

REQUEST FOR**BID (RFB) FORM****MAILING ADDRESS:**

MISSOURI DEPARTMENT OF TRANSPORTATION
GENERAL SERVICES, P.O. BOX 270
JEFFERSON CITY, MO 65102

REQUEST NO. 9-160211KH

DATE January 28, 2016

SEALED BIDS, SUBJECT TO THE CONDITIONS ON ALL PAGES OF
 THIS RFB WILL BE RECEIVED AT THIS OFFICE UNTIL

2:00 PM LOCAL TIME; February 11, 2016

AND THEN PUBLICLY OPENED AND READ FOR FURNISHING
 THE FOLLOWING SUPPLIES OR SERVICES. SIGN AND RETURN
 BEFORE TIME SET FOR OPENING.

BIDS TO BE BASED F.O.B.
MISSOURI DEPARTMENT OF TRANSPORTATION

Springfield, MO

BUYER: Kristi Hixson **EMAIL:** Kristi.Hixson@modot.mo.gov

BUYER TELEPHONE: 573-526-1975

The purpose of this Request For Bids (RFB) is to accept bids for the contractor to remove, furnish and install an air-cooled scroll compressor chiller at the MoDOT's District Office located at 3025 East Kearney Street, Springfield, MO. in accordance with the plans and as directed by the Facility Operations Supervisor. The project described as **"SW District Chiller Replacement Project"** shall be completed according to project drawings and specifications. The pricing being solicited under this RFB is for bids to be rendered to the Missouri Highways and Transportation Commission (hereinafter, "MHTC" or "Commission"), acting by and through its operating arm, the Missouri Department of Transportation (hereinafter, "MoDOT").

Notice to Contractors

This Request For Bid seeks bids from qualified organizations to remove, furnish and install an air-cooled scroll compressor chiller at 3025 East Kearney Street., Springfield, MO. MoDOT will receive bids at the following mailing address: P.O. Box 270, Jefferson City, MO 65102-0270, or hand-delivered in a sealed envelope to the following physical address: General Services Procurement at 830 MoDOT Drive, Jefferson City, MO 65109 until 2:00 p.m., February 11, 2016. Faxed or e-mailed bids will not be accepted. Bid forms and information may be obtained by contacting Kristi Hixson at 573-526-1975, Kristi.Hixson@modot.mo.gov, or electronically download them at no charge from: http://contribute.modot.mo.gov/business/contractor_resources/FacilitiesConstructionandMaintenance.htm Prevailing wage as established by the Missouri Department of Labor and Industrial Relations shall apply. Bid securities in the amount of 5% of the bid will be required to accompany bids. Bids must be made on forms provided by the Commission. The Commission reserves the right to reject any or all bids and to waive irregularity in the bids and the bidding. No bid may be amended or withdrawn after the bid is opened.

Written Questions: All written questions must be addressed to Kristi Hixson no later than 2:00 p.m., Local Time, Wednesday, February 3, 2016 at the following mailing address: Missouri Dept. of Transportation, General Services Procurement Unit, P.O. Box 270, Jefferson City, MO 65102-0270 or by e-mail to Kristi.Hixson@modot.mo.gov. Any questions received after this deadline will not be accepted. MoDOT may issue an addendum and post the responses to all questions on-line for vendors to retrieve. Responses to the questions will be posted on MoDOT's website at:

http://contribute.modot.mo.gov/business/contractor_resources/FacilitiesConstructionandMaintenance.htm

in the form of a written addendum. It is anticipated this addendum will be issued on the morning of Thursday, February 4, 2016. It is the sole responsibility of the Bidder to check for any and all addendums throughout the Bid process.

(SEE ATTACHED FOR TERMS, CONDITIONS, AND INSTRUCTIONS)

In compliance with the above Request For Bid, and subject to all conditions thereof, the undersigned bidder agrees to furnish and deliver any or all the items on which prices were bid within the timeframe specified herein.

Date: _____

Telephone No.: _____

Fax No.: _____

Federal I.D. No. _____

Email Address: _____

Firm Name: _____

Address: _____

By (Signature): _____

Type/Print Name _____

**Is your firm MBE
 certified?**

☐ Yes

☐ No

Title:

**Is your firm WBE
 certified?**

☐ Yes

☐ No

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FINAL CHECKLIST BEFORE SUBMITTING BID

- ____ 1. Complete the Bid Form by filling in the total dollar amount(s) of the bid; listing any addenda which may have been issued; filling in the dollar amount of the bidder's check or Bid Bond, sign the proper signature line, and supply the required information in connection with the signature for the individual bidder, joint adventurer, or corporation.

- ____ 2. Submit Bid Bond executed by the bidder and surety. Bidders are required to use the Bid Bond furnished by the Commission or attach cashier's check to Bid Bond form. Personal checks are not accepted.

- ____ 3. Complete Subcontractor section by listing major subcontractor(s) and general supervisor(s), sign as required.

- ____ 4. Complete the Vendor Information and Preference Certification Form.

- ____ 5. Complete the form that is applicable to your company. Either the:

ANNUAL WORKER ELIGIBILITY VERIFICATION AFFIDAVIT (for use by corporations)

or the

APPLICANT AFFIDAVIT FOR SOLE-PROPRIETORSHIP OR PARTNERSHIP.

- ____ 6. If addenda(s) are issued attach signed copies to the back of the bid package.

NEWSPAPER ADVERTISEMENT
Notice to Contractors

MoDOT will receive bids at its General Services, Procurement section, 830 MoDOT Drive, Jefferson City, MO until 2:00 p.m., February 11, 2016 to remove existing unit, furnish and install a new air-cooled scroll compressor chiller at the MoDOT District Office at 3025 East Kearney St., Springfield, MO. Contact Kristi Hixson at 573-526-1975 or Kristi.Hixson@modot.mo.gov to obtain plans, forms, and information or download them at no charge from: http://contribute.modot.mo.gov/business/contractor_resources/FacilitiesConstructionandMaintenance.htm

DIVISION 0 – BIDDING AND CONTRACT INFORMATION

00100

BIDDER REQUIREMENTS

1. SCOPE OF WORK

Replace existing Carrier Model 30GT-130—510KA Chiller with a Daikin Model AGZ130E chiller or equivalent chiller manufactured by York or Trane. All products must meet or exceed the attached Daikin Model AGZ130E specifications and warranty. **See Attachment A.** Unit must be compatible with Honeywell WEB 600E-0 Automatic Control System. New unit to be set by the contractor on the existing 8' x 26' concrete pad.

After completion of the installation of the unit, a system pressure test shall be performed.

If new chiller manufacturer's recommendation requires oil change after break-in period, cost will be the responsibility of the contractor. Contractor to use factory formulated mixed glycol with inhibitors.

Existing unit will become the property of the contractor and must be removed from site.

Work to be completed when cooling of the building is not needed. Contractor must perform work on weekend or state holiday to allow for minimal disruption.

PICTURES OF EXISTING UNIT





2. DEFINITIONS

MoDOT Inspector or Facility Operations Supervisor: When the term "MoDOT Inspector or Facility Operations Supervisor" is used herein, it shall refer to those MoDOT individuals authorized to perform site inspections by Jeremy Hopper, [Facility Operations Supervisor in the Southwest District], (417) 895-6723 (Landline) or (417) 830-8440 (Cell).

Owner: When the term "Owner" is used herein, it shall refer to Missouri Department of Transportation (MoDOT).

Contractor: The successful bidder to whom the contract is awarded.

3. BID INSTRUCTIONS

In order to receive consideration, bids must be made in strict accordance with the following.

- A. Make bids, upon the forms provided herein, properly signed and with all items filled out. Do not change the wording of the bid form and do not add words to the bid form. Unauthorized conditions, limitations or provisions attached to the bid will be cause for rejection of the bid.
- B. No telegraphic bid or telegraphic modification of a bid will be considered. No bids received after the time fixed for receiving them will be considered. Late bids will be returned to the bidder unopened.

4. INVOICING AND PAYMENT

- A. Each invoice should be itemized in accordance with items listed on the contract in accordance with Section 01019, Contract Considerations, Applications for Payment provisions. Failure to comply with this requirement may delay processing of invoices for payment.
- B. Unless otherwise provided for in the solicitation documents, payment for all equipment, supplies, and/or services required herein shall be made in arrears. The Commission shall not make any advance deposits.
- C. The Commission assumes no obligation for equipment, supplies, and/or services shipped or provided in excess of the quantity ordered. Any authorized quantity is subject to the Commission's rejection and shall be returned at the Contractor's expense.
- D. The Commission reserves the right to purchase goods and services using the state-purchasing card.

5. EXAMINATION OF DOCUMENTS AND SITE OF WORK

- A. Before submitting a bid, each bidder shall examine the Drawings carefully, read the Specifications and all other proposed Contract Documents, and visit the site of the work. Each bidder shall fully inform themselves, prior to bidding, as to existing conditions and limitations under which the Work is to be performed and shall include in his bid a sum to cover the cost of items necessary to perform the Work, as set forth in the proposed Contract Documents. No allowance will be made to a bidder because of lack of such examination or knowledge. The submission of a bid will be considered conclusive evidence that the bidder has made such examination.
- B. The contract price shall include any necessary permits and licenses required by law incidental to the work. Local ordinances requiring building permits are not applicable to the state. Contractor will comply with local laws involving safety in the prosecution of the work.

6. PROOF OF COMPETENCY OF BIDDER

A bidder may be required to furnish evidence, satisfactory to the Commission, that he and his proposed subcontractor(s) have sufficient means and experience in the types of work called for to assure completion of the Contract in a satisfactory manner.

7. AWARD OR REJECTION OF BIDS

The Contract, if awarded, will be made using the lowest bid principle of award, subject to the Commission's right to reject any or all bids and to waive informality and irregularity in the bids and in the bidding.

8. CONTRACT DOCUMENTS

The contract expresses the complete agreement of the parties and performance shall be governed solely by the specifications and requirements contained therein. Any change, whether by modification and/or supplementation, must be accomplished by a formal contract amendment signed and approved by and between the duly authorized representative of the Contractor and the duly authorized representative of the Commission prior to the effective date of such modification. The Contractor expressly and explicitly understands and agrees that no other method and/or no other document, including correspondence, acts, and oral communications by or from any person, shall be used or construed as an amendment or modification.

9. SUBMITTALS

Review of Submittals. The MoDOT review of submittals is only for the limited purpose of checking for conformance with information given and seeing if they conform to design intent. MoDOT is not responsible for determining the accuracy of measurements and completeness of details, for verifying quantities, or for checking fabrication or installation procedures. MoDOT's review does not relieve the contractor of his or her responsibilities under the contract documents. The submittal process shall be carried out as outlined in Section 01300, Submittals.

