Schedule "A"
Schedule No 14 : : MISCELLANEOUS ITEMS

Name of Work : Construction of Staff Residences on Plot Nos 53 / 11 to 53 / 14, Rajendra Nagar, New Delhi - 110 060

Ser No	DSR Item	Description of Items	Unit	Quantity	Rate (Rs)	Amount (Rs)
1	Non DSR Item	Providing, fixing including erection of 6.0 metre high, temporary barricading at site of METRO sheets; fixed with MS frame work, suitable MS channels, angles, rivets, flats, CONCRETED / EMBEDDED IN GROUND, ADEQUATELY SECURED, capable to withstand wind load and other safety requirements as per MCD requirement and norms of safety, pollution control, site isolation and safety. Suitable arrangement shall be made to fix the barricading to avoid from falling / overturning by ensuring suitable arrangments. The work shall be executed as per directions of Engineer-in-Charge which includes writing and painting, painting of caution signs and safety of the construction site. The barricading provided shall be retained in position at site during the execution / completion of the entire work. Rate include its maintenance for damages, painting, all incidentals, labour materials, equipments and works required to execute the job. The barricading shall not be removed without prior approval of Engineer-in-Charge. (Note : One time payment shall be made for providing barricading from start of work till completion of work including shifting at site if required. The barricading provided shall remain to be the property of the contractor after issuance of completion certificate).	sqm	440		
2	Non DSR Item	Providing and Fixing magic eye as in main entrance doors including cutting shaping hole for magic eye, fixing magic eye. Make : Yale, Dorset Magic eye	Each	16		

Schedule "A"
Schedule No 14 : : MISCELLANEOUS ITEMS

Name of Work : Construction of Staff Residences on Plot Nos 53 / 11 to 53 / 14, Rajendra Nagar, New Delhi - 110 060

Ser No	DSR Item	Description of Items	Unit	Quantity	Rate (Rs)	Amount (Rs)
3	Non DSR Item	Providing & fixing galvanized chicken wire mesh (24 gauge -12mm aperture size) to junction of concrete & masonary work & other location where called for including cutting to require size to cover junction or any cutting or over conduits, side laps of minimum 100mm on each side, cutting to size, fixing in position with galavanised U-Wire nails as approved.	sqm	550.00		
4	Non DSR Item	Providing & fixing 20 mm thick exterior wall cladding tiles (make Pioneer Bricks) size 230 x 75 x 20, colour Country Cream, laid with Type 2 tile adhesive grey, conforming to category IS 15477: 2019 Type 2T, over 6mm to 15mm thick rough cement plaster (cement mortar 1:4 , 1 Cement: 4 Coarse sand), as cladding on external walls upto all heights, as per drawings, laid with grooves as specified. The gooves / joints between the tiles will be grouted with similar tile adhesive cementitious grout in concave (recessed) pattern, as directed by Architect, and tiles will be finished clean of all dirt, cement dropping etc. The joints between the tiles will be in one line both in horizontal & vertical direction as per drawing or directed by Engineer-in-Charge. Note : Cost / expenditure towards scaffolding, shuttering shall deemed to be included int he quoted rates.	Sqm	1025.00		
5	Non DSR Item	Providing, installation and commissioning water pumps of capacity 1 HP (One HP), single phase self priming, make Crompton, model Master Plus, fixed in position by using union, brass gate valve including all fittings and fixtures like elbow, socket etc, in the water line drawn from Jal board. (Brass Gate Valve rates are not to be included in this item).	Each	18		

Schedule "A"
Schedule No 14 : : MISCELLANEOUS ITEMS

Name of Work : Construction of Staff Residences on Plot Nos 53 / 11 to 53 / 14, Rajendra Nagar, New Delhi - 110 060

Ser No	DSR Item	Description of Items	Unit	Quantity	Rate (Rs)	Amount (Rs)
6	Non DSR Item	Providing and Fixing Teak Wood (Sudan Teak) handrail on section 75 x 50 mm, crafted and made to shape as per drawing, fixed to existing balusters of staircase railing.	RM	60		
7	Non DSR Item	Providing and fixing wooden moulded architrave of rectangular size and shape of finished size 65 mm x 20 mm, with moulding design, of Teak Wood (Sudan Teak) fixed on door frames, with self tapping screws, joint beween architrave and door frame filled with corner beading of triangular shape to the junction of panelling etc. with iron screws, plugs and priming coat on unexposed surface etc. complete 2nd class teak wood.	RM	288		
8	Non DSR Item	Supplying and fixing of surface/ recess mounting, vertical type, 415 V, TPN, 10 /12 Way MCB distribution board (of make L&T) of sheet steel for lift panels, dust protected, duly powder painted, inclusive of 200 A tinned copper bus bar, common neutral link, earth bar, din bar for mounting MCBs as required for mounting the following:- 1 x RCCB of 25 Amp, 300 mA, 4 pole. 2 x MCB 16 Amp, Single pole. 2 x MCB 10 Amp, Single pole. Note : Cost of RCCB and MCB not to be included.	Each	2		
9	Non DSR Item	Provision, suplying and installation of Electric buzzer / alarm system for water overflow from overhead storage tanks	Each	18		

30 May 2023

Schedule "A"
Schedule No 14 : : MISCELLANEOUS ITEMS

Name of Work : Construction of Staff Residences on Plot Nos 53 / 11 to 53 / 14, Rajendra Nagar, New Delhi - 110 060

Ser No	DSR Item	Description of Items	Unit	Quantity	Rate (Rs)	Amount (Rs)
10	Non DSR Item	Providing, installation and commissioning of electric meter single phase, including liaison for laying of cables by BSES from electric pole to meter, testing of electric meters, sanctioning of load, test report of electric meter, payment to BSES for load sanctioning, liaison etc. complete so as to charge the meters and distribution of electricity.	Job	16		
11	Non DSR Item	Providing, installation and commissioning of electric meter three phase, including liaison for laying of cables by BSES from electric pole to meter, testing of electric meters, sanctioning of load, test report of electric meter, payment to BSES for load sanctioning, liaison etc. complete so as to charge the meters and distribution of electricity.	Job	2		
12	18.48 (Modified)	Providing and placing on terrace (at all floor levels) polyethylene water storage tank of 1000 litres capacity, rotational moulded, Four / five layers, Food Grade, with cover and suitable locking arrangement, Colour White and making necessary holes for inlet, outlet and overflow pipes but without fittings and the base support for tank, make Sintex.	Each	18		
13	18.48 (Modified)	Providing and placing on terrace (at all floor levels) polyethylene water storage tank of 1000 litres capacity, rotational moulded, Four / five layers, Food Grade, with cover and suitable locking arrangement, Colour White and making necessary holes for inlet, outlet and overflow pipes but without fittings and the base support for tank, make Sintex. Note : This item is in lieu of item No 14.2 of Schedule No 12 page No 94	Each	18		

Schedule "A" Schedule No 14 : : MISCELLANEOUS ITEMS						
Name of Work : Construction of Staff Residences on Plot Nos 53 / 11 to 53 / 14, Rajendra Nagar, New Delhi - 110 060						
Ser No	**DSR Item**	**Description of Items**	**Unit**	**Quantity**	**Rate (Rs)**	**Amount (Rs)**
14	Non DSR Item	Providing and fixing Stainless Steel Door Mortise Lock 10 inches (Rose Type) with pair of lever Handles, 6 levers, lock body backset 55 mm, lock barrel with one side coin turn and other side knob (thumb turn) for bathrooms, Antique Brass Finished, with mortice latch and one dead bolt, of approved quality with necessary screws etc. complete of make Hettich / Godrej / Dorset / Ozone / IPSA Note : This item is in lieu of item No 13 of Schedule No 10 page No 77	Each	64		
		Total of Schedule 14 : Miscellaneous Items (Rs)				

Summary : Abstract of Cost of Schedule No 1 to 14			
Name of Work : Construction of Staff Residences on Plot Nos 53 / 11 to 53 / 14, Rajendra Nagar, New Delhi - 110 060			
Ser No	**Description of Schedule & Items**		**Amount (Rs)**
1	Schedule No 1 : Earth Work	:	
2	Schedule No 2 : Concrete Work PCC	:	
3	Schedule No 3 : Concrete Work RCC	:	
4	Schedule No 4 : Masonry Work	:	
5	Schedule No 5 : Cladding Work	:	
6	Schedule No 6 : Flooring Work	:	
7	Schedule No 7 : Water Proofing Work	:	
8	Schedule No 8 : Roofing Work	:	
9	Schedule No 9 : Steel Work	:	
10	Schedule No 10 : Wood Work	:	
11	Schedule No 11 : Finishing Work	:	
12	Schedule No 12 : Sanitary, Water Supply and Drainage Work	:	
13	Schedule No 13 : Electrical Work	:	
14	Schedule No 14 : Miscellaneous Items of Work	:	
	Total Amount (Rs) in figures		
	Total Amount (Rs) in words		
	GST (18%) Extra		
	Total Amount (Rs) in figures after including GST		
	Total Amount (Rs) in words after including GST		

SCHEDULE "A" : CIVIL WORK

1. **Building Work**.

(a) Details of the work to be carried out by the contractor are given in the Items of Work i.e. Schedules, specifications, drawings and description.

(b) The items of work and quantities and scope may vary to any extent and the quoted rates shall remain same irrespective of the quantity of work to be executed.

(c) The drawings of the staff residences to be constructed include architectural and structural drawings. These drawings are meant for giving the understanding of the project to the tenderer. During execution and alongwith progress of construction, fresh drawings may be issued by the architect bringing out changes in basic layout etc. The successful tenderer shall be issued with fresh set of drawings good for construction. These may vary from the drawings issued for the tender purposes. Any variations in the tender drawings and drawings issued for "Good for Construction" shall not be considered as extras and the contractor is bound to execute the work as per drawings issued "Good for Construction" without any extra payment for the same.

(d) The Contractor is bound to maintain "Measurement Books" for the quantities for the steel, cement consumed for different items of works executed under contract. The same will be periodically checked and signed by Engineer-in-Charge / Architect and reconciled with the theoretical consumption of these materials. The contractor is also bound to maintain the site levels for all the jobs where cutting and filling is involved. The representative of Owner shall jointly sign the records so maintained. All works under this contract shall commence simultaneously.

SCHEDULE "A" : ELECTRICAL WORKS

1. **Electrical Works**. All electrical works shall be in accordance with latest CPWD specifications and bill of quantities enclosed with tender.

Signature with date of SET's Representative

Signature of Contractor or his Authorised Representative with date

SPECIFICATIONS OF WORK

NAME OF WORK: CONSTRUCTION OF STAFF RESIDENCES ON PLOTS BEARING MUNICIPAL NOS. 53/11, 53/12, 53/13 AND 53/14 AT RAJENDRA NAGAR, NEW DELHI - 110 060

INTRODUCTION. The work involves provision and construction including material and labour for civil works, electrical works, plumbing work, water supply and sanitary work, sewage disposal so as to achieve a complete construction of staff residences on Plot No 53/11, 53/12, 53/13 and 53/14 as per Items of Work specified in Schedules, architectural drawings, structural drawings, drawings for elements as per specification of the work specified here-in-after. The completed work involves ready to move in residences complete in all respects.

1.0 **DISMANTLING & DEMOLITION**

1.1 The existing buildings on these four plots were dismantled through a separate agency. In order to safeguard the plots from unauthorised parking and its misuse, outer periphery walls upto five to six feet in height were retained. It may be possible that some remnants of the dismantled buildings in form of outer walls, its foundations may be remaining.

