual doing business under a fictitious name makes the bid, the bid shall so state. If the bid is made by a partnership, the full names and addresses of all members of the partnership shall be given and one principal member shall sign the bid. If a corporation, Limited Liability Company, or other legal entity makes the bid, an authorized officer shall sign it in the corporate name. If the bid is made by a joint venture, the full names and addresses of all members of the joint venture shall be given and one member shall sign the bid authorized thereof.

G. Bidder's Responsibilities.

1. By submitting a bid, the bidder represents that bidder has read and understands the IFB and the bid is made in accordance with the IFB; and
2. By submitting a bid, the bidder represents that bidder possesses the capabilities, resources, and personnel necessary to provide efficient and successful service to KCATA.

H. Withdrawal of Bids.

1. Bids may be withdrawn upon written request received by the KCATA before the time fixed for closing. Withdrawal of a bid shall not prejudice the right of the bidder to submit a new bid, provided it is received in a timely manner as provided above. The bond or certified check of any bidder withdrawing its bid, in accordance with the foregoing condition, will be returned promptly.
2. No bids may be withdrawn for a period of 90 days after the time set herein for the opening of bids.

I. Disclosure of Proprietary Information.

1. A bidder may restrict the disclosure of scientific and technological innovations in which it has a proprietary interest, or other information that is protected from public disclosure by law, which is contained in the bids:
 - a. Marking each page of each such document prominently in 16-point font with the words "Proprietary Information;"
 - b. printing each page of each such document in a different color paper other than the paper which the remainder of the bid is printed; and
 - c. segregating each page of each such document in a sealed envelope, which shall prominently display, on the outside, the words "Proprietary Information" in at least 16-point font, along with the name and address of the Bidder.
2. After either a contract is executed pursuant to the IFB, or all bids are rejected, the bids will be considered public records open for inspection. If access to documents marked "Proprietary Information," as provided above, is requested under the Missouri Open Records Law, the KCATA will notify the Bidder of the request and the Bidder shall have the burden to establish that such documents are exempt from disclosure under the Law. Notwithstanding the foregoing, in response to a formal request for information, the KCATA reserves the right to release any documents if the KCATA determines that such information is a public record pursuant to the Missouri Sunshine Law.
3. **Non-discrimination.** Proposers shall not discriminate on the basis of race, color, creed, age, sex, sexual orientation, gender identity, national origin, or disability in the performance of this project. The Proposer shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of contracts. Failure by the Proposer to carry out these requirements is a material breach of the resulting contract, which may result in the termination of the contract or such other remedy as KCATA deems appropriate.

J. Required Documents.

1. Incomplete Bids. All documents that are required to be submitted with this Bid are listed below. The bidder shall read all forms carefully before signing. Incomplete bid documents may render the bid non-responsive.
2. Bid Response/Pricing Pages.
 - a. Bids shall be firm and final.
 - b. Bidders shall be responsible for furnishing and delivering new and complete materials and/or services to include the installation, assembly, accessories, personnel, training, warranty, and guarantee as specified to make this procurement complete.
 - c. Bidders shall complete the Bid Form Summary provided (Attachment B). Use of any other may deem the bid non-responsive. The bid price shall include, as applicable, all items of labor, materials, tools, equipment, transportation, and other costs necessary to complete the manufacture, delivery,

assembly, installation, and drawings, if required, of the materials or services required in this procurement.

- d. The quantities specified for purchase by KCATA are based upon the best available estimates, taking into consideration the consumption during the past periods, and do not determine the actual amount the Authority may order during the contract period. The quantities are subject to change. Payment will be based on actual order quantities based on the unit rates quoted.
 - e. It is the intention of the specifications to provide complete and accurate descriptions for materials and/or services required by the KCATA. Any materials or services omitted from the specifications that are clearly necessary for the completion of this bid, although not directly specified or called for in the specifications, shall be considered a portion of the bid. Bidder shall indicate the additional material and services it has determined to be required for this procurement.
 - f. Bids shall indicate the unit price, extended to reflect the total bid. Any difference between the unit price correctly extended and the total price shall be resolved in favor of the unit price, except where the bidder clearly indicates that the total price is based on consideration of being awarded all items of the bid.
 - g. Bid shall be net and shall reflect any available discount. Separate discount for timely payment shall not be given consideration in evaluating bids, except in the case of bids that end in a tie.
 - h. Tax Exempt Status. The KCATA is exempt from payment of federal, state, and local sales taxes, and such taxes shall not be included in the bid price. Nevertheless, the bidder is not exempt from these taxes when purchasing materials directly from its supplier.
3. KCATA Affidavit of Civil Rights Compliance. Contractors and subcontractors agree to comply with Federal Transit Law, specifically 49 U.S.C. 5332 which prohibits discrimination, including discrimination in employment and discrimination in business opportunity. This form is included as Attachment D. In lieu of this form, firms may submit a current certificate from another government agency verifying compliance with their Affirmative Action program.
4. KCATA Workforce Analysis/EEO-1 Report. Firms have the option of submitting KCATA's form (Attachment E-2) or a current EEO-1 Report that has been filed with another government agency.
5. Employee Eligibility Verification.
- a. In accordance with Section 285.500 RSMo, firms are required by sworn affidavit and provision of documentation, to affirm its enrollment and participation in a Federal work authorization program with respect to employees working in connection with the contracted services. The bidder is required to obtain the same affirmation from all subcontractors at all tiers.
 - b. The bidder shall also affirm (Attachment F) that it does not knowingly employ any person in connection with the contracted services who does not have the legal right or authorization under Federal law to work in the United States as defined in 8 U.S.C. §1324a(h)(3). This form will need to be updated annually.
 - c. Acceptable proof of enrollment includes the E-Verify Memorandum of Understanding (MOU) – a valid, completed copy of the first page identifying the business entity and a valid copy of the signature page completed and signed by the business entity, the Social Security Administration, and the Department of Homeland Security (DHS).
 - d. The Bidder shall obtain this affidavit from its subcontractors at all tiers. The subcontractors' forms shall be submitted as part of the bid documents.

- e. This form is renewable annually.
6. Certification of Debarment.
- a. The bidder shall certify that it is not included in the "U.S. General Services Administration's List of Parties Excluded from Federal Procurement or Non-procurement Programs" (Attachment G).
 - b. The bidder agrees to refrain from awarding any subcontract of any amount (at any tier) to a debarred or suspended subcontractor, and to obtain a similar certification from any subcontractor (at any tier) seeking a contract exceeding \$25,000.
 - c. The bidder agrees to provide the KCATA a copy of each conditioned debarment or suspension certification provided by a prospective subcontractor at any tier, and to refrain from awarding a subcontract with any party that has submitted a conditioned debarment or suspension certification until FTA approval is obtained.
7. Lobbying Certification. For purchases exceeding \$100,000, awarded vendors will be required to provide a certification that no Federal funds were used to influence or attempt to influence an officer or employee of any Federal department or agency, a member of Congress or State legislature, or an employee of a member of Congress or State legislature regarding the project (Attachment H). This certification is required from all subcontractors (at any tier) if the subcontract is valued at \$100,000 or more.
8. Buy America Certification. All bidders as applicable shall complete the appropriate part of the Buy America Certificate Form to certify that steel, iron, and manufactured products used in this project are produced in the United States
9. Federal Tax Liability and Recent Felony Convictions
- a. Contractors must certify (Attachment I) that they do not:
 - 1) Have any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability; and
 - 2) Was not convicted of the felony criminal violation under any Federal law within the preceding 24 months; and
 - b. Contractor is described as any private corporation, partnership, trust, joint-stock company, sole proprietorship, or other business association.
 - c. The Contractor agrees to include these requirements in all subcontracts at all tiers, regardless of value, and to obtain the same certification and disclosure from all subcontractors (at all tiers).
10. Non-Collusion Affidavit for Prime Contractor (Attachment J).
11. Receipt of Addenda. In the event that Addenda are issued against this Invitation to Bid, bidders will be issued a Receipt of Addenda Form to complete and return with the Invitation to Bid, acknowledging receipt of all addenda issued. This is to safeguard KCATA and the bidder against failure to communicate any important information and changes to the scope of the procurement.
11. Other Documents. Bidders shall submit any other documents necessary to complete this bid. This may include a copy of the warranty offered, technical information, or product brochures.

12. Subcontractor Form Submittals. If Bidder is utilizing subcontractors on this project, the above forms are required with the Bidder's submittal. **Contract Kristen Emmendorfer for required forms.**

L. Vendor Registration and Affirmative Action.

1. All firms (prime contractors, subcontractors, and suppliers) doing business with KCATA must complete a vendor registration process. KCATA uses a secure, online vendor management system (B2GNow). Confidential information (Tax ID number, etc.) will not be publicized. *Vendors that have previously registered with KCATA must now also complete the online process with updated information.* Vendors only have to go through this process once but will be required to update their certifications/affidavits on a regular basis.
2. To begin, you must set up an account at <https://kcata.diversitycompliance.com> where you will be given a temporary password. You will receive a confirmation email and be directed to change your password. You may follow the instruction guide to complete the process. B2GNow also conducts webinars that provide guided training on navigating the system and its available features.
3. Vendors must complete the online Vendor Registration Questionnaire.
4. Optional Documents. Firms have the option to attach additional documents to the Questionnaire, including brochures.
5. For questions on these requirements, or for assistance in completing the forms, please contact Carla Mann, KCATA's Community Outreach Specialist at (816) 346-0208 or via email at cmann@kcata.org.

SECTION 4
BID EVALUATION, ACCEPTANCE AND AWARD

A. Bid Evaluation

1. It is the intent of the KCATA to award a contract to the responsive and responsible bidder whose bid conforming to this IFB, is the lowest in price and, in KCATA's sole discretion, the most advantageous to the KCATA. Factors such as discounts, transportation costs and life cycle costs will be considered in determining which bid is lowest in price.
2. A responsible bidder possesses the ability to perform successfully under the terms and conditions of the proposed contract considering matters including Contractor integrity, record of past performance, and financial and technical resources.
3. The low bidder will be required to demonstrate its ability to provide the times and/or perform services contained in the solicitation, in a timely manner, to the complete satisfaction of the Authority. Doubt as to technical ability, productive capability, and financial strength which cannot be resolved affirmatively may result in a determination of non-responsibility by KCATA.
4. If the low bidder is eliminated, then the second lowest bidder will be required to demonstrate its ability to perform services as described herein. This process will continue to the next lowest bidder until a bidder successfully meets the specification requirements.
5. KCATA reserves the right to investigate the qualifications of all bidders under consideration to confirm any part of the information furnished by a bidder, or to require other evidence of managerial, financial, or other capabilities which are considered necessary for the successful performance of the contract.

B. Bid Acceptance. Each bid is to be submitted with the understanding that the acceptance in writing by the KCATA of the bid to furnish the materials and services, or any part thereof, described therein shall constitute a contract between the bidder and the KCATA which shall bind the bidder on its part to furnish and deliver at the price given and in accordance with the terms and conditions of said accepted bid and KCATA's contract included as Attachment A.

C. Unbalanced Bid. The Authority may determine that a bid is non-responsive if the prices proposed are materially unbalanced. A bid is materially unbalanced when it is based on prices significantly less than cost or prices significantly overstated relative to cost.

D. Bid Award.

1. The procurement shall be awarded on the basis of the lowest responsive bidder complying with all the conditions of the bids, specifications, and instructions. The KCATA reserves the right to award any or all items of the bid or not to award at all.
2. In the case of multiple line items, the KCATA reserves the right to award the entire bid to one bidder, or to split the award of the items to multiple bidders.
3. If awarded at all, the bid may be awarded to the bidder whose total price is lowest, whose bid is responsive to the invitation thereof, and who is determined to be technically and financially responsible to perform as required. **Conditional bids and any bid taking exception to these instructions or conditions, to the contract terms/conditions or specifications, or to other contract requirements shall be considered non-responsive and shall be rejected.**

E. Purchase Order and/or Contract.

1. Upon acceptance and award of a bid by KCATA, a purchase order or contract shall be issued thereon and shall constitute a contract for furnishing the items described in the bid in strict conformity with the specifications and bid conditions.
2. The purchase order or contract shall be considered as made in Kansas City, Missouri, and the construction and enforcement of it shall be in accordance with the laws of the State of Missouri except those pertaining to conflicts of law.

F. Licenses and Permits.

1. The bidder shall, without additional expense to KCATA, be responsible for obtaining any necessary licenses and permits, and for complying with all federal, state, and municipal laws, codes, and regulations applicable to the providing of products, equipment or materials, or the performance of the work in this procurement.
2. The Contractor shall comply with all applicable and current rules, regulations, and ordinances of any applicable federal, state, county or municipal governmental body or authority, including those as set forth by the Environmental Protection Agency (EPA), the Missouri Department of Natural Resources (MDNR), the Kansas Department of Health and Environment (KDHE), the FTA, the Department of Transportation (DOT), and the City of Kansas City, Missouri.



**ATTACHMENT A
SAMPLE CONTRACT AGREEMENT AND CONTRACT TERMS & CONDITIONS**

**INVITATION FOR BIDS (IFB) F25-7034-39A
Provide and Deliver 450 Ton Chiller Equipment for Kansas City Area Transportation Authority**

For this bid award, KCATA is using AIA A152, 2019 Purchase Order. A sample of the PO document is provided for review by potential bidders. KCATA has included additional terms required for this PO by our policy and Federal Transit Administration regulations for grant funded purchases. These are non-negotiable, required FTA terms.

ORDER OF PRECEDENCE

In the event of any inconsistency between the articles, attachments, specifications, or provisions which constitute the final PO/Contract, the following order of precedence shall apply:

- A. KCATA's Standard Terms and Conditions and Federal Transit Administration Terms and Conditions;
- C. Executed Contract/PO and any attachments incorporated by reference; and
- D. Contract's Bid Response; and
- E. KCATA's IFB/SCOPE OF WORK/SPECIFICATIONS, including any attachments incorporated by reference.

DRAFT

AIA® Document A152® - 2019

Purchase Order

PURCHASER: (name and address)
Kansas City Area Transportation
Authority
1200 E. 18th Street
Kansas City, MO 64108
Telephone Number: 816-346-0360
Fax Number: 816-346-0336

VENDOR: (name and address)

ARCHITECT: (name and address)
Custom Engineering, Inc.
12760 East US Highway 40
Independence, MO 64055

(hereinafter referred to as "KCATA" or
"Purchaser")

PURCHASE ORDER INFORMATION:
Number:

DELIVER TO: (name and address)
Kansas City Area Transportation
Authority (KCATA)
Attention: Shipping & Receiving
1350 East 17th Street
Kansas City, MO 64108

PROJECT: (name and address)
Provide and Deliver 450 Ton Chiller
Equipment for Kansas City Area
Transportation Authority

Date:

IDENTIFICATION OF GOODS

The Vendor agrees to provide the following goods to the Purchaser:

(Insert a list of goods to be provided by the Vendor, including details for identification and quantities for each, or identify a separate exhibit that includes such information.)

The vendor will Fabricate and Deliver one (1) 450 Ton Chiller.

The Vendor will Fabricate and Deliver one (1) Tower for the 450 Ton Chiller. .

PRICE

The Purchaser shall pay the Vendor the following amount for the goods provided under this Purchase Order:

(Insert the price the Purchaser is to pay the Vendor, including amounts for taxes, duties, tariffs, handling charges, delivery, and incidental services. Identify unit prices, if applicable.)

