



THE URBAN DEVELOPMENT CORPORATION OF TRINIDAD AND TOBAGO LIMITED (UDeCOTT)

REQUEST FOR PROPOSAL AIR CONDITION MAINTENANCE SERVICES AT VARIOUS BUILDINGS AT GOVERNMENT PLAZA

The Government of the Republic of Trinidad and Tobago (GORTT), through the Urban Development Corporation of Trinidad and Tobago Limited (UDeCOTT), is desirous of providing Air Condition Maintenance Services at various buildings at the Government Campus Plaza.

In this regard, the GORTT through UDeCOTT invites suitably qualified and experienced entities to submit proposals for **AIR CONDITION MAINTENANCE SERVICES** at the following buildings:

1. Immigration Building;
2. Inland Revenue Division Tower;
3. Customs and Excise Building; and
4. Ministry of the Attorney General and Legal Affairs Tower

The successful contractor shall be chosen using a competitive selection process as set out in the Request for Proposals (RFP). Proponents are advised that submissions must include ALL the documents as set forth in the RFP. Failure to do so may result in disqualification.

INSTRUCTIONS FOR PURCHASE OF RFP PACKAGE

The tender process for this project will be conducted via UDeCOTT's E-Tender System. To participate, proponents must be registered on the E-Tender System. **Proponents already registered on the E-Tender System are not required to do so again.**

To access the Vendor Registration, proponents are required to go to UDeCOTT's website at udecott.com, place the cursor over the **tenders menu** at the top of the page, then select **E-Tender portal** in the drop-down list. Once registered, an automated email will be sent to the registered email account directing the proponent to activate their E-Tender account. Once the account is activated, the proponent will then be allowed access to view the RFP on the E-Tender System.

Should you encounter any technical difficulties in accessing or using the system, you are to immediately contact our IT Helpdesk at 225-4004 ext. 206 or etenderhelpdesk@udecott.com, carbon copying the Secretary of the Tenders Committee at tendersecretary@udecott.com.

The RFP package will be available for purchase from **March 31, 2021**. To download the RFP package, you will then be required to select and purchase the RFP **via online payment**. The cost of the RFP package is **TT\$1,500.00 VAT Inclusive**.

An online information session will be held on April 7, 2021 at 9:00 am. This will be followed by **Site Visits** at the Government Plaza, Richmond Street, Port of Spain commencing at 2:00 p.m. at the Immigration Building.

The deadline date for submissions is **April 21, 2021 at 2:00pm (AST)**.

Please visit our website at udecott.com for further details.

SECRETARY, TENDERS COMMITTEE

SCOPE OF WORKS
Air Conditioning Maintenance
Ministry of the Attorney General and Legal Affairs Building
Government Plaza
Richmond Street, Port-of-Spain

A. SCOPE

1. The Contractor shall provide air condition maintenance services at the MAGLA building located at the Government Plaza Richmond street Port of Spain for a period of one year
2. The following is a listing of the air condition equipment installed :

Type	Unit Sizes(Tons)	Location (level)	Quantity
F.C.U.	1 T	Basement,1	2
F.C.U.	2 T	Basement,1	1
F.C.U.	3 T	Mezz,2,3,4,9	6
A.H.U.	5 T	Basement	1
Split	1 T	Basement	1
Split	3 T	5,4,23	7
A.H.U.	7.5 T	3	1
A.H.U.	10 T	Basement	1
A.H.U.	20 T	Basement,3,10	5
A.H.U.	25 T	1,Mezz	5
A.H.U.	30 T	3	1
A.H.U.	45 T	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22	22
Tempered Air Units	21850 cfm	10	2
Exhaust Fans	10000 cfm	1	4
Exhaust Fans	1440 cfm	1	1
Exhaust Fans	400 cfm.	2	2
Exhaust Fans	450 cfm	B	1
Exhaust Fans	1667 cfm	3	1
Exhaust Fans	10000 cfm	10	2
Pressurization Fans	2x24000 cfm 2x8000 cfm	23,5	4
C.W. Duplex Pump	150HP	L-B	2
Liebert Units	20T	Basement, Gnd, Mezz	4

Table 1: Equipment Listing

3.

Dimension of Filters (inches)	No. of Filters
25x15x2	32
14x24x2	40
25x25x2	312
18x18x2	50
Total	434

Table 2: Estimated Quantity and sizes of required filters

4. The following below describes the typical maintenance activities that the Contractor will be expected to perform under this contract. The work shall include but not limited to the following:

Item	Equipment	Activity	Frequency
1	AHUs and Tempered air units	<ol style="list-style-type: none"> 1. Work to be done during normal working hours 2. Check belts, grease bearings and check blower wheels 3. Investigate any strange noises 4. Check starts and on/off controls 5. Clean drain pan and flush drain lines 6. Service all strainers where applicable 7. Ensure wire grilles are intact, clean and secure 8. Verify water flow to air handlers 9. Verify operation of actuator valves and VFD drives 10. <u>Note</u>: Any work on the actuator valves and VFD drives must be coordinated with the BMS contractor. The BMS is Automated Logic 11. And other activities as per manufacturer's specifications 12. Pressure clean evaporator coils 13. Operate valves on the chilled water system for the air handler 14. And other activities as per manufacturer's specifications 15. List all corrective work to be done 	Quarterly
2	Merv 8 Filter Replacement	<ol style="list-style-type: none"> 1. Work to be done during normal working hours 2. Replace filters with MERV 8 disposable type. See Table 3 has for quantity and sizes of the filters required 3. The contractor shall verify the sizes and quantities 	Bi-Annually

Item	Equipment	Activity	Frequency
3	Mini split units, Fan Coil Units /VRF Units	<ol style="list-style-type: none"> 1. Work to be done during normal working hours 2. Cleaning/Replacement of filter as needed 3. Clean evaporator and condenser coils 4. Check for refrigerant leaks and repair if required 5. Secure all panels 6. Check all electrical connections 7. Check condenser fan and motor 8. Clean and flush condensate drain line 9. Checking operation of the controls of the air conditioners such as selector switch, thermostat, relays, remote control etc 10. Checking Firmness of the Supporting arrangement for the compressor, blower motor, air conditioners casing and fixing of the air conditioners etc 11. Provide quotation for any repairs required 12. Top up Refrigerant Gas if required 13. Checking of pressures 14. Painting of rusted areas of all air conditioners 15. All other work as per manufacturer specifications 16. List all corrective work to be done 	Quarterly
4	VAV boxes and thermostats	<ol style="list-style-type: none"> 1. Work to be done during normal working hours Ensure all VAV boxes are modulating and functional. 2. Ensure that all control wiring is connected and the unit has power 3. Ensure that the thermostats are communicating with the controllers on the VAV boxes. <u>Note:</u> Any work in the VAV boxes must be coordinated with the BMS contractor. The BMS is automated logic system. 4. Ensure that the VAV boxes are controlling temperature and responding to temperature changes. 5. Any setting changes to VAV boxes must be air balanced accordingly throughout the entire floor. 6. List all corrective work to be done 7. And other activities as per manufacturer's specifications 	As requested
5	Exhaust fans	<ol style="list-style-type: none"> 1. Work to be done during normal working hours 2. Check that fan is working 3. Clean grille if required 4. Service as per manufacturer's requirements 5. List all corrective work to be done 	Quarterly

