

ADDENDUM NO: 1

REQ NO: 114343

FINAL SUBMITTAL: June 3, 2015 2:00 PM EST
FINAL QUESTIONS: May 29, 2015 2:00 PM EST

Department: General Services, City Wide

Changes to the Bid:

The specifications and bid form have been updated from notes taken at Pre-Bid conference on May 20, 2015

Req No: 114343 General Services – HVAC Service

PLEASE SIGN ONE (1) COPY OF ADDENDUM AND RETURN TO THE PURCHASING DEPARTMENT. RETAIN THE OTHER COPY FOR YOUR FILES.

Name: _____

Company: _____

**CITY OF CHATTANOOGA
PURCHASING DEPARTMENT
Mark McKeel
City Hall Suite G13
CHATTANOOGA, TN 37402
TELE: (423) 643-7236
FAX: (423) 643-7244**

SPECIFICATIONS FOR BLANKET CONTRACT

TO SUPPLY

HEATING, VENTILATION & AIR CONDITIONING (HVAC) SERVICES, REPAIRS, EQUIPMENT, AND INSTALLATION

FOR THE

CITY OF CHATTANOOGA, TENNESSEE

April 2015

1.0 SCOPE OF SERVICES

The Scope of Services included in these Specifications shall be for City Wide Heating, Ventilation & Air Conditioning (HVAC) services, repairs, equipment, and Installation on an as-needed basis, for the City of Chattanooga.

Services to be provided by the Vendor may include any or all labor, equipment, tools, parts, materials, and supplies required to repair, replace, remove stoppages, and install existing and new HVAC systems as required. This includes the provision of all replacement parts and component systems required for existing building HVAC systems in accordance with all original equipment manufacturer specifications.

Vendor shall list all areas of HVAC, which Vendor will not provide services for. The services shall additionally include, but not be limited to:

- Expediting services
- Regular service calls
- Emergency service calls

Repair, replacement, stoppage removal and installation services provided by the Vendor shall comply with and conform to all applicable Federal, State, and local regulations, laws and codes.

Any questions or comments related to the services described in these specifications may be directed to Mr. Mark McKeel, Buyer, City of Chattanooga Purchasing Division, phone 423-643-7236.

1.1 BASIS OF BIDDING

The Vendor shall submit two (2) copies of bid documents utilizing the City's Standard Bid Form and attached list of items for bid.

The *installation cost* shall include any and all costs for equipment accessories, standard tools/incidentals required to complete a job, wages, benefits, travel, indirect costs, overhead and profit, insurance, and any other related direct or indirect cost.

The *labor cost* per hour shall be for the service and repairs to existing Heating, Ventilation &

Air Conditioning (HVAC) equipment and shall include any and all costs for standard tools/incidentals required to complete a job, wages, benefits, travel, indirect costs, overhead and profit, insurance, and any other related direct or indirect cost.

The bid shall be awarded on the basis of the unit costs as well as an evaluation of the Vendor's qualifications, experience, capabilities and other factors specified in the City Code. No travel or mileage costs will be paid by the City.

The City of Chattanooga reserves the right to reject any and/or all bids, to waive any information in Bids received, and to accept any Bid which in its opinion may be in the best interest of the city.

1.2 SUBMITTALS

1.2.1 Bid Bond

Not Required

1.2.2 Performance Bond

None Required.

1.2.3 Qualifications

The Vendor shall submit a brief company history of providing services similar to those specified herein, including a list of personnel that will be performing work under this contract.

1.3 GENERAL CONDITIONS AND INSTRUCTIONS TO BIDDERS

The Vendor shall comply with the Terms and Conditions posted on the City's website at <http://www.chattanooga.gov/purchasing/standard-terms-and-conditions> that has been made a part of this solicitation.

1.4 LENGTH OF CONTRACT

The Contract for services described herein shall be for a period of one (1) year beginning the effective date of the award of the Contract. The Vendor shall provide firm rates for the first year of the Contract.

The City and Vendor shall have the option of mutually extending the Contract for two (2) additional one (1) year periods.

1.5 INSURANCE

The Vendor shall, prior to the award of the Contract, furnish proof and maintain in force insurance requirements at the minimum limits specified in the attachment "Requirements for Insurance Coverage." Where applicable, the City shall be listed as additional insured.

