Buildings (C & M) Circle, P.W.D Madurai SCHEDULE - A

Name of work: Construction of Prefabricated Structure workshop and Laboratory in Government ITI at Karaikudi in Sivagangai District

Sl. No	Quantity	Description	TNBP No.	Rate	Unit	Amount
1	2	3	4	5	6	7
1	470.00 cu.m (Four hundred and seventy cubic metres only)	Earth work excavation for foundation in all soils and subsoils and to full depth as may be directed except in hard rock requiring blasting inclusive of shoring shuttering, bailing out water wherever necessary refilling the sides of foundation with excavated soil other than sand in layers of 15cm thick well rammed and completed, and depositing the surplus earth within the compound in places shown by the departmental officers with an initial lead of 10 mts and initial lift of 2 mts. and clearing and levelling the site, etc., complete complying with standard specification.			1 M ³ (One cubic metre)	
2		Earth work open excavation in all soils and sub-soils and to full depth as may be directed except in rock requiring blasting inclusive of shoring shuttering, bailing out water wherever necessary and depositing the excavated earth with a lead of 10 mts. within the compound in places shown by the departmental officers and clearing and levelling the site, etc., complete complying with standard specification.			1 M ³ (One cubic metre)	

No.of corrections: No.of over writtings:

1	2	3	4	5	6	7
3	310.00 cu.m (Three hundred and ten cubic metres only)	Refilling in foundation, basement with excavated earth in layers of not more than 15cm thick well rammed watered and consolidated complying with standard specifications.			1 M ³ (One cubic metre)	
4	40.00 cu.m (Forty cubic metres only)	Cement Concrete 1:5:10 (One Cement, Five sand and Ten hard broken stone jelly) using 40 mm gauge hard broken granite stone jelly for foundation including dewatering wherever necessary and laid in layers of not more than 15 cm thick, well rammed, consolidated and curing etc. complete complying with standard specification and as directed by the departmental officers.			1 M ³ (One cubic metre)	
5	154.00 cu.m (One hundred and fifty four cubic metres only)	Supplying and filling in foundation and basement with filling m sand in layers of not more than 15cm thick, well rammed, watered and consolidated etc., complete complying with standard specification and as directed by the departmental officers.			1 M ³ (One cubic metre)	

1	2	3	4	5	6	7
6	277.00 cu.m (Two hundred and seventy seven cubic metres only)	Supplying and FILLING GRAVEL Supplying and filling in foundation and basement with filling sand in layers of not more than 15cm.thick well rammed watered and compacted 1m3 etc., complete complying with standard specification.			1 M ³ (One cubic metre)	
7	91.70 cu.m (Nine one point seven zero cubic metres only)	Cement Concrete 1:5:10 (One Cement, Five sand and Ten hard broken stone jelly) using 40 mm gauge hard broken granite stone jelly for flooring including dewatering wherever necessary and laid in layers of not more than 15 cm thick, well rammed, consolidated and curing etc. complete complying with standard specification and as directed by the departmental officers.			1 M ³ (One cubic metre)	
8	462.00 sq.m (Four hundred and sixty two square metres only)	Supplying and erecting steel centering including necessary supports for plane surfaces for Reinforced Cement Concrete works such as column footings, column pedestals, plinth beams, grade beams, staircase steps, etc. which require only nominal strutting using mild steel sheets of size 90cm x 60cm and 10 BG stiffened with welded mild steel angles of size 25mm x 25mm x 3 mm for boarding, laid over silver oak joists of size 10cm x 6.5cm spaced at about 75cm centre to centre or at suitable intervals etc. complete in all floors complying with standard specification. (Payment for centering shall be given after the concrete is laid)			1m ² (One square metre)	

1	2	3	4	5	6	7
9		Supplying and erecting centering for sides and soffits				
		including necessary supports and strutting upto 3.29 M				
		height for plane surfaces as detailed below in all floors with				
		all cross bracings using Mild Steel sheets of size 90 x 60 cm				
		and 10 BG stiffened with welded Mild Steel angle of size				
		25mm x 25mm x 3 mm for boarding laid over silver oak				
		joists of size 10cm x 6.50 cm spaced at about 90 cm centre				
		to centre and supported by casurina props of 10cm to 13 cm				
		dia spaced at not more than 75 cm centre to centre etc.				
		complete complying with the standard specificaiton.				
		(Payment for centering shall be given after the concrete is				
		laid)				
a	300.00 sq.m (Three hundred square metres only)	For plane surfaces such as RCC floor slab, roof slab, beams, lintels, bed blocks, landing slab, waist slab, portico slabs and beams, etc.			1m ² (One square metre)	
b	498.00 sq.m (Four hundred and ninety eight square metres only)	For plane surfaces such as rectangular or square RCC columns, sunshades, top and bottom slab of RCC boxing, etc.			1m ² (One square metre)	

Contractor:

1	2	3	4	5	6	7
10		Providing and laying in position, standardised concrete Mix		· · · · · · · · · · · · · · · · · · ·		<u> </u>
		M-20 Grade in accordance with IS 456 using 20mm and				
		down graded hard broken granite stone jelly for all RCC				
		items of works with minimum cement content of 325 kg/m3				
		and maximum water cement ratio of 0.55, including				
		admixture (plasticiser / super plasticiser) in recommended				
		proportions as per IS:9103 to accelerate, retard setting of				
		concrete, improve workability without impairing strength				
		and durability with about (5 cu.m.) 7730 kg. of 20mm				
		machine crushed stone jelly and with about (3.3 cu.m.) 5156				
		kg. of 10-12mm machine crushed stone jelly and with about				
		(4.79 cu.m) 7670 kg. of sand, but excluding cost of				
		reinforcement grill and fabricating charges, centering and				
		shuttering and also including laying, vibrating with				
		mechanical vibrators, finishing, curing, etc. and providing fixtures like fan clamps in the RCC floor/ roof slabs				
		wherever necessary without claiming extra, etc., complete				
		complying with standard specification and as directed by the				
	226.00	* 1 an Park			2	
a	336.00 cu.m	foundation and basement			1 M^3	
	(Three hundred and thirty				(One cubic	
	six cubic metres only)				metre)	
b	63.00 cu.m	Ground floor			1 M^3	
	(Sixty three cubic metres				(One cubic	
	only)				metre)	

Contractor:

No.of corrections: No.of over writtings:

1	2	3	4	5	6	7
11	385.00 Qtl. (Three hundred and eighty five quintals only)	Supplying, fabricating and placing in position Mild Steel / Ribbed Tor Steel rod for all RCC works as per execution given including cost of steel and G.I. binding wire in all floors etc. complete complying with standard specification. (Contractor has to make his own arrangements for the supply of steel and binding wire)			Qtl.	
12		Brick work in Cement Mortar 1:5 using best quality II class Ground moulded chamber burnt bricks of size 9" x 4-3/8" x 2-3/4" for foundation and basement including curing, etc., complete complying with standard specifiction.				
a	127.00 cu.m (One hundred and twenty seven cubic metres only)	foundation and basement			1 M ³ (One cubic metre)	
13		Brick work in Cement Mortar 1:6 using best quality II class Ground moulded chamber burnt bricks of size 9" x 4-3/8" x 2-3/4" for foundation and basement including curing, etc., complete complying with standard specifiction.				

Contractor:

1	2	3	4	5	6	7
a	147.00 cu.m (One hundred and forty seven cubic metres only)	Ground floor			1 M ³ (One cubic metre)	
14		Brick work in Cement Mortar 1:3 using best quality II class Ground moulded chamber burnt bricks of size 9" x 4-3/8" x 2-3/4" for foundation and basement including curing, etc., complete complying with standard specifiction.				
a	21.50 cu.m (Twenty one point five zero cubic metres only)	foundation and basement			1 M ³ (One cubic metre)	
15	798.00 sq.m (Seven hundred and ninety eight square metres only)	Special ceiling plastering and finishing the exposed surface of all RCC items of work such as slabs, beams, sunshades, facia, canopy slab, staircase waist slab, landing slab etc., with Cement Mortar 1:3 (One Cement and Three Sand) 10mm thick including hacking the surfaces, providing cement mortar nosing, beading for sunshades, staircases, steps, landing slabs and curing, etc., in all floors complying with standard specification and as directed by the departmental officers			1m ² (One square metre)	
Contra	actor :	No.of correction No.of over writtin			Superintending Buildings (C & M)	

1	2	3	4	5	6	7
16	1496.00 sq.m	Plastering with Cement Mortar 1:5 (One cement and Five			$1m^2$	
		sand), 12mm thick in all floors including curing etc.			(One square	
	only)	complete complying with standard specification and as directed by the departmental officers.			metre)	
	omy)	directed by the departmental officers.				
17	88.00 sq.m	Plastering with Cement Mortar 1:3 (One cement and Three sand), 12mm thick in all floors including curing etc.			1m^2	
	only)	complete complying with standard specification and as directed by the departmental officers.			(One square metre)	
18		Brick partition walls of 11.50cm thickness using best quality II class Ground moulded chamber burnt bricks of size 9" x 4-3/8" x 2-3/4" in Cement Mortar 1:3 (One Cement and Three Sand) using hoop iron reinforcement if found necessary including curing etc. complete.				
a	44.00 sq.m (Forty four square metres only)	Ground floor			1m ² (One square metre)	

Contractor:

1	2	3	4	5	6	7
19	1377.00 sq.m (One thousand three hundred and seventy seven square metres only)	Painting two coats of newly plastered wall surface with ready mixed interior plastic emulsion paint of first class quality and of approved colour over a priming coat including thorough scrapping, clean removal of dirt etc., complete complying with standard specification.			1m ² (One square metre)	
20	918.00 sq.m (Nine hundred and eighteen square metres only)	Painting two coats of newly plastered wall surface with ready mixed exterior plastic emulsion paint of first class quality and of approved colour over a priming coat including thorough scrapping, clean removal of dirt, and including necessary plaster of paris putty, wherever required etc., complete complying with standard specification.			1m ² (One square metre)	
21	140.00 sq.m (One hundred and forty square metres only)	Painting new iron works such as steel doors, windows, ventilators, window bars, balustrades etc., with two coats of best approved first quality and colour of synthetic enamel paint over the existing red oxide priming coat in all floors excluding cost of priming coat etc., complete complying with standard specification. (The make, quality and colour of paint should be got approved by the Executive Engineer before use on works.)			1m ² (One square metre)	

Contractor:

1	2	3	4	5	6	7
22	36.00 sq.m (Thirty six square metres only)	Painting new wood work with two finishing coats of synthetic enamel ready mixed paint of approved quality and colour over one coat priming coat in all floors including the cost of primer etc., complete complying with standard specification. (The make, quality and colour of paint should be got approved by the Executive Engineer before use on works.)			1m ² (One square metre)	
23	9.80 m2 (Nine point eight zero square metres only)	Manufacturing, Supplying and Fixing of Stainless Steel Hand rails for staircase using 50mm dia 304L Grade Stainless Steel pipe of 1.60mm thick at required locations to a height of 900mm from finished floor level welded to 38mm dia Stainless Steel pipe post of 1.00mm thick as vertical at 900mm centre with 2 Nos. of 25mm dia intermediate horizontal stainless steel pipe of 1.60mm thick in between. The vertical pipe has to be welded to the 100 X 100 X 6mm MS base plate encased in the base concrete. The rate is inclusive of the charges for cutting, bending, welding, grinding, polishing, conveyance, electrical charges, etc. complete			m2	

1	2	3	4	5	6	7
23	37.00 Rm	Supplying ,fabricating and fixing in position of steel frame		 	1 RM.	
	(Thirty seven running	without bottom frame, of size 100X60mm rectangular			(One running	
	metres only)	section with necessary rebate 30mmX15mm, to host the			metre)	
		shutter, using 1.25mm thick (18 guage) CRCA cold rolled				
		frame steel plate confirming to ISI specified ensured of right				
		butt joint riveted hold assembly with nylon insert, not be				
		welded with special purpose hard ware. Proclaimed including phopating as per ISI with rust preventive primer				
		ready to assemble condition for easy installation at site				
		including dismantling, making necessary chipping and holes				
		in RCC columns, walls with power drills to the extent				
		required ,including providing concrete 1:2:4 inside the box				
		curing etc complete. The cost includes the cost of hold fast				
		,plastic bush, insert receiver,rubber bottom,shock absorber				
		etc complete as directed by the departmental officers in all				
		floors.				
24		Supplying and fixing solid core particle board flush shutter				
		of nominal thick of 35 mm with necessary T.W. internal				
		lipping conforming to IS 2302 with both sides alround				
		commercial ply 35mm thick including supplying and fixing				
		cost of wind appliances and furniture fittings such as 1no				
		.200x12mm aluminium tower bolt 2nos. 150x12mm				
		aluminium tower bolts 1no. 250x16mm aluminium aldrops,				
		3 nos. 200mm 'D' type aluminium door handle and door stopper with bush etc., complete as directed by the				
		departmental officers.				
		departmental officers.				

No.of corrections:

No.of over writtings:

Contractor:

1	2	3	4	5	6	7
a	13.30 Sq.m	a) Single Leaf			$1m^2$	_
	(Thirteen point three zero square metres only)				(One square metre)	
25	`	Supplying and Installing Metal False Ceiling using Fire Rretardant Galvanized Steel Sheet Plain lay in tile size 600mm x 600mm, 0.5mm thick, powder coated onexternal surface and shall have flange on all four sides to rest on the exposed grids. The system to give 600mm x 600mm centre to centre 'T'. The 'T' shall be not be dipped GI Tee Section 3600mm long main Tee. 24mm wide and cross Tee panels are formed by running main runner of 'T' section of size 30mm x 24mm powder coated at bottom at intervals with			1m ² (One square metre)	

powder coating at bottom.

No.of corrections: No.of over writtings:

1	2	3	4	5	6	7
		Necessary provision of inter locking of 'T' section are made at required intervals not exceeding 1200mm. The main runners are suspended from the ceiling by means of 4mm dia. GI rods fixed to the ceiling using anchor fasteners of 50mm x 8mm size with nylon inset and hooked to the main rubbers using clips. The last hangers at end of each rubber should not be greater than 600mm from the adjacent wall. The last panel shall be placed at the side wall using edge profile 'L' Angle of size 20mm x 20mm and fixed to the side wall the false ceiling should be fixed of same level and should present a neat look (Sch rate. S.No.272)				
26	348.50 sq.m (Three hundred and forty eight point five zero square metres only)	Paving the floor with best quality Double Charged Vitrified Tiles of size 800 x 800 x 10mm of approved colour, shade and quality laid in cement mortar 1:3 (one cement and three sand) 20mm thick in all floors and the top pointed with the white cement mixed same colour pigments etc., complete complying with standard specification. (The make and brand of the tiles should be got approved by Executive Engineer before use on works)			1m ² (One square metre)	
27	605.50 sq.m (Six hundred and five point five zero square metres only)	vacuum dewatering for workshop			1m ² (One square metre)	

Contractor:

1	2	3	4	5	6	7
28	69.00 sq.m (Sixty nine square metres only)	Fabricating ,Supplying and fixng in position of steel windows (Five Leaves) with the following specifications. Outer frames of windows made of 'Z' section F7D of size 33 x 25 x 3mm at 1.419 kg/m and mullion 'J' section (F4B) of size 46x25x3mm at 2.28kg/m and shutter section of made of F7D of 33x25x3mm at 1.419 kg/m as specified in IS 7452/1990. Each openable shutter should not exceed a width of 600mm to enable separate operations and easy maintenance. The panel of the shutters to be covered with 18 gauge cold rolled sheet of superior quality and welded intact with shutter frames.			1m ² (One square metre)	
29	39.00 sq.m (Thirty nine square metres only)	supplying and fixing in position Glazed steel ventilator with Side/Central hung shutters (Two Leaves) frames and made shutter frame made out of steel section conforming to IS 7452 /1990. The outer frame made out of z section (F7D) of size 33 x22 x3 mm conforming to IS 7452/1990. The mullions are made out of (F4B) section of size 46x25x3 mm and conforming to IS7452/1990.			1m ² (One square metre)	
30	68.00 sq.m (Sixty eight square metres only)	supplying and laying vinyl flooring of 2.00mm thick of approved quality, brand and colour including labour charges for fixing in position using necessary activities approved quality etc., complete complying with standard specification and as directed by the departmental officers etc. (Sche Rate. S.No.242)			1m ² (One square metre)	