1.2 Dismantling and demolition of remnants of existing residential structure above or below ground level on Plot No 53/11, 53/12, 53/13 and 53/14 i.e. Demolition of walls, flooring, columns, foundations and removal of malba/unserviceable or waste material by mechanical/manual means, including loading, transporting, dumping / unloading to approved municipal dumping ground or as approved by Engineer-in-Charge, for all leads including all lifts involved.

2.0 **EARTH WORK**

Earth work in excavation in ordinary soil as existing (**soil test report attached**) for basement, raft, columns, columns footings, wall footings, shear wall footings, underground water tank, manholes, rainwater harvesting tank etc. of required depth and width as per structural drawings, including dressing of sides and ramming of bottom, lift as per depth required including getting out the excavated soil and disposal of excavated surplus soil/malba to Govt. approved sites, filling approved earth in trenches, plinth sides of foundations, etc. in layer consolidating each layer by ramming and watering etc. complete including for any incidental requirement for completion.

2.1 **Protection**.

2.1.1 Excavation shall be securely barricaded and provided with proper caution signs, conspicuously displayed during the day and properly illuminated with red lights and as directed by Engineer-in-Charge during the night to avoid accident. The Contractor shall take adequate protective measures to ensure that the excavation operations do not damage the adjoining structures or dislocate the services. Water supply pipes, sewerage-drainage pipes, manholes, power supply cables etc. met within the course of excavation shall be properly supported and adequately protected, so that these services remain functional. Any service damaged during excavation shall be restored and made good by the contractor at his own expense, in an expeditious timeframe.

2.1.2 As one side of foundation / basement of the proposed residences is adjacent to one of the wall/foundation/structure of the neighboring house, therefore the necessary protection of the foundation / structure of the neighboring house shall be mandatory. Excavation shall not be carried

out below the foundation level of the adjacent building until underpinning, shoring and adequate protection measures are put in place. Safe and correct order of construction in order to safeguard any damage to the structure of adjacent house No 53/15, shall be ensured at all times. Any damages to any existing work, adjacent structures, and neighbouring structures shall be made good by the Contractor at his own cost. Contractor shall ensure every safety measures for the workers. Rates / expenditure towards protection measures shall deemed to be included in the quoted rates.

2.2 **Earth Work in Excavation.**

2.2.1 All excavation operations manually or by mechanical means shall include excavation and 'getting out' the excavated materials and its dumping / depositing in the municipal approved dumping grounds. Proper levelling, compacting the earth / soil by ramming and watering shall be carried out.

2.2.2 During the excavation the natural drainage of the area shall be maintained. Excavation shall be done from top to bottom. Undermining or undercutting shall not be done. Where the soil is soft, loose or slushy, the width of steps shall be suitably increased or sides sloped or the soil shored up. It shall be the responsibility of the contractor to ensure that the stability of the soil mass during excavation or during construction so that no (no) damage is done to the existing neighboring structures / buildings. Dewatering of the basement, incase water enters the basement due to any reason, will also be the responsibility of the contractor. If the excavation for foundation is done to a depth greater than that shown in the drawings or as required by the Engineer-in - Charge, the excess depth shall be made good by the contractor at his own cost with the concrete of the mix used for levelling / bed concrete for foundations. Soft/defective spots at the bed of the foundations shall be dug out and filled with concrete, as directed by the Engineer-in-Charge.

2.2.3 **Test Check of the Excavated Levels.** SET Engineer shall exercise test check of levels at least to the extent of each corner and center of each plot to ensure conformity to the planned levels and will be recorded. Variations in the levels will be technically corrected by the contractor at his own cost.

2.3 **Earth Work in Filling**. Filling available excavated earth after anti termite treatment in trenches, plinth sides of foundations, etc. in layer consolidating each layer by ramming and watering etc. complete. The earth used for filling shall be free from all roots, grass, shrubs, vegetation, brushwood, trees, sapling and rubbish. Filling with excavated earth shall be done in regular horizontal layers each not exceeding 20 cm in depth. All lumps and clods exceeding 8 cm in any direction shall be broken. Each layer shall be watered and consolidated with steel hammer where possible and with blunt end of crow bars where rammers cannot be used. Special care shall be taken to ensure that no damage is caused to the masonry or concrete in the trenches.

3.0 **ANTI TERMITE TREATMENT**.

Pre-Construction Anti Termite Treatment (ATT) shall aim to create a continuous chemical barrier / zone below and around the structure, so as to prevent entry of subterranean termites into treated structure. Providing and laying / carrying out anti termite treatment along with providing a warranty on the treatment for a minimum 5 (five) years. Guarantee shall be given by Contractor on Surety Bond. The treatment shall be carried out as per IS 6313 Part –II as amended, by engaging professional service agency. (Appropriate agency shall carry out the treatment after approval from the architect.)

Signature with date of SET's Representative

Signature of Contractor or his Authorised Representative with date

3.1 **Material for Anti Termite Treatment.** Imidacloprid 30.5% SC or Bifenthrin chemical shall be used as per the manufacturer's recommendations for dosage. These chemicals shall be diluted as per manufacturer's instructions of dosage for the control of termites in buildings during pre and post-construction anti termite treatment.

3.2 **Procedure & Areas to be Covered**. Treatment shall be carried out as per current BIS practices. The treatment procedures as specified in IS 6313 Part II: Code of Practice for Anti Termite Measures in Buildings – Pre Construction Chemical Treatment Measures, shall be followed. Treatment of soil below raft, foundations, basement, backfilling, filling in trenches etc. shall be suitably treated as per manufacturer's instructions and as per BIS codal provisions / CPWD specifications for pre-construction stages. Important stages to be covered shall be as per IS 6313 part –II and CPWD specifications as per clause 2.28. Important stages to be covered shall be Treatment of masonry Foundation and Basement, Treatment for RCC Foundation and Basement, Treatment of Top surface of Plinth Filling, Treatment at Junction of the Wall and the Floor, Treatment of Soil along External Perimeter of Building.

Along external wall where the apron is not provided using chemical emulsion to a depth of 300 mm including excavation channel along the wall & rodding etc. complete. Along the driveway where no basement exists below concrete using chemical emulsion including drilling and plugging holes etc. Treatment of slab surfaces before laying stone. Treatment at points of contact of wood work by chemical emulsion by drilling 6 mm dia holes at downward angle of 45 degrees at 150 mm c/c and sealing the same.

4.0 **FOUNDATION.**

4.1 Earth excavation, excavation of trenches shall be in accordance with the architectural / structural drawing. Proper levelling, ramming, watering will be carried out. Anti-termite treatment as specified in clause No 3.0 above shall be carried out.

4.2 Sand filling, shown in structural drawing of Foundation Details, between raft / foundation slab and basement floor level slab refers to Coarse Sand.

4.3 Half Brick wall in 1:4, between soil / sand filling and RCC work shall be provided around at all places as in foundations to ensure the protection of RCC work from direct contact with soil.

5.0 **CONCRETE.**

5.1 **PCC 1:4:8**. Providing and laying cement concrete 1:4:8 (1 cement: 4 coarse sand: 8 graded stone of 40 mm nominal size) of thickness / depth minimum 100 mm and curing complete including the cost of form work, if any at locations as specified in drawings and subsequent paragraphs.

5.1.1 Providing and laying PCC 1:4:8 (1 cement: 4 coarse sand: 8 stone aggregate 40 mm nominal size) under columns footings, wall footings, shear wall footings, brick wall footings, rain water harvesting pit, manholes, below raft slab, below basement stitch slab before laying waterproofing layer, brick work and under flooring at all levels including basement, stilt, upper floors and terrace wherever required, as per thickness specified in drawings or of thickness 100mm, whichever is more.

Signature with date of SET's Representative

Signature of Contractor or his Authorised Representative with date

5.1.2 Providing and laying PCC 1:4:8 over filling in all sunk slabs for toilets, terraces, balconies including using broken AAC block in lieu of portion of large aggregate, as filling as appropriate, over water proofing layer, which is specified in subsequent paragraph.

5.1.3 Providing and laying PCC 1:4:8 of thickness 150 mm below driveway floorings in mix including addition of nominal re-enforcement to prevent cracking of slab wherever required.

5.2 **PCC 1:2:4**. Providing and laying cement concrete 1:2:4 (1 cement: 2 coarse sand: 4 grade stone 20 mm nominal size) and curing complete including the cost of form work, if any, in areas like cills, copings and/or as specified as per drawings.

5.3 **Reinforced Cement Concrete**.

5.3.1 Cement concrete of specified grade as per structural design and technical specifications drawings for RCC work in any part of the structure i.e. in foundations, footing, basement raft / stitch slab, RCC columns, RCC walls, beams, slabs, lintels, floor / roof slabs, balconies, chajjas, shear walls for lifts, loft, toilet counter, staircase including beams & landings etc. complete including formwork, its centering, shuttering and laying of reinforcement, cutting, straightening, bending and binding of TMT bars including provision of chairs, spacers, curing etc. and removal of formwork. Concrete for RCC work and RCC members shall be fit for "Very Severe" exposure conditions, as per IS 456. Concrete for all structural elements of foundation and basement shall be designed as M-30. RCC for all other structural elements shall be designed/provisioned as specified in the structural drawings.

5.3.2 Only approved laboratory designed, RMC shall be used for all RCC work in the building. Exception may be made only for casting of columns, where the RMC quantity for the truck is much larger than the quantity to be used in the columns. In such cases, RCC, in columns and places requiring very small quantities, as per approved design to achieve specified grade of concrete, from a certified laboratory, specified in structural drawings mix will be laid as per structural drawing by Weigh Batcher Mixture machine at site or RCC laid in ratio 1:1:2 (1 cement: 1 Crushed stone sand: 2 large aggregates in equal proportion of 10 mm size and 20 mm size with FOSROC Conplast SP430 G8 DIS as per manufacturer's instructions). All RCC work shall be compacted with 40 mm and 20 mm nozzle vibrator, as per sizes of the concrete members.

6.0 **SHUTTERING AND FORM WORK.**

6.1 Provision of stable, clean, straight, water tight for preventing loss of slurry from concrete, sufficiently rigid during placing and compaction of concrete, steel jack and steel plate form work using adjustable height steel props complete with centering and shuttering (steel) for slabs, columns, cantilevers and plywood shuttering for beams, cantilever slab portions wherever required, break in slabs, break in concrete slabs, bands, lofts, chajjas, lintels, shelf in kitchen or bathrooms etc., including removal of form work at all heights etc. complete. The formwork shall be strong enough to withstand the dead and live loads and forces caused by ramming and vibration of concrete and other incidental loads, imposed upon it during and after casting of concrete. It shall be made sufficient rigid by using adequate number of ties and braces, screw jack or hard board wedges where required shall be provided to make up any settlement in the form work either before or during the placing of concrete. The provision of formwork and stripping time etc. shall be as per clause 5.2. of CPWD Specification Vol-1.

6.2 **Material for Form Work.**

6.2.1 Steel Form Work. Stable, clean, straight, water tight, steel jack and steel plate form work using adjustable height steel props and steel shuttering using plates for slabs, columns, cantilevers and propping of formwork for beams etc. No wooden (balli) scaffolding (props) shall be used for propping slabs, beams in the building. All propping and centering should be of steel tubes with extension peace or built up sections of rolled steel. The weight of concrete, centering and shuttering of any upper floor being cast shall be suitably supported on one floor below the top most floor already cast.

