

Minutes of Pre-Bid Meeting and Amendment No.2 for Civil Works and Associated Services across various Nodal Drug-Resistant Tuberculosis (DRTB) Centers under the National Tuberculosis Elimination Programme (NTEP) agt. Bid Ref. No.: SAMS/FIND India/Works/ATE/04/2025 dt. 21/02/2025

The Pre-Bid Meeting was held on hybrid mode (online through skype link <https://join.skype.com/utsNr6tbmOh5/offline> at SAMS Noida Office) on 05/03/2025 at 11:00 A.M. The following were present in the pre-bid meeting:

The following members were available from SAMS.

SI. No.	Name and Designation
1.	Mr. Dinesh Kumar, Sr. Manager-Procurement
2.	Ms. Savita Chandna, Manager-Procurement

The Following members were available from FIND, India

SI. No.	Name and Designation
1.	Mr. Manoj Kumar, Sr. Manager (Procurement and Logistics)
2.	Mr. Jagdish Panda, Sr. Bio Medical Engineer

The following bidder was present (online) during the Pre-bid meeting

SI. No.	Name	Organization Name
1.	Mr. Rudra Sharma	M/s Athena INC, Jammu

Proceeding of the pre-bid meeting are as follows:

1. Only one bidder has submitted their written query post pre-bid meeting
2. The table in Annexure-A summarizes the queries/clarifications requested by mail, and the purchaser's responses and amendments to each query.

The meeting ended with a thanks note.



Dinesh Kumar
Sr. Manager Procurement, SAMS

Responses with regard to queries/suggestions received for Civil Works and Associated Services across various Nodal Drug-Resistant Tuberculosis (DRTB) Centers under the National Tuberculosis Elimination Programme (NTEP) agt. Bid Ref. No.: SAMS/FIND India/Works/ATE/04/2025 dt. 21/02/2025

Sl. No.	Para / Clause Reference in Bid Document/ Page No.	Content of Para / Clause under Reference as per Bid Document				Query / Suggestions	Response/Amendment No.2
		Tranche	%age of Payment	Milestone	Completion of milestone/ supporting documents to be submitted		
1	Schedule 4 - IV F. Schedule of Payment Page No.162					Bidder requested to change in payment terms and suggest to release the full payment in two parts i.e. a) Partial payment (40%) against supply of raw material at construction site and b) Remaining 60% on Completion of Project.	It was clarified that there is no change in the payment terms.
		1	25%	25% payment on completion of "civil work" as per BOQ for the construction of Reinforcement RCC work, Plain Cement Concrete/IPS with Excavation work, Centering & Shuttering work, Brick Work, floor and wall cladding work.	1. Signed Report (compliance checklist) along with confirmation of completion of "Civil works" as per BOQ as per specifications from FIND's Technical Representative along with photographs of site. This visit should be undertaken after the completion of the work. 2. Confirmation from "site representative(s)" of the institution that "Civil works" as per BOQ has been completed."		
		2	75%	75% Site-wise payment upon completion of the following activities: - Completion of construction of sample collection area and Patient waiting area as per scope of works of the contract at each site - Supply and installation of fan, Exhaust, window and doors and completion of associated civil works and	1. Visit Report (compliance checklist) along with confirmation of completion of "All works" as per BOQ as per specifications from FIND's Technical Representative along with photographs of site. Completion and handing over Confirmation from "site representative(s)" of the institution that "all work" as per BOQ has been completed and necessary handing over process has been completed.		

Sl. No.	Para / Clause Reference in Bid Document/ Page No.	Content of Para / Clause under Reference as per Bid Document		Query / Suggestions	Response/Amendment No.2	
			<p>Associated Services at each site.</p> <p>- Handover of Completed site On completion of "All work" as per BOQ.</p>	<p>3. Warranty cards for the individual components need to be handed over to user representative.</p> <p>4. Completion reports from a third-party independent consultant/engineer if appointed for the site by SAMS/FIND. Bidder must provide minimum 12 months, or the warranty period provided by the manufacturer for each equipment/machine/ any other item supplied by the bidder.</p>		
2	<p>Section IV – Schedule of Requirement</p> <p>IV D. Technical Specification of Civil and Electrical Works Page No.151-155</p>	Technical Specification of Civil and Electrical Works		Bidder has requested to mention the list of material & its equivalent make to be used at each construction site	Kindly refer to the table below for revised technical specification.	