Contractor:

1	2	3	4	5	6	7
31	8.70 sq.m (Eight point seven zero square metres only)	Supplying and Erecting Pull and Push Type rolling Shutter with ISI make of approved size and section using 18 GI sheet. The shutter shall be painted with one coat of red oxide primer and the rate is inclusive of hood covers, ransportation charges etc., Gear Operated Type (Sche Rate S.No. 132)			1m ² (One square metre)	
32	27.00 MT (Twenty seven metric tone only)	Supply, Fabrication, Erection, alignment and levels as per approved shop drawing of structural steel work in built up sections comprising of ISMB, ISMC, angle, plates and round bar section etc., Necessary permanent rivets, bolts, washers and nuts, handling, straightening, cutting, drilling holes, welding, sand blasting, shop assembly, transport to erection site, storing, leading to erection site and apply a coat of anti-corrosive yellow primer paint of approved make and two coat of MRF enamel paint prior to erection t complete job in all respect. a) Connection Bolt are E350 GR.8.8 (IS3757) b) Hot Rolled are E250 GR, or Equivalent, Plate Grade E350 and all structural steel confirm to IS2062.c) Specification for Cold formed Light gauge Structural Steel Sections Confirm to IS: 811d) Painting confirm to IS 1477 part 1& 2.The rate is inclusive of design, shop drawing preparation, submission for approval etc., and also inclusive of any other incidental charges such as lifting using cranes, labour charges for erection, cost of all materials involved and painting two coats over one coat of primer and as directed by the departmental officers.			1 Mt. (One Metric tone)	

1	2	3	4	5	6	7
33		Supply, Fabrication, Erection, alignment and levels as per				
		approved shop drawing of structural steel work in single				
		section for purlins, tie runners with sag rods, etc., Necessary				
		permanent rivets, bolts, washers and nuts, handling,				
		straightening, cutting, drilling holes, welding, shop				
		assembly, transport to erection site, storing, leading to				
		erection site and apply a coat of anti-corrosive yellow primer				
		paint and MRF enamel paint prior to erection. The rate is				
		inclusive of design ,shop drawing preparation, submission				
		for approval etc., and also inclusive of any other incidental				
		charges such as lifting using cranes, labour charges for				
		erection, cost of all materials involved and painting two				
		coats over one coat of primer and as directed by the				
		departmental officers.				
a	10.40 MT	Purlin but with Painted cold rolled steel sections Z Section			MT	
	(Ten point four zero metric	MET- Z Purlin 150 X 60 x 2.0				

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tone only)

1	2	3	4	5	6	7
b	2.50 MT	Sag rod			MT	_

(Two point five zero metric tone only)

34

Supplying and embedding P.V.C rain water pipes of approved quality embedded inside the RC columns/masonry in position or underside of truss/lattice, column sides with all necessary specials like shoes, bends or any other specials required to suit site conditions etc., jointed with suitable adhesive and covering the joints using fibre glass wherever required, the steel collar and PVC Pipes with necessary MS clamps, brackets ,bolts and nuts all complete as directed. The rate should including providing M.S pipe sleeve necessary lugs of required dia in concrete in the concrete. The rate is inclusive of any other incidental charges such as labour charges, cost of all materials involved and as directed by the departmental officers.

No.of corrections: No.of over writtings:

1	2	3	4	5	6	7
a	101.00 Rm (One hundred and one running metres only)	200 mm Dia PVC Pipe (6k/cm2)			1 RM. (One running metre)	
35	90.00 Rm (Ninety running metres only)	Supply and Fixing of UPVC Rain water Gutter of approved design and drawing including clamping and all others works required to complete the job. The rate is inclusive of any other incidental charges such as labour charges, cost of all materials involved and as directed by the departmental officers.			1 RM. (One running metre)	
36	1215.00 sq.m	Supply & Fixing of Continuous sandwich PUF panels 50 mm thick either as single piece, prefabricated, modular, factory made units which consist of an insulating layer of rigid polyurethane foam between two layers of metal sheets, comprises of PUF bonded between two sheets of Pre-coated GI sheets of 0.5 mm thick to produce straight-to-finish panels with all necessary fixtures to complete the work in all respect. The rate is inclusive of design ,shop drawing preparation, submission for approval etc., and also inclusive of any other incidental charges such as lifting using cranes, labour charges for erection, cost of all materials involved and as directed by the departmental officers.			1m ² (One square metre)	

Contractor:

1	2	3	4	5	6	7
37	110.00 Rm (One hundred and ten running metres only)	Supply and fixing of Ridge made out of 0.50mm thick colour coated galvanized steel sheet (JSW sheet brand or equivalent brand). The both sides will be of 275mm,center angle will be of 120mm and both end drop will be of 30mm. This sheet will be fixed with self-drilling screws. The rate is inclusive of design ,shop drawing preparation, submission for approval etc., and also inclusive of any other incidental charges such as lifting using cranes, labour charges for erection, cost of all materials involved and as directed by the departmental officers. All the materials used on work should be got approved by the executive engineer before use on works.			1 RM. (One running metre)	
38	14.00 Sq.m (Fourteen square metres only)	Solid PVC door shutters using 19 Gauge 19mm MS square tubes for styles and outer frames. 15mm MS square tubes for top, lock and bottom rails. The steel tubes shall be covered with 5mm thick solid PVC sheets. Shutter using 5mm thick solid PVC sheets for panelling shall rigidly fixed in position including necessary furniture and fittings. The over all size of styles shall be 50mm x 30mm. The over all size of top rail, Lock rail and bottom rail shall be 75mm x 30mm. The over all size of frames shall be 50mm x 45mm, with suitable rabate for housing the shutter. Solid panel PVC door with frame (Sche Rate S.No. 125)			1m ² (One square metre)	

Contractor:

1	2	3	4	5	6	7
39	96.00 Sq.m (Ninety six square metres only)	Fabricating Supplying and fixing in position of Aluminium anodised natural colour matt finish 1/3rd fixed glazing 2/3rd prelaminated board of Aluminium partition. The outer frames Outer frame: 63.50x38x3mm@ 1.72 kg/m,Centre mullions: 63.50x38x3mm@ 1.55 kg/m,Alu. Clips: 17.27x17.15x1.50mm @ 0.175kg/mg/m for intermediate vertical mullion 90cm c/c. Horizontal mullion at 1.00m 2.10m covered with 5.5mm thick plain glass with neccessary aluminium clips of size 17.27x17.15 x1.50mm @ 0.176kg/m and with required rubber beading etc., including necessary dismantling holes in RCC column,masonry wherever in necessary with power drills to the extent required etc., complete			1m ² (One square metre)	
40	46.00 Sq.m (Forty six square metres only)	Flooring with following ceramic tiles of size 305 x 305 x 6 mm laid over 20 mm thick cement mortar 1:3 (One Cement and Three Sand) base mortar over the existing slab / floor including cutting the tiles to the required size with special cutter wherever necessary, laying in position and pointing with white cement mixed with colouring pigment at the rate of 0.3 Kg. / sq.m. etc., complete complying with standard specification. (The make and brand of the tiles should be got approved by Executive Engineer before use on works)			1m ² (One square metre)	

1	2	3	4	5	6	7
41	136.00 Sq.m (One hundred and thirty six square metres only)	Dadooing with printed design colour glazed tiles of size 300 x 450 x 8mm best approved quality, white / colour glazed tiles of following sizes set in Cement Mortar 1:2 (One Cement and Two sand) 10mm thick and pointing the joints with white cement mixed with colouring pigments at the rate of 0.40 Kg. / sq.m. neatly in all floors, curing, etc., complying with standard specification and as directed by the departmental			1m ² (One square metre)	
42	6.00 Nos (Six numbers only)	Supplying and fixing in positon Indian Water Closet (Oriya type) of size 580 x 440mm white glazed earthern ware of approved quality and brand with "P" or "S" trap conforming to BIS with sand cushion and forming flooring alround the closet using 40mm broken brick jelly in lime concrete 1:2:5 (One lime, Two sand and Five brick jelly) 100mm thick and finishing the top to the required slope and including giving necessary connection to PVC pipes (including the cost of 110mm dia PVC pipe for a length of 600mm) by dismantling brick masonry wall / reinforced cement concrete roof / floor slab and making good the dismantled portion to the original condition with leakages etc., complete complying with standard specifications			No	

1	2	3	4	5	6	7
43	6.00 Nos	Supplying and fixing in position best quality and approved			No	
	(Six numbers only)	make Indian made white / colour glazed earthernware wash				
		hand basin of size 550 x 400mm (with pedestal / without				
		pedestal) with a pair of cast iron brackets, including cost				
		15mm dia brass CP pillar tap, 32mm dia "B" class GI waste pipe with rubber plug and chain, 15mm dia GM wheel				
		valve, 15mm brass nipple, 15mm dia nylone connection,				
		32mm dia CP brass waste coupling including fixing of wash				
		basin using CI brackets on to the wall in position with TW				
		plugs and screws, rubber washers, white lead and giving				
		necessary water supply connection and painting the brackets				
		with two coat of painting over a priming coat of anti-				
		corrosive paint including testing for leakages etc., complete				
44	3.00 Nos (Three numbers only)	Supply and fixing in position of best Indian make white / colour glazed earthernware lipped mouth flat back urinal of best quality and approved make of size 430mm x 260mm x 350mm with GI pipe, 32mm dia bell mouth PVC connection and waste pipe, 15mm dia GI pipe of required length, 15mm dia GM wheel valve, 15mm dia brass nipple 2 Nos., and fixing the urinals in position with necessary TW plugs, clamps, screws, etc., including dismantling masnory and redoing the same to the original condition, etc. complete			No	

Contractor:

1	2	3	4	5	6	7
45	6.00 Nos (Six numbers only)	Supplying and fixing in position 15mm dia brass CP screw down tap / Pillar tap (heavy duty) of approved make conforming to BIS specifications and quality including cost of shellac, thread, etc., complete complying with standard specification and including cutting and threading wherever		<u>, </u>	No	
		necessary.				
46		Supplying, laying and jointing UPVC pipes (having working pressure 10 kg. / sq.cm) of approved quality and best variety conforming to BIS of the following dia including cutting, threading and fixing UPVC specials using UPVC adhesives (but excluding cost of such specials) and fixing into wall with teak wood plugs, PVC clamps and screws making holes on the wall (or) drilling holes in the roof and making good the dismantled portion to original condition with necessary brick work / cement concrete and plastering neatly wherever necessary with necessary scaffolding charges, etc., complete				
a	30.00 Nos (Thirty numbers only)	25mm UPVC Pipe			No	