PAYMENTS

The Purchaser shall pay the Vendor according to the following payment terms:

(Insert payment terms, such as payment due dates, deposit requirements, and discounts, if any.)

DELIVERY

The Vendor shall deliver the goods to the "Deliver To" address above. The Vendor's additional delivery requirements are:

(Insert additional delivery requirements, such as delivery date or range of dates, hours of delivery, split delivery, inside delivery, unpacking requirements, or receiving instructions.)

Kansas City Area Transportation Authority (KCATA)
Attention: Shipping & Receiving Department
1350 E. 17th Street
Kansas City, MO 64108

OTHER REQUIREMENTS OR TERMS

CONTRACT DOCUMENTS

The Contract Documents consist of:

- 1 This Purchase Order and all documents or exhibits referenced herein
- 2 AIA Document A152™-2019, Exhibit A - Terms and Conditions
- 3 Other:

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User Notes:

(389ADA41)

- Exhibit A. KCATA Terms and Conditions
- Exhibit B. Federal Transit Administration (FTA) Terms and Conditions
- Exhibit C. AIA A152 2019, Terms and Conditions
- Exhibit D. Project Manual

SIGNATURE of the Purchaser's Authorized Representative

KCATA Board of Commissioners
Purchaser's Authorized Representative
(Print Name and Title)

DATE

SIGNATURE of the Vendor's Authorized Representative

Vendor's Authorized Representative
(Print Name and Title)

DATE



**Complete Contract Terms and Conditions
(Exhibit A to Sample AIA 152 Provided)***

****Federal Transit Administration Terms are not negotiable***

1. ACCEPTANCE OF MATERIALS – NO RELEASE

Acceptance of any portion of the products, equipment or materials prior to final acceptance shall not release the Contractor from liability for faulty workmanship or materials, or for failure to fully comply with all of the terms of this Contract. KCATA reserves the right and shall be at liberty to inspect all products, equipment or materials and workmanship at any time during the Contract term, and shall have the right to reject all materials and workmanship which do not conform with the conditions, Contract requirements or specifications; provided, however, that KCATA is under no duty to make such inspection, and Contractor shall (notwithstanding any such inspection) have a continuing obligation to furnish all products, services, equipment or materials and workmanship in accordance with the instructions, Contract requirements and specifications. Until delivery and acceptance, and after any rejections, risk of loss will be on the Contractor, unless loss results from negligence of KCATA.

2. AGREEMENT IN ENTIRETY

This Contract represents the entire and integrated agreement between the parties and supersedes all prior negotiations, representations, or agreements, either written or oral. This Contract may be amended only by written instrument signed by all parties.

3. ASSIGNMENT

The Contractor shall not assign any interest in this Contract and shall not transfer any interest in the same (whether by assignment or novation), without the prior written consent of KCATA. In the event of KCATA's consent to assignment of this Contract, all of the terms, provisions and conditions of the Contract shall be binding upon and inure to the benefit of the parties and their respective successors, assigns and legal representative.

4. BANKRUPTCY

In the event the Contractor enters into proceedings relating to bankruptcy, whether voluntary or involuntary, the Contractor agrees to furnish, by certified mail, written notification of the bankruptcy to the KCATA official identified in the "Notification and Communication" section. This notification shall be furnished within five (5) days of the initiation of the proceedings relating to bankruptcy filing. This notification shall include the date on which the bankruptcy petition was filed, the identity of the court in which the bankruptcy petition was filed, and a listing of KCATA Contract numbers against which final payment has not been made. This obligation remains in effect until final payment under this Contract.

5. BONDING REQUIREMENTS -

Performance Bond

Payment Bond

1. The Contractor shall furnish, at its own expense, a performance bond and payment bond (Payment bond is applicable if the bidder is using subcontractors who must be identified prior to award of contract) payable to KCATA in the amount of 100 % of the full expected cost of the services to be performed (goods to be delivered) from a licensed, fully qualified surety company acceptable to KCATA and listed as a company currently authorized under 31 CFR Part 22 as possessing a certificate of Authority as described hereunder. The bonds shall remain valid

and in effect for the full term of this Contract. KCATA may require an increase in the bond amount in the event of changes to the contract price.

2. A cash deposit, certified check, irrevocable letter of credit (LOC) or other negotiable instrument may be accepted by KCATA in lieu of a bond. The form of any substitution in lieu of a bond must be approved by KCATA. The cash deposit, certified check, irrevocable LOC, or other negotiable instrument accepted in lieu of a bond must remain valid and in effect for the full term of this Contract.
3. If used, the LOC shall be irrevocable, unconditional, and issued by an acceptable federally insured financial institution. The LOC must cover the entire period of performance or may be submitted with an initial expiration date which is a minimum period of one year from the date of issuance, with a provision which states that the LOC is automatically extended without amendment for one year from the expiration date, or any future expiration date, until the period of performance is completed. The period of performance shall end the later of 90 days following final payment, or until completion of any warranty period. KCATA may require additional performance bond protection when the Contract Sum is increased.
4. Contractor's failure to maintain a valid payment/performance bond or a valid substitution for the full term of this Contract will be a breach of this Contract.

Warranty of Work and Maintenance.

1. The Contractor warrants to KCATA, that all products, equipment and materials furnished under this Contract will be of highest quality and new unless otherwise specified by KCATA, free from faults and defects in workmanship or materials, merchantable, suitable for its intended purpose and in conformance with the Contract. All work not so conforming to these standards shall be considered defective. If required by KCATA, the Contractor shall furnish satisfactory evidence as to the kind and quality of products, equipment, and materials. The work or services furnished must be of first quality and the workmanship must be the best obtainable in the various trades.
2. The work must be safe, substantial, and durable construction in all respects. The Contractor hereby guarantees the work against defective materials or faulty workmanship for a minimum period of one (1) year after final payment by KCATA and shall replace or repair any defective products, equipment or materials or faulty workmanship during the period of the guarantee at no cost to KCATA. As additional security for these guarantees, the Contractor shall, prior to the release of final payment, furnish separate maintenance (or guarantee) bonds in form acceptable to KCATA written by the same corporate surety that provides the performance bond for this Contract. These bonds shall secure the Contractor's obligation to replace or repair defective products, equipment and materials and faulty workmanship for a minimum period of one (1) year after final payment and shall be written in an amount equal to one hundred percent (100%) of the Contract Sum, as adjusted (if at all).

6. BREACH OF CONTRACT; REMEDIES

- A. If the Contractor shall fail, refuse or neglect to comply with any terms of this Contract, such failure shall be deemed a total breach of contract and the Contractor shall be subject to legal recourse by KCATA, plus costs resulting from failure to comply including the KCATA's reasonable attorney fees, whether or not suit be commenced.
- B. The duties and obligations imposed by this Contract and the rights and remedies available hereunder shall be in addition to and not a limitation of any duties, obligations, rights, and remedies otherwise imposed or available by law or equity. No action or failure to act by KCATA shall constitute a waiver of any right or duty afforded under this Contract, nor shall any such action or failure to act constitute an approval of or acquiescence in any breach hereunder, except as may be specifically agreed in writing.

7. CHANGES

KCATA may at any time, by a written order, and without notice to the surety, make changes within the general scope of this Contract. No such changes shall be made by the Contractor without prior written approval by KCATA. If any such change causes an increase or decrease in the Contract sum, or the time required for performance of this Contract, whether changed or not changed by such order, an equitable adjustment shall be made by written modification. Any Contractor's claim for adjustment under this clause must be asserted within thirty (30) days from the date of receipt by the Contractor of the notification of change. Nothing in this clause shall excuse the Contractor from proceeding with this Contract as changed.

8. CIVIL RIGHTS

A. Nondiscrimination in Federal Public Transportation Programs.

- 1. Contractor must prohibit:
 - a. discrimination based on race, color, religion, national origin, sex (including sexual orientation, disability, or age;
 - b. exclusion from participation in employment or a business opportunity for reasons identified in 49 U.S.C. § 5332;
 - c. denial of program benefits in employment or a business opportunity identified in 49 U.S.C. § 5332; and
 - d. discrimination identified in 49 U.S.C. § 5332, including discrimination in employment or a business opportunity identified in 49 U.S.C. § 5332.
- 2. Contractor must follow the most recent edition of FTA Circular 4702.1, "Title VI Requirements and Guidelines for Federal Transit Administration Recipients," to the extent consistent with applicable federal laws, regulations, requirements, and guidance. However, FTA does not require an Indian Tribe to comply with FTA program specific guidelines for Title VI when administering its agreement supported with federal assistance under the Tribal Transit Program.

B. Nondiscrimination – Title VI of the Civil Rights Act.

- 1. Contractor must prohibit discrimination based on race, color, or national origin;
- 2. Contractor must comply with a) Title VI of the Civil Rights Act of 1964, as amended, 42 U.S.C. § 2000d, et seq.; b) U.S. DOT regulations, "Nondiscrimination in Federally-Assisted Programs of the Department of Transportation – Effectuation of Title VI of the Civil Rights Act of 1964," 49 CFR Part 21; and c) Federal transit law, specifically 49 U.S.C. § 5332.
- 3. Contractor must follow a) the most recent edition of FTA Circular 4702.1, "Title VI Requirements and Guidelines for Federal Transit Administration Recipients," to the extent consistent with applicable federal laws, regulations,

requirements, and guidance; b) U.S. DOJ, "Guidelines for the enforcement of Title VI, Civil Rights Act of 1964," 28 C.F.R. § 50.3; and c) all other applicable federal guidance that may be issued.

C. Equal Employment Opportunity.

1. Federal Requirements and Guidance. Contractor must prohibit discrimination based on race, color, religion, sex, sexual orientation, or national origin; and
 - a. Comply with: (a) Title VII of the Civil Rights Act of 1964, as amended, 42 U.S.C. § 2000e, et seq.;
 - b. Comply with Title I of the Americans with Disabilities Act of 1990, as amended, 42 U.S.C. §§ 12101, et seq.;
 - c. Comply with federal transit law, specifically 49 U.S.C. § 5332, as provided in section 12 of FTA's Master Agreement;
 - d. Comply with FTA Circular 4704.1 "Equal Employment Opportunity (EEO) Requirements and Guidelines for Federal Transit Administration Recipients"; and
 - e. Follow other federal guidance pertaining to EEO laws, regulations, and requirements.
 2. Indian Tribes. Contractors will recognize that Title VII of the Civil Rights Act of 1964, as amended exempts Indian Tribes under the definition of "Employer".
 3. Nondiscrimination on the Basis of Sex. The Contractor agrees to comply with all Federal prohibitions against discrimination based on sex, including Title IX of the Education Amendments of 1972, as amended, 20 U.S.C. § 1681, et seq., U.S. DOT regulations, "Nondiscrimination on the Basis of Sex in Education Programs or Activities Receiving Federal Financial Assistance," 49 CFR part 25; and federal transit law, specifically 49 U.S.C. § 5332.
 4. Nondiscrimination on the Basis of Age. In accordance with the Age Discrimination in Employment Act, 29 U.S.C. §§ 621-634, U.S. Equal Employment Opportunity Commission (U.S.EEOC) regulations, "Age Discrimination in Employment Act," 29 C.F.R. part 1625, the Age Discrimination Act of 1975, as amended, 42 U.S.C. § 6101 et seq., which prohibits discrimination against individuals based on age in the administration of Programs, Projects and related activities receiving federal assistance; U. S. Department of Health and Human Services regulations, "Nondiscrimination on the Basis of Age in Programs or Activities Receiving Federal Financial Assistance," 45 C.F. R. part 90, and Federal transit law at 49 U.S.C. §5332.
 5. Nondiscrimination on the Basis of Disability. In accordance with section 504 of the Rehabilitation Act of 1973, as amended, 29 U.S.C. § 794, which prohibits discrimination based on disability in the administration of federally assisted programs, projects or activities; the Americans with Disabilities Act of 1990 (ADA), as amended, 42 U.S.C. §12101 et seq., the Architectural Barriers Act of 1968, as amended, 42 U.S.C. § 4151 et seq., which requires that buildings and public accommodations be accessible to individuals with disabilities; Federal transit law, specifically 49 U.S.C. § 5332, and other applicable federal laws, regulations, and requirements pertaining to access for seniors or individuals with disabilities. The Contractor agrees that it will not discriminate against individuals on the basis of disability. In addition, the Contractor agrees to comply with any implementing requirements FTA may issue.
- D. Access to Services for Persons with Limited English Proficiency. Compliance to provide meaningful access to public transportation services in accordance with Title VI of the Civil Rights Act of 1964, as amended, 42 U.S.C. § 2000d, et seq., and its implementing regulation at 28 CFR § 42.405(d), and applicable U.S. Department of Justice guidance.
- E. Promoting Free Speech and Religious Liberty. All Federal funding must be expended in full accordance with the U.S. Constitution, Federal Law, and statutory and public policy requirements, including but not limited to, those prohibiting discrimination and protecting free speech, religious liberty, public welfare, and the environment.

- F. Contractor understands that it is required to include this Article in all subcontracts. Failure by the Contractor to carry out these requirements or to include these requirements in any subcontract is a material breach of this Contract, which may result in the termination of this Contract or such other remedy as the KCATA deems appropriate, including but not limited to withholding monthly progress payments and/or disqualifying the Contractor from future bidding as non-responsible.

9. CONFLICTS OF INTEREST (ORGANIZATIONAL)

In accordance with 2 C.F.R. § 200.112, the Contractor certifies that it has no other activities or relationships that would make the Contractor unable, or potentially unable, to render impartial assistance or advice to KCATA, or that would impair the Contractor's objectivity in performing work under this Contract, or that would result in an unfair competitive advantage to Contractor or to another third party performing the Project work.

10. CONTRACTOR'S PERSONNEL

All of the services required hereunder shall be performed by the Contractor or under its supervision and all personnel engaged in the services shall be fully qualified and authorized under state and local law to perform such services. Any change in the key personnel, as described in the contractor's proposal, shall be subject to the written approval of KCATA; such approval shall not be unreasonably withheld. The parties agree that at all times during the entire term of this Contract that the persons listed in Contractor's proposal shall serve as the primary staff person(s) of Contractor to undertake, render and oversee all of the services of this Contract subject to KCATA's right to remove personnel. KCATA reserves the right to require the Contractor to remove any personnel and or subcontractors for any cause provided such request for removal shall be documented in writing to Consultant.

11. CONTRACTOR'S RESPONSIBILITY

No advantage shall be taken by the Contractor or its subcontractor of the omission of any part or detail which goes to make the equipment complete and operable for use by KCATA. In case of any variance, this specification shall take precedence over Contractor's or subcontractor's own specifications. The Contractor shall assume responsibility for all materials and services used whether the same is manufactured by the Contractor or purchased ready made from a source outside the Contractor's company.

