

EXHIBIT "A"

SCOPE OF SERVICES

MAINTENANCE OF TRANE HVAC SYSTEMS

**DISTRICT VII, HEADQUARTERS FACILITY AND TAMPA BAY SUNGUIDE
REGIONAL TRAFFIC MANAGEMENT CENTER**

DISTRICT VII, HEADQUARTERS FACILITY

I. PURPOSE:

Provide full monthly Heating, Ventilation & Air Conditioning (HVAC) Maintenance and Repair Services to include preventative maintenance, emergency and routine repairs of the Trane Building Air Conditioning Systems and Liebert Model FH147C-A10 Air Handler, as described herein. The equipment is located at the Florida Department of Transportation (FDOT), District Seven Headquarters Facility, 11201 N McKinley Drive, Tampa, Florida.

II. SERVICES TO BE PROVIDED BY THE VENDOR:

The Vendor shall perform the following services for the equipment described herein. The water cooled condenser, its tubes and tube bundle, cleaning and repair of the same, and the water treatment are not included in this service.

- A. Provide for a two (2) hour response time, twenty-four (24) hours per day, seven (7) days per week; to inspect down equipment and then perform repairs to make the equipment operational.
- B. Provide Department personnel a minimum of four (4) hours annual training on current equipment and training as required on new equipment and software.
- C. Maintain a software library to support the Trane Tracer Summit Building Management System and provide and install mandatory software upgrades within thirty (30) days of issue. Vendor will notify Contract Manager of all software revisions which become available within thirty (30) days of issue. Vendor shall advise Contract Manager of optional versus mandatory software changes and which optional revisions should be incorporated into the FDOT BAS.

- D. For centrifugal equipment, provide for all labor, parts, material, subcontractor, oil, nitrogen, travel, freight and miscellaneous expenses associated with maintaining the unit compressor assembly, compressor motor, motor starter and inter-connecting wires from the starter to unit, evaporator, control panel and unit temperature controls, purge unit and associated materials shipped as part of the original unit. All replacement parts shall be of equal or greater quality than existing parts. Parts will be Trane or Trane-compatible.

Included in this service are (including travel time as required):

1. Monthly Inspections:

- a. Check operation of purge unit
- b. Check purge unit controls
- c. Tighten all electrical connections
- d. Check refrigerant level and notify the Department's Contract Manager if refrigerant is needed. If refrigerant is required, it will be purchased under separate contract in accordance with Chapter 287, Florida Statutes
- e. Check operation of unit starters
- f. Check load limit relay
- g. Check setting and operation of R.E. switches cooling tower fan control
- h. Check all sight glasses
- i. Check oil pressure regulator
- j. Check unit starter operation and contacts
- k. Check operators log
- l. Review operating procedures with Department's operating personnel
- m. Provide a written report to the Department's Contract Manager of inspection/servicing activities completed and indicate any detected deficiencies

2. Quarterly peak load operating inspection, includes items 1a through 1m above, and the following:

- a. Complete operating log of unit for ninety (90) minute period at fifteen (15) minute intervals
- b. Check gauges for calibration
- c. Check flow rate through evaporator and condenser

3. Annual major maintenance includes item 1a through 1m above and the following:
 - a. Clean purge condenser
 - b. Meg purge motor
 - c. Meg compressor
 - d. Lubricate vane control shaft
 - e. Set pilot positioner
 - f. Set vane operator
 - g. Meg oil pump motor
 - h. Pressurize unit with hot water generator and leak test
 - i. Check oil filters
 - j. Test and calibrate all safety and interlocking controls
 - k. Check and clean auxiliary water restrainers

4. Additional services to be performed as required:
 - a. Spectrograph Oil Analysis (minimum twice per year)
 - b. Change oil and filters
 - c. Set starter overloads
 - d. Inspect internal bearings
 - e. Check and clean auxiliary water restrainers

- E. For reciprocating equipment, provide for all labor, parts, material, oil, travel, freight and miscellaneous expenses associated with maintaining the compressor, compressor motor, unit, unit starter, controls, evaporator, control panel, system temperature controls, air cooled condenser and associated materials shipped as part of the original unit. Included services are:
 1. Monthly inspections (including travel time as required)
 - a. Compressor unit
 - 1) Check oil level
 - 2) Tighten all electrical connections
 - 3) Check system operation and unloading
 - 4) Check starter contacts for excessive pitting
 - 5) Check operation for excessive vibration

 - b. Controls
 - 1) Tighten all electrical connections
 - 2) Check system interlocks