6.2.2 Plywood shuttering for beams, RCC walls, shear walls, cantilever slab portions wherever required, break in slabs, break in concrete slabs, bands, lofts, chajjas, lintels, shelf in kitchen or bathrooms etc.

6.3 Form work and concreting of upper floor shall not be done until concrete of lower floor has set at least for 14 days. Removal of form work (striping time) shall be as per clause 5.2.3.7 of CPWD Specification Part-1.

6.4 The rates/amount for formwork/scaffolding for all elements of work in order to achieve completion of work shall be deemed to be included in the rates quoted.

7.0 **SCAFFOLDING.**

For all external brick work or tile work double steel scaffolding cup and lock system, independent of the work having two sets of vertical supports shall be provided. The supports shall be sound and strong, tied together with horizontal pieces over which scaffolding planks shall be fixed.

8.0 **REINFORCEMENT BARS.**

8.1 TMT Reinforcement Bars, ribbed of grade Fe 500 / Fe 500 D / Fe 550 D / Fe 500 SD / Fe 550 SD, cut-bent correctly and accurately to the size and shape as shown in the structural drawings or as directed by Engineer- in-Charge, shall be used. Preferably bars of full length shall be used. The reinforcement bars shall be of high strength deformed TMT bars conforming to IS 1786, sourced from Primary Producers only.

8.2 Provision and laying of reinforcement bars include cutting of reinforcement bars, placing in position of reinforcement bars, straightening including steel binding with binding wire, provision of chairs, spacers, jointing, maintaining splice length, anchorage, lap length, development length. Detailing of reinforcement for foundation, R.C.C Wall, columns, beams, slab and / or any structural element shall be as per structural drawings and as per IS code.

8.3 The provision, quality control, acceptance criteria, storage, protection from rust etc. shall be governed as per clause No 5.3 of CPWD Specification Vol-1 and Bureau of Indian Standards.

9.0 **CURING OF CONCRETE AND CEMENT WORK.**

9.1 Wet curing period of concrete including RCC shall be minimum of 10 days or its equivalent. Exposed surface of concrete shall be kept continuously in a damp or wet condition by ponding or by covering with a layer of sacking, canvas, hessian or similar materials and kept constantly wet from the date of placing concrete for atleast 10 days.

10. **QUALITY CONTROL & ACCEPTANCE OF CONCRETE**.

Signature with date of SET's Representative

Signature of Contractor or his Authorised Representative with date

Quality control and acceptance criteria of concrete covering aspects of production of concrete, transportation, laying on site, compaction, curing, and removal of formwork and for provision /laying of reinforcements shall be as per CPWD specifications. After removal of formwork, the concrete shall also be inspected by Engineer-in-Charge for its quality and defects in form of bugholes, honey combing, voids etc. Only after approval of the Engineer-in-charge, the further progress shall be undertaken by the contractor.

11. **BRICK WORK AND BLOCK WORK.**

11.1 **Brick Work**. Brick work shall be carried out in inner lining of the basement, compound wall at stilt floor level, parapet walls, mumty and in locations specified in drawings. Coarse sand refers to crushed stone sand of approved quality.

11.1.1 Brick work in half brick walls shall be laid in stretcher bond. Half brick work shall be reinforced with 2 Nos. M.S. bars of 8 mm dia. bars, embedded in every fourth course. These shall be securely anchored at their ends. The free ends of the reinforcement shall be keyed into the mortar of the main brick work to which the half brick work is joined. The mortar used for reinforced brick work shall be rich dense cement mortar and lime mortar shall not be used. Overlaps in reinforcement, if any, shall not be less than 30 cm. The mortar interposed between the reinforcement bars and the brick shall not be less than 5 mm. The inlaid steel reinforcement shall be completely embedded in mortar. The mortar covering in the direction of joints shall not be less than 15 mm.

11.1.2 In hot and dry weather, the mortar is likely to dry up before it has attained its final set and may crumble. This shall be prevented by keeping the brickwork constantly wet for at least seven days.

11.1.3 Unless otherwise specified here-in-after and/or shown on drawings, brick work in various situations shall be built in cement mortar, as under:-

11.1.3.1	Brick work in half brick thick and under, the independent pillars and reinforced brick work including foundation and brick work in buildings having load bearing structure.	-	Cement Mortar 1:4
11.1.3.2	Brick work in all other situations	-	Cement Mortar 1:6

12. **DPC**.

Plain Cement Concrete 1:2:4 as DPC layer of thickness 50 mm – 75 mm, as per drawing mixed with water proofing compound (liquid type) shall be laid over brick work at plinth level and a layer of Bitumen coating with 85/25 bitumen over the PCC layer. DPC shall consist of cement concrete of specified proportions and thickness. The surface of brick shall be levelled and prepared before laying the cement concrete. Side shuttering shall consist of steel forms and shall be strong and properly fixed so that it does not get disturbed during compaction and the mortar does not leak through. When the sides are removed, the surface should come out smooth without honeycombing. The cost of shuttering etc. for laying the DPC is deemed to be included in the quoted rates.

13. **EXTERNAL AND INTERNAL FINISHING.**

The cement plaster shall be 12 mm, 15 mm or 18-20 mm thick or as specified in the drawings. The joints shall be raked out properly. Dust and loose mortar shall be brushed out. Efflorescence if any shall be removed by brushing and scrapping. The surface shall then be thoroughly washed with water,

cleaned and kept wet before plastering is commenced. The cement plaster and related items of work like preparation of surface, mixing, curing scaffolding etc. shall be carried out as specified in chapter 13 of CPWD Specification Vol- 2. The material for plaster, proportions and application of mortar for plastering shall be as per CPWD specifications, Chapter 3 of Vol 1. **Use of Yamuna Sand is not permitted for any work at any location.**

13.1 **Shotcreting / Guniting**.

The internal and external RCC walls of the basement, including columns of the basement upto roof slab of the basement and the floor / raft slab be treated and waterproofed with Shotcreting (Guniting) process, as per IS 9012, upto full height of basement. Basement wall on external side shall also be gunited / shotcreted upto height of DPC plus one meter. In order to hold and impart strength to the gunited mortar concrete, reinforcement in form of welded mesh fabric of 8 gauge, thickness 3.4 mm with opening size 100 mm x 100 mm with nominal mass 1.430 Kg per m^2 shall be used and secured with anchors. Integral water proofing compound liquid type must be used in the mortar mix (1:4) for Guniting, as per manufacturer's instructions and dosage. The provided shotcreted / gunited material shall be 50 mm thick applied under high pressure.

13.2 **Plaster on Internal Walls**.

13.2.1 Basement**.** No plaster shall be carried out on the soffit of ceiling of the RCC slab of basement. On all internal walls, the first treatment on RCC walls shall be guniting/shotcreting, which shall be adequately cured. Second layer shall be half brick wall. On this half brick wall, 12-15 mm thick plaster in cement mortar 1:4 (1 cement: 4 crushed stone sand of Zone III) shall be carried out. 22 SWG chicken wire mesh or fibre mesh shall be fixed with nails on the junctions of RCC and Brick joint before plaster to prevent formation of any crack on dissimilar surfaces.

13.2.2 Stilt Floor (including Guard Room, Pantry, washrooms, Compound wall), Staircase, Mumty, Lift Well to include lift pit, Parapets and Pantry-Washroom on Terrace including Exterior and Internal Walls of Pantry & Washroom on Terrace**.** On all internal walls including soffit of ceilings, 15-20 mm thick plaster in cement mortar 1:4 (1 cement: 4 crushed stone sand of Zone III) shall be carried out. 22 SWG chicken wire mesh or fibre mesh of width 100-150 mm fixed with nails on the junctions of RCC and AAC Block / Brick joint before plaster to prevent formation of any crack on dissimilar surfaces shall be fixed.

13.2.3 22 SWG chicken wire mesh or fibre mesh of adequate width so as to cover the conduit and pipe line joints before plaster to prevent formation of any crack appearing on plaster /surface shall be fixed.

13.2.4 Sanitary pipe shafts shall be plastered from inside in cement mortar 1:4 (1 cement: 4 crushed stone sand using waterproofing compound, as per manufacturer's instructions). All internal shafts surface shall be tiled using commercial tiles and fixed with chemical adhesive. Shade / Colour of tiles shall be approved by Engineer – in – Charge.

13.2.5 The civil and electric infrastructure shall be provided for installation of lift. The plaster on the internal walls of lift pit and lift shaft shall be carried out in 1:4.

13.2.6 **Plaster on Masonry Work / Plaster on Internal Walls.**

Signature with date of SET's Representative

Signature of Contractor or his Authorised Representative with date

On all internal brick walls including soffit of ceilings, 12-20 mm thick plaster in cement mortar 1:4 (1 cement: 4 crushed stone sand of Zone III) shall be carried out. 22 SWG chicken wire mesh or fibre mesh of width 100-150 mm fixed with nails on the junctions of RCC and Brick joint before plaster to prevent formation of any crack on dissimilar surfaces shall be fixed. Plaster on soffit of ceilings wherever false ceiling is carried out, shall be as per directions of Engineer-in-Charge.

13.3 **Plaster on External Walls**.

13.3.1 All external areas, shall be plastered in Cement Mortar including drip course as required and wherever required. All external plaster shall be 15-20 mm thick plaster in 1:4 (1 cement: 4 coarse sand with appropriate waterproofing compound).

13.3.2 As specified/shown, the external surface is also to be prepared to receive the wall cladding to be fixed with chemical adhesives.

13.3.3 All external walls of basement upto 1 meter above DPC, shall be plastered in Cement Mortar (1:3), thickness 15-20 mm (1 cement : 3 coarse sand with appropriate waterproofing compound). On to the external plaster of basement, one coat of tapecrete as water proofing compound shall be applied.

13.3.4 Crushed stone sand of Zone III shall be used to carry out external plaster. No Yamuna sand to be used. 22 SWG chicken wire or fibre mesh (100-150mm wide) shall be fixed on RCC and brick joint on external surface.

13.4 **Brick Tiles Cladding**.

On external surfaces, brick tiles as per the sizes and places specified in specifications / drawing, will be laid. These tiles will be fixed using chemicals / adhesives as specified in IS: 15477.

13.5 **Cladding in Granite Stone**.

13.5.1 Cladding of Granite stone of approved shade / texture / colour / hue as specified in Architectural drawings shall be fixed / provided / laid using adhesives for granite stone as specified in IS 15477 for porosity less than 3%. Granite stone cladding shall be provided in areas like jambs, lintels, sills and soffit of windows and in areas as specified in drawings.

13.5.2 Cladding on Lift Elevation / Entrance Lobby**.** Cladding as per architectural drawings and pattern shall be provided.

13.6 **Coping over Parapets and Compound Wall**. Coping on compound walls, parapets and in locations as shown in drawings, shall be provided.

13.7 False ceiling in toilet and kitchen area and in areas as specified in drawings shall be provided with POP. The ceiling shall be provided with suspender channels, fasteners and associated material of make Gypsum India.

14. FLOORS, FLOOR FINISHES, SKIRTING, DADO, WINDOW SILLS, PCC CILLS.

Flooring as specified in schedule in subsequent paragraph shall be provided. The tiles shall be fixed with chemical adhesives. These tiles will be fixed using chemicals / adhesives as specified in IS: 15477, for vertical surfaces and for horizontal surfaces depending on the type of tile to be fixed and the substrate on which it is being fixed.

