

STATEMENT OF WORK
Compound Access Control (CAC) security
Upgrade- Fence works
Presidential Villas Compound
U.S. EMBASSY KHARTOUM, SUDAN

Scope of Work: Presidential Villas security Upgrade

The US Embassy, Khartoum has a requirement to upgrade the security measures and install steel fences to surround the sally port area in the Compound Access Control of the newly leased presidential villas complex in hay ElShatti, Khartoum.

Upgrading of the security measures to the Compound access control will bring these residences up to the standards outlined by the Unites states department of states Bureau of diplomatic security.

The works shall be done as per scope of work, specifications and General contract conditions. This project requires an experienced contractor to execute the job. The contractor should comprehend that this project is additional works for another project. Due to the nature of the projects, both projects shall be carried out simultaneously. Coordination and schedule adherence shall be expected from all the parties. The Contracting officer shall supervise the coordination between all the contractors.

The Contractor shall provide all labor, material, tools; equipment, supervision and other related items required to the complete the project as per scope of work, specifications.

Contractors are advised to visit the site, verify the existing site conditions to develop their proposal.

1. Submittals

The contractor shall submit the following

1. Concrete mix design and steel certificates and testing reports.
2. Manufacturers' data: Submit complete data on materials including accessories and fittings.
3. Layout Drawings: Submit full set of layouts/ designs of the shed, drop arms systems, fences, foundations including all required openings, including plans and sections drawn to scale for review.
4. A full set of AS-Built drawings is part of the final submittals of the project.

2. Scope of Work

The sally port

MCAC sally port

- 1- The contractor shall fabricate and install MCAC two sally ports.

The contactor shall provide each sally port with the fence, interior sliding gate and "spear shaped "steel bars around the whole perimeter of the whole area as shown in diagram

Fence:-

- The sally port fence shall have a minimum of 2.75 meters vertical height above F.F.L and shall be made of vertical 20 cm steel bars in diameter. The bars shall be spaced @ 15 cm c/c.

The fence shall have spear shaped bars as shown in diagram. The fence shall have horizontal 16 cm Steel Channel “ C” section as side supports. The horizontal supports shall be at least 2 meters apart and welded to the columns and bollards to form one rigid system. The horizontal supports shall be welded from the protected side.

- The columns shall be made of I section 20 cm. The foundation shall be part of the bollards foundation, the size of the Column footings shall be 1000 mm X 1000 mm X 1200 mm in depth. The footing shall be composed of single layer steel bars mesh; the mesh shall be of two layers, 16 mm deformed bars each at 20 cm intervals. The I beam sections’ columns shall be embedded in the footing and welded to the foundation steel mesh. The bollards’ foundation preparation and concrete work are part of the other projects’ scope of work; however the contractor shall be responsible to install this project steelworks, earthworks jobs required to carry out his works in coordination with the other contractor.

Spear shaped steel bars:

- On the top of the exterior walls of the electrical area and the MCAC control room walls and on the fence, the contractor shall install 75 cm” spear shaped “steel bars as shown in diagram. The spear shaped steel bars shall be on top of the fence steel work and the gate, and doors as an extension to the 20 cm steel bars.

- The spear shaped bars shall be composed of two bars one of which is vertical, as an extension to the fence steel bars and the other is curved. Both shall have pointed tip. The vertical height shall be 75 cm at least.

- The spear shaped steel bars which shall be installed on the top of the exterior walls of the electrical area, and the guards’ control room shall be bonded with the wall with high strength, structural epoxy paste adhesive i.e.: Sikadur® 31 Hi-Mod Gel or equal approved by COR.

Sliding gate:-

- The sally port shall have internal sliding steel gate. The width of the gate shall be 5 meters at least. The gate height and design height shall match the same as the fence. The sliding gate shall be fabricated to allow the smooth manual opening and closure of the gate using heavy duty V-groove steel wheels, track hanger, floor guide, pad locks to carry the load of the gate and allow the easy maintenance of the gates. The frame of the gate shall be 10 cm X 5cm X 6 mm.