- c. Chiller units
 - 1) Check and calibrate freeze stat
 - 2) Check operation of flow switches
 - 3) Check system water strainers
 - d. Air cooled units
 - 1) Check and clean condenser coil
 - 2) Check and lubricate belts and drives
 - 3) Check operation of unit shutters
 - e. Package units
 - 1) Check and lubricate evaporator fan belts and drives
 - 2) Check filters and replace as necessary
 - 3) Check and clean evaporator coil and fan
 - f. Operation
 - 1) Start unit, run fully loaded; observe oil level and check for vibration
 - 2) Run unit at light load; observe oil level and check for vibration
 - 3) Review operator's log
 - 4) Review unit operation with the Department's operator
 - 5) Provide a written report to the Department's Contract Manager indicating inspection/servicing activities completed and indicate any deficiencies
2. Annual major maintenance:
- a. Meg compressor motor and evaporator and condenser fan motors as appropriate
 - b. Test oil and change if required
 - c. Check and set oil pressure control
 - d. Check and set high pressure control
 - e. Check and set low pressure control
 - f. Check pump down cycle
 - g. Leak check the system
 - h. Check unit seal (open compressor only)
 - i. Check unit coupling alignment (open compressor only)
 - j. Check motor ventilation (open compressor)
 - k. Dry run system interlocks
 - l. Calibrate unit thermostat
 - m. Set superheat on expansion valves
 - n. Log all operation conditions for ninety (90) minutes at fifteen (15) minute intervals

3. Additional services to be performed as required:
 - a) Spectrographic oil analysis
 - b) Internal inspections
- F. For the Liebert Air Handler, provide for all labor, parts, material, subcontractors, oil, travel, freight and miscellaneous expenses associated with maintaining the unit starter, controls, evaporator, control panel, system temperature controls, air cooled condenser, and associated materials shipped as part of the original unit.
1. The following maintenance services are to be performed monthly:
 - a. Fan Section
 - 1) Check safety controls
 - 2) Inspect filters and replace if needed
 - 3) Check belts and adjust if needed
 - 4) Check motor operating conditions and ensure motor mounts are secure
 - 5) Check motor assembly for imbalance condition
 - 6) Check motor, shaft bearings and end play; lubricate if needed
 - 7) Check sheave alignment and wear; align if needed
 - 8) Check dampers and linkage; adjust if needed
 - b. Humidifier
 - 1) Check reservoir and clean if needed
 - 2) Check for leaks
 - 3) Check lamps and replace if needed
 - 4) Check electrodes
 - 5) Check sensor operation
 - 6) Check filter and replace if needed
 - 7) Check auto-flush system
 - 8) Check operation of float valve
 - 9) Check water feed through
 - 10) Check and adjust water flow rate
 - 11) Check humidifier operation
 - c. Evaporating Section
 - 1) Clean coils if needed
 - 2) Clean inlet temperature
 - 3) Check outlet temperature
 - 4) Check electronic valve
 - 5) Check condensate drain, pump and pan
 - 6) Check for signs of leaks

- d. Reheat Section
 - 1) Check fuses
 - 2) Check electrical wiring
 - 3) Test reheat operation
- 2. The following maintenance services are to be performed annually:
 - a. Fan Section
 - 1) Calibrate safety controls
 - 2) Check filter clogged switch
 - 3) Check and tighten all electrical connections
 - 4) Adjust belts and check sheaves; replace belts if needed
 - 5) Check and clean impeller
 - 6) Lubricate motor and fan bearings
 - 7) Clean blower wheels
 - 8) Check operation and setting of differential pressure switch
 - b. Humidifier
 - 1) Check make-up water
 - 2) Check water filter
 - c. Evaporating Section
 - 1) Check operation of electronic water valve
 - d. Control Panel
 - 1) Check audible alarm
 - 2) Check high and low temperature alarms; reset if needed
 - 3) Check high and low humidity alarms; reset if needed
 - 4) Check high and low pressure alarms; reset if needed
 - 5) Check all alarm set points
 - 6) Check under floor water sensors, if applicable

G. Other Equipment

- 1. Check and clean all exhaust fans
- 2. Check, service and repair all Variable Air Volume (VAV) systems as needed
- 3. Check and service sensors
- 4. Clean, service and repair all Allen Bradley control panels
- 5. Package units' services per manufacturer's recommendations

