

Schedule - A						
NAME OF WORK :		Special maintenance and repairs works for various building in Periyar EVR College, Trichy 23				
EMD: Rs. 1,15,500/-				Date: 19.04.2022		
Sl. No	Qty	Description of Work	TN BP NO.& NBC	Rate in Words	Unit	Amount
		<b>CIVIL WORK</b>				
1	2016 M <sup>2</sup> ( Two thousand and sixteen square metres)	Dismantling clearing away and carefully stacking materials useful for reuse for any thickness of weathering course and pressed tiles of one course roof finish in cement mortar and stacking carefully away from the site for reuse etc. complete complying with standard specification and as directed by the departmental officers.			1 M <sup>2</sup> (One square metre)	
2	20 M <sup>3</sup> ( Twenty cubic metres)	Dismantling, clearing away and carefully stacking materials useful for re-use for any thickness of <b>Plain cement concrete</b> and roughening the surface etc., complete complying with standard specification and as directed by the departmental officer.			1 M <sup>3</sup> (One cubic metre)	
3	66 M <sup>3</sup> ( Sixty six cubic metres)	<b>Earthwork excavation for foundation</b> in all soils and sub soils to full depth as may be directed except in hard rock requiring blasting inclusive of shoring shuttering, baling out water wherever necessary, refilling the foundation with excavated earth and depositing the surplus earth within compound in places shown by the departmental officers with an initial lead of 10 metre and initial lift of 2 metre and clearing and leveling the site etc., complete complying with standard specification and as directed by the departmental officers.			1 M <sup>3</sup> (One cubic metre)	

4	68 M <sup>3</sup> ( Sixty eight cubic metres)	<b>Earthwork Open excavation</b> in all soils and sub soils to full depth as may be directed except in hard rock requiring blasting inclusive of shoring shuttering, baling out water wherever necessary refilling the foundation with excavated earth other than sandy soil in layers of not more than 15 cm thick layers well rammed and depositing the surplus earth within compound in places shown by the departmental officers with an initial lead of 10 metre and initial lift of 2 metre and clearing and leveling the site etc., complete complying with standard specification and as directed by the departmental officers.			1 M <sup>3</sup> (One cubic metre)	
5	38 M <sup>3</sup> ( Thirty eight cubic metres)	Supplying and Filling in foundation and basement and trenches with <b>Conveyed Gravel</b> 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 <sup>3</sup> (One cubic metre)	
6	3.50 M <sup>3</sup> ( Three point five zero cubic metres)	Supplying and Filling in foundation and basement and trenches with using 12 mm gauge hard broken blue granite stone jelly for foundation and basement including dewatering if found necessary and laid in layers of not more than 15cm thick and compacted etc., complete complying with standard specification and as directed by the departmental officers.			1 M <sup>3</sup> (One cubic metre)	

7	44.90 M <sup>3</sup> ( Forty four point nine zero cubic metres)	Cement concrete 1:5:10 (one cement, five M sand and ten aggregate) using 40mm gauge hard broken blue granite stone jelly for foundation and basement including dewatering if found necessary and laid in layers of not more than 15cm thick and compacted etc., complete complying with standard specification and as directed by the departmental officers.			1 M <sup>3</sup> (One cubic metre)	
8	22 M <sup>3</sup> ( Twenty two cubic metres)	Plain Cement concrete 1:2:4 (One cement two M sand and four aggregate) using machine crushed 20mm gauge hard broken granite stone jelly excluding cenetering, shuttering and, but including laying, curing and finishing for road works etc., complete complying with standard specification and as directed by the departmental officers.			1 M <sup>3</sup> (One cubic metre)	
9		Supplying and erecting <b>steel centering</b> including necessary supports for plane surfaces, for all RCC works including strutting upto 3.29m in all floors using mild steel shutters of size 90cmx60cm of BG 10 stiffened with mild steel angles of size 25mmx 25mmx3mm laid over silver oak (Country wood) Joists of size 10cmx6.5cm spaced at about 90cm c/c and supported by casurina props of 10cm to 13cm dia. (spaced at 75cm c/c) etc., complete complying with standard specification and as directed by the departmental officers. (The centering will be removed after specified period of concrete without damaging the concrete)				

a	63 M <sup>2</sup> ( Sixty three square metres)	For Plain surfaces such as RCC slab, Beam, Bed Block, waist slab, landing slab, lintel etc			1 M <sup>2</sup> (One square metre)	
10	27 M <sup>3</sup> ( Twenty seven cubic metres)	Providing and laying in position, Standardised <b>Concrete Mix M-20 Grade in accordance using with IS:456-2000, 20mm</b> and down graded hard broken granite stone jelly for all RCC items of works with minimum cement content of 325 kg/m <sup>3</sup> 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 (5cu.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 M 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 departmental officers. The coarse and fine aggregates to be used should comply with the requirements of IS standards. (No separate payment will be made by the Department for the excess usage of materials).			1 M <sup>3</sup> (One cubic metre)	

