

**INDIAN INSTITUTE OF TECHNOLOGY MADRAS**  
**Department of Civil Engineering**

Enquiry No: CIE/ 2018/LIGY/Extension of Existing Compost yard at Vichoor Village

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Extension of existing compost yard building and construction of Septic tank for composting yard at Vichoor village

FINANCIAL BID - COVER 2 - VOLUME II - CIVIL - BILL OF QUANTITIES

Name of the Bidder						
S.No	Description	Quantity	Unit	Rate (Rs in Figures)	Rate (Rs in words)	Amount in Rs
<b>I</b>	<b>SCHEDULE A : Extension of existing compost yard building at Vichoor village</b>					
1	Surface dressing of the ground including removing vegetation and inequalities not exceeding 15 cm deep and disposal of rubbish, lead upto 50 m and lift upto 1.5 m. All kinds of soil	70	Sqm			
2	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan), including dressing of sides and ramming of bottoms, lift upto 1.5 m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50m. All kind of soil.	16	Cum			
3	Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift upto 1.5 m.	3	Cum			
4	Supplying and filling in foundation / plinth / basement with quarry dust under floors, including watering, ramming, consolidating and dressing complete.	10	Cum			
5	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level: 1:4:8 (1 Cement :4coarse sand : 8 graded stone aggregate 40mm nominal size)	6	Cum			

S.No	Description	Quantity	Unit	Rate (Rs in Figures)	Rate (Rs in words)	Amount in Rs
6	Providing and laying in position machine batched and machine mixed design mix M-25 grade cement concrete for reinforced cement concrete work, using cement content as per approved design mix, including pumping of concrete to site of laying but excluding the cost of centering, shuttering, finishing and reinforcement, including admixtures in recommended proportions as per IS: 9103 to accelerate, retard setting of concrete, improve workability without impairing strength and durability as per direction of Engineer-in-charge.“(Note :- Cement content considered in this item is @ 330 kg/cum.“Excess/ less cement used as per design mix is payable/recoverable separately).	13	Cum			
7	Add for using extra cement in the items of design mix over and above the specified cement content therein.	78	Kg			
8	Boring with hydraulic piling rigs with power units, providing and installing cast in situ single under reamed piles of specified diameter and length below pile cap in M-25 cement concrete, to carry a safe working load not less than specified, excluding the cost of steel reinforcement but including the cost of boring with bentonite solution and the length of the pile to be embedded in pile cap etc. all complete. (Length of pile for payment shall be measured upto to the bottom of pile cap) 300 mm dia piles	26	Rm			
9	Centering and shuttering including strutting, propping etc. and Removal of form work for all RCC works in all levels.	73	Kg			
10	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete in all levels. TMT bars	2109	Kg			
11	Masonry work with fly ash solid cement concrete blocks M10 grade using Cement mortar 1:6 in all levels.	11	Cum			
12	Half brick masonry work with fly ash cement concrete blocks M10 grade using Cement mortar 1:4 in all levels	7	Sqm			

S.No	Description	Quantity	Unit	Rate (Rs in Figures)	Rate (Rs in words)	Amount in Rs
13	Structural steel work riveted, bolted or welded in built up sections, trusses and framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer all complete.	1358	Kg			
14	Providing and fixing precoated galvanised iron profile sheets (size, shape and pitch of corrugation as approved by Engineer-in-charge) 0.50 mm (+0.05 %) total coated thickness with zinc coating 120 grams per sqm as per IS: 277, in 240 mpa steel grade, 5-7 microns epoxy primer on both side of the sheet and polyester top coat 15-18 microns. Sheet should have protective guard film of 25 microns minimum to avoid scratches during transportation and should be supplied in single length upto 12 metre or as desired by Engineer-in-charge. The sheet shall be fixed using self drilling / self tapping screws of size (5.5x 55 mm) with EPDM seal, complete upto any pitch in horizontal/ vertical or curved surfaces, excluding the cost of purlins, rafters and trusses and including cutting to size and shape wherever required.	90	Sqm			
15	Providing and fixing M.S. grills of required pattern in frames of windows etc. with M.S. flats, square or round bars etc. including priming coat with approved steel primer all complete.	555	Kg			
16	12 mm cement plaster of mix : 1:4 (1 cement: 4 fine sand).	164	Sqm			
17	Cement concrete flooring 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate) finished with a floating coat of neat cement, including cement slurry, but excluding the cost of nosing of steps etc. complete. 40 mm thick with 20 mm nominal size stone aggregate	39	Sqm			
18	Applying one coat of water thinnable cement primer of approved brand and manufacture on wall surface : Water thinnable cement primer	164	Sqm			
19	Finishing walls with water proofing cement paint of required shade : 13.44.1 New work (Two or more coats applied @ 3.84 kg/10 sqm)	164	Sqm			