14.1 Floor.

Base surface of concrete on which the tiles are to be laid shall be cleaned, wetted and mopped. The bedding for the tile shall be with cement mortar 1:4 (1 cement: 4 coarse sand) or as specified. The average thickness of the bedding shall be 20 mm or as specified while the thickness under any portion of the tiles shall not be less than 10mm. Mortar shall be spread, tamped and corrected to proper levels and allowed to harden sufficiently to offer a fairly rigid cushion for the tiles to be set and to enable the mason to place wooden plank across and squat on it. Over this chemical adhesive bedding slurry of honey like consistency shall be spread with grooved trowel.

14.2 Flooring Types and Patterns.

Sr No	Location Facility	Type of Flooring / Skirting / Dado	Size of Tile / Skirting / Dado	Remarks
(a)	Basement Floor	Vitrified Tiles	600 x 600	Jointless. To be fixed with Chemical Adhesives.
(b)	Skirting Basement	100 mm. Flush with plaster with 4 mm groove between skirting and wall plaster (above skirting)		Jointless. Pattern matching with floor joints.
(c)	Staircase, landings, Entrance Lobby, Mumty floor and skirting	18 mm thick Granite in hone finish as approved by Architect.		Treads with double end nosing, champhered and anti-skid. Riser & Tread in single piece. Skirting 100 mm in one piece per step.
(d-1)	Stilt Floor Parking areas	Fully vitrified Tiles – Anti-skid. Slate Finish. Thickness – 10-12 mm	300 x 300	With 3 mm Grooves/ spacers. Grooves to be filled with Epoxy filler of approved shade. Skirting 300 mm matt finish tiles.
(d-2)	Area between Compound Wall and stilt (Open Area in Front)	Fully vitrified Tiles – Anti-skid. Slate Finish. Thickness – 10-12 mm	300 x 300	With 3 mm Grooves with spacers. Grooves to be filled with Epoxy filler of approved shade. Skirting 300 mm matt finish tiles.
(e)	Guard Room	Fully Vitrified tiles. (Matt finish)	300 x 300	Jointless. Skirting 100mm.

Signature with date of SET's Representative

Signature of Contractor or his Authorised Representative with date

(f-1a)	Flooring : Toilets / Washroom on Stilt & Terrace	Fully Vitrified tiles. (Matt finish)	300 x 300	Jointless.
(f-1b)	DADO : Toilets / Washrooms on Stilt & Terrace	GVT/PGVT (Matt finish) DADO full height	600x1200	Jointless.
(f-2a)	Flooring : In Pantry on Stilt & Terrace	Same as of kitchen in floors. Skirting also same as kitchen in floors		
(f-2b)	DADO : In Pantry on Stilt & Terrace	GVT/PGVT (Matt finish) DADO full height	600 x 1200	300x300mm commercial tiles behind cabinets. In visible portion, 600 x 1200 mm tiles
(g)	Room Floorings, common areas, Puja, Store, passage, at all floors - residences	Vitrified Tiles (Glazed 10mm thick)	600 x 600 mm	Jointless. Laid with Chemical Adhesives.
(h)	Skirting in Room Floorings, common areas, Puja, Store, passage, kitchen at all floors	Vitrified Tiles (Glazed 10mm thick)	Skirting 100 mm. Flushed. 4 mm groove between skirting and wall plaster (above skirting)	Jointless. Laid with Chemical Adhesives. Joints to be in line with flooring joints.
(j)	Flooring in bathrooms at all levels	GVT MATT Finish	600 x 600mm	Jointless
(k)	Bathroom Dado	GVT Combination with highlighter as per design	600 x 1200mm	Jointless
(l)	Flooring in Kitchen in all floors	GVT MATT	600 x 600mm	Jointless
(m)	Kitchen (Dado full height) in all floors	GVT Combination with highlighter as per design	600 x 1200mm	300x300mm commercial tiles behind cabinets. In visible portion, 600 x 1200 mm tiles
(n)	Kitchen Shelf	Granite 18-20 mm thick, with front double edge, champhered in approved pattern, shade and design.		Shall be laid with Chemical adhesives
(o)	Balconies at all floors	GVT	600 x 600mm	Laid with Chemical adhesives in design and

				pattern as specified. Skirting shall be 100 mm.
(p)	Window Cills	Granite as per drawing		Fixed with chemical adhesives.
(q)	Floor in lift car	AGL artificial stone 12mm thick.		To be fixed with chemical adhesives.
(r)	Entrance Lobby i.e. Lift Wall Elevations and Lift entrance area	As per drawing		
(s-1)	Shafts floor open to sky	Same as of parking area		
(s-2)	Shaft Area Vertical	Commercial tiles		
(t)	Flooring on terrace over Brick Koba roof treatment	GVT Vitrified terrace tiles 300 x 300mm laid with 4 mm joints.	150 mm (laid flush)	Laid in design and pattern as specified in drawings. Joints to be epoxy filled.

Note: The colour, shade and pattern of tiles and Granite Stone shall be approved by the SET authorities.

14.3 **Granite Stone.**

It shall be of color and size as directed by Engineer-in-Charge. Granite shall be plain machine cut and mirror polished. The stone shall be smooth and of even surface without holes or pits. The Granite stone shall be from South India.

14.4 **Cills**.

Stone Cills shall be provided for all windows/vents. Cills shall be of granite stone laid and fixed over PCC (1:2:4), in pattern, as per drawings. Cill of windows shall extend 50mm on either side of opening to the full bearing of wall and thickness shall be 18mm and shall be projected 40-50mm beyond the external face of the wall.

15. **WATER PROOFING TREATMENT.**

15.1 Water proofing treatment in WC/Bathrooms/washrooms, Kitchen/pantry and balconies shall be of three layers of TapeCrete with fibre mesh, extending upto 300 mm above slab level on walls so as to make jointless covering. The water proofing shall be carried as per clause 22.5.1 to 22.5.6 & 22.6.1 to 22.7.10 of CPWD Specification Vol-2.

15.2 **Terrace Water Proofing, Brick Koba and Terrace Insulation Including Terrace of Mumty.**

The water proofing treatment on roof / terrace including Mumty terrace shall be based on Integral Cement Based Water Proofing Treatment with Brick Bat Coba over three layers of Tapecrete waterproofing laid as per manufacturer's instructions. On to the final layer of the tapecrete, while the layer is still tachy, coarse sand shall be sprinkled for providing adequate friction / bonding of the next layer. For Brick Coba, the preliminaries for preparing the surface, providing and laying of slurry under

base coat, water proofing treatment, laying base coat 20 mm thick, laying brick bat coba, application of slurry over brick bat coba, laying finishing layer (protective coat), curing and testing the treatment shall be as per clause 22.7 of CPWD specifications. Over the Brick Koba, for insulation and further water proofing, vitrified tiles of approved size, pattern shall be laid in slope.

15.2.1 Floor Surface of Terrace after Brick Koba**.**

Tiles shall be laid in pattern and design as approved by the Architect.

15.2.2 Arrangements for keeping the Water Tanks on Terrace / Mumty Top.

As specified in drawings and / or as per standard practice.

16. **CEMENT, MORTAR, WATER AND MATERIALS.**

16.1 **Cement.** The cement used shall be any of the following grade:-

16.1.1 Ordinary Portland Cement 43 Grade or higher conforming to IS 269: 2015. OPC grade 43 cement shall be used for all structural element purposes.

16.1.2 OPC as specified above or PPC conforming to IS 1489 Part-1 shall be used for plastering as well as masonry work.

16.1.3 Different type of cements shall not be mixed.

16.1.4 Acceptance criteria, storage and handling of cement shall be as per CPWD guidelines.

16.2 **Fine Aggregates (Sand)**. Fine aggregate shall be manufactured from crushed stone and shall consist of crushed stone sand, crushed gravel sand. It shall be hard, durable, chemically inert, clean and free from adherent coatings, organic matter etc. and shall not contain any appreciable amount of clay balls or pellets and harmful impurities e.g. iron pyrites, alkalies, salts, coal, mica, shale or similar laminated materials in such form or in such quantities as to cause corrosion of metal or affect adversely the hardening, the strength, the durability or the appearance of mortar, plaster or concrete. The sum of the percentages of all deleterious material shall not exceed 5%. The acceptance criteria for fine aggregates will be as per CPWD specifications. Jamuna / Yamuna sand shall not be used.

16.2.1 Fine Aggregates for use in RCC/Cement Concrete**.** The fine aggregates for PCC / RCC shall be crushed stone sand of grading of Zone II /III, as per Table 3.1 of CPWD Specifications Part-1.

16.2.2 Grading of Sand for use in Masonry Mortar and Plaster**.** The fine aggregates for masonry mortar and plaster shall be crushed stone sand of grading of Zone III, as per Table 3.1 of CPWD Specifications Part-1.

16.3 **Water**.

Water used for mixing and curing shall be clean and free from injurious quantities of alkalis, acids, oils, salts, sugar, organic materials, vegetable growth or other substance that may be deleterious to bricks, stone, concrete or steel. Potable water is generally considered satisfactory for mixing. The Ph value of water shall be not less than 6. Water from each source shall be tested before the commencement of the work and thereafter once in every six months or with every change in source, till the completion of the work. Specifications and acceptability criteria for water must satisfy the qualitative requirements as per CPWD latest specifications. Bore well water shall not be used for concreting.

16.4 **Coarse Aggregates**.

Coarse aggregate shall be manufactured from stone and shall conform to IS 383. It shall consist of naturally occurring (uncrushed, crushed or broken) stones. It shall be hard, strong, dense, durable and clean. It shall be free from veins, adherent coating, and deleterious amounts of disintegrated pieces, alkali, vegetable matter and other deleterious substances. It shall be roughly cubical in shape. Flaky and elongated pieces shall be avoided. Coarse aggregate shall not contain any deleterious material, such as pyrites, coal, lignite, mica, shale or similar laminated material, clay, alkali, soft fragments, sea shells and organic impurities in such quantity as to affect the strength or durability of the concrete. Coarse aggregate shall not contain any material liable to attack the steel reinforcement. Aggregates which are chemically reactive with alkalies of cement shall not be used. The maximum quantity of deleterious material shall not be more than five percent of the weight of coarse aggregate when determined in accordance with IS 2386.

16.4.1 Aggregate 20mm, 12.5 - 10 mm. The aggregated shall be uniformly graded for sizes 20 mm and 10-12.5 mm enabling preparation of concrete as per weights specified.

16.5 **Integral Water Proofing Compound.**

Liquid integral water proofing compound, free from any chlorides, shall only be used for cement mortar for plastering, concrete work and water proofing. Integral water proofing compound shall conform to IS 2645 and shall be of approved brand and manufacture, enlisted by the Engineer-in-Charge. The contractor shall bring the material to the site in its original packing. The containers will be opened and the material mixed with cement in the proportion as per manufacturer's instructions and description of the item.

17. **DOORS, WINDOWS & Pergola on Terrace.**

17.1 **Windows**.

17.1.1 Window Frames & Shutters. These shall be of uPVC of specified types and sizes, as per openings specified in drawings. Provision of uPVC windows is beyond the scope of work.

17.1.2 Window Grills / Guard Bars. : These shall be provided as specified in drawings.

17.1.3 Covering of Sky Light of Basement Roof. The cut out glass shown in the drawing refers to cut out laminated (security glass) glass.

17.2 **Doors**.