12. DELIVERY

Materials and/or equipment shall be delivered to Kansas City Area Transportation Authority, Central Receiving Facility, Building #1, 1350 East 17th Street, Kansas City, Missouri, 64108. KCATA will assume custody of property at other locations, if so directed in writing by KCATA. Packing slips shall be furnished with the delivery of each shipment. KCATA reserves the right to inspect all deliveries or services before acceptance. All external components shall be wrapped for protection against damage during shipping and handling. Each specified unit shall be delivered to KCATA in first-class condition and the Contractor shall assume all responsibility and liability for said delivery. KCATA reserves the right to extend delivery or installation, postpone delivery or installation, or reschedule delivery or installation in case the delivery or installation of service equipment under this Agreement shall be necessarily delayed because of strike, injunction, civil disturbance, government controls, or by reason of any cause of circumstance beyond the control of the Contractor, as detailed in writing by the Contractor. The time of completion of a delivery or installation shall be extended by a number of days to be determined in each instance by KCATA by change order document, agreed upon mutually by KCATA and awarded Contractor, and executed by both parties.

13. DISPUTE RESOLUTION

- A. Except as otherwise provided in this Contract, any dispute concerning a question of fact arising under this Contract which is not disposed of by agreement shall be decided by KCATA's Director of Procurement, who shall reduce the decision to writing and mail or otherwise furnish a copy to the Contractor. The decision of the Director of Procurement shall be final and conclusive unless within ten (10) days from the date of receipt of such copy the Contractor mails or otherwise furnishes a written appeal addressed to the Chief Financial Officer, with a copy to the Director of Procurement. The determination of such appeal by the Chief Financial Officer shall be final and conclusive unless determined by a court of competent jurisdiction to have been fraudulent or capricious, arbitrary, or not supported by substantial evidence. In connection with any appeal proceeding under this clause the Contractor shall be afforded an

opportunity to be heard and to offer evidence in support of its appeal. Pending final decision of a dispute hereunder, and unless otherwise directed in writing by KCATA, the Contractor shall proceed diligently with performance in accordance with the Director of Procurement's decision.

- B. The duties and obligations imposed by the Contract and the rights and remedies available hereunder shall be in addition to and not a limitation of any duties, obligations, rights, and remedies otherwise imposed or available by law. No action or failure to act by the KCATA or Contractor shall constitute a waiver of any right or duty afforded any of them under the Contract, nor shall any such action or failure to act constitute an approval of or acquiescence in any breach thereunder, except as may be specifically agreed in writing.

14. DIVERSE BUSINESS ENTERPRISE REQUIREMENTS

- A. It is the policy of KCATA that Disadvantaged (DBE), Small (SBE), Minority-Owned (MBE), Woman-Owned (WBE), and Small Local (SLBE) Business Enterprises, shall have an equal opportunity to participate in KCATA contracts. It is also the policy of KCATA to:
 - 1. Ensure nondiscrimination in the award and administration of contracts;
 - 2. Create a level playing field on which diverse firms can compete fairly for contracts;
 - 3. Ensure that KCATA's diversity programs are narrowly tailored in accordance with applicable law;
 - 4. Help remove barriers to the participation of diverse firms in contracts;
 - 5. To promote the use of diverse firms in all types of contracts and procurement activities; and
 - 6. Assist in the development of firms that can compete successfully in the marketplace outside the diversity program.
- B. KCATA's diversity programs are based on the requirements of Title 49, Code of Federal Regulations, Part 26, and this Contract is subject to those regulations. Under this contract, Federally funded projects shall abide by DBE or SBE requirements as applicable. Projects that are funded by state or local entities will be subject to MBE, WBE, or SLBE requirements.
- C. **For this contract, NO GOAL for diverse business firms has been established.**
- E. The Contractor shall not discriminate on the basis of race, color, national origin or sex in the performance of this Contract. The Contractor shall carry out applicable requirements of 49 CFR. Part 26 in the award and administration of this contract. Failure by the Contractor to carry out these requirements is a material breach of this Contract, which may result in the termination of this Contract or such other remedy as KCATA deems appropriate. Each subcontract the Contractor signs with a subcontractor must include the assurance in this paragraph (see 49 C.F.R. 26.13(b)).
- F. The Contractor may not substitute, remove, or terminate a diverse subcontractor without KCATA's prior written consent. Written consent of termination may only be given if the Contractor has demonstrated good cause. Before submitting its request to terminate or substitute a diverse subcontractor, the Prime Contractor must give notice in writing to the diverse subcontractor, with a copy to KCATA, of its intent to request to terminate and/or substitute, and the reason for the request. The Contractor must give the diverse subcontractor five days to respond to the Contractor's notice and advise KCATA and the Contractor of the reasons, if any, why it objects to the proposed termination of its subcontract and why KCATA should not approve the Contractor's action. If required in a particular case as a matter of public necessity (e.g., safety), the response period may be shortened.
 - 1. Good Cause. Good cause includes the following circumstances:
 - a. The listed diverse subcontractor fails or refuses to execute a written contract; or

2. The listed diverse subcontractor fails or refuses to perform the work to its normal industry standards. Provided, however, that the good cause does not exist if the failure or refusal of the DBE subcontractor to perform its work on the subcontract results from the bad faith or discriminatory action of the Prime Contractor; or
 3. The listed diverse subcontractor fails or refuses to meet the Prime Contractor's reasonable, nondiscriminatory bond requirements; or
 4. The listed diverse subcontractor becomes bankrupt, insolvent, or exhibits credit unworthiness; or
 5. The listed diverse subcontractor is ineligible to work on public works projects because of suspension and debarment proceedings pursuant to 2 CFR Parts 180, 215, and 1200 or applicable state law; or
 6. The diverse subcontractor is not a responsible contractor; or
 7. The listed diverse subcontractor voluntarily withdraws from the project and provides the Prime Contractor written notice of its withdrawal;
 8. The listed DBE is ineligible to receive diverse credit for the type of work required;
 9. A diverse owner dies or becomes disabled with the result that the listed DBE contractor is unable to complete its work on the contract;
 10. Other documented good cause that compels KCATA to terminate the diverse subcontractor. Provided the good cause does not exist if the Prime contractor seeks to terminate a diverse firm it relied upon to obtain the contract so that the Prime Contractor can self-perform the work for which the diverse contractor was engaged or so that the Prime Contractor can substitute another diverse or non-diverse contractor.
2. Before submitting its request to terminate or substitute a diverse subcontractor, the Prime Contractor must give notice in writing to the diverse subcontractor, with a copy to KCATA, of its intent to request to terminate and/or substitute, and the reason for the request. The Prime Contractor must give the diverse firm five days to respond to the Prime Contractor's notice and advise the KCATA and the Contractor of the reasons, if any, why it objects to the proposed termination of its subcontract and why KCATA should not approve the Prime Contractor's action. If required in a particular case as a matter of public necessity (e.g., safety), the response period may be shortened.

15. EMPLOYEE ELIGIBILITY VERIFICATION (FOR CONTRACTS OVER \$5,000)

- A. To comply with Section 285.500 RSMo, *et seq.*, the Contractor is required by sworn affidavit and provision of documentation, to affirm its enrollment and participation in a federal work authorization program with respect to the employees working in connection with the contracted services. The Contractor shall also affirm that it does not knowingly employ any person in connection with the contracted services who does not have the legal right or authorization under federal law to work in the United States as defined in 8 U.S.C. §1324a(h)(3). The Contractor is required to obtain the same affirmation from all subcontractors at all tiers with contracts exceeding \$5,000.
- B. A federal work authorization program is any of the electronic verification of work authorization programs operated by the United States Department of Homeland Security (E-Verify) or an equivalent federal work authorization program operated by the United States Department of Homeland Security to verify information of newly hired employees, under the Immigration Reform and control Act of 1986 (IRCA), P.L.99-603.

16. FORCE MAJEURE

- A. Both Parties shall be excused from performing its obligations under this Contract during the time and to the extent that it is prevented from performing by an unforeseeable cause beyond its control ("**Excusable Delays**") including, but not limited to: any incidence of fire, flood; acts of God or the public enemy; commandeering of material, products, plants or facilities by the federal, state or local government; national fuel shortage; pandemics; acts of war; terrorism; strikes; any acts, restrictions, regulations, by-laws; prohibitions or measures of any kind on the part of any KCATA; freight embargoes; delays of Contractor's suppliers for like causes; contractual acts of either Party or a material act of omission by either Party; when satisfactory evidence of such cause is presented to the other Party, and provided further that such nonperformance is unforeseeable, beyond the control and is not due to the fault or negligence of the Contractor or KCATA. Contractor and KCATA shall use its best efforts to remove the cause of delay and resume work as soon as possible.
- B. If at any time, Contractor concludes that any of the Work hereunder will become subject to a delay beyond Contractor's control, including but not limited to any of the aforementioned causes, Contractor shall notify KCATA of the nature and detailed reasons and foreseeable extent of such delay and shall, once every seven (7) calendar days thereafter, notify KCATA whenever, to the best of Contractor's knowledge and belief, the nature or foreseeable extent of such delay shall change. Contractor shall provide this written notice within five (5) business days of Contractor's becoming aware of the facts or matters giving rise to such Excusable Delay. Both Parties shall keep in contact with each other as to the status of such Excusable Delay and shall agree in writing to a restart date when the facts or matters giving rise to such Excusable Delay have concluded and further delays are not foreseen. Upon reengagement of work, Contractor and KCATA will formulate and agree upon an update project schedule, taking into account the timeframe that has passed since the work stoppage, necessary time to resume or re-create any previously completed tasks due to damaged or missing equipment and any associated time periods for shipment and/or manufacture of equipment.

17. GENERAL PROVISIONS

- A. **No Third-Party Beneficiaries.** The parties do not intend to confer any benefit hereunder on any person, firm, or entity other than the parties hereto.
- B. **Extensions of Time.** No extension of time for performance of any Contractor obligations or acts shall be deemed an extension of time for performance of any other obligations or acts.
- C. **Time of Essence.** Time is of the essence in Contractor's performance of this Agreement.
- D. **Time Periods.** A "business day" is a business working day of KCATA administrative personnel which are days other than a Saturday, Sunday or legal holidays observed by the KCATA for administrative personnel. If the time period by which any right or election provided under this Contract must be exercised, or by which any act required hereunder must be performed, expires on a day which is not a business day, then such time period shall be automatically extended through the close of business on the next regularly scheduled business day.
- E. **Binding Effect.** This Contract shall bind and inure to the benefit of the legal representatives, successors and permitted assigns of the parties.
- F. **Counterparts.** This Contract may be executed at different times and in two or more counterparts and all counterparts so executed shall for all purposes constitute one contract, binding on all the parties hereto, notwithstanding that all parties shall not have executed the same counterpart. And, in proving this Contract, it shall not be necessary to produce or account for more than one such counterpart executed by the party against whom enforcement is sought.
- G. **Interpretation; Update of Citations.** Unless otherwise specified herein, (a) the singular includes the plural and the plural the singular; (b) words importing any gender include the other genders; and (c) references to persons or parties include their permitted successors and assigns. The parties recognize and agree that many of the laws, regulations, policies, procedures, and directives stated as governing the Contractor's performance of its work or services, or the supplying of products, equipment, or materials, pursuant to this Contract are subject to updating, amendment or replacement. Therefore, all such references in this Contract are agreed by the parties to be deemed to refer to the

then current updated, amended or replacement form of such laws, regulations, policies, procedures, and directives in effect at the applicable time during the term of this Contract and the same are hereby incorporated into this Contract by this reference.

- H. **When Effective.** Notwithstanding any provision contained in this Contract to the contrary, this Contract shall become effective only after the execution and delivery of this Contract by each of the parties hereto and no course of conduct, oral contract or written memoranda shall bind the parties hereto with respect to the subject matter hereof except this Contract.
- I. **Further Actions; Reasonableness and Cooperation by Parties; Time for Certain Actions.** Each party agrees to take such further actions and to execute such additional documents or instruments as may be reasonably requested by the other party to carry out the purpose and intent of this Contract. Except where expressly stated to be in a party's sole discretion, or where it is stated that a party has the ability to act in its sole judgment or for its own uses or purposes, wherever it is provided or contemplated in this Contract that a party must give its consent or approval to actions or inactions by the other party or a third party in connection with the transactions contemplated hereby, such consent or approval will not be unreasonably withheld or delayed. If no time period is set hereunder for a party to approve or consent to an action or inaction by the other party or a third party such approval shall be given or affirmatively withheld in writing within ten (10) business days after it is requested in writing, or it shall be deemed given.
- J. **Survival.** In addition to any provisions expressly stated to survive termination of this Contract, all provisions which by their terms provide for or contemplate obligations or duties of a party which are to extend beyond such termination (and the corresponding rights of the other party to enforce or receive the benefit thereof) shall survive such termination.
- K. **Authority of Signatories.** Any person executing this Contract in a representative capacity represents and warrants that such person has the authority to do so and, upon request, will furnish proof of such authority in customary form.
- L. **Notice of Legal Matters.** If this project is federally funded and is expected to equal or exceed \$25,000, KCATA agrees to notify the FTA Chief Counsel or FTA Regional VII legal counsel of a current or prospective legal matter that may affect the Federal government. Contractor agrees this affirmative notification provision will apply to subcontractors and suppliers and is to be included in all agreements at all tiers. Failure to include this notice may be deemed a material breach of contract.
- M. **Hazardous Material Identification and Material Safety Data.** "Hazardous Material" as used in this clause includes any material defined as hazardous under the latest version of Federal Standard No. 313 as amended. Contractor shall properly identify any hazardous materials to be provided under this Agreement consistent with the Hazardous Materials Regulations on the standard Material Safety Data Sheet form. The hazardous materials shall be properly identified and include any applicable identification number, such as National Stock Number or Special Item Number. This information shall also be included on the Material Safety Data Sheet submitted under this Agreement. After award, Contractor shall notify KCATA of any changes to the composition of the item(s) or revision to Federal Standard No. 313, which renders incomplete or inaccurate data previously submitted. Neither the requirements of this clause nor any act or failure to act by the Government shall relieve the Contractor of any responsibility or liability for the safety of Government, Contractor, or subcontractor personnel or property. Nothing contained in this clause shall relieve the Contractor from complying with applicable Federal, State, and local laws, codes, ordinances, and regulations (including the obtaining of licenses and permits) in connection with hazardous material. Failure to comply with this provision in any way is a material breach.

18. GOVERNING LAW; CHOICE OF JUDICIAL FORUM

This Contract shall be deemed to have been made in, and be construed in accordance with, the laws of the State of Missouri. Any action of law, suit in equity, or other judicial proceeding to enforce or construe this Contract, respecting its alleged breach, shall be instituted only in the Circuit Court of Jackson County, Missouri.

19. HEADINGS

The headings included in this Contract are inserted only as a matter of convenience and for reference, and in no way define, limit, or describe the scope of intent of any provision, and shall not be construed to affect, in any manner, the terms and provisions hereof of the interpretation or construction thereof.

20. INDEPENDENT CONTRACTOR

- A. The parties agree that the Contractor is an independent contractor under this Contract. Under no circumstance shall the Contractor be considered an agent, employee, or representative of KCATA and KCATA shall not be liable for any claims, losses, damages, or liabilities of any kind resulting from any action taken or failed to be taken by the Contractor.
- B. The Contractor shall furnish adequate supervision, labor, materials, supplies, security, financial resources, and equipment necessary to perform all the services contemplated under this Contract in an orderly, timely, and efficient manner.