10. WORK QUALITY

- A. Inspection of Work. The MoDOT designated representative shall be permitted to inspect all work, materials, payrolls, records of personnel, invoices of materials, and other data and records relating to the work. If requested by the MoDOT designated representative, the contractor shall at any time before final acceptance of the work uncover any portion of the finished work as directed for inspection. After examination, the contractor shall restore said portions of the work to the standards required by the contract. Should the work thus exposed and examined prove acceptable, the actual cost of uncovering, removing and replacing shall be paid by the Commission. Should the work so exposed and examined prove unacceptable, the uncovering, removing and replacing shall be at the expense of the contractor.
- B. Defective Work. All work which has been rejected shall be remedied, or if necessary, removed and replaced in an acceptable manner by the contractor at its expense. If the contractor fails to remedy or replace such defective work immediately after receiving written notice from the MoDOT designated representative, the Commission may employ labor to correct the defective work, and the cost incurred in making such corrections shall be deducted from the payment due or to become due the contractor under this contract.
- C. **Contractor will provide a one-year warranty for parts and labor on equipment or a standard manufacturer's warranty whichever is greater.** All warranties, including extended service agreements shall begin upon MoDOT's written acceptance of the punch list items.
- D. Contractor's Responsibility for Work. Until the MoDOT designated representative, accepts the work, it shall be in the custody and under the charge and care of the contractor. Contractor shall rebuild, repair, restore or make good at its own expense any lost or stolen Commission-owned material and all injuries or damages to any portion of the work caused by action of the elements or from any other reason before its completion and final acceptance. Issuance of a payment estimate on any part of the work done will not be considered as final acceptance of any work completed up to that time.
- E. Preservation of Utilities and Monuments. The contractor shall be responsible for the preservation of all public and private utilities, wires, lines, pipes, poles, cables, and conduit at the site of the work and shall use every precaution necessary to prevent damage or injury thereto. The contractor shall not disturb or damage any land monument or property landmark until an authorized agent has witnessed or otherwise referenced, their location and shall not remove them until directed by the MoDOT designated representative.
- F. Cooperation with Other Contractors. The contractor shall arrange its work so as not to interfere with the operations of other contractors of the Commission which might be engaged in performing adjacent or nearby work. Whenever work being done by other contractors is contiguous or related to the work involved in this contract, the respective rights of the various contractors will be determined by the MoDOT designated representative in order to secure the completion of the work under all contracts in general harmony.
- G. The contractor will be required to remove from the Commission's property all debris.
- H. Temporary Suspension of Work. The MoDOT designated representative shall have authority to suspend work, wholly or in part, for such period or periods of time as he may deem necessary when weather or other conditions are such that in the opinion of the MoDOT designated representative the work may be done at a later time with advantage to the Commission or for failure on the part of the contractor to comply with any of the provisions of the contract. The contractor may suspend work for reasonable cause with written approval of the MoDOT designated representative. Liquidated damages shall not accrue during the period in which work is suspended with the approval of the MoDOT designated representative. However, if the suspension is because of the contractor's failure to comply with any of the provisions of the contract, the contractor shall not be entitled to an extension of completion time nor to a waiver of liquidated damages. In the event work is suspended, the contractor shall store all materials in a manner that will protect them from damage, and shall take every precaution to prevent damage or deterioration of, the portions of the work completed. If work has been discontinued for any reason, the contractor shall give the MoDOT designated representative written notice at least forty-eight (48) hours before resuming operations.

11. CHANGE ORDERS

- A. General. All departures from the plans and specifications will be considered unauthorized unless, before proceeding with the work, the contractor has had delivered to it a change order, signed by the MoDOT designated representative, authorizing and directing such changes or departures. All unauthorized work shall be at the

contractor's expense and the MoDOT designated representative may order such unauthorized work removed and replaced at the contractor's expense.

- B. Overhead and Profit on Change Orders. The percentages for overhead and profit charged on Change Orders and Field Work Authorizations shall be negotiated and may vary according to the nature, extent and complexity of the work involved. However, the overhead and profit for the contractor or subcontractor actually performing the work shall not exceed 15%. When one or more tiers of subcontractors are used, in no event shall any contractor or subcontractor receive as overhead and profit more than 7% of the cost of the work performed by any of his subcontractors. In no case shall the total overhead and profit paid by the Owner on any change order exceed twenty five percent (25%) of the cost of materials, labor and equipment necessary to put the change order work in place.
- C. Contractor's Procedure for Claims. If the contractor considers additional compensation may be due for work or material not clearly covered in the contract or ordered in writing by the MoDOT designated representative as extra work, or if additional compensation may be requested beyond the scope of such provisions, the contractor shall notify the MoDOT designated representative in writing of the intention to make a claim before beginning the work in question. If notification is not given and the MoDOT designated representative is not afforded proper facilities by contractor to provide necessary inspection and for keeping strict account of actual cost, the contractor agrees to waive any claims for additional compensation. Notice by the contractor, and the fact that the MoDOT designated representative has kept account of the cost shall not be construed as substantiating the validity of the claim. The contractor shall file a written notice of claim for additional compensation in triplicate within 60 days after completing the work in question.
 - a. If the claim is against the Commission, the notice of claim shall be personally delivered, or sent by certified mail to the office of the Secretary of the Commission in Jefferson City, Missouri. All notices of claims shall contain an itemized statement showing completely and fully the items and amounts forming the basis of the claim.
 - b. Any claim or an item of any claim, not included in the notice and statement, or any claim included but not clearly defined and specifically set out and itemized or any claim not filed within the time and in the manner provided, shall be forever waived and shall neither constitute the basis of nor be included in any legal action, counterclaim, set-off, or arbitration.
 - c. All claims filed with Missouri Highway and Transportation Commission's Secretary will be forwarded to the Missouri Department of Transportation's Claims Committee.

12. QUALITY MANAGEMENT OVERSIGHT

- A. MoDOT **will not provide daily inspection** and quality assurance on this project, therefore the contractor must provide quality management oversight.
- B. Quality management oversight gives the contractor the primary role and responsibility for incorporating quality assurance into the project from start to finish. The contractor shall have at the work site at all times, as the contractor's agent, a competent individual capable of reading and thoroughly understanding the plans and specifications and thoroughly experienced in the type of work being performed, whom shall receive instructions from the engineer. That individual shall have full authority to execute orders or directions of the engineer without delay and to promptly supply material, equipment, tools, labor and incidentals as may be required.
- C. MoDOT staff will be available for Hold Point inspections at the times established in the project schedule. The inspections may be rescheduled as needed, but a minimum 24-hour advance notification from the contractor is required unless otherwise approved by the MoDOT Inspector.

13. HOLD POINTS

- A. Hold Points are events that require approval prior to continuation of work. Hold Points occur at definable stages of work or progress phases when succeeding work depends on acceptance of the proceeding work.
- B. **The Hold Points for this project are as follows:**
 - 1. After existing equipment has been removed.
 - 2. After new chiller has been set and leveled.
 - 3. After new piping and pumps are installed.
 - 4. After all new electrical circuits and control panel are installed
 - 5. After operating controls and refrigerant charge are completed
 - 6. Conduct factory start up
 - 7. After new equipment is operational a final inspection will be conducted.

VENDOR INFORMATION & PREFERENCE CERTIFICATION FORM

Vendor Information

All bidders must furnish ALL applicable information requested below

Vendor Name/Mailing Address: Email Address:	Vendor Contact Information (including area codes): Phone #: Cellular #: Fax #:
Printed Name of Responsible Officer or Employee:	Signature:
For Corporations - State in which incorporated:	For Others - State of domicile:
If the address listed in the Vendor Name/Mailing Address block above is not located in the State of Missouri, list the address of Missouri offices or places of business: <i>If additional space is required, please attach an additional sheet and identify it as <u>Addresses of Missouri Offices or Places of Business.</u></i>	
M/WBE INFORMATION: List all certified Minority or Women Business Enterprises (<u>M/WBE</u>) utilized in the fulfillment of this bid. Include <u>percentages</u> for subcontractors and identify the M/WBE certifying agency: <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div style="width: 33%;"><u>M/WBE Name</u></div> <div style="width: 33%;"><u>Percentage of Contract</u></div> <div style="width: 33%;"><u>M/WBE Certifying Agency</u></div> </div> <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div style="width: 33%; border-bottom: 1px solid black;"></div> <div style="width: 33%; border-bottom: 1px solid black;"></div> <div style="width: 33%; border-bottom: 1px solid black;"></div> </div> <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div style="width: 33%; border-bottom: 1px solid black;"></div> <div style="width: 33%; border-bottom: 1px solid black;"></div> <div style="width: 33%; border-bottom: 1px solid black;"></div> </div>	
<i>If additional space is required, please attach an additional sheet and identify it as <u>M/WBE Information</u></i>	

Preference Certification

All bidders must furnish ALL applicable information requested below

GOODS/PRODUCTS MANUFACTURED OR PRODUCED IN USA: If any or all of the goods or products offered in the attached bid which the bidder proposes to supply to the MHTC are <u>not</u> manufactured or produced in the "United States", or imported in accordance with a qualifying treaty, law, agreement, or regulation, list below, by item or item number, the country other than the United States where each good or product is manufactured or produced.	
Item (or item number)	Location Where Item is Manufactured or Produced
<i>If additional space is required, please attach an additional sheet and identify it as <u>Location Products are Manufactured or Produced.</u></i>	
MISSOURI SERVICE-DISABLED VETERAN BUSINESS: Please complete the following if applicable. Additional information may be requested if preference is applicable. See below definitions for qualification criteria:	
Service-Disabled Veteran is defined as any individual who is disabled as certified by the appropriate federal agency responsible for the administration of veterans' affairs.	
Service-Disabled Veteran Business is defined as a business concern:	
a. Not less than fifty-one (51) percent of which is owned by one or more service-disabled veterans or, in the case of any publicly owned business, not less than fifty-one (51) percent of the stock of which is owned by one or more service-disabled veterans; and b. The management and daily business operations of which are controlled by one or more service-disabled veterans.	
<u>Veteran Information</u>	<u>Business Information</u>
Service-Disabled Veteran's Name (Please Print)	Service-Disabled Veteran Business Name
Service-Disabled Veteran's Signature	Missouri Address of Service Disabled Veteran Business

ANNUAL WORKER ELIGIBILITY VERIFICATION AFFIDAVIT
(for joint ventures, a separate affidavit is required for each business entity)

STATE OF _____)
) ss
COUNTY OF _____)

On the ____ day of _____, 20____, before me appeared _____,
Affiant name
personally known to me or proved to me on the basis of satisfactory evidence to be a person whose name is subscribed to
this affidavit, who being by me duly sworn, stated as follows:

- I, the Affiant, am of sound mind, capable of making this affidavit, and personally certify the facts herein stated, as required by Section 285.530, RSMo, to enter into any contract agreement with the state to perform any job, task, employment, labor, personal services, or any other activity for which compensation is provided, expected, or due, including but not limited to all activities conducted by business entities.

- I, the Affiant, am the _____ of _____, and I am duly authorized,
title business name
directed, and/or empowered to act officially and properly on behalf of this business entity.

- I, the Affiant, hereby affirm and warrant that the aforementioned business entity is enrolled in a federal work authorization program operated by the United States Department of Homeland Security, and the aforementioned business entity shall participate in said program to verify the employment eligibility of newly hired employees working in connection with any services contracted by the Missouri Highways and Transportation Commission (MHTC). I have attached documentation to this affidavit to evidence enrollment/participation by the aforementioned business entity in a federal work authorization program, as required by Section 285.530, RSMo.

- I, the Affiant, also hereby affirm and warrant that the aforementioned business entity does not and shall not knowingly employ, in connection with any services contracted by MHTC, any alien 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, the Affiant, am aware and recognize that, unless certain contract and affidavit conditions are satisfied pursuant to Section 285.530, RSMo, the aforementioned business entity may be held liable under Sections 285.525 through 285.550, RSMo, for subcontractors that knowingly employ or continue to employ any unauthorized alien to work within the state of Missouri.

- I, the Affiant, acknowledge that I am signing this affidavit as a free act and deed of the aforementioned business entity and not under duress.

