

STATE OF OHIO
DEPARTMENT OF ADMINISTRATIVE SERVICES
GENERAL SERVICES DIVISION
OFFICE OF PROCUREMENT SERVICES
4200 SURFACE ROAD, COLUMBUS, OH 43228-1395

REQUIREMENTS CONTRACT: HVAC MAINTENANCE FOR ODPS COLUMBUS METRO AREA

CONTRACT No.: OT905109

EFFECTIVE DATES: 12/01/08 to 11/30/10

The Department of Administrative Services has accepted bids submitted in response to Invitation to Bid No. OT905109 that opened on 10/27/08. The evaluation of the bid response(s) has been completed. The bidder(s) listed herein have been determined to be the lowest responsive and responsible bidder(s) and have been awarded a contract for the items(s) listed. The respective bid response, including the [Terms and Conditions for Bidding, Standard Contract Terms and Conditions, and Supplemental Contract Terms and Conditions](#), special contract terms & conditions, any bid addenda, specifications, pricing schedules and any attachments incorporated by reference and accepted by DAS become a part of this Requirements Contract.

This Requirements Contract is effective beginning and ending on the dates noted above unless, prior to the expiration date, the Contract is renewed, terminated or cancelled in accordance with the Contract Terms and Conditions.

This Requirements Contract is available to DEPARTMENT OF PUBLIC SAFETY, DIVISIONS AS LISTED HEREIN, as applicable.

Agencies are eligible to make purchases of the listed supplies and/or services in any amount and at any time as determined by the agency. The State makes no representation or guarantee that agencies will purchase the volume of supplies and/or services as advertised in the Invitation to Bid.

SPECIAL NOTE: State agencies may make purchases under this Requirements Contract up to \$2500.00 using the state of Ohio payment card. Any purchase that exceeds \$2500.00 will be made using the official state of Ohio purchase order (ADM-0523). Any non-state agency, institution of higher education or Cooperative Purchasing member will use forms applicable to their respective agency.

Questions regarding this and/or the Requirements Contract may be directed to:

Harry Graham
harry.graham@das.state.oh.us

This Requirements Contract and any Amendments thereto are available from the DAS Web site at the following address:



<http://www.ohio.gov/procure>

Signed: _____
Hugh Quill, Director Date

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SPECIAL CONTRACT TERMS AND CONDITIONS

MANDATORY BID CONFERENCES/SITE VISITS: Mandatory Bid Conferences/Site Visits will be held on 10/15/08, at Emergency Management Agency, 10/16/08, at Ohio State Highway Patrol Academy, 10/17/08, at Alum Creek Facility, to discuss the requirements of the bid. The conferences will commence promptly at 9:00 A.M., barring an unforeseen circumstance that results in a delay of the conference. Attendance will be taken. The state will not be responsible to a bidder for their failure to obtain information discussed during the bid conferences/site visits due to their arriving after the conference/site visit has convened. Bidders who fail to attend the mandatory bid conferences/site visits will be deemed not responsive.

Please contact the Site Managers listed on Page 5 during regular business hours to make arrangements for authorization to enter the facilities. Bidders must call for authorization not later than two (2) days prior to the bid conferences/site visits.

DELIVERY AND ACCEPTANCE: Services will be performed as set forth in the Contract and in accordance with paragraphs S-8, S-9, and S-10 of the SUPPLEMENTAL CONTRACT TERMS AND CONDITIONS. The location of performance will be noted on the purchase order issued by the participating agency. Payment for services rendered will occur upon the inspection and written confirmation by the ordering agency that the services provided conform to the requirements set forth in the Contract. Unless otherwise provided in the Contract, payment shall be conclusive except as regards to latent defects, fraud, or such gross mistakes as amount to fraud.

MATERIAL SAFETY DATA SHEET: The Contractor shall provide a Material Safety Data Sheet (MSDS) for any hazardous chemical that he brings onto the facility property for the performance of this contract. The MSDS shall verify the Contractor's compliance with OSHA's Hazard Communications Standard 29 CFR 1910.1200. The MSDS shall be given to the facility contact person prior to use of the hazardous chemical on the facility property.

BUSINESS REFERENCES: All bidders should submit with their bid, a list of at least three (3) companies and/or organizations with which they have had recent (within two [2] years) HVAC service contracts. This list shall include the name and phone number of a contact person who will be familiar with the bidder's job performance. The state may verify the bidder's experience based upon the list of business references submitted and any other sources which the state deems appropriate.

CONTRACT AWARD: The contract will be awarded to the lowest responsive and responsible bidder by low lot total. Failure to bid all items may result in the bidder being deemed not responsive.

EVALUATION: Bids will be evaluated in accordance with Article I-17 of the "Instructions to Bidders". In addition, the state will: total the annual costs for: the 1st and 2nd year's PM and Repair Service, 200 Straight Time hours for the 1st and 2nd year, 100 Overtime hours for the 1st and 2nd year, 25 Emergency Labor hours for the 1st and 2nd year, plus \$1000. of Replacement Parts and Components at the Discount from List Price for the 1st and 2nd year.

USAGE REPORTS: Every twelve (12) months the Contractor must submit a report (written or on disk) indicating sales generated by this contract. The report shall list usage by customer, by line item, showing the quantities/dollars generated by this contract. The report shall be forwarded to the Office of State Purchasing, 4200 Surface Road, Columbus, OH 43228-1395, Attn: Harry Graham.

FIXED-PRICE WITH IN-SERVICE COST ADJUSTMENTS: The Contractor agrees to adjust the total annual charges for any decrease/increase in the number of HVAC units to be serviced due to resident program changes and/or building destruction/construction programs for the duration of the Contract. All adjustments will be in accordance with the Contract.

COMPLIANCE TO RECOMMENDED INDUSTRY STANDARDS: The Contractor will provide all services, repair parts, replacement parts, equipment and/or system recommendations with the focus of compliance to recommended industry standards, controlling codes (OBBC 2005) and / or other governing standards, i.e. ASHRAE Standards #3, #15, #34, #62 which dictate or make recommendation pertinent to the HVAC industry; EPA for proper certification; OSHA for Hazmat/Hazcom and special work safety requirements; DOT for refrigerants; ADA for device placement, etc.

SPECIAL CONTRACT TERMS AND CONDITIONS (Cont'd.)

LIQUIDATED DAMAGES: In the event that an awarded Contractor fails to perform within the timeframe specified by the Contract and/or purchase order, the agency will contact the Contractor to determine when the purchase order will be fulfilled. If the Contractor cannot fulfill the purchase order requirements within a timeline acceptable to the agency, the agency may procure like-kind supplies/services from another resource and invoice the Contractor for the full additional amount charged by the third party provider. Invoices for said liquidated damages must be deducted from subsequent Contractor invoices prior to payment by the agency.

Under these damage recovery provisions, the agency may: (1) elect to procure any portion of the original order from another source; and/or (2) charge the Contractor for any difference in cost for the service/merchandise procured; and/or (3) cancel any portion of the original order without Contractor penalty. Also reference Supplemental Contract Terms and Conditions, Article S-9, Time of Delivery, and Standard Contract Terms and Conditions, Section II, Contract Remedies.

SPECIFICATION QUESTIONS: Information regarding submission of questions and clarifications for this Bid is provided on page one (1) of the Bid. Through the indicated inquiry closure date, Bidders may visit the Procurement Services website to post Bid related questions at <www.ohio.gov/procure>. Answers to all Bidder questions will be posted on the Procurement Services website and linked to the bid number. Bidders can make their own inquiry and/or review all inquiry questions/responses from the same website page from which the bid document is downloaded. The State will make every effort to respond to website inquiries within forty-eight (48) hours of receipt. The State will not respond to any verbal or written questions received through any other medium. No prospective Bidder shall respond to any verbal instructions or changes to this Bid. Only Bid communications, issued by the Department of Administrative Services, Office of Procurement Services, in a public, published format, will be considered valid.

BACKGROUND CHECKS: A complete and thorough background check, at ODPS expense, will be performed on all persons employed by the Contractor for this contract. An extensive investigation will be conducted by the Ohio Highway Patrol prior to assignment of Contractor staff to the contract locations.

1. Criteria for personnel record checks: Background checks will be performed to determine if current or potential employees of the Contractor have any type of convictions in the following areas:
 - a) Any record of violence, domestic or otherwise;
 - b) Drug-related convictions,
 - c) Theft.
2. Those Contractor employees or potential Contractor employees with felony convictions or other criminal records, unless specifically approved by ODPS, will not be permitted to be employed at the contract locations.

The remainder of this page is intentionally left blank.

Specifications

I. General Overview

A. Purpose:

The Ohio Department Administrative Services (DAS), Office of State Purchasing, is seeking bids to provide services for Heating, Ventilation, and Air Conditioning [HVAC] maintenance and support including installation of equipment, repair and other support services at three (3) locations for the Ohio Department of Public Safety (ODPS) as described in this Invitation To Bid (ITB). The initial contract term will be twenty-four (24) months, with the possible renewal of an additional twenty-four months, subject to mutual agreement.