11	28.70 qtl ( Twenty eight point seven zero quintal)	Supplying, fabricating and placing in position of steel reinforcement using MS (or) RTS rods for all RCC item of works including cost of steel and binding wire in all floors etc., complete complying with standard specification and as directed by the departmental officers.			1 qtl (One quintal)	
12	30 M <sup>3</sup> ( Thirty cubic metres)	<b>Brick work in cement mortar 1:5</b> (one cement and five M sand) using <b>Fly Ash bricks of size 230 × 110 × 70mm</b> including curing etc., complete complying with standard specification and as directed by the department officers. (Masonry projections wherever necessary for obtaining required elevation shall be done without extra cost).			1 M <sup>3</sup> (One cubic metre)	
13	7 M <sup>3</sup> ( Seven cubic metres)	<b>Brick work in cement mortar 1:3</b> (one cement and three M sand) using <b>Fly Ash bricks of size 230 × 110 × 70mm</b> including curing etc., complete complying with standard specification and as directed by the department officers. (Masonry projections wherever necessary for obtaining required elevation shall be done without extra cost).			1 M <sup>3</sup> (One cubic metre)	
14	143 M <sup>2</sup> (One hundred and forty three square metres)	Finishing the top of flooring with granolithic floor finish of following thickness with plain cement concrete of mix 1:2:4 (One cement, two M sand and four aggregate) using 20mm / 10 to 12mm ISS gauge hard broken granite stone including finishing the top smooth and forming thread lining and curing etc., complete complying with standard specification and as directed by the Departmental officers			1 M <sup>2</sup> (One square metre)	

15	180 M <sup>3</sup> ( One hundred and eighty cubic metres)	Weathering course in brick jelly lime concrete using broken brick jelly of size 20mm uniform gauge in pure slaked lime (no sand to be used) to the proportion of brick jelly to lime being 32:12.5 by volume and laid over the RCC roof slab in a single layer of required slope and finished by beating the concrete with wooden beaters of approved pattern, keeping the surface constantly wet by sprinkling lime jaggery water, etc., complete as per standard specification and as directed by the departmental officers.			1 M <sup>3</sup> (One cubic metre)	
16	1800 M <sup>2</sup> ( One thousand eight hundred square metres)	Finishing the top of roof with one course of machine pressed tiles of size 230mm x 230mm x 20mm of approved quality set in Cement Mortar 1:3 (One Cement and Three Sand) 12mm thick mixed with water proofing compound conforming to ISS at 2% by weight of cement used and the joints pointed neatly to full depth of tiles with the same cement mortar mixed with red oxide and water proofing compound including curing etc., complete complying with standard specification and as directed by the departmental officers			1 M <sup>2</sup> (One square metre)	
17	8700 M <sup>2</sup> ( Eight thousand seven hundred square metres)	<b>White washing two coats</b> with freshly burnt white shell lime in all floors including cost of lime, blue powder fevicol type gum, brushes, scaffolding charges, etc., complete complying with standard specification and as directed.			1 M <sup>2</sup> (One square metre)	

18	18185 M <sup>2</sup> (Eighteen thousand one hundred and eighty five square metres)	Painting the walls two coats with best Oil bound distemper of approved quality (to be approved by the Executive Engineer before use on works) over one coat of primer for newly plastered wall including preparation of surface and finishing neatly including cost of all materials, brushes, scaffolding charges etc., complete complying with standard specification and as directed by the departmental officers.			1 M <sup>2</sup> (One square metre)	
19	20080 M <sup>2</sup> (Twenty thousand and eighty square metres)	Painting two coats of <b>newly plastered wall surface with ready mixed plastic emulsion paint</b> of first quality and of approved colour over a priming coat including preparing the surface, clean removal of dirt and including necessary plaster of paris putty wherever required etc., complete complying with standard specification.			1 M <sup>2</sup> (One square metre)	
20	1 No (One numbers)	Supplying and fixing in position of Bio Septic tank (PWTS) of 5000 litre capacity Rust proof and leak proof durable light weight, Easy to Install and massive reduction of BOD, TSS, Rib design provides additional strength and durability, FRP tanks are maintenance free and 100 % Eco friendly as directed by the departmental officers etc., complete.			1 No. (Each)	