Copies of the current insurance certificate(s) shall be provided to the City prior to any work being performed. Insurance shall be kept in force during the entire length of the contract.

1.6 REGULAR SERVICE CALLS

Service requests made to Vendor prior to 12:00 P.M. shall be responded to within four (4) hours after the City's notification to Vendor.

1.7 EMERGENCY SERVICE CALLS

Vendor shall respond to emergency calls twenty-four (24) hours per day, seven (7) days per week throughout the duration of the contract. Vendor shall respond to Emergency service requests within one (1) hour of notification to Vendor.

1.8 WARRANTY/GUARANTEE

All work provided by any Vendor pursuant to any contract that ensues from this bid shall be warranted or guaranteed by that Vendor for a period of time of not less than one (1) year following the completion of the work. Vendor shall warrant any services or related materials that are found to be defective or faulty due to imperfect and/or bad workmanship and/or materials shall be replaced promptly at no additional cost to the City.

Any and all manufacturer's warranties for equipment, parts and accessories installed as a part of the work shall be fully transferred and assigned in full force to the City at the end of the Vendor's warranty period.

1.9 CONTRACTORS EMPLOYEES

The Vendor shall ensure that personnel are knowledgeable of all the requirements of these specifications. The Vendor shall be responsible for instructing his employees in safety measures considered appropriate. Tennessee OSHA safety requirements shall be complied within all activities under this award.

1.10 SITE CONTROL

Any areas being worked in shall be secured from public access, clearly marked, and barricaded, if necessary. At all times, work shall not interfere with ingress or egress of the building or normal operations by tenants, employees or vehicles. All surrounding surfaces and vegetation shall be protected from contact with any materials used in this project.

The Vendor is solely responsible for damage to surrounding surfaces, facilities, vegetation, vehicles, or persons caused by its materials, equipment, workers, or agents. The Vendor shall make every effort to maintain a clean, quiet, and orderly work area throughout the term of this project. No materials or equipment shall be left on the site when the Vendor's workers are not present. The Vendor is responsible for protecting the work from damage from any source prior to final acceptance.

1.11 WORK SCHEDULE

The Vendor shall perform work when needed and requested, including day and night hours as well as weekends and holidays.

Vendor shall complete non-emergency work in a timely manner and shall notify the City of expected delays if deadlines cannot be met.

1.12 CLEAN UP

The Vendor shall ensure that upon completion of work assignments, all materials and equipment are cleaned up and/or removed, all materials, supplies, debris and rubbish requiring disposal are removed, all equipment is properly stored, and the work area is completely cleaned and left in a clean, acceptable condition.

2.0 SERVICES AND OTHER REQUIREMENTS

2.1 GENERAL

2.1.1 Subcontractors

The Vendor shall not subcontract the services or assign the contract to others without the written consent of the City of Chattanooga.

2.1.2 Compliance with Applicable Regulations

All of the services provided by the Vendor shall be completed in a good and workmanlike manner. All services provided shall be in compliance with all applicable statutes, rules, ordinances and regulations.

The Vendor's personnel shall comply with all City facilities' work rules and regulations when on site.

2.1.3 Inspection

The services furnished by the Vendor shall be subject to inspection and approval by the City's designated representative, but the manner and method of providing the services shall be the responsibility of the Vendor.

2.1.4 Failure to Provide Services and Termination of Contract

In the event the Vendor:

- a. Fails to initiate services on the date specified or otherwise agreed to;
- b. Fails to provide all of the required documentation required by these Specifications at the specified times;
- c. After having begun services, abandons them for any reason;
- d. Suspends or refuses to continue services; or
- e. Defaults in any manner in the performance under the terms of the Contract for a period of two (2) consecutive working days (unless the Vendor is prevented from continuing for reasons beyond its control);

The City of Chattanooga shall have the right to terminate the Contract after giving a thirty-day (30) written notice to the Vendor for the above, but not limited to the reasons listed above.

2.2 MINIMUM PROPOSER REQUIREMENTS

The Vendor shall be a full time, commercial HVAC contractor. Vendors not meeting this requirement will not be considered. For the purposes of this bid, the City will not consider general contractors as meeting this minimum requirement.