- The contractor install the continuous footing for the sliding gate, the beam shall be 40 X 30 cm. The beam shall have a 14 cm I beam section as its reinforcement. (5cm X 5cm X 3mm) angle shall be aligned and welded to top of the reinforcement to act as the track for the gate wheels.

- All accessories, handles, etc... shall be approved by the COR before installation

Doors:

- Four steel doors shall be fabricated and installed. The doors shall have the same design and height as the fence. The door shall be at least (2.2 m. X 0.9 m). The frame of the doors shall be at least 10 cm X 5cm X 6 mm.
- All the door accessories, handles, heavy duty hinges, pad lock shall be approved by the COR prior installation.

2- The contractor shall carry out all earthwork required to finish up the work according to drawings, specs and scope of work. Any deviation shall be approved by the COR before installation.

3- The contractor shall remove the light posts that obstruct the execution of the project with the proper insulation of the cables and wires which are affected by the relocation upon the approval of the COR.

SCAC sally port

1- The contractor shall fabricate and install SCAC sally port. The Sally port shall consist of the fence, sliding gate and “spear shaped” steel bars around the whole perimeter of the whole area.

Fence:-

- The sally port fence shall have a minimum of 2.75 meters vertical height above the F.F.L and shall be made of vertical 20 cm steel bars in diameter. The bars shall be spaced @ 15 cm c/c. The fence shall have spear shaped bars -75 cm height, as shown in diagram. The fence shall have horizontal 16 cm Steel Channel “ C” section as side supports. The horizontal supports shall be at least 2 meters apart and welded to the columns and bollards to form one rigid system. The horizontal supports shall be welded from the protected side.

Columns in the Bollards area

- The columns shall be made of I section 20 cm. The foundation shall be part of the bollards’ foundation; the depth is 1200 mm at least. The length of the foundation is 1000 mm and width 1000 mm at least. The footing shall be composed of single layer steel bars mesh; each mesh shall be of two layers, 16 mm deformed bars each at 20 cm intervals. The I sections’ columns shall be embedded in the footing and welded to the foundation steel mesh. Although, the bollards’ foundation preparation and concrete work are part of the other projects’ scope of work; the chosen contractor shall be responsible to install this project steelworks, extra earthworks jobs required to carry out his works in coordination with the other contractor .

Columns (outside the bollards) area:

- The columns shall be made of I section 20 cm. The size of the footing is 1 m X 1m X 1.2 m depth. The footing shall be composed of single layer steel bars mesh; each mesh shall be of two layers, 16 mm deformed bars each at 20 cm intervals. The I sections' columns shall be embedded in the footing and welded to the foundation steel mesh
- The contractor install the continuous footing between the columns, the beam shall be 40 X 30 cm. The beam shall have a 14 cm I beam section as its reinforcement. (5cm X 5cm X 3mm) angle shall be aligned and welded to top of the reinforcement to act as the track for the gate wheels.

Two Sliding gates:-

- The sally port shall have internal and external sliding steel gate. The width of the gate shall be 5.5 meters at least. The height shall match the same height as the fence. The frame of the gate shall be 10 cm X 5cm X 6 mm.
- The internal sliding gate shall be made of same design of the fence. The external one shall be similar to the internal one in addition of welding 5 mm thick steel sheet to cover the whole gate and to obstruct the visibility of the outsiders.
- Sliding gate shall be fabricated to allow the smooth manual opening and closure of the gate using heavy duty V-groove steel wheels, track hanger, floor guide, pad locks to hold the load of the gate and allow the easy maintenance of the gates.
- The contractor install the continuous footing for the sliding gate, the beam shall be 40 X 30 cm. The beam shall have a 14 cm I beam section as its reinforcement. (5cm X 5cm X 3mm) angle shall be aligned and welded to top of the reinforcement to act as the track for the gate wheels.

Doors:

- Two steel doors shall be fabricated and installed. The interior door shall have the same design and height as the fence. The exterior door shall have an additional 5 mm thick steel sheet to cover the gate, similar to the sliding gate design. The hinged door shall at least (2.2 m. X 0.9 m). The frame of the doors shall be 10 cm X 5cm X 6 mm.
- All the door accessories, handles, heavy duty hinges, pad lock shall be approved by the COR prior installation.

