



INVITATION FOR SEALED BID

BID 00-738

**Description: Air Conditioning System
Department: PUBLIC WORKS**

NIGP Commodity Code(s): 031-06-00-000-0

Total pages including this page is 21

Note: FAXING OF BID WILL NOT BE ACCEPTED

Important Instruction – Read Carefully:

**If you have obtained these bid specifications from either of:
City of Tulsa's Fax-on-Demand (918-596-1171) or
City of Tulsa's Website : <http://www.cityoftulsapurchasing.org/>**

you must notify the buyer Patricia Cummings of your intent to bid by e-mail at pcummings@ci.tulsa.ok.us in order to receive addenda. The buyer will always acknowledge your e-mail for your records. All addenda will be posted on fax-on-demand and the website.

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Pay special attention to those pages with a reference to the following notes:

Note #1: Signature of authorized agent required

Note #2: Signature of an authorized agent and notarized required

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Your bid response should follow the same format listed above plus any additional format requested in the body of the bid invitation.

**INVITATION FOR SEALED BIDS
TO
City of Tulsa**

200 CIVIC CENTER, ROOM 109, TULSA, OKLAHOMA 74103

Bid number and date of bid opening must appear on the lower
left outside corner of bid envelopes and all related containers.

DATE OF OPENING: May 24, 2001

BID NUMBER: **BID 00-738**

BID MUST BE IN THE CITY CLERK'S OFFICE AT THE ABOVE ADDRESS BY 5:00 P.M. THE DAY PRECEDING THE "DATE OF OPENING" SHOWN ABOVE.

BIDS WILL BE OPENED AT 8:30 A.M. IN THE CITY COUNCIL ROOM ON THE DAY SPECIFIED UNDER "DATE OF OPENING."

PUBLISHED IN THE TULSA DAILY COMMERCE AND LEGAL NEWS: May 15, 16, 17, 18, 21, 2001

Bid must be accompanied by bidder's bond, cashier's check or certified check in the amount of: None

PLEASE READ TERMS AND CONDITIONS ON THE NEXT PAGE BEFORE COMPLETING BID DOCUMENTS

***** **THE FOLLOWING SECTION MUST BE COMPLETED BY BIDDER** *****

Delivery will be made in not more than _____ days after receipt of order.

Payment terms _____ % _____ days.

City of Tulsa may increase quantity of order at the unit price bid for _____ days. (Bidder to Specify Days)
I have examined the terms and specifications and the instructions to bidders herein and agree, provided I am awarded a contract, to provide the above described items for the sum shown in accordance with the terms and specifications stated herein. All deviations are in writing and attached hereto.

Enclosed is a [] BID BOND ; [] CASHIER'S CHECK; [] Certified Check in the amount of \$ None , which I agree the City of Tulsa may retain as liquidated damages in the event of my failure to comply with the terms of this bid.

MUST BE SIGNED BY AUTHORIZED AGENT TO BE VALID

FIRM NAME _____ by _____

SIGNATURE OF AUTHORIZED AGENT

STREET _____ TITLE _____

CITY STATE _____ ZIP CODE _____ PHONE NUMBER _____ DATE _____

GENERAL TERMS AND CONDITIONS OF SEALED BIDS

THESE ITEMS APPLY TO AND BECOME A PART OF THE BID.

NO EXCEPTIONS TO THESE TERMS & CONDITIONS WILL BE CONSIDERED.