The Vendor shall possess and maintain a valid State of Tennessee mechanical contractor's License, and appropriate specialty contractor's license(s).

The Vendor shall provide evidence of his existence in the HVAC business for a minimum of three (3) years.

The Vendor shall provide references from at least five (5) commercial facilities and/or municipalities for which work has been completed in the past 12 months. References shall be indicated with the BID FORM.

2.3 CONTRACT PRICING

Cost shall include all materials, equipment and labor for standard application.

Vendor shall provide rates for:

- a. Regular Time work rates
- b. Standard Overtime work rates
- c. Holiday Time work rates
- d. Weekend Time work rates

Overtime work shall be performed only upon the City's request. The Vendor will be compensated at a rate of 1.5 times the quoted hourly rate.

Supplies and materials shall be provided to the City at the Vendor's published catalog rate, less a percentage discount. The discount shall be indicated on the BID FORM.

The following shall apply to all hourly rate pricing:

- a. Regular Time is defined as the City of Chattanooga's normal business hours, 8:00 a.m. to 4:30 p.m., Monday through Friday.
- b. Overtime work shall be performed only upon the City's request by the City's representative or their designee.
- c. Holiday work shall be performed only upon the City's request. Holidays that qualify for Holiday Time work rate billing are as follows:
 1. New Year's Day
 2. Labor Day
 3. Independence Day
 4. Memorial Day
 5. Thanksgiving Day
 6. Christmas Day

All hourly rates quoted must include any and all overhead, profit, travel and all administrative costs. Trip charges are not permitted under this contract.

The Vendor may be required to have the hours worked certified by City of Chattanooga personnel at the job site.

2.4 WORK AUTHORIZATION

For work which exceeds one thousand dollars (\$1,000), the Vendor shall be required to visit the potential job site and shall furnish to the City, a written quote for the full scope of services requested which shall include a scope of work, bill of materials, fixed price, and time required for completion at no additional charge to the City.

The quotation shall be provided within" three (3) business days" of the original request, and shall include a detailed summary in accordance with the contract rates. If the quotation is accepted and the work performed, the Vendor's invoice shall not exceed the quoted amount unless previously authorized by the City representative or their designee.

2.5 DESCRIPTION OF CONTRACTED SERVICES

2.5.1 Scope of Responsibilities of Vendor

- a. The Vendor shall provide the services as scheduled by the City or on an "as needed" basis as requested by the City.
- b. Vendor shall not assign or subcontract any work covered by this Agreement without the consent of the City.
- c. Services provided by the Vendor shall include as specified, any or all labor, equipment, tools, parts, materials, and supplies required to repair, replace, remove stoppages, and install existing and new HVAC systems as required and shall include the provision of all replacement parts and component systems required for existing building HVAC systems in accordance with all original equipment manufacturer specifications.
- d. Vendor shall perform all work covered by this Agreement in accordance with current Federal, State, and Local regulations.
- e. Vendor shall maintain current licensing, if applicable, with the City.
- f. Vendor shall enact standard lock-out/tag-out procedures during any and all maintenance work inside of units or near open electrical wiring including heating elements, in proximity to normally rotating or oscillating parts such as fans, and inside of units containing ultraviolet or electrostatic filters.
- g. Proper management of the refrigerants present in HVAC equipment in accordance with EPA requirements is an absolute requirement of the contract and it is the Vendor's responsibility to maintain and account for refrigerant charge. If, during an annual leak test or at any other time, it becomes necessary to add refrigerant to replenish a unit's charge or to transfer refrigerant in the process of effecting repairs to the equipment, the Vendor shall immediately locate and repair any and all leaks and to furnish the City with documentation of the event. Documentation shall include at minimum an accounting of the type and quantity of charge lost as well as a description of the measures taken to assure the future integrity of the system.
- h. The Vendor shall furnish to the City's representative SDS documentation for all products and chemicals utilized in the performance of the contract.
- i. Vendor shall provide all services as per the terms of this bid, the bid specifications, and the resultant contract. The Vendor shall perform its obligations and functions in accordance with the requirements and standards contained herein and in a professional and businesslike manner; further, Vendor shall perform its activities so as not to annoy, disturb, endanger, or unreasonably interfere with or delay the operations or activities of any building occupants, tenants, or employees of the City of Chattanooga.
- j. Vendor shall provide itemized billing for each invoice including: Date of Invoice, indication of City department or employee for which service was performed, basic description of service, total labor cost, total parts and materials cost, work order number, and overall total costs including costs for miscellaneous items such as equipment rentals or fuel charges.
- k. Vendor shall provide to the City items not listed under this contract at a cost plus vendor's markup. Invoice to the City must include material invoice and show invoice total and markup as separate items.
- l. The Vendor shall be responsible for the storage and security of all HVAC materials and supplies at all times and until installed and approved by the City representative.
- m. Vendor shall estimate all projects as local jobs only and shall NOT charge mileage or travel time for labor or equipment to or from the jobsite.
- n.