S.No	Description	Quantity	Unit	Rate (Rs in Figures)	Rate (Rs in words)	Amount in Rs
20	Finishing with Epoxy paint (two or more coats) at all locations prepared and applied as per manufacturer's specifications including appropriate priming coat, preparation of surface, etc. complete. On steel work	47	Sqm			
21	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply, including all CPVC plain & brass threaded fittings, including fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and testing of joints complete as per direction of Engineer in Charge.					
a	25 mm nominal outer dia Pipes	15	Rm			
b	40 mm nominal outer dia Pipes	25	Rm			
22	Providing and fixing water closet squatting pan (Indian type W.C. pan ) with 100 mm sand cast Iron P or S trap, 10 litre low level white P.V.C. flushing cistern, including flush pipe, with manually controlled device (handle lever) conforming to IS : 7231, with all fittings and fixtures complete, including cutting and making good the walls and floors wherever required	1	Each			
23	Providing and fixing wash basin with C.I. brackets, 15 mm C.P. brass pillar taps, 32 mm C.P. brass waste of standard pattern, including painting of fittings and brackets, cutting and making good the walls wherever require	1	Each			

S.No	Description	Quantity	Unit	Rate (Rs in Figures)	Rate (Rs in words)	Amount in Rs
24	Providing and fixing aluminium work for doors, windows, ventilators and partitions with extruded built up standard tubular sections/ appropriate Z sections and other sections of approved make conforming to IS: 733 and IS: 1285, fixing with dash fasteners of required dia and size, including necessary filling up the gaps at junctions, i.e. at top, bottom and sides with required EPDM rubber/ neoprene gasket etc. Aluminium sections shall be smooth, rust free, straight, mitred and jointed mechanically wherever required including cleat angle, Aluminium snap beading for glazing / paneling, C.P. brass / stainless steel screws, all complete as per architectural drawings and the directions of Engineer-in-charge. (Glazing, paneling and dash fasteners to be paid for separately)	8	Kg			
25	Providing and fixing PTMT bib cock of approved quality and colour. 15mm nominal bore, 86 mm long, weighing not less than 88 gms	1	Each			
26	Providing and fixing factory made uPVC door frame made of uPVC extruded sections having an overall dimension as below (tolerance $\pm 1$ mm), with wall thickness 2.0 mm ( $\pm 0.2$ mm), corners of the door frame to be Jointed with galvanized brackets and stainless steel screws, joints mitred and Plastic welded. The hinge side vertical of the frames reinforced by galvanized M.S. tube of size 19 X 19 mm and 1mm ( $\pm 0.1$ mm) wall thickness and 3 nos. stainless steel hinges fixed to the frame complete as per manufacturer's specification and direction of Engineer- in-charge Extruded section profile size 48x40 mm	7	Rm			

S.No	Description	Quantity	Unit	Rate (Rs in Figures)	Rate (Rs in words)	Amount in Rs
27	30 mm thick factory made Polyvinyl Chloride (PVC) door shutter made of styles and rails of a uPVC hollow section of size 60x30 mm and wall thickness 2 mm ( $\pm 0.2$ mm), with inbuilt decorative moulding edging on one side. The styles and rails mitred and joint at the corners by means of M.S. galvanised/ plastic brackets of size 75x220 mm having wall thickness 1.0 mm and stainless steel screws. The styles of the shutter reinforced by inserting galvanised M.S. tube of size 25x20 mm and 1 mm ( $\pm 0.1$ mm) wall thickness. The lock rail made up of 'H' section, a uPVC hollow section of size 100x30 mm and 2 mm ( $\pm 0.2$ mm) wall thickness fixed to the shutter styles by means of plastic/ galvanised M.S. 'U' cleats. The shutter frame filled with a uPVC multi-chambered single panel of size not less than 620 mm, having over all thickness of 20 mm and 1 mm ( $\pm 0.1$ mm) wall thickness . The panels filled vertically and tie bar at two places by inserting horizontally 6 mm galvanised M.S. rod and fastened with nuts and washers, complete as per manufacturer's specification and direction of Engineer-in-charge.	3	Sqm			
					<b>TOTAL Schedule A</b>	
	<b>SCHEDULE B : Construction of septic tank for composting yard at vichoor Village</b>					
1	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means in foundation trenches or drain (not exceeding 1.5m in width or 10 sqm on plan), including dressing of sides and ramming of bottoms, lift upto 1.5 m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50m	12.00	Cum			
2	Supplying and filling of Quarry dust in layer not exceeding 20cm and watering each layer thoroughly with consolidation and ramming etc., complete for basement and in foundation.	1.00	Cum			