Item	Equipment	Activity	Frequency
6	Chilled water Testing	<ol style="list-style-type: none"> 1. Work to be done during normal working hours 2. Chill water testing shall be done once per year 3. Ensure pot feeder is operational 4. Take water samples from various points along the chilled water system to check for contaminants. Ensure results are certified by a reputable laboratory. 5. Provide a recommendation on chemical water treatment based on these results. 6. List all corrective work to be done <p>If treatment is required, the contractor shall provide a quotation for the supply and installation of the required chemicals to the system.</p>	Annually
7	Stairwell Pressurization fans	<ol style="list-style-type: none"> 1. Work to be done during normal working hours 2. Ensure fans are clean and operational 3. Check for vibration 4. Investigate any strange noises 5. Check electrical controls and connections 6. Ensure fans are properly secured and housing is rust free. 7. Ensure wire grilles are intact, clean and secure. 8. Any other checks as may be required 9. <u>Note</u>: All work on the Pressurization fans must be coordinated with the Fire Alarm contractor. 10. List all corrective work to be done 	Quarterly

Item	Equipment	Activity	Frequency
8	Chilled Water Pumps	<ol style="list-style-type: none"> 1. Check pump for vibrations and any strange noise 2. Check seal/packing glands, inspect for leakage 3. Check pump coupling insert for cracks and excess wear 4. Clean strainer 5. Check starts and On/Off controls 6. Check Bearings, lubricate bearings only as per manufacturer's recommended intervals; 7. check pump motor alignment 8. Check pump motor 9. a. Check operation for overheating, wear, corrosion or damage 10. Check motor operating current draw and compare with rated output. 11. Clean windings, 12. Perform hipot test on motor 13. Perform surge test on motor 14. Check all connections for security, tightness, contact and corrosion. 15. Check earth wiring continuity 16. Check Pump Starter/VFD. 17. Electromechanical- check electrical connections; inspect, clean and test contactors, interlocks, staging controls. 18. Variable Frequency Drive – (Be sure to follow the manufacturer's suggested maintenance procedures, especially the safe discharge of the DC Bus prior to inspecting) Check cooling fans, clean heat exchange surfaces & cabinet; check connections for overheating, tightness, etc.; check capacitors for leakage, bulging; check control parameters and temperature response to set point. 19. Verify operation with the BMS system. Note that the BMS contractor is Sylinx 20. Clean exterior of pump, motor and surrounding area 21. List all corrective work required 22. And other activities as per manufacturer's recommendations 	Bi-annually

Item	Equipment	Activity	Frequency
	Precision Liebert Units	<ol style="list-style-type: none"> 1. Check filter switch and air filters and change when necessary 2. Efficiency rating to be no less than 60-65%, minimum MERV 8. 3. Inspect, calibrate and verify correct operations of all system and unit control apparatus. 4. Check all belts. Adjust or replace as needed. Contractor will supply belts. 5. Check oil pressure and levels and adjust as necessary. Add fluids as necessary. 6. Check leaks in system and unit control apparatus. Correct as necessary. 7. Check condition of all hoses. Replace as necessary. Contractor will supply hoses. 8. Check humidifier lamps/steam generator. Repair or replace as necessary. 9. Check refrigerant lines for proper vibration elimination and replace as necessary. 10. Check suction pressure, super heat, adjust as necessary and record in report. 11. Check discharge pressure, sub cooling, adjust as necessary and record in report. 12. Check hot gas bypass valve and adjust as necessary. 13. Check thermostatic expansion valve. Adjust as necessary. 14. Inspect for refrigerant leaks, repair refrigerant leaks and add refrigerant as needed and accounted. Contractor will supply refrigerant. 15. Check and adjust water/recirculating valves. 16. Check heating elements (or coil) and adjust switches or settings and verify correct operation. 17. And perform other activities as per manufacturer's recommendations 18. List all corrective work required 	Quarterly
10	Heat Exchanger	<ol style="list-style-type: none"> 1. Work to be done on a weekend 2. Perform internal inspection/servicing as per manufacturer's requirements. Note the unit is leaking and requires corrective work. 3. List corrective work to be done 	annual

Item	Equipment	Activity	Frequency
		4. Contractor is responsible for acquiring maintenance information based on the nameplate details	
11	CHW Pump VFD	<p>Supply and install one (1) 150hp Danfoss FC102 VFD with a FUSED DISCONNECT to replace existing non Functional VFD.</p> <p>Program, test and commission vfd to operate associated pump using similar settings as working VFD</p> <p>The installation and wiring shall be done during normal working hours. The testing and commission will be scheduled for a weekend.</p>	

B. GENERAL REQUIREMENTS

1. The Contractor shall:
 - Provide routine preventive and emergency maintenance of all equipment, in accordance with the manufacturers' specifications and all applicable codes and standards.
 - Ensure all equipment is operating in accordance with the manufacturers recommendations.
 - Ensure all ducting and refrigerant distribution piping are properly insulated and free of condensation.
2. The Contractor shall ensure all scheduled maintenance activities are completed at the frequencies stipulated in item 3 above. Payment shall only be made for works completed.
3. All preventive maintenance work shall be done during normal working hours Monday to Friday unless stated otherwise. Planned corrective work can be schedule on any day of the week in accordance with the planned labour rates submitted.
4. The contractor shall have access to OEM parts and material and technical information from the equipment manufacturers as required.
5. The Contractor shall be responsible for replacing the filters with Merv 8 in the air handler units after inspection in the intervals specified only if needed after approval by the Facilities Manager.
6. The Contractor shall ensure that any and all tools and materials required for the performance of the Services are maintained in its regular inventory and readily accessible to all of his personnel.

7. The Contractor shall have in his employ, and utilize in connection with this Contract, only fully qualified Tradesmen and shall comply with all Local Government and Statutory Authorities' requirements.
8. The Contractor shall use reasonable efforts to keep the site clean and clear of unnecessary obstruction so as to avoid danger to users of the building.
9. The Contractor shall comply with all applicable Laws and regulations regarding safety including but not limited to those contained in the Occupational Safety and Health (Protective Measures] Order which is or are the approved standards of safety for this Contract and which shall be considered as part of this Contract.
10. The Contractor shall ensure proper housekeeping is performed at all times.
11. Ensure all ducting and refrigerant distribution piping are properly insulated and free of condensation and leaks and shall make recommendations for corrective work as needed.
12. The Contractor shall provide its site personnel with personal safety wear which shall be utilized at all times on-site.
13. The Contractor shall not permit the use of alcohol or radios on site, nor shall it permit pets to be brought upon the site or the use of inappropriate language thereon.
14. The Contractor shall supply all the necessary materials as new, unopened units and shall further supply all necessary tools, equipment and access aids to allow the safe and prompt execution of the Services.
15. The contractor shall ensure that his workers are professionally attired with the company logo clearly visible on the breast pocket of his shirt.
16. The contractor shall ensure that his workers possess company identification cards or other forms of identification which shall be on their person at all times while on site.
17. All maintenance activities shall be directed and approved by the Facilities Manager. The Facilities Manager reserves the right to cancel maintenance activities based on the availability, access, exigencies of the client operations.
18. The Facility Manager shall discuss the human resource requirement for each task/job for corrective work after receipt of an estimate from the Contractor before execution of job.
19. The Contractor shall use reasonable efforts in consultation with the Facilities Manager to keep disruptions of the air condition supply to a minimum.