Affiant Signature

Subscribed and sworn to before me in _____, _____, the day and year first above-written.
city (or county) state

Notary Public

My commission expires:

[documentation of enrollment/participation in a federal work authorization program attached]

APPLICANT AFFIDAVIT FOR SOLE-PROPRIETORSHIP OR PARTNERSHIP

(a separate affidavit is required for each owner and general partner)

STATE OF _____)

) ss

COUNTY OF _____)

On this _____ day of _____, 20____, before me appeared _____, personally known to me or proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instruments, who being by me duly sworn, deposed as follows:

My name is _____, and I am of sound mind, capable of making this affidavit, and personally certify the facts herein stated, as required by Section 208.009, RSMo, for failure to provide affirmative proof of lawful presence in the United States of America:

I am the _____ of _____, which is applying for a public benefit (grant, contract, and/or loan) administered/provided by the Missouri Highways and Transportation Commission (MHTC), acting by and through the Missouri Department of Transportation (MoDOT).

owner or partner business name

I am classified by the United States of America as: (check the applicable box)

☐ a United States citizen.

☐ an alien lawfully admitted for permanent residence.

I am aware that Missouri law provides that any person who obtains any public benefit by means of a willfully false statement or representation, or by willful concealment or failure to report any fact or event required to be reported, or by other fraudulent device, shall be guilty of the crime of stealing pursuant to Section 570.030, RSMo, which is a Class C felony for stolen public benefits valued between \$500 and \$25,000 (punishable by a term of imprisonment not to exceed 7 years and/or a fine not more than \$5,000 – Sections 558.011 and 560.011, RSMo), and is a Class B felony for stolen public benefits valued at \$25,000 or more (punishable by a term of imprisonment not less than 5 years and not to exceed 15 years – Section 558.011, RSMo).

I recognize that, upon proper submission of this sworn affidavit, I will only be eligible for temporary public benefits until such time as my lawful presence in the United States is determined, or as otherwise provided by Section 208.009, RSMo.

I understand that Missouri law requires MHTC/MoDOT to provide assistance in obtaining appropriate documentation to prove citizenship or lawful presence in the United States, and I agree to submit any requests for such assistance to MHTC/MoDOT in writing.

I acknowledge that I am signing this affidavit as a free act and deed and not under duress.

Affiant Signature
Social Security Number or

Affiant's
Applicable Federal Identification Number

Subscribed and sworn to before me this _____ day of _____, 20____.

My commission expires:

Notary Public

00301

BID FORM

To: The Missouri Highway and Transportation Commission
PO Box 270
Jefferson City, Missouri 65102

1. The undersigned, having examined the proposed Contract Documents titled: **9-160211KH – SW District Chiller Replacement Project** and having visited the site and examined the conditions affecting the work, hereby proposes and agrees to furnish all labor, materials, equipment and everything which may be necessary or incidental thereto, as proposed by said Contract Documents, all to the satisfaction of the General Services-Facility Operations Supervisor or designated representative of the Missouri Department of Transportation and the Missouri Highway and Transportation Commission, for the stipulated sum of:

BID _____ DOLLARS
(\$ _____)

2. The undersigned, acknowledges having examined and being familiar with the contract documents including the drawings, the Instructions to Bidders, General Conditions, Supplementary Conditions and the body of technical specifications.
3. The undersigned acknowledges receipt of Addenda number _____ through _____ inclusive.
4. Enclosed with this bid is bid security in the amount of not less than 5% of the bidder's proposed Contract Sum, the amount being _____ DOLLARS
(\$ _____).

IF AN INDIVIDUAL

Name of individual

Residence address

Social Security Number

Telephone Number

Firm Name, If Any

Address for communications

Signature

IF A PARTNERSHIP

_____ Name of Partnership	(State Name and Residence Address of All Partners) _____
_____ Partner	_____ Residence Address
_____ Partner	_____ Residence Address
_____ Address for Communications	_____ Federal Tax I.D. Number
_____ Telephone Number	_____ Signature of Either Partner

IF A CORPORATION

_____ Name of Corporation	Incorporated under the laws of the State of _____
_____ Name and Title of Officer	Corporate License No. _____ (If a corporation organized in a state other than Missouri, attach Certificate of Authority to do business in the State of Missouri.)
_____ Signature of officer	_____ Federal Tax I.D. Number
_____ Address for Communications	(ATTEST)
_____ Telephone Number	_____ (SEAL) Secretary

(Each bidder must complete the Bid Form by signing in the proper signature line above and by supplying the required information called for in connection with the signature. The information called for is necessary in the proper preparation of the contract and performance bond.)

00430

SUBCONTRACTOR LISTING

1. For portions of Work equaling or exceeding 1% of the total proposed Contract Sum, the undersigned proposes to use the following subcontractors. Except as otherwise approved by the Owner, the undersigned proposes to perform all other portions of the Work with his own forces.

2. Portion of the Work: Subcontractor name and address:

_____	_____

_____	_____

_____	_____

USE ADDITIONAL SHEETS
IF REQUIRED

PROVIDE SIGNATURE
IDENTICAL TO THAT
SHOWN ON THE BID FORM

BIDDER:

by _____

00600

BID BOND

KNOW ALL MEN BY THESE PRESENTS, that we _____,
as Principal, and _____,
as Surety, are held firmly bound unto the State of Missouri (acting by and through the Missouri Highway and
Transportation Commission) in the penal sum of

_____ Dollars
(\$ _____), to be paid to the State of Missouri, or the Missouri Highway and Transportation
Commission, to be credited to the State Road Fund and Principal and Surety binding themselves, their heirs,
executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

Sealed with our seals and dated this _____ day of _____, 20_____

THE CONDITION OF THIS OBLIGATION is such that:
WHEREAS, the Principal is submitting herewith a bid to the Missouri Highway and Transportation Commission on
Facilities Project SW District Chiller Replacement Project, in Greene County, Request for Bid Number 9-160211KH
for construction or improvement as set out in said bid.

NOW THEREFORE, if the Missouri Highway and Transportation Commission shall accept the bid of the Principal,
and if said Principal shall properly execute and deliver to the Missouri Highway and Transportation Commission the
Contract, Contract Bond, Specifications and evidence of insurance coverage in compliance with the requirements of
the Bid, to the satisfaction of the Missouri Highway and Transportation Commission, then this obligation shall
be void and of no effect, otherwise to remain in full force and effect.

In the event the said Principal shall, in the judgment of the Missouri Highway and Transportation Commission, fail to
comply with any requirement as set forth in the preceding paragraph, then the State of Missouri, acting through the
Missouri Highway and Transportation Commission, shall immediately and forthwith be entitled to recover the fees,
and any other expense of recovery.

_____	_____
Principal	Surety

By _____	_____
	Attorney in Fact (SEAL)

Attest: (CORPORATE SEAL)

Corporate Secretary

Note: This bond must be executed by the Principal and by a Corporate Surety authorized to conduct
surety business in the State of Missouri.

END OF SECTION

DIVISION 1 – GENERAL REQUIREMENTS (BROAD SCOPE)

01019

CONTRACT REQUIREMENTS

PART 1 GENERAL

1.1 SCHEDULE OF VALUES

- A. Submit a printed schedule on Contractor's standard form. Electronic media printout will be considered.
- B. Submit Schedule of Values in duplicate within 20 days after date of Owner-Contractor Agreement.
- C. Revise schedule to list approved Change Orders, with each Application For Payment.

1.2 APPLICATIONS FOR PAYMENT

- A. Submit four copies of each application on Contractor's electronic media driven form.
- B. Content and Format: Utilize Schedule of Values for listing items in Application for Payment.
- C. Payment Period: 30 days.
- D. Include an updated construction progress schedule.
- E. Certified payroll records.

1.3 CHANGE PROCEDURES

- A. The Facility Operations Supervisor may issue a Notice of Change that includes a detailed description of a proposed change with supplementary or revised Drawings and specifications, a change in Contract Time for executing the change with a stipulation of any overtime work required.
- B. The Contractor may propose changes by submitting a request for change to the Facility Operations Supervisor describing the proposed change and its full effect on the Work. Include a statement describing the reason for the change, the effect on the Contract Sum/Price and Contract Time, and a statement describing the effect on Work by the MoDOT District or other Contractors.
- C. Stipulated Sum/Price Change Order: Based on Notice of Change and Contractor's fixed price quotation or Contractor's request for a Change Order as approved by Facility Operations Supervisor.
- D. Construction Change Directive: Facility Operations Supervisor may issue a directive instructing the Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order. Document will describe changes in the Work, and designate method of determining any change in Contract Sum/Price or Contract Time. Promptly execute the change.
- E. Time and Material Change Order: Submit itemized account and supporting data after completion of change, within time limits indicated in the Conditions of the Contract. Facility Operations Supervisor will determine the change allowable in Contract Sum/Price and Contract Time as provided in the Contract Documents.
- F. Maintain detailed records of work done on Time and Material basis. Provide full information required for evaluation of proposed changes, and to substantiate costs for changes in the Work.
- G. Execution of Change Orders: Facility Operations Supervisor will issue Change Orders for signatures of parties as provided in the Conditions of the Contract.

1.4 DEFECT ASSESSMENT

- A. Replace the Work, or portions of the Work, not conforming to specify requirements.
- B. If, in the opinion of the Facility Operations Supervisor, it is not practical to remove and replace the Work, the Facility Operations Supervisor will direct an appropriate remedy or adjust payment.

END OF SECTION

COORDINATION AND MEETING REQUIREMENT

PART 1 GENERAL

1.1 COORDINATION AND PROJECT CONDITIONS

- A. Coordinate scheduling, submittals, and Work of the various sections of the Project Manual to ensure efficient and orderly sequence of installation of interdependent construction elements.
- B. Verify utility requirements and characteristics of operating equipment are compatible with building utilities. Coordinate work of various sections having interdependent responsibilities for installing, connecting to and placing in service, such equipment.
- C. Coordinate space requirements, supports, and installation of mechanical and electrical Work, which are indicated diagrammatically on Drawings. Follow routing shown for pipes, ducts, and conduit, as closely as practicable; place runs parallel with lines of building. Utilize spaces efficiently to maximize accessibility for other installations, for maintenance, and for repairs.
- D. In finished areas, except as otherwise indicated, conceal pipes, ducts and wiring within the construction. Coordinate locations of fixtures and outlets with finish elements.
- E. Coordinate completion and clean up of Work of separate sections.
- F. After Owner occupancy of premises, coordinate access to site for correction of defective Work and Work not in accordance with Contract Documents, to minimize disruption of Owner's activities.

~~1.2 FIELD ENGINEERING~~

- ~~A. Employ a Land Surveyor registered in the State of Missouri and acceptable to Architect/Engineer/Designer.~~
- ~~B. Owner will locate and protect survey control and reference points.~~
- ~~C. Control datum for survey is that established by Owner provided survey.~~
- ~~D. Verify setbacks and easements; confirm drawing dimensions and elevations.~~
- ~~E. Provide field engineering services. Establish elevations, lines and levels, utilizing recognized engineering survey practices.~~

1.3 PRECONSTRUCTION MEETING

- A. Facility Operations Supervisor will schedule a meeting after Notice of Award.
- B. Attendance Required: District engineer or representative, Facility Operations Supervisor and Contractor.
- C. Record minutes and distribute copies within 5 days after meeting to participants, with two copies to District Engineer, Facility Operations Supervisor, participants and those affected by decisions made.

1.4 SITE MOBILIZATION MEETING

- A. Facility Operations Supervisor will schedule a meeting at the Project site prior to Contractor occupancy.
- B. Facility Operations Supervisor will record minutes and distributes copies within 5 days after meeting to participants, with two copies to Facility Operations Supervisor, participants and those affected by decisions made.

