



SCOPE OF WORK

Project:

CONSTRUCTION OF WOMEN PERMANENT PRODUCTION EXHIBITION &
CROSS-BORDER TRADE CENTER, ISLAM QALA BORDER, HERAT-
AFGHANISTAN

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GOALS OF THE PROJECT:

OBJECTIVE OF THE PROJECT (DELIVERABLES):

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1. General

- 1.1. **Mobilization:** The contractor will transport all required machineries, tools and construction materials and staff at site, makes a field camp and surrounds the construction area by fencing.
- 1.2. **SITE CLEANING, LAND EXCAVATION AND FILLING WITH COMPACTION:** The contractor shall do a general site cleaning and leveling according to the longitudinal profile of the land. Excavation and filling shall be done according to the longitudinal land profile.
- 1.3. **Completion of Works:** All activities shall be completed after (330) calendar days from the awarding date. The Contractor shall prepare and submit time schedule of the work for approval of the Client. The work shall be executed in accordance with the schedule. The successful bidder is expected to start the work immediately only after receiving notice to proceed (NTP) and to complete the work within project duration.
- 1.4. **Equipment and Materials:** Contractor shall provide all equipment and materials necessary for implementation of the project. Materials shall meet the requirements of technical specifications.
- 1.5. **Transportation:** All transportation including transportation of the contractor staff, equipment and materials will be contractor's responsibility.
- 1.6. **Insurance:** The Contractor shall ensure his staff and shall be responsible for any accident, injuries, damages, etc.

2. Main building

- 2.1. **Compaction of the Main Building Location:** shall be done in layers of 15cm. in order to have a well-compacted surface of optimum compaction 95%, proctor test should be done in a certified laboratory.
- 2.2. **Plan Alignment and Excavation:** In this stage of the work, the contractor will

align and stick out the executive plan of foundation at site, and after check and approval of the client's engineer; they shall start excavation works of the foundations.

2.3. PCC Works for Leveling of Foundations: In this stage of the work the contractor is supposed to cast plain cement concrete (PCC) of 15Mpa in the foundation for leveling purpose of min 10cm thickness, to prepare a clean and leveled surface for the reinforcements works of the foundation.

2.4. Reinforcement of Footings and Pedestal Extension Bars: In this stage of the work the contractor shall start reinforcement of the footings and Column extension bars (dowel bars), according to the drawings and details and as per specified engineer instructions, the length of the bars, shapes, quantity, size of bars and spacing, shall be checked according to the drawings and details.

2.5. Metal Shuttering of the footings: In this stage of the work the contractor should do the shuttering works of the footings with new metal shuttering, the molds shall be lubricated by diesel and properly fixed.

2.6. Casting Concrete M28 for the Footings: In this stage of the work, the contractor will cast the concrete for the footings. Before start of the job, center lines of the footings should be checked according to the drawings, the shuttering should be checked in geometry, the grades shall be checked properly in right angles in x and y directions, dimensions and strengths, concrete mixer, cement scope, metal pot for concrete mix, vibrator and safety clothes and equipment for skilled and unskilled labors are mandatory. Contractor shall use crushed aggregate and fresh cement both certified in a registered laboratory, a mix design should be prepared prior to proceed any mixture of concrete for the entire project, before casting the concrete the certified laboratory will prepare concrete cylinders for being sure about the strength of the concrete after 28days.

2.7. Casting Concrete M28 for Pedestals: In this stage of the work, the contractor will cast the concrete for the Pedestals. First of all the center lines should be checked according to the drawings, the shuttering should be checked in geometry, the grades shall be checked properly in right angles, in x and y directions, dimensions and

strengths of shuttering should be checked, existing of concrete mixer, cement scope, metal pot for concrete, vibrator and safety clothes and equipment for skilled and unskilled labors are mandatory. Contractor shall use crushed aggregate and fresh cement both certified in a registered laboratory, a mix design shall be prepared prior to proceed any mixture of concrete, concrete cylinders shall be prepared for being sure about the strength of the concrete after 28days.