H. For the Trane Tracer Summit Building Management System

1. On-line services; Provide on-line monitoring service seven (7) days a week, twenty-four (24) hours per day via phone modem. On-line services include system troubleshooting, software review, programming assistance, and consultations for the purpose of improving the operational efficiency of the system. Contractor shall have the ability to start and stop designated equipment from a remote location. Vendor shall have an independent computer, modem and supporting system to enable it to maintain an independent twenty-four (24) hour monitoring system and meet the two (2) hour response time.
2. Monthly inspections and maintenance (including travel time and any associated cost):
 - a. Clean Cathode Ray Tube (CRT) housing and keyboard; check and adjust purity, convergence and degauss as needed
 - b. Check Tracer and Programmable Control Module (PCM) panel voltages, connections, board seating, communications, surge suppression devices, Alternating Current (AC) and Direct Current (DC); record all readings for FDOT use.
3. On-site training: Provide eight (8) hours per year of operator training on the Trane Tracer Summit Building Management System (BMS).
4. BMS seminars: Allow Department personnel to attend BMS seminars and training conducted by the contractor at no additional charge.
5. The Vendor shall be capable of maintaining the entire system. This includes, but not limited to, the central processing unit, video display terminal, data gathering panels, and all devices, such as sensors, relays, etc.
6. The contractor shall not subcontract any services described herein.

III. VENDOR'S RESPONSIBILITIES:

The Vendor shall:

- A. Directly employ and supervise technicians working under this contract. The technicians must be qualified and experienced in keeping the specified equipment/software in proper operating condition. Vendor shall ensure technicians have twenty-four (24) hour access to computers to ensure twenty-four (24) hour online monitoring capability.
 - 1. Employ service technicians throughout the life of the contract to perform the work required under this Scope of Services who are knowledgeable and proficient in the centrifugal, reciprocating and supporting systems.
 - 2. Employ service technicians throughout the life of the contract to perform the work required under this Scope of Services on the Trane Tracer Summit Building Management System who have completed the Trane Tracer Service and Startup Course and are proficient in the following Tracer System components:
 - a. Building control programs
 - b. Chiller sequencing
 - c. Generic Display Data Channel (DDC) editing
 - d. Process control language
 - e. Programmable control language
 - f. Universal programmable control module
 - g. Building management network
 - h. Variable Air Volume (VAV) command units
- B. Provide all parts or materials for the equipment covered herein, except those associated with the unit water cooled condenser (listed in Section II). Should parts and materials be required associated with the unit water cooled condenser, prior approval must be received from the Department's Contract Manager. If approved, they will be covered by a separate purchase order issued by the Department.
- C. Maintain a complete stock of Original Equipment Manufacturer (OEM) parts and service/repair manuals, covering types and models of equipment owned by the Department (see Section IV for the list).

- D. Stock replacement parts and material locally to cover all of the requirements for the repair of chillers and other comfort cooling equipment.
- E. Have fully equipped service trucks and other support equipment, including what is necessary to comply with prudent and regulatory environmental requirements, including Chlorofluorocarbon (CFC) Refrigerant.
- F. Provide a one-year warranty on all parts and labor provided under this Agreement.
- G. Provide a written report to the Department's Contract Manager upon completion of services outlined in Section II of the Scope of Services, detailing all work performed, parts replaced and service recommendations.
- H. Possess throughout the life of the contract, a State of Florida Contractor license with Class "A" Air Conditioning Certification or Mechanical Contractor's license.
- I. Possess throughout the life of the contract an Occupational license to conduct business.
- J. As required by Section 608 of the 1990 Clean Air Act, provide an Environmental Protection Agency (EPA) approved CFC Technician Certification for all service technicians involved in the recycling or reclamation of refrigeration while performing maintenance under this contract.

IV. EQUIPMENT COVERED:

Listed below is the equipment currently installed at the Department's facility which shall be covered by this Agreement:

- Two (2) Centrifugal Chillers
 - Trane Model CVHE 250, S/N L92A01871
 - Trane Model CVHE 250, S/N L92A01872
- One (1) Reciprocating Chiller
 - Trane Model CGAD 304, S/N J91M82789
- Six (6) Chilled water pumps
- Two (2) Condenser water pumps
- Eight (8) Trane Air Handlers
 - A/H A-Trane Model CCPB41K50M
 - A/H B-Trane Model CCD850KSOM
 - A/H C-Trane Model CCDB50M50N

