

Embassy Djibouti - Scope of Work
ASCO Series BFR Filter and
3D Trasar Monitoring System Installation
March - 2016

1. Project Description

- 1.1. This project work is to install TRASAR 3D Monitoring system and ASCO series BFR Filter System at the U.S. Embassy in Djibouti per this Scope of Work.
- 1.2. ASCO Series BFR Filter
 - 1.2.1. Remove existing conventional flow max filter housing.
 - 1.2.2. Relocate existing isolation valves on the branch from main chilled water loop.
 - 1.2.3. Install new ASCO Series BFR Filter System
- 1.3. Install 3D Trasar chilled water Monitoring System
 - 1.3.1. Mount monitoring system using proper size unistrut.
 - 1.3.2. Provide and install a type K copper pipe from the supply and return of the chilled water loop and connect to the monitoring System as per manufacturer's guidance.

2. General Requirements

- 2.1. Material shipped into Djibouti for this project may be brought in duty free.
- 2.2. The Contractor must pay for transportation of all Contractor purchased material to the site and the U.S. Embassy will provide a tax exoneration certificate for customs.
- 2.3. Packaging and Marking

U.S. Embassy Djibouti
Lot 350 - B Haramous
B.P. 185
Republic of Djibouti
- 2.4. Contractor will provide airway and shipping bills to the Department of State Procurement and Shipping group for exoneration of duty on material used on this project.
- 2.5. All costs associated with shipping, transportation to the Embassy, and movement through customs is the responsibility of this contractor.
- 2.6. Security
 - 2.6.1. A list of employees who will work on this project, to include names (as shown on ID), and ID numbers must be submitted to the COR one (1) week prior to accessing the Embassy for approval by the Regional Security Officer. This list must be updated each month and resubmitted for approval 1 week prior to the end of the month.
 - 2.6.2. Information on any vehicles which must come onto the Embassy Compound as part of this work must be submitted to the COR with the list of employees. This information is to include VIN number, license plate number, vehicle description, and color and must be submitted to the COR one (1) week prior to required access.

Embassy Djibouti - Scope of Work

ASCO Series BFR Filter and 3D Trasar Monitoring System Installation

March - 2016

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2.7. Tools

- 2.7.1. All tools must be provided by the contractor.
- 2.7.2. All tools must be taken off-site every day or stored in a container at the end of the work day.

2.8. Contractor Supplied Personnel Technical Qualifications

2.8.1. Qualified Electrical Labor

- 2.8.1.1. Contractor shall have a U.S. Journeyman electrical certification for installation of all electrical work or a comparable National certification from a country having a similar National Electrical Code.
- 2.8.1.2. The name and validation of the certificate must be submitted with the bid.
- 2.8.1.3. The journeyman electrician must be on the job site at all times when electrical work is being performed.
- 2.8.1.4. Contractor's journeyman electrician must have a current OSHA 30 hour training certification.
- 2.8.1.5. All personnel used in the performance of the electrical work shall be licensed and qualified electricians or electrical professionals as recognized by at least one U.S. State or Foreign National jurisdiction.
- 2.8.1.6. At least one team member must have 10 or more years of applicable electrical experience in the United States, Europe, Australia, or other country with a National Electrical Code.
- 2.8.1.7. Resumes for all proposed team personnel detailing their experience MUST be submitted with the Cost Proposal or it will not be considered.
- 2.8.1.8. Similar installation experience must be clearly shown on all resumes submitted.
- 2.8.1.9. Equipment manufacturer technicians (factory representatives) are exempt from this requirement and may supplement but not replace the U.S. staff.

2.8.2. Electrical Installation Labor

- 2.8.2.1. All contractor-provided electrical installation labor furnished under this task order and the electrical tasks to be completed thereto shall be executed only by journeyman and master level tradespersons, licensed to the trade which he/she practices.

Embassy Djibouti - Scope of Work
ASCO Series BFR Filter and
3D Trasar Monitoring System Installation
March - 2016

- 2.8.2.2. Equipment manufacturer technicians (factory representatives) are exempt from this requirement and may supplement but not replace the U.S. staff and must be under constant direction and supervision from licensed personnel.
- 2.8.3. Trade Licenses
 - 2.8.3.1. Contractor must provide certified pipe fitter and personnel qualified for the job. Certifications and qualifications must be provided with the bid submission.
 - 2.8.3.2. All professional tradesmen licenses for Contractor personnel shall be current and valid at the time of COR review and shall be maintained and remain current and valid for the complete duration of the project execution.
- 2.8.4. Use of Non-Licensed Labor
 - 2.8.4.1. Contractor use of non-licensed electrical laborers, helpers, etc. to execute, plan, lay out, or otherwise direct the execution of the electrical work activities under this task order is *not allowed*.
 - 2.8.4.2. Local hired labor shall not perform functions beyond manual labor such as debris removal and must be directly managed and supervised by the contractor.