20. The contractor shall ensure that trained representatives attend to an emergency within two (2) hours of any emergency call.
21. The contractor may be asked to check, investigate, adjust or replace VAV boxes, dampers as the need arises.
22. The contractor shall assess the system and make recommendations for improvement as needed.
23. No parking shall be available on site. The contractor shall be responsible for his own parking arrangement. Parking can be obtained at the Parkade. No reimbursement shall be made for parking.
24. For all preventive maintenance work, work order numbers and task sheets with maintenance activities shall be sent via email to the contractor which are to be included in the service reports when the work is executed. Note these maintenance activities are to be included in the contractor's scope of activities when executing the preventive maintenance work.
25. The contractor must be able to receive scheduled work orders and submit quotations via email.
26. For all corrective work identified, the contractor must clearly record same on their service reports and a copy is to be given to UDeCOTT. All corrective work must be estimated and submitted to UDeCOTT to be scheduled. Work order numbers for the corrective work will be sent to the contractor via email which are to be included in their service reports when the works are executed.
27. All corrective work performed will be planned work and must be recorded on a separate service report which shall be invoiced separately. Note the invoice must contain the work order number
28. Emergency work or unplanned work shall be executed as needed and in accordance with the rates requested in Table below. A Work order number will be assigned and emailed the following day which shall be included in the contractor's service report for the executed work. Note the emergency work will be invoiced separately and the invoice must contain the work order number.
29. Labour Rates shall be submitted for planned and unplanned maintenance work as requested in Table below.
30. All completed work being invoiced for must be supported by the contractor's service reports containing our work order numbers. Please note if our work order numbers are not included in the contractor's service reports, the invoices will not be processed.
31. When invoicing of preventive maintenance work, a summary sheet must be prepared and attached to the invoice together with the other supporting docs such as the service reports. The summary sheet must match the BOQ and must include frequency, Number of units, Cost per unit, number of units completed, total cost etc.

32. A minimum charge of 2 hours based on the planned rates submitted, shall be paid if any planned/scheduled work cannot be executed due to unforeseen circumstances.
33. The contractor can only invoice for work completed with a valid work order number.
34. All service reports must be completed and signed off by UDeCOTT's Facilities Assistant before leaving the site each day.
35. The contractor must provide service reports in triplicate, one copy for UDeCOTT, one copy for the contractor records and the original for the contractor to be submitted with the invoice. The service reports must include the following:
 1. Description of the work done
 2. Location where the work was done (as accurate as possible) – building, floor, room
 3. Equipment number, model number, serial number
 4. Technician name and class type
 5. Start and end times of work
 6. Date the work was done
 7. Material used
 8. Equipment rented if applicable
 9. Corrective work to be done
 10. Signatures of UDeCOTT and contractor's technician

SCOPE OF WORKS

Air Conditioning Maintenance at the Inland Revenue Division Building Government Plaza Richmond Street, Port-of-Spain

A. SCOPE

1. The Contractor shall provide air condition maintenance services at the IRD building located at the Government Plaza Richmond street Port of Spain for a period of one year
2. The following is a listing of the air condition equipment installed :

EQUIPMENT	QTY	TYPE
CHILLER	1	TRANE
CHILLED WATER PUMP	2	BELL & GOSSETT
AIR HANDLER AND VFD	36	TRANE
EXHAUST FAN	6	XPLEAIR & GREENHECK
DX UNITS	7	TRANE
PRECISION UNITS	6	LIEBERT
PUMP AND VFD	2	BELL AND GOSSETT,DANFOSS
FAN COIL	4	TRANE
TEMPERED AIR	2	TRANE
PRESSURIZATION FAN	4	GREENHECK
VARIABLE SPEED CONTROLLER	1	TECHNOLOGIC

Dimension of Filters	No. of Filters
16*20*2	72
16*25*2	32
20*20*2	264
20*25*2	124
20*15*2	1
24*12*2	2
20*20*2	2
Total	497

Table 1: Estimated Quantity and sizes of required filters

3. The following below describes the typical maintenance activities that the Contractor will be expected to perform under this contract. The work shall include but not limited to the following:

Item	Equipment	Activity	Frequency
1	AHUs and Tempered air units	<ol style="list-style-type: none"> 1. Work to be done during normal working hours 2. Check belts, grease bearings and check blower wheels 3. Investigate any strange noises 4. Check starts and on/off controls 5. Clean drain pan and flush drain lines 6. Service all strainers where applicable 7. Ensure wire grilles are intact, clean and secure 8. Verify water flow to air handlers 9. Verify operation of actuator valves and VFD Drives. 10. <u>Note</u>: Any work on the actuator valves and VFD drives must be coordinated with the BMS contractor. The BMS is Automated Logic 11. And other activities as per manufacturer's specifications 12. Pressure clean evaporator coils 13. Operate valves on the chilled water system for the air handler 14. And other activities as per manufacturer's specifications 15. List all corrective work to be done 	Quarterly
2	Merv 8 Filter Replacement	<ol style="list-style-type: none"> 1. Work to be done during normal working hours 2. Replace filters with MERV 8 disposable type. See Table 3 has for quantity and sizes of the filters required 3. The contractor shall verify the sizes and quantities 	Bi-Annually

Item	Equipment	Activity	Frequency
3	Mini split units, Fan Coil Units /VRF Units	<ol style="list-style-type: none"> 1. Work to be done during normal working hours 2. Cleaning/Replacement of filter as needed 3. Clean evaporator and condenser coils 4. Check for refrigerant leaks and repair if required 5. Secure all panels 6. Check all electrical connections 7. Check condenser fan and motor 8. Clean and flush condensate drain line 9. Checking operation of the controls of the air conditioners such as selector switch, thermostat, relays, remote control etc 10. Checking Firmness of the Supporting arrangement for the compressor, blower motor, air conditioners casing and fixing of the air conditioners etc 11. Provide quotation for any repairs required 12. Top up Refrigerant Gas if required 13. Checking of pressures 14. Painting of rusted areas of all air conditioners 15. All other work as per manufacturer specifications 16. List all corrective work to be done 	Quarterly
4	VAV boxes and thermostats	<ol style="list-style-type: none"> 1. Work to be done during normal working hours 2. Ensure all VAV boxes are modulating and functional. 3. Ensure that all control wiring is connected and the unit has power 4. Ensure that the thermostats are communicating with the controllers on the VAV boxes. <u>Note:</u> Any work in the VAV boxes must be coordinated with the BMS contractor. The BMS is automated logic system. 5. Ensure that the VAV boxes are controlling temperature and responding to temperature changes. 6. Any setting changes to VAV boxes must be air balanced accordingly throughout the entire floor. 7. List all corrective work to be done and other activities as per manufacturer's specifications 	As requested
5	Exhaust fans	<ol style="list-style-type: none"> 1. Work to be done during normal working hours 2. Check that fan is working 3. Clean grille if required 4. Service as per manufacturer's requirements 5. List all corrective work to be done 	Quarterly

Item	Equipment	Activity	Frequency
6	Chilled water Testing	<ol style="list-style-type: none"> 1. Work to be done during normal working hours 2. Chill water testing shall be done once per year 3. Ensure pot feeder is operational 4. Take water samples from various points along the chilled water system to check for contaminants. Ensure results are certified by a reputable laboratory. 5. Provide a recommendation on chemical water treatment based on these results. 6. List all corrective work to be done. 7. If treatment is required, the contractor shall provide a quotation for the supply and installation of the required chemicals to the system. 	Annually
7	Stairwell Pressurization fans	<ol style="list-style-type: none"> 1. Work to be done during normal working hours 2. Ensure fans are clean and operational 3. Check for vibration 4. Investigate any strange noises 5. Check electrical controls and connections 6. Ensure fans are properly secured and housing is rust free. 7. Ensure wire grilles are intact, clean and secure. 8. Any other checks as may be required 9. <u>Note</u>: All work on the Pressurization fans must be coordinated with the Fire Alarm contractor. 10. List all corrective work to be done 	Quarterly