21	31 M <sup>2</sup> (Thirty one square metres)	Supplying and fixing in position of solid panel <b>PVC door with sliding PVC frame.</b> The outer frame will be 62x38x2mm @ 1.17 kg/m and 40x20x2mm Aluminium "C" section. Soild PVC door shutter using 16 Gauge 19mm MS Sq. tubes for styles and outer frames. 15mm Ms. Sq. 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 paneling shall rigidly fixed in position including necessary furniture fittings. The overall size of styles shall be 50mmx30mm. The overall size of top rail, lock rail and bottom rail shall be 75mmx30mm, with suitable rebate for housing the shutter etc., complete complying with standard specification and as directed by the departmental officer.			1 M <sup>2</sup> (One square metre)	
22	305 M <sup>2</sup> (Three hundred and five square metres)	Painting old wood two coats 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.)			1 M <sup>2</sup> (One square metre)	



23	560 M <sup>2</sup> ( Five hundred and sixty square metres)	Painting the old iron work 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 and including cost of painting materials, brushes, putty, preparation of surfaces and scaffolding charges etc., complete complying with standard specification and as directed by the departmental officers before use on work.			1 M <sup>2</sup> (One square metre)	
24	32 M <sup>2</sup> ( Thirty two square metres)	Painting the <b>new iron work with two coats</b> 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 and including cost of painting materials, brushes, putty, preparation of surfaces and scaffolding charges etc., complete complying with standard specification and as directed by the departmental officer. (The quality and colour of paint should be got approved by the departmental officer before use on work).			1 M <sup>2</sup> (One square metre)	

25	15 M <sup>2</sup> (Fifteen square metres)	Manufacturing supplying and fixing of steel door with the following specification MS angels of size 40x40x6mm are used for the outer frames and M.S. angles of size 35x35x6mm for the shutter frames stiffeners with 32 x 6mm M.S flat is provided at required intervals in the shutter frame. 18-gauge C.R. sheet laid as panel in the shutter and welded intact. M.S. flat 18x5mm is welded over the 32 x 6mm M.S. flat sandwiching the C.R. sheet in between additional stiffeners with 18x5mm M.S. flat is provided diagonally at the rear side of the shutter, 3nos. of hinges in case of single leaf and 6nos. of hinges in double leaves shutter to be provided 6nos. of holdfasts 120 mm in length made of angle section spliced at the ends are welded to the outer frames of the door. Tower bolts 2nos. one at the top and the other at the bottom are provided 1no. Aldrop is provided incase of double leaf door at lock rail section in the door in single leaf door, one more aldrop is provided in the inner lock rail section of the door One rotaing locking arrangements for the inner side of the door and additional provision for locking arrangements for lock is provided on the rear side of the door at an appropriate place. Incase of double leaf door M.S.Flat 32 x 3mm at 1.1Kg/m is provided on the one shutter t conceal the gap between the two shutters.at an appropriate place in the door. A tie bar is provided at the bottom of the frame to prevent twisting of frame during transportation and fixing. All members are given a coat of red oxide primer as directed by the departmental officers. The rate includes cost of all materials, labour charges, transportation to site of work, loading, un loading and all other incidental charges etc., complete.			1 M <sup>2</sup> (One square metre)	
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26	905 RM (Nine hundred and five running metre)	Supplying and fixing in position best approved of BIS quality 110 mm dia PVC rain water down fall pipes having a pressure of 4 kg. / sq.cm including cost of necessary PVC shoe, PVC bend, cast iron gratings of required diameter and special clamps, brass screws, nails, etc., and fixing of cast iron gratings at junction of parapet and the RCC roof slab including finishing neatly etc., complete. The rate shall be inclusive of cast of removable cast iron grating. The PVC pipe shall be fixed in wall with special type of "U" clamp at the centre of the pipe line in addition to those for more than 3.0 metre pipe length, etc., complete complying with standard specification.			1 RM (One running metre)	
27		Supplying, laying and joining UPVC pipes of approved quality and best variety conforming to ISS with ISI mark, of the the following size above Ground level up to 4 M high laid properly to alignment including cutting, threading and fixing the required PVC specials but excluding the cost of such specials and fixing to the wall with necessary TW plugs, clamps and screws, making holes on the wall or drilling holes in the roof and making good dismantled portion to original condition with necessary brick work, concrete and plastering wherever necessary with necessary scaffolding charges etc., complete.				
a	50 RM (Fifty running metre)	50mm dia UPVC pipe			1 RM (One running metre)	