2.2.2 Scope of Responsibilities of City

- a. City shall typically order work covered by this Agreement from the Vendor unless it is necessary to order such work from another contracting firm in order to best serve public interest.
- b. City shall reserve the right at its own discretion to solicit competitive pricing for certain similar services or products when deemed necessary by the City to ensure that the best interest of the public is being served.
- c. City shall furnish tax exemption information as required by the Vendor.
- d. City shall communicate to the Vendor at the time of request if certain deadlines must be met.
- e. City shall reserve the right to reject unsatisfactory work and/or materials.
- f. City shall verify the status of the Vendor's licensing with the City prior to entering into an agreement.
- g. The City will designate a City representative to coordinate each assignment and/or project with Vendor's personnel

- h. Access to HVAC equipment, mechanical, and electrical rooms during normal business hours shall be coordinated in advance with a City maintenance representative for execution of the work.

3.0 CONTRACT STARTING DATE

The Contract for the full services shall begin immediately on the effective date of the award of the Contract.

4.0 PAYMENT OF SERVICES

Payment shall be made in accordance with City procedures. Invoices should be sent to the following address:

City of Chattanooga
 Accounts Payable Division
 101 East 11th Street, Suite 101
 Chattanooga, TN 37402
acctspayable@chattanooga.gov

And a copy of the invoice sent to the requesting department, such as:

City of Chattanooga
 General Services
 274 E. 10th Street
 Chattanooga, TN 37402
wilson_lynn@chattanooga.gov

Moccasin Bend Waste Water Treatment Plant
 455 Moccasin Bend Road
 Chattanooga, TN 37405
randall_mary@chattanooga.gov

ATTACHMENT A

General Specifications for Typical Scopes of Service

GENERAL SERVICE CATEGORIES AND STANDARD SCOPE OF WORK

For the purposes of this contract the responsibilities for maintenance of equipment have been broken into the following general categories and shall be requested by the City on an AS NEEDED basis only:

- a. Preventative Maintenance work;
- b. Annual Maintenance work;
- c. Hourly Maintenance, Repairs, and Installation.

PREVENTATIVE MAINTENANCE WORK (IF REQUESTED):

Airside Equipment and Waterside Equipment shall be addressed as part of preventive maintenance. The Vendor's responsibility for each item includes inspection, assessment, adjustment, and repair or replacement as needed to maintain equipment in good working order. Justify deficiencies and the steps taken to correct them.

If requested, the Vendor may provide regular Periodic inspection, maintenance, and repair services for City departments and facilities. Vendor may include in the work quoted regular periodic inspection, maintenance, and repair services according to the following schedule:

- a. All airside equipment (air handling units, fan coil and blower coil units, exhaust, return, and relief fans, unit heaters, and energy recovery units) shall be serviced a minimum of three (3) times a year (in August, December, and April)
- b. All waterside equipment (chillers, cooling towers, boilers, pumps, and ancillary equipment) shall be serviced a minimum of six (6) times a year (in August, October, December, February, April, and June).
- c. Annual maintenance tasks on all waterside equipment (chillers, cooling towers, boilers, pumps, and ancillary equipment) shall be completed one time per year.

Preventative Maintenance tasks – Airside Equipment

The specific preventive maintenance tasks enumerated below pertain to regular preventive maintenance tasks on airside equipment including air handling units, fan coil and blower coil units, exhaust, return, and relief fans, unit heaters, and energy recovery units. In general, the Vendor shall be responsible for the proper operation of the equipment and all associated components from the load side of the associated disconnect to the discharge of the unit excluding controls and controlled specialties such as automatic valves and dampers.