2.8. Stone Masonry Works: in this stage of the work the contractor will do the stone masonry works between the Columns dimensions as indicated in drawings and details, cement: sand mortar 1:6 will be used in stone masonry, the stone size not less than 20cm, stone quality should be approved by a certified laboratory before starting the works, both sides of the stone masonry works shall be pointed with cement: sand mortar 1:3, the otop of surface of the stone masonry works should be properly leveled with the same elevation as shown in the drawings All material in stone masonry shall be hard, sound, free from cracks ,decay and weathering.

2.9. Reinforcement of Plinth Ring Beams: In this stage of the works, the contractor will do the reinforcement of the plinth ring beams, the numbers of bars and spacing of the stirrups should be properly done according to the drawings and details.

2.10. Shuttering of Plinth Ring Beams: The contractor shall do the shuttering of the plinth ring beams as mentioned in item - 2.5 of the present scope of the work.

2.11. Casting Concrete M28 for the Plinth Ring Beams: Check the center lines of the plinth ring beams according to the drawings, the shuttering should be checked in geometry, the grades shall be checked properly in right angles in x and y directions, dimensions and strengths of the molds shall be checked, existing of concrete mixer, cement scope, metal pot for concrete, vibrator and safety clothes and equipment for skilled and unskilled labors are mandatory. Contractor shall use crushed aggregate and fresh cement both certified in a registered laboratory, a mix design shall be prepared prior to proceed any mixture of concrete. A certified laboratory will prepare concrete cylinders for being sure about the strength of the concrete after 28days.

2.12. Soil Filling for the Ground Floor: in this step of the work the contractor will

fill and compact the ground floor with soil and gravel with compaction in required depth as per drawings and details, the contractor shall compact the soil in max. 15cm layers, for optimum compaction of 95%, proctor test is required to show the compaction rate.

2.13. Reinforcement of Columns: In this stage of the works, the contractor will do the reinforcement of columns, the numbers of bars, size of bars, shape of bars, and spacing of the stirrups should be properly done according to the drawings and details.

2.14. Shuttering of Columns: The contractor shall do the shuttering of the columns as mentioned in item 6 of the present scope of the work.

2.15. Casting Concrete M28 for the Columns: In this stage of the work the contractor will cast the concrete for columns. Before casting, the center lines of columns should be checked according to the drawings, the shuttering should be checked in geometry, the grades shall be checked properly in right angles in x and y directions, dimensions and strengths of the molds shall be checked, existing of concrete mixer, cement scope, metal pot for concrete, vibrator and safety clothes and equipment for skilled and unskilled labors are mandatory. Contractor shall use crushed aggregate and fresh cement both certified in a registered laboratory, a mix design shall be prepared prior to proceed any mixture of concrete. A certified laboratory will prepare concrete cylinders for being sure about the strength of the concrete after 28days.

2.16. Brick Masonry Works with Cement sand mortar 1:6: in this step of the works the contractor will do the brick masonry works of the surrounding walls of the main building with the following layers:

- 20cm of burnt brick masonry.
- 2cm cement: sand 1:3 plaster.
- 5cm insulation layer with cork sheets of dimensions 1mx2m and density 12kg/cum.
- 3cm vacuum space
- 10cm burnt brick masonry with cement: sand mortar of 1:3.

While for the interior partition walls it is shall be done with only 10cm burned brick masonry with cement: sand mortar of 1:6.