1.5 PROGRESS MEETINGS

- A. Schedule and administer meetings throughout progress of the Work at when arranged by Facility Operations Supervisor.
- B. Facility Operations Supervisor will make arrangements for meetings, prepare agenda with copies for participants, and preside at meetings.
- C. Attendance Required: Job superintendent, major Subcontractors and suppliers, District engineer representative, Facility Operations Supervisor, as appropriate to agenda topics for each meeting.
- D. Agenda:
 - 1. Review of Work progress.
 - 2. Field observations, problems, and decisions.
 - 3. Identification of problems, which impede planned progress.
 - 4. Maintenance of progress schedule.
 - 5. Corrective measures to regain projected schedules.
 - 6. Coordination of projected progress.
 - 7. Effect of proposed changes on progress schedule and coordination.
- E. Record minutes and distributes copies within 5 days after meeting to participants and those affected by decisions made.

1.6 PREINSTALLATION MEETING

- A. When required in individual specification sections, convene a pre-installation meeting at the site prior to commencing work of the section.
- B. Notify Facility Operations Supervisor seven days in advance of meeting date.
- C. Prepare agenda and preside at meeting:
 - 1. Review conditions of installation, preparation and installation procedures.
 - 2. Review coordination with related work.
- D. Record minutes and distributes copies within 5 days after meeting to participants and those affected by decisions made.

PART 2 PRODUCTS

Not used

PART 3 EXECUTION

3.1 CUTTING AND PATCHING

- A. Employ skilled and experienced installer to perform cutting and patching.
- B. Submit written request in advance of cutting or altering elements, which affect:
 - 1. Structural integrity of element.
 - 2. Integrity of weather-exposed or moisture-resistant elements.
 - 3. Work of Owner or separate contractor.
- C. Execute cutting, fitting, and patching to complete Work, and to:
 - 1. Uncover Work to install or correct ill-timed Work.
 - 2. Remove and replace defective and non-conforming Work.
 - 3. Provide openings in elements of Work for penetrations of mechanical and electrical Work.

- D. Cut masonry and concrete materials using masonry saw or core drill.
- E. Fit Work tight to pipes, sleeves, ducts, conduit and other penetrations through surfaces.
- F. Maintain integrity of wall, ceiling, or floor construction; completely seal voids.
- G. Refinish surfaces to match adjacent finishes. For continuous surfaces, refinish to nearest intersection; for an assembly, refinish entire unit.
- H. Identify hazardous substances or conditions exposed during the Work to the Facility Operations Supervisor for decision or remedy.

3.2 ALTERATION PROJECT PROCEDURES

- A. Materials: As specified in Product sections; match existing Products and work for patching and extending work.
- B. Close openings in exterior surfaces to protect existing work from weather and extremes of temperature and humidity.
- C. When finished surfaces are cut so that a smooth transition with new Work is not possible, terminate existing surface along a straight line at a natural line of division and submit recommendation to Facility Operations Supervisor for review.
- D. Patch or replace portions of existing surfaces that are damaged, lifted, discolored or showing other imperfections.
- E. Finish surfaces as specified in individual Product sections.

END OF SECTION

01300

SUBMITTAL REQUIREMENTS

PART 1 GENERAL

1.1 REFERENCES

- A. AGC Associated General Contractors of America publication "The Use of CPM in Construction - A Manual for General Contractors and the Construction Industry".

1.2 SUBMITTAL PROCEDURES

- A. Submit five (5) hard copies of each submittal with Facility Operations Supervisor accepted form.
- B. Identify Project, Contractor, Subcontractor or supplier; pertinent drawing and detail number and specification section number, as appropriate.
- C. Apply Contractor's stamp, signed or initialed certifying that review, approval, verification of Products required, field dimensions, adjacent construction Work and coordination of information is in accordance with the requirements of the Work and Contract Documents.
- D. Schedule submittals to expedite the Project, and deliver to Facility Operations Supervisor at business address. Coordinate submission of related items.
- E. For each submittal for review, allow 15 days excluding delivery time to and from the contractor.
- F. Identify variations from Contract Documents and Product or system limitations, which may be detrimental to successful performance of the completed Work.
- G. Submittals not requested will not be recognized or processed.

1.3 CONSTRUCTION PROGRESS SCHEDULES

- A. Submit initial schedule in duplicate within 15 days after date established in Notice to Proceed.
- B. Revise and resubmit as required.
- C. Submit revised schedules with each Application for Payment, identifying changes since previous version.
- D. Submit a horizontal bar chart with separate line for each major portion of Work or operation, identifying first workday of each week.

1.4 PROPOSED PRODUCTS LIST

- A. Within 15 days after date of Notice to Proceed, submit list of major products proposed for use, with name of manufacturer, trade name and model number of each product.
- B. For products specified only by reference standards, give manufacturer, trade name, model or catalog designation and reference standards.

1.5 PRODUCT DATA

- A. Product Data for Review:
 - 1. Submitted to Facility Operations Supervisor for review for the limited purpose of checking for conformance with information given and the design concept expressed in the contract documents.
 - 2. After review, provide copies and distribute in accordance with SUBMITTAL PROCEDURES article above and for record documents purposes described in Section 01700 - CONTRACT CLOSEOUT.
- B. Product Data for Information:
 - 1. Submitted for the Facility Operations Supervisor's knowledge as contract administrator or for the Owner.

- C. Product Data for Project Closeout:
 - 1. Submitted for the Owner's benefit during and after project completion.
- D. Submit the number of copies, which the Contractor requires, plus two copies that will be retained by the Facility Operations Supervisor.
- E. Mark each copy to identify applicable products, models, options and other data. Supplement manufacturers' standard data to provide information specific to this Project.
- F. After review distribute in accordance with the Submittal Procedures article above and provide copies for record documents described in Section 01700 - CONTRACT CLOSEOUT.

1.6 SHOP DRAWINGS

- A. Shop Drawings for Review:
 - 1. Submit five (5) hard copies to Facility Operations Supervisor for review for the limited purpose of checking for conformance with information given and the design concept expressed in the contract documents.
 - 2. After review, produce copies and distribute in accordance with SUBMITTAL PROCEDURES article above and for record documents purposes described in Section 01700 - CONTRACT CLOSEOUT.
- B. Shop Drawings for Information:
 - 1. Submitted for the Facility Operations Supervisor's knowledge as contract administrator or for the Owner.
- C. Shop Drawings For Project Closeout:
 - 1. Submitted for the Owner's benefit during and after project completion.
- D. Indicate special utility and electrical characteristics, utility connection requirements and location of utility outlets for service for functional equipment and appliances.
- E. Submit in the form of one reproducible transparency and one opaque reproduction.

1.7 SAMPLES

- A. Samples for Review:
 - 1. Submitted to Facility Operations Supervisor for review for the limited purpose of checking for conformance with information given and the design concept expressed in the contract documents.
 - 2. After review, produce duplicates and distribute in accordance with SUBMITTAL PROCEDURES article above and for record documents purposes described in Section 01700 - CONTRACT CLOSEOUT.
- B. Samples for Information:
 - 1. Submitted for the Facility Operations Supervisor's knowledge as contract administrator or for the Owner.
- C. Samples for Selection:
 - 1. Submitted to Facility Operations Supervisor for aesthetic, color, or finish selection.
 - 2. Submit samples of finishes for Facility Operations Supervisor selection.
 - 3. After review, produce duplicates and distribute in accordance with SUBMITTAL PROCEDURES article above and for record documents purposes described in Section 01700 - CONTRACT CLOSEOUT.

1.8 DESIGN DATA

- A. Submit for the Facility Operations Supervisor's knowledge as contract administrator or for the Owner.
- B. Submit for information for the limited purpose of assessing conformance with information given and the design concept expressed in the contract documents.

1.9 TEST REPORTS

- A. Submit for the Facility Operations Supervisor's knowledge as contract administrator or for the Owner.
- B. Submit test reports for information for the limited purpose of assessing conformance with information given and the design concept expressed in the contract documents.

1.10 CERTIFICATES

- A. When specified in individual specification sections, submit certification by the manufacturer, installation/application subcontractor, or the Contractor to Facility Operations Supervisor, in quantities specified for Product Data.
- B. Indicate material or Product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits and certifications as appropriate.
- C. Certificates may be recent or previous test results on material or Product but must be acceptable to Facility Operations Supervisor.

1.11 MANUFACTURER'S INSTRUCTIONS

- A. When specified in individual specification sections, submit printed instructions for delivery, storage, assembly, installation, and start-up, adjusting and finishing, to Facility Operations Supervisor for delivery to owner in quantities specified for Product Data.
- B. Indicate special procedures, perimeter conditions requiring special attention and special environmental criteria required for application or installation.
- C. Refer to Section 01400 - Quality Control, Manufacturers' Field Services article.

1.12 MANUFACTURER'S FIELD REPORTS

- A. Submit reports for the Facility Operations Supervisor's benefit as contract administrator or for the Owner.
- B. Submit for information for the limited purpose of assessing conformance with information given and the design concept expressed in the contract documents.

1.13 ERECTION DRAWINGS

- A. Submit drawings for the Facility Operations Supervisor's benefit as contract administrator or for the Owner.
- B. Submit for information for the limited purpose of assessing conformance with information given and the design concept expressed in the contract documents.
- C. Data indicating inappropriate or unacceptable Work may be subject to action by the Facility Operations Supervisor or Owner.

END OF SECTION

QUALITY CONTROL REQUIREMENTS

PART 1 GENERAL

1.1 QUALITY ASSURANCE - CONTROL OF INSTALLATION

- A. Monitor quality control over suppliers, manufacturers, Products, services, site conditions and workmanship, to produce Work of specified quality.
- B. Comply with manufacturers' instructions, including each step in sequence.
- C. Should manufacturers' instructions conflict with Contract Documents, request clarification from Facility Operations Supervisor before proceeding.
- D. Comply with specified standards as minimum quality for the Work except where more stringent tolerances, codes or specified requirements indicate higher standards or more precise workmanship.
- E. Perform Work by persons qualified to produce required and specified quality.
- F. Verify that field measurements are as indicated on shop drawings or as instructed by the manufacturer.
- G. Secure Products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, or disfigurement.

1.2 TOLERANCES

- A. Monitor fabrication and installation tolerance control of Products to produce acceptable Work. Do not permit tolerances to accumulate.
- B. Comply with manufacturers' tolerances. Should manufacturers' tolerances conflict with Contract Documents, request clarification from Facility Operations Supervisor before proceeding.
- C. Adjust Products to appropriate dimensions; position before securing Products in place.

1.3 REFERENCES AND STANDARDS

- A. For Products or workmanship specified by association, trade or other consensus standards, comply with requirements of the standard, except when more rigid requirements are specified or are required by applicable codes.
- B. Conform to reference standard by date of issue current on date for receiving bids or date specified in the individual specification sections, except where a specific date is established by code.
- C. Neither the contractual relationships, duties or responsibilities of the parties in Contract nor those of the Facility Operations Supervisor shall be altered from the Contract Documents by mention or inference otherwise in any reference document.

1.4 TESTING SERVICES

- A. Contractor to provide all testing services as called out in these specifications.
- B. Testing and source quality control may occur on or off the project site. Perform off-site testing as required by the Facility Operations Supervisor or the Owner.
- C. Testing does not relieve Contractor to perform Work to contract requirements.
- ~~D. Re-testing required because of non-conformance to specified requirements shall be performed by the same MoDOT personnel on instructions by the Architect/Engineer/Designer.~~

1.5 INSPECTION SERVICES

- A. Owner will employ MoDOT Personnel to perform inspection.
- B. Inspecting may occur on or off the project site. Perform off-site inspecting as required by the Facility Operations Supervisor or the Owner.
- C. Inspecting does not relieve Contractor to perform Work to contract requirements.

