



Government of West Bengal
Department of Panchayats & Rural Development
State Institute of Panchayats & Rural Development
State Water & Sanitation Cell
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Memo No. 261/XIV/San-159/13 (Camp-SIPRD)

Dated the 18th July, 2014

To
The District Magistrate & District Programme Co-ordinator (MGNREGA)
All Districts
&
The Additional Executive Officer
All Zilla Parishads/ Siliguri Mahakuma Parishad
& The Project Director, DRDC, Gorkha Territorial Administration.

Sub: Approval of rectified model estimate on IHHL

Madam/ Sir,

I would like to inform you that slight mistake in totaling the amount of different items in Abstract of cost estimate on IHHL amounting ₹ 10,900/- forwarded to different districts has been rectified and approved accordingly by this Department.

Hence, you are requested to start the work as per the newly developed drawing and model estimate on priority basis.

In this connection, it is reiterated that the plan and estimate provided by us is indicative only. If this is followed in totality no further technical vetting at any level is required. If, however, the district customizes the estimate, that should be done at the level of the district only and vetted by the appropriate authority at that level. No further approval from the state is required.

Yours faithfully,

(Dibyendu Sarkar, IAS)
Commissioner, MGNREGS
Government of West Bengal

Dated the 18th July, 2014

Memo No. 261/1(1)/XIV/San-159/13 (Camp-SIPRD)

Copy forwarded for kind information to:
Shri Ganesh Choudhary, State Co-ordinator, State Sanitation Cell, SIPRD, Kalyani.

(Dibyendu Sarkar, IAS)
Commissioner, MGNREGS
Government of West Bengal

N.R.E.G.A. CELL
Jalpaiguri 780
Docket No.
Date: 23/7/14

AE
Immediately
forwarded to
all concerned
23/7/14

**Individual Household Latrine with Brick work superstructure;
Roof & door with GCI sheet; Double leach pit lining with circular concrete/ ferro-cement rings**

1. Earth work in excavation:
 - i) Foundation (trench cutting) -- 4.10 m (C.L.) x 0.20 m x 0.30 m
 - ii) Leach pits -- 2 nos; diameter 0.90 m & depth 1.22 m


2. Construction of Individual Household Latrine (Masonry work):
 - i) P.C.C. (1 : 3 : 6) with jhama khoa - width 200 mm & thickness 100 mm
 - ii) 125 mm brick work (1 : 4) up to G.L. of height 200 mm
 - iii) 125 mm brick work (1 : 4) up to P.L. of height 300 mm
 - iv) Walls of 125 mm brick work (1 : 4) gradually downward in slope from 1.83 m (front side) to 1.68 m (back side) height above P.L. to roof; front wall of 125 mm off-set
 - v) Pan & siphon to be placed in proper position with right alignment: PVC 'Y' pipe to be connected with siphon and outlet of PVC pipe (100 mm dia) to be placed over one leach pit after linking with one arm of 'Y' pipe. Another arm of 'Y' pipe to be blocked.
 - vi) Plaster (19 mm th, 1 : 6 - sand : cement) to internal wall
 - vii) Plaster (12 mm th, 1 : 6 - sand : cement) to external wall
 - viii) Artificial Stone Flooring (1 : 2 : 4; 37.5 mm thickness) in floor
 - ix) Setting up Ceramic tiles (150 mm x 200 mm or 200 mm x 300 mm) at skirting (height 0.30 m) of internal walls
 - x) Neat cement punning at dado (height 0.30 m) of external walls
 - xi) Roof - G.C.I. sheet of thickness 0.25 mm to be placed & framed over timber rafter
 - xii) Door - G.C.I. sheet of thickness 0.18 mm to be fitted with timber battens & hanged in front wall with the help of hinges
 - xiii) Placed 4 nos of pre-cast circular concrete/ ferro-cement rings (using G.I. wire) in each leach pit: internal & external diameter 0.75 m & 0.80 m respectively and height 0.30 m of each ring
 - xiv) Placed pre-cast R.C.C. pit cover of diameter 0.80 m & thickness 37.5 mm over the top most rings in the pit

