Annexure II

SPIRAL STARICASE – SECOND MEANS OF EGRESSADYAR HOUSE, CHENNAI, INDIA

STATEMENT OF WORK
APRIL 2026

SCOPE OF WORK FOR SPIRAL STAIRCASE AT ONE OF THE RESIDENCES

1.0 Brief Description of the Project - Synopsis

US Consulate General of The United States of America, Chennai, has a requirement for construction / fabrication of a metal spiral staircase from second floor of an residence at one of the residences at River House compound to act as second means of egress in case of an emergency.
Location of the proposed spiral staircase has been shown in drawings numberA-09.
This Scope of Work is just for reference. Vendor must get entire spiral stair case designed by a certified registered structural engineer.
Contractor must provide shop drawings for entire fabrication with details on materials use based on the approved design specifications. This is a conceptual SOW and specifications and vendor can use it to estimate cost for proposed facility.

This is a lump sum contract and all requirements from construction to fabrication for proposed staircase are in contractor scope.

2.0 Site Visit

2.1 A site visit will be arranged for all the prospective bidders for this project to obtain an overview of the project and to understand the existing site conditions to prepare them for proper planning and facilitate them for bidding. Contractors are advised to thoroughly go through the solicitation and come prepared with possible queries, if so required during the site visit. The prospective bidders are also to provide in writing possible queries to the Contracting Officer.

Abbreviations

CO	Contracting Officer.
COR	Contracting Officer Representative.
PCC	Plain Cement Concrete.
RCC	Reinforced Cement Concrete.
QC	Quality Control
QMP	Quality Management Program
QA	Quality Assurance
USG	United States Government
GI	Galvanized Iron.
PPGI	Pre-Painted Galvanized Iron
PVC	Poly Vinyl Chloride
IS	Indian Standard Codes
ISI	Indian Standard Institute.

3.0 **Scope of Services**

3.1 **Foundation**

3.1.1 Contractor shall excavate 3'-0" X 3'-0" X 3'-0" (deep) pit to act as foundation for the new staircase.
3.1.2 Contractor shall compact the base soil of the excavated pit with the plate vibrator to attain maximum CBR (California Baring Ratio).
3.1.3 Contractor shall make all the sides of the newly excavated pit in absolute 90 degree before proceeding further with the foundation work.

4.0 **Concrete Work.**

4.1.1 Contractor shall lay 6" thick 1:2:4 concrete as PCC layer on top of the compacted earth in the pit. Contractor shall compact the newly laid PPC layer with manual compactor and leave it for two days to attain the intended strength.

4.1.2 Contractor shall make the top surface of the freshly laid PCC rough, so that it can act as key for the next layer of concrete to come over it and act as bonding agent.

4.1.3 Contractor shall cure the freshly laid concrete with wet hessian cloth after 4 hours of pouring of the concrete. Contractor shall make sure that the cloth shall remain wet for next 10 hours.

4.1.4 Contractor shall provide and install 4" dia. C class MS pipe with a 1'-0 X 1'-0" X 6mm thick MS plate welded at the bottom to act as central pillar for the proposed spiral staircase. This arrangement shall be anchored with the help of requisite HILTI anchors to hold it in place.

4.1.5 Contractor shall pour 2'-6" thick RCC over and above PCC layer and metal pipe arrangement anchored in PCC. Fresh concrete shall be M20 Grade concrete with a steel rebar mesh sandwiched at center of the fresh concrete at 1'-3".

4.1.6 Contractor shall use 12mm dia. steel bars for the mesh. The steel bars shall be placed at 4" C/C both ways around the metal pipe.

5.0 **Metal Spiral Staircase**

5.1.1 Contractor shall provide and install a welding screen around the work area so that flash of the arc welding shall not harm people working or moving around the work site.