21. INSPECTION OF SERVICES

- A. The Contractor shall provide and maintain an inspection system acceptable to the Authority covering the services provided in the performance of the Contract. "Services" as used in this clause, includes services performed, quality of the work, and materials furnished or used in the performance of services.
- B. The Contractor shall provide and maintain an inspection system acceptable to the Authority covering the project. Complete records of all inspection work performed by the Contractor shall be maintained and made available to the Authority during contract performance and for as long afterwards as the Contract requires.
- C. The Authority has the right to inspect and test all services called for by this Contract to the extent practicable at all times and places during the term of the Contract. The Authority shall perform inspection and tests in a manner that will not unduly delay the work.
- D. If any of the services performed do not conform to Contract requirements, the Authority may require the contractor to perform the services again in conformity with Contract requirements for no additional fee. When the defects in performance cannot be corrected by re-performance, the Authority may:
 - 1. Require the Contractor to take necessary action to ensure that future performance conforms to Contract requirements; or
 - 2. Reduce the Contract Sum accordingly.
- E. If the Contractor fails to promptly perform the services again or to take the necessary action to ensure future performance in conformity with contract requirements, the Authority may:
 - 1. By contract or otherwise, perform the services and charge to the Contractor any cost incurred by the Authority that is directly related to the performance of the work; or
 - 2. Terminate the Contract for default.

22. INSURANCE

- A. The insurance required in this Contract shall be written for not less than any limits of liability required by law or by those set forth below, whichever is greater, and shall include blanket contractual liability insurance as applicable to the Contractor's obligations under the Liability and Indemnification section below. All policies, except Professional Liability and Workers Compensation) policies, shall name KCATA, its commissioners, officers, and employees as Additional Insureds. Explosion, collapse, and underground coverage shall not be excluded. The insurance should be written with companies acceptable to KCATA and the companies should have a minimum A.M. Best's insurance rating of A-(VIII). An

exception to the minimum A.M. Best rating is granted for Workers Compensation exposures insured through the Builders' Association of Self Insurance Fund (BASIF).

- B. The Contractor shall be required to furnish to KCATA certificates verifying the required insurance and relevant additional insured endorsements prior to execution of the Contract, and thereafter furnish the certificates on an annual basis. The certificates (with the exception of Professional Liability and Workers Compensation coverage) shall specifically state that:
1. Contractual liability coverage is applicable; and
 2. The Kansas City Area Transportation Authority, its commissioners, officers, and employees are named as additional insureds on the policies covered by the certificate; using this specific wording: **Kansas City Area Transportation Authority, its commissioners, officers, and employees are named as additional insureds as respects general liability and where required by written contract. Any coverage afforded the certificate holder as an additional insured shall apply as primary and not excess or contributing to any insurance or self-insurance in the name of the certificate holder and shall include a waiver of subrogation.**
- C. Further, from time to time and whenever reasonably requested by KCATA, the Contractor shall represent and warrant to KCATA (1) the extent to which the insurance limits identified below have been, or may be, eroded due to paid or pending claims under the policies; and (2) the identity of other entities or individuals covered as an additional insured on the policies. Further, the Contractor shall confirm that the insurers' obligation to pay defense costs under the policies is in addition to, and not part of the liability limits stated in the policies.
- D. All such insurance, with the exception of Professional Liability coverage, shall contain endorsements that the policies may not be canceled or amended or allowed to lapse by the insurers with respect to KCATA its commissioners, officers and employers by the insurance company without thirty (30) days prior notice to KCATA in addition to the Named Insured (s) and that denial of coverage or voiding of the policy for failure of Contractor to comply with its terms shall not affect the interest of KCATA, its commissioners, officers and employees thereunder.
- E. The requirements for insurance coverage are separate and independent of any other provision hereunder.
1. **Worker's Compensation:**
 - a. State: Missouri and/or Kansas – Statutory
 - b. Employer's Liability: Bodily Injury by Accident -- \$500,000 Each Accident
Bodily Injury by Disease -- \$500,000 Each Employee
Bodily Injury by Disease -- \$500,000 Policy Limit

The Contractor and any subcontractor shall maintain adequate workers' compensation insurance as required by law to cover all employees during performance of services, or during delivery, installation, assembly, or related services in conjunction with this Agreement.

2. **Commercial General Liability:**

Bodily Injury and Property Damage to include Products and Completed Operations:

\$1,000,000 Each Occurrence
\$2,000,000 General Aggregate (per project)
\$1,000,000 Personal and Advertising Injury
\$50,000 Fire Damage
\$5,000 Medical Expenses
2 Years (Completed Operations)

Contractor shall procure and maintain at all times during the term of the KCATA purchase order or the Contract commercial general liability insurance for liability arising out of the operations of the Contractor and any subcontractors. The policy(ies) shall include coverage for the Contractor's and subcontractors' products and completed operations for at least two (2) years following project completion, or as otherwise noted. The

policy(ies) shall name as an additional insured, in connection with Contractor's activities, the KCATA, its commissioners, officers, and employees. The Contractor shall be responsible for all premiums associated with the requested policy(ies) and endorsements. The Insurer(s) shall agree that its policy(ies) is primary insurance and that it shall be liable for the full amount of any loss up to and including the total limit of liability without right of contribution from any other insurance or self-insurance KCATA may have.

3. **Auto Liability:**

Bodily Injury and Property Damage: \$1,000,000 Combined Single Limit

The policy(ies) shall include automobile liability coverage for all vehicles, licensed or unlicensed, on or off the KCATA premises, whether the vehicles are owned, hired or non-owned, covering use by or on behalf of the Contractor and any subcontractors during the performance of work under this Contract.

4. **Umbrella or Excess Liability**

Umbrella or Excess Liability Limit: \$1,000,000 Each Occurrence
\$1,000,000 Aggregate (per project)

The Contractor shall obtain and keep in effect during the term of the contract, Umbrella or Excess Liability Insurance covering their liability over the limit for primary general liability, automobile liability, and employer's liability.

5. **Cyber Security** \$3,000,000 Minimum Coverage

23. LIABILITY AND INDEMNIFICATION

- A. **Contractor's Liability.** Contractor shall be liable for all damages to persons (including employees of Contractor) or property of any type that may occur as a result of any act or omission by Contractor, any subcontractors, or sub-subcontractor, their respective agents or anyone directly employed by any of them or anyone.
- B. **Subrogation.** Contractor, its agents, and any subcontractor hereby waive and relinquish any right of subrogation or claim against KCATA, its commissioners, senior leaders and employees arising out of the use of KCATA's premises (including any equipment) by any party in performance of this Agreement.
- C. **Indemnification.**
1. To the fullest extent permitted by law, Contractor agrees to and shall indemnify, defend and hold harmless KCATA, its Commissioners, officers and employees from and against any and all claims, losses, damages, causes of action, suits, liens and liability of every kind, (including all expenses of litigation, expert witness fees, court costs and attorney's fees whether or not suit be commenced) by or to any person or entity (collectively the "Liabilities") arising out of, caused by, or resulting from the acts or omissions of Contractor, subcontractors, or sub-subcontractors, their respective agents or anyone directly or indirectly employed by any of them in performing work under this Contract, regardless of whether or not such claim, damage, loss or expense is caused in part by a party indemnified hereunder, so long as such Liabilities are not caused by the sole negligence or willful misconduct of a party indemnified hereunder. Such obligation shall not be construed to negate, abridge, or otherwise reduce other rights or obligations of indemnity which would otherwise exist as to a party or person described in this paragraph. Contractor shall also indemnify, hold harmless and defend the KCATA for any contractor or subcontractor action, tort, or violation of federal or state law or city ordinance.
 2. In claims against any person or entity indemnified under this section, by an employee or Contractor, or anyone directly or indirectly employed by any of them, the subcontractor or sub-subcontractor indemnification obligation shall not be limited by a limitation on the amount or type of damages, compensation or benefits payable by or for the Contractor, subcontractor, or sub-subcontractor under worker's compensation acts, disability benefit acts or other employee benefit acts. If any action at law or suit in equity is instituted by any

third party against Contractor arising out of or resulting from the acts of Contractor in performing work under this Contract, Contractor shall promptly notify KCATA of such suit.

3. If any action at law or suit in equity is instituted by any third party against KCATA or its commissioners, officers or employees arising out of or resulting from the acts of Contractor, a subcontractor or sub-subcontractor, their respective agents or anyone directly or indirectly employed by any of them in providing products, equipment or materials, or in performing work or services under this Contract, and if Contractor has failed to provide insurance coverage to KCATA against such action as required herein or otherwise refuses to defend such action, KCATA shall have the right to conduct and control, through counsel of its choosing, the defense of any third party claim, action or suit, and may compromise or settle the same, provided that KCATA shall give the Contractor advance notice of any proposed compromise or settlement. Under these circumstances, KCATA retains the right to recover all costs of defense from the Contractor.
4. KCATA shall permit Contractor to participate in the defense of any such action or suit through counsel chosen by the Contractor, provided that all fees and expenses of such counsel shall be borne by Contractor. If KCATA permits Contractor to undertake, conduct and control the conduct and settlement of such action or suit, Contractor shall not consent to any settlement that does not include as an unconditional term thereof the giving of a complete release from liability with respect to such action or suit to KCATA. Contractor shall promptly reimburse KCATA for the full amount of any damages, including fees and expenses of counsel for KCATA, incurred in connection with any such action.

- D. **Release of Liability.** Contractor, its officers, directors, employees, heirs, administrators, executors, agents and representatives and respective successors and assigns hereby fully release, remise, acquit and forever discharge the KCATA and its commissioners, officers, directors, attorneys, employees, agents, representatives and its respective successors and assigns from any and all actions, claims, causes of action, suits, rights, debts, liabilities, accounts, agreements, covenants, contracts, promises, warranties, judgments, executions, demands, damages, costs and expenses, whether known or unknown at this time, of any kind or nature, absolute or contingent, existing at law or in equity, on account of any matter related to this agreement, cause or thing whatsoever that has happened, developed or occurred before or after you sign and deliver this Contract to KCATA. This release will survive the termination of this Contract.

24. LICENSING, LAWS, AND REGULATIONS

- A. The Contractor shall, without additional expense to KCATA, be responsible for obtaining any necessary licenses and permits, and for complying with all federal, state, and municipal laws, codes, and regulations applicable to the providing of products, equipment or materials, or the performance of the Services, under this Contract.
- B. The Contractor shall comply with all applicable and current rules, regulations, and ordinances of any applicable federal, state, county or municipal governmental body or authority, including but not limited to those as set forth by the Environmental Protection Agency, the Missouri Department of Natural Resources, the Kansas Department of Health and Environmental, the FTA, the Department of Transportation, and the City of Kansas City, Missouri.

25. NOTIFICATION AND COMMUNICATION

- A. Communications regarding technical issues and activities of the project shall be exchanged with Lee Barnes, project manager for KCATA at lbarnes@kcata.org or by calling 816/346-0304.
- B. Issues regarding the contract document, changes, amendments, etc. are the responsibility of KCATA's Procurement Department. All notices and communications on all matters regarding this Contract may be given by delivery or mailing the same postage prepaid, addressed to the following:

If to KCATA: Kristen Emmendorfer, Procurement Director
 Kansas City Area Transportation Authority
 1350 East 17th Street
 Kansas City, MO 64108

If to Contractor: **TBD upon award of Agreement**

- C. The Contractor shall notify KCATA immediately when a change in ownership has occurred or is certain to occur.
- D. The addresses to which notices may be made may be changed from time to time by notice mailed as described above. Any notice given by mail shall be deemed given on the day after that on which it is deposited in the United States Mail as provided above.

26. OWNERSHIP, IDENTIFICATION, AND CONFIDENTIALITY OF WORK

- A. All reports, programs, documentation, designs, drawings, plans, specifications, schedules, and other materials prepared, or in the process of being prepared, for the services to be performed by Contractor shall be and are the property of KCATA and shall be identified in an appropriate manner by a title containing KCATA's name and address.
- B. KCATA shall be entitled to copies of these materials during the progress of the work.
- C. Any such material remaining in the possession of the Contractor or in the possession of a subcontractor upon completion or termination of the work, and for which KCATA has reimbursed the contractor, shall be immediately delivered to KCATA. If any materials are lost, damaged, or destroyed before final delivery to KCATA, the Contractor shall replace them at its own expense, and the Contractor assumes all risks of loss, damage, or destruction of or to such material.
- D. The Contractor may retain a copy of all materials produced under this Contract for its own internal use.
- E. Any KCATA materials to which the Contractor has access or materials prepared by the Contractor shall be held in confidence by the Contractor, who shall exercise all reasonable precautions to prevent the disclosure of confidential information to anyone except the officers, employees and agents of the Contractor as necessary to accomplish the work set forth in this agreement.
- F. Access to copies of any reports, information, data, etc., available to or prepared or assembled by the Contractor under this Contract shall not be made available to any third party by the Contractor without the prior written consent of KCATA.

27. PRICE REDETERMINATION

- A. The unit prices stated In the Bidder's Response Forms may be adjusted during the term of this contract only with documented changes in market conditions. This price increase/decrease verification must be on letterhead from Contractor's supplier and include the effective date of the change, signature of supplier, and must be notarized. The contracted pricing will remain in effect until KCATA confirms and approves the pricing adjustment.
- B. The Contractor may appeal KCATA's denial for adjustment in accordance with the procedures outlined in the "Disputes" clause above.

28. PRIVACY ACT REQUIREMENTS

- A. The Contractor agrees to comply with, and assures the compliance of its employees and subcontractors with, the information restrictions and other applicable requirements of the Privacy Act of 1974, 5 U.S.C. § 552. Among other things, the Contractor agrees to obtain the express consent of the KCATA and/or the Federal Government before the Contractor or its employees operate a system of records on behalf of the KCATA or Federal Government.
- B. The Contractor understands that the requirements of the Privacy Act, including the civil and criminal penalties for violation of that Act, apply to all individuals involved, and that failure to comply with the terms of the Privacy Act may result in termination of the underlying Agreement.

- C. The Contractor agrees that strict privacy will be maintained in the collection, storage, use, transfer, access to and/or security of personnel information. Contractor agrees to protect such information, and to limit the use of the information to that required by the contract.
- D. Contractor shall be liable to each employee for loss of any private or personal information lost or left unsecure by Contractor. Contractor shall not have any personal employee information for any reason outside of this contract.

29. PROHIBITED INTERESTS

- A. No board member, officer, employee or agent of KCATA or of a local public body who has participated or will participate in the selection, award, or administration of this Contract, nor any member of his or her immediate family, business partner or any organization which employs, or intends to employ any of the above during such period, shall have any interest, direct or indirect, in this Contract or the proceeds thereof, to any share or part of this Contract, or to any benefit arising there from. This shall not be construed to prevent any such person from owning stock in a publicly owned corporation.
- B. No member of, or delegates to, the Congress of the United States shall be admitted to any share or part of the Contract, or to any benefit arising there from. This shall not be construed to prevent any such person from owning stock in a publicly owned corporation.