The Vendor is expected to perform exactly those tasks applicable to each unit. For example, filter changes and coil inspection are required for air handlers, but not for exhaust fans, while drive train maintenance is necessary for both. The Vendor shall furnish all labor, parts, tools, and materials necessary to the performance the tasks.

Work shall be performed in a manner that maintains the integrity of any existing equipment warranties. The Vendor shall turn over to the City any and all warranty documentation pertaining to newly installed replacement equipment or parts.

For Preventative Maintenance work requested on Airside Equipment the following tasks shall be performed:

- a. **Verify the general condition and function of each unit;**
- b. **Spring isolators (floor mounted or suspended):**
Verify that isolators have sufficient range of motion in all planes, are secured properly, and have no visible defects;
- c. **Motor mounts:**
Verify that motor mounts are properly secured;

d. Motors:

Verify motor's proper operation. Furnish the City with nameplate as well as operating volts and amps;
Replacement motors shall be in-kind according to equipment manufacturer's specifications for that unit;

e. Motor starters:

Inspect contacts for signs of wear or heat associated defects;
Clean contacts with a solvent recommended by the equipment manufacturer. Do not sand or file or use other mechanical means to clean;
Verify operation;

f. Unit enclosure and structural integrity:

Verify that the air handling unit shell – including outer and inner casing, doors, seams, transitions, and all penetrations – is free from leaks and in good physical condition;
Identify and justify structural or envelope deficiencies

g. Insulation/sound lining:

Inspect unit interior for insulation/sound lining integrity. Repair or replace any torn, separated, delaminated, or otherwise damaged sections;

h. Condensate pans:

Inspect air handling unit condensate pans for integrity and report all deficiencies to City for action;
Verify the operation of all drains, pumps, and overflow prevention devices (e.g., auxiliary pans and float switches) as applicable;

i. Flexible duct connectors:

Verify that flexible connectors are intact with no air leaks, are securely attached to the associated air handler and ductwork, and are properly aligned;

j. Fan integrity:

Verify that fans and blowers are free from mechanical defects and debris;
Verify the function and working condition of associated shafts and bearings;
Verify grease line connections and lubrication;
Inform the City of excessive fan vibration;

k. Drive train:

Verify the integrity of all belts and sheaves. Sheaves with physical defects that may affect performance (including cracks, nicks, wear, and glazing) shall be replaced in kind;
Verify alignment of sheaves to assure that belt runs are straight and true;
Replace damaged, worn, glazed, or broken belts, and verify proper tension;
If changes other than one for one belt replacement are to be performed, verify fan operating speed both before and after repairs. Provide documentation to City;

l. Air filters:

Air Filters shall be replaced with new filters at each service visit – or a minimum of every (4) months.
Replacement filters shall be 40% efficiency, pleated, disposable devices, sized for one-for-one replacement of existing filters;

m. Heating and cooling water coils:

All heating and cooling coils shall be inspected and cleaned properly and maintained in prime condition. Existing deficiencies shall be justified.
Inspect coils, associated piping, connections, and valves for leaks;
Note the condition of coil fins and report significant deficiencies to the City;
Verify that coils are free from debris;
Disassemble and thoroughly clean associated strainers as needed; Repair or replace damaged or missing insulation;

Identify and immediately report to City any and all deficiencies related to coils or associated piping and specialties that have the potential to cause water damage to City property or structures;

n. Electrically powered heating elements:

Verify the proper operation of electrically powered heating elements including the operation of all associated components (circuit breakers, switches, etc.) that affect heater operation; Verify that the air path (including any filters, grilles, and the fan itself) is clear of debris;

o. Readouts and gages:

Verify the function of all existing analog and digital monitors and sensors associated with all equipment. Replace or repair any such sensors found to be damaged or out of calibration. Verify functionality and calibrate new sensors;

Preventative Maintenance tasks – Waterside Equipment

The specific maintenance tasks enumerated below pertain to regular preventive maintenance tasks on waterside equipment. In general, the Vendor is responsible for the proper operation of the entire unit from the load side of the disconnect to the discharge of the unit, and from the associated strainers to the fluid discharge point.