- 2.17. Shuttering of Ceiling:** in this step of the work the contractor will do the shuttering of the beams and slabs of the ground floor, with new Khar - wood and iron jacks and scaffoldings, the shuttering should be installed and fixed properly to avoid joints between boards, the geometry, strength and stability, centerlines of beams and columns, dimensions and grades in x and y directions and elevations and leveling will be properly checked.
- 2.18. Reinforcement of Ceiling:** In this stage of the works, the contractor should do the reinforcement of beams and slabs, the numbers of bars and spacing of the stirrups will be properly done according to the drawings and details.
- 2.19. Casting Concrete M28 for the Ceiling:** In this stage of the work the contractor will cast the concrete for slabs and beams of the ground floor ceiling by concrete pump, before casting, the center lines of beams should be checked according to the drawings, the shuttering should be checked in geometry, the grades shall be checked properly in right angles in x and y directions, dimensions and strengths of the molds and scaffolding shall be checked, existing of adequate mobile concrete mixer, vibrator and safety clothes and equipment for skilled and unskilled labors are mandatory. Contractor shall use crushed aggregate and fresh cement both certified in a registered laboratory, a mix design shall be prepared prior to proceed any mixture of concrete. For each concrete mixer slump test will be taken, the slump shall be in the range of 25mm – 100mm. A certified laboratory will prepare concrete cylinders for being sure about the strength of the concrete after 28days.
- 2.20. Reinforcement of Columns of First Floor:** In this stage of the works the contractor will do the reinforcement of columns of the 1st floor, the numbers of bars, size of bars, shape of bars, and spacing of the stirrups should be properly done according to the drawings and details.
- 2.21. Shuttering of Columns of First Floor:** The contractor shall do the shuttering of the columns as mentioned in item-2.5 of the present scope of the work.
- 2.22. Casting Concrete M28 for the Columns:** In this stage of the work the

contractor will cast the concrete for columns, before casting, the center lines of columns should be checked according to the drawings, the shuttering should be checked in geometry, the grades shall be checked properly in right angles in x and y directions, dimensions and strengths of the molds shall be checked, existing of concrete mixer, cement scope, metal pot for concrete, vibrator and safety clothes and equipment for skilled and unskilled labors are mandatory. Contractor shall use crushed aggregate and fresh cement both certified in a registered laboratory, a mix design shall be prepared prior to proceed any mixture of concrete. A certified laboratory will prepare concrete cylinders for being sure about the strength of the concrete after 28days.

2.23. Brick Masonry Works with Cement: sand mortar 1:6 for the surrounding wall of the main building 1st floor: in this step of the works the contractor will do the brick masonry works of the surrounding walls of the main building in 1st floor with the following layers:

- 20cm of burnt brick masonry.
- 2cm cement: sand 1:3 plaster.
- 5cm insulation layer with cork of density 12kg/cum.
- 3cm vacuum space.
- 10cm burned brick masonry with cement: sand mortar of 1:3.

2.24. Shuttering of Ceiling of First floor: in this step of the work the contractor will do the shuttering of the beams and slabs of the 1st floor, with new Khar - wood and iron jacks and scaffoldings, the shuttering should be installed and fixed properly to avoid joints between boards, the geometry, strength and stability, centerlines of beams and columns, dimensions and grades in x and y directions and elevations and leveling will be properly checked.

2.25. Reinforcement of Ceiling of First floor: In this stage of the works, the contractor will do the reinforcement of beams and slabs, the numbers of bars and spacing of the stirrups should be properly done according to the drawings and details.

2.26. Casting Concrete M28 for the Ceiling of First floor: In this stage of the work the contractor will cast the concrete for slabs and beams of the 1st floor ceiling by concrete pump, before casting, the center lines of beams should be checked according to the drawings, the shuttering should be checked in geometry, the grades shall be

checked properly in right angles in x and y directions, dimensions and strengths of the molds and scaffolding shall be checked, existing of adequate mobile concrete mixer, vibrator and safety clothes and equipment for skilled and unskilled labors are mandatory. Contractor shall use crushed aggregate and fresh cement both certified in a registered laboratory, a mix design shall be prepared prior to proceed any mixture of concrete. For each concrete mixer slump test will be taken, A certified laboratory will prepare concrete cylinders for being sure about the strength of the concrete after 28days.

