

Bill of Quantities and Engineer 's Estimate for Implementation of 4700 Houses under IHP Phase-IV (Stage-2)

INDIAN HOUSING PROJECT IN PLANTATION AREAS

Engineering estimate for Construction of a Typical Houses for Plantation Community

Type Plan I		Floor area 550 sq.ft.			
Item No	Description	Unit	Qty	Rate Rs.	Amount Rs.
1	Preliminary work				Estate contribution
1.1	Site clearing and levelling				
1.3	Provide internal roads.				
	Sub Total 1				0
2	Foundation work				
2.1	Plot levelling and Foundation Excavation - in normal earth up to depth of 5' inclusive of back filling, compacting and disposal of surplus earth.	Cube	3.69	6,050.00	22,325.00
2.2	Rubble Masonry - 6"x9" rubble masonry in foundations up to DPC with 1:6 cement mortar.	Cube	4.88	55,585.00	271,254.80
2.3	Earth Filling - Filling earth and compacting with selected earth in 6" layers under floors.(as approved by Engineer) Rate includes for transport	Cube	3.19	6,537.00	20,853.03
2.4	Concrete corner columns - 8"x8" columns in 1:2:4 (20mm) concrete, reinforced with 10 mm tor steel 4 nos. with 6 mm stirrups at 6" spacing , including 2'x2'x6" concrete column base laid over gauge 1000 PVC layer, reinforced with 10mm tor steel at 6" spacing, both ways @ bottom and formwork- up to roof level (9'7" high)	Nos	4	15,000.00	60,000.00
2.5	Plinth Beam - 8" x9" beam @ plinth level in 1:2:4 (20mm) concrete laid on foundation rubble work in external and internal wall foundations, reinforced with two nos of 10mm bars at both bottom and top and with 6mm stirrups at 6" C/C.	Lft	83	1,110.00	92,130.00
2.6	DPC - 20mm thick damp proof course in 1:2 cement and sand troweled smooth and applied with two coats of hot tar, blinded with sand only on internal wall foundations.	Sqrs	0.50	24,582.00	12,291.00
	Sub total 2				478,853.83
3	Walls and Slabs and Floor				
3.1	External walls - 4" Solid Cement block masonry in walls in 1:6 cement mortar.	Sqrs	7.82	22,918.00	179,218.76
3.2	Internal walls - 4" Solid Cement block masonry in walls in 1:6 cement mortar	Sqrs	4.41	22,918.00	101,068.38
3.3	Ring Beam at Lintel level- 4" x 4" ring beam at lintel level in 1:2:4 (20mm) concrete, reinforced with 2 nos 10mm tor steel bars placed at top and bottom with 6mm mild steel bar at 6" c/c	L.ft	133.8	360.00	48,168.00
3.4	Front Column - Pre cast decorative concrete column to support roof in the verandah (Approximately 9' 7" clear height)	Nos	2	15,000.00	30,000.00
3.5	Slabs - 4" thick in 1:2:4 (3"/4") r/f concrete "Filler slabs" for chimney roof and hearth including formwork. Filler material to be burnt clay bricks or other material approved by Engineer.	Sqrs	0.24	76,500.00	18,360.00
3.6	Pantry table - 1' 6" width ,2" Thick & 6' length in Ferro- cement concrete chased into block work on three sides including 1:3 cement rendering	Item	1	15,000.00	15,000.00
3.7	Floor concrete - laying 1000 gauge polythene with 6" side and end laps under concrete layer and Mixing and placing 3" thick 1:2 1/2 :5 (1 1/2") concrete floor (trowel finished surface)	Sqrs	4.71	24,000.00	113,040.00
	Sub total 3				504,855.14