The Vendor is expected to perform exactly those tasks applicable to each unit. For example, while all chillers require the Vendor to verify refrigerant level, not all chillers require checks on oil level.

For preventive maintenance work requested on waterside equipment the following tasks shall be performed:

a. Verify the general condition and function of each unit;

b. Air cooled and water cooled chillers:

Verify general condition and function;
 Verify control panel function including all ancillary functions (such as logging, diagnostics, etc.) as applicable;
 Verify proper operation of all safety and protection mechanisms;
 Verify proper operation of flow switch;
 Adjust operating controls as necessary;
 Disassemble and thoroughly clean associated strainers as needed; Repair or replaced insulation against condensation and/or excessive energy loss;
 Verify that all monitors are functional and calibrated;
 Verify that all gages, readouts, and other state indicators are fully functional and calibrated;
 Verify proper refrigerant level;
 Verify proper oil level, condition, and operating temperature;
 Verify that oil filters are clean and free from obstruction;
 Verify proper operation of the lubrication system;
 Verify proper operation of the crankcase heater and thermostat calibration;
 Verify proper operation of the motor, motor starter, and all associated devices including relays and controls;
 Document motor voltage and current at full load;
 Verify proper operation of condenser fans;
 Verify that the condenser fan air path is clean and clear of debris.
 Furnish City with an operating log as well as documentation of chiller and chiller motor condition, deficiencies, and actions taken to correct deficiencies.

c. Cooling towers:

Verify general condition and function;
 Verify sump integrity and freedom from leaks;
 Verify the integrity of the supporting structure;

Verify motor's proper operation. Furnish the City with complete nameplate information, running volts, amps, and motor rpm's with unit at full operating speed.

Verify that fans are free from mechanical defects and debris;

Verify the function and working condition of associated shafts and bearings;

Verify grease line connections and maintain a periodic lubrication schedule;

Inform the City of excessive fan vibration;

Verify the integrity of all sheaves. Sheaves with physical defects that may affect performance (including cracks, nicks, wear, and glazing) shall be replaced in kind;

Verify alignment of sheaves to assure that belt runs are straight and true;

Replace damaged, worn, or broken belts, and verify proper tension;

If changes other than belt replacement have been effected, verify fan operating speed before and after repairs. Furnish documentation to City for future reference.

Verify proper operation of automatic level control system;

Clean the sump of all detritus and debris;

Verify sump drains are clear of debris and are functioning properly;

Inspect spray nozzles, fill material, and air inlet diffusers verifying that all are free from scale or other blockages;

Note and report to City all deficiencies in associated piping, fittings insulation, and specialties.

Furnish City with documentation of cooling tower condition, deficiencies, and actions taken to correct deficiencies.

d. Boilers:

Verify general condition and function;

Verify the integrity of all fuel lines, fuel line couplings, seals, and pumps;

Verify control panel function including all ancillary functions (such as logging, diagnostics, etc.) as applicable;

Verify proper operation of all safety and protection mechanisms (e.g., flame detection, low water shut off, etc.);

Verify that all monitors are functional and calibrated;

Verify that all gages, readouts, and other state indicators are functional and calibrated;

Verify proper operation of the any motor, motor starter, and all associated devices including relays and controls;

Inspect burners for signs of incomplete combustion and blocked or damaged ports. Take corrective action as necessary;

Inspect and clean fuel filters. Provide replacement filters as needed;

Verify proper operation of relief and blowdown valves;

Disassemble and thoroughly clean associated strainers as needed. Repair or replaced insulation against excessive energy loss.

