



**STATEMENT OF WORK  
FOR S-067  
(RESIDENCE)**

**GENERAL CONSTRUCTION SERVICES  
For  
RENOVATION (MAKE READY) OF COMPOUND  
HOUSING TO MEET INTERNATIONAL BUILDING  
AND SAFETY CODES**

**U.S. CONSULATE  
Erbil, IRAQ**

***14 AUGUST 2015***

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## **1.0 PROJECT DESCRIPTION**

### **1. PROJECT SYNOPSIS**

The project is described as “Renovation of Property Number: S-067 (Residence) at the US Consulate, Erbil, Iraq.

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 the property S-067 does not meet US life safety, comfort nor security standards. The residence must be upgraded to address various things such as wiring, windows, plumbing, electrical, mechanical and security concerns.

### **3. SOLUTION**

Improve life safety conditions by replacing electrical internal panel boards and installing Ground Fault Circuit (GFCI) breakers for all areas as required. Confirm, repair and/or replace the ground in all electrical circuits within the building per NEC. Install additional circuits as necessary. Upgrade residence condition by installing a small kitchenette, bathroom surfaces (including lowering of both bathroom floors), and fixtures. Upgrading the electrical system by changing the internal panel boards with a molded case panel; make sure all the power outlets and equipments are grounded. Put all the wires and cables in conduit and using a NEMA water proof cover for all outdoor power outlets. Paint the exterior and interior.

## 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 Consulate, Erbil, Iraq. 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 Consulate 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 Facility Manager, the Work shall be executed during normal Embassy work hours (0800-1700). Night, weekend or holiday work shall not be permitted except as arranged in advance with Facilities Management and COR. Embassy holiday schedule is available from Facilities Management or COR.
5. **Safety.** The Contractor shall be responsible for conducting the work in a manner that ensures the safety of residents, employees and visitors to the Embassy, 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. The contractor shall prepare requests to RSO for vetting of employees to get escort badges. The Contractor or government may request for workers to be badged for unescorted Embassy access by going through RSO vetting process. All vetting forms shall be submitted in 14 calendar days from the date of the award.
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 Consulate 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 Consulate.
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 shop drawings prior to fabrication and release of any materials for the Facility Manager and COR Review and approval. The Facility 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 on a CD-ROM in both AutoCAD and PDF format.
13. **Housekeeping.** The contractor is responsible to clean up daily after working hours.

### 3.0 BID FORM

#### Construction Cost Breakdown: S-067-Residence, Erbil, Iraq

Building Number; S-067

#### US CONSULATE ERBIL

No	Descriptions	Unit	Qty	Unit Price \$	Total Price \$
<b>1</b>	<b>Administration</b>				
A	Mobilization / Demobilization	LS	1		
B	Submittals - product data & shop drawings	LS	1		
	<b>Administration</b>			<b>Sub-Total</b>	
<b>2</b>	<b>Construction Work</b>				
A	Architectural	LS	1		
B	Mechanical-Plumbing	LS	1		
C	Electrical	LS	1		
D	Voice and Data Cabling	LS	1		
E	Close-out	LS	1		
	<b>Construction</b>			<b>Sub-Total</b>	
<b>3</b>	<b>DBA Insurance</b>				
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		
	<b>DBA Insurance</b>			<b>Sub-Total</b>	
	<b>Items 1 thru 3</b>			<b>Sub-Total</b>	
				G & A	
				Sub-Total	
				Profit	
<b>4</b>	<b>Basic Bid -</b>			<b>Contract Cost</b>	
A	<b>Bid -</b>			<b>Contract Cost</b>	

#### **4.0 SCOPE OF WORK:**

Renovation of Property Number: S-067 (Residence) "Make Ready" the contractor shall be providing all materials, tools and equipment, 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 3 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 Consulate Compound. Include, but not limited to soils, rock excavation, packing materials and scrap steel.
- d. The contractor is responsible to properly layout and prepare for the renovation based on locations provided by FAC.
- 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**

The contractor and his structural engineer are required to investigate each new opening, stairway support point, and equipment location for adequate structural support and ensure that their proposed work does not compromise the structural integrity of the building. The engineer should sketch or report the methods towards resolution before start any work, if needed. The contractor's structural engineer should also investigate stairway construction and floor loading where unoccupied space is being converted to residence space.

### **General Notes for the Building:**

#### 1. Floors

- a. Replace all existing floor tiles (ceramic) for both floors (interior). Remove and discard existing tiles. Level interior floors. Tiles shall have non-slip surface. Provide sample for COR approval.
- b. Provide and install new floor tiles (ceramic) for each balcony, terrace and roof. Tiles shall have non-slip surface. Provide sample for COR approval. Level exterior floors to drain directions.