A/H D-Trane Model CCD85DKSOM
A/H A2- TRANE MODEL
A/H C2-TRANE MODEL 006GBROBPC
A/H MT-TRANE MODEL TWH018B140FI (Maintenance Building)
A/H C6-Trane Model TWE036CI40FI
One (1) Liebert Air Handler-Model FH147C-A10
Two (2) Condensers
 Trane Model XE-100ttro3oc100a-2 (C6/EOC)
 Trane Model TWR018C100A2 (Maintenance Building)
Two (2) Cooling Towers-Tri-Thermal Model SlT-80167
Five (5) Fan Coil Units
Twelve (12) Exhaust Fans - 126 VAV units
Five (5) Allen Bradley Frequency Drives, Building Automation Equipment
One (1) Tracer Summit Building Management System
One (1) Building Management Network with Graphics
One (1) Chiller System Control Panel
Seven (7) Programmable Control Modules (PCM)
Two (2) VAV Command Units (CU)

V. DEPARTMENT RESPONSIBILITIES:

The Department will provide a Contract Manger for administering the terms and conditions of this contract. This person will be:

Patricia Short, District Facilities Manager
11201 North McKinley Drive, MS 7-240
Tampa, Florida 33612-6456.

The Department reserves the right to change the Contract Manager at any time.

VI. BEGINNING AND LENGTH OF SERVICES:

The performance period of this Agreement shall commence upon acceptance of the Purchase Order Terms and Conditions and shall continue for a period of two (2) years.

VII. TERMINATION ACTION:

Reference is made to Paragraph 6 of the Purchase Order Terms and Conditions.

EXHIBIT "B"

SCOPE OF SERVICES

MAINTENANCE OF TRANE HVAC SYSTEMS

DISTRICT VII, HEADQUARTERS FACILITY AND TAMPA BAY SUNGUIDE REGIONAL TRAFFIC MANAGEMENT CENTER

TAMPA BAY SUNGUIDE REGIONAL TRAFFIC MANAGEMENT CENTER

I. PURPOSE:

Provide full monthly Heating, Ventilation & Air Conditioning (HVAC) Maintenance and Repair Services for the Florida Department of Transportation (FDOT), Tampa Bay SunGuide Center, which is managed by FDOT, District VII, hereinafter referred to as the Regional Transportation Management Center (RTMC). The Vendor must do everything reasonably possible to avoid a shutdown or building closure due to failure(s) of the HVAC systems.

II. SERVICES TO BE PROVIDED BY THE VENDOR:

- A. Any service performed under this contract shall be performed by factory trained and/or certified technicians. Training must be kept up to date as to be current with the existing equipment at the RTMC.
- B. All technicians servicing YORK equipment shall be trained by York / Johnson Controls for HVAC Mechanical systems, Maintenance, Testing, Adjusting, Balancing, Variable Air Volume (VAV) systems and control, and HVAC Digital Control Systems.
- C. All technicians servicing Liebert equipment shall be certified by Liebert / Emerson as having all appropriate training as a Fully Factory Trained (FFT) service technician.
- D. All technicians servicing the METASYS HVAC control equipment shall be trained by Johnson Controls as having all appropriate training for METASYS Operations, Hardware Troubleshooting, and Database Management. Johnson Controls has proprietary software for GPL Engineering and Database Generation.
- E. The Vendor shall have a minimum of four (4) qualified technicians on staff at all times, for the duration of this contract.

- F. The Vendor shall have at a minimum, two (2) factory trained Johnson Controls METASYS technicians available under this contract. This portion of the Agreement may be outsourced, but those costs are included in this Agreement and coordination with the sub-consultant to be made by the Vendor.
- G. **EMERGENCY SERVICE:** The Vendor shall provide the Department with one (1) emergency service contact number that is answered twenty-four (24) hours/seven (7) days per week including all holidays. The Department requires that the Vendor respond on-site within two (2) hours during standard working hours, and three (3) hours during non-standard hours by an authorized technician meeting the requirements of Section II of this Scope of Services. Emergency service for the HVAC system support shall be the failure or malfunction of any component, system, controller, or program of the system individually or as a whole.
- H. **HOURS:** The hours for HVAC system support shall be governed as defined below. Standard working hours are Monday through Friday, 8:00 a.m. to 5:00 p.m., except for State holidays.
1. **ROUTINE MAINTENANCE (A):** Routine maintenance Schedule (A) shall be any maintenance service, that DOES NOT IMPACT THE OPERATION of the HVAC operations and/or the system's ability to heat or cool any portion of the RTMC. Schedule (A) services are to be defined by the Vendor and approved by the Department. Schedule (A) maintenance activities can be performed during standard working hours.
 2. **ROUTINE MAINTENANCE (B):** Routine maintenance Schedule (B) shall be any maintenance service, that IMPACTS THE OPERATION of the HVAC operations and/or the system's ability to heat or cool any portion of the RTMC. Schedule (B) services are to be defined by the Vendor and approved by the Department. Schedule (B) maintenance activities shall be scheduled with the Department at a time that will be the least disruptive and that the loss of A/C will have the least affect on building temperature. Cancellation of Schedule (B) maintenance by the Vendor or Department shall be prior to forty-eight (48) hours of the Schedule (B) maintenance.