b	50 RM (Fifty running metre)	40mm dia UPVC pipe			1 RM (One running metre)	
c	80 RM ( Eighty running metre)	32mm dia UPVC pipe			1 RM (One running metre)	
28		Supplying and fixing in position of the following UPVC specials best approved quality conforming to BIS and providing leak proof joints with PVC adhesive etc., including fixing to walls with necessary teak wood plugs screws etc., and giving connections to the UPVC pipe dismantling the brick masonry RCC floor or roof slab and redoing the disturbed portion to original conditions etc., complete complying with standard specification.(The UPVC specials should be got approved from the Executive Engineer before use on works).				
a	8 Nos ( Eight numbers)	50mm Union			1 No. (Each)	

b	7 Nos ( Seven numbers)	40mm Union			1 No. (Each)	
c	8 Nos ( Eight numbers)	32 mm Union			1 No. (Each)	
d	10 Nos ( Ten numbers)	25 mm Union			1 No. (Each)	
e	8 Nos ( Eight numbers)	40mm Elbow			1 No. (Each)	

f	10 Nos ( Ten numbers)	50mm Elbow			1 No. (Each)	
g	10 Nos ( Ten numbers)	32 mm Elbow			1 No. (Each)	
h	10 Nos ( Ten numbers)	25 mm Elbow			1 No. (Each)	
i	10 Nos ( Ten numbers)	40mm Tee			1 No. (Each)	

j	6 Nos ( Six numbers)	32 mm dia Tee			1 No. (Each)	
k	8 Nos ( Eight numbers)	25 mm dia Tee			1 No. (Each)	
l	8 Nos ( Eight numbers)	32mm x 25mm reducer			1 No. (Each)	
m	9 Nos ( Nine numbers)	25mm x20mm reducer			1 No. (Each)	

29		Supply and fixing in position best quality PVC Soil/ waste pipes 6 kg / sqcm of various size (Above Ground Level) having ISI mark and providing leak proof joints including fixing to the wall with special PVC /MS clamps, etc., and making connection to all sanitary fittings, dismantling masonry / RCC works wherever necessary and making good the dismantled portion to the original condition, complying with standard specification etc., complete.				
a	106 RM ( One hundred and six running metre)	110mm dia Pipe			1 RM (One running metre)	
b	60 RM ( Sixty running metre)	160mm dia Pipe			1 RM (One running metre)	
30		Supplying and fixing in position of the following <b>PVC specials</b> best approved quality conforming to ISS and providing leak proof joints with PVC adhesive etc., i and giving connections to the PVC pipe etc., complete complying with standard specification.(The PVC specials should be got approved by the departmental officer before use on works).				



a	12 Nos ( Twelve numbers)	110mm dia Elbow			1 No. (Each)	
b	8 Nos ( Eight numbers)	110mm dia "Y"			1 No. (Each)	
c	8 Nos ( Eight numbers)	110mm dia shoe			1 No. (Each)	

31	10 Nos ( Ten numbers)	Supplying and fixing in position first quality and approved variety of new Gun Metal Gate Valve / Wheel Valve heavy type of approved quality and good variety excluding the fixing charges but including necessary cutting & threading of UPVC pipes for jointing the UPVC specials and providing two coats of painting with good quality and approved variety of anti-corrosive paint over a coat of red oxid primer coat in the case of pipe line above ground level and one coat of tarring in the case of pipe line below ground level etc., complete complying with standard specification and as directed by the departmental officers. <b>40 mm dia</b>			1 No. (Each)	
32	10 Nos ( Ten numbers)	Construction of Inspection chamber of size 60X60X110cm as per following description. The earth work to a size of 1.20X1.20X1.20m, sand filling to depth of 10cm,cement concrete 1:5:10 to a depth of 15cm using 40mm gauge HBGS jelly, wall in brick work in CM 1:3 using Chamber bricks plastering with CM 1:3, 12mm thick and the bottom is finished with CC 1:3:6 using 20mm brick jelly etc. complete.			1 No. (Each)	