1.6 MANUFACTURERS' FIELD SERVICES

- A. When specified in individual specification sections, require material or Product suppliers or manufacturers to provide qualified staff personnel to observe site conditions, conditions of surfaces and installation, quality of workmanship, start-up of equipment, test, adjust and the balancing of equipment as applicable and to initiate instructions when necessary.
- B. Report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturers' written instructions.
- C. Refer to Section 01300 - SUBMITTALS, MANUFACTURERS' FIELD REPORTS article.

PART 2 EXECUTION

2.7 EXAMINATION

- A. Verify that existing site conditions and substrate surfaces are acceptable for subsequent Work. Beginning new Work means acceptance of existing conditions.
- B. Verify that existing substrate is capable of structural support or attachment of new Work being applied or attached.

2.8 PREPARATION

- A. Clean substrate surfaces prior to applying next material or substance.
- B. Seal cracks or openings of substrate prior to applying next material or substance.
- C. Apply manufacturer required or recommended substrate primer, sealer or conditioner prior to applying any new material or substance in contact or bond.

END OF SECTION

CONSTRUCTION FACILITIES AND TEMPORARY CONTROL REQUIREMENTS

PART 1 GENERAL

~~1.1 TEMPORARY ELECTRICITY~~

~~A. Cost: By Contractor; pay for temporary power service furnished by MoDOT.~~

~~1.2 TELEPHONE SERVICE~~

~~A. Provide, maintain, and pay for telephone service to field office and Architect/Engineer/Designer's field office at time of project mobilization.~~

~~1.3 FACSIMILE SERVICE~~

~~A. Provide, maintain and pay for facsimile service and a dedicated telephone line to field office and Architect/Engineer/Designer's field office at time of project mobilization.~~

~~1.4 TEMPORARY WATER SERVICE~~

~~A. Connect to existing water source as directed for construction operations at time of project mobilization.~~

~~B. Contractor will reimburse Owner for water used in construction as agreed upon at time of project mobilization.~~

~~1.5 TEMPORARY SANITARY FACILITIES~~

~~A. Provide and maintain required facilities and enclosures. Provide at time of project mobilization.~~

~~1.6 FENCING~~

~~A. Construction: Use plastic mesh safety fencing or better.~~

~~B. Provide 48" high fence around construction site; equip with vehicular and pedestrian gates with locks.~~

~~1.7 WATER CONTROL~~

~~A. Grade site to drain. Maintain excavations free of water. Provide, operate and maintain pumping equipment.~~

~~B. Protect site from puddling or running water. Provide water barriers as required to protect site from soil erosion.~~

1.8 EXTERIOR ENCLOSURES

- A. Provide temporary weather tight closure of exterior openings to accommodate acceptable working conditions and protection for Products, to allow for temporary heating and maintenance of required ambient temperatures identified in individual specification sections, and to prevent entry of unauthorized persons. Provide access doors with self-closing hardware and locks.

1.9 PROTECTION OF INSTALLED WORK

- A. Protect installed Work and provide special protection where specified in individual specification sections.

- B. Provide temporary and removable protection for installed Products. Control activity in immediate work area to prevent damage.
- C. Provide protective coverings at walls, projections, jambs, sills and soffits of openings.
- D. Protect finished floors, stairs, and other surfaces from traffic, dirt, wear, damage or movement of heavy objects, by protecting with durable sheet materials.
- E. Prohibit traffic or storage upon waterproofed or roofed surfaces. If traffic or activity is necessary, obtain recommendations for protection from waterproofing or roofing material manufacturer.
- F. Prohibit traffic from landscaped areas.

1.10 SECURITY

- A. Provide security and facilities to protect Work and existing facilities and Owner's operations from unauthorized entry, vandalism or theft.
- B. Coordinate with Owner's security program.

1.11 ACCESS ROADS

- A. Provide and maintain access to fire hydrants, free of obstructions.
- B. Provide means of removing mud from vehicle wheels before entering streets.
- C. Designated existing on-site roads may be used for construction traffic.

1.12 PROGRESS CLEANING AND WASTE REMOVAL

- A. Maintain areas free of waste materials, debris and rubbish. Maintain site in a clean and orderly condition.
- B. Remove debris and rubbish from pipe chases, plenums, attics, crawl spaces and other closed or remote spaces, prior to enclosing the space.
- C. Broom and vacuum clean interior areas prior to start of surface finishing and continue cleaning to eliminate dust.
- D. Collect and remove waste materials, debris and rubbish from site periodically and dispose off-site.
- E. Open free-fall chutes are not permitted. Terminate closed chutes into appropriate containers with lids.

~~1.13 FIELD OFFICES AND SHEDS~~

- ~~A. Office: Weather tight, with lighting, electrical outlets, heating and ventilating equipment and equipped with drawing rack and drawing display table.~~
- ~~B. Provide space for Project meetings, with table and chairs to accommodate 6 persons.~~

1.14 REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS

- A. Remove temporary utilities, equipment, facilities and materials prior to Final Application for Payment inspection.
- B. Clean and repair damage caused by installation or use of temporary work.
- C. Restore existing facilities used during construction to original condition. Restore permanent facilities used during construction to specified condition.

END OF SECTION

MATERIAL AND EQUIPMENT REQUIREMENT

PART 1 GENERAL

1.1 PRODUCTS

- A. Do not use materials and equipment removed from existing premises, except as specifically permitted by the Contract Documents.
- B. Provide interchangeable components of the same manufacture for components being replaced.

1.2 TRANSPORTATION AND HANDLING

- A. Transport and handle Products in accordance with manufacturer's instructions.
- B. Promptly inspect shipments to ensure that Products comply with requirements, quantities are correct and products are undamaged.
- C. Provide equipment and personnel to handle Products by methods to prevent soiling, disfigurement or damage.

1.3 STORAGE AND PROTECTION

- A. Store and protect Products in accordance with manufacturers' instructions.
- B. Store with seals and labels intact and legible.
- C. Store sensitive Products in weather tight, climate controlled, enclosures in an environment favorable to Product.
- D. For exterior storage of fabricated Products, place on sloped supports above ground.
- E. Provide bonded off-site storage and protection when site does not permit on-site storage or protection.
- F. Cover Products subject to deterioration with impervious sheet covering. Provide ventilation to prevent condensation and degradation of Products.
- G. Store loose granular materials on solid flat surfaces in a well-drained area. Prevent mixing with foreign matter.
- H. Provide equipment and personnel to store Products by methods to prevent soiling, disfigurement or damage.
- I. Arrange storage of Products to permit access for inspection. Periodically inspect to verify Products are undamaged and are maintained in acceptable condition.

1.4 PRODUCT OPTIONS

- A. Products Specified by Reference Standards or by Description Only: Any Product meeting those standards or description is acceptable.
- B. Products Specified by Naming One or More Manufacturers: Products of manufacturers named and meeting specifications, no options or substitutions allowed.
- C. Products Specified by Naming One or More Manufacturers with a Provision for Substitutions: Submit a request for substitution for any manufacturer not named in accordance with the following article.

1.5 SUBSTITUTIONS

- A. Facility Operations Supervisor will consider requests for Substitutions only within 15 days after date established in Notice to Proceed.
- B. Substitutions may be considered when a Product becomes unavailable through no fault of the Contractor.
- C. Document each request with complete data substantiating compliance of proposed Substitution with Contract Documents.
- D. A request constitutes a representation that the Contractor:
 - 1. Has investigated proposed Product and determined that it meets or exceeds the quality level of the specified Product.
 - 2. Will provide the same warranty for the Substitution as for the specified Product.
 - 3. Will coordinate installation and make changes to other Work that may be required for the Work to be complete with no additional cost to Owner.
 - 4. Waives claims for additional costs or time extension that may subsequently become apparent.
 - 5. Will reimburse Owner for review or redesign services associated with re-approval by authorities.
- E. Substitutions will not be considered when they are indicated or implied on shop drawing or product data submittals, without separate written request or when acceptance will require revision to the Contract Documents.
- F. Substitution Submittal Procedure:
 - 1. Submit three copies of request for Substitution for consideration. Limit each request to one proposed Substitution.
 - 2. Submit shop drawings, product data and certified test results attesting to the proposed Product equivalence. Burden of proof is on proposer.
 - 3. The Facility Operations Supervisor will notify Contractor in writing of decision to accept or reject request.

END OF SECTION

STARTING OF SYSTEMS REQUIREMENT

PART 1 GENERAL

1.1 STARTING SYSTEMS

- A. Coordinate schedule for start-up of various equipment and systems.
- B. Notify Facility Operations Supervisor seven days prior to start-up of each item.
- C. Verify that each piece of equipment or system has been checked for proper lubrication, drive rotation, belt tension, and control sequence and for conditions that may cause damage.
- D. Verify tests, meter readings, and specified electrical characteristics agree with those required by the equipment or system manufacturer.
- E. Verify that wiring and support components for equipment are complete and tested.
- F. Execute start-up under supervision of applicable manufacturer's representative or Contractors' personnel in accordance with manufacturers' instructions.
- G. When specified in individual specification Sections, require manufacturer to provide authorized representative to be present at site to inspect, check and approve equipment or system installation prior to start-up and to supervise placing equipment or system in operation.
- H. Submit a written report in accordance with Section 01300 that equipment or system has been properly installed and is functioning correctly.

1.2 DEMONSTRATION AND INSTRUCTIONS

- A. Demonstrate operation and maintenance of Products to Owner's personnel two weeks prior to date of Final Completion.
- B. For equipment or systems requiring seasonal operation, perform demonstration for other season within six months.
- C. Utilize operation and maintenance manuals as basis for instruction. Review contents of manual with Owners' personnel in detail to explain all aspects of operation and maintenance.
- D. Demonstrate start-up, operation, control, adjustment, trouble-shooting, servicing, maintenance and shutdown of each item of equipment at agreed time, at equipment location.
- E. Prepare and insert additional data in operations and maintenance manuals when the need for additional data becomes apparent during instruction.
- F. The amount of time required for instruction on each item of equipment and system that's specified in individual sections.

END OF SECTION

CONTRACT CLOSEOUT REQUIREMENT

PART 1 GENERAL

1.1 CLOSEOUT PROCEDURES

- A. Submit written certification that Contract Documents have been reviewed, Work has been inspected, and that Work is complete in accordance with Contract Documents and ready for Facility Operations Supervisor's review.
- B. Provide submittals to Owner that is required by governing or other authorities.
- C. Submit final Application for Payment identifying total adjusted Contract Sum, previous payments and sum remaining due.
- D. Owner will occupy portions of the building as specified in Section 01010.
- E. Projects shall not be accepted by MoDOT until the vendor has completed all punch list items. The vendor will then have 30 days to submit all required paperwork necessary to close the project. Failure to submit the required paperwork within 30 days could result in the debarment or suspension of the contractor from future projects.

1.2 FINAL CLEANING

- A. Execute final cleaning prior to final project assessment. Clean interior and exterior glass, surfaces exposed to view; remove temporary labels, stains and foreign substances, polish transparent and glossy surfaces, vacuum carpeted and soft surfaces.
- B. Clean equipment and fixtures to a sanitary condition with cleaning materials appropriate to the surface and material being cleaned.
- C. Clean or replace filters of operating equipment used during construction and/or adjustment.
- D. Clean debris from roofs, gutters, downspouts and drainage systems.
- E. Clean site; sweep paved areas, rake clean landscaped surfaces.
- F. Remove waste and surplus materials, rubbish and construction facilities from the site.

1.3 ADJUSTING

- A. Adjust operating Products and equipment to ensure smooth and unhindered operation.