III. EQUIPMENT COVERED:

- A. The following major systems are listed below, Maintenance and Inspection services will need to be completed on these items and all other systems related to the HVAC system. It shall be the responsibility of the VENDOR to ensure proper operations of the entire HVAC system at the Tampa Bay SunGuide Center.

Qty	Manufacturer	Equipment Type	Model Number	Serial Number
1	Trane	7.5 Ton condensing unit	TTA090A400FA	7465391AD
1	Trane	1.5 Ton condensing unit	2TTB3018A1000AA	8462LEJ3F
2	Trane	Air handler units	Unknown	Unknown
1	Trane	Fan Coil Unit	FCSC08C1L	Unknown
1	York	Air-Cooled Scroll Chiller	YCAL0034EC46XC	RGPM02045
1	York	Air-Cooled Scroll Chiller	YCAL0034EC46XC	RGPM02046
1	York	Modular Air Handler	XTI-072X096-EAMA046A	CHPM CT0081
1	York	Modular Air Handler	XTI-051X066	CHPM XT0104
30	-	VAV Boxes		
1	Liebert	Air Handler	Unknown	Unknown
1	Liebert	Air Handler	Unknown	Unknown
1	Liebert	Fan Coil Unit	Unknown	Unknown
2	Bell & Gossett	Pumps	AD81	
1	Johnson Controls	METASYS System		

IV. OTHER REQUIRED SERVICES:

- A. The Vendor will be required to provide EMERGENCY SERVICES based on a cell phone text message or e-mail notification of a critical alarm or a call from the Department, for the purpose of diagnosis of system faults, adjustment, repair, and programming.
- B. The following items shall be completed as per each unit’s respective manufacturer’s routine maintenance recommendations; at a minimum the following items shall be maintained as listed below. The services listed below are not necessarily inclusive and Vendor should perform all routine maintenance services that ensure the proper operation of all systems.
 - 1. Manufactured suggested maintenance on all operational components not specifically listed – Bi-Monthly inspections required on air cooled chillers, air handling units and pumps.

2. Annual Condenser Coil Cleaning - Chillers
 3. Annual Evaporator Coil Cleaning – Air Handlers
 4. Annual Spectro Graphic Oil Analysis
 5. Annual Belt Changes
 6. Quarterly Pan Treatment
 7. Water Inspection and Treatment (closed loop) – Semi-annually
- C. The Vendor shall perform all maintenance and administer changes to the METASYS system. This shall include, but not be limited to, system monitoring of alerts sent to technician’s cell phone, text message system or e-mail, and ensuring that the system is in proper communication with all relays, controllers, and devices.
- Software upgrades are the responsibility of the **Tampa Bay SunGuide Center**.
Software upgrades are proprietary to **Johnson Controls**.
- D. The Vendor shall ensure that the Tampa Bay SunGuide HVAC system is in balance and operating at peak efficiency for the term of this contract. It shall be the responsibility of the Vendor to bring the system “as-is” and to proper peak operational performance.
- E. The Department shall provide filters as needed for replacement. The Vendor shall provide the labor to replace them and notify the Department when additional filters are needed. As an alternate, the Vendor shall provide separate pricing to include the cost of filters and depending on budgeting concerns, the Department may elect to have the Vendor provide the filters. The Purchase Order shall state which option.

V. DEPARTMENT RESPONSIBILITIES:

The Department will provide a Contract Manager for administering the terms and conditions of this contract. This person will be:

Romona Burke, ITS Support Manager
11201 North McKinley Drive, MS 7-1300
Tampa, Florida 33612-6456

The Department reserves the right to change the Contract Manager at any time.

VI. BEGINNING AND LENGTH OF SERVICES:

The performance period of this Agreement shall begin upon acceptance of Purchase Order Terms and Conditions and shall continue for a period of two (2) years.

VII. TERMINATION ACTION:

Reference is made to Paragraph 6 of the Purchase Order Terms and Conditions.