33	10 Nos ( Ten numbers)	Supplying and fixing in position best quality of approved make <b>white glazed earthenware wash hand basin (without pedestal)</b> of size 550x400mm with a pair of cast iron brackets , including cost of 15mm diameter brass chromium plated pillar tap, 32mm diameter C.P.waste, 32mm diameter PVC waste pipe with rubber plug and chain, 15mm diameter gun metal wheel valve, 15mm dia brass nipple, 15mm dia nylon connection etc. including fixing the wash hand basin in the wall in position with pair of C.I.brackets with teak wood plugs and screws and giving necessary water supply connection and painting the brackets with two coats of paint over a priming coat of anti-corrosive paint including testing for leakage etc., complete complying with standard specification and as directed by the departmental officers.(The wash hand basin and specials should be got approved by the departmental officers before use on work)			1 No. (Each)	
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34	5 Nos (Five numbers)	Supplying and fixing in position <b>White Glazed European water closet</b> of best quality and approved make with 100mm P or S trap with double flapped rigid PVC.seat cover with chromium plate brass hinges, including supplying and fixing PVC. Low level flushing tank 10 litre capacity of approved quality on wall with teak wood plugs, brass screws and 2 numbers 15mm dia gun metal wheel valve, 15mm dia nylon connection and giving necessary water supply connection as directed by the departmental officers. The rate includes cost of 100mm dia PVC.Pipe 60cm long including cost of 3 Kg.of white cement 6Kg.of cement, spunyarn, shellac, thread ball, teak wood plugs, brass screws 75mmx10mm etc., complete complying with standard specification and as directed by the departmental officers. (The European Water Closet and flushing tank should be got approved by the Departmental Officers before use on work.)			1 No. (Each)	
35	8 Nos (Eight numbers)	Supplying and fixing in position <b>Indian water closet oriya type of size 580x440mm white glazed earthenware</b> of approved quality with 'P" trap or 'S' trap conforming to IS 2556-Part XII with sand cushion and forming flooring alround the closet using 40mm broken brick jelly in lime concrete 1:2:5 (One part of lime, two parts of sand and five parts of brick jelly) 100mm thick and finishing the top to required slope and including giving necessary connection to PVC. pipes by dismantling brick masonry, reinforced cement concrete roof/floor slab and making good the disturbed portion to original condition without leakage etc., complete complying with standard specification and as directed by the departmental officers.(The Oriya type Water Closet and all accessories should be got approved by the departmental officers before use on work)			1 No. (Each)	

36	11 Nos (Eleven numbers)	Supply and fixing of stored pressure <b>ABC</b> (Mono Ammonium Phosphate) powder type fire extinguisher of 6 kg capacity as per IS:15683 with pressure gauge, discharge hose & control nozzle, wall mounting bracket, safety clip etc. including conveyance, all incidental charges, necessary scaffolding and re-doing the dismantled portions to its original condition wherever found necessary etc. complete as per standard specification and as directed by the Departmental Officers. Make: Excellent/Safety First/equivalent.			1 No. (Each)	
37	11 Nos (Eleven numbers)	Supply and fixing of water CO2 stored pressure type 9 litres capacity fire extinguisher as per new IS 15683 complete with control valve, Gun metal cap, Pressure Gauge, operation sticker, discharge hose, wall mounting bracket, safety clip etc., as directed			1 No. (Each)	
38	3120 M <sup>2</sup> ( Three thousand one hundred and twenty square metres)	Removing the old damaged tiles joint from the existing M.P tiles free from dust and applying the bonding agent in the gap and having the fill the gap with chemical materials combination SBR acrylic liquid intergrated water proofing liquid and sand with cement After filling the jointy apply two coats of highly Performance water proof membarance coating to the tiles surface including labour charges and material etc., complete complying with standard specification			1 M <sup>2</sup> (One square metre)	