Item	Equipment	Activity	Frequency
8	Chilled Water Pumps	<ol style="list-style-type: none"> 1. Check pump for vibrations and any strange noise 2. Check seal/packing glands, inspect for leakage 3. Check pump coupling insert for cracks and excess wear 4. Clean strainer 5. Check starts and On/Off controls 6. Check Bearings, lubricate bearings only as per manufacturer's recommended intervals; 7. check pump motor alignment 8. Check pump motor 9. a. Check operation for overheating, wear, corrosion or damage 10. Check motor operating current draw and compare with rated output. 11. Clean windings, 12. Perform hipot test on motor 13. Perform surge test on motor 14. Check all connections for security, tightness, contact and corrosion. 15. Check earth wiring continuity 16. Check Pump Starter/VFD. 17. Electromechanical- check electrical connections; inspect, clean and test contactors, interlocks, staging controls. 18. Variable Frequency Drive – (Be sure to follow the manufacturer's suggested maintenance procedures, especially the safe discharge of the DC Bus prior to inspecting) Check cooling fans, clean heat exchange surfaces & cabinet; check connections for overheating, tightness, etc.; check capacitors for leakage, bulging; check control parameters and temperature response to set point. 19. Verify operation with the BMS system. Note that the BMS contractor is Sylinx 20. Clean exterior of pump, motor and surrounding area 21. List all corrective work required 22. And other activities as per manufacturer's recommendations 	Bi-annually

Item	Equipment	Activity	Frequency
9	Precision Liebert Units	<ol style="list-style-type: none"> 1. Check filter switch and air filters and change when necessary 2. Efficiency rating to be no less than 60-65%, minimum MERV 8. 3. Inspect, calibrate and verify correct operations of all system and unit control apparatus. 4. Check all belts. Adjust or replace as needed. Contractor will supply belts. 5. Check oil pressure and levels and adjust as necessary. Add fluids as necessary. 6. Check leaks in system and unit control apparatus. Correct as necessary. 7. Check condition of all hoses. Replace as necessary. Contractor will supply hoses. 8. Check humidifier lamps/steam generator. Repair or replace as necessary. 9. Check refrigerant lines for proper vibration elimination and replace as necessary. 10. Check suction pressure, super heat, adjust as necessary and record in report. 11. Check discharge pressure, sub cooling, adjust as necessary and record in report. 12. Check hot gas bypass valve and adjust as necessary. 13. Check thermostatic expansion valve. Adjust as necessary. 14. Inspect for refrigerant leaks, repair refrigerant leaks and add refrigerant as needed and accounted. Contractor will supply refrigerant. 15. Check and adjust water/recirculating valves. 16. Check heating elements (or coil) and adjust switches or settings and verify correct operation. 17. And perform other activities as per manufacturer's recommendations 18. List all corrective work required 	Quarterly
10	Heat Exchanger	<ol style="list-style-type: none"> 1. Work to be done on a weekend 2. Perform internal inspection/servicing as per manufacturer's requirements. Note the unit is leaking and requires corrective work. 3. List corrective work to be done 4. Contractor is responsible for acquiring 	annual

Item	Equipment	Activity	Frequency
11	Chiller	<ol style="list-style-type: none"> 1. Start unit and observe operation. 2. Check unit for noise and vibration. 3. Check compressor for proper operation 4. Check oil pressure of compressor 5. Check Oil Level in Oil Separator Sight Glass 6. Check Liquid Line Sight Glass/ Moisture indicator 7. Check condenser fans 8. Check Compressor and Evaporator Heater operation 9. Check discharge & suction gas pressures, add refrigerant if necessary. 10. Check Electrical wiring for lose connections. 11. Check for leaks. 12. Check chiller & condenser water pressure for any blockage 13. Check controls for proper operation 14. Check piping and valves for leaks tighten connection as necessary. 15. Clean surrounding floor area 16. Service condenser fans 17. Clean Condenser Coils 18. Check starts and on/off controls 19. Service all strainers, dryers where applicable 20. Check refrigerant charge and top-up as required 21. Inspect the entire system so as to detect any eventual abnormality: noisy compressor, loose casing panels, leaky pipes or juddering contacts. 22. Verify operation with the BMS system. Note that the BMS contractor is Sylinx 23. Check piping and valves for leaks, tighten connection as necessary. 24. Check for corrosion, clean, prime and paint area of corrosion as necessary. 25. Perform diagnostic check to identify any failing components 26. Perform other activities as per manufacturer's recommendations 27. List all corrective work to be done 	Every 2 months

B. GENERAL REQUIREMENTS

1. The Contractor shall:
 - Provide routine preventive and emergency maintenance of all equipment, in accordance with the manufacturers' specifications and all applicable codes and standards.
 - Ensure all equipment is operating in accordance with the manufacturers recommendations.
 - Ensure all ducting and refrigerant distribution piping are properly insulated and free of condensation.
2. The Contractor shall ensure all scheduled maintenance activities are completed at the frequencies stipulated in item 3 above. Payment shall only be made for works completed.
3. All preventive maintenance work shall be done during normal working hours Monday to Friday unless stated otherwise. Planned corrective work can be schedule on any day of the week in accordance with the planned labour rates submitted.
4. The contractor shall have access to OEM parts and material and technical information from the equipment manufacturers as required.
5. The Contractor shall be responsible for replacing the filters with Merv 8 in the air handler units after inspection in the intervals specified only if needed after approval by the Facilities Manager.
6. The Contractor shall ensure that any and all tools and materials required for the performance of the Services are maintained in its regular inventory and readily accessible to all of his personnel.
7. The Contractor shall have in his employ, and utilize in connection with this Contract, only fully qualified Tradesmen and shall comply with all Local Government and Statutory Authorities' requirements.
8. The Contractor shall use reasonable efforts to keep the site clean and clear of unnecessary obstruction so as to avoid danger to users of the building.
9. The Contractor shall comply with all applicable Laws and regulations regarding safety including but not limited to those contained in the Occupational Safety and Health (Protective Measures] Order which is or are the approved standards of safety for this Contract and which shall be considered as part of this Contract.
10. The Contractor shall ensure proper housekeeping is performed at all times.
11. Ensure all ducting and refrigerant distribution piping are properly insulated and free of condensation and leaks and shall make recommendations for corrective work as needed.

12. The Contractor shall provide its site personnel with personal safety wear which shall be utilized at all times on-site.
13. The Contractor shall not permit the use of alcohol or radios on site, nor shall it permit pets to be brought upon the site or the use of inappropriate language thereon.
14. The Contractor shall supply all the necessary materials as new, unopened units and shall further supply all necessary tools, equipment and access aids to allow the safe and prompt execution of the Services.
15. The contractor shall ensure that his workers are professionally attired with the company logo clearly visible on the breast pocket of his shirt.
16. The contractor shall ensure that his workers possess company identification cards or other forms of identification which shall be on their person at all times while on site.
17. All maintenance activities shall be directed and approved by the Facilities Manager. The Facilities Manager reserves the right to cancel maintenance activities based on the availability, access, exigencies of the client operations.
18. The Facility Manager shall discuss the human resource requirement for each task/job for corrective work after receipt of an estimate from the Contractor before execution of job.
19. The Contractor shall use reasonable efforts in consultation with the Facilities Manager to keep disruptions of the air condition supply to a minimum.
20. The contractor shall ensure that trained representatives attend to an emergency within two (2) hours of any emergency call.
21. The contractor may be asked to check, investigate, adjust or replace VAV boxes, dampers as the need arises.
22. The contractor shall assess the system and make recommendations for improvement as needed.
23. No parking shall be available on site. The contractor shall be responsible for his own parking arrangement. Parking can be obtained at the Parkade. No reimbursement shall be made for parking.
24. For all preventive maintenance work, work order numbers and task sheets with maintenance activities shall be sent via email to the contractor which are to be included in the service reports when the work is executed. Note these maintenance activities are to be included in the contractor's scope of activities when executing the preventive maintenance work.
25. The contractor must be able to receive scheduled work orders and submit quotations via email.