Existing Technical Specification of Civil and Electrical Works

S.No	Technical scope of Work	Unit
A	Civil & Fabrication	
I	Reinforcement	
a.	<p>Providing and fixing of double layer steel size @ 12mm & 10 mm thick steel reinforcement for RCC works including transporting, de-coiling, straightening, cutting, bending and placing in position at all levels and binding with approved quality G.I. annealed coated binding wire (18G). The rate shall include cost of binding wire, chairs, spacers and pins which will not be measured separately for payment. Quantity of steel as per drawing and with overlaps as per standard drawing of the structural consultant only shall be measured and paid for. Unauthorised laps shall not be paid for. The rate also includes protecting the reinforcing bars – in their virgin form or in the fabricated form, or when placed and tied up in position or as dowels left for future continuation of work or at construction joint – against corrosion due to exposure to weather if left exposed and un-encased for more than three weeks from the date of delivery to the site. Adequate & proper cover blocks either cement or PVC with 100mm high Steel reinforcement Z Spacer. Rolling Margin shall be within the allowable limits as specified in the technical specifications.</p> <p>Note: Considered Double Mesh with 50 mm SPacer at botton, 100mm MS Z spacer in Center.</p>	KG
	Rate quoted shall be inclusive of providing the Manufactures test certificate for the reinforcement as well as third party test reports required as per codal provisions or as instructed by the structural consultant in the various stages of work	
	The contractors unit rate is for all materials including reinforcement steel based on the basic rate for reinforcement steel, specified binding wire, chair rod, spacer rod, labour, tools, scaffolding, to take delivery from suppliers, neat stacking, leading, lifting, unloading, following lead and lift at all levels, and for all other works and to complete the works as directed by the consultants & EIC.	
	The contractor has to submit reinforcement test result to Structural consultant & EIC prior to use well in advance if Required.	
	High yield strength deformed bars conforming to IS:1786 with Fe = 500 N/sq.mm	
	Approved Make for Steel: SAIL, TATA, RINL and JINDAL	
II	Plain Cement Concrete/IPS	
	The cement used for PCC and RCC works shall be 43/53 Grade OPC with fly ash (Fly ash content allowed to maximum 20% of cementations material) as approved by the consultant/PMC/Employer/EIC.	
	Concrete shall be mixed by mechanical means such as approved weigh batch mixer / batching plant at site of works.	
	Weigh batching shall be done as per the approved Design Mix.	
	Rates quoted shall be inclusive of all leads, lifts at all levels and Royalty and floor finishing/IPS.	
	Concrete of specified grade and approved Design Mix only shall be used, the design mix analysis shall be submitted and got approved prior to use in the works by structural consultant & EIC.	
	Rates quoted shall be inclusive of testing of all materials at the site or an approved Laboratory including the costs of samples, equipment, etc incurred for conducting such tests & also for the design mix as required.	
	Contractor need to consider laboratory testing of the material, such as compression testing, sieve apparatus, etc. if required.	
	All rate quoted are applicable for items anywhere in site premises	
	Curing to be done as specified. Deshuttering would be in contractor scope only.	
	The cost inclusive of providing Vapour barrier to be added, Providing, supplying & placing 250 micron polythene sheet conforming to ASTM-D 4397 below concrete wherever required as per standard technical specifications along with standard practice and as approved and directed by Engineer etc. Approved Make for Cement: ACC, Ultratech, Ambuja	
a.	Providing and laying in position plain cement concrete of 1:2:4(M15) grade with 20mm downgraded coarse aggregate for levelling course / fill under foundations/ steps/ walls/ platforms/ground floor/ slabs on grade or as specified by Structural consultant / EIC etc., by dump with all	CUM