B. Locations :

This solicitation is limited to the ODPS facilities within the Columbus metropolitan area; specifically :

1. ODPS buildings at 1583 Alum Creek Drive [ODPS Alum Creek Facility]
2. Emergency Management Agency at 2855 West Dublin-Granville Road.
3. The Ohio State Highway Patrol [OSHP] Training Academy at 740 East 17th Avenue.

C. Objectives:

The State's objective is to acquire quality HVAC professional support services to facilitate the effective operation of the facilities listed above in Section I. B.

II. Scope:

- A. To provide all labor, tools, equipment, incidentals and supervision required in the performance of meeting the HVAC needs that may be required by the Ohio Department of Public Safety [ODPS] for three Columbus facilities listed above in Section I.B.

It is imperative that the bidder awarded a contract be capable of fielding more than one maintenance and support team simultaneously. Planning will, of course, alleviate many anomalies that may occur among known tasks that have to be accomplished. However, it is impossible to ascertain before hand the exact nature of a task that may occur, thus, the skill set(s) that might be required for a particular team to accommodate a given task.

In light of the above reality, the bidder awarded this contract for this HVAC maintenance and support initiative must have sufficient personnel, to field three teams simultaneously, two of which may be assigned to similar tasks.

Specific duties and tasks will be assigned to the Contractor on an on-going basis throughout the term of the contract as defined by, and communicated by the ODPS Facility/Project Manager as listed below:

ODPS Alum Creek Facility
1583 Alum Creek Drive
Columbus Ohio

Mr. Michael VanSuch
(614)995-1995

OSHP Training Academy
740 East 17th Avenue
Columbus, Ohio

Training Commander
(614)466-4896

Emergency Management Agency
2855 West Dublin-Granville Road
Columbus Ohio

Mr. Daniel Redman
(614)799-3838

Specifications (cont.'d)

B. For this solicitation the Contractor will provide the following services:

1. Project Management [on a task by task basis]
2. Site Survey [as required] includes evaluations
3. Disconnect Services
4. Relocation Services
5. Installation Services
6. Preventive Maintenance Services
7. Software Migration, Upgrade, and Configuration [for only those units containing embedded software]
8. Trouble shooting, fault assessment, replacement assessment [including control systems]
9. Repair of HVAC equipment
10. Component and Parts Replacement
11. System Parts and Replacement
12. Emergency Service
13. Maintenance Scheduling
14. Repair and Replacement Labor
15. Maintenance Supplies
16. Test and Inspect Labor
17. Air Filter Service
18. Refrigerant Management Program
19. Automatic Temperature Control Service
20. Indoor Air Quality
21. Seasonal Start Ups
22. HVAC system compliance recommendations

III. General Requirements: These are service requirements that apply to all three locations.

- A. Test and Inspect: Job labor, travel labor, travel and living expenses required to visually inspect and test equipment to determine its operating condition and efficiency. All travel limited to Columbus Metropolitan area unless specifically approved otherwise. Typical activities include:
1. Testing for: excessive vibration, motor winding resistances, refrigerant charge, fan RPM, refrigerant oil (acid), water condition, flue gas analysis, safety controls, combustion and draft, crankcase heaters, control system(s), air quality, etc.
 2. Inspecting for: worn, failed or doubtful parts, mountings, drive couplings, oil level, rotation, boot, flame composition and shape, pilot and igniter, steam, water, oil and/or refrigerant leaks, etc.
- B. Preventive Maintenance: Job labor, travel labor and travel and living expenses [living expenses only if pre-approved] required to clean, align, calibrate, tighten, adjust, lubricate and paint equipment. All travel limited to Columbus Metropolitan area, unless specifically approved otherwise. These activities are intended to extend equipment life and assure proper operating condition and efficiency. Bidder's forms for reporting the completion of Preventive Maintenance shall be acceptable to both parties. Typical activities include: those PM activities recommended by the individual equipment manufacturer.
- C. Cleaning: coil surfaces, fan impellers and blades, electrical contacts, burner orifices, passages and nozzles, pilot and igniter, cooling tower baffles, basin, sump, and float; chiller, condenser and boiler tubes, etc.
- D. Aligning: belt drives, drive couplings, air fins, etc.
- E. Calibrating: safety controls, temperature and pressure controls, etc.
- F. Tightening: electrical connections, mounting bolts, pipe clamps, refrigerant piping fittings, damper sections, etc.
- G. Adjusting: belt tension, refrigerant charge, super heat, fan RPM, water chemical feed and feed rate, burner fuel/air ratios, gas pressure, set point of controls and limits, compressor cylinder un-loaders, damper close-off; sump floats, etc.

Specifications (cont.'d)

- H. Lubricating: motors, fan and damper bearings, valve stems, damper linkages, fan vane linkages, etc.
- I. Painting for corrosion control, as directed by scheduling system and on an as-needed basis.
- J. Troubleshooting and Fault Assessment: trace inconsistent system parameters and document fault with resolution.
 - 1. Repair and Replace: Job labor, travel labor, parts procurement labor (locating, ordering, expediting and transporting) and travel [Note: travel limited to Columbus Metropolitan area unless specifically approved otherwise] and living expenses required to repair or remove and replace broken, worn and/or doubtful components and or parts. This activity is inclusive of control systems/subsystems for HVAC Equipment. This activity includes the services listed below in J.2., J.3., J.4.
 - 2. Trouble Calls: Job labor, travel labor, plus travel and living expenses [living expenses only if pre-approved] [Note: Travel limited to the Columbus Metropolitan unless specifically approved otherwise] for unscheduled work resulting from abnormal conditions.
 - 3. Emergency Request/Work: Contractor will respond to all request for emergency service in four (4) hours or less. Response continuity is for seven (7) days a week; (24) hours a day; 365 days per year. A 24 hour emergency answering service for dispatching is required.
 - 4. Components, Parts, and Supplies: The costs of components, parts, and supplies required to keep the equipment operating properly and efficiently.
- K. Agreement Specific Overview Requirements: These are requirements that apply to all three locations unless specifically denoted as non-applicable or changed for that location.
 - 1. Items agreement encompasses: Agreement covers all moveable and non-moveable parts (i.e. compressors, motors, coils, piping, heat exchangers, refrigerant leaks, refrigerant and disposal, control systems/subsystems, etc.)
 - 2. Items agreement does not encompass: Will not cover poor system design (i.e. relating to such oversights as not enough diffusers, ductwork or unit sized improperly, site remodeling of areas, etc.)
 - 3. Travel: All travel to and from facility is to be included in bidder's pricing. It is noted that all facilities relating to this acquisition are located in the Columbus, Ohio metropolitan area.
 - 4. Labor Rate: Submission of no less than (NLT) three labor rates required.
 - One basic labor rate
 - One overtime labor rate
 - One emergency labor rate (Covers all repair and/or replacement labor for emergency calls.)
 - 5. Equipment Obsolescent: Equipment that is less than 8 years old will normally be repaired as indicated above. However, the equipment will be assessed as to the labor and replacement parts costs associated with repair. This assessment is particularly pertinent for equipment that has or is beginning to have frequent repairs. The appropriate ODPS Facility Services Chief will consult with the Contractor and make a decision with respect to equipment replacement.
 - 6. Seasonal Start-Up Costs: Seasonal start-up costs for equipment listed for each facility will be the responsibility of the Contractor. Contractor will also be responsible for all material, labor, freight, and handling fees for any and all repairs to units at seasonal start-up time.
 - 7. Indoor Air Quality (IAQ): Testing four (4) times per year. To check for CO2 levels, temperature, humidity, small and large particles, radon, ozone, total volatile organic compounds, mold, pollen. Reports to include graphs, charts, date, times and locations of areas tested, and recommendations on problem resolution. An IAQ log must be provided and maintained on-site by the Contractor.