26. For all corrective work identified, the contractor must clearly record same on their service reports and a copy is to be given to UDeCOTT. All corrective work must be estimated and submitted to UDeCOTT to be scheduled. Work order numbers for the corrective work will be sent to the contractor via email which are to be included in their service reports when the works are executed.
27. All corrective work performed will be planned work and must be recorded on a separate service report which shall be invoiced separately. Note the invoice must contain the work order number
28. Emergency work or unplanned work shall be executed as needed and in accordance with the rates requested in Table below. A Work order number will be assigned and emailed the following day which shall be included in the contractor's service report for the executed work. Note the emergency work will be invoiced separately and the invoice must contain the work order number.
29. Labour Rates shall be submitted for planned and unplanned maintenance work as requested in Table below.
30. All completed work being invoiced for must be supported by the contractor's service reports containing our work order numbers. Please note if our work order numbers are not included in the contractor's service reports, the invoices will not be processed.
31. When invoicing of preventive maintenance work, a summary sheet must be prepared and attached to the invoice together with the other supporting docs such as the service reports. The summary sheet must match the BOQ and must include frequency, Number of units, Cost per unit, number of units completed, total cost etc.
32. A minimum charge of 2 hours based on the planned rates submitted, shall be paid if any planned/scheduled work cannot be executed due to unforeseen circumstances.
33. The contractor can only invoice for work completed with a valid work order number.
34. All service reports must be completed and signed off by UDeCOTT's Facilities Assistant before leaving the site each day.
35. The contractor must provide service reports in triplicate, one copy for UDeCOTT, one copy for the contractor records and the original for the contractor to be submitted with the invoice. The service reports must include the following:
 1. Description of the work done
 2. Location where the work was done (as accurate as possible) – building, floor, room
 3. Equipment number, model number, serial number
 4. Technician name and class type

5. Start and end times of work
6. Date the work was done
7. Material used
8. Equipment rented if applicable
9. Corrective work to be done
10. Signatures of UDeCOTT and contractor's technician

SCOPE OF WORKS

Air Conditioning Maintenance at the Immigration Building Government Plaza Richmond Street, Port-of-Spain

A. SCOPE

1. The Contractor shall provide air condition maintenance services at the Immigration building located at the Government Plaza Richmond street Port of Spain for a period of one year
2. The following is a listing of the air condition equipment installed :

Equipment	Total Qty	Location
Air Handler Units(Dunham-Bush)	42	Ground to Level 10
Mini split units	3	Basement , Ground; Roof
Fan Coil units	3	Basement; Ground
Chilled water pumps	2	Basement
Pressurization Fans	3	Roof
Variable refrigeration Flow (VRF) units	4	Ground, Level 5
Heat Exchanger	1	basement

Table 1: Equipment listing

LEVEL	UNIT TYPE	MANUFACTURER	QUANTITY	CFM	BTU
ROOFTOP (ELEVATOR MACHINE ROOM)	SPLIT UNIT	PEAKE	3		12,000
10	AHU	DUNHAM BUSH	4	6000	
9	AHU	DUNHAM BUSH	4	6000	
8	AHU	DUNHAM BUSH	4	6000	
7	AHU	DUNHAM BUSH	4	6000	
6	AHU	DUNHAM BUSH	4	6000	
5	AHU	DUNHAM BUSH	4	6000	
4	AHU	DUNHAM BUSH	4	6000	
3	AHU	DUNHAM BUSH	4	6000	
2	AHU	DUNHAM BUSH	4	6000	
1	AHU	DUNHAM BUSH	4	6000	
GF	AHU	DUNHAM BUSH	2	3000	
GF-SECURITY ROOM	SPLIT UNIT	PEAKE	1		25,000
GF-KITCHENETTE	SPLIT UNIT	PEAKE	1		25,000
BASEMENT -TSTT ROOM	SPLIT UNIT	PEAKE	1		24,000
BASEMENT - LV ROOM	SPLIT UNIT	PEAKE	1		24,000

Table 2: Air Condition Equipment

Location of AHUs	Dimension of Filters	No. of Filters	No. of Filters per AHU
Levels 1 to 10 (40,x 15T AHUs Total)	12x24x2	120	3
	20x24x2	120	3
Ground Floor(2x 7.5T units)	20x24x2	4	2
	12x24x2	2	1
	Total	246	

Table 3: Merve 8 Filter sizes and Quantities

3. The following below describes the typical maintenance activities that the Contractor will be expected to perform under this contract. The work shall include but not limited to the following:

Item	Equipment	Activity	Frequency
1	AHUs on ground level to 9 th level	<ol style="list-style-type: none"> 1. Work to be done during normal working hours 2. Check belts, grease bearings and check blower wheels 3. Investigate any strange noises 4. Check starts and on/off controls 5. Clean drain pan and flush drain lines 6. Service all strainers where applicable 7. Ensure wire grilles are intact, clean and secure 8. Verify water flow to air handlers 9. Verify operation of actuator valves and VFD Drives. 10. <u>Note</u>: Any work on the actuator valves and VFD drives must be coordinated with the BMS contractor. The BMS is Automated Logic 11. And other activities as per manufacturer's specifications 12. Pressure clean evaporator coils 13. Operate valves on the chilled water system for the air handler 14. And other activities as per manufacturer's specifications 15. List all corrective work to be done 	Quarterly
2	Merv 8 Filter Replacement	<ol style="list-style-type: none"> 1. Work to be done during normal working hours 2. Replace filters with MERV 8 disposable type. See Table 3 has for quantity and sizes of the filters required 3. List all corrective work to be done 	Quarterly

Item	Equipment	Activity	Frequency
3	Mini split units, Fan Coil Units /VRF Units	<ol style="list-style-type: none"> 1. Work to be done during normal working hours 2. Cleaning/Replacement of filter as needed 3. Clean evaporator and condenser coils 4. Check for refrigerant leaks and repair if required 5. Secure all panels 6. Check all electrical connections 7. Check condenser fan and motor 8. Clean and flush condensate drain line 9. Checking operation of the controls of the air conditioners such as selector switch, thermostat, relays, remote control etc 10. Checking Firmness of the Supporting arrangement for the compressor, blower motor, air conditioners casing and fixing of the air conditioners etc 11. Provide quotation for any repairs required 12. Top up Refrigerant Gas if required 13. Checking of pressures 14. Painting of rusted areas of all air conditioners 15. All other work as per manufacturer specifications 16. List all corrective work to be done 	Quarterly
4	VAV boxes and thermostats	<ol style="list-style-type: none"> 1. Work to be done during normal working hours Ensure all VAV boxes are modulating and functional. 2. Ensure that all control wiring is connected and the unit has power 3. Ensure that the thermostats are communicating with the controllers on the VAV boxes. <u>Note:</u> Any work in the VAV boxes must be coordinated with the BMS contractor. The BMS is automated logic system. 4. Ensure that the VAV boxes are controlling temperature and responding to temperature changes. 5. Any setting changes to VAV boxes must be air balanced accordingly throughout the entire floor. 6. List all corrective work to be done 7. And other activities as per manufacturer's specifications 	As requested

Item	Equipment	Activity	Frequency
5	Washroom Exhaust fans	<ol style="list-style-type: none"> 1. Work to be done during normal working hours 2. Check that fan is working 3. Clean grille if required 4. List all corrective work to be done 	As requested
6	Chilled water testing	<ol style="list-style-type: none"> 1. Work to be done during normal working hours 2. Chill water testing shall be done once per year 3. Ensure pot feeder is operational 4. Take water samples from various points along the chilled water system to check for contaminants. Ensure results are certified by a reputable laboratory. 5. Provide a recommendation on chemical water treatment based on these results. 6. List all corrective work to be done <p>If treatment is required, the contractor shall provide a quotation for the supply and installation of the required chemicals to the system.</p>	Annually
7	Stairwell Pressurization fans	<ol style="list-style-type: none"> 1. Work to be done during normal working hours 2. Ensure fans are clean and operational 3. Check for vibration 4. Investigate any strange noises 5. Check electrical controls and connections 6. Ensure fans are properly secured and housing is rust free. 7. Ensure wire grilles are intact, clean and secure. 8. Any other checks as may be required 9. <u>Note</u>: All work on the Pressurization fans must be coordinated with the Fire Alarm contractor. 10. List all corrective work to be done 	Quarterly

