



**U.S. CONSULATE GENERAL
ERBIL, IRAQ**

STATEMENT OF WORK

GENERAL CONSTRUCTION SERVICES

For

CONTAINER STORAGE AREA

NOVEMBER 30, 2014

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ATTACHMENTS

- 1. Sketch

1.0 PROJECT DESCRIPTION

1. PROJECT SYNOPSIS

The project is described as “Container Storage Area at the U.S. Consulate General Erbil, Ankawa Compound”.

The Contractor should furnish all necessary materials, labor, transportation, equipment, investigation and supervision, etc. Work will be performed within a fixed-price contract.

2. BACKGROUND

At present no functional area for containers “they are everywhere and not organized” at the U.S. Consulate General Erbil, Ankawa Compound.

3. SOLUTION

Remove all structural walls/shed/tanks and sands where the project will be executed. Build a concrete slab that can be used as a container storage area.

2.0 GENERAL CONDITIONS

1. **Fixed-Price Proposal.** The Contractor shall provide one fixed-priced Proposal for the complete Project that includes every aspect of the Work.
2. **Specifications.** The Work shall be governed by the US Embassy International Codes, which includes the National Fire Prevention Association (NFPA), International Building Code, International Mechanical Code, International Plumbing Code, and National Electric Code (NEC), also are applicable. Should there be a discrepancy between the US Embassy Specifications and the applicable Building Code, the more stringent of the two shall govern.

The Contractor is responsible for compliance with all Building Codes; Work not in compliance with the Codes shall be deemed to be unacceptable.
3. **Execution.** The Work shall be executed in a diligent and workmanlike manner in accordance with the negotiated fixed-price, this Scope of Work, the Project Schedule, International Building Codes, and the laws of the City of Erbil where applicable.
4. **Work Hours.** Unless otherwise agreed with COR or the Facilities Manager, the Work shall be executed during normal Embassy work hours. Night, weekend or holiday work shall not be permitted except as arranged in advance with Facilities Manager and COR. Embassy holiday schedule is available from Facilities Manager or COR.
5. **Safety.** The Contractor shall be responsible for conducting the work in a manner that ensures the safety of employees and visitors to the Embassy Compound, and the Contractor's employees.
6. **Workforce.** The contractor shall provide all supervision, skilled and unskilled labor needed to perform the work. The contractor shall comply with embassy security policy by providing embassy approved escorts. Contractor provided escorts shall be in quantity sufficient to comply with RSO escort ratios for number of workers on the project.
7. **Subcontractors.** Contractor shall be responsible for the conduct and workmanship of Subcontractors engaged in the Project, and for Subcontractors compliance with the terms of this Statement of Work. The Contractor is responsible for the behavior and workmanship of Subcontractors while on Embassy property.
8. **Modification to Contract.** The Contractor shall not incur any costs beyond those described in this SOW unless directed otherwise in writing by the Contracting Officer. Any work performed by the Contractor beyond this SOW without written direction from the Contracting Officer will be at the Contractor's own risk and at no cost to the Embassy.
9. **Stop Work.** At any time during the Project, the Contracting Officer reserves the right to Stop Work for protection of employees or visitors, security, or any other reason at his/her discretion.

10. **Submittals.** The contractor is responsible to submit :

- Installer Qualifications:

All work under this Scope of work shall be performed by Construction Contractor having experiences on civil works. The Contractor shall have the following qualifications:

1. Qualifications for installation firm and installation supervisor
2. A list of the relevant projects. Do not list projects that proposed staff was not involved, even if your firm was.
3. Qualifications/Experience of the firm
4. References

- Material and Equipment Lists:

Submit material lists as follows:

Furnish complete Material Lists. Include only information on exact material installed; not complete "line" of manufacturer. Where catalog sheets show proposed material as well as other materials or equipment, identify proposed material with rubber stamp arrow or similar concise method.

Provide all product data with Material Safety Data Sheet for each product.

- Proposed design and construction schedule

The Contractor shall submit a project design and construction bar chart schedule with their technical proposal.