Document entering and leaving water temperatures under full load conditions;

Furnish City with documentation of boiler condition, deficiencies, and actions taken to correct deficiencies.

e. Pumps:

Verify general condition and function;

Verify integrity of all connections and seals;

Verify that all pump specialties (e.g., backflow preventers, strainers, etc.) are functioning properly;

Disassemble and thoroughly clean associated strainers as needed;

Repair or replace missing or damaged insulation;

Verify proper alignment and functioning of shaft, bearings, and coupling;

Verify that equipment isolators have sufficient range of motion in all planes, are secured properly, and have no visible defects;

Verify that motor and pump mounts are properly secured;
 Repair or replace areas of damaged or missing insulation.

f. Water treatment equipment:

Provide water treatment service to all chilled water, condenser water, and hot water systems in order to maintain proper heat transfer surfaced conditions;
 Monitor and adjust chemical levels;
 Furnish the City with a condition report;

Annual Maintenance tasks – Waterside Equipment

The specific maintenance tasks enumerated below pertain to annual maintenance tasks on waterside equipment. In general, the Vendor is responsible for the proper operation of the entire unit from the load side of the disconnect to the discharge of the unit, and from the associated strainers to the fluid discharge point.

The Vendor is expected to perform exactly those tasks applicable to each unit. For example, while all chillers require the Vendor to verify refrigerant level, not all chillers require checks on oil level.

For Annual Maintenance tasks requested on waterside equipment, the following tasks shall be performed:

a. Verify the general condition and function of each unit;

b. Chillers:

Document entering and leaving fluid flow rates;
 Document condenser and chilled water heat transfer;
 Verify the condition of sight glasses;
 Repair or replace damaged or missing insulation.

c. Refrigerant leak test:

Perform a refrigerant leak test;
 Top off refrigerant charge as needed;
 Locate and repair all leaks;
 Inspect equipment and associated piping for potential points of weakness or failure;
 Furnish City with documentation of test results including, if applicable, an accounting of the type and quantity of charge lost as well as a description of the measures taken to assure the future integrity of the system.

d. Oil system:

Change low pressure refrigerant compressor oil and furnish City with documentation of oil lab analysis;
 Change high pressure refrigerant compressor oil only as required by equipment manufacturer frequency or rate schedule or sooner if oil sample report dictates;
 Replace filter and dryer with new;
 Verify the proper operation of the oil pump including motor function and seal integrity;
 Verify the proper operation of ancillary devices to the oil system including the cooler, strainer, and/or solenoid valve, as applicable;
 Verify that the dirt leg is clean and clear.

e. Motor:

Document motor winding resistance;

For open motors:

Verify the integrity of coupling and seals,

Lubricate motor,

Verify the proper functioning of drive package including sheave condition and alignment, as applicable,

Clean or replace contactors as required, retighten power wiring, and verify contactor operation,
 Furnish City with documentation of motor condition, deficiencies, and actions taken to correct deficiencies.

f. Motor starter:

Inspect contacts for signs of wear or heat associated defects;
Verify linkage function;
Change solid state starter fluid;
Tighten all power connections;
Replace air filter, as applicable;
Verify starter operation;

g. Control Panel:

Run diagnostic check of panel;
Verify safety shut down sequence;
Tighten all controls and power wiring terminals;
Verify that all sensors and displays are functional and calibrated;
Verify the proper operation of all relays, internal controls, interlocks, and internal safeties, including repair, replacement, and/or recalibration, as applicable;

h. Purge unit:

Verify the proper operation of the purge system including all its subsidiary components;
Change the filter dryer;
Verify that the liquid feed line is clean and clear of debris;
Clean solenoid valves and verify their proper operation;
Verify the proper operation of the float valve;
Document pressure control set point;

i. Condenser:

Prior to any mechanical or chemical cleaning, inspect tube sheets and heat transfer tubes for signs of dirt, scale, or debris. A water treatment service technician shall be present at this inspection and shall furnish the City with a written report of tube condition;
Verify proper operation of the flow switch;
Disassemble condenser head and inspect end sheets;
Brush clean condenser water tubes using nylon bristle brushes only;
Inspect head gaskets and replace as needed;

j. Cooler:

Verify flow and flow switch operation;
Document refrigerant level;
Furnish City with documentation of chiller condition, critical performance values, deficiencies, and actions taken to correct deficiencies.

k. Cooling towers:

Drain down unit;
Clean water sump;
Clean hot deck;

l. Boilers:

The Vendor shall be responsible for cleaning all heat transfer surfaces that become fouled from dirt, scale, or debris which restrict water flow or normal heat transfer as specified by the equipment manufacturer.