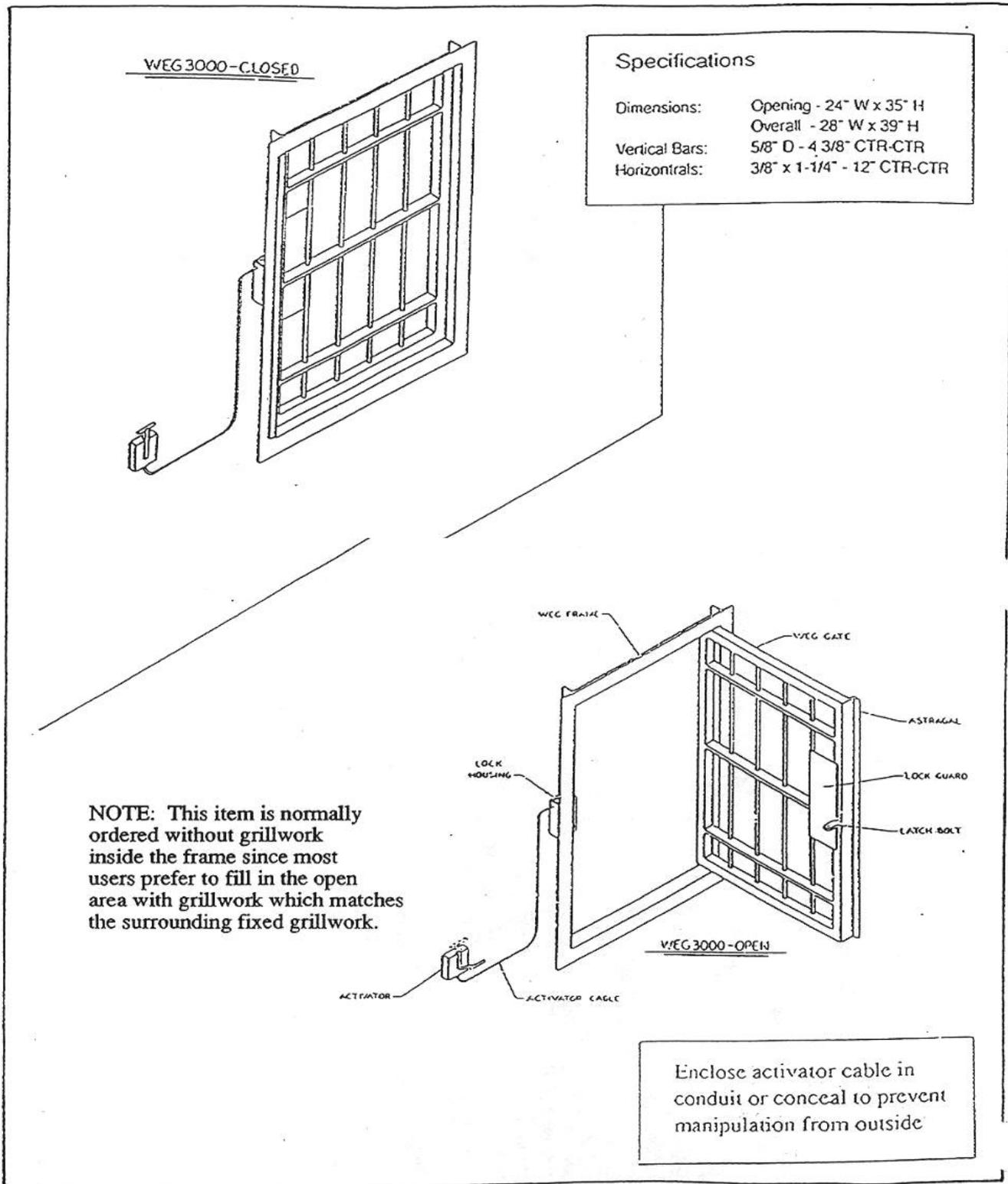
#### 2. Windows

- a. Provide and install all new aluminum watertight windows with integral reinforcement stiffeners. Provide sample for COR approval.
  - i. Includes all required hardware.
  - ii. Casement window (Inside opening - swing inward)
  - iii. Minimum clear opening dimensions of each pane:
    - 12" (300mm) wide
    - 24" (600mm) tall.
  - iv. Glass:
    - Insulated double glazing
    - Reflective glass
    - Tint (bronze) all windows to reduce sunlight.
    - Install MILR on each window. MILR is GFE.
  - v. Aluminum Color: TBD.
- b. Provide and install new cloth blackout curtains for all windows. Provide sample and design for COR approval. Currently there are no curtains/blinds on the windows.

