

SPECIFICATIONS FOR PREVENTIVE MAINTENANCE PROGRAM FOR THE HEATING, VENTILATING AND AIR CONDITIONING EQUIPMENT

The following is a basic list of equipment:

- ❑ Sixteen (16) electric duct heaters.
- ❑ Four (4) ITT air handlers with belt drive fan, evaporator coil, electric heat and air filter rack.
- ❑ Four (4) Carrier air-cooled condensing units ranging from 20 to 40 TR located outside the mechanical rooms.
- ❑ Various controls to control temperature, air mixing, dampers and safety of operation.
- ❑ Six (6) electric coil heaters located in entrances/exits on north and south side of building and in Employees rest rooms. (*4 entrance coil heaters are disabled*)
- ❑ Two (2) electric heaters with motors and fans located in main entranceway, east side of building. (*disabled*)
- ❑ Twenty (20) electric baseboard heaters located under each window in the offices. (*disabled*)
- ❑ Four (4) exhaust fans.
- ❑ One (1) compressor, after cooler and air dryer
- ❑ One (1) generator

New equipment as below:

- ❑ In 1994 the office was renovated and portions of the HVAC system (duct work, two **condensing units**, etc.) were replaced due to a major remodeling on the layout of the offices.
- ❑ In July 2006, four (4) Series Flow Fan-Powered VAV Terminal Units were installed to prevent the tripping of the electric reheat coils in the VAV boxes during low air flow. (4KW heater, 277 volts/single phase with (2) steps of control)
- ❑ In August 2007, installed a separate cooling unit in the LAN Room. The **Sanyo** 2 ton (24,000 btu) duct free split system is capable of operating down to -20F. It is an indoor unit with 7.5 KVA transformer which is tied into the existing control system.

All Bidders are required to visit the site to insure they know what equipment needs serviced to insure they understand the system. Please Contact Tammy McIntyre to make an appointment. Only vendors who have signed in with Tammy will be considered for this solicitation.

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Preventative maintenance shall include **four (4)** quarterly visits with each visit including the following: Filters will only be changed with the Spring, and Fall visits as noted below.

Spring Visit

Air Handlers

- ❑ Replace air filters (using high efficiency pleated filters).
- ❑ Replace all drive belts on air handlers.
- ❑ Check and lubricate bearings on air handler shafts and motors.
- ❑ Check motor contractors for pitting or burning.
- ❑ Perform a vibration analysis one time per year and submit test results.
- ❑ Check amp draw on motor.
- ❑ Note any excessive vibration or noise.
- ❑ Verify proper operation of controls and safe ties.
- ❑ Provide written report of inspection and any recommended repairs.

Condensing Units

- ❑ Check condenser fans for tightness and bearing wear.
- ❑ Inspect all contactors for pitting or burning.
- ❑ Check refrigerant and oil level in system and perform refrigerant leak check.
- ❑ Inspect condenser coils for damage and cleanliness.
- ❑ Brush clean coils and recommend chemical cleaning if necessary.
- ❑ Start system and verify proper condenser fan operation, and proper compressor operation measuring amperage, pressures, and superheats.
- ❑ Verify that all controls and safeties are functioning properly.
- ❑ Provide written report of inspection and any recommended repairs.

Exhaust Fans

- ❑ Check, lubricate and adjust belts, if applicable.

Generator

- ❑ Inspect generator and check battery.

Summer Visit

Air Handlers

- ❑ Inspect and adjust all drive belts on air handlers.
- ❑ Check motor contractors for pitting and burning.
- ❑ Note any excessive vibration or noise.
- ❑ Provide written report of inspection and any recommended repairs.

Condensing Units

- ❑ Check condenser fans for tightness and bearing wear.
- ❑ Inspect all contractors for pitting or burning.
- ❑ Check refrigerant and oil level in system and perform refrigerant leak check.
- ❑ Inspect condenser coils for damage and cleanliness. Brush clean coils and recommend chemical cleaning if necessary.
- ❑ Start system and verify proper condenser fan operations, and proper compressor operation measuring amperage, pressures and superheats.
- ❑ Verify that all controls and safeties are functioning properly.
- ❑ Provide written report of inspection and any recommended repairs.

Exhaust Fans

- ❑ Check, lubricate and adjust belts, if applicable.

Generator

- ❑ Inspect generator and check battery.

Compressor, after cooler and dryer

- ❑ Inspect

Fall Visit

Air Handlers

- ❑ Replace air filters (using efficiency pleated filters).
- ❑ Inspect and adjust all drive belts on air handlers.
- ❑ Check motor contactors for pitting or burning.