30. PROHIBITED WEAPONS AND MATERIALS

- A. Missouri Revised Statutes, Section 571.107 (RSMo §571.107) allows government units and businesses to prohibit persons holding a concealed carry endorsement from carrying concealed firearms on its premises. Accordingly, KCATA has adopted the following rules prohibiting weapons, whether concealed or not, and whether or not the individual carrying the weapon has an endorsement or permit to carry.
- B. No weapon, including firearms concealed or not, or other instrument intended for use as a weapon, or any object capable of inflicting serious bodily injury upon another person or property may be carried in or on any facility or property of KCATA, including vehicles of contractors parked on KCATA property or leased facilities, or vehicles used in transporting KCATA customers, even if a person has a permit to carry a concealed weapon, unless authorized in writing to do so by KCATA. For the purposes hereof, a weapon shall include, but not be limited to, a firearm, knife, sword, mace, or any instrument of any kind known as blackjack, billy club, club, sandbag, and metal knuckles.
- C. No explosives, flammable liquids, acids, fireworks, other highly combustible materials, radioactive materials, or biochemical materials may be carried on or in any KCATA property, facility or vehicle, including vehicles of contractors parked on KCATA property or leased facilities, or vehicles used in transporting any KCATA customer, except as authorized in writing by KCATA.
- D. Any contractor, subcontractor, employee or agent thereof, who has a firearm or other weapon, including those used for recreational purposes, in his/her possession, including on his/her person, in a vehicle on an KCATA facility, in a vehicle carrying KCATA customers, or accessible such as in first aid kits, toolboxes, purses, lunch or carrying bags, etc., at any time while performing KCATA contracted services or on KCATA property, including parking lots, concealed or not, shall be immediately prohibited from performing any further KCATA work, even if the person has a permit to carry a concealed weapon.
- E. Any KCATA contractor, subcontractor, employee or agent thereof, while performing KCATA contracted services or on any KCATA property or facilities, who has in his/her possession, carries, transports, displays, uses, flourishes, or threatens another person with a weapon, radioactive material, biochemical material or other dangerous weapon, object or material, which has the capability of inflicting bodily injury, shall be immediately prohibited from performing any further KCATA work and reported to local law enforcement authorities.

30. QUALIFICATION REQUIREMENTS – REQUIRED ONLY IF QUALITY ASSURANCE AND TESTING

Qualification requirements, as used in this clause, means a KCATA requirement for testing or other quality assurance demonstration that must have been completed before award. One or more qualification requirements apply to the supplies or services covered by this Contract, whether the covered product or service is in an end item under this agreement or simply a component of an end item. The product or service must be qualified at the time of award of this Contract, whether the Contractor or subcontractor will ultimately provide the product or service in question. If, after award, KCATA discovers that an applicable qualification requirement was not in fact met at the time of award, KCATA may either terminate this Contract for default or allow performance to continue if adequate consideration is offered and KCATA determines the action is otherwise in KCATA's best interest.

31. RECORD RETENTION AND ACCESS

- A. The Contractor agrees that, during the course of this agreement and any extensions thereof, and for three years thereafter, it will maintain intact and readily accessible all data, documents, reports, records, contracts, and supporting materials relating to this Contract in accordance with 2 CFR § 200.33, 49 U.S.C. § 5325(g) and 49 CFR part 633. In the event of litigation or settlement of claims arising from the performance of this Contract, the Contractor agrees to maintain same until such litigation, appeals, claims or exceptions related thereto have been disposed of.
- B. The Contractor shall permit KCATA, the U.S. Secretary of Transportation, the Comptroller General of the United States, and, as applicable, any local municipality, to inspect all work, materials, construction sites, payrolls, and other data and records, and to audit the books, records, and accounts of the Contractor relating to its performance under this Contract.
- C. The Contractor agrees to permit any of the foregoing parties to reproduce by any means whatsoever or to copy excerpts and transcriptions as reasonably needed, and to include this clause in all subcontracts.

32. REQUESTS FOR PAYMENT

- A. Contractor shall timely submit invoices for work performed each calendar month by the 15th day of each subsequent month for work performed the previous month. Invoices requesting payment shall be submitted electronically to KCATA's dedicated Accounts Payable email at payme@kcata.org. Invoices shall be numbered, dated, and contain full descriptive information of materials or services furnished per resulting Agreement by and between the Contractor and KCATA. Contractor shall reference KCATA's contract number and FSM number (provided by KCATA to Contractor), the billing period applicable and, if travel expenses, pre-approved before issuance of an Agreement by the Authority, are included for reimbursement, receipts for each line item claimed as reimbursable shall be included with Invoice and/or Payment Application. Contractor agrees the KCATA shall have no contract obligation to pay any contractor invoices submitted to the KCATA more than ninety (90) days from the date the service was performed for the KCATA.
- B. Payment by KCATA shall be made within 30 days after receipt of a proper and timely invoice.
- C. All final invoices shall be submitted to KCATA within 90 days of project completion or contract termination. Invoices submitted more than 90 days after project completion or contract termination will not be valid and will not be paid. Contractor indemnifies and holds KCATA harmless for any suit filed for payment of invoices submitted after 90 days of project completion or contract termination.
- D. **Subcontractor Payments.**
 - 1. **Prompt Payment.** The Contractor shall establish procedures to ensure timely payment of amounts due pursuant to the terms of its subcontracts. The Contractor shall pay each DBE and non-DBE subcontractor for satisfactory performance of its contract, or any billable portion thereof, in accordance with the timing set forth in any applicable laws or no later than 30 days, whichever is less, from the date of the Contractor's receipt of payment from the Authority for work by that subcontractor.
 - 2. **Prompt Return of Retainage.** If retainage is withheld from subcontractors, the Contractor is required to return any retainage payment to its DBE and non-DBE subcontractors in accordance with the timing set forth in any applicable laws or no later than 30 days, whichever is less, from the date of receipt of the retainage payment from

the Authority related to the subcontractor's work. Any delay or postponement of payment from said time frame may occur only for good cause following written approval from KCATA.

3. The Contractor shall certify on each payment request to the Authority that payment has been or will be made to all subcontractors. Lien waivers may be required for the Contractor and its subcontractors. The Contractor shall notify KCATA on or before each payment request, of any situation in which scheduled subcontractor payments have not been made.
4. If a subcontractor alleges that the Contractor has failed to comply with this provision, the Contractor agrees to support any Authority investigation, and if deemed appropriate by the Authority, to consent to remedial measures to ensure that subcontractors are properly paid as set forth herein.
5. The Contractor agrees that the Authority may provide appropriate information to interested subcontractors who inquire about the status of Authority payments to the Contractor.
6. Nothing in this provision is intended to create a contractual obligation between the Authority and any subcontractor or to alter or affect traditional concepts of privity of contract between all parties.

33. RIGHT TO OFFSET

KCATA, without waiver or limitation of any rights, may deduct from any amounts due Contractor in connection with this Contract, or any other contract between Contractor and KCATA, any amounts owed by Contractor to KCATA, including amounts owed by Contractor pursuant to Contractor's obligation to indemnify KCATA against third party claims arising out of Contractor's performance of work under this Contract.

34. SEAT BELT USE POLICY

Contractor agrees to comply with terms of Executive Order No. 13043, "Increasing Seat Belt Use in the United States," April 16, 1997, 23 U.S.C. § 402 note, (62 Fed Reg. 19217); Contractor is encouraged to include those requirements in each subcontract awarded for work relating to this Agreement.

35. SERVICE MANUAL / WIRING SCHEMATICS

If specified, the Contractor will provide at least one (1) copy of a service manual and at least one (1) copy of wiring schematics for individual components and other schematics and drawings as may be applicable.

36. SEVERABILITY

If any clause or provision of this Contract is held to be invalid illegal or otherwise unenforceable by a court of competent jurisdiction, the remaining provisions of this Contract shall continue in full force and effect.

37. SUBCONTRACTORS

- A. **Subcontractor Approval.** None of the work or services covered by this Contract shall be subcontracted without the prior written approval of KCATA. The only subcontractors approved for this Contract, if any, are listed in an appendix to this Contract. Any substitutions or additions of subcontractors must have the prior written approval of KCATA as set forth herein.
- B. The Contractor is responsible for managing and directing the work of the Subcontractors and for all actions of subcontractors performing work under this Contract. Any contact from Subcontractors to KCATA shall be limited to KCATA's Director of Procurement.
- C. **Diverse Subcontractor Employment.** See Article 15, "Diverse Business Enterprise Requirements.

D. **Adequate Provision(s) in Subcontract(s).** Any subcontracts related to this Contract must contain adequate provisions to define a sound and complete agreement. In addition, all subcontracts shall contain contractual provisions or conditions that allow for:

1. Administrative, contractual, or legal remedies in instances where subcontractors violate or breach contract terms, including sanctions and penalties as may be appropriate.
2. Termination for cause and for convenience including the manner by which it will be effected and the basis for settlement.
3. The following provisions if included in this Contract:

ADA Access Requirements
Architect-Engineer Rights & Responsibilities
Assignment
Bonding Requirements
Bus Testing
Changes in Federal Requirements
Civil Rights
Conflicts of Interest
Debarment and Suspension
Disadvantaged Business Enterprise (DBE) Requirements (if a goal has been assigned to the project)
Disclaimer of Federal Government Obligations or Liability
Dispute Resolution
Diverse Business Enterprise Requirements
Drug and Alcohol Testing
Employee Eligibility Verification
Construction Employee Protections
Employee Protections
Environmental Regulations
Federal Tax Liability and Convictions
Force Majeure
Fraud and False or Fraudulent Statements or Related Acts
General Provisions
Headings
Incorporation of FTA Terms
Lobbying
National Intelligent Transportation Systems Architecture & Standards
Patents and Rights in Data and Copyrights
Pre-Award & Post-Delivery Requirements
Prohibited Interests
Prohibition on Restricted Telecommunications and Surveillance Equipment
Prohibited Weapons and Materials
Record Retention and Access
Seat Belt Use Policy
Seismic Safety
Small Business Enterprise (SBE) Requirements
Subcontractors
Termination
Texting While Driving and Distracted Driving
Trafficking in Persons
Transit Operation Restrictions
United States Product and Service Preference

- E. The Contractor will take such action with respect to any subcontractor as KCATA, or the U.S. Department of Transportation, may direct as means of enforcing such provisions of this contract.
- F. KCATA reserves the right to review the Contractor's written agreement with its subcontractors (DBE and non-DBE) to confirm that required federal contract clauses are included.
- G. KCATA may perform random audits and contact minority subcontractors to confirm the reported DBE participation.

38. SUSPENSION OF WORK

KCATA may order the Contractor, in writing, to suspend, delay, or interrupt all or any part of the work under this agreement for the period of time that KCATA determines appropriate for the convenience of KCATA.

39. TERMINATION

- A. **Termination for Convenience.** The KCATA may terminate this Contract, in whole or in part, at any time by written notice to the Contractor when it is in KCATA's best interest. The Contractor will only be paid the Contract price for supplies delivered and accepted, or work or services performed in accordance with the manner of performance set forth in the Contract.
- B. **Funding Contingency.** If this Contract is subject to financial assistance provided by the U.S. Department of Transportation, the Contractor agrees that withdrawal or termination of such financial assistance by the U.S. DOT may require KCATA to terminate the agreement.
- C. **Termination for Default.**
 - 1. If the Contractor does not deliver supplies in accordance with the contract delivery schedule or according to specifications, or if the Contract is for services, and the Contractor fails to perform in the manner called for in the Contract, or if the Contractor fails to comply with any other provisions of the Contract, KCATA may terminate this Contract for default. Termination shall be effected by serving a notice of termination on the Contractor setting forth the manner in which the Contractor is in default. The Contractor will only be paid the contract price for supplies delivered and accepted, or services performed in accordance with the manner of performance set forth cost of the Contract.
 - 2. If the termination is for failure of the Contractor to fulfill the contract obligations, KCATA may complete the work by contract or otherwise and the Contractor shall be liable for any additional cost incurred by KCATA. If, after termination for failure to fulfill contract obligations, it is determined that the Contractor was not in default, KCATA, after setting up a new delivery or performance schedule, may allow the Contractor to continue work, or treat the termination as a termination for convenience.
- D. **Opportunity to Cure.** KCATA in its sole discretion may, in the case of a termination for breach or default, allow the Contractor an appropriately short period of time in which to cure the defect. In such case, the written notice of termination will state the time period in which cure is permitted and other appropriate conditions. If Contractor fails to remedy to KCATA's satisfaction the breach or default of any of the terms, covenants, or conditions of this Contract within the time period permitted, KCATA shall have the right to terminate the Contract without any further obligation to Contractor. Any such termination for default shall not in any way operate to preclude KCATA from also pursuing all available remedies legal and non-legal against Contractor and its sureties for said breach or default.
- E. **Waiver of Remedies for any Breach.** In the event that KCATA elects to waive its remedies for any breach by Contractor of any covenant, term or condition of this Agreement, such waiver by KCATA shall not limit KCATA's remedies for any succeeding breach of that or of any other term, covenant, or condition of this Agreement.
- F. **Property of KCATA.** Upon termination of this Contract for any reason, and if the Contractor has any property in its possession or under its control belonging to KCATA, the Contractor shall protect and preserve the property or pay KCATA full market value of the property, account for the same, and dispose of it in the manner KCATA directs. Upon

termination of this Contract for any reason, the Contractor shall (1) immediately discontinue all services affected (unless the notice directs otherwise), and (2) deliver to KCATA's Project Manager all data, drawings, specifications, reports, estimates, summaries, and other information and materials accumulated in performing this Contract, whether completed or in process.

39. TEXTING WHILE DRIVING AND DISTRACTED DRIVING

Consistent with Executive Order No. 13513, "Federal Leadership on Reducing Text Messaging While Driving," October 1, 2009, 23 U.S.C. § 402 note, (74 Fed. Reg. 51225) and U.S. DOT Order 3902.10, "Text Messaging While Driving," December 30, 2009, the Contractor agrees to promote policies and initiatives for its employees and other personnel that adopt and promote safety policies to decrease crashes by distracted drivers, including policies to ban text messaging while driving, and to encourage each subcontractor to do the same.

40. TRAINING

If specified, the Contractor shall properly train KCATA personnel in the operation and maintenance, to include preventive maintenance, of any applicable equipment supplied as part of the project. The estimated amount of training man-hours will be provided as specified.

41. UNAVOIDABLE DELAYS

- A. A delay is unavoidable only if the delay was not reasonably expected to occur in connection with or during the Contractor's performance, and was not caused directly or substantially by acts, omissions, negligence, or mistakes of the Contractor, the Contractor's suppliers or their agents, and was substantial and in fact caused the Contractor to miss delivery dates, and could not adequately have been guarded against by contractual or legal means.
- B. **Notification of Delays.** The Contractor shall notify the Director of Procurement as soon as the Contractor has, or should have, knowledge that an event has occurred which will cause an unavoidable delay. Within five (5) days, the Contractor shall confirm such notice in writing, furnishing as much as detail as is available.
- C. **Request for Extension.** The Contractor agrees to supply, as soon as such data is available, any reasonable proof that is required by the Director of Procurement to make a decision on any request for extension. The Director of Procurement shall examine the request and any documents supplied by the Contractor and shall determine if the Contractor is entitled to an extension and the duration of such extension. The Director of Procurement shall notify the Contractor of its decision in writing.
- D. It is expressly understood and agreed that the Contractor shall not be entitled to damages or compensation, and shall not be reimbursed for losses on account of delays resulting from any cause under this provision, except to the extent the Contractor's delay was attributable to KCATA's non-performance of its duties herein.