Specifications (cont.'d)

8. Filters: All HVAC filters to be replaced five (5) times per year (exception: Alum Creek Facility filters are to be replaced six [6] times per year). Dates and times to be determined by coordination between the Contractor and the Facility manager for the State. ODPS will provide all filters except for those used on the OSHP Academy Firing Range.
 9. Equipment Service Logs: The Contractor will maintain an up-to-date Service Log for each equipment item listed. The Log will be kept on site and will be reviewed monthly with the Facility Manager. The monthly review will focus on PM services completed for the month, trouble areas, potential predictive maintenance tasks, schedule and contract compliance issues. Documentation of the monthly review meeting will be maintained in the Log.
- L. Special Requirements: Alum Creek Facility [ACF]
1. Facility normal business hours; 8:00am – 5:00pm Monday through Friday. During this contract, the Contractor's normal business hours must coincide with ODPS hours.
 2. A specific prior-scheduled window will be required to gain access to the Ohio State Patrol and Investigative Unit Crime Labs and other evidence storage areas.
 3. Contractor must first report to Facility services office room 704A to "sign in" and obtain a Contractor badge, prior to performing work. Contractor will also "sign-out" at same location and surrender badge.
 4. Contractor will provide company "identifier" items [badges, uniforms, shirts etc.] for personnel working at the facility.
 5. Contractor will have access to ODPS scissors lift when working on units (must be site certified-certification to be provided by ODPS at its expense).
 6. For HVAC belt replacement, must use "Raw Edge, Cogged, which are oil and heat resistant and static conducting. Approved belt brands will be Dayton, Browning, Goodyear, Gates, and Dayco. Belts to be furnished by Contractor.
 7. Contractor will be responsible for annual cleaning of louver screens on motorized louvers.
 8. DPS wants the option, for ACF only, of choosing repair or replacement of the equipment shown in Appendix A. The decision to repair or replace will be at the option of the ACF Facility Manager on a one-for-one equipment item basis. If the decision is to replace an item which has deteriorated or become inoperable, the ACF Facility Manager will authorize the Contractor to purchase replacement equipment. Upon completion of installation of the new equipment, the Contractor will invoice DPS at his cost for the equipment replaced. DPS will then reimburse the Contractor for that equipment. The state agrees to pay only the actual Contractor's cost for the replacement equipment and may request a copy of the invoice from the Contractor's supplier for documentation. Prior to purchasing any replacement equipment, the Contractor must submit specification data for review and approval by ODPS.
 9. Direct Digital Controls (DDC) – The Contractor will provide full service for DDC system(s). This will include providing repair services as necessary and the ability to make changes in the DDC software regarding the equipment data (additions, deletions, revisions, etc.) as requested by ODPS. All the above will be completed using existing DDC equipment, at the Alum Creek Facility.
The system in place at ACF is "Tridium" manufactured by:
Tridium, Inc.
3951 Westerre Parkway
Suite 350
Richmond, VA 23233
Service for the Invensys (controllers) and all other ancillary equipment associated with the DDC will be the responsibility of the Contractor.

Specifications (cont.'d)

10. Full Service (as denoted in Appendix A) - In addition to the PM (Preventive Maintenance) checks and services, the Contractor will provide all parts necessary to repair the unit as part of the contract price.
11. Partial Service (as denoted in Appendix A) – In addition to PM checks and services, any repairs are outside of the contract price. Labor, however, will be at the contract rates.
12. Parts – All parts used for Full Service and Partial Service will be OEM or equivalent per the manufacturer and/or the manufacturer's recommended alternative.
13. ACF Site Manager or designee will make the decision as to the approval of Overtime and Emergency labor prior to requesting Contractor response services.
14. Known values for IAQ testing: 301,415 SF, normal occupancy rate, 340.
15. Prior to scheduling any PM's at ACF, Contractor will provide two (2) day notice to ACF facility manager.
16. Contractor will be responsible for the annual testing and certification of seven (7) Chemical Fume Hoods located in the Highway Patrol Investigative Unit Crime Labs, in accordance with Associated Air Balance Council (AABC) standards – see Chemical Fume Hood information (Appendix A).
17. Contractor must be able to provide all services as indicated in this contract for ACF. Any use of subcontractors will require prior approval by ACF Facility Manager.

M. Special Requirements: OHIO EMA Facility

1. Facility normal business hours; 7:30am-3:30pm Monday through Friday.
2. Contractor must first report to Facility front desk to "sign in" and obtain a Contractor badge prior to performing work.
3. Forklift, platform lift with operator will be supplied by Ohio EMA.
4. Contractor will provide MSDS for all chemicals used, prior to using chemical.
5. For HVAC belt replacement, belts will be furnished by Ohio EMA.
6. Air filters will be furnished and replaced by Ohio EMA personnel.
7. Contractor responsible for cleaning louver screens on motorized louvers.
8. Ohio EMA will maintain the authority to initiate and conduct emergency repairs. (NOTE: The Contractor may be called as set forth in III. J. 3.; however, if the EMA center is "Manned" and in operation for a State Emergency, the Contractor crews may find EMA personnel trying to alleviate the problem when they arrive).
9. Known values for IAQ testing: 84,000 SF, normal occupancy rate, 240.

N. Special Requirements: OSHP Training Academy

1. Facility normal business hours; 8:00am-5:00pm Monday through Friday.
2. Contractor must call one day before coming to the Academy.
3. Contractor must enter building through front door, report to Building Maintenance Supervisor, sign in and obtain a Contractor badge, prior to performing any work.

Specifications (cont.'d)

4. Contractor will provide company "identifier" items [badges, uniforms, shirts, etc.] for personnel working at the facility.
 5. Contractor will provide MSDS for all chemicals used, prior to using chemical.
 6. For HVAC belt replacement, must use "Raw Edge, Cogged, which are oil and heat resistant and static conducting". Approved belt brands will be Dayton, Browning, Goodyear, Gates, and Dayco.
 7. Contractor must use "pleated air filters" in lieu of the fiberglass filters. Contractor must provide and use at least 2.5-mil 55-60 gallon clear trash liners (linear low density) for placement of the contaminated Range filters. The liners (bags) should be sealed before removal from the roof. A plastic twist-tie or plastic wire-tie is adequate to seal the bags. Contractor's disposable protective clothing (coveralls, gloves, etc.) may also be placed into the bags. The Contractor must place the sealed bags into the roll-off container which will be placed on-site by the Disposal Contractor.
 8. Contractor must schedule PM and planned repairs to Firing Range at least one week in advance. All work on the Range must be done on Saturday.
 9. Contractor will comply with all applicable local, State, and/or Federal laws, regulations or requirements during the removal and storage of lead-laden filters. Cartridge filters for dust units contain DIATOMITE and will have to be disposed of properly per EPA guidelines.
 10. Equipment Service Logs: The Contractor will maintain an up to date service log for each equipment item listed. The log will be kept on-site.
 11. Full Service (as denoted in Appendix C) – In addition to PM checks and services, the Contractor will refer any repair activity to the Facility Manager. Any repairs equal to, or less than \$1000, and all emergency repairs will receive immediate attention/response. All other repair requests will be addressed by the Facility manager on a priority basis.
 12. Known values for IAQ testing: 150,000 SF, normal occupancy rate, 350.
- O. Service Provision Equipment Identification and Location:
1. Alum Creek Facility: The HVAC equipment to be serviced in accordance with the above specifications at the Alum Creek Facility are listed and identified in Appendix "A".
 2. Emergency Management Agency: The HVAC equipment to be serviced in accordance with the above specifications at the Ohio Emergency Agency are listed and identified in Appendix "B".
 3. OSHP Training Academy: The HVAC equipment to be serviced in accordance with the above specifications at the Ohio State Patrol Training Academy are listed and identified in Appendix "C".
 4. Exemplary Equipment Maintenance Checks: Appendix "D" is provided to give some insight into the nature and detail of Equipment Maintenance upkeep. It does not cover all equipment addressed in Appendices "A" thru "C". It is provided herein solely as examples of the type of maintenance activity required.

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PRICE SCHEDULE:

ALUM CREEK FACILITY (ACF)			
ITEM CODE NO. 8485			
Service	Per Month Cost	First Year 12/01/08 thru 11/30/09	Second Year 12/01/09 thru 11/30/10
Preventative Maintenance and Repair	For Preventative Maintenance for Equipment shown In Appendix A. Include any costs that may be incurred under special requirements (section III. L., 1-7)	\$4,000.00 /mo.	\$4,000.00 /mo.
OHIO EMERGENCY MANAGEMENT AGENCY (EMA)			
ITEM CODE NO. 8486			
Service	Per Month Cost	First Year 12/01/08 thru 11/30/09	Second Year 12/01/09 thru 11/30/10
Preventative Maintenance and Repair	For Preventative Maintenance and Repair for Equipment shown In Appendix B. Include any costs that may be incurred under special requirements (section III. M.).	\$1,850.00 /mo.	\$1,850.00 /mo.
OHIO STATE HIGHWAY PATROL TRAINING ACADEMY			
ITEM CODE NO. 3884			
Service	Per Month Cost	First Year 12/01/08 thru 11/30/09	Second Year 12/01/09 thru 11/30/10
Preventative Maintenance and Repair	For Preventative Maintenance and Repair for Equipment shown in Appendix C. Include any costs that may be incurred under special requirements (section III. N.).	\$2,700.00 /mo.	\$2,700.00 /mo.
Range Filter Bags	2.5-mil 55-60 Gallon Clear Trash Liners, Linear Low Density ULine No. S-13574, or equal	\$ N/C	\$ N/C
Bag Manufacturer: Troy or Air Guard		Stk./Model No. N/A	Qty per case N/A
Item	For all three locations listed herein:	First Year 12/01/08 thru 11/30/09	Second Year 12/01/09 thru 11/30/10
Labor Rate	ITEM CODE NO. 3885 Straight Time	\$80.00 /hr	\$80.00 /hr
Labor Rate	ITEM CODE NO. 8487 Overtime	\$120.00 /hr	\$120.00 /hr
Labor Rate	ITEM CODE NO. 8488 Emergency Labor Rate	\$160.00 /hr	\$160.00 /hr
Parts Discount	ITEM CODE NO. 3886 Replacement Parts and Components Discount from List Price	Cost plus 35 %	Cost plus 35 %