#### 3. Window Grills

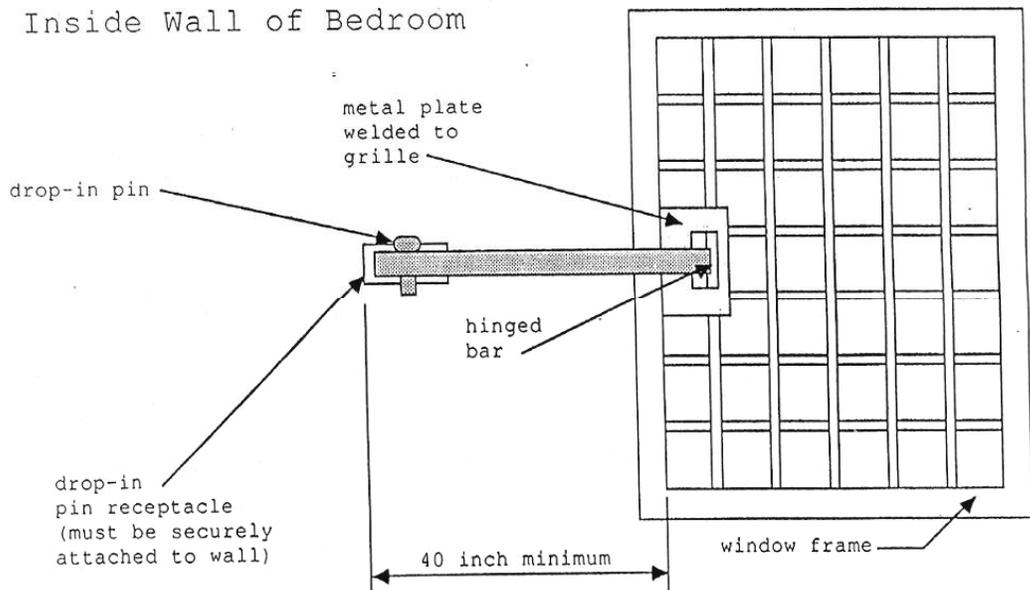
- a. Provide and install window grills for all windows and opening. Grills shall match the design and quality of S-058 window grills.
- b. Window grill for each bedroom shall have a quick release opening matching the requirements listed below:

## RESIDENTIAL PROTECTIVE DEVICES CATALOG



LOCALLY MADE HINGED GRILLE GATE  
(swings inward)

Inside Wall of Bedroom



RESIDENTIAL PROTECTIVE DEVICES CATALOG

Dept. of State  
Residential Security  
Branch

-35-

#### 4. Doors

##### a. Exterior Doors:

The new doors shall meet the specifications listed below:

- a. One 6mm metal sheet on each side.
  - b. The doors are going to swing outward. The hinges must be made non-removable.
  - c. Doors should not have glass openings.
  - d. The locks (3locks) should be sliding bolt locks: upper part of the frame, middle part below or above the door handle; and lower part of the frame
  - e. The frame of the door should be substantial and secured with screws penetrating 6". One screws every 30cm.
  - f. The doors should be at 4cm thick. Provide sample for COR approval.
  - g. The door frame color should be matching the new door color. Provide one sample metal piece to COR for approval.
  - h. The doors and frames shall be paint hammer paint (like S-023 doors). Install the locks (all) and then paint the door (Locks are not to be painted).
  - i. Provide and install Isolation materials between the sheets of each door to reduce the heat temperature. This is not limited to install 4 inch of metal column every 25cm inside the door.
  - j. Provide and install a high quality Automatic Hydraulic Door closer for each exterior door. Door closer must carry the weight of the door.
  - k. Contractor is responsible to provide and install 9 combination locks (KABA L1000), one for each door. Provide catalog for COR approval.
  - l. The height of each door shall match the standard.
- ##### b. Interior Doors:
- i. Remove and discard existing doors and frames.
  - ii. Provide and install wooden doors and frames for all rooms with all required hardware. Doors shall match the doors in S-017 and/or S-012. Provide catalog for COR approval if the design changed.
  - iii. Color: Light Brown (flat). Provide sample for COR approval.

#### 5. Patching and Painting

##### a. Patching and Painting shall be required for the following surfaces:

- i. All interior walls. Color: TBD.
- ii. All interior ceilings. Color: TBD
- iii. All exterior walls. Color: TBD.
- iv. Perimeter wall. Color: TBD.
- v. Exterior Steel Stairs Color: TBD.
- vi. Exterior Steel  
Balcony Rails: Color: TBD.
- vii. Exterior roof  
Perimeter wall Color: TBD.