The bar chart schedule developed by the Contractor shall reflect their recommended project phases, phase activities and activity durations.

A written narrative shall also be included with the technical proposal explaining the schedule submitted and the reasons why and how it can be completed in the time frame proposed by the Contractor.

This schedule and narrative will be reviewed by the Technical Evaluation Committee as part of the evaluation process and will be assigned a score with clarity and comprehensiveness of the submission.

- Hazard control measures plan

The contractor must document in the bid for work how the hazard controls will be implemented and maintained during the project.

- Shop drawings

The Contractor shall provide all shop drawings prior to fabrication and release of any materials for the Facilities Manager and COR Review and approval. The Facilities Manager review, however, does not relieve of the contractor's responsibility for the engineering work as to provide a complete working system.

11. **Excavation and Utilities.** The contractor is responsible to locate all existing utility lines prior to any excavation. Prior to disconnecting any existing utility services, the contractor is responsible to provide 48-hour advance notice to the COR.
12. **Close-out.** Prior to final acceptance, the contractor is to submit to the COR marked up drawings (As-Built) reflecting the work as constructed. The drawings shall be digitally submitted in PDF format.
13. **Housekeeping.** The contractor is responsible to clean up daily after working hours.
14. **Bid form.** The Contractor shall cover each of its workers at the site with Workers' Compensation coverage, and require its subcontractors to do the same. Contractor must furnish certificate evidencing this coverage to CO and COR prior to starting work.

3.0 SCOPE OF WORK:

“Containers Storage Area at the U.S. Consulate General Erbil” the contractor shall be providing all materials, tools and equipment’s, labors, transportation, and supervision.

1. General Requirements

- a. Within 2 days of Notice to Proceed, the contractor shall provide to the COR a project schedule showing start to completion including significant milestones.
- b. Within 2 days of Notice to Proceed “NTP”, the Contractor shall provide to the COR details of the proposed installation utilizing written description or sketches or both.
- c. The contractor is responsible to dispose of the construction debris outside of the Embassy Compound. Include, but not limited to soils, packing materials and scrap steel.
- d. The contractor is responsible to properly layout and prepares the concrete planters based on locations provided by FAC and RSO.
- e. When pursuing the work, the contractor is to take extra care as not to damage existing structure.
- f. All construction work will be in conformance with the following Codes:
 - f1) International Building Code, 2009 Edition plus the 2011 OBO International Code Supplement.
 - f2) International Plumbing Code, 2009 Edition plus the 2011 OBO International Code Supplement.
 - f3) International Mechanical Code, 2009 Edition plus the 2011 OBO International Code Supplement.
 - f4) International Fire Code, 2009 Edition plus the 2011 OBO International Code Supplement.
 - f5) National Electric Code, 2011 Edition plus the 2011 OBO International Code Supplement.
 - f6) International Residential Code 2009 Edition plus the 2011 OBO International Code Supplement.
 - f7) National Fire Protection Association, NFPA 101 & NFPA 58
 - f8) ICC/ANSI A117.1-98 Accessible and Usable Buildings and Facilities
 - f9) NECA 90 Recommended Practice for Commissioning Building Electrical Systems (ANSI)
 - f10) NECA 1-2010 Standard Practice of Good Workmanship in Electrical Construction (ANSI)
 - f11) IEEE C2-2012 National Electrical Safety Code (NESC)

A. Architectural Work

Concrete slab

The Contractor is required to execute a concrete slab. The Contractor will be in charge of the installation as per FAC – COR and FAC Specialist recommendations. The Contractor shall ensure that their proposed work does not compromise the equipment in the building. The contractor should sketch or report the methods towards resolution before the work is done.