CONTRACTOR INDEX

CONTRACTOR AND TERMS:

BID CONTRACT NO.: OT905109-1

0000048166
 General Temperature Control
 970 Walnut Street
 Canal Winchester, OH 43110



DELIVERY: per ITB schedule

TERMS: 2% 10 days, Net 30 Days

CONTRACTOR'S CONTACT: Ken Newman ,

Telephone: (614) 837-3888, ext. 205
 FAX: (614) 837-5434
 E-Mail: kennewman@gtc.cc

Receiving Purchase Order: Fax, (614) 837-5434

Appendix A

HVAC EQUIPMENT TO BE SERVICED (ALUM CREEK)						
ODPS Identifier	Equipment	Manufacturer	Serial No.	Condensor Serial No.	Type Service	Size/Additional Comment
RTU1	Rooftop Unit	Trane	R36101408D		Full	25 Ton
RTU2	Rooftop Unit	Trane	R46102908D		Full	12.5 Ton
RTU3	Rooftop Unit	Trane	413100072L		Full	4 Ton
RTU4	Rooftop Unit	Trane	S241433OD		Full	8 Ton
RTU4A	Rooftop Unit	Trane	412101560L		Full	4 Ton
RTU5a	Rooftop Unit	Trane	351101018D		Full	12.5 Ton
RTU5b	Rooftop Unit	Trane	407100913D		Full	12.5 Ton
RTU6	Rooftop Unit	Trane	219100521L		Full	5 Ton
RTU7	Rooftop Unit	Trane	412101596L		Full	7.5 Ton
RTU8	Rooftop Unit	Trane	412101616L		Full	5 Ton
RTU9	Rooftop Unit	Trane	40914U11H		Full	2.5 Ton
RTU10	Rooftop Unit	Trane	4091MR01H		Full	2.5 Ton
MAU1	AHU-Make-Up Air	Engineered Air	DK-3751-MAU1		Full	Central Install/Fleet Mgt
MAU2 (Aaon Unit)	DH Main Unit (Packaged)	Aaon	93AKGU3		Full	50 ton [480V 3PH] outside
DH1	Duct Heater	Aaon			Partial	inline heaters [480V 3PH 24V]
DH2	Duct Heater	Aaon			Partial	inline heaters [480V 3PH 24V]
DH3	Duct Heater	Aaon			Partial	inline heaters [480V 3PH 24V]
DH4	Duct Heater	Aaon			Partial	inline heaters [480V 3PH 24V]
DH5	Duct Heater	Aaon			Partial	inline heaters [480V 3PH 24V]
DH6	Duct Heater	Aaon			Partial	inline heaters [480V 3PH 24V]
DH7	Duct Heater	Aaon			Partial	inline heaters [480V 3PH 24V]
DH8	Duct Heater	Aaon			Partial	inline heaters [480V 3PH 24V]
DH9	Duct Heater	Aaon			Partial	inline heaters [480V 3PH 24V]
DH10	Duct Heater	Aaon			Partial	inline heaters [480V 3PH 24V]
DH11	Duct Heater	Aaon			Partial	inline heaters [480V 3PH 24V]
DH12	Duct Heater	Aaon			Partial	inline heaters [480V 3PH 24V]

Appendix A

HVAC EQUIPMENT TO BE SERVICED (ALUM CREEK)						
ODPS Identifier	Equipment	Manufacturer	Serial No.	Condensor SN	Type Service	Size/Additional Comment
HVAC1	Split-System	Inter Therm/Trane	PBM920401975	ZO55KCEBF	Full	3 Ton Shipping
HVAC2	Split-System	Lennox/Trane	5883F05440	Z055J8TBF	Full	3 Ton Mezz Lobby
HVAC3	Split-System	Lennox/Trane	442876H11	R313YJB3F	Full	4 Ton Distribution Services
HVAC4	Split-System	Lennox/Lennox	6397M 10121	5897L 40028	Full	2.5 Ton Maintenance Shop
HVAC5	Split-System	Trane/Trane	544159XIG	Z062PBLBF	Full	POST 98
AHU1	Package	Trane	M4710255BD		Full	12.5 Ton Outside On Grade
AHU-1A	Split-System	Trane/Trane	3222R4S2V	31820AW3F	Full	Print Shop
AHU2	Split-System	Trane/Trane	M474NHM5H	M471K96AH	Full	12.5 Ton Print Shop
AHU-2A	Split System	York	AOM5423777 A)E6372839	WOD6205172	Full	
AHU4	Split-System	MagicAir/Trane	970823548	M397ULIBF	Full	3 Ton Liquor Lab
AHU5	Split-System	MagicAir/Trane	971132845	M473PCHAF	Full	2 Ton Crime Lab
AHU6	Split-System	MagicAir/Trane	970720253	M391UF5BF	Full	3 Ton Crime Lab
AHU7	Split-System	MagicAir/Trane	970823549	M463PAMBF	Full	2.5 Ton Crime Lab
AHU8	Split-System	Lennox/Lennox	NOT AVAILABLE	5697J03781	Full	Tailor Shop
AHU8A	Split-System	Trane/Trane	M474HIW6H	M47325BAH	Full	Investigative Unit
AHU9	Split-System	Lennox/Lennox	5486D04999	5698A02678	Full	Tailor Shop
AHU10	Split-System	Lennox/Lennox	5485H01045	5698A01282	Full	Tailor Shop
AHU11	Split-System	Lennox/York	NOT AVAILABLE	NON6305250	Full	Breakroom
AHU12	Split-System	Lennox/York	5372E00342	W0L5159902	Full	Insertter Unit
UH-1	Unit Heaters	Lennox	5369C		Partial	
UH-2	Unit Heaters	Lennox	NOT AVAILABLE		Partial	
UH-3	Unit Heaters	Lennox	5881L04142		Partial	
UH-4	Unit Heaters	Lennox	NOT AVAILABLE		Partial	
UH-5	Unit Heaters	Lennox	6397M03848		Partial	
UH-6	Unit Heaters	Lennox	6398C 08438		Partial	
UH-7	Unit Heaters	Lennox	6397M03856		Partial	
UH-8	Unit Heaters	Lennox			Partial	
UH-9	Unit Heaters	Lennox			Partial	

Appendix A

HVAC EQUIPMENT TO BE SERVICED (ALUM CREEK)						
ODPS Identifier	Equipment	Manufacturer	Serial No.	Condensor Serial No.	Type Service	Size/Additional Comment
UH-10	Unit Heaters	Reznor			Partial	
UH-11	Unit Heaters	Lennox			Partial	
UH-12	Unit Heaters	Lennox	6000A36352		Partial	
UH-13	Unit Heaters	Lennox	6397MO3852		Partial	
UH-14	Unit Heaters	Reznor			Partial	
UH-15	Unit Heaters	Reznor			Partial	
UH-16	Unit Heaters	Modine			Partial	
UH-17	Unit Heaters	Lennox			Partial	
UH-18	Unit Heaters	Lennox			Partial	
UH-19	Unit Heaters	Modine			Partial	
UH-20	Unit Heaters	Modine			Partial	
UH-21	Unit Heaters	Modine			Partial	
UH-22	Unit Heaters	Reznor	API31K7N52443		Partial	
UH-23	Unit Heaters	Lennox	6397MO3849		Partial	
UH-24	Unit Heaters	Lennox	6000A36350		Partial	Entrance Heater
UH-25	Unit Heaters	Qmark			Partial	Entrance Heater
UH-26	Unit Heaters	Lennox	6397MO3835		Partial	Entrance Heater
UH-27	Unit Heaters	Lennox	6397MO3866		Partial	Entrance Heater
UH-28	Unit Heaters	Lennox	6397MO3872		Partial	Pump House
UH-29	Unit Heaters	Reznor	AP131K7N52440		Partial	Blue Title
UH-30	Unit Heaters	Reznor	AP131K7N52447		Partial	Blue Title
UH-31	Unit Heaters	Modine	15012010590		Partial	Radiant-Central Install
UH-32	Unit Heaters	Lennox	5886D03499		Partial	Radiant-Central Install
UH-33	Unit Heaters	Lennox	6397K 18058		Partial	Radiant-Central Install
UH-34	Unit Heaters	Modine	UNKNOWN		Partial	Radiant-Central Install
UH-35	Unit Heaters	Modine	0510104797-7174		Partial	Radiant-Central Install