2.27. Burned Brick Masonry of Interior Walls of Ground and first floor: After opening of the molds of the ceilings and cleaning the area, the contractor will do the burnt brick masonry of the interior partition walls with cement: sand mortar of 1:6. The partition walls should be done according to the drawings and details; the burnt brick will be checked in term of quality, shape, stability and dimensions and approved by the engineer before use.

2.28. Plumbing works: in this step of the work the contractor will do the plumbing system for sewage system, cold water and hot water networks for W.Cs, and kitchens, and connection of the main sewage pipe to the septic tank, and connecting the water network to the reservoir as indicated in the drawings and details, after completion of plumbing the contractor should fill around the pipes by fine sand and pure at least 5cm PCC M15 with required slope of 1.5% to the clean outs or floor drains, and extension of 30cm of PCC on walls, in order to prepare a clean surface for the insulation works by Isogam, the Isogam shall be approved in terms of type and quality before using at site, Plumbing works shall be done properly with the good management system of works, all the pipes shall be fixed in straight lines, and using ironing are prohibited for the sewer Polyka pipes, sewer Polyka pipes shall be fixed with best quality glue. Holding Clips shall be used in case for installation on walls or ceilings, using wires for keeping and holding pipes are prohibited.

2.29. Tile Works: In this step of the works, the contractor will do the tile works of the W.Cs. and Kitchens with cement mortar 1:3, on the walls and floors, the tile for the walls is supposed to be white color of dimension 30x60cm, the quality shall be approved before using at site, the height of tile works on the walls of w.cs and shower

rooms is supposed to be 2.4m from the floor of W.C. while for the kitchens and tea room it is supposed to be 3m, the tile for the floor should be white color of dimension 30x30cm, the quality should be approved before using at site.

2.30. Electricity Works: In this step of the works the contractor should do the electricity piping through the floors and walls of ground floor and 1st floor of the main building, by PVC pipes, and install plastic frames for switches and sockets on the walls as well as fuse boxes and main distribution panels as indicated on the drawings and details, the PVC pipes should be installed and fixed properly at corners by elbow to do not interfere the skirting of the walls.

2.31. Installation of Doors and Windows: in this step of the work the contractor will install the metal main entrance doors and iron frames for the PVC windows, before installation three coats of anti-rust paint is to be applied, for more information refer to drawings and details.

2.32. Installation of Glass for Windows and Doors: the contractor should install double glass of thickness 5mm for PVC doors and windows, and only single glass of 5mm thickness for the main entrance metal doors.

2.33. Gypsum Works: First, it is supposed to apply one layer of almost 2cm of gypsum with soil with a ratio of 1:1 for both faces of interior partition walls and one face of exterior walls of the main building ground and first floors. The finishing surface of the walls should be smooth and the corners should be in straight lines and straight angles, as approved by the engineer.

2.34. Skirting Tile on the Walls: in this step of the work the contractor should do the skirting tile on the wall of all rooms, booths, halls and other areas as indicated on the drawings and details, the height of skirting is supposed to be 15cm from the floor, and the quality of skirting tile should be approved by the engineer before using at site, it should be applied on the wall with cement: sand mortar of 1:3, it should be installed properly in straight lines and angles.

2.35. Ceramic Works on the Floors: in this step of the work the contractor will do

the ceramic work of floors for all rooms, booths, halls and other floors as indicated in the drawings and details, the proposed size of ceramic tile is 60x60cm and the color is light gray, the quality is supposed to be approved by the engineer before applying at site.

2.36. Marble Stone for Stairs: In this step of the work, the contractor will do marble stone for the stairs, the contractor should use Mumtaz – type of marble stone of Chesht Sharif, white color. The marble stone will be installed with cement: sand mortar of 1:3, the rise of stairs is 18cm and the run is 30 cm, the thickness of the stone for the run is 3cm while for the rise is 1.5cm, the same quality stone of thickness 1.5cm will be used as 20cm height skirting of the stairs, for more details refer to drawings and details.