Item	Equipment	Activity	Frequency
8	Chilled Water Pumps	<ol style="list-style-type: none"> 1. Work to be done during normal working hours 2. Check pumps for vibrations 3. Investigate any strange noise 4. Check shaft alignments 5. Check pump couplings 6. Check filters and strainers 7. Flush drain lines in pump room 8. Check starts and On/Off controls 9. Check pressure differential sensor and VFD drives for the chilled water pumps. 10. <u>Note</u>: Any work on the actuator valves and VFD drives must be coordinated with the BMS contractor. The BMS is a Automated Logic. 11. Grease bearings where applicable 12. Rotate pump usage 13. List all corrective work to be done <p>And other activities as per manufacturer's specifications on both pumps</p>	Bi-annually

Item	Equipment	Activity	Frequency
9	Duct Cleaning	<p>The cleaning for the air ducts will include the following:</p> <ol style="list-style-type: none"> 1. Work to be done on weekends 2. Cover all office furnishings e.g Desks, computers, chairs, carpets 3. Cut opening into ducting to allow access air ducts, that is large enough to facilitate mechanical cleaning equipment and allow for inspection 4. Mark the position of access hole upon completion of work 5. Use mechanical agitation methods to remove dust, particulate, debris, and surface contamination. 6. Capture dislodged substances and contaminants and ensure they are removed with suitable collection equipment from the facility 7. Do not use any cleaning methods that will damage any HVAC components or duct insulation 8. Sanitize ducts with anti-bacterial environment friendly cleansers 9. Mark the position of dampers and any air directional mechanical devices inside the HVAC system prior to cleaning and, upon completion; restore them to their marked position. 10. Inspect ducting after cleaning to ensure all contaminants, substances, particulates etc have been completely removed 11. Seal all openings made for ducts to return to original state. 12. Clean and vacuum entire floor including carpets and affected work areas to allow staff to return to work safely. 13. Make good any and all damages sustained by the works 14. List all corrective work to be done 	
10	Heat Exchanger	<ol style="list-style-type: none"> 1. Work to be done on a weekend 2. Perform internal inspection/servicing as per manufacturer's requirements. Note the unit is leaking and requires corrective work. 3. List corrective work to be done 4. Contractor is responsible for acquiring maintenance information based on the nameplate details 	

B. GENERAL REQUIREMENTS

1. The Contractor shall:
 - Provide routine preventive and emergency maintenance of all equipment, in accordance with the manufacturers' specifications and all applicable codes and standards.
 - Ensure all equipment is operating in accordance with the manufacturers recommendations.
 - Ensure all ducting and refrigerant distribution piping are properly insulated and free of condensation.
2. The Contractor shall ensure all scheduled maintenance activities are completed at the frequencies stipulated in item 3 above. Payment shall only be made for works completed.
3. All preventive maintenance work shall be done during normal working hours Monday to Friday unless stated otherwise. Planned corrective work can be schedule on any day of the week in accordance with the planned labour rates submitted.
4. The contractor shall have access to OEM parts and material and technical information from the equipment manufacturers as required.
5. The Contractor shall be responsible for replacing the filters with Merv 8 in the air handler units after inspection in the intervals specified only if needed after approval by the Facilities Manager.
6. The Contractor shall ensure that any and all tools and materials required for the performance of the Services are maintained in its regular inventory and readily accessible to all of his personnel.
7. The Contractor shall have in his employ, and utilize in connection with this Contract, only fully qualified Tradesmen and shall comply with all Local Government and Statutory Authorities' requirements.
8. The Contractor shall use reasonable efforts to keep the site clean and clear of unnecessary obstruction so as to avoid danger to users of the building.
9. The Contractor shall comply with all applicable Laws and regulations regarding safety including but not limited to those contained in the Occupational Safety and Health (Protective Measures] Order which is or are the approved standards of safety for this Contract and which shall be considered as part of this Contract.
10. The Contractor shall ensure proper housekeeping is performed at all times.
11. Ensure all ducting and refrigerant distribution piping are properly insulated and free of condensation and leaks and shall make recommendations for corrective work as needed.

12. The Contractor shall provide its site personnel with personal safety wear which shall be utilized at all times on-site.
13. The Contractor shall not permit the use of alcohol or radios on site, nor shall it permit pets to be brought upon the site or the use of inappropriate language thereon.
14. The Contractor shall supply all the necessary materials as new, unopened units and shall further supply all necessary tools, equipment and access aids to allow the safe and prompt execution of the Services.
15. The contractor shall ensure that his workers are professionally attired with the company logo clearly visible on the breast pocket of his shirt.
16. The contractor shall ensure that his workers possess company identification cards or other forms of identification which shall be on their person at all times while on site.
17. All maintenance activities shall be directed and approved by the Facilities Manager. The Facilities Manager reserves the right to cancel maintenance activities based on the availability, access, exigencies of the client operations.
18. The Facility Manager shall discuss the human resource requirement for each task/job for corrective work after receipt of an estimate from the Contractor before execution of job.
19. The Contractor shall use reasonable efforts in consultation with the Facilities Manager to keep disruptions of the air condition supply to a minimum.
20. The contractor shall ensure that trained representatives attend to an emergency within two (2) hours of any emergency call.
21. The contractor may be asked to check, investigate, adjust or replace VAV boxes, dampers as the need arises.
22. The contractor shall assess the system and make recommendations for improvement as needed.
23. No parking shall be available on site. The contractor shall be responsible for his own parking arrangement. Parking can be obtained at the Parkade. No reimbursement shall be made for parking.
24. For all preventive maintenance work, work order numbers and task sheets with maintenance activities shall be sent via email to the contractor which are to be included in the service reports when the work is executed. Note these maintenance activities are to be included in the contractor's scope of activities when executing the preventive maintenance work.
25. The contractor must be able to receive scheduled work orders and submit quotations via email.

26. For all corrective work identified, the contractor must clearly record same on their service reports and a copy is to be given to UDeCOTT. All corrective work must be estimated and submitted to UDeCOTT to be scheduled. Work order numbers for the corrective work will be sent to the contractor via email which are to be included in their service reports when the works are executed.
27. All corrective work performed will be planned work and must be recorded on a separate service report which shall be invoiced separately. Note the invoice must contain the work order number
28. Emergency work or unplanned work shall be executed as needed and in accordance with the rates requested in Table below. A Work order number will be assigned and emailed the following day which shall be included in the contractor's service report for the executed work. Note the emergency work will be invoiced separately and the invoice must contain the work order number.
29. Labour Rates shall be submitted for planned and unplanned maintenance work as requested in Table below.
30. All completed work being invoiced for must be supported by the contractor's service reports containing our work order numbers. Please note if our work order numbers are not included in the contractor's service reports, the invoices will not be processed.
31. When invoicing of preventive maintenance work, a summary sheet must be prepared and attached to the invoice together with the other supporting docs such as the service reports. The summary sheet must match the BOQ and must include frequency, Number of units, Cost per unit, number of units completed, total cost etc.
32. A minimum charge of 2 hours based on the planned rates submitted, shall be paid if any planned/scheduled work cannot be executed due to unforeseen circumstances.
33. The contractor can only invoice for work completed with a valid work order number.
34. All service reports must be completed and signed off by UDeCOTT's Facilities Assistant before leaving the site each day.
35. The contractor must provide service reports in triplicate, one copy for UDeCOTT, one copy for the contractor records and the original for the contractor to be submitted with the invoice. The service reports must include the following:
 1. Description of the work done
 2. Location where the work was done (as accurate as possible) – building, floor, room
 3. Equipment number, model number, serial number
 4. Technician name and class type
 5. Start and end times of work
 6. Date the work was done