42. WARRANTY

- A. The Contractor agrees that equipment, materials, or services furnished under this Agreement, shall be covered by the most favorable warranties the Contractor gives to any customer of such equipment, materials, or services and that the rights and remedies provided herein are in addition to and do not limit any rights afforded to KCATA by any other clause in this Contract.
- B. The Contractor warrants to KCATA, that all products, equipment, and materials furnished under this Contract will be of highest quality and new unless otherwise specified by KCATA, free from faults and defects in workmanship or materials, merchantable, suitable for its intended purpose and in conformance with the Contract. All work not so conforming to these standards shall be considered defective. If required by KCATA, the Contractor shall furnish satisfactory evidence as to the kind and quality of products, equipment, and materials. Further, at a minimum, all such products, equipment or materials must be merchantable, comply with all applicable specifications and laws and be suitable for its intended purposes. The workmanship must be the best obtainable in the various trades.

- C. The work must be of safe, substantial, and durable construction in all respects. The Contractor hereby guarantees the work against defective materials or faulty workmanship for a minimum period of one (1) year after final payment by KCATA and shall replace or repair any defective products, equipment or materials or faulty workmanship during the period of the guarantee at no cost to KCATA.
- D. Upon final acceptance by KCATA of all work to be performed by the Contractor, KCATA shall so notify the Contractor in writing. The date of final acceptance shall commence the warranty period.

43. COMPLETE FTA REQUIRED CONTRACT CLAUSES

A. **Changes to Federal Requirements.** Contractor shall at all times be aware and comply with all applicable Federal Transit Administration (FTA) regulations, policies, procedures, and directives, including without limitation, those listed directly or by reference in the Master Agreement between the Authority and FTA (ref: MA 33 dated April 25, 2025), as they may be amended or promulgated from time to time during the term of this Contract. Contractors' failure to so comply shall constitute a material breach of this Contract. Contractor agrees to include this clause in all subcontracts at any tier. It is further agreed that the clause shall not be modified, except to identify the subcontractors who will be subject to its provisions.

B. **Debarment and Suspension Certification.**

1. The Contractor shall comply and facilitate compliance with U.S. DOT regulations "Nonprocurement Suspension and Debarment," 2 C.F.R. §§ 180.220 and 1200.220 , and any amendments thereto, which adopts and supplements the U.S. Office of Management and Budget & U.S. OMB) "Guidelines to Agencies on Governmentwide Debarment and Suspension (Nonprocurement)," 2 C.F.R. part 180 that implement Executive Orders 12549 (31 U.S.C. § 6101 note, 51 Fed Reg. 6370) and 12689 (31 U.S.C. § 6101 note, 54 Fed. Reg. 34131).
2. The Contractor, its principals, and any affiliates, shall certify that it is not included in the "U.S. General Services Administration's "System for Award Management -- Lists of Parties Excluded from Federal Procurement or Non-procurement Programs," if required by U.S. DOT regulations, 2 C.F.R. part 1200.
3. The Contractor agrees to refrain from awarding any subcontract of any amount (at any tier) to a debarred or suspended subcontractor, and to obtain a similar certification from any subcontractor (at any tier) seeking a contract exceeding \$25,000.
4. The Contractor agrees to provide KCATA a copy of each conditioned debarment or suspension certification provided by a prospective subcontractor at any tier, and to refrain from awarding a subcontract with any party that has submitted a conditioned debarment or suspension certification until FTA approval is obtained.

C. **Disclaimer of Federal Government Obligation or Liability.** The Contractor, and any subcontractors acknowledge and agree that, notwithstanding any concurrence by the Federal Government in or approval of the solicitation or award of this contract, absent the express written consent by the Federal Government, the Federal Government is not a party to this contract and shall not be subject to any obligations or liabilities to the Contractor, or any other party (whether or not a party to this Contract) pertaining to any matter resulting from this Contract. It is further agreed that the clause shall be included in each subcontract and shall not be modified, except to identify the subcontractor who will be subject to its provision.

D. **Employee Protections.**

1. **Veterans Employment Preference.** Contractors working on a federally funded capital project shall give a hiring preference, to the extent practicable, to veterans (as defined in 5 U.S.C. § 2108) who have the requisite skills and abilities to perform the construction work required under the contract. This subsection shall not be understood, construed, or enforced in any manner that would require an employer to give preference to any veteran over any equally qualified applicant who is a member of any racial or ethnic minority, female, an individual with a disability, or former employee.

E. **Environmental Regulations.**

1. **Clean Air.** The Contractor agrees to comply with all applicable standards, orders, or regulations issued pursuant to the Clean Air Act, as amended, 42 U.S.C. §7401-7671q *et seq.* The Contractor agrees to report, and to require each subcontractor at every tier receiving more than \$100,000 from this Contract to report any violation of these requirements resulting from any project implementation activity to KCATA. KCATA will in turn, report each violation as required to assure notification to FTA and the appropriate U.S. EPA Regional Office.
2. **Clean Water.** The Contractor agrees to comply with all applicable standards, orders, or regulations issued pursuant to the Federal Water Pollution Control Act, as amended, 33 U.S.C. § 1251-1388 *et seq.* The Contractor agrees to report, and require each subcontractor at every tier receiving more than \$100,000 from this Contract to report, any violation of these requirements resulting from any project implementation activity to KCATA. The Contractor understands that KCATA will in turn, report each violation as required to assure notification to FTA and the appropriate U.S. EPA Regional Office
3. **Recovered Materials/Recycled Products.** To the extent practicable and economically feasible, the Contractor agrees to provide a competitive preference for products and services that conserve natural resources and protect the environment and are energy efficient. Examples of such products may include, but are not limited to, products described in U.S. Environmental Protection Agency guidelines at 40 CFR Part 247, which implements Section 6002 of the Resource Conservation and Recovery Act, as amended (42 U.S.C. 6962), and Executive Order 12873. The Contractor also agrees to include these requirements in each subcontract at every tier receiving more than \$10,000.

F. **Federal Tax Liability and Recent Felony Convictions.**

1. The Contractor affirmatively represents and certifies that:
 - a. The Contractor does not have any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted or have lapsed, and if there is a federal tax liability that it is being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability; and
 - b. The Contractor was not convicted of the felony criminal violation under any Federal law within the preceding twenty-four (24) months.
2. Contractor is described as any private corporation, partnership, trust, joint-stock company, sole proprietorship, or other business association.
3. The Contractor agrees to include these requirements in all subcontracts at all tiers, regardless of value, and to obtain the same certification and disclosure from all subcontractors (at all tiers).

G. **Fraud and False or Fraudulent Statements Or Related Acts**

1. The Contractor acknowledges that the provisions of the Program Fraud Civil Remedies Act of 1986, as amended, 31 U.S.C. § 3801 *et seq.* and U.S DOT regulations, "Program Fraud Civil Remedies," 49 CFR Part 31, apply to its actions pertaining to the Project. Upon execution of the Contract, the Contractor certifies and affirms the truthfulness and accuracy of any statement it has made, it makes or may make pertaining to the project covered under this Contract. In addition to other penalties that may be applicable, the Contractor further acknowledges that if it makes a false, fictitious, or fraudulent claim, statement, submission, or certification, the Federal Government reserves the right to impose the penalties of the Program Fraud Civil Remedies Act of 1986 on the Contractor to the extent the Federal Government deems appropriate.

2. The Contractor also acknowledges that 49 U.S.C. § 5323(l)(1) authorizes the Federal Government to impose penalties under 18 U.S.C. § 1001 if it makes, or causes to be made, a false, fictitious, or fraudulent claim, statement, submission, or certification to the Federal Government in connection with this Contract and under 49 U.S.C chapter 53 or any other applicable law.
3. The Contractor agrees to include these clauses in each subcontract, and it is further agreed that the clauses shall not be modified, except to identify the subcontractor who will be subject to the provisions

H. **Incorporation of Federal Transit Administration Terms.** The provisions in this Contract include certain standard terms and conditions required by the U.S. Department of Transportation (DOT), whether or not expressly set forth. All contractual provisions required by DOT, as set forth in FTA Circular 4220.1G or any revision thereto, are hereby incorporated by reference. Anything to the contrary herein notwithstanding, all FTA mandated terms shall be deemed to control in the event of a conflict with other provisions contained in the Contract. Contractor shall not perform any act, fail to perform any act, or refuse to comply with any KCATA requests that would cause KCATA to be in violation of the FTA terms and conditions. The Contractor agrees to include this clause in all subcontracts at any tier. It is further agreed that the clause shall not be modified, except to identify the subcontractors who will be subject to the provision.

I. **Lobbying Restrictions.**

1. The Contractor is bound by its certification contained in its offer to the Authority regarding the use of federal or non-federal funds to influence, or attempt to influence any federal officer or employee regarding the award, execution, continuation, or any similar action of any federal grant or other activities as defined in 31 U.S.C. 1352, as amended; 2 C.F.R. § 200.450, 2 C.F.R. part 200 appendix II (J) and 49 CFR Part 20, to the extent consistent with 31 U.S.C. § 13532, as amended. The Contractor agrees to comply with this requirement throughout the term of the Contract.
2. The Contractor agrees to include these requirements in all subcontracts at all tiers exceeding \$100,000 and to obtain the same certification and disclosure from all subcontractors (at all tiers).

J. **Prohibition on Certain Telecommunications and Video Surveillance Equipment.** Contractor represents that it is and will be compliant at all times with 2 C.F.R. § 200.216 and will not provide telecommunications and/or video surveillance services or equipment to the KCATA in the performance of any contract, subcontract or other contractual instrument resulting from a solicitation or RFP that have been manufactured by a supplier (including any subsidiary or affiliate of those entities) that is considered prohibited or not approved under this regulation. This statute is not limited to entities that use end-products produced by those companies; and also covers the use of any equipment, system, or services that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system.

K. **Research Development, Demonstration, Deployment, and Special Studies – Special Requirements.**

1. Rights in Data.

- a. The term "subject data" used in this clause means recorded information, whether or not copyrighted, that is delivered or specified to be delivered under the Contract. The term includes graphic or pictorial delineation in media such as drawings or photographs; text in specifications or related performance or design-type documents; machine forms such as punched cards, magnetic tape, or computer memory printouts, and information retained in computer memory. The term "subject data" does not include financial reports, cost analyses, and similar information incidental to contract administration.
- b. The following restrictions apply to all subject data first produced in the performance of the Contract:
 - 1) Except for its own internal use, Contractor may not publish or reproduce subject data in whole or in part or in any manner or form, nor may Contractor authorize others to do so, without the written consent of KCATA, until such time as KCATA may have either released or approved the release of such data to the public.

- 2) In accordance with 2 C.F.R. part 200, Appendix II (F) and 37 C.F.R. part 401, the Federal Government reserves a royalty-free, non-exclusive, and irrevocable license to reproduce, publish, or otherwise use, and to authorize others to use, the following subject data for "Federal Government purposes":
 - (a) Any subject data developed under the Contract, whether or not a copyright has been obtained; and
 - (b) Any rights of copyright purchased by KCATA or Contractor using Federal assistance in whole or in part provided by FTA.
 - 3) "For Federal Government Purposes" means use only for the direct purpose of the Federal Government. Without the copyright owner's consent, the Federal Government may not extend its Federal license to any other party.
 - 4) Unless prohibited by state law, Contractor agrees to indemnify, save, and hold harmless KCATA and the Federal Government, its officers, agents, and employees acting within the scope of their official duties against any liability, including costs and expenses, resulting from any willful or intentional violation by the Contractor of proprietary rights, copyrights, or rights of privacy, arising out of the publication, translation, reproduction, delivery, use or disposition of any data furnished under this Contract. The Contractor shall not be required to indemnify the Federal Government for any such liability arising out of the wrongful act of any employee, official, or agents of the Federal Government.
 - 5) Nothing contained in this clause on rights in data shall imply a license to the KCATA or to the Federal Government under any patent or be construed as affecting the scope of any license or other right otherwise granted to KCATA or to the Federal Government under any patent.
 - 6) Data developed by the KCATA or Contractor and financed entirely without using Federal assistance provided by the Federal Government that has been incorporated into work required by this Contract to which this clause has been added is exempt from the requirements of subsections (b), (c), and (d) of this clause, provided that the KCATA or Contractor identifies that data in writing at the time of delivery of the contract work.
 - 7) Contractor agrees to include these requirements in each subcontract for experimental, developmental, or research work funded in whole or in part with federal assistance.
2. Export Controls. If data developed in the course of this contract is subject directly or indirectly to U.S. Export Control regulations, that data may not be exported to any countries or any foreign persons, without first obtaining the necessary Federal license or licenses and complying with any applicable Department of Commerce, Export Administration Regulations, 15 C.F.R. Part 730.
 3. Patent Rights. If any invention, improvement, or discovery of the Contractors is conceived or first actually reduced to practice in the course of work under this Contract, and that invention, improvement, or discovery is patentable under the laws of the United States of America or any foreign country, the Contractor agrees to notify KCATA immediately and provide a detailed report, who in turn shall ultimately notify the FTA. Unless the Federal Government later makes a contrary determination in writing, the KCATA and Contractor agree to take the necessary actions to provide, through FTA, those rights in that invention due the Federal Government as described in U.S. Department of Commerce regulations, "Rights to Inventions Made by Nonprofit Organizations and Small Business Firms Under Government Grants, Contracts and Cooperative Agreements," 37 C.F.R. Part 401 and 35 U.S.C 2000 *et seq.*
 4. Protection of Human Subjects. A third-party contractor providing services involving the use of human subjects must comply with the National Research Act at 42 U.S.C. 289 *et seq.*, and DOT regulations, "Protection of Human Subjects," 49 C.F.R. Part 11.

5. **Protection of Animals.** A third-party contractor providing services involving the use of animals must comply with the Animal Welfare Act, 7 U.S.C. 2131 *et seq.*, and Department of Agriculture regulations, "Animal Welfare," 9 C.F.R. Parts 1, 2, 3 and 4.
- L. **Seismic Safety.** The Contractor agrees that any new building or addition to an existing building will be designed and constructed in accordance with the Earthquake Hazards Reduction Act of 1977, as amended, 42 U.S.C. § 7701, *et seq.*, and U.S. DOT regulations, "Seismic Safety", 49 C.F.R. Part 41, specifically, 49 C.F.R. § 41.117. and will certify to compliance to the extent required by the regulation. The Contractor agrees to ensure that all work performed under this contract, including work performed by a subcontractor, is in compliance with the standards required by the Seismic Safety regulations and the certification of compliance issued on the project.
- M. **Trafficking in Persons.** Contractor and its subcontractors or their employees shall not: 1) engage in severe forms of trafficking in persons during the Contract Term; b) procure a commercial sex act during the Contract Term; or c) use forced labor in the performance of the Contract. Contractor shall inform KCATA immediately of any information Contractor receives from any source alleging a violation of a prohibition in this section. KCATA may terminate this Contract for any violation of this section; such right of termination is in addition to all other remedies for noncompliance that are available to the KCATA.
- N. **United States (Domestic) Product and Service Preference.**
1. **Buy America.**
- a. **Steel and Manufactured Products.** The Contractor agrees to comply with 49 U.S.C. §5323(j), and 49 C.F.R. Part 661, which provide that federal funds may not be obligated unless steel, iron, and manufactured products used in FTA-funded projects are produced in the United States, unless a waiver has been granted by FTA or the product is subject to a general waiver. General waivers are listed in 49 C.F.R. 661.7.
- b. **Rolling Stock.** Buy America requirements for rolling stock are set out at 5323(j)(2)(C) and 49 C.F.R. Part 661.11. Rolling stock not subject to a general waiver must be manufactured in the United States and have a 70 percent (70%) domestic content.
- c. **Construction Materials.** Buy America Preference set forth in Section 70914 of the Build America, Buy America Act, included in the Infrastructure Investment and Jobs Act (Public Law 117-58, div. G, tit. IX, §§ 70911 – 70927) as implemented by the U.S. Office of Management and Budget's "Buy America Preferences for Infrastructure Projects", 2 C.F.R. part 184 and incorporated under 49 U.S.C. 5323(j). A list of included materials is in Public Law 117-58 and 2 C.F.R. Part 184, as amended.
- d. The Contractor further agrees to include these requirements in all subcontracts exceeding \$150,000.
2. **Cargo Preference – Use of United States-Flag Vessels.**
- a. In accordance with 46 U.S.C. § 55305, and U.S. Maritime Administration regulations, "Cargo Preference – U.S.-Flag Vessels," 46 C.F.R. Part 381, at least 50 percent of any equipment, materials or commodities procured, contracted for or otherwise obtained with funds granted, guaranteed, loaned, or advanced by the U.S. Government and which may be transported by ocean vessel, shall be transported on privately owned United States-flag commercial vessels, if available.
- b. The Contractor further agrees to furnish within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated "on-board" commercial ocean bill-of-lading in English for each shipment of cargo described 46 C.F.R. § 381.7(a)(1) shall be furnished to both KCATA (through the prime contractor in the case of subcontractor bills-of-lading) and to the Division of National

Cargo, Office of Market Development, Maritime Administration (MAR-590), 1200 New Jersey Avenue SE Washington, DC, 20590.