3. Safety

- 3.1. Contractor must submit with the bid, a Company Safety Plan including a specific Safety Plan tailored to this project to include an Activity Hazard Analysis (AHA).
- 3.2. All safety plans must conform to USACE (Army Corps of Engineers) Safety and Health Manual EM-385.
- 3.3. General. The contractor shall provide and maintain work environments and procedures which will safeguard the public and Government personnel, property, materials, supplies, and equipment exposed to contractor operations and activities; avoid interruptions of Government operations and delays in project completion dates; and, control costs in the performance of this contract. For these purposes, the contractor shall:
 - 3.3.1. Provide appropriate safety barricades, signs and signal lights;
 - 3.3.2. Comply with the standards issued by any local government authority having jurisdiction over occupational health and safety issues; and,
 - 3.3.3. Ensure that any additional measures the contracting officer determines to be reasonably necessary for this purpose are taken.
 - 3.3.4. For overseas construction projects, the contracting officer shall specify in writing additional requirements regarding safety if the work involves:
 - 3.3.4.1. Scaffolding;

Embassy Djibouti - Scope of Work
ASCO Series BFR Filter and
3D Trasar Monitoring System Installation
March - 2016

- 3.3.4.2. Work at heights above two (2) meters;
 - 3.3.4.3. Trenching or other excavation greater than one (1) meter in depth;
 - 3.3.4.4. Earth moving equipment;
 - 3.3.4.5. Temporary wiring, use of portable electric tools, or other recognized electrical hazards. Temporary wiring and portable electric tools require the use of a ground fault circuit interrupter (GFCI) in the affected circuits; other electrical hazards may also require the use of a GFCI;
 - 3.3.4.6. Work in confined spaces (limited exits, potential for oxygen less than 19.5 percent or combustible atmosphere, potential for solid or liquid engulfment, or other hazards considered to be immediately dangerous to life or health such as water tanks, transformer vaults, sewers, cisterns, etc.);
 - 3.3.4.7. Hazardous materials—a material with a physical or health hazard including but not limited to, flammable, explosive, corrosive, toxic, reactive or unstable, or any operations which creates any kind of contamination inside an occupied building such as dust from demolition activities, paints, solvents, etc.; or
 - 3.3.4.8. Hazardous noise levels.
- 3.4. Records. The contractor shall maintain an accurate record of exposure data on all accidents incident to work performed under this contract resulting in death, traumatic injury, occupational disease, or damage to or theft of property, materials, supplies, or equipment. The contractor shall report this data in the manner prescribed by the contracting officer.
- 3.5. Subcontracts. The contractor shall be responsible for its subcontractors' compliance with this clause.
- 3.6. Written program. Before commencing work, the contractor shall:
- 3.6.1. Submit a written plan to the contracting officer for implementing this clause. The plan shall include specific management or technical procedures for effectively controlling hazards associated with the project; and,
 - 3.6.2. Meet with the contracting officer to discuss and develop a mutual understanding relative to administration of the overall safety program.
- 3.7. Notification. The contracting officer shall notify the contractor of any non-compliance with these requirements and the corrective actions required. This notice, when delivered to the contractor or the contractor's representative on site, shall be deemed sufficient

Embassy Djibouti - Scope of Work

ASCO Series BFR Filter and 3D Trasar Monitoring System Installation

March - 2016

notice of the non-compliance and corrective action required. After receiving the notice, the contractor shall immediately take corrective action. If the contractor fails or refuses to promptly take corrective action, the contracting officer may issue an order suspending all or part of the work until satisfactory corrective action has been taken. The contractor shall not be entitled to any equitable adjustment of the contract price or extension of the performance schedule on any suspension of work order issued under this clause.

4. Government Provided Material

- 4.1. TRASAR 3D Monitoring System
- 4.2. ASCO Series BFR Filter Housing

5. Submittals

- 5.1. Copper Pipe
- 5.2. **All** fittings including valves, reducers, elbows, and all other components and accessories
- 5.3. Welding solder and filling material
- 5.4. Pipe insulation and insulation covering
 - 5.4.1. Armaflex or approved substitute
 - 5.4.2. Insulation thickness will not be less than 1 in. (Ref. ASHREA).
- 5.5. Electrical conductors.
 - 5.5.1. THHN ONLY and minimum AWG#12.
 - 5.5.2. Black (phase), White (neutral), and Green or Green w/ Yellow stripe (ground).
- 5.6. Electrical pipe, boxes, and fittings
 - 5.6.1. ¾" minimum conduit size
 - 5.6.2. Compression fittings ONLY. NO/NO set screw connectors.
 - 5.6.3. Rigid steel conduit for exterior runs**
 - 5.6.4. Myers hubs for exterior box entry.**

6. Scope of Work

- 6.1. Installation of ASCO series BFR filter system (model: BFR012SL02T-A35)
 - 6.1.1. Relocate the inlet and outlet valves to within 200 mm of their respective main branches of chilled water supply and return lines.
 - 6.1.1.1. **THIS IS TIME CRITICAL AND MUST BE COMPLETED WITHIN TWO (2) HOURS.**
 - 6.1.1.2. Facility Management (FAC) staff will stop the chillers and chilled water circulating pumps prior to draining the lines.
 - 6.1.1.3. Isolate the sections of the chilled water supply and return affected by the work and drain the chilled water lines.