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4	Doors & Windows				
4.1	Door Type D1 - Supplying and fixing 3'-0" x 7'-0" timber door frame (2"x4") & timber fit panel sash 1 1/4" thick (both in class I timber) including iron furniture & mortice lock and including applying two coats of approved quality enamel paint to new wood work after preparing surface as directed.	Nos	1	50,000.00	50,000.00
4.2	Door Type D2 - Supplying and fixing 2'-9" x 7'-0" timber Door frame (2"x4") & ledge & batten sash 1 1/4" thick (both in class I timber) , including iron furniture & lock, for Rear door and including applying two coats of approved quality enamel paint to new wood work after preparing.	Nos	2	45,000.00	90,000.00
4.3	Door Type D3 - Toilet door- Supplying and fixing 2'-3" x 6'-0" timber ledge & batten door sash(both in class I timber)fixed directly to the wall with role plugs and iron screws , including 2 iron hinges and barrel bolt and including applying two coats of approved quality enamel paint to new wood work after preparing.	Nos	1	22,000.00	22,000.00
4.4	Window Type W1- Supplying and fixing 5'-0" x 4'-0"- (2"x4") timber window frame & 1" thick sashes both in class I timber including 3mm thick glass panes and iron furniture, including applying two coats of approved quality enamel paint to new wood work after preparing surface as directed. Rate to including fixing 12mm. dia. iron bars as detailed for safety and painted with two coats of anticorrosive paint after preparation of surface.	Nos	1	75,000.00	75,000.00
4.5	Window Type W2- -Supplying and fixing 4'-0" x 4'-0" - (2"x4") timber window frame & 1" thick sashes both in class I timber including 3mm thick glass panes with iron furniture and including applying two coats of approved quality enamel paint to new wood work after preparing surface as directed. Rate to including fixing 12mm. dia. iron bars as detailed for safety and painted with two coats of anticorrosive paint after preparation of surface.	Nos	2	60,000.00	120,000.00
4.6	Window Type W3- -Supplying and fixing 3'-0" x 4'-0" - (2"x4") timber window frame & 1" thick sashes both in class I timber including 3mm thick glass panes with iron furniture and including applying two coats of approved quality enamel paint to new wood work after preparing surface as directed. Rate to including fixing 12mm. dia. iron bars for safety and painted with two coats of anticorrosive paint after preparation of surface.	Nos	1	20,000.00	20,000.00
4.6a	Window Type FL- -Supplying and fixing 1'-6" x 1'-6" - (2"x4") timber window frame & 1" thick sashes both in class I timber including 3mm thick glass panes with iron furniture and including applying two coats of approved quality enamel paint to new wood work after preparing surface as directed.	Nos	1	12,000.00	12,000.00
	Sub total 4				389,000.00
5	Roof work				
5.1	Roof Covering & Ridge - Supplying and installing 0.47mm thick Zink Aluminum metal roof cladding on 100x50x2mm galvanized lip panel frame work with all specials including flashing for the hearth and fasteners for fix valance board.	Sqft	826.88	675.00	558,144.00
5.2	Valance Board - Valance boards in Ginisapu timber beaded 225mm x 20mm thick, supplying and fixing, including one coat of primer and two coats of enamel paint.	L.ft	54.5	375.00	20,437.50
5.3	Gutters - Supplying & fixing Gutters colour Zn/Al(The nominal base metal thickness(BMT) should be 0.42 mm and total coated thickness(TCT) not less than 0.47 mm, 457mm girth with brackets not exceeding 0.6m crs. Rate includes for special. The coating mass of the Zn/Al sheet is AZ150(Maximum 150gms/sq.m total on both sides)	L.ft	54.5	983.00	53,573.50