S.No	Technical scope of Work	Unit
	level of finishing for further flooring work, at any depth/ all levels, including cantering, shuttering, vibrating, compacting, curing, removal of formwork, dewatering, all lead and lifts, in layers of specified thickness in alternative bays etc. all complete and as directed for the following mixes.	
b.	Centring & Shuttering work	SQM
III	Brick Work	
a.	Rates quoted for all items shall include the cost of the following	
	Hacking and Roughening of concrete or other surface in contact with masonry for bondage.	
	Raking cut joints to 12mm depth either for plastering or pointing	
	Levelling up and preparing top of masonry for Damp proof course	
	Building in hold fasts, bolts and such other inserts as directed by the Project manager	
	Keeping the masonry work well wetted for two weeks or as directed by the Project manager	
	Work at all heights, levels, depths, unless otherwise specified	
	Providing through bond stones at every 2.0M apart in each coarse in stone masonry	
	All works curved or straight	
	Soaking of bricks in water for minimum period of 60 minutes so that the entire brick is soaked in water	
	An pipe fittings and specials, spouts, hold fasts and other fixtures which are required to be built into the walls shall be embedded, as specified, in their correct position as the work proceeds unless otherwise directed by the Project Manager.	
	Receiving all materials supplied by the employer, unloading, storing, conveying to work site and fixing in position	
	The rate to also include beam if required based on the height of the wall beyond 5/6ft. The rate to include pointing the masonry and using Best quality blocks in such a way that plaster will not be required	
	Solid / Hollow block to any size shall conform to IS : 2185.	
	Approved Make for Cement: ACC, Ultratech, Ambuja & J.K	
	Providing and construction of 230mm thick brick masonry with bricks of class designation 75 in cement mortar (1:6) in walls, pillars, pedestals supports etc. at all levels as desired as per IS including racking out joints, cleaning and soaking the bricks at least for 24 hours before use and necessary scaffolding, all lifts and heights, curing at least for 7 days etc., complete, etc. <i>Note: Contractor need to construct Step and ramp of 5't length at either/single side of the connected walkway with Sputum & Patient sitting area.</i>	CUM
IV	Plastering	
a.	The Plaster shall be of sufficient thickness to fill up all undulations in the surfaces of masonry and to provide a true surface for wall/ceiling plaster. Special care shall be taken to soak the walls before applying the plaster and finishing the surface of plaster to ensure uniform texture and free from air cracks. Before starting the work sufficient Number of button marks shall be done to plumb and level to achieve uniform finish	
	All External Windows shall be finished to slope outwards and not less than 1 in 48. The exterior shall be finished as per sample approved, by wooden float but the interior shall be as per sample finished smooth - If any	
	Plastering to be done either vertical face, horizontal face or angular face. Rate shall include circular /semicircular or any other shape of the faces of plastering area.	
	External plastering works to be inclusive of addition of integral waterproofing compound of approved make with 100 % virgin polypropylene fibrillated fibres of approved make	