1. **BIDS MUST BE SUBMITTED ON THIS FORM ONLY INCLUDING A SIGNATURE OF AN AUTHORIZED AGENT.** Each bid shall be placed in a separate envelope. Be sure envelope is completely and properly identified and sealed, showing the bid number and date in the lower left hand corner. Bids must be time stamped in the office of the City Clerk by 5:00 P.M. on the day before date of opening.
2. No bidder may withdraw his proposal for a period of thirty (30) days after the date and hour set for the opening of bids.
3. All prices shall be quoted F.O.B. Tulsa, Oklahoma, and delivery to City of Tulsa location shall be without additional charge.
4. The bidder shall attach the manufacturer's name of the equipment or material to be furnished, type, model numbers, manufacturer's descriptive bulletins and specifications. All guarantees and warranties should be clearly stated. This data shall be in sufficient detail to describe accurately the equipment or material to be furnished. Manufacturer's specifications, in respect to the successful bidder, shall be considered as part of his contract with the City of Tulsa.
5. The bidder shall show in the proposal both the unit prices and total amount, where required, of each item listed. In the event of error or discrepancy in the mathematics, the unit prices shall prevail.
6. Any exceptions or deviations from written specifications shall be shown in writing and attached to the bid form.
7. Each bidder agrees to comply with the terms of Title 5, Chapter 1, of Tulsa, Oklahoma Charter and revised ordinances relating to equal employment opportunity.
8. **THE ENCLOSED FORMS REGARDING NON-COLLUSION AND FINANCIAL INTEREST MUST BE SIGNED, NOTARIZED, AND RETURNED WITH THE BID.**
9. The City of Tulsa reserves the right to reject any and all bids, to waive any technicalities in the bidding, and to award each item to different bidders or all items to a single bidder.
10. All bids must be accompanied by bidders bond, cash, certified or cashier's check in the amount shown on the face of the bid form. This amount shall be retained by the City of Tulsa as liquidated damages in the event the successful bidder (or bidders) fails to execute a contract, if required. The bidder agrees that said amount is presumed to be the damages sustained by the City due to the impracticability and extreme difficulty in fixing the actual damages. The office of the City Clerk will return the bid deposits to the unsuccessful bidders, after a contract has been awarded or all bids have been rejected.
11. In the event cash discounts are offered by the bidder, the discount date shall begin with the date of invoice, the date of receipt of all material covered by the purchase order, or the date of receipt by the City of Tulsa of the original copy of the purchase order with properly executed Affidavit of Claimant, whichever is the later date.
12. Direct purchase of certain items of equipment or material by the City of Tulsa are exempt from Federal Excise Tax and Oklahoma Sales Tax. In such cases the bidder shall quote prices which do not include Federal Excise Tax and Oklahoma Sales Tax. The City of Tulsa will furnish executed exemption certificates upon presentation by the bidder at the time of purchase.
13. Bid must show number of days required for delivery under normal conditions. Failure to state delivery time obligates bidder to complete delivery in fourteen (14) calendar days. Unrealistically short or long delivery promises may cause bid to be disregarded. Contractor must keep Purchasing Department advised at all times of status of order. Default in promised delivery or failure to meet specifications authorizes the Purchasing Agent to purchase supplies elsewhere and charge full increase of cost and handling to defaulting contractor. Consistent failure to meet delivery promises without valid reason may cause removal from bid list.
14. Bidder agrees to defend and save City of Tulsa from and against all demands, claims, suits, costs, expenses, damages and judgments based upon infringement of any patent relating to goods specified in this order or the ordinary use or operation of such goods by City or use or operation of such goods in accordance with bidders direction.
15. If the bid requires a written contract, the successful bidder shall execute a written contract with the City of Tulsa and return the required bonds and insurance certificates within ten (10) days after submission of contracts to said bidder by the City.

BIDDER AFFIDAVIT - TITLE 74 O.S. (1974 SUPP.) 85.22-85.25

STATE OF _____ COUNTY OF _____

_____, of lawful age, being first duly sworn on oath says
Authorized Agent

1. (s)he is the duly authorized agent of _____, the bidder submitting the competitive bid which is attached to this statement, for the purpose of certifying the facts pertaining to the existence of collusion among bidders and between bidders and municipal officials or employees, as well as facts pertaining to the giving or offering of things of value to government personnel in return for special consideration in the letting of any contract pursuant to the bid to which this statement is attached.
2. (s)he is fully aware of the facts and circumstances surrounding the making of the bid to which this statement is attached and has been personally and directly involved in the proceedings leading to the submission of such bid; and
3. neither the bidder nor anyone subject to the bidder's direction or control has been a party;
 - a. to any collusion among bidders in restraint of freedom of competition by agreement to bid at a fixed price or to refrain from bidding,
 - b. to any collusion with any municipal official or employee as to quantity, quality or price in the prospective contract, or as to any other terms of such prospective contract, nor
 - c. in any discussions between bidders and any municipal official concerning exchange of money or other thing of value for special consideration in the letting of a contract.