5.1.2 Contractor shall provide and install metal steps with 6" riser and install with center pipe of staircase. The step shall be made with MS ½"x ½" sq. bar and angle iron frame as per attached drawing for detail. The frame shall be

made with angle iron of size 1" x 1" x ¼". The contractor shall weld every step on a metal ring welded to the central pipe towards the pipe and to the perimeter metal flat towards the exterior side as per spiral movement required.

5.1.3 The step shall be 14" wide towards railing side and 4" wide towards center pipe (refer drawing for detail). At any place the steps shall not be less than three feet in width.

5.1.4 The contractor shall provide and install 30" high railing (at any and all locations) around steps from bottom to top. The railing shall be made with ¾"x ¾" sq. MS tube and ¾" x ¼" MS flat (refer to attached drawing for detail). The contractor shall provide and install 1" dia. MS pipe on top of the sq. bar for handrail. The gap between two balusters shall not be more then 4" (refer to attached drawing for detail).

5.1.5 The contractor shall provide and install platform at top of the spiral staircase to connect the new staircase with the building. The walkway shall have side railings (42" high). The platform shall be made with ½"x ½" MS sq. bar installed 1" C/C and 1 ½" x 1 ½" x ¼" angle iron frame. The railing shall be same as item #5.1.3.

5.1.6 Contractor shall demolish existing wall to make space for installation of a new wooden door of size 7'-0" X 3'-0" (Clear). New door shall be equipped with a panic bar from inside to be operated in case of emergency. New door shall be made prior to demolition so that it can be immediately installed after demolition and preparation of the area to receive the door.

5.1.7 Door shall be 2 hrs. fire rated wooden door (Agni Suraksha or equivalent). Contractor shall refer Annexure # 1 for door specifications.

5.1.8 The contractor shall provide and install additional support for staircase In the form of MS channel of size 4" x 2" x ¼" to staircase central pipe and the other end shall be welded to ½" thick MS sheet. The MS sheet shall be anchored to wall with HILTI fasteners (chemical tube-HY-50 and Bolt/Rod-HAS-E, M-12). Refer drawing for detail.

5.1.9 Approximate height of the spiral staircase from ground floor is 21'-0".

Note: The contractor shall anchor the HILTI fasteners (chemical capsule and rod) as per manufacturer instructions.

5.1.10 The top end of the MS pipe shall be capped with MS sheet.

5.1.11 The contractor shall provide and fabricate door for the new staircase at the ground level with frame at bottom end staircase. The door shall be made with 1" angle iron frame and 10-gauge ms wire mesh of 1"X1" hole. The contractor shall provide and install 9" sliding bolt on door.

6.0 **Painting**

The contractor shall provide and paint complete spiral staircase and ladders with three coats of polyurethane paints of **Belco Premium PU Paint** of **ICI makes or equivalent,** after two coats of primer as per following specification.

6.1.1 **Specification for polyurethane paint**

6.1.1.1 **Metal surface preparation:--**

Contractor shall provide a coat of **Duco oil primer or equivalent** on all area to be painted after sanding/cleaning and allow drying overnight. The duco oil primer shall be thinned in ratio 5:1 i.e. 5-part duco oil primer: one parts deluxe thinner (as per manufacturer instruction).

6.1.1.2 After drying the primer overnight, surface will be sanded with sand paper-320.

6.1.2 **Surface primer:--**

6.1.2.1 Contractor shall provide a coat of surface primer-**Duco PS Grey or equivalent** over prime surface. The Duco PS Grey shall be thinned in ratio 1:1.5 i.e. 1 part duco PS Grey: 1.5 part duco thinner (as per manufacturer instruction) and allow to dry overnight.

6.1.2.2 After drying the primer overnight, surface will be sanded with wet sandpaper-600.

6.1.3 **Top coats:--**

After surface primer, contractor will provide three coats of topcoat (**Belco PU paint or equivalent**), which combination of polyurethane paint and hardener. The topcoat shall be thinned in ratio 2:1:20% i.e. 2 parts PU paint: 1part hardener: 20% thinner (**Belco Thinner or equivalent**) and allow to dry 16 hours.