- ❑ Check amp draw on motor.
- ❑ Note any excessive vibration or noise.
- ❑ Verify proper operation of controls and safe ties.
- ❑ Provide written report of inspections and any recommended repairs.

Exhaust Fans

- ❑ Check, lubricate and adjust belts, if applicable.

Generator

- ❑ Inspect generator and check battery.

Winter Visit

Air Handlers

- ❑ Inspect and adjust all drive belts on air handlers
- ❑ Check motor contactors for pitting or burning.
- ❑ Check amp draw on motor
- ❑ Note any excessive vibration or noise
- ❑ Verify proper operation of controls and safeties.
- ❑ Provide written report of inspections and any recommended repairs.

Exhaust Fans

- ❑ Check, lubricate and adjust belts, if applicable

Generator

- ❑ Inspect generator and check battery

Compressor, after cooler and dryer

- ❑ Inspect

SPECIFICATIONS FOR PREVENTIVE MAINTENANCE PROGRAM FOR THE JOHNSON CONTROLS MANUFACTURED METASYS DIRECT DIGITAL CONTROL SYSTEM

The following is a basic list of equipment:

Sixteen (16) AS-VAV Digital Controllers
Sixteen (16) Temperature Sensors

One (1) DX9100 Digital Controller

One (1) Metasys Companion Headend workstation

One (1) Metasys Companion LTD Digital Control Panel

Preventive maintenance shall be performed by a technician capable to service the Metasys system, and shall include two (2) visits-one in the summer and one in the winter-with each visit to include the following:

Verify that the VAV box is being controlled in the appropriate values.

- Change the set point value. Verify smooth, stable control at the new value.
- Return the set point to original value.

Verify that the VAV box is being controlled in the appropriate values.

- Change the set point value. Verify smooth, stable control at the new value.
- Return the set point to original value.

Verify the proper operation of critical processes and points associated with this unit. Make adjustments as necessary.

Verify/Calibrate other points associated with this unit. Make necessary adjustments.

Check for alarm conditions on the DX-9100

- Verify that equipment is being controlled at appropriate values.
- Change one set point value for each control loop; verify smooth transition and stable control at the new point. Return to original value.

Verify/Calibrate other points associated with this unit. Make necessary adjustments.

Check monitor, disk drive.

Install appropriate METASYS software refinements as they become available.

AS NEEDED SERVICES

To be provided in the Erie Job Center Building to keep systems operating.

Services must be available on a 24-hour basis. All material furnished must be of first quality. Materials and parts must be at contractor's cost plus no more than 10%.

Contractor to supply all filters, as needed, to maintain proper operation of systems.

Unless otherwise stipulated, the hourly rate will be considered the same on a 24-hour, 7-day a week basis. If this is **not** the case, so indicate when giving rates.

THE COMMONWEALTH WILL NOT PAY MILEAGE and TRAVEL TIME.

All bidders must have the expertise to service the complete HVAC system as shown in the statement of work, including any recapture of refrigerants per EPA regulations. Performance below expectations shall be cause for cancellation of any contract or purchase order as in the standard terms and conditions.

All invoices shall be sent to the address on the PO issued within 30 days of completion of the work with a separate "Packing list/statement of work completed": mailed to the below address of the service location, for payment. All invoices must reference the purchase order number, dates of service, invoice number and invoice date.

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BIDDERS INSTRUCTIONS

Lines 1 through 3 and 8 you will enter the quarterly maintenance Total \$ amount for the service needed per the SOW for the preventive maintenance. This is expected to include all lubricants, refrigerants, and miscellaneous belts, filters (**lines 2 and 8**) and labor etc. Lines 1 and 3, and lines 2 and 8 should be quoted at the same price.

If any major parts need replaced (compressors, motors, etc. except filters) these must be quoted separately and approved before completion. (A single part of more than \$100 would be considered major)

Lines 4 and 5 shall be entered as your HOURLY LABOR RATE. This shall be used for any non-scheduled work outside of the scheduled quarterly preventive maintenance. Quantity is an estimate only.

Line 6 and 7 shall be used for internal use for billing of any non-scheduled service for PARTS needed and you would complete these lines of your quote by entering the price at \$1.00 so the total extension will be \$7,000.00 for line 6 and \$3,000.00 for line 7. Quantity is an estimate only.

This bid shall be for 1 year, with an option for 2 (1) year renewals. A 3% adjustment will be allowable for both the labor rate, and the Quarterly maintenance.

METHOD OF AWARD: INVITATION FOR BID (IFB)

Award will be made by factors including, Labor Rate, Price for spring and fall price scheduled maintenance (including filters). Price for winter and summer scheduled maintenance.