Embassy Djibouti - Scope of Work
ASCO Series BFR Filter and
3D Trasar Monitoring System Installation
March - 2016

- 6.1.1.4. Water will be drained into drums to be either returned to the chiller system at the end of this work or be disposed of properly by this contractor. Water to be drained is estimated to be 700 liters.
- 6.1.1.5. Cut and thread the existing piping on the branch lines to and from the ASCO filter casing to accept new ball valves.
- 6.1.1.6. Install new ¼ turn ball valves in new locations
- 6.1.1.7. Existing valves will remain in place for isolation of the filter.
- 6.1.1.8. Refill the chilled water system and vent
- 6.1.1.9. Return the chillers and circulating system to full operation
- 6.1.2. Remove and dismantle existing filter housing after closing inlet and outlet valves
- 6.1.3. Install and mount ASCO filter skid on the existing pad as per manufactures guidance.
 - 6.1.3.1. If more space is required, contractor will increase size of the pad to create the additional space for the filter skid. Match existing pad height dimensions.
 - 6.1.3.2. Modify piping as required using 2” type K Copper pipe to complete the circuit installation from the isolation valves (Supply and Return) to the inlet and outlet of the ASCO filter respectively. Connect as per manufacturer’s recommendation.
 - 6.1.3.3. Contractor will supply all the necessary valves, pipe fittings, and pipe supports.
- 6.1.4. Test Run for at least one hour for checking for leaks and insure proper operation of the filter.
- 6.1.5. Insulate all piping and fittings using approved closed cell foam insulation and pipe covering material.
- 6.1.6. Ensure that dielectric fittings are used between piping of dissimilar metals.
- 6.1.7. Ensure that copper piping is insulated from ferrous metal hangers.
- 6.2. Installation of 3D Trasar Monitoring System
 - 6.2.1. Erect the monitoring system using proper sized hot-dipped galvanized or epoxy coated Unistrut supports.

Embassy Djibouti - Scope of Work
ASCO Series BFR Filter and
3D Trasar Monitoring System Installation
March - 2016

- 6.2.1.1. Mounting will be stand alone. Anchor Unistrut supports using stainless steel anchors and bolts. Use of mild steel is not allowed.
- 6.2.1.2. Provide and install required electrical power.
 - 6.2.1.2.1. Power for the Trasar system will be installed by this contractor.
 - 6.2.1.2.2. Power will originate from electrical panel PMPH, circuit 33.
 - 6.2.1.2.3. Contractor will install conduit and wire from this point to the unistrut support, per US NEC, for the Trasar system. This will act as the service disconnect and power for the Trasar system. Outlet must be within cord range of the Trasar system plug.
- 6.2.2. Provide and install type K copper pipes from both 2" supply and return lines
 - 6.2.2.1. Install 2" to 3/4" reducers at the isolation valves on the chilled water supply and return taps to connect to the inlet and outlet of the monitoring system.
 - 6.2.2.2. Install all piping support using minimum 3/8" galvanized threaded rod with cathodic isolation to prevent corrosion due to copper pipe supported on steel hangers. At least one support every 1.5 meters/5 ft.
- 6.2.3. Connect the supply line to the inlet of the monitoring system and connect the return line to the outlet of the monitoring system.
 - 6.2.3.1. There are two outlet ports from the monitoring systems
 - 6.2.3.2. Cap/Plug the return line to the outlet from the fluorimeter and cap/plug the other outlet.
- 6.2.4. Inspect monitoring system and insure all sensors and communication lines are installed and are in place as per manufacturer's guide lines.
- 6.2.5. Open main isolating valves and test run for at least one hour check for leaks and proper operation of equipment.
- 6.2.6. Insulate all piping and fittings AFTER TESTING using approved closed cell foam insulation and pipe covering material.

7. After Implementation

- 7.1. Provide 1 year installation warranty

8. Billing

- 8.1. Invoices will be submitted to Djibouti Accounts Payable (DjiboutiAP@state.gov)

Embassy Djibouti - Scope of Work
ASCO Series BFR Filter and
3D Trasar Monitoring System Installation
March - 2016

8.2. All billing/invoices for progress payments must be accompanied by an AIA Form G702/703. This is a spreadsheet and will be provided by the USG for your use.

9. Points of Contact

9.1. CONTRACTING OFFICER: The Contracting Officer (CO) shall be the Embassy General Services Officer (GSO).

9.2. CONTRACTING OFFICER REPRESENTATIVE (COR) shall be the Embassy Facility Manager (FM).

10. Proposal Submittal

10.1. Proposal shall be submitted to Procurement Group, U.S. Embassy Djibouti (DjiboutiProcurement@state.gov)

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