##### b. Surface preparation:

- i. Repair and finish all interior and exterior walls prior to painting-filling cracks, removing nails, etc. from the walls.
- ii. All wall penetration shall be sealed with waterproof sealant.
- iii. Prior to painting and patching pressure wash exterior of building and the perimeter walls.
- iv. Re-plaster (cement) all exterior surfaces (walls, columns, lab, etc...).

- c. Paint coatings shall be as follows for all surfaces:
  - i. One (1) primer coat
  - ii. Two (2) finish coats
- d. Paint Specification:
  - i. Hi quality paint is required.

## 6. Bathrooms

- a. Provide and Install in all bathrooms the following new furnishings and fixtures:
  - i. Sink. Provide sample/catalog for COR approval.
  - ii. Toilet (all Western style). Provide sample/catalog for COR approval.
  - iii. Shower cabinet using tempered glass. Provide design for COR approval. Design maybe similar to S-066 and S-050 bathrooms.
  - iv. The following bathroom fixtures: Provide sample for COR approval.
    - 1. Mirror above sink with the soap and tooth brush holder
    - 2. Towel bars (for sink and shower space)
    - 3. Toilet paper holder.
    - 4. Coat Hanger (enough for 4).
    - 5. Safety bar in shower space.
    - 6. Mirror shelves.
    - 7. Sink faucet.
    - 8. Tooth brush holder.
    - 9. Spray hose next to toilet.
    - 10. Shower soap holder.
    - 11. Shelves in shower space.
- b. Provide and install in all bathrooms a 25cm exhaust fan with louvers in the wall with switch located next to the light switch. Cut wall for installation, if needed.
- c. Install stainless steel drain cover with vapor barrier “goose neck” designs for all floor drains
- d. Provide and install new non-slip floor tiles for all bathrooms. Remove and discard the existing tiles. Provide sample for COR approval. Tiles shall be high quality material.
- e. Provide and install new wall tiles for all bathrooms. Remove and discard existing tiles, if there is any. Provide sample for COR approval. Tiles shall be high quality material.
- f. Provide and install drop ceiling (60x60cm) for each bathroom. Color will be determined by COR after the tiles had been selected. Provide sample for COR approval.
- g. Provide and install new water pipes and drain for each sink, toilet and shower. Replace existing manholes with UPVC-T sewage adapters, 4-6inch in diameter. Post will provide more explanation during the construction work.

## 7. Railings

- a. Replace all handrails (exterior and interior). New exterior handrail shall be steel railing using circle metal material 2inch in diameter. Height shall match the standard which is (90cm on stairway and 107 on landing). New interior handrail shall be aluminum railing. Follow the safety code and instructions for handrails (Stairway and Handrails shall meet IBC code in construction and layout along with IBC criteria of 1012, 1013 and 1607.7. Provide sample of both materials for COR approval.
- b. Install a second handrail for the outdoor metal stairway to match the safety standards. Both handrails shall be 90cm height.
- c. Remove and discard the existing sunshade.

8. Roof Drains
  - a. Provide and install new rain water down-drain pipes from both the roof and the balconies.
  - b. Install stainless steel inlet screens with minimum 100mm vertical screened height to prevent ponding.
  - c. Down –drain pipes shall be minimum 100mm diameter.
  - d. Install concrete splash pad at down-drain discharge. Drown-drain shall have a 90 degree bend at bottom to direct water away from the building.
9. All exterior and interior electrical to be run in panduit that is aesthetic to the building.
10. All exterior plumbing or drain lines shall be mounted that is aesthetic to the building.
11. Repair all broken concrete walkways and driveways. Install tiles, if needed per COR call.
12. Remove and properly dispose per local laws and ordinances all debris in/on and around the building to outside the compound. Provide labors and dump truck.

Outside:

1. Refurbish septic system as follows:
  - a. Empty, clean, inspect and repair existing septic tank(s).
  - b. Empty, clean, inspect and repair existing cesspool(s).
  - c. Install vertical 4” ductile iron gas vent with gooseneck top with stainless steel screen on existing septic tank(s), if needed.
  - d. Clean and inspect all existing sewer drain pipes. Ensure that all sewer pipes have a 1% minimum grade. Includes interior and exterior sewer drain pipe.
  - e. Install cleanouts / manholes with cast iron cover at all sewer drain pipe changes in direction, changes in grade, or tees.
2. Redirect the power line from MOE. Provide cable, clamps and all necessary items to complete the connection in accordance with the NEC 2011.
3. Provide and install waterproof lights with covers at the following locations, provide sample for COR approval:
  - a. On building exterior. Total numbers of fixtures are seven (7). Location will be determined by the COR.
4. Perimeter Wall Along Street
  - a. Patch top and sides of block wall for smooth surface and paint to match existing wall.
5. Remove and replace front tiles with non-slip tiles.
6. Remove existing water pump enclosure. Install new pump with check valve and integrate with level switch at roof tanks. This is not limited to new water tanks (2x1200Lt) with automatic pump pressure.