SIGNATURE OF AUTHORIZED AGENT

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

Signature of Notary Public

MY COMMISSION EXPIRES

The Bidder Affidavit must be completed, signed by an authorized agent, and notarized.

CONTRACTOR/BIDDER INFORMATION SHEET

To be completed by all Bidders
For Contracts with the City of Tulsa
(Please print or type)

Project No. or Description _____

Full Name of Bidder _____

Legal Identity
(Corporation, Partnership,
Individual, etc.) _____

Address _____

Telephone No. _____

FAX No. _____

Taxpayer Identification Number _____

Contact Person _____

Phone No. _____

Fax No. _____

E-mail address _____

Webpage Address _____

Price Sheet Summary

Vendor Name: _____ Date: _____

Signature: _____

You will be able to obtain a copy of the Bid Summary on the City of Tulsa's Purchase-Net Fax-on-Demand and Website shortly after bid opening.

BID 00-738 Air Conditioning System Public Works Department

Item	Qty.	<u>Description</u>	<u>Price Each</u>
(1)	1 or more	Water Source Heat Pump Air Conditioning System	\$ _____

Specify brand and model bidding: _____

TOTAL BID: \$ _____

Please attach any descriptive literature available

BID 00-738
Air Conditioning System
PUBLIC WORKS DEPARTMENT

INTENT:

THE INTENT OF THESE SPECIFICATIONS IS TO SECURE, ON A COMPETITIVE BASIS, A SOURCE TO SUPPLY **WATER SOURCE HEAT PUMP AIR CONDITIONING UNIT** FOR THE CITY OF TULSA'S PUBLIC WORKS DEPARTMENT.

PRICING:

PRICES BID SHALL BE FIRM AND INCLUDE ANY APPLICABLE FREIGHT CHARGES.

BIDDER'S AFFIDAVIT:

EACH BIDDER SHALL ACCOMPANY THEIR BID WITH A FULLY EXECUTED AND NOTARIZED COPY OF THE ATTACHED **NON-COLLUSION AFFIDAVIT** AND THE **INTEREST AFFIDAVIT**. FAILURE TO DO SO MAY BE CAUSE FOR REJECTION OF THE BID.

METHODS OF SAMPLING, INSPECTIONS & TESTS:

1. AFTER BID RESULTS ARE TABULATED, THE CITY OF TULSA PURCHASING DIVISION RESERVES THE RIGHT TO REQUIRE SAMPLES OF SELECTED EQUIPMENT AND/OR PRODUCTS FOR INSPECTION AND EVALUATION.
2. UNLESS OTHERWISE SPECIFIED IN THE CONTRACT OR PURCHASE ORDER, THE SUPPLIER SHALL BE RESPONSIBLE FOR THE PERFORMANCE OF ALL INSPECTION AND TEST REQUIREMENTS NECESSARY TO INSURE COMPLIANCE WITH REQUIREMENTS FOR THIS SPECIFICATION. THIS DOES NOT PRECLUDE SUBSEQUENT INSPECTION AND TESTIMONY BY THE CITY OF TULSA TO FURTHER DETERMINE CONFORMANCE WITH SPECIFICATION REQUIREMENTS OF QUALITY STANDARDS OF WORKMANSHIP, MATERIAL AND CONSTRUCTION TECHNIQUES.

ADDENDA AND INTERPRETATIONS:

IF IT BECOMES NECESSARY TO REVISE ANY PART OF THIS BID, A WRITTEN ADDENDUM WILL BE PROVIDED TO ALL THE BIDDERS. THE CITY OF TULSA IS NOT BOUND BY ANY ORAL REPRESENTATION, CLARIFICATIONS OR CHANGES MADE IN THE WRITTEN SPECIFICATIONS BY CITY OF TULSA EMPLOYEES UNLESS SUCH CLARIFICATION OR CHANGE IS PROVIDED TO BIDDERS IN WRITTEN ADDENDUM FORM FROM THE PURCHASING DIVISION.