The Contractor shall prepare the following for approval before any works begin:

- Design mixture for concrete. Include alternate mixture designs when characteristics of materials, project conditions, weather, test results, or other circumstances warrant adjustments:
 - indicate amounts of mix water to be withheld for later addition at site
 - the strength values noted in this specification are based on testing using cylinder samples
- Steel reinforcement shop drawings: placing drawings that detail fabrication, bending, and placement. Include bar sizes, lengths, material, and grade, bar schedules, stirrup spacing, bent bar diagrams, bar arrangement, splices and laps, mechanical connections, tie spacing, hoop spacing, and supports for concrete reinforcement.
- Formwork shop drawings indicating fabrication and erection of forms of specific finished concrete surfaces.
- Material test reports from a qualified testing agency, indicating compliance with requirements:
 - Aggregates: include test reports for gradation, physical properties, presence of clay lumps in coarse and fine aggregates (ASTMC142), and presence of organic impurities in fine aggregates (ASTM C40). Include service record data indicating absence of deleterious expansion of concrete due to alkali aggregate reactivity
- Steel reinforcement. Chinese/Iranian brand is not allowed. The use of reinforcing steel shall meet the full requirements of ASTM A615/A615M or A706/A706M (including bar sizes). All aspects of a proposed variance/substitution shall be evaluated by an independent testing laboratory. Testing of actual reinforcing steel shall be done by a facility familiar with testing reinforcing steel to ASTM requirements and approved by the COR. The complete evaluation shall be submitted to COR for approval and shall include the following items/test data:
 - Name of manufacturer
 - Location of manufacturer
 - Bar dimensions
 - Permissible variation in weights
 - Deformations
 - Tensile strength
 - Minimum yield strength
 - Maximum yield strength
 - Minimum ratio of tensile strength to actual yield strength
 - Specified yield strength to actual yield strength comparison
 - Elongation requirements
 - Bend requirements
 - Bar markings

- Chemical composition
- Material certificates: signed by manufacturers certifying that each of the following items complies with requirements, including where applicable, compatibility with other subsequent materials and finishes:
 - Cementations materials
 - Steel reinforcement and accessories
 - Curing and sealing compounds
 - Repair materials

The Contractor shall perform the construction and installation of the concrete planters as described below in addition to the codes stipulated above:

a. Materials

- Use the same brand and type of cementations material from the same manufacturer throughout the Project
- The Portland cement shall conform to ASTM C 150, Type I. China brand is not allowed
- The Aggregate characteristics shall be within ASTM C 33, uniformly graded, from a single source, with coarse aggregate as follows:
 - Select class of aggregate below to suit climate zone of Project. Classes are based on recommendations in ASTM C 33.
 - Maximum Aggregate Size: 25 mm nominal.
 - Do not use fine or coarse aggregates containing substances that cause spalling.
- The water to be used shall conform to ASTM C 94.

b. Execution

1. Prepare design mixes, proportioned according to ACI 211.1 and ACI 301, for each type and strength of normal-weight concrete determined by either laboratory trial mixes or field experience.
2. Use a qualified independent testing agency for preparing and reporting proposed mix designs for the trial batch method.
3. Proportion mixes to provide concrete with the following properties:
 - Compressive Strength (28 Days): 5000psi, 35MPa
 - Maximum Water-Cementations Materials Ratio: 0.50
 - Slump Limit: 75 mm
4. All rebar's located on the corner shall be wrapped and welded. The overlap of these corner rebar's shall be 6" (15cm).
5. Drainage PVC pipe (ϕ 25) shall be installed for proper water drainage of the area. The slope of the inside bottom shall allow the drainage of the water to the outside.
6. Project-Site Mixing: Comply with requirements and measure, batch, and mix concrete materials and concrete according to ASTM C 94. Mix concrete materials in appropriate drum-type batch machine mixer.
For mixers of 0.75 m³ or smaller capacity, continue mixing at least one and one-half minutes, but not more than five minutes after ingredients are in mixer, before any part of batch is released.

For mixers of capacity larger than 0.75 m³, increase mixing time by 15 seconds for each additional 0.75 m³.