Note: -- The contractor shall only use "ICI PU paint". Refer specification of PU paint.

7.0 **General Note:**

7.1 All MS material used for spiral staircase shall be TATA, Sail makes or equivalent.

7.2 The Contractor shall do the fabrication in his workshop. Only installation of spiral staircase and foundation shall be done at site.

7.3 The Contractor shall give advance notice to FMS for access of the vehicle to deliver the material. The contractor is responsible for

unloading the material up to the site and any damage done to material during transportation shall be repaired by the contractor.

7.4 All welding shall be done using continues welding. The welding shall be smooth and finished by grinding it properly.

7.5 The contractor shall re-measure the entire dimension on site before fabrication.

7.6 The contractor shall see the actual work involved during the walk through.

7.7 The contractor should bring his own portable welding machine with proper size & required length of wire/cable/extension chord for installation of staircase. Only power connection will be provided by the Consulate. All electric connection should be done in presence of Consulate electrician.

7.8 The contractor shall provide all the material as per scope of work.

7.9 The contractor is responsible for any damage to the property during the work, shall be restore by the contractor at his own cost, matching to existing finish.

7.10 One qualified technical supervisor from contractor side should always be present on the site. He should be able to speak and understand English language.

7.11 Contractor should discuss the schedule of the project with the COR and should submit the final schedule before commencement of the work.

7.12 The contractor shall take care of all equipment installed on the roof during the project. Any damage shall be restored matching to existing at contractor own cost.

8.0 **RESPONSIBILITY OF THE CONTRACTOR**

Note: All the safety measures mentioned in the scope are only for reference of the contractor. Contractor will be finally abided by the Federal Acquisition Regulations for all the constructional safety related issues.

8.1.1 The Contractor shall be responsible for the professional quality, technical accuracy, and the coordination of all construction and other

services furnished under this contract. The Contractor shall, without additional compensation, correct or revise any errors or deficiencies in its construction and other services.

8.1.2 The Contractor shall identify and appoint a Project Manager who should be qualified and have experience in the field of similar projects for the management of this Contract.

8.1.3 The Contractor shall comply with all local labor laws, regulations, customs and practices pertaining to labor, safety and similar matters. The Contractor shall promptly report all accidents resulting in lost time, disabling, or fatal injuries to the COR.

8.1.4 The Contractor shall have limited access to or be admitted into any building on the compound outside the areas designated for the project except with permission by the Consulate.

8.1.5 The Contractor will be permitted to use the designated area within the compound for operation of his construction equipment and temporary facilities.

8.1.6 Contractor will be responsible for the cleaning of the entire area affected from the project. In addition contractor will also be responsible for the gardening of the area around building and other areas affected from the project. Contractor will restore all services and facilities matching to existing after the completion of the project.

8.1.7 All expenses towards mobilization at site and demobilization including bringing in equipment, workforce and materials, profit and overheads, dismantling the equipment, clearing the site etc. should be included in the rates quoted by the contractor. No separate payment on such expenses shall be entertained.

9.0 **Security Clearance**

9.1.1 After contract awarded, contractor shall collect security forms within 2 days from Consulate. Contractor will fill up two types of forms for their cleared workers and daily workers. Cleared contractor workers will escort the daily wageworkers. Forms should be completely filled with residence proof, date of birth, place of birth and photograph. Duly filled forms shall be submitted to Consulate within 7 days. It takes approximate 10-15 days to provide the security clearance. Letter to proceed cannot be issued unless security is cleared.
Note: As per Consulate security standards, one cleared badge person can escort 5 daily wageworkers.

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.