17.2.1 Doors Frames. Each door frame shall be fixed with six hold fast embedded in concrete / wall.

17.2.2 Flush door shutters.

Flush door shutters shall have a solid core as per IS 2202. For the main entry doors, nominal thickness of flush door shutter without any lamination/veneer shall be 38 mm thick and for the internal doors nominal thickness of Flush Door shutter without any lamination/veneer shall be 35 mm. Flush door shutter shall be Grade-1 Premium quality. Mica laminate of thickness 1 mm on both sides, pattern, shade and design to be approved by Architect, shall be fixed with Teak Wood Margin of thickness 10-12 mm (finished) on all edges, and architraves, on all doors.

All four edges of the shutter shall be square. The shutter shall be free from twist or wrap in its plane. The moisture content in timbers used in manufacture of flush door shutter shall be not more than 12

percent when tested according to IS 1708. All fitting, fixtures, screws shall be of stainless steel with antique brass finish.

17.2.3 Details for Fittings and Fixtures of Doors. For basement and residences on First, second, third and fourth floor as per schedule give below:-

Item ↓ / Doors →		**Door D1**	**Door D2**	**Door D3**
Nomenclature of the Door		Entrance Doors	Room Doors	Wash Room Doors
No of Hinges		5	5	5
Hinges (Stainless Steel) with bearing		125 mm x 3 mm thickness	125 mm x 3 mm thickness	125 mm x 3 mm thickness
Outside	Pull Handle (SS)	1	NIL	NIL
	Mortise Lock (10 inches) with handle – Stainless Steel (SS) grade 304 with backset minimum 55 mm	NIL	1 (Key)	1 Mortise Handle with Lock – rose type (10 inches) – SS grade 304 (Coin Turn)
	Magic Eye	1	NIL	NIL
	Aluminum Door Stopper with rubber	1	1	1
Inside	Pull Handle (SS)	1	NIL	NIL
	Mortise Lock with handle	NIL	1 (Thumb Turn)	1 (Thumb Turn)
	Tower Bolt 250 mm (SS)	1	1	1
	Dead Bolt Safety Lock with latch make Europa Model No 8023 AB / Godrej	1	NIL	NIL
	Door Safety Chain (SS)	1	NIL	NIL
	Rubber door Stopper	1	1	1
	Robe hooks	NIL	NIL	2 sets (one set consists two robe hooks)

17.2.4 Details for door, Fittings and Fixtures of Doors. For doors on stilt and terrace as per schedule give below:-

Item ↓ / Doors →		Door (D1)		Door (D4)	Door (D3)
		Stilt	Terrace	Stilt	Terrace
Door Frame		Teak	Apollo MS door section of 3.0 mm thickness	Teak	Apollo MS door section of 3.0 mm thickness
No of Hinges		5	5	5	5
Hinges (Stainless Steel) with bearing		125 mm x 3 mm thickness	125 mm x 3 mm thickness	125 mm x 3 mm thickness	125 mm x 3 mm thickness
Type of Door		Flush Door 38 mm + 1 mm laminate on both sides	Steel Door with laser cut MS sheet 1.25 mm thick	Flush Door 38 mm + 1 mm +1 mm	Steel Door with laser cut MS sheet 1.25 mm thick
Outside	Pull Handle (SS)	01	01	NIL	01
	Mortise Lock (10 inches) with handle – Stainless Steel (SS) grade 304	NIL	NIL	1 (Key)	NIL
	SS Aldrop	NIL	NIL	NIL	01
	SS Door Stopper with rubber	1	NIL	1	01
Inside	Pull Handle (SS)	1	01	NIL	01
	Mortise Lock with handle	NIL	NIL	1 (Thumb Turn)	NIL
	Tower Bolt 250 mm (SS)	1	NIL	1	1
	SS Aldrop	NIL	01	NIL	NIL
	Dead Bolt Safety Lock make Europa Model No 8123 AB / Godrej	1	NIL	NIL	NIL
	Rubber door Stopper	01	NIL	1	NIL
	Robe hooks	NIL	01	NIL	01

Signature with date of SET's Representative

Signature of Contractor or his Authorised Representative with date

17.3 **Pergola**. Shall be provisioned and fixed as per drawings.

18. **WOOD WORK, KITCHEN AND BATHROOM FIXTURES.**

The timber for wood work like doors, windows, shutters, kitchen cabinets, bathroom cabinets, wardrobes etc. shall be free from decay, fungal growth, boxed heart, pitch pockets or streaks on the exposed edges, splits and cracks. The timber shall be graded as first grade and second grade on the basis of the permissible defects in the timber, knots should be avoided over a specified limit. The timber shall be adequately seasoned and dry.

18.1 **Kitchen Cabinets**. As specified in drawings.

18.1.1 Under Cooking Platform Cabinets. Provision of kitchen cabinets under the Cooking Platform is not in the scope of present contract. However, provision of Cooking platform of Granite (South) of approved colour, its fixing on the cooking platform carcass, provision and fixing of stainless steel sink, taps, tap-mixer, electricity supply, fixing of tiles behind cabinets and fixing of tiles in kitchen in spaces shall be provisioned and shall be considered within the scope of this contract.

18.1.2 Above Cooking Platform Cabinets. Provision of cabinets above Cooking Platform is not in the scope of present contract. However, provision of tiling of approved shade and colour, its fixing on the walls / spaces above cooking platform, provision and fixing of lights, stainless steel sink, taps, mixer, geyser, provision and fixing of angle valves and water supply line for RO including light / power point for RO shall be considered within the scope of this contract.

18.2 **Kitchen Fixtures and Fittings**. Following items shall be considered as included in the scope of present contract and shall be provisioned and fixed in kitchens and pantries at all levels:-

18.2.1 Stainless Steel Sink complete with drain pipe, jaali including angle cock etc

18.2.1.1 Sink at Pantry at Stilt and Terrace: SBSD-01 (RR) Make Jayna (Jupiter Series).

18.2.1.2 Sink in kitchen at Floors except fourth floor: OR-01 (Make Jayna) Oracle Series

18.2.1.3 Sink in kitchen at fourth floor: DBSD-01 DX (Make Jayna) Mercury Series

18.2.2 Sink Tap (mixer for hot and cold water).

18.2.3 Fresh water Bib Tap

18.2.4 Angle Cock for RO. Arrangements for RO shall be below the kitchen counter top in all floors.

18.2.5 All water supply lines and arrangements of water supply.

18.2.5 Geyser (5 litres) with angle cock. (Kitchen geyser shall not be instant water heater type).

18.2.6 Exhaust fan (8") with louvres and mesh.

18.2.7 Electric & exhaust arrangement for Exhaust Chimney 60 cms, 1000 m^3

18.2.8 Ceiling fan

18.2.9 LED Tube light (4 ft)

18.2.10 Electricity supply, connections and fittings.

18.2.11 Towel Rail

18.1.12 Ward Robe Hooks

18.1.13 Washing machine arrangements for electrification, water supply (piping and angle valve) and drainage. Position/location of washing machine shown in drawings.

19. **PLATFORMS AND ITS SPECIFICATIONS.**

19.1 **Kitchen Platform**. 18-20 mm thick Granite laid over cabinet carcass fixed with Adhesives. Kitchen sink shall be of Stainless Steel.

19.2 **Bathroom Platform**. As per drawings.

20. WATER, SANITARY WORK, SEWAGE DISPOSAL, RAIN WATER PIPES AND DISPOSAL.

20.1 Water Supply.

20.1.1 All water lines shall be 20 mm / 32 mm CPVC pipes with cold and hot provision in kitchen and toilet. Make: ASTRAL / Supreme.

20.1.2 The water pipe line from water meter to motor pump to Water tank on Terrace shall be of 32 mm. The downtake pipe shall be 32 mm. Distribution pipes shall be of 20 mm diameter.

20.1.3 **Water Meter with Test Report**. One fresh water connection from Municipal water line with water meter shall be provided for each flat for all residences on floors. In addition, two water connections for complete stilt (parking area) shall be provided. In total 18 new water meter connections shall be provisioned. Sanction of water connection, permission for Road cutting, co-ordination with local authority, repair of the road, , testing of water meter, allotment of K-Numbers including entry in DJB ledgers etc. complete in all respect is part of the scheduled work.

20.1.4 **Motor with Pump**. Each flat will be given independent water connection with water meter and 1 HP electric motor with pump for lifting of fresh water from MCD line to storage water tank kept on top of terrace. Pump with motor will be kept in suitable enclosure at stilt, so as to facilitate meter reading and repairs. Electric connections shall be so provided enabling the motor to be switched on and switched off from the kitchen of the respective flat.

20.1.5 One fresh water supply connection shall be provided from this rising main in each kitchen.

20.1.6 A separate independent water connection from existing submersible pump to service storage tank for each flat shall be given. Provision and installation of submersible pump is not in the scope of work. A 32 mm dia pipe from existing pump shall be laid and from this pipe suitable dia pipe of 20 mm will be taken for each storage tank. Each storage tank shall also be provided with control valve. A separate control valve shall be provided in each service tank for pipe line from service tank. A pressure release valve will be provided in the water line from submersible pump to protect this pipe line incase all the valves are closed and supply from submersible pump is on.

20.1.7 Overflow. Over flow pipe of dia 25 mm shall be provided in each service tank with air vent pipe. An independent automatic alarm bell for overflow at each water storage tank shall be provided.

20.1.8 ISI marked PVC/uPVC fittings of all types i.e. Floor trap, Nahni trap, P Trap, Tee junction, Bends etc. Make: - ASTRAL / Supreme.

20.2 Sanitation, Sewerage and Disposal.

20.2.1 Connection with MCD sewer line outside the building, provision of manhole(s) including all material, road cutting, liaison with civil authority and repair to damaged road, complete in all respect is part of the scheduled work.

20.3 Sewage and Disposal.

20.3.1 Waste Water Pipes / Sewage / Soil Pipe Vertical along wall – Size 4 inches (110 mm), uPVC, conforming to IS 13592 Type B

20.3.2 Waste Water Pipes / Sewage Pipe Horizontal – From Manhole to MCD Sewage main man hole – 6 inches Trap / along wall – Size 4 inches (110 mm), uPVC, conforming to IS 13592 Type B. uPVC pipe shall be fixed with cleaning eye chamber / cleaning door at every junction.

20.3.3 Sewage, Drainage. Gully trap. Pipe, Manhole and manhole cover, pipe line connection to existing manhole, shall be carried out as per clause 19.1.1 to 19.8.2 of CPWD Specification Vol-2.

20.3.4 Location & size of Manholes. The location of the manhole and Gully Trap shall be approved by Engineer –in-Charge. Size of the manhole cover (GI or GFRC) shall be 600 x 600 mm.

20.4 **Rain Water Pipes and Disposal of Rain Water.**

20.4.1 Rain Water pipes and Vent Pipes – Size 4 inch (110 mm), uPVC, conforming to IS 13592 Type "A" with shoe socket and splash stone shall be provided. Two Numbers pipes for disposal of Rain Water for terrace of each plot shall be provided.

20.5 Jointing. Shall be with matching uPVC jointing compound of make as of pipes.

20.6 All 4 inch and above dia pipes will be clamped at interval of 2 meters.

20.7 Traps. As per drawings.

20.8 Vents and Cowls Clips. Shall be from Supreme/Astral of uPVC.

20.9 Tiles in Open Shafts. Commercial tiles shall be provided & fixed.

21. **BATHROOM FITTINGS, FIXTURES AND APPLIANCES.**

Bath room fittings, fixtures and appliances shall be provisioned and fixed after approval of model, make and its type from SET/Architect.