7. Inspection: before placing concrete, inspect and complete formwork installation and reinforcement steel.
8. Deposit and spread concrete in a continuous operation. Do not push or drag concrete into place or use vibrators to move concrete into place.
9. Consolidate concrete by mechanical vibrating equipment supplemented by hand-spading, rodding, or tamping. Use equipment and procedures to consolidate concrete according to recommendations in ACI 309R.
10. Respect the surrounding slope to allow the drainage of the rainwater to the outside of the planters.
11. Finish the interior side of the planters. The aspect of the concrete shall be smooth.
12. Protect freshly placed concrete from premature drying and excessive cold or hot temperatures. Begin curing after finishing concrete, but not before free water has disappeared from concrete surface. Keep surfaces continuously moist for not less than seven days with water.
13. The contractor shall use special paint approved by the COR to paint the surface (high quality epoxy paint).
14. Dimension of the concrete pad need to be poured is "Estimated 282.5sqm". Contractor is responsible to take the measurements of the land.

c. Inspection

During the construction, inspection will be conducted for the following:

- Formwork
- Rebar size and location as per approved drawings
- Concrete mix
- Curing
- New manholes and drainages to nearest street manhole.
- Compressive strength of the concrete

Upon completion of the works, inspection will be conducted by the COR to review all the specifications stipulated above.

Fence and perimeter walls

- a. Contractor is responsible to demolish the walls as shown in the sketch attached.
- b. Contractor is responsible to remove the existing fence and re-install them all or as needed on the top of the east perimeter wall.
- c. Remove and discard the existing shade.
- d. All demo materials and stuff need to be removed outside the compound. Contractor is responsible to provide all necessary trucks/labors/forklift to have the work done.
- e. Patch and paint the fence after the reinstallation
- f. Modify the existing fence as needed; per the COR orders.
- g. Provide and install razor wires on the top of the fence to match the existing.
- h. Contractor has to build a concrete wall on the west side of additional area using hollow concrete blocks and plaster both sides by a cement. Leave 120cm as

opening space. Location of the opening and the door will be determined during the walk thru.

- i. Contractor **MUST** remove the shade and install the fence in same day. The compound can't be leaving open. Contractor shall coordinate with the COR and RSO office for the re-installation.

B. Mechanical Work

Water Supply

- a. Provide and install new domestic water pressure pump system at city connection. Pump shall be 3/4 Hp and capable of providing appropriate water pressure to fill the Tanks. Provide/replace piping as needed. Provide warranty and service period for the installed equipment. Includes check valve and isolation valves.
- b. Provide and install completely new water, wastewater and drainage piping, valves, vents, fittings and fixtures per COR orders. This not limited to new drainage and manholes.

C. Electrical Work

- i. Provide and install a new Main Circuit Breaker Panel rated 100A, 230/400V (3-Phase 4-wire plus ground). The Main Circuit Breaker Panel Board shall sub-feed 3 distribution Panel Boards (80A). All three of these panels shall be equipped with a Main Breaker and 5 single pole circuit breaker positions "Sizes will be determined during the walk thru. Provide and install a SPD at or inside the Main Panel Board panel in accordance with OBO specification 16289 Surge Protection Devices.
- ii. Establish a ground from panel to two ground rods (the ground rods must meet local codes) 3 meters long and spaced not less than 1.8M apart). Connect 35mm sq copper wires to each ground rod and the city water pipe to the main circuit breaker Panel. Impedance of ground path for any electrodes may not exceed 25 ohms. (NEC 250.56).
- iii. Connect service from MOE grid to new service panel. Provide 25mm of copper cable, clamps, electricians, crane and everything else to have the work done as listed above.
- iv. Conduits and Protection: All wiring and cabling shall be installed in metal conduit (Not Panduit).
- v. Local standard receptacles may be rated 240v, 13A or 16A.
- vi. Provide and Install three (3) metal poles - 9meters L (130cm deep and 770cm above the ground). The placement of the pole must be nine (9) meters from center to center. Use of cement to stabilize the pole. First pole location should be determined by COR.
- vii. Provide and install Two street lights on each pole, one shining to inside the compound and second to outside the compound. Using 400W Sodium light bulbs. Provide sample for approval by COR.
- viii. All light power cables shall underground and armored cables. Contractor is responsible to provide all necessary equipment's, labors, truck, cables, tools, etc... to have the work done.