S.No	Description	Quantity	Unit	Rate (Rs in Figures)	Rate (Rs in words)	Amount in Rs
3	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering All work upto plinth level : 1 : 4 : 8 (1 cement : 4 coarse sand : 8 graded stone aggregate 40mm nominal size).	1.00	Cum			
4	Providing centering, shuttering for PCC works using best quality of film coated plywood with steel / wooden frame and necessary supports including charges for demoulding agent, removal of form work etc., complete for raft slab, RCC wall and plinth beam level etc	48.00	Sqm			
5	Providing and laying in position machine batched, machine mixed and machine vibrated design mix cement concrete of specified grade for reinforced cement concrete including admixtures in recommended proportions (as per IS: 9103) to accelerate, M-25 grade reinforced cement concrete including admixtures in recommended proportions (as per IS : 9103) to accelerate, retard setting of concrete improve workability without imparing strength and durability as per direction of Enginner-in-charge : M-25 grade reinforced cement concrete by using 330 kg of cement and 50Kg of fly ash per cum of concrete.	5.00	Cum			
6	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete in all levels. TMT bars	700.00	Kg			
7	Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift upto 1.5 m.	5.00	Cum			
8	supplying and fixing Rectangular size 600mmx600mm SFRC cover medium duty with frame	2.00	Each			



S.No	Description	Quantity	Unit	Rate (Rs in Figures)	Rate (Rs in words)	Amount in Rs
9	Excavating trenches of required width for pipes, cables, etc including excavation for sockets, and dressing of sides, ramming of bottoms, depth upto 1.5 m, including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20 cm in depth, including consolidating each deposited layer by ramming, watering, etc. and disposing of surplus excavated soil as directed, within a lead of 50 m : Pipes, cables etc. exceeding 80 mm dia. but not exceeding 300 mm dia	50.00	Rm			
10	Providing and fixing soil, waste and vent pipes : UPVC Pipe 4kg/sqcm including all fittings.					
	a.75mm dia	20.00	Rm			
	b.110mm dia	60.00	Rm			
11	Providing and fixing Slotted cowl (terminal guard) 75 mm dia in air vent pipes	1.00	Each			
12	Providing and fixing square-mouth S.W. gully trap class SP-1 complete with C.I. grating brick masonry chamber with water tight C.I. cover with frame of 300 x300 mm size (inside) the weight of cover to be not less than 4.50 kg and frame to be not less than 2.70 kg as per standard design: 100x100 mm size P type With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	2.00	Each			

S.No	Description	Quantity	Unit	Rate (Rs in Figures)	Rate (Rs in words)	Amount in Rs
13	Constructing brick masonry chamber for underground C.I. inspection chamber and bends with bricks in cement mortar 1:4 (1 cement : 4 coarse sand) C.I. cover with frame (light duty) 455x610 mm internal dimensions, total weight of cover with frame to be not less than 38 kg (weight of cover 23 kg and weight of frame 15 kg), R.C.C. top slab with 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size), foundation concrete 1:5:10 (1 cement : 5 coarse sand(Zone-III) : 10 graded stone aggregate 40 mm nominal size), inside plastering 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand), finished smooth with a floating coat of neat cement on walls and bed concrete etc. complete as per standard design: Inside dimensions 455x610 mm and 45 cm deep for single pipe line : With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	2.00	Each			
					<b>Total Schedule B</b>	
	<b>SCHEDULE C : Electrical works</b>					
1	Wiring for light point/ fan point/ exhaust fan point/ call bell point with 1.5 sq.mm FR PVC insulated copper conductor single core cable in surface / recessed medium class PVC conduit, with modular switch, modular plate, suitable GI box and earthing the point with 1.5 sq.mm. FR PVC insulated copper conductor single core cable etc as required.	13	Point			
2	Wiring for circuit/ submain wiring alongwith earth wire with the following sizes of FR PVC insulated copper conductor, single core cable in surface/ recessed medium class PVC conduit as required					
2.1	2x2.5 sq.mm + 1x2.5 sq.mm earth wire	60	Metre			
3	Supplying & fixing suitable size GI box with modular plate and cover in front on surface or in recess including providing and fixing 3 pin 5/6 amps modular socket outlet and 5/6 amps modular switch connection etc as required.	3	Each			
4	Supplying and fixing modular blanking plate on the existing modular plate & switch box excluding modular plate as required.	5	Each			

S.No	Description	Quantity	Unit	Rate (Rs in Figures)	Rate (Rs in words)	Amount in Rs
6	Supply Installation, testing and commissioning of pre-wired, fluorescent fitting/ LED light fitting of following types, complete with all accessories and tube etc. directly on ceiling/ wall, including connection with 1.5 sq. mm FR PVC insulated, copper conductor, single core cable and earthing etc. as required The sample got to be approved before bulk procurement.No payment shall be made if other than approved model/make/without sample approval.					
6.1	1200mm x 21w LED light fittings. The approved make will be PHILIPS LED LENEABN 550 WLED 20 or equivalent of CG,Thorn and Bajaj.	9	Each			
6.2	18 watts surface mounted square/round LED lighting fixture.The accepted make and model will CG Pearl II or equivalent of Philips,BAJAJ, Thorn & GE.	2	Each			
					<b>Total for Schedule C</b>	
					<b>Grand Total for Schedule (A+B+C)</b>	
	<b>Total amount (Rs in words)</b>					
<b>Signature of the Contractor</b> (during signing of the agreement)			<b>Principal Coordinator</b> (IIT Madras)			