1.4 PROJECT RECORD DOCUMENTS

- A. Store record documents separate from documents used for construction.
- B. Record information concurrent with construction progress.
- C. Specifications: Legibly mark and record at each Product section description of actual Products installed, including the following:
 - 1. Manufacturer's name and product model and number.
 - 2. Product substitutions or alternates utilized.
 - 3. Changes made by Addenda and modifications.
- D. Record Drawings and Shop Drawings: Legibly mark each item to record actual construction including:
 - 1. Measured depths of foundations in relation to finish main floor datum.

2. Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
 3. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of the Work.
 4. Field changes of dimension and detail.
 5. Details not on original Contract drawings.
- E. Submit documents to Facility Operations Supervisor's with claim for final Application for Payment.

1.5 OPERATION AND MAINTENANCE DATA

- A. Submit data bound in 8-1/2 x 11 inch (A4) text pages, three D side ring binders with durable plastic covers.
- B. Prepare binder cover with printed title "OPERATION AND MAINTENANCE INSTRUCTIONS", title of project and subject matter of binder when multiple binders are required.
- C. Internally subdivide the binder contents with permanent page dividers, logically organized; with tab titling clearly printed under reinforced laminated plastic tabs.
- D. Submit 1 draft copy of completed volumes 15 days prior to final inspection. This copy will be reviewed and returned with Facility Operations Supervisor comments. Revise content of all document sets as required prior to final submission.
- E. Submit two sets of revised final volumes, within 10 days after final inspection.

1.6 SPARE PARTS AND MAINTENANCE PRODUCTS

- A. Provide spare parts, maintenance, and extra Products in quantities specified individual specification sections.
- B. Deliver to Project site; obtain receipt prior to final payment.
- C. Examine system components at a frequency consistent with reliable operation. Clean, adjust and lubricate as required.
- D. Include systematic examination, adjustment, and lubrication of components. Repair or replace parts whenever required. Use parts produced by the manufacturer of the original component.
- E. Maintenance service shall not be assigned or transferred to any agent or Subcontractor without prior written consent of the Owner.

1.7 WARRANTIES

- A. Execute and assemble transferable warranty documents from Subcontractors, suppliers and manufacturers.
- B. Submit prior to final Application for Payment.
- C. For items of Work delayed beyond date of Final Completion, provide updated submittal within 10 days after acceptance, listing date of acceptance as start of the warranty period.

END OF SECTION

Attachment A

PART 1: GENERAL

1.01 SUMMARY

- A. Section includes design, performance criteria, refrigerants, controls, and installation requirements for air-cooled scroll compressor chillers.

1.02 REFERENCES

- A. Comply with applicable Standards/Codes of AHRI 550/590, ANSI/ASHRAE 15, ETL, cETL, NEC, and OSHA as adopted by the State.
- B. Units shall meet the efficiency standards of the current version of ASHRAE Standard 90.1, and FEMP standard.

1.03 DELIVERY AND HANDLING

- A. Chiller shall be delivered to the job site completely assembled and charged with refrigerant and oil by the manufacturer.
- B. Comply with the manufacturer's instructions for rigging and handling equipment.

1.04 MAINTENANCE

- A. Maintenance of the chillers shall be the responsibility of the owner and performed in accordance with the manufacturer's instructions.

PART 2: PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

- A. York – equivalent to Daikin model specifications
- B. Trane - equivalent to Daikin model specifications

2.02 UNIT DESCRIPTION

- A. Provide and install as shown on the plans factory-assembled, factory-charged air-cooled scroll compressor packaged chillers in the quantity specified. Each chiller shall consist of hermetic tandem scroll compressor sets (total four compressors), brazed plate evaporator, air-cooled condenser section, microprocessor-based control system and all components necessary for controlled unit operation.
- B. Each chiller shall be factory run-tested to verify operation. Operating controls and refrigerant charge shall be checked for proper operation and optimum performance.

2.03 DESIGN REQUIREMENTS

- A. Flow Range: The chiller shall have the ability to support variable flow range down to 40% of nominal design (based on AHRI conditions).
- B. Operating Range: The chiller shall have the ability to control leaving chilled fluid temperature from 15F to 65F.
- C. Performance: Refer to the schedule of unit performance above. The chiller shall be capable of stable operation to a minimum percentage of full load (without hot gas bypass) of 25%. Performance shall be in accordance with AHRI Standard 550/590.

2.04 CHILLER COMPONENTS

- A. Compressor
 - 1. The compressors shall be sealed hermetic, scroll type with crankcase oil heater and suction strainer. The compressor motor shall be refrigerant gas cooled, high torque, hermetic induction type, two-pole, with inherent thermal protection on all three phases and shall be mounted on RIS vibration isolator pads. The compressors shall be equipped with an internal module providing compressor protection and communication capability.

- B. Evaporator
 - 1. The evaporator shall be a compact, high efficiency, dual circuit, brazed plate-to-plate type heat exchanger consisting of parallel stainless steel plates.
 - 2. The evaporator shall be protected with an electric resistance heater (heat trace tape) and insulated with 3/4" (19mm) thick closed-cell polyurethane insulation. This combination shall provide freeze protection down to -20°F (-29°C) ambient air temperature.
 - 3. The water-side working pressure shall be a minimum of 653 psig (4502 kPa). Evaporators shall be designed and constructed according to, and listed by, Underwriters Laboratories (UL).
- C. Condenser
 - 1. Condenser fans shall be propeller type arranged for vertical air discharge and individually driven by direct-drive fan motors. The fans shall be equipped with a heavy-gauge vinyl-coated fan guard. Fan motors shall be TEAO type with permanently lubricated ball bearings, inherent overload protection, three-phase, direct-drive, 1140 rpm. Each fan section shall be partitioned to avoid cross circulation.
 - 2. Coil shall be all copper microchannel design and shall have a series of flat tubes containing multiple, parallel flow microchannels layered between the refrigerant manifolds. Coils shall consist of a two-pass arrangement. Each condenser coil shall be factory leak tested with high-pressure air under water. Coils shall withstand 1000+ hour acidified synthetic sea water fog (SWAAT) test (ASTM G85-02) at 120°F (49°C) with 0% fin loss and develop no leaks.
- D. Refrigerant Circuit
 - 1. Each of the two refrigerant circuits shall include a replaceable-core refrigerant filter-drier, sight glass with moisture indicator, liquid line solenoid valve (no exceptions), electronic expansion valve (no exceptions), and insulated suction line.
- E. Construction
 - 1. Unit casing and all structural members and rails shall be fabricated of pre-painted or galvanized steel to meet ASTM B117, 500-hour salt spray test.
 - 2. Upper section of unit shall have protective and decorative louvers covering the coils and unit end; base section of unit shall have protective, 12 GA, PVC-coated, wire grille guards and have painted steel wraps enclosing the coil end sections and piping.
- F. Control System
 - 1. A centrally located weatherproof control panel shall contain the field power connection points, control interlock terminals, and control system. Power and starting components shall include factory circuit breaker for fan motors and control circuit, individual contactors for each fan motor, solid-state compressor three-phase motor overload protection, inherent fan motor overload protection and two power blocks (one per circuit) for connection to remote, contractor supplied disconnect switches. Hinged access doors shall be lockable. Barrier panels or separate enclosures are required to protect against accidental contact with line voltage when accessing the control system.
 - 2. Shall include optional single-point connection to a non-fused disconnect switch with through-the-door handle and compressor circuit breakers.
- G. Unit Controller
 - 1. An advanced DDC microprocessor unit controller with a 5-line by 22-character liquid crystal display provides the operating and protection functions. The controller shall take preemptive limiting action in case of high discharge pressure or low evaporator pressure. The controller shall contain the following features as a minimum:
 - 2. The unit shall be protected in two ways: (1) by alarms that shut the unit down and require manual reset to restore unit operation and (2) by limit alarms that reduce unit operation in response to some out-of-limit condition. Shut down alarms shall activate an alarm signal.
 - 3. Shutdown Alarms
 - a. No evaporator water flow (auto-restart)

- b. Sensor failures
 - c. Low evaporator pressure
 - d. Evaporator freeze protection
 - e. High condenser pressure
 - f. Outside ambient temperature (auto-restart)
 - g. Motor protection system
 - h. Phase voltage protection
4. Limit Alarms
- a. Condenser pressure stage down, unloads unit at high discharge pressures.
 - b. Low ambient lockout, shuts off unit at low ambient temperatures.
 - c. Low evaporator pressure hold, holds stage #1 until pressure rises.
 - d. Low evaporator pressure unload, shuts off one compressor.
5. Unit Enable Section
- a. Enables unit operation from either local keypad, digital input, or BAS
6. Unit Mode Selection
- a. Selects standard cooling, ice, glycol, or test operation mode
7. Analog Inputs:
- a. Reset of leaving water temperature, 4-20 mA\
 - b. Current Limit
8. Digital Inputs
- a. Unit off switch
 - b. Remote start/stop
 - c. Flow switch
 - d. Ice mode switch, converts operation and setpoints for ice production
 - e. Motor protection
9. Digital Outputs
- a. Shutdown alarm; field wired, activates on an alarm condition, off when alarm is cleared
 - b. Evaporator pump; field wired, starts pump when unit is set to start
10. Condenser fan control - The unit controller shall provide control of condenser fans based on compressor discharge pressure.

2.05 OPTIONS AND ACCESSORIES

- A. The following options are to be included:
- 1. Low Ambient Control: Fan VFD allows unit operation from 32°F down to -10°F (-23.3 C).
 - 2. High Ambient Control Panel for operation from 105°F up to 125°F ambient temperatures
 - 3. Phase loss with under/over voltage protection and with LED indication of the fault type to guard against compressor motor burnout.
 - 4. 115V GFI convenience outlet
 - 5. Hot Gas Bypass: allows unit operation to 10 percent of full load. Includes factory-mounted hot gas bypass valve, solenoid valve, and manual shutoff valve for each circuit.
6. The following accessories are to be included:
- a. Spring vibration isolators for field installation
 - b. Rubber-in-shear vibration isolators for field installation
 - c. Factory-mounted thermal dispersion type flow switch
 - d. Field-mounted, paddle type, chilled water flow switch field wired to the control panel
 - e. Wye strainer, to be installed at the evaporator inlet and sized for the design flow rate , with perforation diameter of 0.063" with blowdown valve and Victaulic couplings (factory mounted or field installed)

PART 3: EXECUTION

3.01 INSTALLATION

- A. Install in strict accordance with manufacturer's requirements, shop drawings, and contract documents.
- B. Adjust and level chiller in alignment on supports.
- C. Coordinate electrical installation with electrical contractor.
- D. Coordinate controls with control contractor.
- E. Install a field-supplied or optional manufacturer-supplied strainer in the chilled water return line at the evaporator inlet; 40-mesh on units with brazed-plate evaporators.

3.02 START-UP

- A. Provide testing and starting of machine, and instruct the Owner in its proper operation and maintenance.