ALTERING BIDS:

BIDS CANNOT BE ALTERED OR AMENDED AFTER SUBMISSION DEADLINE. ANY INTERLINEATION, ALTERATION, OR ERASURE MADE BEFORE OPENING TIME AND DATE MUST BE INITIALED BY THE SIGNER OF THE BID, GUARANTEEING AUTHENTICITY. BIDS MUST BE SUBMITTED IN INK OR TYPEWRITTEN, PENCILING WILL NOT BE ACCEPTED.

TESTS:

THE CITY RESERVES THE RIGHT TO SUBJECT ALL PRODUCTS OFFERED, PRIOR TO AWARD OF BID, TO WHATEVER PHYSICAL AND OR CHEMICAL TESTS ARE DEEMED NECESSARY TO SATISFY THE PURPOSE FOR WHICH THEY ARE REQUIRED. IF ADDITIONAL SAMPLES ARE REQUIRED TO COMPLETE SUCH TESTS, THEY SHALL BE SUPPLIED BY THE BIDDER AT NO ADDITIONAL COST.

DESCRIPTIVE LITERATURE:

EACH BIDDER IS REQUIRED TO FURNISH WITH THEIR BID, CATALOG CUTS AND/OR DESCRIPTIVE LITERATURE, PROPERLY LABELED WITH THE BID NUMBER AND BIDDER'S NAME, WITH FULL ILLUSTRATIONS AND DETAILED SPECIFICATIONS FOR EACH ITEM OFFERED AS EQUAL TO THE BRAND NAME SPECIFIED. IN ADDITION, **ALL DIFFERENCES IN SPECIFICATIONS FROM THE SPECIFICATIONS STATED HEREIN MUST BE SO MARKED.** DESCRIPTIVE LITERATURE IS REQUIRED TO ESTABLISH, FOR THE PURPOSE OF BID EVALUATION AND AWARD, DETAILS OF THE PRODUCT(S) THE BIDDER PROPOSES TO FURNISH AS TO DESIGN, MATERIALS, METHOD OF MANUFACTURE, CONSTRUCTION, ASSEMBLY OR OPERATION, AS APPROPRIATE. **FAILURE TO SUBMIT THE DESCRIPTIVE LITERATURE MAY BE CAUSE FOR REJECTION OF YOUR BID.**

AMERICANS WITH DISABILITIES ACT:

THE CONTRACTOR SHALL TAKE THE NECESSARY ACTIONS TO ENSURE ITS FACILITIES AND EQUIPMENT ARE IN COMPLIANCE WITH THE REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT. IT IS UNDERSTOOD THAT THE PROGRAM OF THE CONTRACTOR IS NOT A PROGRAM OR ACTIVITY OF THE CITY OF TULSA. THE CONTRACTOR AGREES THAT ITS PROGRAM OR ACTIVITY WILL COMPLY WITH THE REQUIREMENTS OF THE ADA. ANY COSTS OF SUCH COMPLIANCE WILL BE THE RESPONSIBILITY OF CONTRACTOR. UNDER NO CIRCUMSTANCES WILL CONTRACTOR CONDUCT ANY ACTIVITY WHICH IT DEEMS TO NOT BE IN COMPLIANCE WITH THE ADA.