21.1 **Bathroom fittings, fixtures & appliances for each Bathroom.**

Ser No	Item	Remarks
(a)	EWC	Wall mounted with cover.
(b)	Flushing Cistern	Concealed, with frame complete with flushing buttons
(c)	WHB	Counter Type / Table type
(d)	Platform for WHB	As per drawings.
(e)	Tap : WHB mounted	Yes
(f)	Geyser with angle valves	Yes

Signature with date of SET's Representative

Signature of Contractor or his Authorised Representative with date

(g)	Health Faucet with angle valve	Yes : Jaquar
(h)	Towel Rail	Yes
(i)	Towel Ring	Yes
(j)	Glass shelf above WHB	Yes
(k)	Mirror (size) with cabinet	Yes
(l)	Corners (4)	Yes
(m)	Soap Dish	Yes
(n)	Diverter Wall Mixer and spout	Yes
(o)	Bib Tap (1)	Yes
(p)	Angle Valve for washing machine	Yes
(q)	Drain pipe from WHB	Yes
(r)	Shower arm and rose with angle Valve	Make: - Jaquar
(s)	Exhaust fan	8 inches
(t)	Tube light	2 ft
(u)	Mirror light	Yes
(v)	Ward Robe Hook line with three hooks (as per approved design)	Yes
(w)	Angle Valves / Angle Cocks : As required	Yes

21.2 The type, pattern of the items mentioned below shall be approved by Architect / SET authorities.

22. **ELECTRIC WORK.**

22.1 The work will be carried out in 25 mm dia PVC conduit wiring system in accordance of CPWD General Specification for electric work (Internal) including amendments. BIS approved PVC conduit of heavy grade shall be laid in slabs and of medium grade in walls. All surface, Tee, D B, Junctions boxes, bends, fan boxes etc. shall be provided in best quality, rust resistant.

22.2 FRLS PVC insulated copper conductor wires shall be used for point, Circuit & sub-main wiring. All wiring shall be done with Make: Polycab. The wire shall be of 1.5 sq. mm, 2.5 sq.mm (for 6/16Amp power plugs & Kitchen appliances) and 4 sq. mm (for AC & Geyser). Separate armoured cable 16 sq

mm, 3 phase, from panel box to meter shall be laid on surface with looping on both ends shall be provided, as per electrical norms.

22.3 Modular type switches, sockets and stepped type fan regulator, bell push along with matching mounting boxes of same make shall be used.

22.4 15 Amp power socket & switch with industrial socket & switch of approved quality & make shall be provided.

22.5 Call bell/ buzzer suitable for single phase – 230 watt complete shall be provided with two way switches Make: - Havells fixed as per direction of Engineer-in-Charge.

22.6 Ceiling fan of approved brand, size, colour, wiring, down rods of standard length, with regulators shall be installed. Fans shall be provided in Guard Rooms at Stilt & Pantry on terrace, as per direction of Engineer-in-Charge.

22.7 Exhaust fan of size 12 inches (300 mm) of approved colour with louvres on both sides shall be installed in each kitchen and wash rooms.

22.8 LED Lamp of 10-12 watt per fitting complete with all accessories including connection etc. as per direction of Engineer-in-Charge. Provision of lamps / lights must ensure sufficient lumens.

22.9 Suitable Light operated from two way switch will be provided at each landing and mid landing of staircase in each plot at all levels including mumty.

22.10 **Provision of Geyser**. The geysers shall be provided as per the following schedule:-

Ser No	Location	Capacity	Make
22.10.1	Toilet / Bathrooms at First, Second and Third Floor (total 3 floors)	1 x 25 liters 1 x 15 litres	Recold / Venus
22.10.2	Kitchen at First, Second, Third, Fourth Floor and pantry at kitchen	5 liters	Recold / Venus
22.10.3	Toilet / Bathrooms at Fourth Floor (Top Floor only)	25 liters	Recold / Venus

22.11 **Provisions for AC**.

Concealed electrical wiring in pvc conduits, plug / switch and drainage shall be provided. The location of the ACs (Window Type AC or Split type Ac), shall be as per Architectural Drawings. However, the provision of AC unit in not covered in the present scope of work.

22.12 Electric connections with power points for electric motors including electric motor with pump 1 HP for lifting water from MCD fresh water supply line for each flat shall be provided. The motor shall be placed at stilt with proper platform and locking arrangements provided in such a way that it facilitates monthly meter readings, safety and maintenance. Make: - Crompton. Overflow buzzer shall be provided for each tank.

22.13 One RO per kitchen is planned for potable water. For this, necessary electrical connection and water supply connections and angle valves shall be provided. Provision of RO is beyond the scope of work.

22.14 Each plot shall be provided with electricity connections and energy meters from BSES Provision and fixing of electric meters shall be as follows:-

(a) One separate electric meter for Common Area for electricity supply to parking, staircase lighting (common) and lift (3 Phase). **Total 4 connections for common areas shall be provided, out of which two connections shall be of 3 phase, for lifts/elevators.**

(b) One electric meter per basement, as per load. **(Total 4 connections).**

(c) One electric meter per flat. **(Total 16 connections).**

(d) The cost and expenditure towards sanctioning of load, **24** electric meter connections (3 phase and single phase), provision and laying of cables, testing of meters, provision and fixing of electric panel board and all items for electricity supply are deemed to be included in the scheduled work.

22.14.1 Cost / expenditure towards provision/installation of meter, connection from electric pole, liaison for sanctioning etc, payment of all types of fees/charges and for all related electrical items like cable, clips and any other item required to make it functional and operational with safety shall be in considered in the scheduled work.

22.14.2 Provision, Fixing and Commissioning of electric panel, earthing, cable from meter to panel box shall be provided. Separate Distribution box shall be provided in each flat.

22.15 **Earthings**. Marconite Earthing with Copper Conductor (CU – 16X85X3000), shall be laid at a depth of 15 ft. from floor level of basement. Earthing Strip (GI) 40 mm x 6mm will be brought on surface in earthing pit.

22.15.1 Two earths shall be provided for each lift as per norms.

22.15.2 Separate two earths per plot shall be provided for meters / each panel / floors and to earth the water motors etc.

22.15.3 Four earthing shall be provided for DG set.

22.15.4 After completing the work, necessary test result as envisaged in CPWD General Specification (Internal) & Indian Electricity Rule shall be recorded and submitted. The results shall be within the permissible limits. Test report form duly signed by authorized person shall be sufficient for obtaining electric connection (Energy meter) from BSES and approval of operation of lifts.

22.16 TV outlet point wiring of each house shall be terminated in suitable size of GI box along with splitter at every floor. The interconnections of all splitter boxes fixed at all floors shall be done properly with conduits to form proper distribution system with prior approval of Engineer-in-Charge. TV Cable RG-6 grade 0.7 mm solid copper conductor PE insulated sheathed with fine tinned copper & protected with PVC sheathed i.e. GI box 75 x 75 x 60 mm modular plate & switch, TV outlet etc. complete shall be provided as per direction of Architect / Engineer-in-Charge.

22.17 Broad band cable and Telephone outlet point wiring of each house shall be terminated in suitable size of GI Junction box in DUs direct from ground floor to each DU. However, conduit for BB and telephone wiring may be provided through branching by providing suitable size of GI junction box along with suitable tag block at each floor. The inter connection of all junction boxes fixed at all floors shall be done properly making proper distribution system with the prior approval Engineer-in-Charge.

23. **CIVIL WORKS AND ELECTRICAL WORKS FOR LIFTS.**

Two lifts are being catered for in this project. The lifts will be provisioned and installed by the lift vendor.

23.1 **Civil Work**. All necessary civil works infrastructure and all minor builder work related to the installation of the Elevator shall be considered within Scope of Work.

(a) Finished and dry hoist way, machine room, pit with complete preparatory work as per the norms laid out in the Indian Standards 14665:2000.

(b) White washing, plastering and adequate measures to prevent water from seeping into the hoist way before start of installation.

(c) Adequate ventilation for head room with rain protected windows/ louvers. Temperature of machine area to not exceed 45°C. Smoke cutout of 450 X 450 mm with aluminum louver and mesh.

(d) Lintels, hoisting beams/ hooks/ pit ladder/ smoke window as per our requirement as specified in the layout at each landing.

(e) Full height facia with the distance between car sill to front wall shaft inside should be more than 135 mm.

(f) To ensure safety at site & avoid falling hazard, a wall/ handrail (as per safety standards of construction industry as prescribed by application Law) on both sides of the stepped path is mandatory before start of lift work.

(g) Lift pit of depth at least 1500mm, water proofing of lift pit, internal plaster and fixing of dampers (springs). Provision and fixing of ventilation and ventilation fan with cover, load hook (s), shaft plaster with painting, smoke vent with sun shade, louver & mosquito mesh, RCC beam of size at least 300 x 300 mm at door height at all levels, headroom slab at the designated level of top most landing floor, Load hooks (made of 25 mm dia bars – 4 in numbers for each lift), recess for panels, recess for lift call buttons, recess for fire alarm shall be provisioned and shall be considered within the scope of work.

23.2 **Electrical Work**.

The necessary electrical works which includes provision of the main & lightning power supply, its installation connections with protective means / devices, provision of three phase electricity supply including cabling permanently after completion and temporarily including cabling during installation of lift. Alternative source of power supply through a generator during the installation and commissioning work, in case power supply not available (in quality or quantity). Single and Three phase power supply as per the Indian standard 14655 (Part2/Sec 1): 2000 Clause 5.2. Cabling for 3-phase/1-phase for car, electrical main switches and two separate earthing (high quality earthing) shall be considered within scope of work.

Power network and connected as per the layout drawing to the entry interface of the elevator. Items required for lift are as follows:-

23.2.1 Shaft light shall be provided with LED tube light of size 4 feet at all levels.

23.2.2 Power point of 16 amp. with on/off switch with each shaft light.

23.2.3 All shaft light shall be operated by 2 way switch one should be fixed at bottom most landing floor and second at top most landing floor.

23.2.4 Double Earthing (Marconite) using 8 SWG copper wire for each elevator.

23.2.5 3 phase supply to be provided by 6-10 sq. mm 4 core armoured copper cable.

23.2.6 1 x Earth bus bar of copper with 12 holes.

23.2.7 1 x Exhaust fan of size 12 inches with louver in smoke vent.

23.2.8 1 x DB box of 10 way with under mentioned items:-

23.2.8.1 1 x RCCB of 25 amp., 300 amp., 4 pole.

23.2.8.2 2 x MCB 16 amp, Single pole.

23.2.8.3 2 x MCB 10 amp., Single pole.

The list above is tentative, approximate and items may vary. The lift is likely to be from Schindler company.

23.3 **Storage Requirements for Material for Lift**.

Contractor shall make available the storage room with weather protection & locking arrangements. It should be accessible by forklift/ truck due to logistics of heavy materials. Area should have adequate lighting arrangements, power plug, preferably near the entrance.

24. PROVISIONS COMMON FOR ALL FLOORS.

24.1 Numbering & Markings.

24.1.1 Signages, in Stainless Steel, for identification of each floor shall be posted in staircase area / entrance lobby indicating the number of the floor, visible to persons coming out from lift / staircase. The number shall be of bold type and size of the numeral shall not be less than 100 mm high with proportionate thickness. The numeral and background shall be in contrasting permanent colour. In respect of Basement and parking, the display shall be “BASEMENT” and “PARKING”. Height of these letters shall not be less than 100 mm high with proportionate thickness.