Spear shaped steel bars:

- The contractor shall install" spear shaped "steel bars on top of the fence, gates and the doors.
- The spear shaped bars shall be composed of two bars one vertical, as an extension to the fence steel bars and the other is curved. Both shall have pointed end. The vertical height shall be 75 cm at least.

2- The contractor shall carry out all earthwork required to finish up the work according to drawings, specs and scope of work. Any deviation shall be approved by the COR before installation.

3- The contractor shall remove the light posts that obstruct the execution of the project with the proper insulation of the cables and wires.

Paint of all steel works: The contractor shall be responsible to paint the steel work, frames with iron oxide primer followed by Shop spray Semi-gloss enamel paint. The color of the paint shall be dark brown in color. All Paint materials shall be contractor furnished, subject to compliance with requirements to products of "NILE PAINTS", or approved equal. Apply paint in accordance with manufacturer's directions. Use applicators and techniques best suited for substrate and type of material being applied and to ensure full and adequate coverage. Apply additional coats when undercoats, stains, or other conditions show through final coat of paint until paint film is of uniform finish, color, and appearance.

Reinforced Concrete work details

Reinforcing Bars: ASTM A 615/A 615M, Grade 420 (Grade 60), deformed.

- The concrete shall be ready mix concrete
 - a. Maximum Slump: 125 mm.
 - b. Maximum Slump for Concrete Containing High-Range, Water-Reducing Admixture: 200 mm after admixture is added to concrete with 50 mm to 75 mm slump.
 - c. Compressive Strength (28 Days): 30 MPa minimum.
 - d. Maximum Water-Cementitious Materials Ratio: 0.54 for non-air-entrained concrete and 0.45 for air-entrained concrete.

The work shall include excavation of topsoil, the refill works and compaction to achieve a leveled surface.

- **The contractor shall maintain existing utilities indicated to remain and protect them against damage during the project. Damages caused by works, shall be repaired by the contractor at no additional cost to the Government.**
- **The contractor shall transport from site all debris, rubbish, and materials resulting from operations and dispose off site on a daily basis in accordance with local regulations.**

Conditions of Contract

1. General

This is a firm fixed price turnkey job for the entire work and amount quoted shall include all work described in attached drawing, scope of work and general condition of contract. The lump sum price quoted shall be fixed and nothing extra will be entertained on any account.

Contractor's staff is subject to such restriction for entry and exit as are required by the Embassy's security requirement. Contractor's staff will be subject to security cleared as required by the Embassy.

Contractor shall restore all surfaces disturbed by construction to match with existing finish.

Any deviation from the original contract/scope of work shall be informed to COR before work begins. No additional work or changes will be carried out without a contract modification.

2. Responsibilities of Contractor

Contractor shall be responsible for procuring, supplying, transporting, and providing all labor, materials, tools and plant and equipment etc., required for completion of the work in all respects and as per the scope of the work.

All expenses towards mobilization at site and demobilization including bringing in equipment, workforce and materials, dismantling the equipment, clearing the site etc. shall be deemed to be included in the rates quoted by the contractor against various items of schedule of rates and no separate payment on such expenses shall be entertained.

Contractor shall employ and provide one full time engineer to supervise the project and has experienced of carrying out such type of work.

Contractor shall not proceed with next activity until previous activity will be checked and approved by COR. Contractor shall mentioned all inspection dates in the schedule chart

Contractor should keep the site clean and accessible to Embassy employee all time

3. Specifications

Work under this contract shall be carried out strictly in accordance with specifications attached and will meet US and Local codes.

4. Execution of Work

The Contractors are advised to review the material specifications and scope of work. The Contractor should visit and walk through the site to familiarize themselves with the site conditions to understand the exact quantum of work.

On award of the work, Contractor shall submit all items below via email:

- a. Bar chart within 3 days for approval by the Contracting Officer Representative (COR). All dates and time schedule agreed upon should be strictly adhered to. Contractor shall notify the COR in advance regarding anticipated problems through the project.
- b. Proposed start date
- c. Weekly schedule/activity plan for the duration of the project *prior to the start date*.