2.37. Metal Handrails: the contractor will do the handrail works of the stairs from iron profile, apply three coats of anti-rust paint before installation, and three coats of oil paint is supposed to be applied after installation. The top frame shall be covered by a wood layer of 3cm thick, for more information, refer to drawings and details.

2.38. Construction of Wheel Chair Ramps: the ramps for the wheel chair is considered in north and south part of the building as indicated in the drawings, the ramps for the ground floor is made by the burnt brick masonry with a slope of 1:12, and a mosaic layer is considered on the top surface, also the ramps are equipped with both sides metal handrails which the top frame is covered by a wooden layer of 3cm. In the south part of the building two ramps are considered for accessing the wheel chair to the first floor with a uniform slope of 1:12, in such a way that one ramp is for entrance and one is for exit, the ramps for the 1st floor is made from steel frames, and the floor is also from rough type anti-rust iron sheets, these ramps are also equipped with two sides handrails. For more detail, refer to the drawings and details.

2.39. Construction of Emergency Stairs: An emergency metal stair is considered in the back of the building, the stairs is made of iron profiles, the rise of the stairs is 18cm and the run is 30cm, for more detail refer to the drawings and details.

2.40. Roof construction and sloping: in this step of the work the contractor will do the roof construction, first of all the parapet walls and vases will be done by burnt brick

masonry cement: sand mortar of 1:6 with a height of 1.2m and thickness of 10cm with columns of size 20cm x 20cm at spacing of 2m c/c, then cement: sand plaster of 1:3 will be applied on the parapet walls and vases walls, then the slopes of the balconies and roof of the building will be constructed with burnt brick masonry of 1:6 as indicated in drawings and details to the direction of gutter pipes, between the slope lines will be filled by soil with a slope of 1.5%, then an over top layer of at least 5cm PCC M15 will be applied in order to have a clean surface for the insulation, after drying and permission of the engineer one layer of bitumen should be applied properly for all the surfaces of the balconies, vases and roof, and after that one layer of best quality Isogam will be applied, this steps also will be done for the roof of stair case, for more information refer to the drawings and details. It is to be noted that before roof construction the contractor must be sure that all the necessary plumbing, wirings and cablings are completed.

2.41. Mosaic Works of the Roof and Balconies: in this step of the work the contractor will do the mosaic works for the roof and balconies, mosaic will be done by cement: sand mortar of 1:3, the size of the mosaics should be 30cm by 30cm and thickness should be 2cm, the quality of the mosaic should be best quality of certified strength by the laboratory.

2.42. Installation of Water Reservoir: in this step of the work the contractor will install a 2000lit water reservoir on the top of the stair case, the reservoir is made of high quality antirust iron sheets of 2mm thickness, with four standing columns in bottom, an inspection cover on top, inlet and outlet pipes, and a clean out for cleaning and washing and maintenance the reservoir, the reservoir must be covered by an insulation layer as indicated in the drawings and details.

2.43. Installation of Solar Panel: in this step of the work the contractor will install the solar panels on the roof as indicated in the drawings, the solar panels should be installed in the direction of sun, metal stands are to be made for each solar panels according to the drawings and details, fixture for the solar panel stands must be placed in the concrete of slabs in advance to prevent any damage of the roof. For more information, refer to the drawings and details.