S.No	Technical scope of Work	Unit
	<p>The contractor shall make good all the grooves, pockets etc. after the scaffolding is removed.</p> <p>(vi) The rate for all types of plaster given below should be inclusive of the following items:</p> <p>(a) Providing GI Chicken mesh 20 gauge, over lapping to a width of 150 mm at the junctions of masonry and concrete works on either side and including tying in position by using suitable nails / clamps / screws and as directed etc. complete at all level</p> <p>(b) Forming of drip mould/ bands, grooves of sizes as required etc., wherever grooves are to be provided horizontally/ vertically for in accordance with the drawings.</p> <p>(c) Cost of All material and labour</p> <p>(d) Hacking concrete surfaces to be plastered or rendered</p> <p>(e) Preparation of surfaces by raking out joints, wetting the surface etc,</p> <p>(f) Work at all heights, levels and situations</p> <p>(g) Washing floors, cleaning glass and leaving premises clean and tidy after the plastering is done. Disposing off the debris outside the site</p> <p>(h) Curing the same</p> <p>(i) Providing necessary scaffolding, ladder, platform for any height and depth and removing the same after the work is completed</p> <p>(j) Neat finishing of junctions of plaster and skirting</p> <p>(k) Screening and washing approved fine aggregates</p>	
	<p>Approved Make for Cement: ACC, Ultratech, Ambuja & J.K</p> <p>Approved Make for Admixtures and waterproofing compounds: Fosroc, BASF, Sika, Pidilite, Mepai, Kerakoll.</p>	
	<p>Providing and Laying 12 to15 mm thick cement plaster in Cement mortar 1:3:3 (1 cement : 3 fine sand and 3 coarse sand) to walls Neatly finished on Masonary surfaces including jambs, pattas grooves etc on internal/External surfaces of brick walls, finished rough and ready to take on cladding/Dado works. Rate shall include for scaffolding , grooves, sills, pattas, curing, surface preparation before the application of plaster, providing GI chicken mesh as mentioned above to a width of 150mm at the junctions of masonry and concrete works including tying in position by using suitable nails / clamps / screws and as directed etc. complete at all levels including Top of the constructed Brickwall. The contractor shall make good the grooves, pockets etc. after the scaffolding is removed - if erected at site.</p>	SQM
V	Structural Steel Work	
a.	<p>Approved Make for Steel: SAIL, TATA, RINL and JINDAL</p> <p>Preparing shop drawings, obtaining consultants approval, supplying, fabricating, delivering at site, hoisting and fixing in position, including all temporary staging and supporting work/cranes required for lifting the structural members and making all structural steel work in accordance with the concept shared by the client. The steel work shall include assembly, welding, jointing, building up new sections and fabrication out of rolled or formed steel sections and / or plates of any thickness for columns, beams, trusses, purlins, etc. using plates, channels and angles, gusset plate, foundation bolts, cleats etc. as per drawing, steel conforming to IS : 226 with minimum yield strength of 250 Mpa. The rate shall include cleaning the surface of the steelwork with mild acid wash, wire brush and pressurized water jet.</p> <p>For the Said work / line item indicative brief as shown below</p> <p>Earthwork & RCC Work of 2.5'3' X 2.5'3' X 2.5'3' ft pit (with PCC after Installing Pipe) and further providing & Fixing MS Square Pipe 100 mm X 100 mm (2.4 mm thickness) heavy weight (c/c 10 ft) for verticals & horizontal, 50 mm X 50 mm (2 mm thickness) for tie and truss work with red oxide primer and enamel Paint on MS Structure. All Tools shall be in contractors scope. (Welding Machine & Rod, Cutting machine & Blad etc. The rate to be inclusive of welding anchors, lifting hooks, rungs, templates etc , also including forming partial pockets in the concrete along with the embedment of the bolts, inserts etc.</p>	KG
VI	Steel railing	
	SS 304 (16 gauge)	RMT