39	1980 M <sup>2</sup> ( One thousand nine hundred and eighty square metres)	Cleaning the Surface to be freed of dust. Apply of two Flex (Terracotta) Water proof coating etc., complete complying with standard specification			1 M <sup>2</sup> (One square metre)	
40	140 M <sup>2</sup> ( One hundred and forty square metres)	Cutting the tile joint with "U" grew cleaning the joint to be freed of dust of floor/ wall tile to a width of 2mm all over the tile of the existing ceramic tile flooring and apply the standard Epoxy grouting to the full depth of the tiles thickness for the same 2mm width complying with standard specification and clean the excess grout material in the tiles area as directed by the departmental officers.			1 M <sup>2</sup> (One square metre)	
41	15.50 RM ( Fifteen point five zero running metre)	Supplying and laying jointing the 25mm PVC pipes 10g/Sq.cm of quality and best variety conforming to ISS and with ISI mark laid properly to alignment including fixing PVC specials to the wall with necessary water proof materials maing holes on the wall or drilling hole and making good to the disamtling portion to original condition with necessary brick work and plastering etc, complete as directed by the departmental officers.			1 RM (One running metre)	
42	108 M <sup>3</sup> ( One hundred and eight cubic metres)	Cleaning in the crack in brick masonry wall to be free of dust cutting with "U" grew and apply to building agent one coating fxl in the crack filler (Mixing-crack filler,fiber,SBR liquied)and apply of fill A-cap material with saft secured coat etc., complete complying with standard specification and as directed by the departmental officers.			1 M <sup>3</sup> (One cubic metre)	

43	198 M <sup>2</sup> ( One hundred and ninety eight square metres)	Cleaning the corroded reinforcement free from dust and apply anti-corrosive coating including labour charges and material etc., complete complying with standard specification and as directed by the departmental officers.			1 M <sup>2</sup> (One square metre)	
44	845 Nos ( Eight hundred and forty five numbers)	Proving the chemical mixmaterials (cement, grout, admix, IWP, liquid, I W powder with pressure in the hole of effect concrete including Labour charges and materials in the drilled hole including labour charges as directed by the departmental officers			1 No. (Each)	
45	822 Kg ( Eight hundred and twenty two kilogram)	Supplying and fixing MS grills to doors, windows and ventilators etc. using necessary MS flats (or) square rods for inner members and outer members which should be fixed to window frames as directed and design given by the departmental officers inclusive of cost of providing one coat of best quality red oxide primer etc., complete complying with standard specification and as directed by the departmental officers .			1 kg (one kilogram)	

46	93 M <sup>2</sup> (Ninety three square metres)	Manufacturing, Supplying and Fixing in position of M.S.steel window (four leaves) with following specifications. The outer frame of window made out "Z" section (F7D) of size 33x25x3mm at 1.419 Kg/m and mullion of "J" section (F4B) of size 45x25x3mm at 2.28 Kg/m. Shutter made out of (F7D) section of size 33x22x3mm at 1.419 Kg/m. Each openable shutter should not be exceeded a width 600mm to enable separate operations and easy maintenance. 2Nos. of sturdy hinges and one number of handle cum latch of special type make with 18x5 MS flat are revetted to the shutters of an appropriate height in each window shutter. Suitable opening is left for its easy operation. A stopper square rod for handle is provided in the mullion section at suitable place to catch the window handle. Each shutter having an adjustable window stay made out of 18mmx5mm at 0.70 kg/m MS flat of length 320mm with free adjustable positions. A matching peg is provided in the outer frame of the window, at suitable place, 4Nos of holdfasts of 200mm length MS angle 40x40x6mm the ends are welded to the outer frame of the window, 18 mmx 5 mm at 0.70 kg/m MS flat is welded to the shutter at two places, equal distance from each other from top and bottom of the shutter. 18 gauge cold rolled sheet of superior quality is laid as panel in the shutter frames and welded intact. Stiffeners with 18x5mm at 0.70 kg/m MS flat of suitable length welded diagonally to all four corners of each openable shutter to hold the CR sheet in position firmly. MS square bars of 12mm size is welded to the inner face of the window at equal intervals not exceeding 100mm edge to edge between them. All members are painted with one coat of anticorrosive red oxide primer as directed by the departmental officers. All sections used should confirm to IS 7542 / 1990. The rate includes cost of all materials, labour charges, transportation to taxes and other incidental charges etc. complete.			1 M <sup>2</sup> (One square metre)	
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47	1030 M <sup>2</sup> ( One thousand and thirty square metres)	Finishing the top roof with one course of <b>solar reflecting ceramic tiles</b> of size 305x305x7mm thick of approved quality set in cement mortar 1:3 (One cement and three sand) (12mm thick ) and mixed with for 10M2 / 4.00 kg Epoxy Packing conforming to ISS including curing etc., complete complying with standard specification and as directed by the Departmental officers.			1 M <sup>2</sup> (One square metre)	
48	16 M <sup>2</sup> ( Sixteen square metres)	Supplying and fixing of special type <b>Terra Cotta Jally of size 20x20x8cm</b> of approved pattern including pointing neat finishing and labour charges for fixing the jally in position etc., complete complying with standard specification and as directed by the departmental officer.			1 M <sup>2</sup> (One square metre)	
49	130 M <sup>2</sup> ( One hundred and thirty square metres)	<b>Plastering with cement mortar 1:5</b> (one cement and five p-sand) 12mm thick in all floors using fine river sand including neat finishing, curing, etc., complete complying with standard specification and as directed by the department officers.			1 M <sup>2</sup> (One square metre)	
50	360.80 M <sup>3</sup> ( Three hundred and sixty point eight zero cubic metres)	Providing and laying gravel soling to compacted thick including cost and conveyance of gravel from approved sources to worksite including labour for spresding,watering and compacting by power roller to achieve the required proctor density at 100% compaction at optimum moisture content and hire & fuel charges for power roller ,water sprinkler and all other incidental charges such as barricading and providing dangerlights etc., complete.			1 M <sup>3</sup> (One cubic metre)	