Appendix A

HVAC EQUIPMENT TO BE SERVICED (ALUM CREEK)						
ODPS Identifier	Equipment	Manufacturer	Serial No.	Condensor S. N.	Type service	Size/Additional Comment
UH-36	Unit Heaters	Modine	051014797-6608		Partial	Radiant-Central Install
UH-37	Unit Heater	Q-Mark			Partial	Room 808 Blue Title
WU-1 M103	Window Air Unit	Carrier	209B43045		Partial	Room M103
WU-2	Window Air Unit	Frigidaire			Partial	Room M801
WU-3	Window Air Unit	Frigidaire	3096X53785	EK61007021	Partial	Room 809
WU-4	Wall Mount Roof Unit	Trane	NA		Partial	RM 116 split system
L-1	Motorized Louvers	Invensys	NA		Partial	SRT
L-2	Motorized Louvers	Invensys	NA		Partial	SRT
L-3	Motorized Louvers	Invensys	NA		Partial	SRT
L-4	Motorized Louvers	Invensys	NA		Partial	Liq Evidence
L-5	Motorized Louvers	Invensys	NA		Partial	Liq Evidence
L-6	Motorized Louvers	Invensys	NA		Partial	Liq Evidence
L-7	Motorized Louvers	Invensys	NA		Partial	CI/Fleet
L-8	Motorized Louvers	Invensys	NA		Partial	CI/Fleet
L-9	Motorized Louvers	Invensys	NA		Partial	Leased Area
L-10	Motorized Louvers	Invensys	NA		Partial	Leased Area
L-11	Motorized Louvers	Invensys	NA		Partial	Leased Area
EF1	Exhaust Fan	Dayton	NA		Partial	Bathrooms lower roof
EF2	Exhaust Fan	Dayton	NA		Partial	Reinstatement Bathrooms
EF3	Exhaust Fan	Dayton	NA		Partial	Front Break room Bathroom
EF4	Exhaust Fan	Dayton	NA		Partial	Front Mezz
EF5	Exhaust Fan	Hurricane	NA		Partial	High Bay
EF6	Exhaust Fan	Hurricane	NA		Partial	High Bay
EF7	Exhaust Fan	Hurricane	NA		Partial	Area 302
EF8	Exhaust Fan	Hurricane	NA		Partial	Area 302
EF9	Exhaust Fan	Hurricane	NA		Partial	Area 302
EF10	Exhaust Fan	Hurricane	NA		Partial	Area 302

Appendix A

HVAC EQUIPMENT TO BE SERVICED (ALUM CREEK)						
ODPS Identifier	Equipment	Manufacturer	Serial No.	Condensor Serial No.	Type Service	Size/Additional Comment
EF11	Exhaust Fan	Hurricane	NA		Partial	Area 302
EF12	Exhaust Fan	Hurricane	NA		Partial	Area 302
EF13	Exhaust Fan	Hurricane	NA		Partial	Area 410
EF14	Exhaust Fan	Hurricane	NA		Partial	Area 410
EF15	Exhaust Fan	Hurricane	NA		Partial	Area 410
EF16	Exhaust Fan	Hurricane	NA		Partial	Area 410
EF17	Exhaust Fan	Unknown	NA		Partial	Area 410
EF18	Exhaust Fan	Hurricane	NA		Partial	Area 410
EF19	Exhaust Fan	Hurricane	NA		Partial	Area 410
EF20	Exhaust Fan	Loren Cook	0284-2		Partial	CI/Fleet
EF21	Exhaust Fan	Loren Cook	2150 6		Partial	CI/Fleet
EF22	Exhaust Fan	Loren Cook	0284-2		Partial	CI/Fleet
EF23	Exhaust Fan	Centre Master	04C149101		Partial	CI/Fleet
EF24	Exhaust Fan	Loren Cook	0284-2		Partial	CI/Fleet
EF25	Exhaust Fan	Loren Cook	NA		Partial	CI/Fleet
EF26	Exhaust Fan	Loren Cook	NA		Partial	CI/Fleet
EF27	Exhaust Fan	Centre Master	NA		Partial	
EF28	Exhaust Fan	Centre Master	NA		Partial	
EF29	Exhaust Fan	Dayton	NA		Partial	OSHP Crime Lab
EF30	Exhaust Fan	Green Hack	NA		Partial	Blue Title
EF31	Exhaust Fan	Dayton	NA		Partial	Serves unknown
EF32	Exhaust Fan	Green Hack	97K15935		Partial	Maintenance Shop
EF33	Exhaust Fan	Penn Zeyphr	314438		Partial	Records Ret
EF34	Exhaust Fan	Zephyrct	3K1438		Partial	Records Ret
EF35	Exhaust Fan	Loren Cook	NA		Partial	Records Ret
EF36	Exhaust Fan	Loren Cook	NA		Partial	Records Ret
EF37	Exhaust Fan	Unknown	NA		Partial	Inv Unit

Appendix A

HVAC EQUIPMENT TO BE SERVICED (ALUM CREEK)						
ODPS Identifier	Equipment	Manufacturer	Serial No.	Condensor Serial No.	Type Service	Size/Additional Comment
EF38	Exhaust Fan	Dayton	NA		Partial	Liq. Lab
EF39	Exhaust Fan	Loren Cook	NA		Partial	Investigative Unit
EF40	Exhaust Fan	Loren Cook	NA		Partial	Vault Area Metal Roof
EF41	Exhaust Fan	Unknown	NA		Partial	Fork Battery charging area
EF42	Exhaust Fan	Unknown	NA		Partial	Blue Title S. Garage
EF43	Exhaust Fan	Unknown	NA		Partial	Blue Title Break Room
EF44	Exhaust Fan	DSP Monoxivent Co.	NA		Partial	car exhaust reel inside C.I.
EF45	Exhaust Fan	DSP Monoxivent Co.	NA		Partial	car exhaust reel inside C.I.
EF46	Exhaust Fan	DSP Monoxivent Co.	NA		Partial	car exhaust reel inside C.I.
EF47	Exhaust Fan	DSP Monoxivent Co.	NA		Partial	car exhaust reel inside C.I.
EF48	Exhaust Fan	DSP Monoxivent Co.	NA		Partial	car exhaust reel inside C.I.
EF49	Exhaust Fan	DSP Monoxivent Co.	NA		Partial	car exhaust reel inside C.I.
EF50	Exhaust Fan	DSP Monoxivent Co.	NA		Partial	car exhaust reel inside C.I.
EF51	Exhaust Fan	DSP Monoxivent Co.	NA		Partial	car exhaust reel inside C.I.
EF52	Exhaust Fan	DSP Monoxivent Co.	NA		Partial	car exhaust reel inside C.I.
EF53	Exhaust Fan	Unknown	NA		Partial	C.I. Bathroom's (inside)
EF54	Exhaust Fan	Unknown	NA		Partial	C.I. Bathroom's (inside)
EF55	Exhaust Fan	Unknown	NA		Partial	OSP Crime Lab bathroom Rm
EF56	Exhaust Fan	Unknown	NA		Partial	OHP Lab vent hood motor
EF57	Exhaust Fan	Unknown	NA		Partial	OHP Lab vent hood motor
EF58	Exhaust Fan	Unknown	NA		Partial	OHP Lab vent hood motor
EF59	Exhaust Fan	Unknown	NA		Partial	OHP Lab vent hood motor
EF60	Exhaust Fan	Unknown	NA		Partial	OHP Lab vent hood motor
EF61	Exhaust Fan	Unknown	NA		Partial	OHP Lab vent hood motor
EF62	Exhaust Fan	Loren Cook	NA		Partial	CI/Fleet side wall vents
EF63	Exhaust Fan	Loren Cook	NA		Partial	CI/Fleet side wall vents
EF64	Exhaust Fan	Unknown	NA		Partial	Front Mezz Bathrooms

Appendix A

HVAC EQUIPMENT TO BE SERVICED (ALUM CREEK)						
ODPS Identifier	Equipment	Manufacturer	Serial No.	Condensor Serial No.	Type Service	Size/Additional Comment
EF65	Exhaust Fan	Unknown	NA		Partial	Front Mezz Bathrooms
EF66	Exhaust Fan	Unknown	NA		Partial	Shipping Dock Bathrooms
EF67	Exhaust Fan	Unknown	NA		Partial	Shipping Dock Bathrooms
EF68	Exhaust Fan	Unknown	NA		Partial	Blue Title customer Restroom
EF69	Exhaust Fan	Unknown	NA		Partial	Blue Title customer Restroom
EF70	Exhaust Fan	Unknown	NA		Partial	Blue Title employee Restroom
EF71	Exhaust Fan	Unknown	NA		Partial	Back Mezz locker Rm restroom
EF72	Exhaust Fan	Unknown	NA		Partial	Back Mezz locker Rm restroom