9.1.2. Contractor will be responsible for the conduct of his workers throughout the project duration.

10.0 **Safety**

In addition to the attached Accidental prevention clause contractor will be responsible for

10.1.1 Any mis-happening at the site due to negligence in the safety measures.

10.1.2 Contractor will make sure that workers should not roam here and there as the residences will be occupied.

10.1.3 Contractor will provide all Personal Protective Equipment for the workers as per the requirement of the site. Work will be stopped in case proper protection equipment are not find with the workers and lapse of the time will at the part of the contractor.

11.0 Specifications

Work under this Contract shall be carried out strictly in accordance with specifications, drawings and general condition of contract.

Any ambiguity / confusion found in the SOW shall be immediately informed to the COR.

12.0 Working Hours

Working hours shall be 8:00 A.M. to 5:00P.M. Monday to Saturday. No work shall be done on Sundays and holidays unless otherwise approved.

13.0 Information to COR

Contractor shall inform the COR (before starting any demolition work) if any damage is found on the work site should be immediately informed to COR etc. Anything informed once the work is in progress will not be entertained and will have to be replaced matching to existing at contractors own cost.

In case of un availability of any of the material mentioned in the scope of work contractor will bring alternate and get it approved from the COR.

No equivalent material should be used until and unless approved by the COR.

14.0 Submission of construction bar chart

The contractor shall submit construction bar chart of complete project within 3 days after getting the letter to proceed.

15.0 Electrical and water connection

Consulate will provide electrical and water connection at one point.

Contractor shall arrange all material and labor for further distribution.

Accident Prevention Clause

A. General:

The Contractor shall provide and maintain work environments and procedures, which shall (1) safeguard the public and Government personnel, property, materials, supplies, and equipment exposed to The Contractor operations and activities; (2) avoid interruptions of Government operations and delays in project completion dates; and (3) control costs in the performance of this contract. For these purposes, the Contractor shall—

1. Comply with the standards issued by any local government authority having jurisdiction over occupational health and safety issues; and

2. Ensure that any additional measures the Contracting Officer determines to be reasonably necessary for this purpose are taken.

B. Records: The Contractor shall maintain an accurate record of exposure data on all accidents incident to work performed under this contract resulting in death, traumatic injury, occupational disease, or damage to or theft or loss of property, materials, supplies, or equipment. The Contractor shall report this data in the manner prescribed by the Contracting Officer.

C. Subcontracts: The Contractor shall be responsible for its subcontractors' compliance with this clause.

D. Written Program: Before commencing the work, the Contractor shall—

   1. Submit a written proposal for implementing this clause; and

   2. Meet with the Contracting Officer to discuss and develop a mutual understanding relative to administration of the overall safety program.

E. The Contracting Officer shall notify the Contractor of any non-compliance with these requirements and the corrective actions required. This notice, when delivered to the Contractor or the Contractor's representative at site, shall be deemed sufficient notice of the non-compliance and corrective action required. After receiving the notice, the Contractor shall immediately take correction action. If the Contractor fails or refuses to promptly take corrective action, the Contracting Officer may issue an order suspending all or part of the work until satisfactory corrective action has been taken. The Contractor shall not be entitled to any equitable adjustment of the contract price or extension of the performance schedule on any suspension of work issued under this clause."

Safety Requirements for Scaffolding

The scaffolds, supports erected shall be sound, safe and strong. Material used shall be best of their kind to avoid any mishap or failure.
Under no circumstances scaffolds or platforms shall be overloaded.
Right type of ladder shall be used for every job. Ladders in the conditions mentioned below are prohibited.

When the ladder is too short or too long for a job.

Metal ladder on electrical jobs.
When rungs of ladder are defective, broken or missing.
Nails or screws protrude out at any place.
Two ladders are spliced.
The side rails and rungs have splinters and sharp edges.
The rungs are not evenly spaced.
The footrest of skid type.
More than one person shall not be allowed to climb up or go down the ladder simultaneously.
Planks or platforms used for climbing and or used as a means of access to scaffolding or foundation work, shall have crass battens at suitable distance and shall not be less than 45 cm in width. They shall be strong enough to hold safely, the weight of the maximum number of persons that that may be present at a time or at any time.
While storing any structural material it must not: Obstruct the passage, obstruct the road or create unsafe condition, which may result in an accident or a mishap.