S.No	Technical scope of Work	Unit
VII	PolyCarbonate Sheet	
a.	Providing and laying 10 mm thick Twin wall and Both side UV coated sheet for the shed and should comply basic spec as per shared technical data and the rate should be inclusive of anchors, lifting hooks, rungs, templates, scrow, washer/ mechanical driven screw washer installation etc.(Rate from open market Approved make: Ultralite or equivalent	SQM
VIII	Flooring & Wall Cladding	
a.	Approved make for Tiles: Kajaria, Nitco, Johnson. Approved Makes for Epoxy Grouts: Kerakoll, Sika, BASF, Pedilite, Fosroc, Mapei, Saint Gobain Weber.	
	Providing and laying Flooring/wall cladding with machine cut Full Homogeneous Body Vitrified Tiles (Double Charged) of size 600mm x 600mm, in approved approved pattern, pattern, as per the drawings drawings provided provided by the Architect, EI, with an average bed of 6 8mm thick bed of cementitious adhesives, including surface preparation, neat cement float, giving necessary slopes, cleaning joints and grouting them in epoxy grouts of approved make with pigmented additives to match shade of the tile, protecting the floor with bubble guard as mentioned above etc complete (Make- somani, kajaria)	SQM
IX	M S Fencing with wire mesh	
a	05"X0.5" ,10 gauge ,50 mm pipe freming	SQFT
B	Electrical Services	
1	MCB Control Light Points:	
a	Circuit wiring: 2 x 2.5mm ² + 2.5mm ² (Earth) in 25mm dia conduit. (From DB to first curcuit points)	RM
b	Point wiring with 2 x 1.5mm² + 1 x 1.5mm² (Earth) in 25mm dia conduit from first light point to other light points:	Nos
2	Ceiling Fan :	
a	Supplying and fixing ceiling fan of 1200 mm sweep suitable to work on 220 -250V, 50 HZ A.C supply complete with aluminium blades duly painted with stove enamel white paint or any other available shade as instructed by site engineer, 2 nos. of canopies, down suspension rod, insulator shackle. <ul style="list-style-type: none"> • The fan motor shall be 100% Copper, capacitor start capacitor run and shall have double ball bearings. • Speed 370 RPM; Air Delivery 225 CMM; • The ceiling fan shall be suspended from the ceiling by providing an „s” type hook of 10 mm M.S. round bars anchored to the reinforcement of the slab, making the patch work wherever required. • In the case of trusses, the „s” fan hook shall be fixed with a suitable clamping arrangement and mounted just above the adjacent fluorescent fixture to avoid the „s” type fan hook shall be fixed with suitable clamping arrangement and be mounted just above the adjacent fluorescent fixture to avoid the shadows. • The fan shall be connected by three core PVC/PVC insulated sheathed flexible wire with copper conductors of size 16/0.20mm. • Electronic An electronic fan regulator shall be provided for each fan. The Electronic Regulator for the ceiling fan shall be of Step type of electronic circuit. The regulator shall be rated for a minimum 100W. • All ceiling fans shall be wired to the ceiling rose through the connector to which fan rod wires shall be connected and suspended from hooks or shackles with the insulators between hooks and suspended rods. • Dedicate A dedicated ON/OFF switch is to be provided, wherever it's not available. Make: Crompton or Bajaj or Polycab or Anchor, Bajaj, Havells, Orient, Polycab, Anchor, or any other equivalent reputed brand. <ul style="list-style-type: none"> • The ceiling fan requirement may be new or replacement. So accordingly the fan has to be fixed in the ceiling along with provision and installation of dedicated switch, regulator and wiring with conduit work to be carried out as per site requirement. 	Nos
3	Exhaust Fan:	

S.No	Technical scope of Work	Unit
a	<p>Exhaust fan of sweep 300 mm, Speed-1500 RPM / required capacity as mentioned in the BOQ conforming to I.S.2312 of 1967 and of approved make and shall be suitable to work on 220V - 250V, 50 HZ A.C. single phase or 3 phase 415V A.C. supply. Single phase fan shall have a capacitor start-run motor. The motor shall be Heavy Duty, 100% copper, totally enclosed type and provided with pressure die cast aluminium rotor mounted on ball bearings. The impeller shall be with four curved blades of deep drawn quality sheet steel fitted on a robust aluminium die-cast hub. The complete assembly shall be balanced to minimize vibration. The frame shall be fabricated from sheet steel. The fan and steel work shall be finished with the dark grey stove or any suitable colour enamelled paint.</p> <p>The fan shall be installed on suitable size teak wood batten covered with wire mesh. Batten shall not be less than 50 X 40 mm.</p> <p>The fan shall be installed in the window frame or by taking a suitable properly finished round hole in the wall. The fan shall be connected to the supply outlet near the mounting complete with 3 pin socket or to three plate ceiling rose by means of suitable size three-core PVC/PVC flexible wire of size 14/0.193 mm. of 16 / 0.20 mm. copper conductors.</p> <p>Make: Crompton, Bajaj, Almonard, GEC-Alstom, Alfa, Innova, Cinni, Adler, havells, orient, Oorpat or equivalent brand</p>	Nos
4	Fixtures	
a	<p>Supply Installation and Commissioning of '36 W LED Batten with Optical PC material for excellent and smooth light output, CRI>80, uniform distribution, Lifetime of 30,000 burning hours@ L70, comply to 3KV surge test, Color Temperature should be 5700k, Power Factor >.9, LM 79 and LM 80 reports need to be submitted with all accessories shall be as per tender. Make Wipro/Phillips/Bajaj/Havells</p>	Nos
C	Misc	
a	Tissue paper and sanitizer holder	Nos
b	Signages	Job
c	Outdoor floor mounted stand dustbins with durable plastic,80L capacity. The stand must be fixed in the ground.	Nos
d	Three Seater Stainless Steel Waiting Area Visitor Chair, 325-350 Kg Weight Handling Capacity. Durable Parts And Support	Nos