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5.4	Down Pipe - Supplying & fixing down pipes colour Zn/Al 100mm x 100mm (The nominal base metal thickness(BMT) should be 0.42 mm and total coated thickness(TCT) not less than 0.47 mm) with brackets not exceeding 1.2m crs. of the pipe, rate includes for specials.The coating mass of the Zn/Al sheet is AZ150(Minimum 150gms/sq.m total on both sides)	L.ft	43	1,106.00	47,558.00
Sub Total 5					679,713.00
6	Plastering & Finishing				
6.1	Laying 4" wide architraves (plaster bands) with 12mm thick 1:1:5 lime cement mortar along the reveals of doors, windows and ring beams on external surfaces.	Lft	194	90.00	17,460.00
6.2	Internal plastering - in 12mm thick 1:1:5 with cement lime mortar and finish with lime putty to walls and reveals up to wall plate level.	Sqrs	16.68	12,401.00	206,848.68
6.3	Plinth plaster - Rendering with 1:3 cement mixer & finish with cement putty (1/2") thick around the house.	Sqrs	1.29	13,943.00	17,986.47
6.4	Plastering & Finishing external wall -Plastering 1:1:5 semi rough & paint with tow cost of exterior paint (Weather shield) after preparing surface.	Sqrs	7.93	22,000.00	174,460.00
6.5	Finishing Internal wall - Emulsion paint after preparing surface.	Sqrs	16.68	2,843.00	47,421.24
Sub Total 6					464,176.39
7	Water supply and electrical internal installations				
7.1	Supply and installed 500 Liter PVC water tank.	Nos	1	13,338.00	13,338.00
7.2	20mm diameter type 1000 uPvc pipes & fittings.	L.Ft	65	105.00	6,825.00
7.3	50mm diameter type 400 uPvc pipes & fittings for waste water line from taps.	L.ft	12	400.00	4,800.00
7.4	20mm diameter gate valve & fittings (pvc).	Nos	1	575.00	575.00
7.5	20mm diameter plastic Bip Tap & fittings for wash basin, toilet and out side of house.	Nos	3	788.00	2,364.00
7.6	Supplying and laying 50mm (1 1/2") Type 600 uPVC pipes with all specials.	L.ft	6	501.00	3,006.00
7.7	Supplying and fixing 6 way Single Phase Distribution Board including 32 A 2P Isolator , 40A DP R.C.D. (30mA) , 04 Nos single pole M.C.B s.	Item	1	24,994.00	24,994.00
7.8	5A socket outlet - wiring to be carried out with 2 x 2.5mm2 PVC insulated PVC sheathed copper cables and 2.5mm2 earth cable wired in concealed conduit in wall and above ceiling to be supplied and installed in to working order.rate to be included all necessary fittings.	Nos	4	7,539.00	30,156.00
7.9	Pendent type lamp point wiring - to be carried out with 2 x 1.0 mm2 PVC insulated PVC sheathed copper cables wired in concealed conduit in wall and above ceiling to be supplied and installed in to working order.(Including sunk switch and 15W CFL bulb) for room 1/2 and toilet.	Nos	3	4,057.00	12,171.00
7.10	2 Nos. of Pendent type lamp points to be controlled by one switch - point wirings to be carried out with 2 x 1.0 mm2 PVC insulated PVC sheathed copper cables wired in concealed conduit in wall and above ceiling, to be supplied and installed in to working order.	Nos	2	5,611.00	11,222.00
7.11	50mm x 50mm x 2mm angel iron bracket complete with insulators, D brackets and wooden meter box with glass panel.	Item	1	4,655.00	4,655.00
7.12	50mm diameter medium gauge G.I earth pipe minimum 1800 mm long connected to system .	Item	1	2,616.00	2,616.00
Sub total 7					116,722.00
8	Toilet				

Type Plan I				Floor area 550 sq.ft.	
Item No	Description	Unit	Qty	Rate Rs.	Amount Rs.
8.1	Type 400 pvc 110mm for sewer line supplied and laid in excavated trench, backfilled, joints embedded in 1:3:6(40mm) concrete including necessary excavation, back filling, and compaction, invert depth up to 600mm.	L.ft	10	599.00	5,990.00
8.2	Approved squatting pan with trap, supplied and fixed to working order including connection to sewer line.	Nos	1	16,492.00	16,492.00
8.3	Construction of toilet Double pit including slabs and rubble work.	Sum	1	64,000.00	64,000.00
Sub total 8					86,482.00
Total including beneficiary contribution					2,719,802.36
Beneficiary contribution					20,000.00
Total excluding beneficiary contribution					2,699,802.36