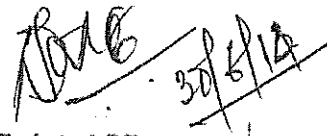
Soil has been categorized in 05 (five) different sectors - (i) Loose & soft soil; (ii) Ordinary mixed soil; (iii) Medium hard soil; (iv) Hard soil, moorum & laterite; and (v) Muddy & slushy soil as per the Government Order vide No. 7490-RD/P/NREGA/18S-09/06 Dated: 20/12/2011. The average output in excavation against lead upto 80'-0" and lift upto 5'-0" has been considered following the above mentioned G.O. However, in this model estimate, the consumption of un-skilled labour in point of earth work excavation has been shown on Ordinary mixed soil (62 c.ft/ 1 u-sk). Hence, the consumption of un-skilled labour in other soil sectors may be adjusted little a bit following the Government Order & Guideline.

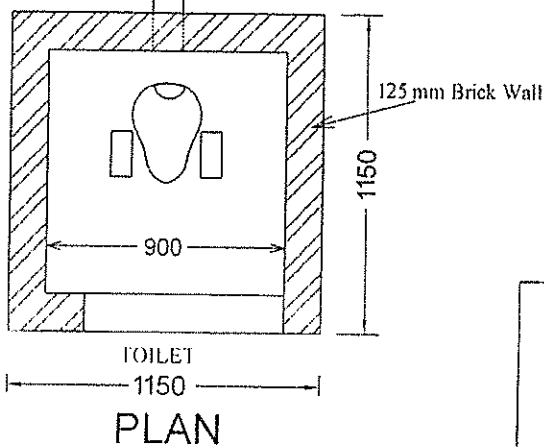
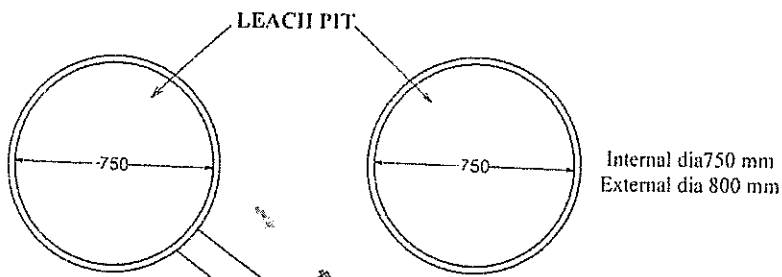
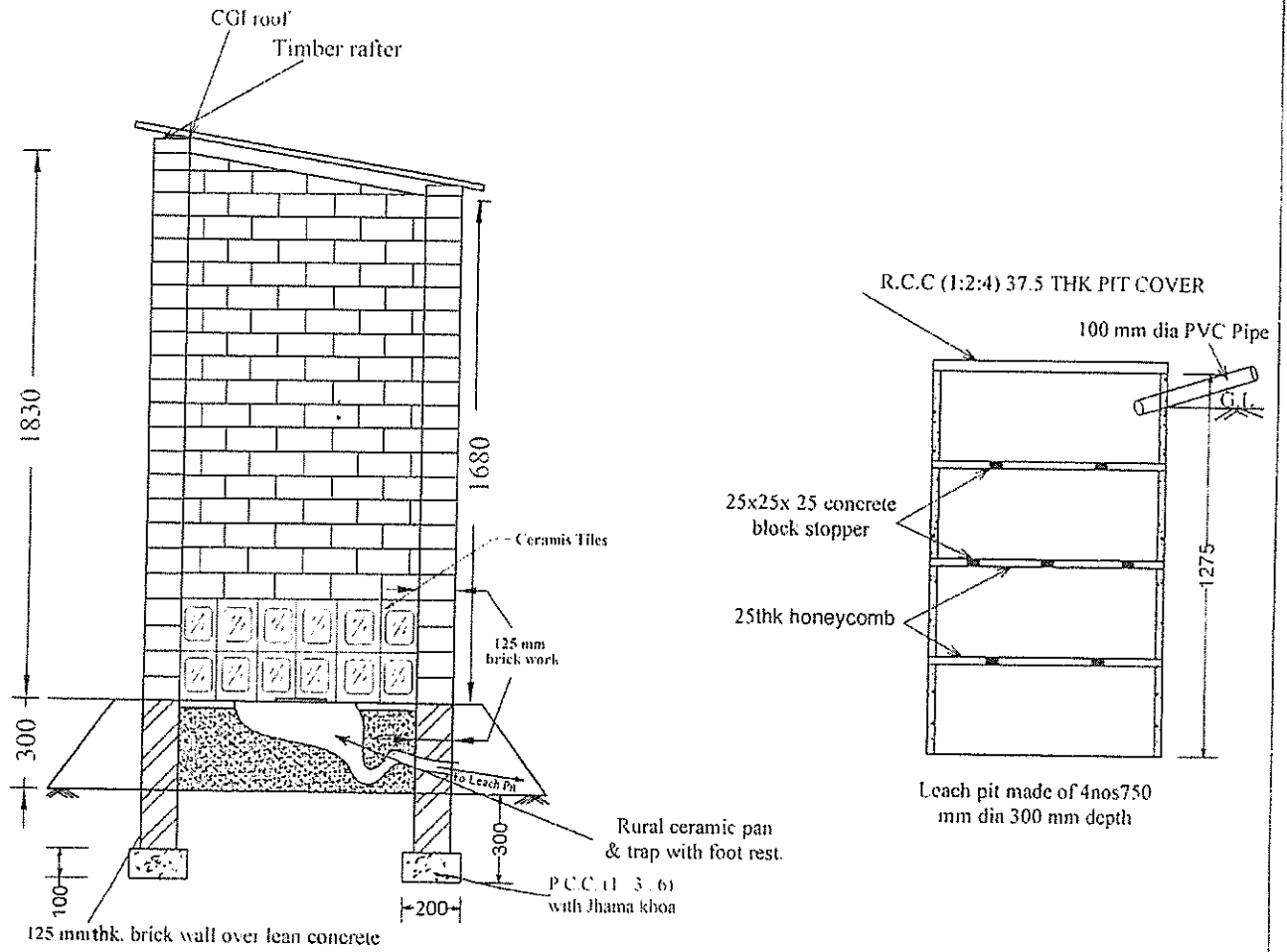
N.B. :