Read As - Technical Specification of Civil and Electrical Works

IV D. Technical Specification of Civil and Electrical Works

Sl. No.	Technical Specification of Work	Unit
A	Civil & Fabrication	
I	Reinforcement	
	<p>Providing and fixing of double layer steel size @ 12mm & 10 mm thick steel reinforcement for RCC works including transporting, de-coiling, straightening, cutting, bending and placing in position at all levels and binding with approved quality G.I. annealed coated binding wire (18G). The rate shall include cost of binding wire, chairs, spacers and pins which will not be measured separately for payment. Quantity of steel as per drawing and with overlaps as per standard drawing of the structural consultant only shall be measured and paid for. Unauthorised laps shall not be paid for. The rate also includes protecting the reinforcing bars – in their virgin form or in the fabricated form, or when placed and tied up in position or as dowels left for future continuation of work or at construction joint – against corrosion due to exposure to weather if left exposed and un-encased for more than three weeks from the date of delivery to the site.</p> <p>Adequate & proper cover blocks either cement or PVC with 100mm high Steel reinforcement Z Spacer. Rolling Margin shall be within the allowable limits as specified in the technical specifications.</p> <p>Note: Considered Double Mesh with 50 mm Spacer at bottom, 100mm MS Z spacer in Center.</p> <p>The contractors unit rate is for all materials including reinforcement steel based on the basic rate for reinforcement steel, specified binding wire, chair rod, spacer rod, labour, tools, scaffolding, to take delivery from suppliers, neat stacking, leading, lifting, unloading, following lead and lift at all levels, and for all other works and to complete the works as directed by the consultants & EIC.</p>	KG
II	Plain Cement Concrete/IPS	
	<p>Providing and laying in position plain cement concrete of 1:2:4 (M15) grade with 20mm downgraded coarse aggregate for levelling course / fill under foundations/ steps/ walls/ platforms/ground floor/ slabs on grade or as specified by Structural consultant / EIC etc., by dump with all level of finishing for further flooring work, at any depth/ all levels, including cantering, shuttering, vibrating, compacting, curing, removal of formwork, dewatering, all lead and lifts, in layers of specified thickness in alternative bays etc. all complete and as directed for the following mixes.</p> <p>The cement used for PCC and RCC works shall be 43/53 Grade OPC with fly ash (Fly ash content allowed to maximum 20% of cementations material). Weigh batching shall be done as per approved Design Mix. Rates quoted shall be inclusive of all leads, lifts at all levels and Royalty and floor finishing/IPS.</p>	CUM
III	Brick Work	
	<p>Providing and construction of 230mm thick brick masonry with bricks of class designation 75 in cement mortar (1:6) in walls, pillars, pedestals support etc. at all levels as desired as per IS including racking out joints, cleaning and soaking the bricks at least for 24 hours before use and necessary scaffolding, all lifts and heights, curing at least for 7 days etc., complete, etc.</p> <p><i>Note: Contractor need to construct Step and ramp of 5't length at either/single side of the connected walkway with Sputum & Patient sitting area.</i></p>	CUM
IV	Plastering	
	<p>Providing and Laying 12 to15 mm thick cement plaster in Cement mortar 1:3:3 (1 cement: 3 fine sand and 3 coarse sand) to walls Neatly finished on masonry surfaces including jambs, grooves etc on internal/External surfaces of brick walls, finished rough and ready to take on cladding/Dado works. Rate shall include for scaffolding, grooves, sills, pattas, curing, surface preparation before the application of plaster, providing GI chicken mesh as mentioned above to a width of 150mm at the junctions of masonry and concrete works including tying</p>	SQM