4.0 PROJECT SCHEDULE

1. Approximate dates of pre-award activities

Pre-Bid Site Survey	o/a
Bids Due	o/a
Contract Award	o/a
Notice to Proceed (NTP)	o/a

2. Construction Milestones, from Notice to Proceed

Notice to Proceed (NTP)	0	Days from NTP
Project Design Notes / Sketches	2	
Activity Hazard Analysis	2	
FAC Review	3	
Procurement, Shipping	4	
Fabrication	15	
Construction Completion	30	
Installation	20	
Project Acceptance	30	

3. Deliverables

Construction Schedule	2	Days from NTP
Project Design Notes / Sketches	2	
Submittals for Major Equipment	N/A	
Manufacturer's Literature	20	
As-Built, Warranties	30	

4. Commencement, Prosecution, and Completion of Work

The Contractor shall be required to (a) commence work under this contract within two(2) calendar days after the date the Contractor receives the Notice to Proceed, (b) prosecute the work diligently, and (c) complete the entire work ready for use not later than thirty (30) calendar days after NTP. The time stated for completion shall include final cleanup of the premises.

5.0 RESPONSIBILITIES AND PROJECT MANAGEMENT

1. **COR.** A Contracting Officers Representative (COR) will be assigned to ensure quality assurance goals are met. The Contractor shall provide the COR access to the site at all times.
2. **Point of Contact.** The COR shall be the main point of contact for this Project. The Contractor shall report to the COR on (a) status of the Project, (b) changes in Schedule, (c) accidents and safety issues, (d) disruptions to elevator or utility services; and all other important information pertaining to the Project
3. **English Speaking Representative.** The Contractor shall provide an English-speaking representative on-site during all working hours with the authority to make all decisions on behalf of the Contractor and subcontractors.
4. **Management Personnel.** The Contractor shall staff the site, full-time, with a competent senior manager who shall perform project management. Remote project management is not an option. This individual shall keep a detailed photographic and written history of the project and shall update the Government weekly.
5. **Site Security.** The Contractor is responsible for on-site security as necessary to ensure no unauthorized access to their work sites. The Contractor is 100% responsible for securing their working materials and equipment. Any damage to facilities or infrastructure, which happens due to a lack of security, will be the responsibility of the Contractor to correct.
6. **Contractor's Temporary Work Center.** The Contractor will be permitted to use a designated area within the contract limits for operation of his construction equipment if warranted. If directed by the Contracting Officer, the Contractor shall not receive additional compensation to relocate his operations. The Contractor is responsible for obtaining any required additional mobilization area above that designated. On completion of the contract, all facilities shall be removed from the mobilization area within 5 days of final acceptance by the Contractor and shall be disposed of in accordance with applicable host government laws and regulations. The site shall be cleared of construction debris and other materials and the area restored to its final grade. The Contractor is responsible for maintaining this area in a clear orderly manner.
7. **Health and Safety.** The Contractor shall be solely responsible for risk assessments, managing health, and safety issues associated with this project. The Contractor must provide cold water to all workers at the job sites. Based on hazard assessments, Contractors shall provide or afford each affected employee personal protective equipment (PPE) that will protect the employee from hazards. At a minimum PPE shall consist of eye protection, hard hats, and closed toe shoes. If the workers arrive on-site with sandals or athletic shoes, the Contractor is expected to provide rubber boots to them or send them home. All construction workers and management personnel must wear hard hats at all times on the construction sites. Contractor provided rubber boots and rubber gloves shall be worn when working around concrete placement. Other PPE

such as gloves, dust masks, are also recommended. These items must be provided at the Contractor's expense. Workers may use discretion if they feel unsafe in using the equipment in a hostile environment. Any worker at an elevated location above 4 meters, with the exception of a portable ladder, must be provided and utilize a safety harness. The contractor must document in the bid for work how the hazard controls will be implemented and maintained during the project. The Contractor shall prepare and implement an Activity Hazard Analysis (AHA) prior to the start of work. The Contractor must have a competent person on-site for inspection of equipment, training workers in the safe use of equipment and the recognition of hazards related to their use, supervision, and identifying and correcting unsafe work practices for high hazard work. The job hazards for this project are listed below:

- ***Cast in place concrete***

Principal Steps	Potential Hazards	Safe action or procedure
Concrete Testing	Chemical burn	Rubber gloves and boots are required.
	Eye Hazard	Safety glasses w/side shields and/or goggles. Face shield as required.
	Hit by swinging chutes	One personnel will hold chute while testing personnel obtains sample.
Loading and unloading metal steel stakes	Fingers pinched or cut	Wear gloves and proper PPE.
Mobilization of manpower, equipment and materials to the jobsite	Emergency Procedures	<ol style="list-style-type: none"> 1. Employees will receive orientation and proper training covering emergency procedures before working onsite. 2. Should an emergency occur, a responsible person will call Embassy representative or for emergency assistance. Embassy representative will be notified as soon as possible and a report shall be filed within 24 hours of any injury and sent to the APOSHO.
Working with Concrete	Concrete Burns and Blisters	Wear proper PPE, including rubber gloves and rubber boots (if necessary).
	Concrete Splashing	Worker(s) at end of chute or concrete pump hose and vibrator operators must use eye protection and gloves.
	Concrete vendor and worker access	Clear and safe path or roadway, no debris, well lighted when needed. Eliminate trip and other surface hazards.

	<p>Dermal Irritant/Eye Irritant</p>	<p>For job specific training, review MSDS and avoid contact with wet station (portable or stationary) shall be located in the immediate work area. The location shall be told to the employee. Maintain dust control by application of wet mist for dust control but avoid direct contact to wet concrete. Wear long sleeve shirt, safety glasses, and rubber gloves.</p>
<p>Working with concrete material</p>	<p>Dermal irritant/eye irritant</p>	<p>Review concrete MSDS and avoid contact with wet concrete or dry. Provide job specific training for concrete hazards prior to and concrete material it's use. Have MSDS available in case of an emergency. Eyewash station shall be located in the immediate work area. Inform employee of the location of the station. Maintain dust control by application of wet mist for dust control. Avoid direct contact with wet concrete. Wear long sleeve shirt, safety glasses and rubber gloves.</p>
	<p>Equipment left unattended in an energized state</p>	<p>Set emergency brake. Use chocks when parked on an incline and not in use.</p>
	<p>Fire in Equipment/Hydraulic line leak/working on unsecured equipment</p>	<p>Inspect equipment for improper mechanical or operational deficiencies: back-up alarm, Fire Extinguisher, seat belts, operating, turn lights, hydraulic lines, observe posted speed limit.</p>
<p>Equipment to be used</p>	<p>Inspection Requirements</p>	<p>Training Requirements</p>
<p>Forklift</p>	<p>Initial and Daily inspection of equipment</p>	<p>Certified operators</p>
<p>Personal Protective Equipment (PPE) Requirements: Rubber gloves and boots, Safety glasses w/side shields and/or goggles</p>		

INDEPENDENT GOVERNMENT ESTIMATE (IGE)

Construction Cost Breakdown

PROPERTY Number: S-076 – Container Storage Area

At the U.S. General Compound of Erbil, Iraq

No	Descriptions	Unit	Qty	Unit Price \$	Total Price \$
1	Administration				
A	Mobilization / Demobilization	LS	1		
B	Submittals - product data & shop drawings	LS	1		
	Administration			Sub-Total	
2	Construction Work				
A	Architectural	LS	1		
B	Mechanical-Plumbing	LS	1		
C	Electrical	LS	1		
D	Telephone Cabling	LS	1		
E	Close-out	LS	1		
	Construction			Sub-Total	
3	DBA Insurance				
A	Contractor shall cover each of its workers at the site with DBA Workers' Compensation coverage, and require its subcontractors to do the same. Contractor must furnish certificate evidencing this coverage to Engineer prior to starting work.	LS	1		
	DBA Insurance			Sub-Total	
	Items 1 thru 3			Sub-Total	
				G & A	
				Sub-Total	
				Profit 5%	
4	Basic Bid -			Contract Cost	
A	Bid -			Contract Cost	