7. Material used
8. Equipment rented if applicable
9. Corrective work to be done
10. Signatures of UDeCOTT and contractor's technician

SCOPE OF WORKS

Air Conditioning Maintenance at the Customs and Excise Building Government Plaza Richmond Street, Port-of-Spain

A. SCOPE

1. The Contractor shall provide air condition maintenance services at the Customs and Excise building located at the Government Plaza Richmond street Port of Spain for a period of one year
2. The following is a listing of the air condition equipment installed :

Equipment	Total Qty	Location
Air Handler Units(Dunham-Bush) 36x15Ton + 4x20Ton	40	Ground to level 9
VAV boxes	720	Ground to level 9
Mini split units 1 x 12000 BTU 3 x 24000 BTU 3 x 36000 BTU 3 x 48000 BTU 2 x 58000 BTU 1 x 60000 BTU	13	Basement , Roof
Heat exchanger	1	Basement
Chilled water pumps	2	Basement
Fresh air unit	1	Basement
Pressurization Fans	2	Roof

Table 1: Equipment listing

3. The following below describes the typical maintenance activities that the Contractor will be expected to perform under this contract. The work shall include but not limited to the following:

Item	Equipment	Activity	Frequency
1	AHUs on ground level to 9 th level	<ol style="list-style-type: none"> 1. Work to be done during normal working hours 2. Check belts, grease bearings and check blower wheels 3. Investigate any strange noises 4. Check starts and on/off controls 5. Clean drain pan and flush drain lines 6. Service all strainers where applicable 7. Ensure wire grilles are intact, clean and secure 8. Verify water flow to air handlers 9. Verify operation of actuator valves and VFD Drives. 10. <u>Note:</u> Any work on the actuator valves and VFD drives must be coordinated with the BMS contractor. The BMS is Automated Logic 11. And other activities as per manufacturer's specifications 12. Pressure clean evaporator coils 13. Operate valves on the chilled water system for the air handler 14. And other activities as per manufacturer's specifications 15. List all corrective work to be done 	Quarterly
2	AHUs on ground level to 9 th level	<ol style="list-style-type: none"> 1. Work to be done during normal working hours 2. Replace filters with MERV 8 disposable type. See Table 1 has for quantity and sizes of the filters required for each air handler unit 3. List all corrective work to be done 	Quarterly

Item	Equipment	Activity	Frequency
3	Mini split A/C units,	<ol style="list-style-type: none"> 1. Work to be done during normal working hours 2. Cleaning/Replacement of filter as needed 3. Clean evaporator and condenser coils 4. Check for refrigerant leaks and repair if required 5. Secure all panels 6. Check all electrical connections 7. Check condenser fan and motor 8. Clean and flush condensate drain line 9. Checking operation of the controls of the air conditioners such as selector switch, thermostat, relays, remote control etc 10. Checking Firmness of the Supporting arrangement for the compressor, blower motor, air conditioners casing and fixing of the air conditioners etc 11. Provide quotation for any repairs required 12. Top up Refrigerant Gas if required 13. Checking of pressures 14. Painting of rusted areas of all air conditioners 15. All other work as per manufacturer specifications 16. List all corrective work to be done 	Quarterly
4	VAV boxes and thermostats	<ol style="list-style-type: none"> 1. Work to be done during normal working hours Ensure all VAV boxes are modulating and functional. 2. Ensure that all control wiring is connected and the unit has power 3. Ensure that the thermostats are communicating with the controllers on the VAV boxes. <u>Note:</u> Any work in the VAV boxes must be coordinated with the BMS contractor. The BMS is automated logic system. 4. Ensure that the VAV boxes are controlling temperature and responding to temperature changes. 5. Any setting changes to VAV boxes must be air balanced accordingly throughout the entire floor. 6. List all corrective work to be done <p>And other activities as per manufacturer's specifications</p>	As requested

Item	Equipment	Activity	Frequency
5	Washroom Exhaust fans	<ol style="list-style-type: none"> 1. Work to be done during normal working hours 2. Check that fan is working 3. Clean grille if required 4. List all corrective work to be done 	As requested
6	Fresh air unit	<ol style="list-style-type: none"> 1. Work to be done during normal working hours Check belts, grease bearings and check blower wheels 2. Investigate any strange noises 3. Check starts and on/off controls 4. Clean drain pan and flush drain lines 5. Service all strainers where applicable 6. Ensure wire grilles are intact, clean and secure 7. Verify water flow 8. Verify operation of actuator valves and VFD 9. Drives if present 10. <u>Note</u>: Any work on the actuator valves and VFD drives must be coordinated with the BMS contractor. The BMS is an Automated Logic system. 11. Pressure clean coils 12. Replace filters with washable filter 13. And any other activity as per manufacturer's specification 14. List all corrective work to be done 	Quarterly
7	Chilled water supply and return system	<ol style="list-style-type: none"> 1. Work to be done during normal working hours 2. Chill water testing shall be done once per year 3. Ensure pot feeder is operational 4. Take water samples from various points along the chilled water system to check for contaminants. Ensure results are certified by a reputable laboratory. 5. Provide a recommendation on chemical water treatment based on these results. 6. List all corrective work to be done <p>If treatment is required, the contractor shall provide a quotation for the supply and installation of the required chemicals to the system.</p>	Annually

Item	Equipment	Activity	Frequency
8	Stairwell Pressurization fans	<ol style="list-style-type: none"> 1. Work to be done during normal working hours 2. Ensure fans are clean and operational 3. Check for vibration 4. Investigate any strange noises 5. Check electrical controls and connections 6. Ensure fans are properly secured and housing is rust free. 7. Ensure wire grilles are intact, clean and secure. 8. Any other checks as may be required 9. <u>Note</u>: All work on the Pressurization fans must be coordinated with the Fire Alarm contractor. 10. List all corrective work to be done 	Quarterly
9	Chilled Water Pumps	<ol style="list-style-type: none"> 1. Work to be done during normal working hours 2. Check pumps for vibrations 3. Investigate any strange noise 4. Check shaft alignments 5. Check pump couplings 6. Check filters and strainers 7. Flush drain lines in pump room 8. Check starts and On/Off controls 9. Check pressure differential sensor and VFD drives for the chilled water pumps. 10. <u>Note</u>: Any work on the actuator valves and VFD drives must be coordinated with the BMS contractor. The BMS is a Automated Logic. 11. Grease bearings where applicable 12. Rotate pump usage 13. List all corrective work to be done <p>And other activities as per manufacturer's specifications on both pumps</p>	Bi-annually

Item	Equipment	Activity	Frequency
10	Duct Cleaning	<p>The cleaning for the air ducts will include the following:</p> <ol style="list-style-type: none"> 1. Work to be done on weekends 2. Cover all office furnishings e.g Desks, computers, chairs, carpets 3. Cut opening into ducting to allow access air ducts, that is large enough to facilitate mechanical cleaning equipment and allow for inspection 4. Mark the position of access hole upon completion of work 5. Use mechanical agitation methods to remove dust, particulate, debris, and surface contamination. 6. Capture dislodged substances and contaminants and ensure they are removed with suitable collection equipment from the facility 7. Do not use any cleaning methods that will damage any HVAC components or duct insulation 8. Sanitize ducts with anti-bacterial environment friendly cleansers 9. Mark the position of dampers and any airdirectional mechanical devices inside the HVAC system prior to cleaning and, upon completion; restore them to their marked position. 10. Inspect ducting after cleaning to ensure all contaminants, substances, particulates etc have been completely removed 11. Seal all openings made for ducts to return to original state. 12. Clean and vacuum entire floor including carpets and affected work areas to allow staff to return to work safely. 13. Make good any and all damages sustained by the works 14. List all corrective work to be done 	
11	Heat Exchanger	<ol style="list-style-type: none"> 1. Work to be done on a weekend 2. Perform internal inspection/servicing as per manufacturers requirements 3. List corrective work to be done 4. Contractor is responsible for acquiring maintenance information based on the nameplate details 	