Sl. No.	Technical Specification of Work	Unit
	in position by using suitable nails / clamps / screws and as directed etc. complete at all levels including top of the constructed brick wall.	
V	Structural Steel Work	
	The steel work shall include assembly, welding, jointing, building up new sections and fabrication out of rolled or formed steel sections and / or plates of any thickness for columns, beams, trusses, purlins, etc. using plates, channels and angles, gusset plate, foundation bolts, cleats etc. as per drawing, steel conforming to IS: 226 with minimum yield strength of 250 Mpa. The rate shall include cleaning the surface of the steelwork with mild acid wash, wire brush and pressurised water jet. For the Said work / line item indicative brief as shown below Earthwork & RCC Work of 2.5'3" X 2.5'3" X 2.5'3" ft pit (with PCC after Installing Pipe) and further providing & Fixing MS Square Pipe 100 mm X 100 mm (2.4 mm thickness) heavy weight (c/c 10 ft) for verticals & horizontal, 50 mm X 50 mm (2 mm thickness) for tie and truss work with red oxide primer and enamel Paint on MS Structure. All Tools shall be in contractor's scope. (Welding Machine & Rod, Cutting machine & Blad etc. The rate to be inclusive of welding anchors, lifting hooks, rungs, templates etc , also including forming partial pockets in the concrete along with the embedment of the bolts, inserts etc.	KG
VI	Steel railing	
	SS 304 (16 gauge)	RMT
VII	Polycarbonate Sheet	
	Providing and laying 10 mm thick Twin wall and both side UV coated sheet for the shed and should comply basic spec as per shared technical data and the rate should be inclusive of anchors, lifting hooks, rungs, templates, screw, washer/ mechanical driven screw washer installation etc.	SQM
VIII	Flooring & Wall Cladding	
	Providing and laying Flooring/wall cladding with machine cut Full Homogeneous Body Vitrified Tiles (Double Charged) of size 600mm x 600mm or similar size as per facility requirement, in approved pattern, pattern, as per the drawings provided by the Architect, EI, with an average bed of 6 8mm thick bed of cementitious adhesives, including surface preparation, neat cement float, giving necessary slopes, cleaning joints and grouting them in epoxy grouts of approved make with pigmented additives to match shade of the tile.	SQM
IX	M S Fencing with wire mesh	
	Providing and laying of 05"X0.5" ,10 gauge ,50 mm pipe framing	SQFT
X	Wash basin	JOB
	- Ceramic Type: Providing and fixing of white vitreous China new wash basin at desired location with C.I. brackets, 15 C.P. brass pillar taps, 32mm C.P, brass waste of standard pattern, including painting, fittings, and brackets, cutting, and repairing the walls including necessary plumbing work (inlet and drainage). Supply and drainage pipes should be made of PVC. Dimensions and inlet & drainage pipe length of wash basin as per the scope of work. - SS type: Providing and fixing of Modular standalone hand washing sinks made of SS 304 with SS water inlet tape mechanism shall be provided as per design and shall be equipped with back-flow prevention devices. Inlet and outlet pipes should be made of PVC with closure outside lab made of SS plate. Dimensions and inlet & drainage pipe length of wash basin as per the scope of work.	
XI	Creation of Door or window	JOB
	Providing & fixing anodized aluminium sections for doors / windows / glazing manufactured from best extruded aluminium sections and corners grinded with joints. Glass-Aluminium Door with proper handle, door lock, key system & hydraulic door closure with appropriate Neoprene gasketing. Scope includes for breakage of wall as required in the tech specs. Dimensions as per scope of work.	
XII	Work Bench	JOB
	- SS type: Providing and fixing of Stainless-steel grade 304 Work Bench of required dimensions. Frame shall be made up of SS 304 with minimum 30 mm Vertical and Horizontal pipes with nylon cushion/ bushing for the legs, no under self, non-particle shredding material and	