- i) The drawing and the abstract of cost estimate may be considered as a guide and a model estimate one for provision of household toilet.
- ii) Consumption of skilled & un-skilled labour has been followed vide reference of the "Technical Guide Book and Schedule of Works for Rural Employment Programme", P.&R.D., GoWB.
- iii) The foundation as indicated in the drawing may vary (with the approval of district authority) depending on the bearing capacity of soil and other local conditions where the toilet would be built.
- iv) Rate of few raw materials considered in the cost estimate as per prevailing justified local market rates in and around Kolkata during the 1st week of April, 2014. Thus, the estimate may vary from place to place and from time to time (with the approval of district authority) depending on the prevailing market rates of different kinds of raw materials in any particular area.

Specification_IHHL_MBA-MGNREGS_10900


Coordinator
Sanitation Cell
SIPRD, Kalyani, Nadia


30/6/14
Technical Officer,
State Sanitation Cell
Dist. of West Bengal
S.I.P. & R.D., Kalyani, Nadia



[Signature]
 20/6/14
Technical Officer,
State Sanitation Cell
Govt. of West Bengal
S.I.P. & R.D., Kalyani, Nadia

PLAN AND SECTIONAL DETAILS

**OFF-THE PIT TOILET (DOUBLE PIT) WITH
 BRICK MASSONRY SUPERSTRUCTURE**

All dimensions are in mm

NOT TO SCALE

Convergence between NBA - MGNREGA

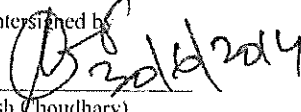
Abstract of cost estimate of Individual Household Latrine with Brick work superstructure;
Roof & door with GCI sheet; Floor & skirting set up with ceramic tiles;
Double leach pit lining with circular ferro-cement/ concrete rings in each pit

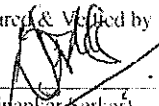
Part (A): Incentive from NBA fund + Beneficiary contribution					
Sl. No.	Description of Items	Quantity	Unit	Rate (Rs.)	Amount (Rs.)
1	1st class Bricks	390	Each	8.00	3,120.00
2	Cement (Reputed brand with ISI mark)	5.00	Bag	351.50	1,757.50
3	1/2" Stone chips	7.00	C.ft	42.00	294.00
4	Transportation cost of all materials	Lump - Sum	Lump - Sum	Lump - Sum	328.50
	(a) Total Cost of Materials	Five Thousand Five Hundred only			5,500.00

Part (B): MGNREGA fund					
a) Material component					
Sl. No.	Description of Items	Quantity	Unit	Rate (Rs.)	Amount (Rs.)
1	Sand (Coarse)	23.00	C.ft	20.00	460.00
2	Steel (using 5.5 mm rod) for 2 pit covers	2.50	Kg	52.00	130.00
3	Jhama bats (PWD SOR - Wage for Breaking)	3.00	C.ft	35.00	105.00
4	GCI sheet (of thickness 0.18 mm) for door of height 5'-0" (cutting piece from sheet of full height 10'-0"; 7 pieces in bundle @ Rs. 2,100/-)	3/4	Piece	300.00	225.00
5	GCI sheet (of thickness 0.25 mm) for roof of height 5'-0" & width 2'-8" (cutting piece from sheet of height 10'-0"; 7 pieces in bundle @ Rs. 2,450/-)	1	Piece	350.00	350.00
6	PVC pipe (4" dia; 2'-0" long) with 'Y' junction	1	Set	180.00	180.00
7	Washer, Nut-Bolt, Black annealed wire (for binding), GI wire (if ferro cement rings used), Hinges, Sikols, P. sheet etc	Lump sum	Lump sum	Lump sum	154.00
8	Ceramic rural pan/ trap with foot rest	1	Set	300.00	300.00
9	Ceramic tiles (6" x 8" or 8" x 12") for internal walls	11.00	Sq.ft	25.00	275.00
10	Timber batten for door & roof (local heart wood)	Lump sum	Lump sum	Lump sum	375.00
11	Display Board	Lump sum	Lump sum	Lump sum	100.00
	a) Raw material	-	-	-	2,654.00
12	Skilled labour for Masonary work	4.00	MD	338.00	1,352.00
13	Supervisor (to be engaged for every 6 IHHL's vide Memo No. 301(20)/Comm.-P&RD/P/NREGA/18E-01/06(Part-1) Dated 08.10.2013 of P&RDD, Government of West Bengal)	1/6	MD	253.50	42.25
	b) Skilled labour + Supervisor	-	-	-	1,394.25
	a) + b)				4,048.25
	say	Four Thousand Forty Eight only			4,048.00
b) Wage component					
14	i) Un-skilled labour for Masonary work	8.0	MD	169.00	1,352.00
	Total Un-skilled labour	One Thousand Three Hundred Fifty Two only			1,352.00

Synopsis		
Part - (A): Incentive from NBA fund + Beneficiary contribution		5,500.00
Part - (B): MGNREGA fund	Ratio of %age	
a) Material component	74.96	4,048.00
b) Wage component	25.04	1,352.00
Grand Total -	Rupees Ten Thousand Nine Hundred only	10,900.00

N.B. - This estimate is prepared on the basis of PWD (WB) Schedule of Rates for Building works (effective from 01st August, 2010) and the Corrigendum (w.e.f. 07th April, 2012)/ Local justified market rate; Technical Guide Book and Schedule of Works for Rural Emolymment Programme (effective from 01.12.1999, P.&R.D. Deptt., GoWB) and NBA Guidelines

Countersigned by

 (Ganesh Choudhary)
 State Co-ordinator
 State Sanitation Cell, SIPRD, Kalyani

Prepared & Verified by

 (Dipankar Sarkar)
 Technical Officer
 State Sanitation Cell, SIPRD, Kalyani

Consumption of Materials & Labour Component on estimate of IHHL

Sl. No.	Description of Items	Qty.	Unit	Materials						Labour	
				Brick (in Pes)	Cement (in Bags)	Sand (in C.ft.)	Stone chips (in C.ft.)	Jhama khoa (in C.ft.)	Steel (in Kg)	Sk	Usk
1	a) Earthwork in excavation of foundation trenches or drains (considering Ordinary mixed soil to be excavated by spade upto 5'-0" & lead upto 80'-0") [considering 62.0 c.ft per 1-Usk]	1.80	m3	-	-	-	-	-	-	-	1.02
2	Cement concrete (1 : 3 : 6) with graded jhama khoa (40 mm size) excluding shuttering [2-Sk & 3-Usk per 2.1 m3] [Jhama khoa-0.96 m3, Sand-0.48 m3 & Cement-0.16 m3 per m3] In foundation	0.082	m3	-	0.38	1.39	-	2.780	-	0.08	0.12
	Supply of Jhama bats = 2.78 x 1.10 = 3.058 c.ft Breaking of Jhama bats to Jhama khoa (63mm to 45mm), 2.78 c.ft = 0.0787 m3 [1-Usk per 1.20 m3]	0.0787	m3	-	-	-	-	-	-	-	0.07
3	125 mm thick Brick work (1 : 4) [3-Sk & 4-Usk per 24.0 m2] [Brick-4951 nos, Sand-3.66 m3 & Cement-0.914 m3 per % m2] Brick work laid over PCC upto Plinth level	2.0500	m2	101	0.54	2.65	-	-	-	0.26	0.34
4	125 mm thick Brick work (1 : 4) [3-Sk & 4-Usk per 24.0 m2] [Brick-4951 nos, Sand-3.66 m3 & Cement-0.914 m3 per % m2] Superstructure above P.L.	5.8448	m2	289	1.54	7.55	-	-	-	0.73	0.97
5	Nominal mix (1 : 2 : 4) cement concrete with graded stone chips (20 mm size) excluding shuttering & reinforcement in Gr. Floor [2-Sk & 3-Usk per 2.0 m3] [Stone chips-0.88 m3, Sand-0.44 m3 & Cement-0.22 m3 per m3] b) 2 nos RCC pit cover	0.0387	m3	-	0.215	0.601	1.202	-	-	0.01	0.06
	Nominal mix (1 : 2 : 4) cement concrete with graded stone chips (20 mm size) excluding shuttering & reinforcement in Gr. Floor. [2-Sk & 3-Usk per 2.0 m3] [Stone chips-0.88 m3, Sand-0.44 m3 & Cement-0.22 m3 per m3] c) 8 nos RCC rings & concreting in 4 top corners	0.1575	m3	-	0.997	2.447	4.893	-	-	0.16	0.24
6	Reinforcement for reinforced concrete work in all sorts of structure Tor steel/ Mild steel (using 5.5 mm bar) [3-Sk (Rod binder) & 2-Usk per 220 Kg] 2 nos RCC pit cover	0.8% of total R.C.C. volume	kg	-	-	-	-	-	2.43	0.03	0.02
7	Grey A.S.F. for floor, dado, skirting, staircase etc. with cement concrete (1 : 2 : 4) with stone chips 6 mm down [5-Sk & 5-Usk per 24.0 m2] [Stone chips-2.23 m3, Sand-1.12 m3 & Cement-0.855 m3 per %m2]	0.720	m2	-	0.177	0.285	0.567	-	-	0.15	0.09
8	Plaster (to wall, floor, ceiling etc.) with sand and cement mortar a) 19 mm thick (1 : 6) [5-Sk & 8-Usk per 36.0 m2] [Cement-0.366 m3 & Sand-2.196 m3 per %m2] Internal wall	5.244	m2	-	0.55	4.07	-	-	-	0.73	1.17
	Plaster (to wall, floor, ceiling etc.) with sand and cement mortar b) 12 mm thick (1 : 6) [2-Sk & 3-Usk per 18.0 m2] [Cement-0.244 m3 & Sand-1.46 m3 per %m2] External wall	7.802	m2	-	0.55	4.02	-	-	-	0.87	1.30

Sl. No.	Description of Items	Qty.	Unit	Materials						Labour	
				Brick (in Pcs)	Cement (in Bags)	Sand (in C.ft.)	Stone chips (in C.ft.)	Jhama khoa (in C.ft.)	Steel (in Kg)	Sk	Unsk
9	Neat cement punning about 15 mm thick in wall, dado, window sills, floor, drain etc. [2-Sk & 1-Unsk per 50.0 m ²] [Cement-0.152 m ³ per 2m ²] Floor area, Internal & External wall	2 190	m ²	-	0.096	-	-	-	-	0.09	0.04
10	Roofing work with cladding of roof surface materials over frame work (for Corrugated iron sheet) [1-Carpenter (Sk), 4-Helper & 2-Unsk per 37.0 m ²]	1 400	-	-	-	-	-	-	-	0.04	0.23
11	Fitting, fixing door & window shutters with necessary hinges [1-Sk & 1-Unsk per 2 nos] (Skilled labour converted to Un-skilled labour for more involvement & participation under Wage component)	1	each	-	-	-	-	-	-	-	1.50
12	Setting up ceramic tiles in walls [2-Sk & 5-Unsk per 7.5 m ²] [considering, the amount of work per day as the same of item - 25 mm thick mosaic flooring ...] [2 mm thick cement slurry at back side of tiles using cement @ 2.91 kg/ m ² & joint filling using white cement slurry @ 0.20 kg/ m ²]	0.95	m ²	-	0.05	-	-	-	-	0.25	0.63
				390	5.13	23.02	6.66	2.78	2.43	3.42	7.80
	Total - say			390	5.00	23.00	7.00	3.00	2.50	4.00	8.00

Countersigned by

(Ganesh Choudhary)

State Co-ordinator

State Sanitation Cell, SIPRD, Kalyani

Prepared & Verified by

(Dipankar Sarkar)

Technical Officer

State Sanitation Cell, SIPRD, Kalyani

Part - A: Itemwise detail estimate of IHHL

Particulars	No.	Length	Breadth	Height	Dia.	Total	Unit
1. Earthwork in excavation of foundation trenches ... (considering, soil to be excavated by spade, lift upto 5'0" & lead upto 80'0")							
i) Foundation, - 1 x 13'8" x 0'8" x 1'0"	1	4.10	0.20	0.30		0.2460	cu.m
ii) Leach pit - 2 nos. (depth - 4'0" & diameter - 3'0")	2	-	-	1.22	0.90	1.5529	cu.m
						1.7989	cu.m
2. P.C.C (1 : 3 : 6) with jhama kboa; (Jhama chips-0.96 m3, Sand-0.48 m3 & Cement-0.16 m3) per m3							
In fndn. & trenches, (C.L. = 1.025 m), i.e. Total length = (4 x 1.025) = 4.10 m	1	4.10	0.20	0.10		0.0820	cu.m
3. B/work; 125 mm (1 : 4); (Brick-4951 Nos, Cement-0.914 m3 & Sand-3.66 m3) per % m2							
Upto G.L., (C.L. = 1.025 m), i.e. Total length = (4 x 1.025) = 4.10 m	1	4.10		0.20		0.8200	sq.m
4. B/work; 125 mm (1 : 4); (Brick-4951 Nos, Cement-0.914 m3 & Sand-3.66 m3) per % m2							
Upto P.L., (C.L. = 1.025 m), i.e. Total length = (4 x 1.025) = 4.10 m	1	4.10		0.30		1.2300	sq.m
5. B/work; 125 mm (1 : 4); (Brick-4951 Nos, Cement-0.914 m3 & Sand-3.66 m3) per % m2							
Above P.L., {(2 x 1.15) + (1 x 0.90)} = 3.20m & Ht. (1.83 + 1.68)/2 = 1.755m	1	3.20		1.755		5.6160	sq.m
Front side	1	0.125		1.83		0.2288	sq.m
						5.8448	sq.m
6. Plaster (to wall, floor, ceiling etc.) with cement-sand mortar							
a) Plaster (19 mm th.; 1 : 6) with cement-sand mortar, (Cement-0.366 m3 & Sand-2.196 m3) per % m2							
Internal wall, 2 side walls	2	0.90		1.755		3.1590	sq.m
Back wall	1	0.90		1.68		1.5120	sq.m
Front wall	1	0.125		1.83		0.2288	sq.m
Top surface of the wall	1	2.750	0.125			0.3438	sq.m
						5.2435	sq.m
b) Plaster (12 mm th.; 1 : 6) with cement-sand mortar, (Cement-0.366 m3 & Sand-2.196 m3) per % m2							
External wall, 2 side walls	2	1.15		2.055		4.7265	sq.m
Back wall	1	1.15		1.98		2.2770	sq.m
Front wall	1	0.375		2.13		0.7988	sq.m
						7.8023	sq.m
7. Artificial Stone Flooring (1 : 2 : 4; 37.5 mm th.); (Stone chips-2.23 m3, Sand-1.12 m3 & Cement-0.855 m3 per %m2)							
Floor area	1	0.90	0.90			0.8100	sq.m
Deduction (-) for pan area	1	0.30	0.45			0.1350	sq.m
						0.6750	sq.m
8. Neat cement punning about 1.5 mm thick; (Cement-0.152 m3 per % m2)							
External wall (dado)	4	1.15		0.30		1.3800	sq.m
Floor area						0.8100	sq.m
						2.1900	sq.m
9. Setting up ceramic tiles in walls							
Internal wall (skirting)	3	0.90		0.30		0.8100	sq.m
	3	0.15		0.30		0.1350	sq.m
						0.9450	sq.m
10. P.C.C. (1 : 2 : 4); Stone chips - 0.88 cu.m, Sand - 0.44 cu.m & Cement - 0.22 cu.m (per cu.m for all materials)							
i) Pre-cast Rings, D1=0.81 m, D2=0.76 m & H=0.3 m. V = 22/7 x (0.66 - 0.58) x 0.3/4 = 0.0189 m3	8			0.3		0.1512	cu.m
ii) Concreting 4 nos top corners (for holding timber batten in roof truss through bolt inserted in concrete block)	4	0.125	0.125	0.10		0.00625	cu.m
						0.1575	cu.m
11. R.C.C. (1 : 2 : 4); Stone chips - 0.88 cu.m, Sand - 0.44 cu.m & Cement - 0.22 cu.m (per cu.m for all materials)							
Pre-cast Pit cover: (considering, 0.8% steel on total volume of concrete; using 5.5 mm rod @ 150 mm c/c)	2			0.0375	0.81	0.0387	cu.m

Countersigned by

(Ganesh Choudhary)

State Co-ordinator

State Sanitation Cell, SIPRD, Kalyani

Prepared & Checked by

(Dipankar Sarkar)

Technical Officer

State Sanitation Cell, SIPRD, Kalyani