1	2	3	4	5	6	7
b	100.00 Nos	40mm UPVC Pipe			No	
	(One hundred numbers					
	only)					
47		Supplying UPVC Specials (with working pressure 10 kg. /				
.,		sq.cm.) in water supply arrangements (both in internal and				
		external water supply arrangements(Sche Rate S.No.412)				
a	15.00 Nos	25mm dia UPVC Elbow			No	
	(Fifteen numbers only)					
b	12.00 Nos	25mm dia UPVC TEE			No	
	(Twelve numbers only)					

Contractor:

1	2	3	4	5	6	7
С	8.00 Nos	32mm dia UPVC Elbow			No	_
	(Eight numbers only)					
d	8.00 Nos	32mm dia UPVC TEE			No	
	(Eight numbers only)					
48		Supplying and fixing in position best quality PVC soil / waste pipes of various dia having 6 kg / sq.cm. pressure BIS mark and providing leak proof joints using PVC adhesives including fixing to the wall with special PVC / MS clamp,				

teak wood plugs, brass screws, etc., and making connection to all sanitary fittings, dismantling masonry / RCC works wherever found necessary and making the good dismantled portion to the original condition, including testing for any

leakages, etc., complete

No.of corrections: No.of over writtings:

1	2	3	4	5	6	7
a	64.00 Nos	a) 110mm dia PVC Soil Pipe			No	
	(Sixty four numbers only)					
b	27.00 Nos	b) 75mm dia PVC Soil pipe			No	
	(Twenty seven numbers	, 11				
	only)					
40		G 1: DVG G : 1 / :/1 1: 101 /				
49		Supplying PVC Specials (with working pressure 10 kg. / sq.cm.) in water supply arrangements (both in internal and				
		external water supply arrangements				
a	6.00 Nos	a) 110mm dia PVC Elbow			No	
	(Six numbers only)					

1	2	3	4	5	6	7
b	6.00 Nos	b) 110mm dia PVC Tee			No	
	(Six numbers only)					
c	6.00 Nos (Six numbers only)	c) 110mm dia PVC Door Elbow			No	
d	5.00 Nos (Five numbers only)	d) 75mm dia PVC Elbow			No	

1	2	3	4	5	6	7
e	5.00 Nos	e) 75mm dia PVC Tee			No	
	(Five numbers only)					
		Manufacturing, supplying and fixing Precast Reinforced				
		Cement Concrete slabs of following thickness in RCC 1:2:4				
		(one cement, two sand and four aggregates), using following				
50		HBGS jelly excluding cost of reinforcement steel in position but including cost of moulding charges, casting of slab,				
50		finishing, curing and fixing in position in all floors etc.,				
		complete complying with standard specification and as				
		directed.				
a	13.00 Sq.m	50mm thick			1m^2	
а	_	John unck				
	(Thirteen square metres only)				(One square metre)	
	omy)					
51	1.00 Nos	Supplying and fixing PVC ventilating shaft of 110mm dia			No	
	(One numbers only)	(having working pressure 4 kg. / sq.cm) with 3 metre height				
		including cost of PVC cylindrical cowl of best approved quality etc., complete complying with standard				
		specifications and as directed by the departmental officers				

Contractor:

1	2	3	4	5	6	7
52	3.00 Cu.m (Three cubic metres only)	Supplying and filling 40mm guauge HBGS stone jelly for dispersion trench including loading conveying and unloading and as directed by the departmental officers etc. complete complying with standard specification.			No	
53	3.00 Cu.m (Three cubic metres only)	Supplying and filling 20mm guauge HBGS stone jelly for dispersion trench including loading conveying and unloading and as directed by the departmental officers etc. complete complying with standard specification.			No	
54	10.00 Rm (Ten running metres only)	Supplying, laying and jointing glazed stoneware pipes of 100 dia of approved best quality with spigot and socket ends (in reverse direction) in dry condition and laid in loose joints (i.e.) without cement and spun yarn, so that the waste water can be drained to the trenches already available, excluding cost of earth work excavation, cost of re-filling with sand / earth, but including laying the pipe in true alignment and gradient and conducting required water supply test for draining with necessary tools and plants, etc., complete			1 RM. (One running metre)	

Contractor:

1	2	3	4	5	6	7
55	3.00 Sq.m	Paving the floor with best approved quality fine polished			$1m^2$	_
	(Three square metres only)	Granite Stone Slabs of size 1200 x 600 of 18 / 20mm thick			(One square	
		of Synthetic Grey, Paradise and similar varieties with			metre)	
		machine cut edges laid over a cement mortar bed of 20mm				
		thick using cement mortar 1:3 (One cement and three sand)				
		fixing the slabs with required cement slurry and laid in true right angles with minimum possible width of joints and				
		pointing the joints with white cement mixed with mathcing				
		colouring pigments etc., The granite stone slabs and other				
		materials to be used shall be got approved by the Executive				
		Engineer concerned before use on work, etc., complete as				
		per standard speicification.				
56	1.20 Cu.m	Plain Cement Concrete 1:2:4 (one cement, two sand and			1 M^3	
	•	four hard broken stone jelly) using 20mm jelly for wearing			(One cubic	
	metres only)	coat including laying, compacting, finishing and curing, etc.,			metre)	
		complete as per standard specificatins and as directed by the				
		departmental officers.				