24.1.2 Signage for Plot No Identification. Two signages per plot (front and rear) shall be posted. The number shall be of bold type and size of the numeral shall not be less than 100 mm high with proportionate thickness. Signage shall be displaying 53/11, 53/12, 53/13 and 53/14.

24.1.3 Water Tanks. Capacity of each water tank shall be 1000 litres. These storage water tanks shall be in five layers in food grade material. Colour White.

25. FINISHES.

25.1 **Plastic Emulsion Paint on New Wall and Ceiling Surface**. Painting work shall be carried out as per clause 13.31 of CPWD Specification Vol-2.

25.2 Painting on External Wall.

Painting on exposed to weather (external) walls shall be carried out as under:-

Ser No	Area / Location	Weather Proof Paint in three coats over a coat of Primer over two coats of white cement based putty
25.2.1	Compound Wall both sides	√
25.2.2	Balcony Walls including Ceiling	√
25.2.3	Parapet Internal face	√

25.3 **Painting on Iron / Steel Surfaces**.

Painting work to be carried out as per clause 13.23.1 to 13.23.6.4 of CPWD Specification Vol-2.

25.3.1 Painting on Gates, Grills Railings, Iron / Steel Doors & Frames : Synthetic Enamel paint in three coats over well prepared metallic base with iron putty and primer.

25.4 Schedule of painting on internal surfaces shall be as follows:-

Ser No	Location	Putty (2 Coats)	Primer (1 Coat)	OBD (3 Coats)	Plastic Emulsion Paint (3 Coats)
1.	**Basement**				
	(a) Walls	√	√		√
	(b) Ceiling	-	-	-	
2.	Staircase including Entrance Lobby				
	(a) Walls	√	√		√
	(b) Mumty Ceiling	√	√	√	
3.	**Stilt / Parking**				
	(a) Internal Walls	√	√		√
	(b) Ceiling	√	√	√	
	(c) Kitchen / Pantry {Wall (above dado) & Ceiling}	√	√	√	
	(d) Toilet {Walls (above dado) & Ceiling}	√	√	√	
	(e) Guard Room	√	√	√	
4.	**Terrace**				
	(a) Kitchen / Pantry Wall (above dado) and Ceiling	√	√	√	

Signature with date of SET's Representative

Signature of Contractor or his Authorised Representative with date

	(b) Toilet {Walls (above dado) & Ceiling}	√	√	√	
5.	**Rooms / Facilities / common area on all floors**				
	(a) Bedroom, Drawing and Dining Walls	√	√		√
	(b) Bedroom, Drawing, Dining & Toilets Ceiling	√	√	√	
	© Kitchen & Pantry at all levels : Walls (above dado)	√	√	√	
	(d) Kitchen & Pantry at all levels : Ceiling	√	√	√	
	(m) Mumty Walls	√	√		√
	(n) Lift Shaft including ceiling	√	√		√

26. **SANCTIONS AND APPROVALS FROM AUTHORITIES**.

26.1 Contractor shall obtain the following sanctions / approvals from authorities as per Building Bye Laws from MCD, BSES (Electricity Distribution Department), DJB:-

Ser No	Type of Sanction	Sanctioning Authority	Remarks
1.	DPC Level Approval	MCD (as per Building Bye Laws)	
2.	Water Connection	DJB	Sanctions to be taken in the favour of Secretary, Salwan Education Trust C/o Salwan School, Pt Girdhari Lal Salwan Road, Rajendra Nagar, New Delhi – 110 060
3.	Sewerage Connection	DJB	
4.	Electricity Load Sanction and Electric Meter Connection (Three Phase and Single Phase)	BSES	

Signature with date of SET's Representative

Signature of Contractor or his Authorised Representative with date

LIST OF MAKES/ BRANDS OF MATERIAL

NAME OF WORK: CONSTRUCTION OF STAFF RESIDENCES ON PLOTS BEARING MUNICIPAL NOS. 53/11, 53/12, 53/13 AND 53/14 AT RAJENDRA NAGAR, NEW DELHI - 110 060

Ser. No.	Item	Recommended Makes / Brands	Remarks
1.	CEMENT for structural elements	OOPC / PPC : Ultra Tech OPC 43 Grade, OPC 43 grade make BIRLA OPC 43 grade, Ambuja OPC 43 grade, ACC OPC 43GRADE, , JK Super Plus OPC 43 Grade	
2.	Cement for plaster, waterproofing, masonry work	PPC 43 grade make BIRLA, Ambuja, ACC, Ultra Tech, Wonder Cement	
3.	Structural Steel Reinforcements	TMT Reinforcement bars make TATA TISCON, JINDAL JSW Neo Steel (TMT), JINDAL PANTHER (TMT), SAIL / RNIL TMT BARS	
4.	Binding Wire	TATA TISCON	
5.	RMC	ACC / UIltraTech / Lafarge	
6.	Integral Liquid Water Proofing Compound	Saint Gobain Weber, FOSROC, SIKA, Dr FIXIT	
7.	Bathroom, Kitchen and Balcony Waterproofing	Tapecrete with three Coats and applied as per manufacturer's instructions (CICO)	
8.	Superplasticizers	FOSROC	
9.	Bricks	First Class	
10.	RAIN WATER & Vent PIPE	SUPREME uPVC conforming to IS 13592:2013 Type A	
11.	SEWAGE / Soil Pipes	SUPREME uPVC conforming to IS 13592:2013 Type B	
12.	Waste Water Pipe 4 inches	SUPREME uPVC conforming to IS 13592:2013 Type B	
13.	Water Supply Pipes and pipe accessories	Astral CPVC PRO (SDR 11 -Class-1)	
14.	ATT CHEMICAL	Imdacloprid 30.5 EC, Bifenthrin, make Bayer	
15.	Pipe for electrical conduiting and accessories	AKG (ISI) Marked – Heavy for slabs AKG (ISI) Marked – Medium for Walls	
16.	Electrical Boxes for switches etc	G.I. Boxes or Powder Coated 16 Gauge MS boxws with protection of screws / nuts, Make Havells, Indo Asian or equivalent	

Signature with date of SET's Representative 30 May 2023

Signature of Contractor or his Authorised Representative with date

17.	Factory made door shutters	CENTURY, GREEN PLY, BHUTAN TUFF.	
18.	Door Hinges	Jolly, Hettich, Ozone (Stainless steel grade 304, Antique Brass Finish)	
19.	Laminates / Laminated Boards	GreenLam, Century, Merino	
20.	Vitrified Tiles	Somany, KAJARIA, Simpolo	
21.	Glazed Ceramic/ Nonskid/ wall/ floor tiles	Somany, KAJARIA, JOHNSON, BELL, NITCO	
22.	Interlocking Tiles/Exterior Tiles, Pavers Block	UNISTONE, NTC, NITCO, ULTRA, JOHNSON.	
23.	Glass Mosaic Tiles	JOHNSON, ITALIA, CORAL MOSAIC, NITCO.	
24.	Aluminum Section	HINDALCO, JINDAL, INDAL	
25.	Standard Mortise Lock	Dorset, IPSA, Hettich, Godrej	
26.	Sanitary Ware appliances fittings	Kohler, Hindware Queo, Hindware Italian Collection, Jaquar	
27.	Stainless Steel Sink with Drainage board, Plate Rack	NIRALI, NEELKANTH, JAYNA	
28.	Plumbing Items Shower Rose, Bib Tap, Stop cock, Pillar tap, Angle valve.	JAQUAR	
29.	GI Pipe/ fittings	JINDAL, TATA, NECO, UNICO.	
30.	CI Pipe/ fittings	SKF, SRF, SINGHAL.	
31.	Wall Putty	Weber Fine Coat, J&K White, Asian	
32.	Wall Primer	Asian, Nerolac, Berger	
33.	Cement Base Paint	ASIAN, BERGER, DURACEM, NEROLAC	
34.	Oil Bound Distemper	ASIAN PAINTS, NEROLAC PAINTS, BERGER PAINTS.	
35.	Plastic Emulsion Paint	ASIAN (ROYAL, APCOLITE ADVANCE) NEROLAC (Impression Ecoclean, Impression 24 carat), BERGER (Silk, Rangoli easy clean)	
36.	Synthetic Enamel Paint	ASIAN, BERGER, ICI DULUX, NEROLAC	
37.	Drapery Rods	VISTA LEVALOR	
38.	Mirror Looking	SAINT GOBAIN, MODI, FLOAT GLASS, FLOAT TRIVENI.	
39.	Sheet glass / Toughened / Laminated	Saint Gobain	
40.	Copper Wire / Multistrand wires	Havells, Polycab, KEI	
41.	Modular Switches, Sockets, Ceiling Rose,	Legrand (Lyncus)	

Signature with date of SET's Representative

30 May 2023

Signature of Contractor or his Authorised Representative with date

	Fan Regulators, Push bell		
42.	LED Lights	Wipro, Havells, Crompton, Bajaj, Syska	
43.	Ceiling Fan / Exhaust Fan	HAVELLS, CROMPTON, BAJAJ.	
44.	Pump 1 HP	CROMPTON & GREAVES	
45.	PVC Water Tanks (white)	SINTEX, GANGA, Supreme (5 LAYERS)	
46.	Brick Tiles (Façade)	Pioneer Tiles	
47.	POP	Sakarni, Saint Gobain	
48.	Adhesives, Grouts, Epoxy Grouts,	Laticrete, Weber (Saint Gobain)	

30 May 2023

Signature with date of SET's Representative 30 May 2023

Signature of Contractor or his Authorised Representative with date

LIST OF DRAWINGS

NAME OF WORK: CONSTRUCTION OF STAFF RESIDENCES ON PLOTS BEARING MUNICIPAL NOS. 53/11, 53/12, 53/13 AND 53/14 AT RAJENDRA NAGAR, NEW DELHI - 110 060

Ser No	Drawing No	Drawing Title	Status
Architecture Drawings			
1.	NMA-SSR-AR-101-R0	Basement Floor Plan	
2.	NMA-SSR-AR-102-R0	Stilt Floor Plan	
3.	NMA-SSR-AR-103-R0	Typical Floor Plan	
4.	NMA-SSR-AR-104-R0	Fourth Floor Plan	
5.	NMA-SSR-AR-105-R0	Terrace Floor Plan	
6.	NMA-SSR-AR-106-R0	Roof Plan	
7.	NMA-SSR-AR-201-R0	Front Elevation	
8.	NMA-SSR-AR-202-R0	Side Elevation	
9.	NMA-SSR-AR-203-R0	Rear Elevation	
10.	NMA-SSR-AR-301-R0	Section AA'	
11.	NMA-SSR-AR-302-R1	Section BB'	Revised
12.	NMA-SSR-AR-303-R0	Section CC'	
13.	NMA-SSR-AR-304-R0	Parapet Detail	
14.	NMA-SSR-AR-305-R0	Sill Detail Typical	
15.	NMA-SSR-AR-306-R0	Lift Elevation Detail	
16.	NMA-SSR-AR-307-R0	Compound Wall Detail	
17.	NMA-SSR-AR-308-R0	Terrace Pergola Detail	
18.	NMA-SSR-AR-309-R1	Staircase Railing Detail	Revised
19.	NMA-SSR-AR-310-R1	Skylight Detail	Revised
Electrical Drawings			
20.	NMA-SSR-EL-101A-R0	Basement Electrical Layout Plan 53/12&53/11	
21.	NMA-SSR-EL-101B-R0	Basement Electrical Layout Plan 53/14&53/13	
22.	NMA-SSR-EL-102A-R0	Stilt Electrical Layout Plan 53/12&53/11	
23.	NMA-SSR-EL-102B-R0	Stilt Electrical Layout Plan 53/14&53/13	
24.	NMA-SSR-EL-103A-R0	53/11 Typical Floor Electrical	
25.	NMA-SSR-EL-103B-R0	53/12 Typical Floor Electrical	
26.	NMA-SSR-EL-103C-R0	53/13 Typical Floor Electrical	
27.	NMA-SSR-EL-103D-R0	53/14 Typical Floor Electrical	
28.	NMA-SSR-EL-104A-R0	Fourth Floor Electrical Layout Plan 53/12&53/11	
29.	NMA-SSR-EL-104B-R0	Fourth Floor Electrical Layout Plan 53/14&53/13	
30.	NMA-SSR-EL-105A-R0	Terrace Electrical Layout Plan 53/12&53/11	
31.	NMA-SSR-EL-105B-R0	Terrace Electrical Layout Plan 53/14&53/13	
32.	NMA-SSR-EI-201-R0	Typical Floor Bedroom Elevation	
33.	NMA-SSR-EI-202-R0	Typical Floor Toilet Elevation	
34.	NMA-SSR-EI-203-R0	Typical Floor Drawing & Dining Elevation	
35.	NMA-SSR-EI-204-R0	Typical Floor Kitchen Elevation	
Ser No	**Drawing No**	**Drawing Title**	**Status**
36.	NMA-SSR-EM-101A-R0	Typical Floor Electrical	