ALUM CREEK AIR FILTER(S) REPLACEMENT						
Type	Quantity	Size				
FP-100	1	16X20				
FP-100	2	20X22				
FP-100	1	25X36				
Pleated	8	15X20X2				
Pleated	4	16X25X2				
Pleated	8	20X20X2				
Pleated	20	20X25X2				
Pleated	12	20X25X4				
Pleated	8	20X30X1				
Pleated (above ceiling)	12	16X20X1				
Pleated	4	16X25X1				
Pleated (above ceiling)	10	16X25X1				
Pleated (above ceiling)	4	16X25X2				
Pleated (above ceiling)	4	20X20X1				
Pleated (above ceiling)	5	20X25X1				

Appendix A

ALUM CREEK FACILITY CHEMICAL FUME HOODS REQUIRING ANNUAL INSPECTION AND CERTIFICATION				
OSPS IDENTIFIER	EQUIPMENT	MANUFACTURER	MODEL	LOCATION (ROOM NO.)
Chemical Fume Hood	Exhaust Fan	Labconco	7280000-301565	531
Chemical Fume Hood	Exhaust Fan	Labconco	4880300-301469	507
Chemical Fume Hood	Exhaust Fan	Labconco	4880300-301470	507
Chemical Fume Hood	Exhaust Fan	Labconco	4880300-301471G	501
Chemical Fume Hood	Exhaust Fan	Labconco	4880300-3013733	501
Chemical Fume Hood	Exhaust Fan	Labconco	4880300-301472	505
Chemical Fume Hood	Exhaust Fan	Labconco	4880300-301369G	505

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Appendix B

HVAC EQUIPMENT TO BE SERVICED
 FOR
 OHIO EMERGENCY MANAGEMENT AGENCY

Equipment/Manufacturer	Model No.	Location	Quantity
Greenheck Fan (EF-6)	OOCUE-130	Roof	1
Greenheck 10 HP Fan (RF-1)	OOTCF-49	Air Handler Room	1
Greenheck 1.5 HP Fan (EF-3)	OOSQ-140	Air Handler Room	1
Greenheck 7.5 HP Fan (RF-2)	OOTCF-36	Air Handler Room	1
Greenheck 7.5 HP Fan (RF-3)	OOTCF-36	Air Handler Room	1
Greenheck 1 HP Fan (EF-2)	OOSQ-180	Air Handler Room	1
Greenheck 3.3 HP Fan (EF-1)	OOSQ-240	Air Handler Room	1
Greenheck Fan (EF-5)	OOSPBE-CA-364	Radio Maint. Garage	1
Greenheck Fan (EF-7)	SWB-13-30	Radio Maint. Garage	1
Temtrol 2 HP Fan (MAU-1)	WF-BS-MBP7S	Boiler Room	1
Trane 40 HP Supply Unit (AHU-1)	CLCH-1M-15A	Air Handler Room	1
Trane 25 HP Supply Unit (AHU-2)	CLCH-1M-15	Air Handler Room	1
Trane 25 HP Supply Unit (AHU-3)	CLCH-1M-15A	Air Handler Room	1
Trane 20 HP Supply Unit (AHU-4)	CLCH-1M-15A	Air Handler Room	1
Trane Condenser Units	CAUC-D10	Outside North Side	2
Trane Propeller Unit Heaters	UH-1M-2C	Radio Maint. Garage	6
Trane Propeller Unit Heaters	UH-1M-3C	Mechanical Rooms	7
Trane Liquid Chillers	CCAC-D10R	Chiller Room	2
Clever Brooks Boilers	FLX	Boiler Room	2
Bell & Gosset 5 HP Pump	1510	Boiler Room	2
Bell & Gosset 7.5 HP Pumps	1510	Chiller Room	2
A.O. Smith Water Heater	BTP-140-140	Boiler Room	1
A.O. Smith Water Heater	COBT-140-140	Boiler Room	1
Air Compressor Products	ACP-C4S-312DP3	Chiller Room	1
Bell & Gosset Pump		Boiler Room	1
	158	LR-	
Viking Fuel Transfer Pumps	Series 400 Type 56	Boiler Room	2
Kellog Air Compressor	B332UB	Radio Maint. Garage	1
DriSteen		Air Handler Room	3
	VLC		
Satefa DCS Control System		Telephone Room	1
Hastings Gas Furnance	RHVA400	Radio Maint. Garage	1
Backflow Prevention Assemblies	Various	Boiler/Fan Rooms	4
Unit Heaters		Ceiling	41

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Appendix C

HVAC EQUIPMENT TO BE SERVICED
 FOR
 OHIO STATE HIGHWAY PATROL TRAINING ACADEMY

BOILERS:

Manufacturer	Model No.	Location	Installed Date
Cleaver-Brooks	FLX-350	Main Boiler RM	1-95
Cleaver-Brooks	FLX-350	Main Boiler RM	1-95
Falcon-Pack (STEAM)	FP-10	Main Boiler RM	12-94
Bryan (Dom. Water)	CL120-WT-FDG	Main Boiler RM	12-94
Raypak	HI-0824-CEARAAA	W. Dorm Boiler RM	1-95
Raypak	HI-0514A-CEARAAA	W. Dorm Boiler RM	1-95
AO Smith (Dom. Water)	DW-720 DURA-MAX	W. Dorm Boiler RM	1-95
Prox (59 HP)			1972
Raypak (Dom. Water)	W10183BB	N. Dorm Boiler RM	12-97
Raypak (Dom. Water)	W10183BB	N. Dorm Boiler RM	6-97
Hydro Pulse	AM-150	H&F Boiler RM	12-92
Hydro Pulse	AM-150	H&F Boiler RM	12-92
Lochinvar	EWN200PM	Range Mech. RM	2000

HVAC SPLIT & PACKAGE SYSTEMS

Manufacturer	Model No.	Location	Installed Date
Carrier	39M	Simulators	8-05
Trane	RAUC-C156	Health&Fitness	1986
Trane	PCCB-M-1A	East Admin. Office	9-90
Reznor	HRPB-150	Locker Room	8-96
Trane	YCD120C3LA	Classroom A	2000
Trane	YCD060C3LA	Classroom B	2000
Trane	YCD060C3LA	Recruitment	2000
Engineered Air	FWB-224/DJ-40-0	Classroom 10	2000
Engineered Air	FWB-354/DJE-100-KM0	Range Office	2000
Trane	TCD181C30C	West Admin. Office	2002
Carrier	48HJD008	Classroom C	2002
Carrier	48HJE009	Classroom D	2002
Carrier	48HJD012	Classroom E	2002
Carrier	48HJE009	Classroom F	2002
American Standard	Air Handler	Cafeteria	1965
Trane	Air Handler	Kitchen	1995
Trane	Air Handler	O.S.P.C.	1995
American Standard	Air Handler	S. Gym	1965
American Standard	Air Handler	Heritage Hall	1965
Carrier	Air Handler	W. Dormitory	2002
Carrier	Air Handler	N. Dormitory	2002
American Standard	Air Handler	Training Tank	1965
American Standard	Air Handler	N. Gym	1965

SCREW CHILLER

Manufacturer	Model No.	Location	Installed Date
Carrier	23-XL R-22	Chiller Building.	1993

Appendix C (cont.'d)

AIR COMPRESSORS & REFRIGERATED DRYERS

Manufacturer	Model No.	Location	Installed Date
Curtis Twin Compressor	8DH60	Main Mech. RM	1995
Johnson Cntrl Ref Dry	A-4210-1	Main Mech. RM	1995
Speedaire Compressor	5Z697A	W. Dorm Boiler RM	2005
Hankison Ref. Dryer	HPR5-10-115	W. Dorm Boiler RM	2005
Johnson Cntrl Compressor	QR-25	N. Dorm Boiler RM	1972
Johnson Cntrl Ref. Dryer	A-42	N. Dorm Boiler RM	1972
Gardner Denver Duplex Compressor	HR5D-12	Firing Range Debris RM	2000
Van Air Ref. Dryer	RAD-50	Firing Range Debris RM	2000

PUMPS [In-Line]

Manufacturer	Model No.	Location	Installed Date
Bell & Gosset	60 13T	Main Mech. RM	1995
Bell & Gosset	60	Main Mech. RM	1995
Bell & Gosset	60	Main Mech. RM	1995
Bell & Gosset	60-2AA	Main Mech. RM	1995
Bell & Gosset	60-11S	Main Mech. RM	1995
Bell & Gosset	100-BNFI	Main Boiler RM	1995
Bell & Gosset	60	Main Boiler RM	1995
Bell & Gosset	60	Notebook Storage RM	1995
Bell & Gosset	60	Notebook Storage RM	2005
Bell & Gosset	60	Notebook Storage RM	1995
Taco	1611C	W. Dorm Boiler RM	2002
Armstrong	816549-091	W. Dorm Boiler RM	2002
Bell & Gosset	100-BNFI	W. Dorm Boiler RM	1985
Bell & Gosset	13T	W. Dorm Boiler RM	1985
Bell & Gosset	PL-36B	N. Dorm Boiler RM	1999
Grundfos	43-75 BF	N. Dorm Boiler RM	1999
Grundfos	43-75 BF	N. Dorm Boiler RM	1999
Taco	1611C	N. Dorm Mech. RM	2002
Bell & Gosset	60-14	Training Tank Mech. RM	1995
Bell & Gosset	60-11S	Training Tank Mech. RM	2005
Bell & Gosset	60-13T	Training Tank Mech. RM	1995
Bell & Gosset	60	Health/Fitness Mech. RM	1995
Bell & Gosset	60	Health/Fitness Mech. RM	1986
PUMPS [In-Line] [Cont.]			
Bell & Gosset	60	Health/Fitness Mech. RM	1995
Bell & Gosset	NA	Firing Range Mech. RM	2000
Armstrong	LS-45	Firing Range Mech. RM	2000