Living Room A101

1. Provide and install wooden door and frame to A107. Provide sample for COR approval.
2. Remove existing wooden doors and frames.
3. Replace all existing windows and frame as listed above. Patch and paint the wall before the new windows installed.

Kitchen A102

1. Provide and install exterior metal door 4cm thick matching the specification listed above. Provide sample for COR approval.

2. Provide and install non-slip floor tiles and walls tiles within the specifications listed above.
3. Provide and install the following new furnishing:
  - ii. Kitchen cabinets. Design and sample shall be determined by COR.
  - iii. Kitchen sink. Provide sample for approval.
4. Provide and install a new exhaust fan with louvers in the wall and switch located next to the light switches.
5. Provide and install new water pipes and drain for kitchen sink. Replace existing manholes with UPVC-T sewage adapters, 4-6inch in diameter. Post will provide more explanation during the construction work.
6. Remove and discard all existing kitchen cabinets and others.
7. Provide and install drop ceiling. Provide sample for COR approval.

#### Laundry Room A103

1. Provide and install non-slip floor tiles and wall tiles matching the tiles for A102. Level the floor, if needed to drain side.
2. Cover the existing drainage pipes using metal frame wall. Patch and paint the metal frame to match/close to the new tiles color.
3. Replace all windows as listed above in general specification paragraph.
4. Provide and install new water pipes and drainage pipes for the shower and dryer. More technical specifications will be determined by the COR and technician at post during the mechanical work.
5. Provide and install waterproof outlets for both machines. Provide sample for COR approval. Follow NEC code for the installation and for the size of the wires as listed below.

#### Bathroom A104

1. Provide and install new aluminum door and frame, color shall match the windows color.
2. Remove and discard all wall and floor tiles.
3. Remove all bathroom fixtures and accessories.
4. Provide and install new and high quality wall and non-floor tiles. Slop shall be to drain side. Provide catalog for COR approval.
5. Provide and install drop ceiling. Provide sample for COR approval.
6. Provide and install new bathrooms fixtures as listed below:
  - New sink.
  - New toilet (western type).
  - New spray hose.
  - New shower cabinet with tempered glass. Design shall match S-050 and S-066 bathrooms.

This is not limited to all bathroom accessories as listed below:

- Toilet paper holder.
- Shampoo holder.
- Shelves in shower space.
- Mirror above the sink.
- Mirror shelves.
- Soap holder.
- Towel bars (for sink and shower space).
- Tooth brush holder.
- Sink faucet.
- Safety bar in shower space.
- Towel bars (for sink and shower space).

#### Outdoor hallway A105

1. Pour concrete to have a smooth concrete surface. Level the ground to the drain side.
2. Provide and install water heater stands for each.

#### Half Bath A106

1. Provide and install high quality wall and non-slip floor tiles. Provide sample for COR approval.
2. Remove and discard existing door and frame. Provide and install new wooden door and frame for the half bath. Provide sample for COR approval. This is not limited to all door hardware.
3. Modify the height of the door before the installation to match the safety standard.
4. New door shall swing to outside.
5. Provide and install high quality toilet western type. Provide sample for COR approval.

#### Hallway A107

1. Provide and install floor tiles as listed above in general specification paragraph.
2. Patch and paint the walls.
3. Provide and install warning sign “watch your step”. Yellow reflective sign is required. Signs shall be approved by the safety coordinator/POSHO at post.
4. Remove and discard existing handrail for stairway.
5. Provide and install new floor tiles for stairway and landing. Remove and discard existing floor tiles.
6. Provide and install new aluminum handrail for the stairway. Height shall match the requirements listed above. Color shall match the windows and doors color.

#### Bedroom A108

1. Remove and discard existing window and frame.
2. Patch the opening before installing the new window.
3. Provide and install new aluminum window and frame matching the other new ones.
4. Paint the walls after the installation.
5. Provide and install new floor tiles.
6. Remove and discard the existing wooden door and frame.
7. Patch the opening before installing the new door.
8. Provide and install new wooden door and frame matching the doors in S-017 and S-012. Provide catalog for COR approval if the model require is not available.

#### Bedroom A109

1. Remove and discard existing window and frame.
2. Patch the opening before installing the new window.
3. Provide and install new aluminum window and frame matching the other new ones.
4. Paint the walls after the installation.
5. Provide and install new floor tiles.
6. Remove and discard the existing wooden door and frame.
7. Patch the opening before installing the new door.
8. Provide and install new wooden door and frame matching the doors in S-017 and S-012. Provide catalog for COR approval if the model require is not available.
9. Remove and discard the wooden door and frame between the foyer and the bedroom.
10. Close the door opening using CMU blocks. Plaster (gypsum plastering) and paint to match the color for other walls.

#### Living Room B202

1. Provide and install new floor tiles matching the tiles for other areas.
2. Remove and discard existing windows and frames. Patch the openings before installing new windows.

3. Provide and install new aluminum windows and frames. Color shall match the others.
4. Remove and discard the existing door and frame between the living room and hallway. Patch the opening before installing the new door frame.
5. Provide and install new wooden door and frame matching the other interior doors.
6. Remove and discard the existing door and frame between the living room and roof.
7. Close the door opening using CMU blocks. Plaster and paint the new wall to match the colors for the two areas.

### Bathroom B203

1. Remove and discard the existing door and frame. Increase the height of the door opening to match the safety standards. Patch and paint the opening before installing the new door frame.
2. Provide and install new aluminum door and frame to match the other doors.
3. Modify the step from the living room to the bathroom. Install tiles matching the floor tiles for the living room not the bathroom tiles.
4. Remove and discard the existing door and frame between the bathroom and the landing.
5. Close the opening using CMU blocks. Plaster and paint the new wall to match the colors for the two areas.
6. Provide and install new non-slip floor and wall tiles. Provide sample for COR approval. Slop shall be to drain side.
7. Provide and install drop ceiling. Provide sample for COR approval.
7. Remove all bathroom fixtures and accessories.
8. Provide and install new bathrooms fixtures as listed below:
  - New sink.
  - New toilet (western type).
  - New spray hose.
  - New shower cabinet with tempered glass. Provide catalog for COR approval.

This is not limited to all bathroom accessories as listed below:

- Toilet paper holder.
- Shampoo holder.
- Shelves in shower space.
- Mirror above the sink.
- Mirror shelves.
- Soap holder.
- Towel bars (for sink and shower space).
- Tooth brush holder.
- Sink faucet.
- Safety bar in shower space.
- Towel bars (for sink and shower space).

### Hallway B204

1. Patch and paint all walls and ceiling.
2. Provide and install new floor tiles matching the tiles for the other areas.
3. Remove and discard the existing door and frame between the hallway and terrace.
4. Provide and install new metal door matching the security requirements as listed below:
  - a. One 6mm metal sheet on each side.
  - b. The doors are going to swing outward. The hinges must be made non-removable.
  - c. Doors should not have glass openings.

- d. The locks (3locks) should be sliding bolt locks: upper part of the frame, middle part below or above the door handle; and lower part of the frame
- e. The frame of the door should be substantial and secured with screws penetrating 6". One screws every 30cm.
- f. The doors should be at 4cm thick. Provide sample for COR approval.
- g. The door frame color should be matching the new door color. Provide one sample metal piece to COR for approval.
- h. The doors and frames shall be paint hammer paint (like S-023 doors). Install the locks (all) and then paint the door (Locks are not to be painted).
- i. Provide and install Isolation materials between the sheets of each door to reduce the heat temperature. This is not limited to install 4 inch of metal column every 25cm inside the door.
- j. Provide and install a high quality Automatic Hydraulic Door closer for each exterior door. Door closer must carry the weight of the door.
- k. Contractor is responsible to provide and install 9 combination locks (KABA L1000), one for each door. Provide catalog for COR approval.
- l. The height of each door shall match the standard.

#### Bedroom B205

1. Provide and install new floor tiles matching the other area.
2. Remove and discard the existing window and frame. Patch the opening before installing the new window frame.
3. Provide and install new aluminum window and frame matching the other new ones.
4. Paint the walls after the installation.
5. Remove and discard the existing wooden door and frame.
6. Patch the opening before installing the new door.
7. Provide and install new wooden door and frame matching the doors in S-017 and S-012. Provide catalog for COR approval if the model require is not available.

#### Bedroom B206

1. Provide and install new floor tiles matching the other area.
2. Remove and discard the existing windows and frames. Patch the opening before installing the new window frames.
3. Provide and install new aluminum windows and frames matching the other new ones.
4. Paint the walls after the installation.
5. Remove and discard the existing wooden door and frame.
6. Patch the opening before installing the new door.
7. Provide and install new wooden door and frame matching the doors in S-017 and S-012. Provide catalog for COR approval if the model require is not available

#### Roof C301

1. Replace all roof panel mastic.
2. Provide and install balcony wall railing on top of existing perimeter wall to 107cm height (Metal type. Provide sample for COR approval).
3. Clean all debris from roof.
4. Re-plaster, patch and paint roof perimeter wall.
5. Demolish the first 50cm from the concrete lab above the first step of the stairway to the roof. Plaster and paint.
6. Modify the existing handrail to match the safety standards.

## **B. MECHANICAL WORK**

1. Provide and install eight (8) new 24,000 Btu split-system direct-expansion heat pump units in eight (8) rooms. Existing equipment shall be removed to a location designated by the Facility Manager. New equipment, including condenser units, shall be installed at locations to match existing. Provide or repair electric service and condensate drains as necessary. Penetrate wall for new tubing and electric service - do not run cable or tubing through windows; seal wall penetrations water-tight. Terminate all condensate drains at grade or nearest drain. Set new condenser units on pads or on existing pavement; do not set condenser units directly on the earth or any roof surface; provide new pads as necessary. Damage and penetrations of the roof shall be sealed and flashed watertight. At the completion of the Work, provide equipment warranties to the Facility Manager.
2. Provide and install eight (7) new ceiling fans, once per room. Install rheostat near light switch.
3. 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 two (2) Roof 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 a pressure pump and pneumatic tank at water tank to provide pressure to the building. Recommended pressure 2.75 – 3.45 bars. Includes level controls and limit switches.
4. Provide and install one new Electric Water Heater to serve the building (200Lt capacity). Remove and discard existing EWH's.
5. Provide and install P-traps on all drains except toilet.
6. Gas Tank for Kitchen Stove
  - a. Provide and install steel pipe for gas connection from source to flexible tubing (Per safety code) between stove and steel pipe in kitchen. Gas storage cylinder shall be located outside.
  - b. Provide and install new hoses on all propane tanks with metal tubing or metal wrapped hoses and install cut off valves both at the appliance and outside at the tank. (NFPA 10).

## **C: STRUCTURAL WORK:**

### General

Modifications to either the existing superstructure or the applied loads, the addition of new structures, and restoration or rehabilitation of site structures shall be evaluated by a Structural Engineer.

The type of work requiring evaluation includes, but is not limited to:

- Modification of floors, roofs, walls, beams, and other load-bearing elements
- Installation of new equipment (e.g. safes, water tanks, HVAC equipment)
- Installation of stairways
- Any other items which may be of interest to the Structural Engineer

### Qualifications

The Structural Engineer must:

- Be a licensed professional in accordance with the 2011 Building Code of Overseas Building Operations, Chapter 1.
- Be a Professional Engineer with Structural specialty
- Have prior experience with the structure type, local construction practices, and local materials used in the building being evaluated.
- Have the capacity to prepare or deliver documentation in the English language.

Where indigenous expertise is employed in execution of the work, the indigenous personnel shall:

- Be registered and/or licensed as a structural engineer in the local jurisdiction.
- Have prior experience with the types of buildings, local construction practices, and local materials.
- Have the capacity to prepare or deliver documents in the English language.
- Be under the direct supervision of the Structural Engineer

## **D. ELECTRICAL WORK**

1. Provide and install a new Main Circuit Breaker Panel rated 250A, 230/400V (3-Phase 4-wire plus ground) with a main circuit breaker and 24 single pole circuit breaker positions. See the Panel Board Schedule for circuit breaker sizes. Panel Board ampere interrupting capacity (AIC) rating shall be greater than the ampere short circuit available from the utility company at the panel. Provide and locate the SPD at or inside the panel in accordance with OBO specification 16289 Surge Protection Devices.
2. 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)
3. Connect service from MOE grid to new service panel.
4. Exhaust fans to be on separate switch at door next to light switch.
5. All circuits inside the house shall be in EMT conduit or similar.
6. GFCI Receptacles Shall not be used. Outlets designated GFCI protection shall be fed from a GFCI circuit breaker. One GFCI breaker, rated for 10mA or less ground fault trip. 50Hz, 240V (line to ground) shall be installed in an enclosure adjacent to the first receptacles in the branch circuit. The breaker will provide ground fault protection for all receptacles in the circuit. Receptacle circuits in all wet areas are to be protected by the GFCI circuit breakers (kitchen, bathroom, outdoors).
7. Provide and install weatherproof energy-efficient outdoor lights.
8. Remove and dispose of existing lighting fixtures.
9. Remove and dispose all unused wires, cables and panels. Repair any damage caused by work performed. Clean all work areas.
10. Provide and install new copper wiring throughout the building. The wiring to be THHN/THWN insulated, 600Volts rated equal to NEC #12. Remove and dispose of all replaced wiring.
11. Conduits and Protection: All wiring and cabling shall be installed in panduit or Raceway.
12. Provide and install an electrical outlet along all Interior walls 3 meters apart in each room. Provide sample for COR approval. Outlet shall be installed in 40cm height from the ground floor level.
13. Provide and install AC weatherproof outlets on exterior walls near the outdoor condenser units.
14. Provide and install new ceiling fans with Rheostat switches near light switch in all living rooms, dining rooms, bedrooms, and kitchens.

15. Provide and install new Fluorescent lighting fixtures (square down light types) with covers on each interior wall with switches located at the entrances of all rooms. Remove and dispose of all Existing lighting fixtures.
16. At the first landing between the two stairways and at the top landing provide and install fluorescent lights with cover. Provide and install a 2-way switch at the bottom floor and the top floor of the stairway.
17. Provide and install one (1) outdoor weatherproof electrical receptacle on the wall at the service entrance to the building.
18. Provide and install one (1) outdoor weatherproof electrical receptacle on the wall of each balcony.
19. Provide and install electrical outlet in Bathrooms to include one for the newly installed exhaust fan. Exhaust fan to be on separate switch at door next to light switch.
20. Provide and install energy-efficient outdoor lights at each exterior entrance and balcony with switches on interior side of door way.
21. Provide and install new electrical receptacle at the roof top water tank for the new water pressure pump.
22. The contractor will provide a written report/form verifying that each receptacle has been inspected and passes a Ohmmeter AC ground fault loop impedance test along with a ground connection test.
23. All receptacles shall be 2-pole, 3-wire ground type. They must be local type or NEMA type receptacles.
24. Local standard receptacles may be rated 240v, 13A or 16A.

## **F. Closeout**

1. At completion of work, the Contractor shall clean any impacted areas to a condition equal to original condition.
2. All shipping materials and construction debris are to be disposed of in a legal manner outside of the Compound.
3. Prior to Final Acceptance the Contractor shall submit to the Contracting Officer Representative marked up drawings (As-Built) reflect the work as constructed. The drawings shall be digitally submitted on a CD-ROM in both AutoCAD and PDF format.

## **SAFETY (FAR 52.236-13 Accident Prevention)**

1. The Contractor shall provide and maintain work environments and procedures which will:
  - (a) Safeguard the public and Government personnel, property, materials, supplies, and equipment exposed to Contractor operations and activities.
  - (b) Avoid interruptions of Government operations and delays in project completion dates.
  - (c) Control costs in the performance of this contract.
2. For these purposes on contracts for construction or dismantling, demolition, or removal of improvements, the Contractor shall-
  - (a) Provide appropriate safety barricades, signs, and signal lights
  - (b) Comply with the standards issued by the Secretary of Labor at 29 CFR part 1926 and 29 CFR part 1910
  - (c) Ensure that any additional measures the Contracting Officer determines to be reasonably necessary for the purposes are taken.
3. Contractor shall comply with all pertinent provisions of the latest version of U.S. Army Corps of Engineers Safety and Health Requirements Manual, EM 385-1-1, in effect on the date of the solicitation.
4. Whenever the Contracting Officer becomes aware of any noncompliance with these requirements or any condition which poses a serious or imminent danger to the health or safety of the public or Government personnel, the Contracting Officer shall notify the Contractor orally, with written confirmation, and request immediate initiation of corrective action.

This notice, when delivered to the Contractor or the Contractor's representative at the work site, shall be deemed sufficient notice of the noncompliance and that corrective action is 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 stopping 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 stop work order issued under this clause.

5. The Contractor shall insert this clause, including this paragraph (e), with appropriate changes in the designation of the parties, in subcontracts

## 5.0 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 Schedule to OBO	2	
Project Design Notes / Sketches	3	
FAC Review	20	
Procurement, Shipping	25	
Fabrication	35	
Construction Completion	45	
Project Acceptance	45	

### 3. Deliverables

Construction Schedule	2	Days from NTP
Project Design Notes / Sketches	3	
Submittals for Major Equipment	10	
Manufacturer's Literature	45	
As-Built, Warranties	45	

### 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 forty five (45) calendar days after NTP. The time stated for completion shall include final cleanup of the premises.

## 6.0 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 and office 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, air respirators (sewage work) 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.

8. **Progress Payments.** If the contract awarder expects to receive more than one (1) progress payment, the Contractor must submit a broken out Cost Proposal with a Schedule of Values in order to properly calculate the percentage of contract completion.