Signature with date of SET's Representative

Signature of Contractor or his Authorised Representative with date

37.	NMA-SSR-EM-101B-R0	Typical Floor Electrical	
38.	NMA-SSR-EM-102A-R0	Fourth Floor 53/12&53/11	
39.	NMA-SSR-EM-102B-R0	Fourth Floor 53/14&53/13	
40.	NMA-SSR-EM-103A-R0	Terrace 53/12&53/11	
41.	NMA-SSR-EM-103B-R0	Terrace 53/14&53/13	
42.	NMA-SSR-EV-101A-R0	Typical Floor Electrical	
43.	NMA-SSR-EV-101B-R0	Typical Floor Electrical	
44.	NMA-SSR-EV-102A-R0	Fourth Floor 53/12&53/11	
45.	NMA-SSR-EV-102B-R0	Fourth Floor 53/14&53/13	
46.	NMA-SSR-EV-103A-R0	Terrace 53/12&53/11	
47.	NMA-SSR-EV-103B-R0	Terrace 53/14&53/13	
48.	NMA-SSR-EV-104-R0	Meter Board Panel	
49.	NMA-SSR-EP-101-R0	Stilt Floor Plan – Earthing Pit Location	
Plumbing Drawings			
50.	NMA-SSR-PD-101-R1	Stilt – Drainage Drawing	Revised
51.	NMA-SSR-PD-102A-R1	53/11 Typical Floor Drainage	Revised
52.	NMA-SSR-PD-102B-R1	53/12 Typical Floor Drainage	Revised
53.	NMA-SSR-PD-102C-R1	53/13 Typical Floor Drainage	Revised
54.	NMA-SSR-PD-102D-R1	53/14 Typical Floor Drainage	Revised
55.	NMA-SSR-PD-103A-R1	Fourth Floor Drainage Plan 53/12&53/11	Revised
56.	NMA-SSR-PD-103B-R1	Fourth Floor Drainage Plan 53/14&53/13	Revised
57.	NMA-SSR-PD-104A-R1	Terrace Drainage Plan 53/12&53/11	Revised
58.	NMA-SSR-PD-104B-R1	Terrace Drainage Plan 53/14&53/13	Revised
59.	NMA-SSR-PD-105A-R1	Mumty Drainage Plan 53/12&53/11	Revised
60.	NMA-SSR-PD-105B-R1	Mumty Drainage Plan 53/14&53/13	Revised
61.	NMA-SSR-PW-101-R1	Stilt – Water Supply	Revised
62.	NMA-SSR-PW-102A-R1	53/11 Typical Floor Water Supply	Revised
63.	NMA-SSR-PW-102B-R1	53/12 Typical Floor Water Supply	Revised
64.	NMA-SSR-PW-102C-R1	53/13 Typical Floor Water Supply	Revised
65.	NMA-SSR-PW-102D-R1	53/14 Typical Floor Water Supply	Revised
66.	NMA-SSR-PW-103A-R1	Fourth Floor Water Supply 53/12&53/11	Revised
67.	NMA-SSR-PW-103B-R1	Fourth Floor Water Supply 53/14&53/13	Revised
68.	NMA-SSR-PW-104A-R1	Terrace Water Supply 53/12&53/11	Revised
69.	NMA-SSR-PW-104B-R1	Terrace Water Supply 53/14&53/13	Revised
70.	NMA-SSR-PW-105-R0	Stilt – Water Pump Details	
71.	NMA-SSR-PW-106-R0	Typical Water Supply Schematics	
Air-Conditioning Drawings			
72.	NMA-SSR-AC-101-R0	Typical Floor AC Drawing	
73.	NMA-SSR-AC-102-R0	Fourth Floor AC Drawing	
PNG Drawings			
74.	NMA-SSR-PNG-101-R0	PNG _Drawing_01	
75.	NMA-SSR-PNG-102-R0	PNG _Drawing_02	
76.	NMA-SSR-PNG-103-R0	PNG _Drawing_Front Elevation	
77.	NMA-SSR-PNG-104-R0	PNG _Drawing_Rear Elevation	
Ser No	**Drawing No**	**Drawing Title**	**Status**
Millwork Drawings			
78.	NMA-SSR-MW-101-R0	Typical Floor Wood Work Key Plan	

Signature with date of SET's Representative

Signature of Contractor or his Authorised Representative with date

79.	NMA-SSR-MW-102A-R0	Typical Floor Kitchen Details(A)	
80.	NMA-SSR-MW-102B-R0	Typical Floor Kitchen Details(A) Elevation Without Shutters	
81.	NMA-SSR-MW-103-R0	Typical Floor Wardrobe Details	
82.	NMA-SSR-MW-104-R0	Fourth Floor Wood Work Key Plan	
83.	NMA-SSR-MW-105A-R0	Fourth Floor Kitchen Details(A)	
84.	NMA-SSR-MW-105B-R0	Fourth Floor Kitchen Details(A) Elevation Without Shutters	
85.	NMA-SSR-MW-106-R0	Master Bedroom Wardrobe Detail(A)	
86.	NMA-SSR-MW-107-R0	Bedroom 1 Wardrobe Detail(A)	
87.	NMA-SSR-MW-108-R0	Bedroom 2 Wardrobe Detail(A)	
88.	NMA-SSR-MW-109-R0	Terrace Wood Work Key Plan	
89.	NMA-SSR-MW-110A-R0	Terrace Kitchen Detail(A)	
90.	NMA-SSR-MW-110B-R0	Terrace Kitchen Detail(A) Elevation Without Shutters	
91.	NMA-SSR-MW-111-R0	Stilt Wood Work Key Plan	
92.	NMA-SSR-MW-112-R0	Stilt Pantry Detail	
Door Window Schedule			
93.	NMA-SSR-DW-101-R0	Door Window Detail-01	
94.	NMA-SSR-DW-102-R0	Internal Door Detail	
95.	NMA-SSR-DW-103-R0	Metal Door Detail	
96.	NMA-SSR-DW-104-R0	Door Window Detail-02	
97.	NMA-SSR-DW-105-R0	Door Window Detail-03	
98.	NMA-SSR-DW-106-R0	Door Window Detail-04	
Metal Balcony Drawings			
99.	NMA-SSR-MB-101-R0	Rear Balcony Railing Detail	
100.	NMA-SSR-MB-102-R0	Front Balcony Railing Detail	
101.	NMA-SSR-MB-103-R0	Side Balcony Railing Detail	
Metal Gate Drawings			
102.	NMA-SSR-MG-101-R1	Gate Reference key Plan	Revised
103.	NMA-SSR-MG-102-R0	Rear Folding Gate(G1) Detail	
104.	NMA-SSR-MG-103-R0	Side Folding Gate(G2) Detail	

Signature with date of SET's Representative

Signature of Contractor or his Authorised Representative with date

Ser No	Drawing No	Drawing Title	Status
Mirror Drawings			
105.	NMA-SSR-MI-101-R0	Typical Floor Mirror Location & Size	
106.	NMA-SSR-MI-102-R0	Fourth Floor Mirror Location & Size	
Interior Design			
107.	NMA-SSR-ID-101-R0	Stilt Floor False Ceiling Layout	
108.	NMA-SSR-ID-102-R0	Ground Floor False Ceiling Layout	
109.	NMA-SSR-ID-103-R0	Third Floor False Ceiling Layout	
110.	NMA-SSR-ID-104-R0	Fourth Floor False Ceiling Layout	
111.	NMA-SSR-ID-105-R0	Basement Office Layout	
Structure			
112.	ST-01,NO-01	Foundation Plan	
113.	ST-01,NO-02	Foundation Detail	
114.	ST-01,NO-03	Column Curtailment Detail	
115.	ST-02,NO-01	Basement Floor Roof Slab Plan	
116.	ST-02,NO-02	Basement Floor Roof Slab Beam Detail	
117.	ST-03,NO-01	Stilt Floor Roof Slab Plan	
118.	ST-03,NO-02	Stilt Floor Roof Slab Beam Detail	
119.	ST-04,NO-01	First Floor Roof Slab Plan	
120.	ST-04,NO-02	First Floor Roof Slab Beam Detail	
121.	ST-05,NO-01	Second Floor Roof Slab Plan	
122.	ST-04,NO-02	Second Floor Roof Beam Detail	
123.	ST-06,NO-01	Third Floor Roof Slab Plan	
124.	ST-06,NO-02	Third Floor Roof Slab Beam Detail	
125.	ST-07,NO-01	Mumty Floor Roof Slab	
126.	ST-07,NO-02	Mumty Floor Roof Beam Detail	

Signature with date of SET's Representative 30 May 2023

Signature of Contractor or his Authorised Representative with date

SCHEDULE OF FISCAL ASPECTS

1.	Earnest Money Deposit	:	Rs.3,50,000/- (Rupees Three Lakhs Fifty Thousand Only)
3.	Security Deposit	:	Shall be deducted @ 5% of the value of Work done in Running Account & Final bill. Initial deposit of Earnest Money will form a part of the Security Deposit. This Security Deposit of 5% will be released, without interest, after Defect Liability period.
4.	Date of Commencement	:	10th day from the date of letter of award of Contract.
5.	Period for completion of work	:	18 months from the date of commencement.
6.	Minimum value of work / frequency for raising running bill	:	Minimum 15 lakhs / after 15 days of work.
7.	Period for honouring interim bills	:	2 weeks. However pending verification of the yardstick, adhoc payment up to 50% may be made within ten days or so purely in the interest of the work.
8.	Period for honouring final bill certificate	:	45 days
9.	Defect liability period	:	12 months after completion
10.	T.D.S./Works contract	:	Statutory deductions towards T.D.S. / Any other tax as applicable shall be made from each and every payment as per the prevailing rules of the Govt. or local authorities.
11.	Secured Advance	:	NIL

Signature with date of SET's Representative 30 May 2023

Signature of Contractor or his Authorised Representative with date