PUMPS [Pedestal]

Weinman	2 ½ KH	Main Boiler RM	1995
Weinman	4 AC	Main Boiler RM	1995
Bell & Gosset	1 ¼ AC	Notebook Storage RM	1995
Bell & Gosset	1 ½ BC	W. Dorm Boiler RM	1995
Bell & Gosset	2 AC	W. Dorm Boiler RM	1995
Bell & Gosset	2 AC	N. Dorm Boiler RM	1995
Bell & Gosset	1 ½ BC	N. Dorm Boiler RM	1995
Weinman	4L2	Chiller Building	2005
Weinman	4L1	Chiller Building	1993

Appendix C (cont.'d)

OHIO STATE HIGHWAY PATROL FIRING RANGE

Manufacturer	Model No.	Quantity	Location	Installed Date
Twin City Circ. Fan	365TSL	2	Firing Range Roof	2000
Twin City Strip Fan	270BCV	2	Firing Range Roof	2000
Sterling Heated Makeup Air	RT80A	2	Firing Range Roof	2000
McQuay 40 ton AC units	ALP-041	2	Firing Range Roof	2000
Sterling Gas unit heaters	TF200	2	Above Firing Range Stalls	2000

FIRING RANGE FILTER REPLACEMENT SPECIFICS

Quantity	Size	Type	Frequency
60	24"x24"x2"	American Air Pleated 300X or equal	Quarterly
24	24"x24"x1 1/2 "	American Air#550-493-001 or equal	Semi-annually
12	24"x24"x1 1/2 "	American Air#331-946-148 or equal	Semi-annually
12	13.84+9.48+26	EO4192 American Air Cartridge Part #2441319-000 Dust collector or equal	Semi-annually

EXHAUST FANS

Manufacturer	Model No.	Location	Serves	Installed
American Standard	NA	Above walk-in refrigerator	Kitchen/cafe Restrooms	1965
	NA	Dish room ceiling	Dishwasher	NA
American Standard	NA	Kitchen exhaust hood	Hood	1965
	NA	Kitchen above ice machine	Dishroom	NA
American Standard	NA	Training Tank basement	Gym restrooms	1965
American Standard	NA	Training Tank basement	Training Tank	1965
American standard	NA	SRT vault	SRT vault	1965
Greenheck	BSQ-80	Lobby custodial closet	Lobby Restrooms	2002
Greenheck	SFB-10	W. dorm 2 nd fl. dry closet	South restrooms	2002
Greenheck	SFB-10	W. dorm 2 nd fl. wet closet	North restrooms	2002
Greenheck	SFB-10	N. dorm 2 nd fl. dry closet	West restrooms	2002
Greenheck	SFB-10	N. dorm 2 nd fl. wet closet	East restrooms	2002
	NA	Bus garage	Health & Fitness	1986
	NA	Mat room	Mat room	2000
Cook	ACRU-B	Range roof	Parts room	2000
Cook	ACRU-B	Range roof	Locker room	2000
Cook	ACRU-B	Range roof	Vault	2000
Cook	ACRU-B	Range roof	Control room	2000
Cook	ACRU-B	Range roof	Restrooms	2000

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Appendix C (cont.'d)

Required services for Carrier 23XL R-22 Screw Chiller	
Task and Actions	Frequency
Routine Operating Inspection	5 times per year
Check general machine operation	5 times per year
Check Control, power and piping	5 times per year
Check refrigerant charge	5 times per year
Check safety/operating controls	5 times per year
Check starter wiring and contacts	5 times per year
Check gauges/indicator lights	5 times per year
Log CWH/Brine in temperature	5 times per year
Log CHW/Brine out temperature	5 times per year
Log CHW/Brine flow Delta P	5 times per year
Log CHW/Brine pump Delta P	5 times per year
Log Cooler refrigerant temperature	5 times per year
Log cooler pressure	5 times per year
Log cooler leaving temperature difference	5 times per year
Log Cond water in temperature	5 times per year
Log cond water out temperature	5 times per year
Log cond water flow Delta P	5 times per year
Log cond water pump Delta P	5 times per year
Log condenser refrigerant temperature	5 times per year
Log condensing pressure	5 times per year
Log rotor inlet temperature	5 times per year
Log cond leaving temperature difference	5 times per year
Log oil level	5 times per year
Log oil filter differential pressure	5 times per year
Log oil sump pressure	5 times per year
Log oil sump temperature	5 times per year
Log bearing temperature	5 times per year
Log oil pressure	5 times per year
Check approaches through calculation	5 times per year
Test for leaks using leak detector	5 times per year
Lubricate equipment	5 times per year
Stop equipment	5 times per year
Clean up work station	5 times per year
Report to owner, advise and obtain signature	5 times per year

Repair Services for Carrier 23XL R-22 Screw Chiller	
Task and Actions	Frequency
Repair Services coverage	As Required
Minor repair during Scheduled Visit (Labor)	As Required
Minor material during Scheduled Visit	As Required
Emergency Calls	As Required
Refrigerant Leak Repairs (Labor)	As Required
Refrigerant Leak Repair: 100% Refrigerant	As Required
Major Repair (Labor)	As Required
Major Repair (Material)	As Required
Refrigerant Side Tubes (Labor)	As Required
Refrigerant Side Tubes (Material)	As Required

Appendix C (cont.'d)

Preventive Maintenance Services for Carrier 23XL R-22 Screw Chiller Task and Actions	Frequency
Leak Check with Leak Detector	Annual
Secure Circuits, Lockout and Tag	Annual
Review and Evaluate Log Readings	Annual
Calibrate Condenser High Pressure Cut-Out	Annual
Calibrate Oil Low Pressure Cut-Out	Annual
Calibrate Operating Controls	Annual
Pull oil sample for analysis	Annual
Pull refrigerant sample for analysis	Annual
Replace oil filter	Annual
Drain water from condenser water box	Annual
Remove condenser heads	Annual
Clean/brush condenser tubes	Annual
Re-assemble condenser heads	Annual
Check gauges/indicator lights	Annual
Inspect starter arc shields	Annual
Inspect starter capacitors	Annual
Inspect starter coil faces	Annual
Inspect starter fuses and heaters	Annual
Inspect starter linkages	Annual
Inspect starter resistors	Annual
Inspect starter transformers	Annual
Inspect starter wire insulation	Annual
Megger compressor motor	Annual
Provide vibration analysis report	Annual
Restore power	Annual
Leak check disassembled joints	Annual
Clean up work station	Annual
Report to owner, advise and obtain signature	Annual

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Appendix D

AIR HANDLING UNITS

1. ANNUAL MAINTENANCE – Once a year, including the following.

- Inspect coil
- Inspect drain pan and drain line.
- Inspect fan wheels
- Inspect drive sheaves
- Check belt alignment and tension
- Lubricate as required
- Check bearing and motor mounting
- Check motor operating voltage and amperages
- Check motor starters and Contractor, or VFD
- Check inlet vanes (where applicable) and dampers and adjust if necessary

2. SCHEDULED PREVENTIVE MAINTENANCE –Three (3) Inspection(s) during operating season, including the following

- Check belt tension
- Lubricate as required
- Check bearing and motor mounting
- Check any excessive vibration or noise and advise if repair is required.

PUMP MAINTENANCE

1. SEASONAL START-UP

- Lubricate pump bearings per manufacturer's recommendations
- Lubricate motor bearings per manufacturer's recommendations
- Tighten all nuts and bolts. Check motor mounts and vibration pads (Replace and adjust as required.
- Visually check pump alignment and coupling
- Check motor operating conditions
- Inspect electrical connections
- Check and clean strainers and check hand valves
- Inspect mechanical seals or pump packing and adjust as required

2. SCHEDULED PREVENTIVE MAINTENANCE –Three (3) Inspection(s) during operating season, including

- Lubricate pump bearings per manufacturer's recommendations
- Lubricate motor bearings per manufacturer's recommendations
- Check suction and discharge pressures
- Check packing of mechanical seal and adjust as necessary
- Check motor voltage and amperage
- Record pump pressures

PNEUMATIC TEMPERATURE CONTROLS

1. SEMI-ANNUAL INSPECTIONS- An inspection will be performed during the heating season and during the cooling season and will include:

- Calibrate major system controls
- Check system-operating sequences.
- Clean control panels (wipe panel surfaces with clean rag and blow dust out of cabinets with compressed air or vacuum)
- Check operating conditions of duct system smoke detectors (voltage check or smoke check via sampling chamber) and adjust sensitivity as required.
- Check damper operation for misalignment, binding and shutoff: provide labor to correct as necessary.
- Check controls air pressure at each system and record the pressure levels and location of lowest main air pressure.
- Adjust main air PRV at compressed air system if necessary
- Clean sampling chamber of duct mounted smoke detectors, per manufacturer's recommendation, once per year where applicable.