Unit Dunham-Bush Air Handler	Filter Specification Multi-Pleat MERV8 SC	Qty/Air Handler	Total
Ground floor to 8 th floor (36 units)	16" x 24" x 2"	4	144
	16" x 20" x 2"	2	72
9 th floor (4 units)	16" x 25" x 2"	4	16
	16" x 20" x 2"	2	8

Table 2: Estimated Quantity and sizes of required filters
(Note contractor is to confirm actual quantities and sizes of all filters)

B. GENERAL REQUIREMENTS

1. The Contractor shall:
 - Provide routine preventive and emergency maintenance of all equipment, in accordance with the manufacturers' specifications and all applicable codes and standards.
 - Ensure all equipment is operating in accordance with the manufacturers recommendations.
 - Ensure all ducting and refrigerant distribution piping are properly insulated and free of condensation.

2. The Contractor shall ensure all scheduled maintenance activities are completed at the frequencies stipulated in item 3 above. Payment shall only be made for works completed.

3. All preventive maintenance work shall be done during normal working hours Monday to Friday unless stated otherwise. Planned corrective work can be schedule on any day of the week in accordance with the planned labour rates submitted.

4. The contractor shall have access to OEM parts and material and technical information from the equipment manufacturers as required.

5. The Contractor shall be responsible for replacing the filters with Merv 8 in the air handler units after inspection in the intervals specified only if needed after approval by the Facilities Manager.

6. The Contractor shall ensure that any and all tools and materials required for the performance of the Services are maintained in its regular inventory and readily accessible to all of his personnel.

7. The Contractor shall have in his employ, and utilize in connection with this Contract, only fully qualified Tradesmen and shall comply with all Local Government and Statutory Authorities' requirements.

8. The Contractor shall use reasonable efforts to keep the site clean and clear of unnecessary obstruction so as to avoid danger to users of the building.
9. The Contractor shall comply with all applicable Laws and regulations regarding safety including but not limited to those contained in the Occupational Safety and Health (Protective Measures] Order which is or are the approved standards of safety for this Contract and which shall be considered as part of this Contract.
10. The Contractor shall ensure proper housekeeping is performed at all times.
11. Ensure all ducting and refrigerant distribution piping are properly insulated and free of condensation and leaks and shall make recommendations for corrective work as needed.
12. The Contractor shall provide its site personnel with personal safety wear which shall be utilized at all times on-site.
13. The Contractor shall not permit the use of alcohol or radios on site, nor shall it permit pets to be brought upon the site or the use of inappropriate language thereon.
14. The Contractor shall supply all the necessary materials as new, unopened units and shall further supply all necessary tools, equipment and access aids to allow the safe and prompt execution of the Services.
15. The contractor shall ensure that his workers are professionally attired with the company logo clearly visible on the breast pocket of his shirt.
16. The contractor shall ensure that his workers possess company identification cards or other forms of identification which shall be on their person at all times while on site.
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18. The Facility Manager shall discuss the human resource requirement for each task/job for corrective work after receipt of an estimate from the Contractor before execution of job.
19. The Contractor shall use reasonable efforts in consultation with the Facilities Manager to keep disruptions of the air condition supply to a minimum.
20. The contractor shall ensure that trained representatives attend to an emergency within two (2) hours of any emergency call.
21. The contractor may be asked to check, investigate, adjust or replace VAV boxes, dampers as the need arises.

22. The contractor shall assess the system and make recommendations for improvement as needed.
23. No parking shall be available on site. The contractor shall be responsible for his own parking arrangement. Parking can be obtained at the Parkade. No reimbursement shall be made for parking.
24. For all preventive maintenance work, work order numbers and task sheets with maintenance activities shall be sent via email to the contractor which are to be included in the service reports when the work is executed. Note these maintenance activities are to be included in the contractor's scope of activities when executing the preventive maintenance work.
25. The contractor must be able to receive scheduled work orders and submit quotations via email.
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30. All completed work being invoiced for must be supported by the contractor's service reports containing our work order numbers. Please note if our work order numbers are not included in the contractor's service reports, the invoices will not be processed.
31. When invoicing of preventive maintenance work, a summary sheet must be prepared and attached to the invoice together with the other supporting docs such as the service reports. The summary sheet must match the BOQ and must include frequency, Number of units, Cost per unit, number of units completed, total cost etc.
32. A minimum charge of 2 hours based on the planned rates submitted, shall be paid if any planned/scheduled work cannot be executed due to unforeseen circumstances.
33. The contractor can only invoice for work completed with a valid work order number.

34. All service reports must be completed and signed off by UDeCOTT's Facilities Assistant before leaving the site each day.

35. The contractor must provide service reports in triplicate, one copy for UDeCOTT, one copy for the contractor records and the original for the contractor to be submitted with the invoice. The service reports must include the following:

1. Description of the work done
2. Location where the work was done (as accurate as possible) – building, floor, room
3. Equipment number, model number, serial number
4. Technician name and class type
5. Start and end times of work
6. Date the work was done
7. Material used
8. Equipment rented if applicable
9. Corrective work to be done
10. Signatures of UDeCOTT and contractor's technician

FREQUENTLY ASKED QUESTIONS (FAQs)

Provision of Air Condition Maintenance Services at various buildings at Government Plaza

What is the purpose of this Request for Proposal?

The purpose of this Request for Proposal is to identify and contract a suitably qualified and experienced Contractor with the specialised expertise necessary to undertake the Project.

What is the Location of the site?

The locations for Air Condition Maintenance Services at various buildings at Government Plaza are as follows;

1. Immigration Division Building
2. Inland Revenue Division Building
3. Customs and Excise Building
4. Ministry of the Attorney General and Legal Affairs Tower

Date and Time of Pre-submission Meeting and Site Visit?

Wednesday 7th April, 2021 at 2:00 p.m.

Are there any eligibility requirements for this Procurement Process?

In order to be eligible for evaluation and/or consideration to provide the Services, Proponents must be able to demonstrate the following:

- Incorporation or otherwise registered to do business in Trinidad and Tobago **prior** to the award of any contract for the provision of the Works, as evidenced by the Certificate of Incorporation or Registration (as applicable),
- Submission of Annual Return – 2020 (2021 if applicable)
- Submission of valid statutory clearance/compliance certificates, namely,
 - VAT Clearance Certificate
 - BIR Clearance Certificate
 - NIS Certificate of Compliance

Are Proponents required to submit a Bid Bond with their Proposals?

No. A Bid Bond is not required for this Project.

Would proposals submitted by Joint Ventures be acceptable?

Proposals submitted by Joint Venture (JV) entities would be acceptable providing that the following is included in their Proposals:

1. Joint Venture Guarantee
2. Joint Venture Agreement (executed)
3. Audited Financial Statements, Litigation History and Experience of each member
4. Other related documents identified in the RFP.

Proponents are to note that the responses provided as guidance to these Frequently Asked Questions does not relieve the Proponent of its obligation and responsibility to fulfil and comply with all requirements of the Request for Proposals.