- c. The Contractor further agrees to include these requirements in all subcontracts issued pursuant to this Contract when the subcontract may involve the transport of equipment, materials or commodities by ocean liner and exceeds \$150,000.

- 3. **Fly America.** In accordance with Section 5 of the International Air Transportation Fair Competitive Practices Act of 1974, as amended, 49 U.S.C. § 40118, and the U.S. General Services Administration (U.S. GSA) regulations, "Use of the United States Flag Air Carriers," 41 C.F.R. §§ 301-10.131 – 301-10.143, recipients and subrecipients of federal funds and their Contractors are required to use U.S. Flag air carriers for U.S. Government-financed international air travel and transportation of their personal effects or property, to the extent such service is available, unless travel by foreign air carrier is a matter of necessity, as defined by the Fly America Act. The Contractor shall submit, if a foreign air carrier was used, an appropriate certification or memorandum adequately explaining why service by a U.S. flag air carrier was not available or why it was necessary to use a foreign air carrier and shall, in any event, provide a certificate of compliance with the Fly America requirements. The Contractor agrees to include the requirements of this section in all subcontracts that may involve international air transportation and exceed \$150,000.

Contractor's Initials _____

KCATA's Initials _____

KCATA's Initials _____

ATTACHMENT B
AFFIDAVIT OF CIVIL RIGHTS COMPLIANCE
(To Be Completed by Prime and Subs if subs used)

STATE OF _____

COUNTY OF _____

On this ____ day of _____, 2025, before me appeared _____, personally known by me or otherwise proven to be the person whose name is subscribed on this affidavit and who, being duly sworn, stated as follows: I am the _____ (title) of _____ (business entity) and I am duly authorized, directed or empowered to act with full authority on behalf of the business entity in making this affidavit.

I hereby swear or affirm that the business entity complies with the following:

A. Nondiscrimination in Federal Public Transportation Programs.

1. Contractor must prohibit:
 - a. discrimination based on race, color, religion, national origin, sex (including sexual orientation, disability, or age;
 - b. exclusion from participation in employment or a business opportunity for reasons identified in 49 U.S.C. § 5332;
 - c. denial of program benefits in employment or a business opportunity identified in 49 U.S.C. § 5332; and
 - d. discrimination identified in 49 U.S.C. § 5332, including discrimination in employment or a business opportunity identified in 49 U.S.C. § 5332.
2. Contractor must follow the most recent edition of FTA Circular 4702.1, "Title VI Requirements and Guidelines for Federal Transit Administration Recipients," to the extent consistent with applicable federal laws, regulations, requirements, and guidance. However, FTA does not require an Indian Tribe to comply with FTA program specific guidelines for Title VI when administering its agreement supported with federal assistance under the Tribal Transit Program.

B. Nondiscrimination – Title VI of the Civil Rights Act.

1. Contractor must prohibit discrimination based on race, color, or national origin;
2. Contractor must comply with a) Title VI of the Civil Rights Act of 1964, as amended, 42 U.S.C. § 2000d, et seq.; b) U.S. DOT regulations, "Nondiscrimination in Federally-Assisted Programs of the Department of Transportation – Effectuation of Title VI of the Civil Rights Act of 1964," 49 CFR Part 21; and c) Federal transit law, specifically 49 U.S.C. § 5332.
 2. Contractor must follow a) the most recent edition of FTA Circular 4702.1, "Title VI Requirements and Guidelines for Federal Transit Administration Recipients," to the extent consistent with applicable federal laws, regulations, requirements, and guidance; b) U.S. DOJ, "Guidelines for the enforcement of Title VI, Civil Rights Act of 1964," 28 C.F.R. § 50.3; and c) all other applicable federal guidance that may be issued.

KCATA AFFIDAVIT OF CIVIL RIGHTS COMPLIANCE (PAGE 2)

C. Equal Employment Opportunity.

1. Federal Requirements and Guidance. Contractor must prohibit discrimination based on race, color, religion, sex, sexual orientation, or national origin; and
 - a. Comply with: (a) Title VII of the Civil Rights Act of 1964, as amended, 42 U.S.C. § 2000e, et seq.;
 - b. Comply with Title I of the Americans with Disabilities Act of 1990, as amended, 42 U.S.C. §§ 12101, et seq.;
 - c. Comply with federal transit law, specifically 49 U.S.C. § 5332, as provided in section 12 of FTA's Master Agreement;
 - d. Comply with FTA Circular 4704.1 "Equal Employment Opportunity (EEO) Requirements and Guidelines for Federal Transit Administration Recipients"; and
 - e. Follow other federal guidance pertaining to EEO laws, regulations, and requirements.
2. Indian Tribes. Contractors will recognize that Title VII of the Civil Rights Act of 1964, as amended exempts Indian Tribes under the definition of "Employer".
3. Nondiscrimination on the Basis of Sex. The Contractor agrees to comply with all Federal prohibitions against discrimination based on sex, including Title IX of the Education Amendments of 1972, as amended, 20 U.S.C. § 1681, *et. seq.*, U.S. DOT regulations, "Nondiscrimination on the Basis of Sex in Education Programs or Activities Receiving Federal Financial Assistance," 49 CFR part 25; and federal transit law, specifically 49 U.S.C. § 5332.
4. Nondiscrimination on the Basis of Age. In accordance with the Age Discrimination in Employment Act, 29 U.S.C. §§ 621-634, U.S. Equal Employment Opportunity Commission (U.S.EEOC) regulations, "Age Discrimination in Employment Act," 29 C.F.R. part 1625, the Age Discrimination Act of 1975, as amended, 42 U.S.C. § 6101 *et seq.*, which prohibits discrimination against individuals based on age in the administration of Programs, Projects and related activities receiving federal assistance; U. S. Department of Health and Human Services regulations, "Nondiscrimination on the Basis of Age in Programs or Activities Receiving Federal Financial Assistance," 45 C.F. R. part 90, and Federal transit law at 49 U.S.C. §5332.
5. Nondiscrimination on the Basis of Disability. In accordance with section 504 of the Rehabilitation Act of 1973, as amended, 29 U.S.C. § 794, which prohibits discrimination based on disability in the administration of federally assisted programs, projects or activities; the Americans with Disabilities Act of 1990 (ADA), as amended, 42 U.S.C. §12101 *et seq.*, the Architectural Barriers Act of 1968, as amended, 42 U.S.C. § 4151 *et seq.*, which requires that buildings and public accommodations be accessible to individuals with disabilities; Federal transit law, specifically 49 U.S.C. § 5332, and other applicable federal laws, regulations, and requirements pertaining to access for seniors or individuals with disabilities. The Contractor agrees that it will not discriminate against individuals on the basis of disability. In addition, the Contractor agrees to comply with any implementing requirements FTA may issue.
6. Access to Services for Persons with Limited English Proficiency. Compliance to provide meaningful access to public transportation services in accordance with Title VI of the Civil Rights Act of 1964, as amended, 42 U.S.C. § 2000d, *et seq.*, and its implementing regulation at 28 CFR § 42.405(d), and applicable U.S. Department of Justice guidance.
7. Promoting Free Speech and Religious Liberty. All Federal funding must be expended in full accordance with the U.S. Constitution, Federal Law, and statutory and public policy requirements, including but not limited to, those prohibiting discrimination and protecting free speech, religious liberty, public welfare, and the environment.

KCATA AFFIDAVIT OF CIVIL RIGHTS COMPLIANCE (PAGE 3)

- D. Contractor understands that it is required to include this Article in all subcontracts. Failure by the Contractor to carry out these requirements or to include these requirements in any subcontract is a material breach of this Contract, which may result in the termination of this Contract or such other remedy as the KCATA deems appropriate, including but not limited to withholding monthly progress payments and/or disqualifying the Contractor from future bidding as non-responsible.

Affiant's Signature

Date

Subscribed and sworn to me before this _____ day of _____, 2025.

Notary Public Signature

Date

My Commission expires: _____

ATTACHMENT C
GUIDELINES FOR COMPLETING
KCATA WORKFORCE ANALYSIS/EEO-1 REPORT

Contractor shall apply the following definitions to the categories in the attached Workforce Analysis/EEO-1 Report form. Contractors must submit the Workforce/Analysis form to be considered for contract award. *The form is also required for all subcontractors.*

A. RACIAL/ETHNIC

1. **White** (not of Hispanic origin): All persons having origins in any of the original peoples of Europe, North Africa, or the Middle East.
2. **Black** (not of Hispanic origin): All persons having origins in any of the Black racial groups of Africa.
3. **Hispanic**: All persons of Mexican, Puerto Rican, Cuban, Central or South American origin, regardless of race.
4. **Asian or Pacific Islander**: All persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands. This area includes, for example, China, Japan, Korea, the Philippine Islands, and Samoa.
5. **American Indian or Alaskan Native**: All persons having origins in any of the original peoples of North America, and who maintain cultural identification through tribal affiliation or community recognition.

B. JOB CATEGORIES

1. **Officials and Managers**: Includes chief executive officers, presidents, vice-presidents, directors, and kindred workers.
2. **Professionals**: Includes attorneys, accountants, and kindred workers.
3. **Technicians**: Includes computer programmers and operators, drafters, surveyors, highway technicians, inspectors, and kindred workers.
4. **Sales Workers**: Includes contract sales representatives, purchasing agents, customer relations representatives and kindred workers.
5. **Office and Clerical**: Includes secretaries, bookkeepers, clerk typists, payroll clerks, accounts payable clerks, receptionists, switchboard operators and kindred workers.
6. **Craft Workers** (skilled): Includes mechanics and repairers, electricians, carpenters, plumbers, and kindred workers.
7. **Operatives** (semi-skilled): Includes bricklayers, plaster attendants, welders, truck drivers and kindred workers.
8. **Laborers** (unskilled): Includes laborers performing lifting, digging, mixing, loading, and pulling operations and kindred workers.
9. **Service Workers**: Includes janitors, elevator operators, watchmen, chauffeurs, attendants, and kindred workers.

ATTACHMENT C-2 --- KCATA WORK FORCE ANALYSIS/EEO-1 REPORT

Report on all permanent, temporary, or part-time employees including apprentices and on-the-job trainees. Enter the appropriate figures on all lines and in all columns. All blank spaces will be considered zero. This form is also required for subcontractors and major suppliers on a project.

Job Categories	Number of Employees (Report employees in only one category)														
	Race/Ethnicity														
	Hispanic or Latino		Not Hispanic or Latino												Total Col A-N
			Male						Female						
	Male	Female	White	Black or African American	Native Hawaiian or Other Pacific Islander	Asian	American Indian or Alaska Native	Two or more races	White	Black or African American	Native Hawaiian or Other Pacific Islander	Asian	American Indian or Alaska Native	Two or more races	
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	
Executive/Senior-Level Officials and Managers															
First/Mid-Level Officials and Managers															
Professionals															
Technicians															
Sales Workers															
Administrative Support Workers															
Craft Workers															
Operatives															
Laborers and Helpers															
Service Workers															
TOTAL															
PREVIOUS YEAR TOTAL															
TYPE OF BUSINESS	<input type="checkbox"/> Manufacturing		<input type="checkbox"/> Wholesale		<input type="checkbox"/> Construction		<input type="checkbox"/> Regular Dealer		<input type="checkbox"/> Selling Agent		<input type="checkbox"/> Service Establishment			<input type="checkbox"/> Other	

Signature of Certifying Official

Company Name

Printed Name and Title

Address/City/State/Zip Code

Date Submitted

Telephone Number/Fax Number

**ATTACHMENT D
NON-COLLUSION AFFIDAVIT**

State of _____

County of _____

Name and Title of Person Signing

Proposer Name

The above-named individual being first duly sworn, deposes and says that he or she is an authorized representative of the above Proposer and that all statements made, and facts set out in this proposal for the above referenced project are true and correct and that the Proposer (firm, person, association, or corporation making the bid) has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive proposal in connection with such proposal or any contract which may result from its acceptance.

Affiant further certifies that Proposer is not financially interested in or financially affiliated with, any other Proposer for the project.

By _____ personally known to me or proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(is), and that by his/her/their signatures(s) on the instrument the person(s), or entity upon behalf of which the person(s) acted, executed the instrument.

Subscribed and sworn to before me on this _____ day of _____, 2025.

Notary Public

My Commission Expires: _____

(Seal)

ATTACHMENT E
KANSAS CITY AREA TRANSPORTATION AUTHORITY
AFFIDAVIT OF PRIMARY PARTICIPANT'S COMPLIANCE WITH SECTION
285.500 RSMO, ET SEQ. REGARDING EMPLOYEE ELIGIBILITY VERIFICATION

STATE OF _____

COUNTY OF _____

On this _____ day of _____, 20____, before me appeared _____, personally known by me or otherwise proven to be the person whose name is subscribed on this affidavit and who, being duly sworn, stated as follows: I am the _____ (title) of _____ (business entity) and I am duly authorized, directed or empowered to act with full authority on behalf of the business entity in making this affidavit.

I hereby swear or affirm that the business entity does not knowingly employ any person in connection with the contracted services who does not have the legal right or authorization under federal law to work in the United States as defined in 8 U.S.C. §1324a(h)(3).

☐

I hereby additionally swear or affirm that the business entity is enrolled in an electronic verification of work program operated by the United States Department of Homeland Security (E-Verify) or an equivalent federal work authorization program operated by the United States Department of Homeland Security to verify information of newly hired employees, under the Immigration Reform and Control Act of 1986, and that the business entity will participate in said program with respect to any person hired to perform any work in connection with the contracted services.

I have attached hereto documentation sufficient to establish the business entity's enrollment and participation in the required electronic verification of work program.

☐

State laws/regulations DO NOT require that we participate in a federal work program operated by the United States Department of Homeland Security or an equivalent program.