Appendix D (cont.'d)

2. SCHEDULED PREVENTIVE MAINTENANCE – Two (2) Inspection(s) during the operating seasons will be made to include the following:

Visually check control valve for leak
Visually check dampers and linkages and oil as required
Check time clock settings and day/night thermostat set points
Inspect changeover control stations and record mode system it is in at the time of inspection. Correct as necessary.
Record outside air temperature and ambient conditions in a pre selected spot identified in contract documents.
Check compressor run time versus off time for three operating cycles and record the average results.
Open compressor tank drain valve and bleed off any water accumulated in the tank.
Record gauge reading for compressor air pressure and final system air pressure. Adjust pressure-reducing valves if necessary.
Check compressor belts, oil level, safety valves and general operating conditions of the air compressor.
Clean compressor tank, compressor, pressure reducing station and alter-filter with damp clean rag.
Check refrigerant after cooler for proper operation
Visually check air filter and oil indicators, if available, for contamination. (Note: Throwaway oil indicators are available for installation in the compressed air system for many compressor equipment(s) some allow installation before and aft of PRV station)

BOILER MAINTENANCE

1. ANNUAL PRESEASON MAINTENANCE

Secure and drain boiler, as required
Open fire side and water side for cleaning and inspection, as required
Check heating surfaces and water side for: corrosion, pitting blisters, bulges and soot.
Inspect refractory
Clean or replace water column sight glass, if required
Disassemble, clean and inspect low water cutoff control(s)
Reassemble, clean and inspect low water cutoff control(s)
Check blow down valve packing and lubricate as required
Refill boiler
Perform hydrostatic test (if required by insurance or state regulation)
Clean or replace fuel filters as applicable.
Replace fuel nozzles
Clean burner fan wheel and air dampers.
Clean flame safeguard scanner
Clean and adjust ignition electrodes
Check all burner linkage for excessive water
Tighten all linkage set screws
Lubricate motor and shaft bearings, as applicable
Check gas valves against leakage (where test cocks are provided)
Clean contacts in program timer
Check operation of flame safeguard control
Check operation of modulating motor
Perform pilot turn down test
Check operation of low water cutoff and feed control(s)
Check settings and test all operating and limit controls. Perform bubble test on gas valves and regulators.
Disassemble and clean pressure relief valve.

2. SEASONAL START-UP

Check fuel supply
Check auxiliary equipment operation
Inspect burner boiler and controls prior to set up
Start burner and check operating controls. Test safety controls and pressure relief valve.
Perform combustion test and adjust burner for maximum efficiency
Log all operating conditions
Review operating procedures and owner's log with boiler operator.

Appendix D (cont.'d)

3. SCHEDULED PREVENTIVE MAINTENANCE –Three (3) Time(s) per year during the operation, these inspections and adjustments will be made:

Review owner's log. Log all operating conditions
Inspect boiler and burner and make adjustments as required
Test low water cutoff and pressure relief valve.
Blow down and test low water cutoff and feed control(s)
Check for water steam and fuel leaks
Check sequence and operation of flame safeguard control
Check setting and test operating and limit controls
Check operation of modulating motor
Blow down gauge cocks and try cocks to confirm glass water level.
Check and test boiler blowdown valve
Lubricate motor and shaft bearings (as required)
Check customers log with operator and discuss operation of boiler.

ADDITIONS AND EXCEPTIONS

Water treatment corrosion inhibitors for hot water loop, quarterly visit

UNIT HEATERS/MAKE-UP AIR UNITS

1. ANNUAL INSPECTION – Once a year including the following:

Check electrical wiring and electrical components for proper operation and condition
Verify unit thermostat controller operates properly
Inspect fan wheels or blades
Inspect shaft and motor bearings
Verify proper pulley alignment, if applicable
Inspect belts
Lubricate motor control contactors, motors and bearings
Check external interlocks for proper operation
Inspect unit cabinet for proper integrity
Place system in operation and measure temperature rise throughout unit.

Gas Heat Option:

Check operation of gas train components
Check burner sequence of operation
Check combustion blower assembly and clean if required
Check combustion efficiency (if possible)
Inspect heat exchanger
Inspect flame condition
Verify integrity of the flue system

Electric Heat Option:

Inspect electrical connections and motor control contactors
Check and verify operation of operating and safety controls
Verify operation of heating elements
Measure voltage and amp draw of heating elements.

Hot Water/Steam Heat Option:

Inspect control valves and traps
Check and verify operation of operating and safety controls.
Verify operation of heating coils

Appendix D (cont.'d)

2. SCHEDULED PREVENTIVE MAINTENANCE –Three (3) Inspection(s) during the operating season, including the following:

- Clean heat exchanger and inspect
- Lubricate fan drive and moving parts.
- Check/adjust control circuit and safety circuit
- Start-up system and check performance
- Calibrate temperature control
- Adjust burner efficiency (gas only)

ROTARY/SCROLL COMPRESSOR CHILLERS INSPECTION COVERAGE

1. ANNUAL WINTER MAINTENANCE –Once a year; including the following:

- Check oil filter and pressure change
- Leak test machine
- Check and calibrate safety controls, as applicable
- Check condition of contacts for wear, pitting, etc.
- Meg compressor motor
- Tighten motor terminals and control panel terminals
- Visually inspect condenser tubes
- Report to operator

2. SCHEDULED PREVENTIVE MAINTENANCE –Three (3) Inspection(s) during the operating season, including the following:

- Check operating and safety controls. Record settings per ASHRAE Guideline 3
- Complete operating log of temperature, pressures, voltages and amperages.
- Check operation of control circuit
- Check operation of motor and starter
- Check oil level and refrigerant charge
- Check customer's log with operator, discuss operation of machine generally
- Report to operator

3. ADDITIONS AND EXCEPTIONS

- Clean condenser coils once per year
- Water treatment corrosion inhibitors for cold water loop, quarterly visit.

SUPPLY, RETURN AND EXHAUST FANS

1. ANNUAL WINTER MAINTENANCE – Once a year, including the following

- Check electrical wiring and electrical components for proper operation
- Check operation of the control circuit
- Inspect fan wheel or blades
- Inspect shaft and motor bearings
- Verify proper pulley alignment
- Inspect belts and replace as required
- Verify proper belt tension
- Lubricate all motors and bearings
- Measure motor voltage and amperage
- Lubricate associated dampers and linkages
- Verify integrity of housing and connections
- Provide a written report of work completed and indicate all detected deficiencies.

Appendix D (cont.'d)

2. SCHEDULED PREVENTIVE MAINTENANCE – Three (3) Inspections per year, including the following:

Check operation of the unit
Check operation of the control circuit
Perform routine maintenance as required, including performing necessary lubrication
Inspect belts for proper condition and alignment within pulleys
Provide a written report of work completed and indicate all detected deficiencies

3. ADDITIONS AND EXCEPTIONS

This coverage does not include cleaning or removal of grease from ductwork

ELECTRIC/ELECTRONIC CONTROLS SYSTEMS

1. SEMI-ANNUAL INSPECTIONS- An inspection shall be performed during the heating season and during the cooling season and will include:

Calibrate major system controls
Check system operating sequences
Clean control panels. (Wipe panel surfaces with cleaning rag and blow dust out of cabinets with compressed air or vacuum)
Check operating conditions of duct system smoke detectors (Voltage check or smoke check via sampling chamber) and adjust sensitivity as required.
Check damper operation for misalignment, binding, and shutoff: provide labor to correct as necessary
Measure and record primary and secondary voltages of the system transformer or power supply on primary control system
Clean sampling chamber of duct mounted smoke detectors, per manufacturer's recommendation, once a year where applicable

2. SCHEDULED PREVENTIVE MAINTENANCE – Two (2) Inspection(s) during the operating season will be made to include the following:

Visually check control valve for leak
Visually check dampers and linkages and oil as required
Check time clock settings and day/night thermostat set points
Inspect changeover control stations and record the mode system it is in at time of inspection. Correct as necessary.
Record outside air temperature and ambient conditions in a pre selected spot identified in contract documents.
Check primary system power supply input and output voltage and record reading (Only required for major systems where one control transformer or power supply feeds the entire system.).

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