Prior to any mechanical or chemical cleaning, inspect tube sheets and heat transfer tubes for signs of dirt, scale, or debris. A water treatment service technician shall be present at this inspection and shall furnish the City with a written report of tube condition;

Inspect the fireside surfaces of the equipment and report on conditions including, at minimum, any corrosion, blisters, pitting, erosion, surface irregularities, misalignment, and weld deterioration;
Brush clean all fireside surfaces including water wall tubing, shell material, and drum surfaces within the firebox area;
Brush clean the interior of each water tube;

Document all damage to refractory surfaces;

Document all corrosion, blisters, pitting, erosion, surface irregularities or excessive scale build up within water tubes;

Document all leakage. Remove and replace insulation as needed to assure a thorough examination.

Document all warping, misalignment, or signs of overheating along the boiler casing;

Verify the strength and alignment of the supporting structure;

Clean and/or replace oil nozzles and filter.

Verify that all linkages are moving freely.

Furnish City with documentation of boiler condition, deficiencies, and actions taken to correct deficiencies.

m. Pumps:

Furnish the City with complete nameplate information, running volts, amps, and motor rpm's with unit at full operating speed.

Blow down strainer, examine screen for damage and replace as necessary.

Furnish City with flow data at full working load.

BID FORM

SECTION I: HVAC PREVENTIVE MAINTENANCE TASKS

Airside Equipment: (Air Handling Units, Fan Coil Units, Exhaust, Return, and Relief Fans, Unit Heaters, and Energy Recovery Units) All Preventive Maintenance tasks listed in **Attachment A** under "Preventive Maintenance tasks - Airside Equipment" shall be completed at EACH service.

AHUs rated 10,000 cfm and less	_____	Per Service
AHUs rated 25,000 cfm and greater	_____	Per Service
RTU and Splits 10 ton and less	_____	Per Service
RTU and Splits 11 ton to 29 ton	_____	Per Service
RTU and Splits 30 ton and greater	_____	Per Service

Waterside Equipment: (Liquid Chillers, Cooling Towers, Boilers, Pumps, and Ancillary Equipment) All Preventive Maintenance tasks listed in **Attachment A** under "Preventive Maintenance tasks - Waterside Equipment" shall be completed at EACH service. All tasks under "Annual Maintenance tasks – Waterside Equipment" shall be completed one time per year as an "Annual Service".

Chillers rated 10 ton and less	_____	Per Service
Chillers rated 10 ton and less	_____	Per Annual Service
Scroll Chillers rated 11 ton to 99 ton	_____	Per Service
Scroll Chillers rated 11 ton to 99 ton	_____	Per Annual Service
Screw Chillers rated 100 to 199 ton	_____	Per Service
Screw Chillers rated 100 to 199 ton	_____	Per Annual Service
Centrifugal Chillers Rated 200 ton and greater	_____	Per Service
Centrifugal Chillers Rated 200 ton and greater	_____	Per Annual Service
Cooling Towers (Counterflow)	_____	Per Service
Cooling Towers (Counterflow)	_____	Per Annual Service
Boilers (Hot Water Heating) 500k Btu and less	_____	Per Service
Boilers (Hot Water Heating) 500k Btu and less	_____	Per Annual Service
Boilers (Hot Water Heating) 501k Btu and greater	_____	Per Service
Boilers (Hot Water Heating) 501k Btu and greater	_____	Per Annual Service

SECTION II: HVAC HOURLY RATES

The Vendor shall complete the form below identifying the rates at which for the term of the contract, the City may be billed for normal HVAC services, installation, and repair work. Please provide a single hourly rate for regular time, overtime, holiday, and weekend time as well as a percentage markup for materials. **Please bid all items in this section. Failure to do so may disqualify bid.**

Technician, Regular Time Labor Rate	_____	per hour
Helper, Regular Time Labor Rate	_____	per hour
Technician, Standard Overtime Labor Rate	_____	per hour
Helper, Standard Overtime Labor Rate	_____	per hour
Technician, Holiday Time Labor Rate	_____	per hour
Helper, Holiday Time Labor Rate	_____	per hour
Technician, Weekend Time Labor Rate	_____	per hour
Helper, Weekend Time Labor Rate	_____	per hour

SECTION III: HVAC EQUIPMENT AND MATERIAL MARKUP OVER COST

Percentage Markup for Equipment and Materials _____ %