51	134.04 M <sup>3</sup> ( One hundred and thirty four point zero four cubic metres)	Providing and laying, spreading and compacting graded stone aggregates to Crusher Run Macadam specification including premixing the materials with water at OMC in mechanical mix plant carriage of mixed material by tipper to site laying in uniform layers with pavers in Sub Base/ Base course on well prepared surface and compacting with vibratory roller to acheive the desired density including cost of material, labour charges, rentals for machinery, fuel and all other incidental charges etc., complete			1 M <sup>3</sup> (One cubic metre)	
52	3815.35 M <sup>2</sup> (Three thousand eight hundred and fifteen point three five square metres)	Providing and laying Prime Coat over CRM/ Gravel base using 9 Kg of Emulsion Bitumen (SS1) per 10 sqm for preparatory to another bituminous construction over it including cost of material, labour charges, rentals for machinery, fuel and all other incidental charges etc., complete as per Clause 502 of MORTH Rev-5			1 M <sup>2</sup> (One square metre)	
53	3815.35 M <sup>2</sup> (Three thousand eight hundred and fifteen point three five square metres)	Providing and laying Tack Coat over CRM surface (treated with primer) using 2.50 Kg of Bitumen Emulsion (RS1) per 10 sqm for preparatory to another bituminous construction over it including cost of material, labour charges, rentals for machinery, fuel and all other incidental charges etc., complete			1 M <sup>2</sup> (One square metre)	

54	3815.35 M <sup>2</sup> (Three thousand eight hundred and fifteen point three five square metres)	Providing laying and rolling of Open graded premix carpet of compacted 20mm thickness using using 0.0162 cum of 13.20-11.20mm, 0.1404 cum of 11.2-5.6mm, 0.0729 cum of 5.60-2.80mm, 0.0405 cum of 2.80mm and below (Type B) graded HBG metal using 19kg of VG30 bitumen for 10sqm including premixing at CMP, conveyance by tipper lorry, laying by paver finisher and rolling by Vibratory Roller including cost and conveyance of all materials, hire charges of all T&P all labour charges, fuel and and all other incidental charges etc., Complete as per specification using CMP as per clause 508 of MORTH Rev-5			1 M <sup>2</sup> (One square metre)	
55	452 M <sup>2</sup> (Four hundred and fifty two square metres)	Supplying, fabricating, erecting and fixing Gyp Board false ceiling upto a ceiling height of 4.50m from floor level with plain gyp boards of 10mm thick and GI metal channel of size 45 X 15 X 0.9mm forming a grid of 120 X 60cm and anchored to the celing with dash fasteners of 12.50mm dia, 40mm long 6mm dia bolt and nut to the hanger of 25x25x5mm of required length. The other end of the angle fixed with bolt and nut to GI channel. The GI frame work will be covered with 10mm thick gyp board of approved quality confirming to IS 2095.			1 M <sup>2</sup> (One square metre)	