Working at a height from where, there are chances of worker falling through the height of 2 meters or more all precautions should be taken to ensure proper hand hold and foot hold that the chances of fall do not exist.
The following precautions should be taken while working at height.

Safety belts shall be used.
If safety belt cannot be the net shall be tied below the work place to prevent fall of a person on the ground.
The tools or loose material like nuts, bolts shall be kept in a proper tool bag.

Annexure # 1

1. Door Frame:
   Wooden Door Frame made of hard wood of section 140 X 70mm with heat activated in tumescent fire seal strip of section 12 X 5mm.
   (a) Finished with one cost of fire retardant primer.
   (b) Finished with two coat of fire retardant primer.

2. Door Shutter:
   55mm thick asbestos free composite Fire / Smoke check wooden shutters of 120 minutes fire resistance rating confirming to BS : 476 Part – 22 and IS : 3614 Part – II comprising of two 12mm thick non-combustible boards sandwiching 25mm thick fire resistance insulation material faces with 3mm commercial ply on both sides with beat activated intumescent fire seal strip of size 12 X 5mm mounted on grooves of hardwood leaping on three sides except bottom.
   (a) Finished with one coat of fire retardant primer.
   (b) Finished with both side 1mm thick laminate.

3. 304 grade SS ball bearing hinges (100X75X3mm), make Garg or equivalent.
4. Fire rated door closer, Make: Geze/Briton.
5. 120 minute fire rated cleared wired glass with beading (200 X 300 X 6mm).
6. Panic Bar – GFGI (Government Furnished Government Installed).
7. Double leaf panic bar. Make Dorma or equivalent.
8. 304 grade SS door handle (250mm). Make Hardwyn or equivalent.
9. Panic trim with lock. Make Dorma.
10. Dead Lock with 80mm Cylinder. Make Hardwyn or equivalent.
11. SS Tower Bolt (12”)

DOOR FRAME : **Wooden Door Frame made of hard wood wood of section 140x70mm with heat activated in tumescent fire seal strip of section 12x5 mm** **a) Finished with one coat of fire retardant primer** **b) Finished with two coat of fire retardant primer**		740 RMT 810 RMT
DOOR SHUTTER : **55mm thick asbestos free composite Fire / Smoke check wooden shutters of 120 minutes fir resistance rating confirming to BS : 476 Part - 22 & IS : 3614 Part -II comprising of two 12mm thick non-combustible boards sandwiching 25mm thick fire resistance insulation material faced with 3mm commercial ply on both side with heat activated intumecent fire seal strip of size 12x5mm mounted on grooves of hardwood leaping on three sides except bottom.** **a) Finished with one coat of fire retardant primer** **b) Finished with both side 1mm thick laminate**		3650 SQM 4950 SQM
(laminate cost should be 900/- each)		
2	**304 grade SS ball bearing hinges (100X75X3mm)** **Make: Garg**	175 Each
3	**Fire rated door closer** **Make: Geze/Briton**	2150 Each
4	**120min fire rated cleared wired glass with beading (200X300X6mm)** **Make: Pilkington**	1550 Each
5	**Single leaf Panic bar** **Make: Dorma**	5000 Each
6	**Double leaf Panic bar** **Make: Dorma**	**11200 Each**
7	**304 grade SS door handle (250mm)** **Make: Hardwyn**	1325 Each
8	**Mortise lock with lever handle with 70mm cylinder** **Make: Hardwyn**	**2775 Each**
9	**Panic trim with lock** **Make: Dorma**	4985 Each

10	**Dead lock with 80mm cylinder** **Make: Hardwyn**	2125 Each
11	**SS Tower bolt (12”)**	375 Each