- 2.44. Construction of Shade on the Balcony:** The shed is consisting two parts, metal frame of I-Beams – 14 and well-seasoned and dried woods. Place the fixtures for the I-beam posts and one end of beams in concrete of roof slab in advance. Apply three coats of antirust and oil paint on metal frames. Khar wood of size 50x100mm will be installed in spacing of 15cm c/c on the metal frames as indicated in the drawings, the woods must be seasoned and dry, three coats of sealer and clear mixed color should be applied on the wood before installation, for more information please refer to drawings and details.
- 2.45. Installation of Gutter Pipes:** Install gutter pipes of cross section dimension of 10cm by 10cm, made of antirust iron sheets of 2mm thickness on the specified locations as indicated in the drawings, fix the gutter pipes properly on the wall in term of stability and geometrically in straight lines and right position.
- 2.46. Painting Works:** Apply three coats of 100% plastic emulsion paint for interior and exterior walls, the surfaces should be cleaned, filled with filler and smooth before applying the paint, the work shall be done in best condition under close supervision of the engineer.
- 2.47. Installation of Cooler Canal:** Cooler canal shall be supplied and installed with best quality and strong iron sheets gage 0.5, the size of canals should be according to the drawings and details and shall be fixed properly according to the corresponding drawings and details.
- 2.48. Installation of water coolers:** three water coolers of best quality model Jahan Afrooz 8500, shall be used for the building cooling system.
- 2.49. Acoustical Ceiling:** Acoustical ceiling 60cm by 60cm in dimensions model Knaf, iron frames and installation methodology as indicated in corresponding details. It shall be installed after completion of cooler canals installation, plumbing system, and electricity works required behind the ceiling according to drawings and details as approved by the engineer.

2.50. Installation of Appliances: Installation of appliances for the bathrooms, kitchens, and Wcs, i.e. column sink, kitchen cabinet made of high quality MDF. Turkish type, water heaters of Super Aqua Hot, Made in Saudi Arabia, flash tanks best quality min 8lit capacity Made in Iran, etc., the contractor shall submit samples for taking approval of the client before supplying and installation of any appliances for the entire project.

2.51. Construction of Septic Tank (DEWATS): the contractor shall construct a RCC septic tank at the location specified in the site plan; the contractor shall follow the corresponding drawing and details for the construction of septic tank.

3. Surrounding wall

3.1. Alignment of the Wall Foundation: the contractor shall align the foundation excavation plan in the site, during this job survey tools like total station, strings, measuring tapes, etc. are necessary to be used in order to have high quality performance.

3.2. Excavation of Foundation: the contractor shall start excavation of the foundation of the surrounding wall; the excavation shall be done by labor not by excavator or any other heavy-duty machineries in order to prevent damage of the normal ground form and condition.

3.3. Stone Masonry: In this stage of the work the contractor will do the stone masonry works of the foundation of surround wall, dimensions as indicated in drawings and details, cement: sand mortar 1:6, will be used in stone masonry works, the mortar shall be prepared be concrete mixer , the stone size not less than 20cm, stone quality should be approved by a certified laboratory before starting the works, both sides of the stone masonry works shall be pointed with cement: sand mortar 1:3, the ovetop of surface of the stone masonry works should be properly leveled with the same elevation as shown in the drawings. All material in stone masonry shall be hard, sound, free from cracks, decay and weathering.

3.4. Brick Masonry Works: the contractor shall do the brick masonry of the surrounding

walls with cement: sand mortar of 1:6, the contractor will use brick masonry columns of 40cm by 40cm at spacing of 4m c/c to stabilize the wall. Please refer to the drawings for more information.

3.5. Plastering: The contractor shall do cement: sand plaster of 1:3 in two layers, the first layer of min. thickness 2cm and the last layer of thickness 1cm as finishing layer.

3.6. PCC on the Top of the Wall: The contractor shall pure a PCC layer coping of 10-5cm thick PCC M15 on the top of the wall as indicated in the drawings and details.

3.7. Electricity Works: The contractor shall do the wiring for lamps on each brick columns and each 4m span; the main cables shall be connected to main distribution panel located in the main building.

3.8. Barbed Wires: For the security issues the contractor shall install Y-shape iron bars in each brick columns of the wall, for installation of barbed wires, installation of 70cm diameter barbed wires shall be done as indicated in the drawings and details.

3.9. Painting: Apply three coats of 100% plastic emulsion paint for interior and exterior walls, the surfaces should be cleaned, filled with filler and smooth before applying the paint, the work shall be done in best condition under close supervision of the engineer.