1	2	3	4	5	6	7
57	76.00 Sq.m	Supplying and laying of Interlocking Paver Block Stone			$1m^2$	
	(Seventy six square metres	60mm thk. Over a base layer of sand filling incl. Cost of			(One square	
	only)	materials laying and Labour charges etc.,			metre)	
58		Drilling of Borewells anywhere in Tamilnadu including				
36		transportation from one place to another with in Tamilnadu				
		in alluvial soil sedimentary strata of clay and sand stone				
		shale pebbles boulders etc. By first taking a pilot bore of				
		140 mm/150mm dia and then enlarging to required dia				
		direct or reverse rotary mud circulation method using rotary				
		rigs, fuel, labour and drilling bentonite and water required				
		for drilling at site (Site will be shown by the TWAD Board				
		Officers) including construction of mud pit.				
a)	60.00 Rm	Upto 60 m Depth ending below ground level			1 RM.	
	(Sixty running metres only)				(One running	
	· -				metre)	

1	2	3	4	5	6	7
b)		From 60 m to 90m Depth ending below ground level			1 RM.	
	(Thirty running metres				(One running	
	only)				metre)	
c)	10.00 Rm (Ten running metres only)	From 60 m to 90m Depth ending below ground level			1 RM. (One running metre)	
59		Reaming 140/150 mm dia pilot bore to 300mm dia bore as directed by the TWAD Board Officers.				
a)	60.00 Rm (Sixty running metres only)	Upto 60 m Depth ending below ground level			1 RM. (One running metre)	

1	2	3	4	5	6	7
b)		From 60 m to 90m Depth ending below ground level			1 RM.	
	(Thirty running metres				(One running	
c)	only) 10.00 Rm (Ten running metres only)	From 60 m to 90m Depth ending below ground level			metre) 1 RM. (One running	
60		Supply of PVC Plain casing pipes of 160mm dia vertical 10Kg/Cm2 in sedimentary depth as directed by the departmental officers etc., complete.			1 RM. (One running metre)	

1	2	3	4	5	6	7
61	30.00 Rm (Thirty running metres only)	Supply of PVC Slotted casing pipes of 160mm dia vertical 10Kg/Cm2 in sedimentary depth as directed by the departmental officers etc., complete.			1 RM. (One running metre)	
62	100.00 Rm (One hundred running metres only)	Labour Charges for inserting PVC Casing pipes assembly (with slots or without slots) in the drilled hole including jointing the pipes with PVC Couplers with Cement paste etc., complete, supply and packing the annular space with pebbles of size and quality as approved by the executive Engineers of TWAD Board			1 RM. (One running metre)	
63	8.00 Hrs. (Eight hours only)	Charges for developing the Borewell with air compressor of 600 CFM capacity (Minimum 8 Hours) including transportation, labour and fuel charges for compressor as directed by TWAD Officers and conducting yield test by 'V' notch method.			Hrs.	

1	2	3	4	5	6	7
64	1.00 No.	Bore cap 200mm dia size using M.S. Flat of size 1 cm x 3		-	1 No	_
	(One number only)	mm and M.S. sheet on top with bolting arrangements for securing the cap in position (Bore caps with M.S. Couplings need not be made)			(One Number)	
65	1.00 No. (One number only)	End cap for borewell 160mm dia			1 No (One Number)	
66		Supply of 1.5 HP Submerssible motor with ISI Mark 14 stage with pump			1 No (One Number)	

1	2	3	4	5	6	7
67		Supply and delivery of single phase panel board with two level guard and auto start direct online starter confirming to IS13947 and IEC 947 suitable KW rating for operation in AC/single Phase/50HZ(± 5%) and 230 V(±10%) including Ammeter, Voltmeter, Thermal Overload relay, 16 Amps 2 pole Magnetic Contactor with under Voltage protection, Indication lamp, starting capacitor, running capacitor and On/Off Push button switches, 5 way connector, wiring with 1 sq. mm/1.5 sq. mm copper PVC insulated cable, powder coated vermin proof box including the capacitor (the cost of capacitor is to be taken separately).				
a)	1.00 No. (One number only)	1.5 HP			1 No (One Number)	
68	1.00 No. (One number only)	Labour charges for the erection of submersible Pumpset in borewell/openwell including fixing and jointing submersible cable with proper clamps upto the starter to required depth and also fixing of riser pipes to the required depth valves erection clamps, pressure gauges upto the exterior wall of pump room and erection of panel board consisting of TPICN switches starter, Voltmeter, Ammeter, three pilot (indicating) lamps capacitor single phasing preventor, water level guard and laying and jointing the cables and twin earthing as per IE rules etc., complete and testing the pumpset and trail run for 10 days.			1 No (One Number)	

Contractor:

1	2	3	4	5	6	7
ϵ	59 1.00 No.	Supply of 65mm MS clamp of 0.75m lenth nos, with boit			1 No	
	(One number only)	and nuts -8nos of heavy type as directed by the departmentel			(One Number)	
		officers ect.,complete				
7	70 95.00 Rm (Ninety five running metres only)	supply of 2.5 sq.mm. three core flat copper cable for submercible motor pump with wire bounded punched copper conductor insulated and sheathed with PVC with voitage grate upto 1100v confirming to and marked with is (694-1990) complying with standrad etc., complete			1 RM. (One running metre)	
7	71 90.00 Rm (Ninety running metres only)	32mm dia UPVC Pipe (Un-Plasticized Polyvinyl Chloride) UPVC used for commercial 1 and home applications, water pressure in resodential areas do not normally exceed the maximum tolerance. (Schedule-40)			1 RM. (One running metre)	