AWARD OF BID:

THE BID SHALL BE AWARDED TO THE FIRM WHOSE PROPOSAL IS RESPONSIVE TO THE BID AND IS MOST ADVANTAGEOUS TO THE CITY,

CONSIDERING THE FACTORS IDENTIFIED IN THE BID AND SECTION 406E OF TITLE 6, THE PURCHASING ORDINANCE SET FORTH BELOW:

E. AWARD OF CONTRACT.

1. AUTHORITY OF MAYOR. THE MAYOR SHALL HAVE THE AUTHORITY TO AWARD CONTRACTS WITHIN THE PURVIEW OF THIS CHAPTER.

2. LOWEST SECURE BIDDER. CONTRACTS SHALL BE AWARDED TO THE LOWEST SECURE BIDDER MEETING SPECIFICATIONS. IN DETERMINING "LOWEST SECURE BIDDER", IN ADDITION TO PRICE, THE FOLLOWING FACTORS SHALL BE CONSIDERED:

A. THE ABILITY, CAPACITY AND SKILL OF THE BIDDER TO PERFORM THE CONTRACT OR PROVIDE THE SERVICE REQUIRED;

B. WHETHER THE BIDDER CAN PERFORM THE CONTRACT OR PROVIDE THE SERVICE PROMPTLY OR WITHIN THE TIME SPECIFIED, WITHOUT DELAY OR INTERFERENCE;

C. THE CHARACTER, INTEGRITY, REPUTATION, JUDGMENT, EXPERIENCE AND EFFICIENCY OF THE BIDDER;

D. THE QUALITY OF PERFORMANCE OF PREVIOUS CONTRACTS OR SERVICES;

E. THE PREVIOUS AND EXISTING COMPLIANCE BY THE BIDDER WITH LAWS AND ORDINANCES RELATING TO THE CONTRACT OR SERVICE;

F. THE SUFFICIENCY OF THE FINANCIAL RESOURCES AND ABILITY OF THE BIDDER TO PERFORM THE CONTRACT OR PROVIDE THE SERVICE;

G. THE QUALITY, AVAILABILITY AND ADAPTABILITY OF THE SUPPLIES OR CONTRACTUAL SERVICES TO THE PARTICULAR USE REQUIRED;

H. THE ABILITY OF THE BIDDER TO PROVIDE FUTURE MAINTENANCE AND SERVICE FOR THE USE OF THE SUBJECT OF THE CONTRACT, AND;

I. WHERE AN EARLIER DELIVERY DATE WOULD BE OF GREAT BENEFIT TO THE REQUISITIONING AGENCY, THE DATE AND TERMS OF DELIVERY MAY BE CONSIDERED IN THE BID AWARD, AND;

J. THE NUMBER AND SCOPE OF CONDITIONS ATTACHED TO THE BID.

K. IF A POINT SYSTEM HAS BEEN UTILIZED IN THE BID SPECIFICATIONS, THE NUMBER OF POINTS EARNED BY THE BIDDER.

BID DOCUMENTS:

BIDDER SHALL RETURN ALL BID DOCUMENTS INTACT EXACTLY AS FURNISHED IN ITS ORIGINAL FORM. ALL BID DOCUMENTS REQUIRING SIGNATURE MUST BE SIGNED BY AN AUTHORIZED AGENT OF THE COMPANY BIDDING. PRINTING YOUR NAME IN LIEU OF SIGNATURE WILL NOT BE ALLOWED. **FAILURE TO COMPLY WILL RESULT IN REJECTION OF YOUR BID.**

Minimum Specification
Water Source Heat Pump Air Conditioning System
April 2001

Intent:

Furnish and install a Water Source Heat Pump, for the pilot plant at A.B. Jewell. The unit(s) must meet the capacities and characteristics listed in the specification that follows.

The bidder must note any additions, deletions, or variations for the following minimum required specifications. If you do not note all deviations from these specifications, we will assume that you are either meeting or exceeding these requirements.

Item	Specifications (minimum)	Bidder's Proposal
Type	Water source heat pump unit (10 ton capacity using two or more units) manufactured by ClimateMaster or some other equivalent qualified manufacturer. The unit must be hung horizontally from the roof (between the roof and the drop ceiling).	
General	The equipment specified herein shall be new, unused, and of current manufacture. Equipment shall be completely assembled, piped and internally wired. The unit supplied shall meet or exceed these minimum specifications in all cases, and must be delivered fully assembled and operational.	
Basic Construction	The heat pumps shall be fabricated from heavy gauge galvanized sheet metal.	
	All interior surfaces shall be lined with ½ inch thick, 1-½ lb. acoustic type glass fiber insulation.	
	All fiberglass shall be coated and have exposed edges tucked under flanges to prevent the introduction of glass fibers into the air stream.	
	All insulation must meet NFPA 90A standards.	

	<p>Horizontal units will have factory installed hanger brackets, isolation grommets, and factory installed 1-inch duct collars.</p>	
	<p>All units must have an insulated panel separating the fan compartment from the compressor compartment. Units with the compressor in the air stream are not acceptable. Units shall have a factory installed 1-inch wide filter bracket for filter removal from either side. Units shall have a 1-inch thick throwaway type glass fiber filter. The bidder shall supply one spare set of filters and replace factory shipped filters on completion of start-up. Filters shall be standard sizes. If units utilize non-standard filter sizes then the bidder shall provide 12 spare filters for each unit.</p>	
	<p>Cabinets shall have separate openings and knockouts for entrance of line voltage and low voltage control wiring. Supply and return water connections shall be copper FPT fittings and shall be securely mounted flush to the cabinet corner post allowing for connection to a flexible hose without the use of a back-up wrench. Water connections that protrude through the cabinet or require the use of a backup wrench shall not be allowed. All water connections and electrical knockouts must be in the compressor compartment corner post as to not interfere with the serviceability of unit. The bidder shall be responsible for any extra costs involved in the installation of units that do not have this feature. The bidder must ensure that units can be easily removed for servicing and coordinate locations of electrical conduit and lights with the electrician.</p>	
	<p>The bidder must provide a Y-strainer on the incoming water source.</p>	

Fan and Motor Assembly	Units rated 60,000 BTUH and under shall have a direct-drive centrifugal fan	
	The fan motor shall be 3-speed, permanently lubricated, PSC type with internal thermal overload protection.	
	Blower shall have inlet rings to allow removal of wheel and motor from one side without removing housing.	
	Units supplied without permanently lubricated motors must provide external oilers for easy service.	
	The fan motor shall be isolated from the fan housing by torsionally flexible isolation grommets.	
	The fan and motor assembly must be capable of overcoming the external static pressures as shown on the schedule.	
	CFM/Static pressure rating of the unit shall be based on a wet coil and a clean filter in place. Ratings based on dry coil and/or no filter shall not be acceptable.	
Refrigerant Circuit	The units shall have a sealed refrigerant circuit including a high efficient scroll, rotary or reciprocating compressor designed for heat pump operation.	

	<p>A thermostatic expansion valve for refrigerant metering, an enhanced aluminum lanced fin and rifled copper tube refrigerant to air heat exchanger, a reversing valve, a coaxial (tube in tube) refrigerant to water heat exchanger, and safety controls including a high pressure switch, a low pressure sensor, and a low water and low air temperature sensor.</p>	
	<p>Access fittings shall be factory installed on high and low pressure refrigerant line to facilitate field service.</p>	
	<p>Activation of any safety device shall prevent compressor operation via a lockout device.</p>	
	<p>The lockout shall be reset at the thermostat or at the disconnect switch.</p>	
	<p>Units which may be reset only at the disconnect switch only shall not be acceptable.</p>	
	<p>Hermetic reciprocating compressors shall be internally sprung. The compressor shall be mounted on an external computer selected isolating springs.</p>	
	<p>The external springs will be secured to rails that are isolated from the cabinet base.</p>	
	<p>Compressor shall have thermal overload protection located in an insulated compartment away from air stream to minimize sound transmission.</p>	

	Refrigerant to air heat exchangers shall utilize enhanced lanced aluminum fins and rifled copper tube construction rated to withstand 450 PSIG refrigerant working pressure	
	Refrigerant to water heat exchangers shall be of cupro nickel, rated to withstand 450 PSIG working refrigerant pressure and 450 PSIG working water pressure.	
	Plate to plate heat exchangers is not acceptable.	
	Refrigerant metering shall be accomplished by thermostatic expansion valve only. Units intended for use in factory standard built operating range with entering water temperatures from 20° to 120°F (-6.7° to 49°C). Reversing valves shall be four-way solenoid activated refrigerant valves which shall fail to heating operation should the solenoid fail to function. If the reversing valve solenoid fails to cool, a low temperature thermostat must be provided to prevent over-cooling an already cold room.	
Drain Pan	The drain pan shall be constructed to inhibit corrosion and be fully insulated. The drain outlet shall be located on the pan to allow complete and unobstructed drainage of condensate. The unit will be supplied with solid-state electronic condensate overflow protection. Mechanical float switches will not be accepted.	

Electrical	A control box shall be located within the unit compressor compartment and shall contain a 50VA transformer, 24 volt activated, 2 or 3 pole compressor contactor, terminal block for thermostat wiring and solid-state controller for complete unit operation.	
	Electro-mechanical operation will not be accepted.	
	Units shall be name-plated for use with time delay fuses or HACR circuit breakers. Unit controls shall be 24 volt and provide heating or cooling as required by the remote thermostat/sensor.	
Solid-State Control System	Units shall have a solid-state control system (CXM). The control shall interface with a heat pump (Y,O), wall thermostat, mechanical or electronic. The control system microprocessor board shall be specifically designed to protect against building electrical system noise contamination, EMI, and RFI interference.	
	Unit Performance Sentinel (UPS). The UPS warns when the heat pump is running inefficiently.	
	Anti-short cycle time delay on compressor operation, time delay shall be 5 minutes minimum.	

	Random start on power up mode.	
	Low voltage protection.	
	High voltage protection.	
	Unit shutdown on high or low refrigerant pressures.	
	Unit shutdown on low water temperature.	
	Water coil freeze protection (selectable for water or anti-freeze).	
	Air coil freeze protection.	
	Condensate overflow shutdown.	
	Option to reset unit at thermostat or disconnect. Fault type shall be retained in memory if reset at thermostat.	

	Automatic intelligent reset. Unit shall automatically reset 5 minutes after trip if the fault has cleared. Should a fault reoccur 3 times sequentially then permanent lockout will occur.	
	Ability to defeat time delays for servicing.	
	Light emitting diodes (LED) to indicate high pressure, low pressure, low voltage, high voltage, air/water freeze protection, condensate overflow, and control status.	
	The low-pressure switch shall not be monitored for the first 90 seconds after a compressor start command to prevent nuisance safety trips.	
	Remote fault type indication at thermostat.	
	Selectable 24v or pilot duty dry contact alarm output.	
	24v output to cycle a motorized water valve with compressor contactor.	
Hose Kits	All units 120,000 BTUH and below shall be connected with hoses. The hoses shall be 2 feet long, braided stainless steel; fire rated hoses complete with adapters. Only fire rated hoses will be accepted.	
Thermostat	Electromechanical thermostats shall be single-stage manual changeover with HEAT-OFF-COOL system switch and fan ON-AUTO switch.	

Ductwork	Duct will be designed and installed by the contractor. The layout shall allow balance heating and cooling of the entire pilot plant room. Ductwork will be rigid sheet metal, insulated and hung above the drop ceiling.	
Warranty	Factory standard warranty with a minimum of one year for parts and labor. The bidder shall provide a cost estimate of an extended compressor warranty.	
Manuals	Complete set of operation, maintenance, parts, and repair manuals.	
Additional	The bidder must deliver the equipment fully assembled, piped, and internally wired. Water source heat pump units shall be supplied completely factory built and capable of operation. The bidder shall supply the entering water temperature ranges. All equipment must be rated and certified in accordance with ARI/ISO, NRTL, or CSA. The units shall have ARI/ISO, NRTL or CSA labels. All units shall be factory run tested under normal operating conditions at nominal water flow rates. This testing shall generate a report card to be shipped with each unit stating performance in both heating and cooling modes. Serial numbers will be recorded by the factory and furnished to contractor for ease of unit warranty status. Units tested without water flow are not acceptable. The bidder will be required to operate the equipment and demonstrate all features and operational modes to City of Tulsa personnel. The bidder shall supply the names and telephone numbers of the local qualified dealer that will perform warranty.	