TRAILBLAZER™ Air-Cooled Scroll Chiller



Job Information		Technical Data Sheet
Job Name		
Date		
Submitted By		
Software Version		
Unit Tag		



Unit Overview						
Model Number	Capacity ton	IPLV EER	Voltage	Unit Starter Type	ASHRAE 90.1	LEED EA Credit 4
AGZ130E	125.7	15.4	208 / 60 / 3	Across the Line	'07, '10, '13	Pass

Unit						
Unit Type				Platform		Unit Revision
Air-Cooled Scroll Compressor Chiller				Packaged		00
Head Pressure				Tubing		
VFD w/Line Reactors & Control Box Heaters [First Fans / Circuit]				Replaceable Filter Dryer with Discharge & Liquid Valves, no HGBP		
Unit Controls				Display		
Electronic Expansion Valve				On Controller only		
Refrigerant Type				Refrigerant Weight		
R410a				130 lb (per unit)		
Pump Controls						
Dual Evaporator Pumps - Dual Control Output						
Approval						
ETL/cETL, AHRI & ASHRAE 90.1						
Evaporator						
Connection Hand:	Universal Connection - Facing out back					
Connection Size:	3.00 in					
Insulation:	Single Layer Insulation to Suction at each Compressor					
Entering Fluid Temperature	Leaving Fluid Temperature	Fluid Type	Fluid Flow	Fluid Flow Min / Max	Pressure Drop	Fouling Factor
54.0 °F	44.0 °F	Water	301.7 gpm	186.8/ 498.0 gpm	8.8 ft H ₂ O	0.00010 °F.ft ² .h/Btu
Condenser						
Coil Fins:	MicroChannel					
Guards:	Condenser Coil Louvers & Base Frame Wire Grilles					
Design Ambient Air Temperature	Altitude	Fan Diameter	Fan Motor Horsepower	Fan Speed	Minimum Design Ambient Temperature	Unit Airflow
95.0 °F	0 ft	30.0 in	2.0 hp	1140 RPM	0.0 °F	90320 CFM

Unit Performance

Design										
Capacity			Input Power		Efficiency				IPLV	
125.7 ton			149.9 kW		10.1 EER				15.4 EER	
Performance Points rated at AHRI Ambient Relief										
Unit					Evaporator				Condenser	
Point #	% Load	Capacity ton	Input Power kW	Efficiency EER	Fluid Flow gpm	Pressure Drop ft H ₂ O	Entering Fluid Temperature °F	Leaving Fluid Temperature °F	Ambient Air Temperature °F	Altitude ft
1	100.0	125.7	149.9	10.1	301.7	8.8	54.0	44.0	95.0	0
2	75.0	94.3	83.1	13.6	301.7	8.8	51.5	44.0	80.0	0
3	50.0	62.9	46.0	16.4	301.7	8.8	49.0	44.0	65.0	0
4	25.0	31.4	20.8	18.1	301.7	8.8	46.5	44.0	55.0	0

Sound (without insulation)

Sound Pressure (at 30 feet)								
63 Hz dB	125 Hz dB	250 Hz dB	500 Hz dB	1 kHz dB	2 kHz dB	4 kHz dB	8 kHz dB	Overall dBA
67	68	68	64	61	60	60	55	68
Sound Power								
63 Hz dB	125 Hz dB	250 Hz dB	500 Hz dB	1 kHz dB	2 kHz dB	4 kHz dB	8 kHz dB	Overall dBA
94	97	93	93	91	85	85	84	96

Octave band is non 'A' weighted and overall readings are 'A' weighted. Sound data rated in accordance with AHRI Standard-370.

Physical

Unit				
Length**	Height	Width**	Shipping Weight*	Operating Weight*
192 in	99 in	88 in	6222 lb	6333 lb
*Shipping and Operating Weights include the below Option weights only and do not include the weights of any Accessories. Contact Chiller Applications for additional information.				
Option Weights				
Louvers:	430 lb			
Total:	430 lb			

Electrical

Unit Electrical Data				
Voltage	Starter Type	Fan Motor Quantity	LRA Fan Motor (each)	FLA Fan Motors (each)
208 / 60 / 3	Across the Line	8	32 A	7.8 A
Power Connection Type:	Single Point Disconnect Switch with Circuit Protection			
Phase Voltage:	Phase & Under/Over Voltage Protection with LED			

Single Point Power Connection	
MCA:	569 A
Fuse Size (recommended):	700 A
Fuse Size (maximum):	700 A
Connector Wire Range:	(3) 2/0-400

Compressor Electrical Data				
Compressor Type	Compressor Quantity		Starter Type	
Scroll	4		Across the Line	
Circuit #:	1		2	
Compressor #:	1	3	2	4
RLA:	111 A	111 A	111 A	138.8 A
Inrush Current:	599 A	599 A	599 A	963 A

Note: Power wiring connections to the chiller may be done with either copper or aluminum wiring. Wire should be sized per NEC and/or local codes. Wire sizing and wire count must fit in the power connection lug sizing listed in latest installation manual. Please contact your local sales office for more information.

Options – to be included

Basic Unit	
Control Box Ambient:	High Ambient with Exhaust Fans (125°F maximum)
Suction Shut-off Valve:	Included
Electrical	
Unit Options:	115V Convenience Outlet

Warranty

Unit Startup	Domestic
Standard Warranty:	1st Year Entire Unit Parts and Labor Warranty by contractor
First Year Labor Warranty:	Parts Only
Extended Compressor Warranty:	Compressor Only; extended 4 years parts only

AHRI Certification



Certified in accordance with the AHRI Air-Cooled Water-Chilling Packages Using Vapor Compression Cycle Certification Program, which is based on AHRI Standard 550/590 (I-P) and AHRI Standard 551/591 (SI). Certified units may be found in the AHRI Directory at www.ahridirectory.org

Accessories – to be included

Optional	
Part Number	Description
017503301	Flow Switch, Paddle, 3-8" Dia, 150PSI, Qty 1 (Not WDC)
331758922	Evaporator Strainer Kit; AGZ: 075-130E

Missouri Highways and Transportation Commission
Standard Bid/Proposal Provisions, General Terms and Conditions and Special Terms and Conditions

STANDARD SOLICITATION PROVISIONS

- a. The solicitation for the procurement of the supplies referenced therein, to which these "Standard Bid Provisions, General Terms and Conditions and Special Terms and Conditions" are attached, is being issued under, and governed by, the provisions of Title 7 – Missouri Department of Transportation, Division 10 – Missouri Highways and Transportation Commission, Chapter 11 – Procurement of Supplies, of the Code of State Regulations. The Missouri Highways and Transportation Commission (**MHTC**), acting by and through its operating arm, the Missouri Department of Transportation (**MoDOT**), draws the Bidder's attention to said 7 CSR 10-11 for all the provisions governing solicitation and receipt of bids/quotes and the award of the contract pursuant to this solicitation.
- b. All bids/quotes must be signed with the firm name and by a responsible officer or employee. Obligations assumed by such signature must be fulfilled.

GENERAL TERMS AND CONDITIONS

Definitions

Capitalized terms as well as other terms used but not defined herein shall have the meaning assigned to them in section 7 CSR 10-11.010 Definition of Terms.

Nondiscrimination

- a. The Contractor shall comply with all state and federal statutes applicable to the Contractor relating to nondiscrimination, including, but not limited to, Chapter 213, RSMo; Title VI and Title VII of Civil Rights Act of 1964 as amended (42 U.S.C. Sections 2000d and 2000e, *et seq.*); and with any provision of the "Americans with Disabilities Act" (42 U.S.C. Section 12101, *et seq.*).
- b. **Sanctions for Noncompliance:** In the event of the Contractor's noncompliance with the nondiscrimination provisions of this contract, MHTC shall impose such contract sanctions as it or the Federal Highway Administration may determine to be appropriate, including, but not limited to:
 - i. withholding of payments to the Contractor under the contract until the Contractor complies, and/or,
 - ii. cancellation, termination or suspension of the contract, in whole or in part.

Contract/Purchase Order

- a. By submitting a bid/quote, the Bidder agrees to furnish any and all equipment, supplies and/or services specified in the solicitation documents, at the prices quoted, pursuant to all requirements and specifications contained therein.
- b. A binding contract shall consist of: (1) the solicitation documents, amendments thereto, and/or Best and Final Offer (BAFO) request(s) with any changes/additions, (2) the Contractor's bid response, and (3) the MHTC's acceptance of the bid by post-award contract or purchase order.
- c. A notice of award does not constitute an authorization for shipment of equipment or supplies or a directive to proceed with services. Before providing equipment, supplies and/or services, the Contractor must receive a properly authorized notice to proceed and/or purchase order.

Applicable Laws and Regulations

- a. The contract shall be construed according to the laws of the State of Missouri. The Contractor shall comply with all local, state, and federal laws and regulations related to the performance of the contract. The exclusive venue for any legal proceeding relating to or arising, out of the contract shall be in the Circuit Court of Cole County, Missouri.
- b. The Contractor must be registered and maintain good standing with the Secretary of State of the State of Missouri, Missouri Department of Revenue, and other regulatory agencies, as may be required by law or regulations. Prior to the issuance of a purchase order and/or notice to proceed, the Contractor may be required to submit to MHTC a copy of their current Authority Certificate from the Secretary of State of the State of Missouri and/or a copy of their Certificate of No Tax Due from the Missouri Department of Revenue.
- c. Prior to the issuance of a purchase order and/or notice to proceed, all **out-of-state** Contractors **providing services** within the state of Missouri must submit to MHTC a copy of their current Transient Employer Certificate from the Missouri Department of Revenue, in addition to a copy of their current Authority Certificate from the Secretary of State of the State of Missouri.

Executive Order:

The Contractor shall comply with all the provisions of Executive Order 07-13, issued by the Honorable Matt Blunt, Governor of Missouri, on the sixth (6th) day of March, 2007. This Executive Order, which promulgates the State of Missouri's position to not tolerate persons who contract with the state engaging in or supporting illegal activities of employing individuals who are not eligible to work in the United States, is incorporated herein by reference and made a part of this Agreement.

- 1) "By signing this Agreement, the Contractor hereby certifies that any employee of the Contractor assigned to perform services under the contract is eligible and authorized to work in the United States in compliance with federal law."
- 2) In the event the Contractor fails to comply with the provisions of the Executive Order 07-13, or in the event the Commission has reasonable cause to believe that the contractor has knowingly employed individuals who are not eligible to work in the United States in violation of federal law, the Commission reserves the right to impose such contract sanctions as it may determine to be appropriate, including but not limited to contract cancellation, termination or suspension in whole or in part or both.
- 3) The Contractor shall include the provisions of this paragraph in every subcontract. The Contractor shall take such action with respect to any subcontract as the Commission may direct as a means of enforcing such provisions, including sanctions for noncompliance.

Preferences

- a. In the evaluation of bids/quotes, preferences shall be applied in accordance with 7 CSR 10-11.020(7). Contractors should apply the same preferences in selecting subcontractors. The attached document entitled "**VENDOR INFORMATION AND PREFERENCE CERTIFICATION FORM**" must be completed and returned with the solicitation documents.
- b. Bidders are encouraged to obtain minority business enterprise (MBE) and women business enterprise (WBE) participation in this work through the use of subcontractors, suppliers, joint ventures, or other arrangements that afford meaningful participation for M/WBEs. Bidders are encouraged to obtain 10% MBE and 5% WBE participation.

Missouri Highways and Transportation Commission
Standard Bid/Proposal Provisions, General Terms and Conditions and Special Terms and Conditions

Cancellation of Contract

The MHTC may cancel the Contract at any time for a material breach of contractual obligations or for convenience by providing Contractor with written notice of cancellation. Should the MHTC exercise its right to cancel the contract for such reasons, cancellation will become effective upon the date specified in the notice of cancellation sent to the Contractor.

Bankruptcy or Insolvency

Upon filing for any bankruptcy or insolvency proceeding by or against the Contractor, whether voluntarily, or upon the appointment of a receiver, trustee, or assignee, for the benefit of creditors, the Commission reserves the right and sole discretion to either cancel the Agreement or affirm the Agreement and hold the Contractor responsible for damages.

Warranty

The Contractor expressly warrants that all equipment, supplies, and/or services provided shall: (1) conform to each and every specification, drawing, sample or other description which was furnished to or adopted by the MHTC, (2) be fit and sufficient for the purpose expressed in the solicitation documents, (3) be merchantable, (4) be of good materials and workmanship, and (5) be free from defect.