56	2 Nos ( Two numbers)	Supply and delivery of clear water vertical wet type submersible pumpset suitable for 150mm dia borewell conforming to IS 8034/2002 as amended thereafter and BEE 3 Star Rated capable of discharging noted LPM against head of water column due to all causes. The pump shall be with stainless steel shaft and dynamically balanced bronze or Cast SS impeller, brass screws and CI FG 200 grade pump bowl/diffuser with ISI mark. The pump shall be directly coupled to a continuous rated two pole suitable wet type vertical squirrel cage induction motor as per IS9283 /1995 as amended there after, suitable for operation in AC three phase 415 V+/- 10 %, 50 HZ +/- 5 %			1 No. (Each)	
57	2 Nos ( Two numbers)	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 trial run for 10 days.			1 No. (Each)	
58	2 Nos ( Two numbers)	Supplying and fixing in position of panel board for 3 phase 3 HP pumpset comprising of 1No Voltmeter Ammeter with selector switches and indication lamps suitable for operating on 3, 440V 50c/s with 1 No DOL starter with necessary cut out switches etc and inter connection complete and panel board being fabricated out of 16 swg sheet steel enclosure complete as per standard specification and as directed by the departmental officers.			1 No. (Each)	

59	4.90 M <sup>3</sup> ( Four point nine zero cubic metres)	Supplying and Filling in foundation and basement with <b>filling M sand</b> 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 <sup>3</sup> (One cubic metre)	
60		R.C.C M 30 Design mix using 20 mm and 10mm size H. B.G stone (machine crushed) including mixing concrete using machanical mixer machine and vibrating with machanical vibrator, but excluding cost of steel reinforcement, fabrication and placing the grills in postion and the cost of centering and strutting but including curing, finishing etc., complete as directed by the departmental Officers.				
a	7.01 M <sup>3</sup> ( Seven point zero one cubic metres)	Below GL & Upto 1.5 m			1 M <sup>3</sup> (One cubic metre)	
b	11.40 M <sup>3</sup> (Eleven point four zero cubic metres)	Above G.L			1 M <sup>3</sup> (One cubic metre)	

61		Centering for sides and soffits of R.C.C slab for plane surface / curved surface including strutting upto required height using MS sheets of size 90cm x 60cm and BG 10 gauge, stiffend with welded MS angle of size 25mm x 25mm x 3mm laid over silver oak (country wood) joists of size 10cm x 6.5cm (space at about 90cm c/c) and supported by casurina props of 10cm to 13cm dia spaced at 75cm c/c complying with standard specification etc., complete as directed by the departmental Officers. for the following items				
a	22.67 M <sup>2</sup> (Twenty two point six seven square metres)	Plain surface			1 M <sup>2</sup> (One square metre)	
b	104.91 M <sup>2</sup> (One hundred and four point nine one square metres)	Curved surface			1 M <sup>2</sup> (One square metre)	

62	2 Nos ( Two numbers)	Supply and fixing of CI manhole cover with frame of size 0.60m x 0.60m (heavy duty)with locking arrangements as directed by departmental Officers. The manhole cover frame and cover should be light weight conforming to IS 1726 / 1974			1 No. (Each)	
63	4 Nos ( Four numbers)	Supply and fixing of GI ventilators with wire mesh complying with standard specification etc., complete as directed by the TWAD Board Officers. for the following items			1 No. (Each)	
64	1 No ( One number)	Supplying and fixing RCC ladder inside the sump complying with standard specification etc., complete as directed by the TWAD Board Officers. for the following items			1 No. (Each)	
65	1 No ( One number)	Supplying and fixing MS ladder out side the sump complying with standard specification etc., complete as directed by the departmental Officers. for the following items			1 No. (Each)	

66	0.02 M <sup>3</sup> (Point zero two cubic metres)	Providing cut stone set in C.M 1:3 for inlet pipe complying with standard specification etc., complete as directed by the TWAD Board Officers. for the following items			1 M <sup>3</sup> (One cubic metre)	
67	3.56 M <sup>3</sup> (Three point five six cubic metres)	Refilling the outside of the sump with excavated earth(other then sand) complying with standard specification for filling the foundation including watering consolidation etc., complete as directed by the departmental Officers.			1 M <sup>3</sup> (One cubic metre)	
68	1 No ( One number)	Supply and delivery of CI D/F pipe and specials and other CI specials as per IS 7181/1986 and Is 1538/1984 and as amended from time to time for delivery at site of work including all taxes, duties, loading, freight, unloading and stacking at site etc complete (vide seperate sheet )			1 RM (One running metre)	



69	48.78 M <sup>2</sup> (Forty eight point seven eight square metres)	Painting two coats with approved cement paint over one coat of priming coat over cement plastered exposed surface of the Reservoir including cleaning, preparing the surface and curing etc., complete and as directly by departmental officers.			1 M <sup>2</sup> (One square metre)	
				TOTAL		
				GST 12 %		
				GRAND TOTAL		
	69 Items ( Sixty nine items only)					