Sl. No.	Technical Specification of Work	Unit
	<p>shall be chemical resistant to allow chemical disinfection. Dimensions as per scope of work.</p> <p>- Platform type: Providing and fixing of Work bench with brick and mortar with granite top of required dimensions along with one counter-type washbasin including necessary plumbing work (inlet and drainage). Supply and drainage pipes should be made of PVC. Dimensions and inlet & drainage pipe length of wash basin as per the scope of work.</p>	
B	Electrical Services	
I	Ceiling Fan	
	<p>Supplying and fixing ceiling fan of 1200 mm sweep suitable to work on 220 -250V, 50 HZ A.C supply complete with aluminium blades duly painted with stove enamel white paint or any other available shade as instructed by site engineer, 2 nos. of canopies, down suspension rod, insulator shackle.</p> <ul style="list-style-type: none"> • The fan motor shall be 100% Copper; capacitor start capacitor run and shall have double ball bearings. • Speed 370 RPM; Air Delivery 225 CMM; • The ceiling fan shall be suspended from the ceiling by providing an „s” type hook of 10 mm M.S. round bars anchored to the reinforcement of the slab, making the patch work wherever required. • In the case of trusses, the „s” fan hook shall be fixed with a suitable clamping arrangement and mounted just above the adjacent fluorescent fixture to avoid the „s” type fan hook shall be fixed with suitable clamping arrangement and be mounted just above the adjacent fluorescent fixture to avoid the shadows. • The fan shall be connected by three core PVC/PVC insulated sheathed flexible wire with copper conductors of size 16/0.20mm. • Electronic An electronic fan regulator shall be provided for each fan. The Electronic Regulator for the ceiling fan shall be of Step type of electronic circuit. The regulator shall be rated for a minimum 100W. • All ceiling fans shall be wired to the ceiling rose through the connector to which fan rod wires shall be connected and suspended from hooks or shackles with the insulators between hooks and suspended rods. • Dedicate A dedicated ON/OFF switch is to be provided, wherever it’s not available. • The ceiling fan requirement may be new or replacement. So accordingly, the fan has to be fixed in the ceiling along with provision and installation of dedicated switch, regulator and wiring with conduit work to be carried out as per site requirement. 	Nos.
II	Exhaust Fan:	
	<p>Exhaust fan of sweep 300 mm, Speed-1500 RPM / required capacity as mentioned in the BOQ conforming to I.S.2312 of 1967 and of approved make and shall be suitable to work on 220V - 250V, 50 HZ A.C. single phase or 3 phase 415V A.C. supply. Single phase fan shall have a capacitor start-run motor. The motor shall be Heavy Duty, 100% copper, totally enclosed type and provided with pressure die castdie-cast aluminium rotor mounted on ball bearings. The impeller shall be with four curved blades of sheet steel fitted on aluminium die cast. The complete assembly shall be balanced to minimize vibration. The frame shall be fabricated from sheet steel. The fan and steel work shall be finished with the dark grey stove or any suitable colour enamelled paint.</p> <p>The fan shall be installed on suitable size teak wood batten covered with wire mesh. Batten shall not be less than 50 X 40 mm.</p> <p>The fan shall be installed in the window frame or by taking a suitable properly finished round hole in the wall. The fan shall be connected to the supply outlet near the mounting complete with 3 pin socket or to three plate ceiling rose by means of suitable size three-core PVC/PVC flexible wire of size 14/0.193 mm. of 16 / 0.20 mm. copper conductors.</p>	Nos.
III	Light Fixtures	
	<p>Supply Installation and Commissioning of '36 W LED Batten with Optical PC material for excellent and smooth light output, CRI>80, uniform distribution, Lifetime of 30,000 burning hours@ L70, comply to 3KV surge test, Colour Temperature should be 5700k, Power Factor >0.9.</p>	Nos.