Status of Independent Contractor

The Contractor represents itself to be an independent Contractor offering such services to the general public and shall not represent itself or its employees to be an employee of the MHTC. Therefore, the Contractor shall assume all legal and financial responsibility for taxes, FICA, employee fringe benefits, workers' compensation, employee insurance, minimum wage requirements, overtime, etc., and agrees to indemnify, save and hold the MHTC, its officers, agents and employees harmless from and against any and all losses (including attorney fees) and damage of any kind related to such matters.

Non-Waiver

If one of the parties agrees to waive its right to enforce any term of this Contract, that party does not waive its right to enforce such term at any other time or to enforce any or all other terms of this Contract.

Indemnification

The Contractor shall defend, indemnify and hold harmless MHTC, including its members and department employees, from any claim or liability whether based on a claim for damages to real or personal property or to a person for any matter relating to or arising out of the Contractor's performance of its obligations under the contract awarded pursuant to this solicitation.

SPECIAL TERMS AND CONDITIONS

Tax Exempt Status:

MHTC is exempt from paying Missouri Sales Tax, Missouri Use Tax and Federal Excise Tax. However, the Contractor may themselves be responsible for the payment of taxes on materials they purchase to fulfill the contract. A Project Tax Exemption Certificate will be furnished to the successful Bidder upon request if applicable.

Insurance

The Contractor shall maintain or cause to be maintained at Contractor's own expense commercial general liability, automobile liability, worker's compensation insurance against negligent acts, errors or omissions of the Contractor, or its subcontractors and anyone directly or indirectly employed by any of them. Any insurance policy required as specified in this Section shall be written by a company that is licensed and authorized to issue such insurance in the state of Missouri and shall provide insurance coverage for not less than the following limits of liability:

- 1) General Liability: Not less than \$500,000 for any one person in a single accident or occurrence, and not less than \$3,000,000 for all claims arising out of a single occurrence;
- 2) Automobile Liability: Not less than \$500,000 for any one person in a single accident or occurrence, and not less than \$3,000,000 for all claims arising out of a single occurrence;
- 3) Missouri State Workmen's Compensation policy or equivalent in accordance with state law.

Upon request from the Commission, the Contractor shall provide the Commission with certificates of insurance evidencing the required coverage and that such insurance is in effect.

Bid Guaranty/Contract Bond

- a. Each bid shall be accompanied by a Bid Bond, Certified Check, Cashier's Check or Bank Money Order payable to the Director of Revenue – Credit State Road Fund for an amount equal to Five Percent (5%) of the amount of the bid submitted. This is to act as a guarantee that the bidder, if awarded the contract, will furnish an acceptable performance and payment bond (Contract Bond) or a cashier's check, a bank money order or a certified check made payable to "Director of Revenue--Credit State Road Fund" in an amount equal to One Hundred (100%) of the contract price.
- b. If a BID BOND is used (in lieu of a certified check, cashier's check, or bank money order), it must be in the form provided and executed by the bidder as principal and by a surety company authorized to do business in the State of Missouri as surety. The agent executing the same on behalf of the surety company must attach a current Power of Attorney setting forth his authority to execute the bond involved.
- c. Certified Checks, Cashier's Checks or Bank Money Orders of unsuccessful bidders will be returned as soon as the award is made. The checks or bank money orders of the successful bidder(s) will be retained until the contract is executed and a satisfactory Performance and Payment (Contract Bond) is furnished. Bid Bonds will not be returned except on specific request of the bidder.
- d. Failure to execute the contract and file acceptable performance payment (Contract Bond) or cashier's check, bank money order or certified check within **15 days** after the contract has been mailed to the bidder shall be just cause for the cancellation of the award and the forfeiture of the proposal guaranty. Award may then be made to the next lowest responsible bidder, or the work may be re-advertised and performed under contract or otherwise, as the Commission may decide. No contract shall be considered effective until it has been executed by all parties thereto.

Missouri Highways and Transportation Commission
Standard Bid/Proposal Provisions, General Terms and Conditions and Special Terms and Conditions

Subcontracting

- a. It is specifically understood that no portion of the material or any interest in the contract, shall be subcontracted, transferred, assigned or otherwise disposed of, except with the written consent of MHTC. Request for permission to subcontract or otherwise dispose of any part of the work shall be in writing to MHTC and accompanied by documentation showing that the organization which will perform the work is particularly experienced and equipped for such work.
- b. Consent to subcontract or otherwise dispose of any portion of the work shall not be construed to relieve the Contractor of any responsibility for the production and delivery of the contracted work and the completion of the work within the specified time.
- c. All payments for work performed by a subcontractor shall be made to the Contractor to whom the contract was awarded and the purchase order issued.

Prohibition Of Employment Of Unauthorized Aliens:

- a. **Non-employment of Unauthorized Aliens:** Pursuant to Section 285.530, RSMo., no business entity or employer shall knowingly employ, hire for employment, or continue to employ an unauthorized alien to perform work within the State of Missouri. As a condition for the award of any contract or grant in excess of five thousand dollars by the State or by any political subdivision of the State to a business entity, or for any business entity receiving a state-administered or subsidized tax credit, tax abatement, or loan from the state, the business entity shall:
 - 1) By sworn affidavit and provision of documentation, affirm its enrollment and participation in a federal work authorization program with respect to the employees working in connection with the contracted services. E-Verify is an example of a federal work authorization program. The business entity must affirm its enrollment and participation in the E-Verify federal work authorization program with respect to the employees proposed to work in connection with the services requested herein by providing acceptable enrollment and participation documentation consisting of **completed** copy of the E-Verify Memorandum of Understanding (MOU). For business entities that are not already enrolled and participating in a federal work authorization program, E-Verify is available at http://www.dhs.gov/files/programs/qc_1185221678150.shtm
 - 2) By sworn affidavit, affirm that it does not knowingly employ any person who is an unauthorized alien in connection with the contracted services. A copy of the affidavit referenced herein is provided within this document, attached as Exhibit A.
- b. **Proof of Lawful Presence For Sole Proprietorships and Partnerships:** If the business entity is a sole proprietorship or partnership, pursuant to Section 208.009, RSMo., each sole proprietor and each general partner shall provide affirmative proof of lawful presence in the United States. Such sole proprietorship or partnership is eligible for temporary public benefits upon submission by each sole proprietor and general partner of a sworn affidavit of his/her lawful presence on the United States until such lawful presence is affirmatively determined, or as otherwise provided by Section 208.009, RSMo. A copy of the affidavit reference herein is provided within this document, attached as Exhibit B.

Construction Safety Program

Missouri law, 292.675 RSMo, requires the awarded Contractor and its subcontractor(s) to provide a ten-hour occupational safety and health administration (OSHA) construction safety program (or a similar program approved by the Missouri Department of Labor and Industrial Relations as a qualified substitute) for their on-site employees (laborers, workmen, drivers, equipment operators, and craftsmen) who have not previously completed such a program and are directly engaged in actual construction of the improvement (or working at a nearby or adjacent facility used for construction of the improvement). The Contractor and its subcontractor(s) shall require all such employees to complete this ten-hour program, pursuant to 292.675 RSMo, unless they hold documentation on their prior completion of said program. Penalties for non-compliance include Contractor forfeiture to the Commission in the amount of \$2,500, plus \$100 per contractor and subcontractor employee for each calendar day such employee is employed beyond the elapsed time period for required program completion under 292.675 RSMo.

Prevailing Wage

- a. The work to be performed under this solicitation is governed by the provisions of Chapter 290 RSMo, as amended, related to prevailing wages to be paid on public works.
- b. If the bid/quote is accepted, the vendor will be required to comply with the prevailing wages as fixed by the Missouri Department of Labor and Industrial Relations, in effect as of the date of the issuance of the solicitation, for each affected craft and type of workmen in the following county: **Greene**. The **Annual Wage Order #22** is attached to the bid documents. Pursuant to the requirements of the Chapter 290 RSMo., not less than the prevailing hourly rate of wages, as set out in the wage order attached to and made part of the specification for work under the contract, must be paid to all workers performing work under the contract.
- c. The Contractor shall provide all information, reports and other documentation as required by MHTC to ensure compliance with Chapter 290 RSMo., as amended, relating to prevailing wages to be paid on public works.
- d. The Contractor shall forfeit a penalty to the contracting public body of \$500 per day (or portion of a day) for each worker that is paid less than the prevailing rate for any work done under the contract by the contractor or by any subcontractor.

Permits, Licenses and Safety Issues

The contract price shall include any necessary permits and licenses required by law incidental to the work. Local ordinances requiring building permits are not applicable to state agencies.

Liquidated Damages

- a. In the event the successful Contractor fails to deliver the material within the time specified, the Department and the public will sustain damages because of such delay in delivery, the exact extent of which would be difficult to ascertain, and in order to liquidate such damage in advance it is agreed that the **sum of \$200 per day**, for each assessable calendar day on which the delivery has not been completed, is reasonable and the best estimate which the parties can arrive at as liquidated damages, and it is therefore agreed that said amount will be withheld from payments due the Contractor or otherwise collected from the Contractor as liquidated damages.
- b. **Saturdays, Sundays, holidays and days whereas the Department has suspended work** shall not be assessable days.

Time of Completion

If this bid is accepted, it is hereby agreed that work will begin not later than the date specified in the "Notice to Proceed" and will diligently be prosecuted in order to complete the work and billing within **90-working days** from the date specified. The number of working days includes fifteen (15) days for providing Submittal. Completion of work will be based on FINAL ACCEPTANCE of the building; "SUBSTANTIAL COMPLETION" will not be accepted as basis for completion.

Missouri Highways and Transportation Commission
Standard Bid/Proposal Provisions, General Terms and Conditions and Special Terms and Conditions

A Working Day

Is defined as any day when, soil and weather conditions would permit the major operation of the project for six hours or more unless other unavoidable conditions prevent the contractor's operation. If conditions require the contractor to stop work in less than six hours, the day will not be counted as a working day. Working days will begin as soon as notice to proceed is issued. In order for MoDOT not to change a workday due to unavoidable conditions, the contractor must have enough forces, equipment, and materials on site to begin the project. The contractor must notify MoDOT inspector before 12:00 noon of said working day if forces will not be present.

Personal Protective Equipment

- a. All contractor and subcontractor employees utilized in the performance of work resulting from this request must adhere to OSHA standards and at a minimum shall utilize appropriate head, eye and foot protection in the performance of work.
- b. All workers within highway right of way shall wear approved ANSI/ISEA 107 Performance Class 2 or 3 safety apparel and more specifically as follows:
 - 1) **Daytime Flagger.** During daytime activities, flaggers shall wear a high visibility hard hat, safety glasses, a Performance Class 3 top OR a Performance Class 2 top, and safety footwear. Hard hats other than high visibility orange or green shall be covered with a high visibility covering.
 - 2) **Daytime Worker.** During daytime activities, workers shall wear a hard hat, safety glasses, a Performance Class 3 top OR a Performance Class 2 top, and safety footwear.
 - 3) **Nighttime Flagger.** During nighttime activities, flaggers shall wear a high visibility/reflective hard hat, safety glasses, a Performance Class 3 top AND Class E bottoms, OR Performance Class 2 top AND Class E bottoms, and safety footwear. Hard hats shall be reflective or covered with a high visibility covering.
 - 4) **Nighttime Worker.** During nighttime activities, workers shall wear a hard hat, safety glasses, a Performance Class 3 top OR Performance Class 2 top AND Class E bottoms, and safety footwear.