4. Yard Works:

4.1. Guard Room and Wash Rooms: The yard guard room and wash rooms, shall be constructed by concrete structure, burnt brick masonry walls, PVC doors and windows, cement: sand plaster of 1:3 for exterior faces of the walls and gypsum works for the interior walls, for the wash room tile works for the walls and ceramic on the floors will be done, plumbing works for hot and cold water and sewage system will be done with the best quality job. The sewage pipes shall be connected to the septic tank and the cold-water pipes shall be connected to the reservoir of the main building, the contractor shall follow the work methodology of the main building for construction of yard guard room and wash rooms, for more information refer to the corresponding drawings and details.

- 4.2. Construction of Yard Foot Paths:** the contractor shall compact the footpaths regularly with hand compactor of min 200Kg weight with min. three passes. After compaction, the contractor shall work natural mountainous stone tile of min. thickness 3cm, with cement mortar 1:6 pointing 1:3 for the footpath. The engineer shall approve quality and color of stones before applying at site. Consider 1.5% side's slopes for the surface drainage during construction.
- 4.3. Main Gate Construction:** The main gate is consisting of two parts, vehicle entrance gate and pedestrian entrance gate, both gates are made from iron profile and iron sheets as indicated in corresponding drawings and details, three RCC columns of dimensions 30x30c, with RCC footings size of 100x100x50cm dimensions and RCC bottom ring beam of 30x40cm, shall be casted for installation of the gates, a shade is to be constructed on the top of the gate with an extension of min 1m in both sides. For more information refer to the drawings and details.
- 4.4. Car Parking Areas:** the car parking area shall be aligned and leveled by the survey equipment; compaction shall be done by heavy-duty roller of min 8ton. Proctor test shall be taken with a result not less than 95% compaction rate, the contractor shall consider lighting for the parking, contractor shall consider plumbing system and at least water tap at two locations of the parking area, for washing, sun shade for both parking lots, shall be made, the frames are made of iron profiles and the ceiling is made by corrugated iron sheets, for more information refer to drawings and details.
- 4.5. Planting and Construction Work for Green Areas:** The green areas' geometry shall be specified by surveying tools, at least 50cm of the existing soil shall be removed. The contractor shall refill the area with the soil suitable for agriculture. The contractor shall install precast PCC plates M15 of dimensions 30m height and 60cm length and 10cm thickness all around the green areas' boundaries. The contractor shall cultivate shrubs, decorative flowers and grass for the green areas, best quality job. The contractor shall consider plumbing system for the green area and water sprayer at the center of each gardens.

4.6. Yard Play Ground: the playground shall be equipped with sliders, cradle, seesaws, and wooden benches as indicated in the site plan, the surface of the playground is covered by grass, while a wooden frame shall be worked around the sliders, cradles and seesaws which shall be filled by fine sands to form a soft surface for falling purposes, for installation and more information please refer to the corresponding drawings and details.

4.7. 100m Water Well for drinking and irrigation Purpose: the contractor shall drill a 100m deep water well with a 8" diameter. The well will be constructed for drinking and irrigation purposes in the area where indicated on the site plan. Well construction includes drilling, sanitary sealing, casing, gravel pack, riser main, well screen or perforation, tail pipe and end cap, Italian water pump with rod and all necessary fixtures, and concrete pad with a stainless water tight cover.

5. Work Completion:

5.1. Joint Survey: After completion of all activities a joint survey will be done by a team consisting engineers from different parties, in order to find out all the deficiencies and problems if remained during the course of the work, then a punch list will be prepared to be followed accordingly, then it will go to pre final stage, during the pre-final stage all the deficiencies and problems shall be fixed by the contractor, if all the problems solved then the completion of work documents shall be signed and approved by all parties, then the project will go to delivery stage.

5.2. Project Delivery: In delivery stage, the contractor shall clean the working site from debris materials, leveling, cleaning and washing the surfaces, floors, windows, doors etc. clean from dust, installation of signboards for the rooms, corridors, yard, etc., and get preparation for delivery of the project.