For dismantling/blocking or making connection to any existing services or any shut-down, contractor shall inform the COR at least three working days in advance and proceed with the work only after the permission from the COR.

The duration of the project shall be 40 working days.

5. Materials

All materials used on this work shall be new and conforming to the contract specifications as per US and local codes.

Materials shall conform to the latest US Standards specifications as amended to date and carry certification mark. Contractor shall submit material samples and catalog for pre-approval.

All materials used on the project shall be approved by the Contracting Officer Representative (COR) before use. Any changes/substitutes on material shall be approved by COR before proceeding.

6. Storage of Materials

All materials shall be stored in a proper manner protected from natural elements so as to avoid contamination and deterioration.

7. Site Clearance and Cleanup

The Contractor shall clear away all debris and excess materials accumulated at the site and dispose of it away from Embassy premises, maintaining a neat site condition.

On completion of project, Contractor shall remove all surplus materials and leave the site in a broom clean condition.

8. Workmanship

Workers working on the site shall be skilled in their job and have related job experience.

9. Working Hours

Working hours shall be 8:30 A.M. to 4:30P.M Sunday to Thursday. No work shall be done on Fridays, Saturdays and holidays without the prior approval of the Contracting Officer.

10. Security Clearance

The Contractor shall inform and provide in writing transportation details (vehicle registration number, drivers name, and date of delivery) to the COR at least 24 hours in advance for material deliveries.

Contractor shall give workers names at least 3 days in advance to get the security clearance. All the workers shall have an official photo ID or photo ID with the company name on it.

11. Safety

- Contractor is responsible and shall continue management and implementation of a safety and health program throughout construction.
- The Contracting Officer and the Post Occupational Safety and Health Officer [OSHA] reserve the right to suspend work when and where Contractor's safety and health program is considered to be operating in an inadequate or non-complying manner.
- Contractor shall provide all Personal Protective Equipment for the workers as per the requirement of the site. Work will be stopped in case the proper protection equipment is not found with the workers and the lapse of time shall be at the Contractor's expense.
- Contractor will not leave the work site in an unsafe condition or any other condition that might cause injury to personnel, damage to existing work, plants or equipment.
- Contractor will use all safety gadgets e.g. hard hats, cotton gloves and goggles as required on site to avoid the accident.
- Any equipment or work considered dangerous shall be immediately discontinued
- Contractors must demonstrate understanding of their responsibilities under Post Managed Construction Project safety program by addressing hazards in preplanning processes and meetings
- Prior to starting a project, each contractor is required to review the work site and identify hazards that may occur while performing the job.
- Prior to starting a project, the contractor shall contact contracting officer, to ensure they have received pertinent information for the project including requirements for permits, floor plans, utility information, asbestos, lead based paint, and other hazardous materials.
- Per 15 FAM 935, contractors must provide their employees with a safe and healthful condition of employment.
- Contractors are expected to provide a "competent person" to implement site health and safety plan and to oversee its compliance. A competent person is an individual who, by way of training and/or experience, is knowledgeable of applicable standards, is capable of identifying workplace hazards relating to the specific operation, is designated by the employer, and has authority to take appropriate actions.
- The contractor shall be responsible for the removal and/or disposal of hazardous waste generated from the project. Hazardous waste generated from the project must be removed and disposed of in accordance with the Department's Hazardous Waste Management Policy as well as local rules and regulations.
- The contractor shall ensure proper safety, health and environmental requirements of EM 385-1-1 applicable to their project as followed.

- The contractor shall ensure individuals working at the site are trained and are aware of potential hazards. Contractors shall ensure that these individuals are provided with proper safety equipment to prevent accidental injury in accordance with the requirements of the contract
- Contractors will report accidents to Contracting officers, Contracting officer's representative and POSHO.

12. Warranty

The contractor shall guarantee that all work performed will be free from all defects in workmanship and materials and that all installation will provide the capacities and characteristics specified. The contract further guarantees that if, during a period of three years from the date of the certificate of completion and acceptance of the work, any such defects will be repaired by the contractor at his expenses.