Affiant's signature

Subscribed and sworn to before me this _____ day of _____, 2025

Notary Public

My Commission expires: _____ (Seal)

NOTE: An example of acceptable documentation is the E-Verify Memorandum of Understanding (MOU) – a valid, completed copy of the first page identifying the business entity and a valid copy of the signature page completed and signed by the business entity, the Social Security Administration and the Department of Homeland Security. Firms may register at <https://www.e-verify.gov/>

ATTACHMENT F
KANSAS CITY AREA TRANSPORTATION AUTHORITY
CERTIFICATION OF PRIMARY PARTICIPANT
REGARDING DEBARMENT, SUSPENSION, AND OTHER
RESPONSIBILITY MATTERS

The Primary Participant (applicant for an FTA grant or cooperative agreement, or potential Contractor for a major third-party contract), _____ certifies to the best of its knowledge and belief, that it and its principals:

1. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
2. Have not within a three-year period preceding this bid, been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
3. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (2) of this certification; and
4. Have not within a three-year period preceding this application/bid had one or more public transactions (Federal, State or local) terminated for cause or default.

If the primary participant (applicant for FTA grant, or cooperative agreement, or potential third-party Contractor) is unable to certify to any of the statements in this certification, the participant shall attach an explanation to this certification.

THE PRIMARY PARTICIPANT (APPLICANT FOR AN FTA GRANT OR COOPERATIVE AGREEMENT, OR POTENTIAL CONTRACTOR FOR A MAJOR THIRD-PARTY CONTRACT), _____ CERTIFIES OR AFFIRMS THE TRUTHFULNESS AND ACCURACY OF THE CONTENTS OF THE STATEMENTS SUBMITTED ON OR WITH THIS CERTIFICATION AND UNDERSTANDS THAT THE PROVISIONS OF 2 CFR PARTS §§ 180.220 and 1200.220 ARE APPLICABLE THERETO.

Signature and Title of Authorized Official

Date

ATTACHMENT G
CERTIFICATION OF PRIMARY PARTICIPANTS
REGARDING RESTRICTIONS ON LOBBYING

I, _____ (Name and Title of Grantee Official or Potential Contractor for a Major Third-Party Contract), hereby certify on behalf of _____ (Name of Grantee or Potential Contractor) that:

1. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.
3. The undersigned shall require that the language of this certification be included in the award documents for all sub-awards at all tiers (including subcontracts, sub-grants, and contracts under grants, loans, and cooperative agreements) and that all sub-recipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance is placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352, 2 CFR § 200.450, 2 CFR Part 200 Appendix II (J) and 49 CFR Part 20. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

Executed this _____ day of _____ 2025

By _____
Signature of Authorized Official

Title of Authorized Official

ATTACHMENT H
KANSAS CITY AREA TRANSPORTATION AUTHORITY
CERTIFICATION OF PRIMARY PARTICIPANT
REGARDING FEDERAL TAX LIABILITY AND RECENT FELONY CONVICTIONS

The Primary Participant (name of applicant for an FTA grant or cooperative agreement, or potential Contractor for a major third-party contract), _____ certifies to the best of its knowledge and belief, that:

1. Does not have any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted or have lapsed, and if there is a federal tax liability that it is being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability; and
2. Was not convicted of the felony criminal violation under any Federal law within the preceding 24 months.

Contractor is described as any private corporation, partnership, trust, joint-stock company, sole proprietorship, or other business association.

If the primary participant (applicant for FTA grant, or cooperative agreement, or potential third-party Contractor) is unable to certify to any of the statements in this certification, the participant shall attach an explanation to this certification.

The Contractor agrees to include these requirements in all subcontracts at all tiers, regardless of value, and to obtain the same certification and disclosure from all subcontractors (at all tiers).

THE PRIMARY PARTICIPANT (APPLICANT FOR AN FTA GRANT OR COOPERATIVE AGREEMENT, OR POTENTIAL CONTRACTOR FOR A MAJOR THIRD-PARTY CONTRACT), _____ CERTIFIES OR AFFIRMS THE TRUTHFULNESS AND ACCURACY OF THE CONTENTS OF THE STATEMENTS SUBMITTED ON OR WITH THIS CERTIFICATION AND UNDERSTANDS THAT THE PROVISIONS OF 48 CFR PARTS 1, 22 AND 52 ARE APPLICABLE THERETO.

Signature and Title of Authorized Official

Date

ATTACHMENT I

KANSAS CITY AREA TRANSPORTATION AUTHORITY

**BUY AMERICA CERTIFICATION FORM
FOR STEEL OR MANUFACTURED PRODUCTS
OTHER THAN ROLLING STOCK**

CERTIFICATE OF COMPLIANCE WITH BUY AMERICA REQUIREMENTS

The bidder or offeror hereby certifies that it will comply with the requirements of 49 U.S.C. 5323(j)(1), and the applicable regulations in 49 CFR part 661.

Signature: _____

Printed Name: _____

Title: _____

Company: _____

Date Signed: _____

CERTIFICATE OF NON-COMPLIANCE WITH BUY AMERICA REQUIREMENTS

The bidder or offeror hereby certifies that it cannot meet the requirements of 49 U.S.C. 5323(j), but it may qualify for an exception to the requirements consistent with 49 U.S.C. 5323(j)(2) as amended, and the applicable regulations in 49 CFR 661.7.

Signature: _____

Printed Name: _____

Title: _____

Company: _____

Date Signed: _____

ATTACHMENT J

KANSAS CITY AREA TRANSPORTATION AUTHORITY

**BUY AMERICA CERTIFICATION FORM
For Construction Materials**

CERTIFICATE OF COMPLIANCE WITH BUY AMERICA REQUIREMENTS – CONSTRUCTION MATERIALS

The bidder or offeror hereby certifies that it will comply with the requirements of the Infrastructure Investment and Jobs Act, Public Law 117-58, div. G, tit. IX, §§ 70911 – 70927 (2021) as implemented by the U.S. Office of Management and Budget’s “Buy America Preferences for Infrastructure Projects”, 2 CFR part 184. A list of materials included in this requirement are listed in the Public Law and the OMB memorandum.

Signature: _____

Printed Name: _____

Title: _____

Company: _____

Date Signed: _____

CERTIFICATE OF NON-COMPLIANCE WITH BUY AMERICA REQUIREMENTS – CONSTRUCTION MATERIALS

The bidder or offeror hereby certifies that it cannot comply with the requirements of the Infrastructure Investment and Jobs Act, Public Law 117-58, div. G, tit. IX, §§ 70911 – 70927 (2021) as implemented by the U.S. Office of Management and Budget’s “Buy America Preferences for Infrastructure Projects”, 2 CFR part 184. A list of materials included in this requirement are listed in the Public Law and the OMB memorandum.

Signature: _____

Printed Name: _____

Title: _____

Company: _____

Date Signed: _____

**ATTACHMENT K
BID RESPONSE FORMS**

INVITATION FOR BIDS (IFB) F25-7034-39A

Item	Unit	Item Description	Total Price
No.	Measure		(\$)
1	EA	Carrier (Basis of Design)	

ALTERNATE #1

Item	Unit	Item Description	Total Price
2	EA	Trane (Used for Basis of Product Only)	

ALTERNATE #2

Item	Unit	Item Description	Total Price
3	EA	York (Used for Basis of Product Only)	

ALTERNATE #3

Item	Unit	Item Description	Total Price
4	EA		

Itemized Bid Proposal Submitted By: _____
Authorized Signature

Company: _____

Date: _____

BID FORM SUMMARY (PAGE 2)

INVITATION FOR BIDS (IFB) F25-7034-39A

Item	Unit	Item Description	Total Price
No.	Measure		(\$)
1	EA	MAARLEY (Basis of Design)	\$ -

TOTAL	\$ -
--------------	------

ALTERNATE 1

Item	Unit	Item Description	Total Price
No.	Measure		(\$)
1	EA	BAC	\$ -

TOTAL	\$ -
--------------	------

ALTERNATE 2

Item	Unit	Item Description	Total Price
No.	Measure		(\$)
1	EA	EVAPCO	\$ -

TOTAL	\$ -
--------------	------

Itemized Bid Proposal Submitted By: _____

Authorized Signature

Company: _____

Date: _____

BID FORM SUMMARY (PAGE 3)

INVITATION FOR BIDS (IFB) F25-7034-39A

The undersigned, acting as an authorized agent or officer for the Bidder, does hereby agree to the following:

1. The offer submitted is complete and accurate, including all forms required for submission in accordance with the terms and conditions listed in this Invitation for Bids and any subsequent Addenda. The Bidder shall immediately notify the KCATA in the event of any change.
2. The quantities specified are based upon the best available estimates and do not determine the actual amount the Authority shall order during the contract period. The quantities are subject to change. Payments will be based on actual quantities order based on the unit rates quoted.
3. The undersigned agrees to furnish and deliver the items or perform services as described herein for the consideration stated in accordance with the terms and conditions listed in the KCATA IFB. The rights and obligations of the parties to any resultant purchase order/contract shall be subject to and governed by this document and any documents attached or incorporated herein by reference.

Company Name (Type / Print)

Date

Address / City / State / Zip

Authorized Signature

Title

Name (Type / Print)

Telephone #

Facsimile #

E-mail Address

**ATTACHMENT L
REFERENCES**

Project Number: F25-7034-39A

Bidder Name: _____

Work accomplished by Contractor which best illustrates current qualification relevant to this project:

Job Description: _____
Contract Amount: _____
Contract Term: _____
Owner & Location: _____
Contact Name: _____ Telephone No.: _____
E-mail Address: _____ Contract Date: _____ to _____

Job Description: _____
Contract Amount: _____
Contract Term: _____
Owner & Location: _____
Contact Name: _____ Telephone No.: _____
E-mail Address: _____ Contract Date: _____ to _____

Job Description: _____
Contract Amount: _____
Contract Term: _____
Owner & Location: _____
Contact Name: _____ Telephone No.: _____
E-mail Address: _____ Contract Date: _____ to _____

Job Description: _____
Contract Amount: _____
Contract Term: _____
Owner & Location: _____
Contact Name: _____ Telephone No.: _____
E-mail Address: _____ Contract Date: _____ to _____

ATTACHMENT M
REQUEST FOR CHANGE OR APPROVED EQUAL

INVITATION FOR BIDS (IFB) F25-7034-39A
Provide and Deliver 450 Ton Chiller Equipment for Kansas City Area Transportation Authority

Bidders shall submit requests for changes and approval of items equal to items specified with a brand name, and they must be submitted by the deadline indicated in Section 1, "Bid Schedule".

Bidder: _____

IFB Page Reference _____

Questions/Clarification or Approved Equal: _____

_____ ACCEPTED

_____ REJECTED

KCATA Comments: _____

WATER CHILLER SCHEDULE

DESIGNATION		CH-1		
LOCATION		CHILLER ROOM		
MANUFACTURER		CARRIER	TRANE	YORK
MODEL		19XRV404238HUER64	CVHF048	YKEKELQ-EMH
OPTION		BASIS OF DESIGN	ALERNATE 1	ALTERNATE 2
TYPE		CENTRIFUGAL	CENTRIFUGAL	CENTRIFUGAL
RIGGING WEIGHT		16,900 LBS.	17698 LBS.	18950 LBS.
OPERATING WEIGHT		18,837 lbs.	19796 LBS.	20,992 LBS
CAP. NOMINAL TONS		450	450	450
REFRIG. TYPE		R-513A	R-514A	R-513A
REFRIG. CHARGE (lbs)		898 LBS.	700 Lbs	988 LBS.
FL KW / TON		0.5834	0.5583	0.5739
IPLV		0.351	0.3576	0.3563
EVAPORATOR DATA	EWT (F)	54.0°F	54.0°F	54.0°F
	LWT (F)	44.0°F	44.0°F	44.0°F
	GPM	1080	1075	1076
	PRESS DROP (FT)	22.4	34.4	17.1
	NO OF PASSES	2	2	2
	FOULING FACTOR	0.0001	0.0001	0.0001
CONDENSOR DATA	EWT (F)	85.0°F	85.0°F	85.0°F
	LWT (F)	94.3°F	95.0°F	94.3°F
	GPM	1354	1265	1341
	PRESS DROP (FT)	16.7	42.6	8.85
	NO OF PASSES	2	2	2
	FOULING FACTOR	0.00025	0.00025	0.00025
COMPRESSOR DATA	MAX kW input	262.5	251.2	258.3
	VOLT / PHASE	460 / 3	460 / 3	460 / 3
	FLA	397	357	359
	STARTER TYPE	VFD	VFD	VSD
	VFD	YES	YES	YES
ELECTRICAL DATA	PANEL & CIRCUIT			
	WIRE & CONDUIT			
	MCA	446	407	414
	MOCP	800	700	700
	POINTS OF CONNECTION	SINGLE	SINGLE	SINGLE
	DISCONNECT INCLUDED	YES	YES	YES
	CONTROL	SEE SPECS	SEE SPECS	SEE SPECS
NOTES		1	1	1

1 THESE ARE THE APPROVED EQUAL CHILLERS, ONE WILL BE SELECTED FOR THIS PROJECT. SEE SPECIFICATIONS

COOLING TOWER SCHEDULE

DESIGNATION		CT-1		
UNIT DATA	TYPE	INDUCED	INDUCED	INDUCED
	MANUFACTURER	MARLEY	BAC	EVAPCO
	MODEL #	NC8405RAN1	S3E-1222-070N	AXS 12-9J22-VR
	OPTION	BASIS OF DESIGN	ALERNATE 1	ALTERNATE 2
	# OF CELLS	1	1	1
	RIGGING WEIGHT	8,685 LBS.	12,121 LBS.	12,520 lbs.
	OPERATING WEIGHT	19,480 LBS.	25,150 LBS.	25,340 lbs.
	NOMINAL TONS	450	450	450
	GPM	1350	1500	1350
	CFM	120,430	130,099	106,500
	EWT (F)	95	95	95
	LWT (F)	85	85	85
	AMBIENT WB (F)	78	78	78
	FAN MOTORS (NO./HP)	1 / 25 HP	1 / 25 HP.	1 / 15.
	MOTOR SPEED(S)	1800	1800	1800
	VOLTAGE / PHASE	460V / 3 PH	460V / 3 PH	460V / 3 PH
ELECT. CTRL. DATA	PANEL & CIRCUIT			
	WIRE & CONDUIT			
	MOC	60	60	45
	DISCONNECT	INCLUDED	INCLUDED	INCLUDED
	STARTER	2-SPEED	2-SPEED	2-SPEED
	CONTROL SEQUENCE	SEE SPECS	SEE SPECS	SEE SPECS
BASIN HTR DATA	BASIN HEATER (QTY./kW)	1 / 18 kW	1 / 18 kW	1 / 18 kW
	BASIN HEATER (VOLT/PH)	460V / 3 PH	460V / 3 PH	460V / 3 PH
	BASIN HEATER CONTROL	OUTDOOR T-STAT	OUTDOOR T-STAT	OUTDOOR T-STAT
ELECTRICAL DATA	PANEL & CIRCUIT			
	WIRE & CONDUIT			
	MCA			
	MOC	30	30	30
	POINTS OF CONNECTION	TWO	TWO	TWO
	DISCONNECT	INCLUDED	INCLUDED	INCLUDED
	CONTROL	SEE SPECS	SEE SPECS	SEE SPECS
NOTES		1	1	1

1 THESE ARE THE APPROVED EQUAL CHILLERS, ONE WILL BE SELECTED FOR THIS PROJECT. SEE SPECIFICATIONS