1	2	3	4	5	6	7
72	95.00 Rm	Supplying and fixing fibre rope for hanging 1.5 HP motor			1 RM.	_
	•	and fixing rigidly with motor as directed by the departmental			(One running	
	only)	officers.			metre)	
73		Supplying and fixing in position GI unions of heavy duty of				
		approved quality and good variety of various sizes inluding				
		necessary cutting and threading of GI pipes for jointing the union and providing two coats of painting with good variety				
		and approved quality of synthetic enamel paint over one coat				
		of primer in case of pipe line above ground level / one coat				
		of tar in case of below ground level for both internal and				
		external water supply arrangements, etc., complete				
		complying with standard specifications. (The GI unions should be got approved by Executive Engineer before use				
		on works).				
		,				
a)	5.00 Nos.	32mm dia GI Union			1 No	
	(Five numbers only)				(One Number)	

1	2	3	4	5	6	7
74		Supplying and fixing in position the following GI Specials				
		of heavy type and approved quality and good variety				
		excluding fixing charges but including necessary cutting and				
		threading of GI pipes, jointing the GI specials and painting				
		with two coats with good variety and best quality synthetic				
		enamel paint over a coat of red oxide primer and jointing the				
		specials with pipe line using shellac etc., complete				
		complying with standard specification. (The GI specials should be got approved by the Executive Engineer				
		concerned before use on works.)				
		concerned before use on works.)				
a)	10.00 Nos.	32mm dia GI Elbow			1 No	
	(Ten numbers only)				(One Number)	
b)	5.00 Nos.	32mm dia GI Tee			1 No	
	(Five numbers only)				(One Number)	
	(= 1. c nametra anij)					

1	2	3	4	5	6	7
c)	15.00 Nos.	32mm dia GI Bend			1 No	
	(Fifteen numbers only)				(One Number)	
d)	20.00 Nos. (Twenty numbers only)	32mm dia GI Coupling			1 No (One Number)	
e)	10.00 Nos.	32mm dia GI Hex Nipple			1 No	
	(Ten numbers only)				(One Number)	

1	2	3	4	5	6	7
75		Supplying, laying and jointing CPVC pipes (having working pressure 10 kg. / sq.cm) of approved quality and best variety conforming to BIS of the following dia including cutting, threading and fixing CPVC specials using UPVC adhesives (but excluding cost of such specials) and fixing into wall with teak wood plugs, CPVC clamps and screws making holes on the wall (or) drilling holes in the roof and making good the dismantled portion to original condition with necessary brick work / cement concrete and plastering neatly wherever necessary with necessary scaffolding charges upto 4 metre height above ground level, etc., complete complying with standard specifications. The CPVC pipes shall be got approved by Executive Engineer before use on works.				
		Above ground level				
a)	5.00 Rm	32mm dia CPVC Pipe			1 RM.	
(Five 1	running metres only)				(One running	

Superintending Engineer, P.W.D. Buildings (C & M) Circle, Madurai-2.

metre)

1	2	3	4	5	6	7
		Below ground level				
b)	10.00 Rm	32mm dia CPVC Pipe			1 RM.	
	(Ten running metres only)				(One running	
					metre)	
76	1.00 No.	Supplying and erecting in position of 50 liters capacity			1 No	
	(One number only)	Industrial Model Reverse Osmosis Water-cum-Purifier to			(One Number)	
		deliver Potable Water with World Health Organization				
		(WHO) Standards with following accessories. (a) MS Skid-				
		1 No. (b) Media 11054 No. Vessel with 20 nb Multiport				
		Valve (with Media Pubble and Fine Sand and Activated Carbon Filling) set (c) Feed Pump 0.50 HP - 1 No. (d)				
		Vertical Pump 2-9, 2.00 HP / Single Phase – 1 No. (e)				
		Membrane 40 x 40 filmtech (or) equivalents / Osmonic				
		(USA) - 1 No. and Membrane Pressure Vessel 40 x 40 -1				
		No. & Pressure Gauge - 2 Nos. (f) Flow Meter - 1 No. 20"				
		Filter with Housing - 1 No. Low Pressure Switch - 1 No.,				
		Level Switch - 1 No. & Necessary CPVC Pipes and Fittings.				
		The system shall be provide with Two Panel Control System				
		with necessary Stainless Valves and Fittings and Float				
		Control etc. The rate should be inclusive of all civil works,				
		wherever necessary to install the System in position and				
		intact				

1	2	3	4	5	6	7
77	7.00 Nos	Supply and fixing of stored pressure ABC (Mono			1 No	
	(Seven numbers only)	Ammonium Phospate) Powder Type Fire Extinguisher of 6 kg. capacity as per IS 15683 with pressure gauge, discharge hose & control nozzie, wall mounting bracket, safety clip etc., ncluding conveyance, all incidental charges, necessary scaffolding and re-doing the dismantled portions to its			(One Number)	
		original condition wherever found necessary etc complete as per standard specification and as directed by the Departmental Officers. Make: EXCELLENT/ SAFETY FIRST? EQUIVALENT.				

Total Item No: (77 items only)

Sub Total GST 12% Total Rs.

No.of corrections: No.of over writtings: