



**PUBLIC WORKS DEPARTMENT
BUILDING ORGANISATION**

**OFFICE OF THE ENGINEER-IN-CHIEF (BUILDINGS) &
CHIEF ENGINEER (BUILDINGS), CHENNAI REGION, PWD, CHEPAUK, CHENNAI-5**

CIRCULAR MEMORANDUM NO. HDO (A) / 48518 / 2003, dated 16.08.2016

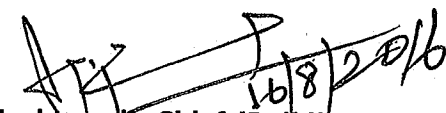
Sub: Buildings – Plinth Area Rates for the preparation of
Rough Cost Estimates for building schemes during the
year **2016-2017** – Approved – Communication of –
Regarding.



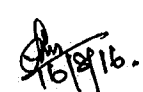
The Plinth Area Rates for the purpose of preparation of Rough Cost Estimates for Building Schemes during the year **2016-2017** are approved and furnished in Annexure I, II, III, IV & V. The Chief Engineers, the Superintending Engineers and the Executive Engineers of Building Organisation are requested to adopt the above rates in the preparation of the rough cost estimates for building schemes with effect from **16.08.2016**, until further orders from this office.

The receipt of this circular memo along with its enclosures may be acknowledged.

Encl.: Annexures-I, II, III, IV & V.


for Engineer-in-Chief (Buildings) &
Chief Engineer (Buildings), PWD,
Chennai Region, Chennai-5

To


The Chief Engineer (Buildings), PWD, Trichy Region, Trichy.
The Chief Engineer (Buildings), PWD, Madurai Region, Madurai.

- Copy to the Engineer-in-Chief, Water Resources Department, Chennai-5.
- Copy to the All Chief Engineers, Public Works Department and Water Resources Department.
- Copy to the Superintending Engineers of Buildings Organisation.
- Copy to the Executive Engineers of Buildings Organisation.
- Copy to the Superintending Engineer, PWD, P&D Circle, Chennai-5 (with 10 copies).
- Copy to the EIC & CE (B), CR's Table.
- Copy to the Joint Chief Engineer (Buildings), PWD, Chennai-5.
- Copy to the Deputy Chief Engineer (Buildings), PWD, Chennai-5.
- Copy to HDO & Assistant Executive Engineers of all Technical Sections in O/o the Engineer-in-Chief (Buildings) & Chief Engineer (Buildings), Chennai Region, PWD, Chennai-5.
- Copy to Stock File / File / Spare copies (50 Nos.)

ANNEXURE-I

PLINTH AREA RATES FOR THE YEAR 2016-2017 FOR THE PREPARATION OF ROUGH COST ESTIMATE

Sl. No.	Type of Building	For works in Moffusil (other than Corporation Limits)			For works in Corporation Limits					
		Foundation	Super Structure	Roof Finishing	In Trichy, Salem, Tirunelveli, Thoothukudi, Vellore, Tiruppur and Erode			In Chennai, Coimbatore and Madurai		
					Foundation	Super Structure	Roof Finishing	Foundation	Super Structure	Roof Finishing
(Rate in Rupees per 1 sqm.)										
1.	Residential Load Bearing	3015	6705	1120	3165	7040	1180	3245	7195	1215
	Framed	3575	9345	1150	3755	9810	1215	3855	10030	1235
2.	Non-Residential Load Bearing	2325	5685	1120	2440	5960	1180	2500	6110	1215
	Framed	3575	7020	1150	3755	7370	1215	3855	7530	1235
3.	Hospital Load Bearing	2325	6365	1120	2440	7095	1180	2500	6840	1215
	Framed	3575	9790	1150	3755	10285	1215	3855	10535	1235

Note:-

- (1) For the calculation of Foundation Cost, Plinth area at Ground level of the building is to be taken.
- (2) For the calculation of Super Structure cost, plinth area of respective floor of the building is to be taken.
- (3) For the calculation of Roof finishing cost, Plinth area at Ground level of the building is to be taken.
- (4) For School Buildings - the Super Structure cost will be 80% of Super Structure cost of Non-Residential Buildings.
- (5) For stilt floor towards Car parking, Garages, Cycle shed, Staircase Head Rooms etc., - the plinth area rate will be 65% of Super Structure cost of Non-residential building.
- (6) For basement floor, an extra 25% over the super structure cost of respective type of building is to be added.
- (7) In framed structure, where dummy columns are to be provided, a rate of Rs.354/m² of plinth area for Residential Building and a rate of Rs.279/m² for Hospital Buildings and Non-residential Buildings is to be allowed.

- (8) For upper floors, an extra @ Rs.27/m² may be added towards lift charges for each floor.
- (9) The additional rates allowed in the schedule of rates for works in Jails, Reserve forests, Hills and other Special tracts etc., shall be added to the above plinth area rates for works in respective areas.
- (10) For works in the belt area of Chennai City, the plinth area rate applicable for Chennai City shall be adopted.
- (11) For works in coastal area a rate of Rs.96/m² over the basic rate as approved in the table above, (for the total plinth area) shall be added for providing concrete of higher grade.
- (12) For super structure for Earth-quake prone areas, the rates in Annexure-V shall be adopted.
- (13) All the above provisions shall be added only on the basic rates as approved in the table above.

(14) PROVISIONS INCLUDED IN FOUNDATION RATE:

- (a) The rate given for foundation is applicable for Ground Floor + 2 Floors in the case of Load bearing structure.
- (b) The rate given for foundation is applicable for Ground Floor + 3 Floors in the case of Framed structure.
- (c) The rate given for foundation is to be calculated based on plinth area at Ground Floor of the building only.
- (d) The depth of foundation assumed is 1.8m below G.L. with conventional stepped footing in the case of Load bearing structure.
- (e) The depth of foundation assumed is 2.0m below G.L. with isolated footing in the case of Framed Structure.
- (f) The foundation rate is inclusive of Earth Work, Sand filling, PCC 1:5:10 for Mat Concrete, Brick Work / Random Rubble Masonry in Cement Mortar, Re-filling the sides of foundation, Plinth beam including cost of centering, Cement Concrete, Steel, Damp Proof Course, Sand filling in basement and flooring concrete in Ground Floor in the case of Load bearing structure.
- (g) The foundation rate is inclusive of Earth Work, Sand filling, PCC 1:5:10 for Mat Concrete, Cement Concrete, Centering, Steel for column footing, Pedestal, Column, Re-filling the sides of foundation, Plinth beam, Brick work in Cement Mortar upto basement level, Damp Proof Course, Sand filling in basement and flooring concrete in Ground Floor in the case of framed structure.

- (h) The foundation rates are applicable for building with basement at 0.9m height from ground level.

(15) PROVISIONS INCLUDED IN SUPER STRUCTURE RATE:

- (a) This rate is inclusive of Brick work, RCC, Steel, Centering, Plastering, joinery items with steel frames and M.D.F. shutter for doors, steel glazed windows and steel glazed ventilators, Grano flooring 25mm thick in the case of residential & non residential buildings, mosaic tile flooring in the case of Hospital building and Rain water down fall pipe of adequate dia.
- (b) The height of each floor has been taken as 3.30m average.
- (c) This rate is inclusive of provision for Anti skid ceramic tile flooring and glazed tile dadoing in Toilets.
- (d) This rate is inclusive of plastering with Cement Mortar 1:5, 12mm thick, white washing two coats over one coat of white washing for interior walls and colour washing two coats over one coat of white washing for exterior faces.

(16) PROVISIONS INCLUDED IN ROOF FINISHING RATE:

- (a) This rate is inclusive of weathering course, finishing with pressed tiles, providing parapet wall with Brick work in Cement Mortar, plastering, white washing for interior faces and colour washing for exterior walls.

(17) EXTRA PROVISIONS TO BE ALLOWED OVER THE ABOVE RATE:

(a) IN FOUNDATION:-

Sl. No.	Type of foundation	Rate in Rupees per one sq.m.	Area to which applicable
(i)	For stub column arrangements for Load bearing structure	915	plinth area at Ground level
(ii)	For combined footing	595	plinth area at Ground level
(iii)	For strip raft	2380	plinth area at Ground level
(iv)	For raft (Floating Raft)	3575	plinth area at Ground level
(v)	For every additional 0.3m basement height	352	plinth area at Ground level
(vi)	For every additional 0.3m depth in foundation	225	plinth area at Ground level

Sl. No.	Type of foundation	Rate in Rupees per one sq.m.	Area to which applicable
(vii)	For every additional floor over initial Ground + 3 floors in case of Framed structure	490	Respective floor area
(viii)	For Anti-termite treatment	90	plinth area at Ground level
(ix)	Pile Foundation		
(a)	Upto 4 storeys for a depth of 15m	7060	plinth area at Ground level
(b)	More than 4 storeys but less than 8 floors	9070	plinth area at Ground level
(c)	More than 8 floors	12345	plinth area at Ground level
(d)	Add extra for every one metre depth, if the depth of pile exceeds 15m	400	plinth area at Ground level
(e)	Deduct extra for every one metre depth, if the depth of pile is less than 15m	195	plinth area at Ground level

(b) IN SUPER STRUCTURE:-

Sl. No.	Description of work	Rate	
(i)	For every additional 1m height over the initial height of 3.30 m	Rs.440/m ²	
(ii)	Flooring:- (Actual area of flooring has to be considered)	In Residential & Non-residential Buildings	In Hospital Buildings
(a)	Grey colour mosaic tiles	Rs.570/m ²	NIL
(b)	Other colour mosaic tiles	Rs.765/m ²	Rs.185/m ²
(c)	Ceramic tiles (not less than 305 x 305 x 6 mm size)	Rs.845/m ²	Rs.270/m ²
(d)	Marble (macrona) (not less than 600 x 600 x 18mm size)	Rs.1650/m ²	Rs.1070/m ²
(e)	Marble (White) (not less than 600 x 600 x 18mm size)	Rs.1840/m ²	Rs.1265/m ²

(f)	Marble (Adanga) (not less than 600 x 600 x 18mm size)	Rs.1375/m ²	Rs.800/m ²
(g)	Marbonite tiles (not less than 600 x 600 x 8mm size)	Rs.1355/m ²	Rs.780/m ²
(h)	Rajasthan Kota Stone (Plain)	Rs.980/m ²	Rs.405/m ²
(i)	Rajasthan Kota stone (Laid in combination with marble strips)	Rs.1125/m ²	Rs.550/m ²
(j)	Cuddapah slab	Rs.735/m ²	Not recommended
(iii)	Joinery: (for any joinery like Aluminium (or) any other equivalent types of joineries if proposed) – Add extra	Rs.508/m ² of carpet area	
(iv)	Cement painting if proposed:-		
(a)	For internal faces and External faces	Rs.435/m ² based on plinth area	
(b)	For external faces only	Rs.210/m ² based on plinth area	

[Signature]
for Engineer-in-Chief (Buildings) &
Chief Engineer (Buildings), PWD,
Chennai Region, Chennai-5

[Signature]
16/8/16

ANNEXURE-II
OPTIONAL ITEMS

Sl. No.	Description of work	Rate in Rupees per one sq.m.	Area to which applicable
1	False ceiling using G.I. Channel Sections etc., (if proposed):-		
(a)	False ceiling with plain Gypsum board	1110	Ceiling area proposed
(b)	False ceiling with perforated Gypsum board using G.I. channel sections etc.,		
(i)	Without Glass wool	1275	Ceiling area proposed
(ii)	With Glass wool 50mm thick below A.C. sheet roofing	1535	Ceiling area proposed
(iii)	With Glass wool 25mm thick below R.C.C. roofing	1405	Ceiling area proposed
2	Wall Paneling using G.I. Channel Sections etc., (with Gypsum board) if proposed:-		
(a)	Wall paneling with perforated Gypsum board with Glass wool of 25mm thick	1275	Wall paneling area proposed
(b)	Wall paneling with plain Gypsum board without Glass wool	1020	Wall paneling area proposed


 for Engineer-in-Chief (Buildings) &
 Chief Engineer (Buildings), PWD,
 Chennai Region, Chennai-5


 16/8/16

ANNEXURE-III

ELECTRICAL, WATER SUPPLY AND SANITARY ITEMS OF WORKS

Sl. No.	Description of work	Rate in Rupees per one sq.m.	Area to which applicable
1	A.C. Provision for office buildings and in Hospitals, (if proposed):-		
(a)	For non-ductable A.C. units	4125	Floor area proposed
(b)	For ductable type A.C. plants	5505	Floor area proposed
Note The above rates are not inclusive of civil works such as construction of plant room, false ceiling, etc.			

2	Lift (if proposed):-	
(a)	Passenger Lift (SS Body) having speed 1m / second including power main	
(i)	8 persons capacity (Upto Ground + Four floors)	Rs.15.60 lakhs
(ii)	10 persons capacity (Upto Ground + Four floors)	Rs.16.64 lakhs
(iii)	13 persons capacity (Upto Ground + Four floors)	Rs.17.68 lakhs
(b)	Bed-cum-Passenger Lift (SS Body) having speed 1m / second including power main	
(i)	15 persons capacity (Upto Ground + Four floors)	Rs.18.72 lakhs
(ii)	20 persons capacity (Upto Ground + Four floors)	Rs.23.92 lakhs
(iii)	26 persons capacity (Upto Ground + Four floors)	Rs.26.01 lakhs
(c)	Dump Lift (Upto Ground + Four floors)	Rs.6.76 lakhs
Note:		
1. Provision for civil works such as construction of lift pit, shaft, machine room, etc., are not included in the above rates.		
2. For passenger lift and bed-cum-passenger lift - For every additional floor over the Ground + Four floors an extra at Rs.1,12,425/ shall be allowed for each floor.		
3. For Dump lift - For every additional floor over the Ground + Four floors an extra at Rs.44,970/- shall be allowed for each floor.		
4. For lift pit an extra at Rs.12,590/- per sq. mt. of lift well sectional area shall be allowed.		

Sl. No.	Description of work	Rate
3	High Tension Supply (including erection, testing & commissioning and allied works)	
(i)	With transformer upto 250 KVA	Rs.19.86 lakhs
(ii)	With transformer upto 500 KVA	Rs.33.08 lakhs
(iii)	With transformer upto 1000 KVA	Rs.52.95 lakhs
Note: 1. Rates are inclusive of service connection charges payable to TNEB. 2. Provision for civil works such as, construction of transformer, MV panel room, etc., are not included in the above rates.		

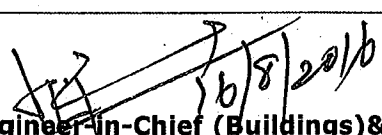
4	Generator Set with AMF Panel: (including erection, testing & commissioning)	
(i)	100 KVA capacity	Rs.8.16 lakhs
(ii)	125 KVA capacity	Rs.9.69 lakhs
(iii)	160 KVA capacity	Rs.12.75 lakhs
(iv)	250 KVA capacity	Rs.16.32 lakhs
Note: Cost of construction of Generator room not included in the above rates.		

5	Cold storage facilities for Mortuary:	
(i)	9 Bodies capacity	Rs.12.85 lakhs
(ii)	12 Bodies capacity	Rs.16.06 lakhs
Note: Cost of Mortuary building not included in the above rates.		

6	Public Address System: For mini Conference Hall / Meeting Hall	Rs.2.60 lakhs
7	Intercom with EPABX arrangements upto 300 lines	Rs.15.60 lakhs
8	Lightning Arrester (For more than 5 storeys)	Rs.2.62 lakhs
9	Civil Aviation lights for buildings more than 8 storeys	Rs.1.31 lakhs

10	Internal Water Supply, Sanitary Arrangements & Electrical Arrangements			
Sl. No.	Type of Buildings	Water Supply Arrangements	Sanitary Arrangements	Electrical Arrangements
		Rate in rupees per one sq.m.		
(1)	Residential	515	400	765
(2)	Non-Residential	400	310	670
(3)	Hospital	515	400	785

11	External Water Supply, Sanitary Arrangements & Electrical Arrangements						
Sl. No.	Type of Building	Water Supply Arrangements		Sanitary Arrangements		Electrical Arrangements	
		Within existing well developed campus	New campus	Within existing well developed campus	New campus	Within existing well developed campus	New campus
		Rate in rupees per one sq.m.					
(1)	Residential	315	615	115	195	255	510
(2)	Non-Residential	315	615	115	195	255	510
(3)	Hospital	315	615	115	195	255	510
Note: <ol style="list-style-type: none"> 1. The above rate is applicable only for ground and first floors on plinth area basis. 2. For every upper floor over the basic ground and first floor, 50% of respective floor area alone shall be taken into account for making provision towards external water supply and sanitary arrangements. 3. For every upper floor over the basic ground and first floor, 20% of respective floor area alone shall be taken into account, for making provision towards external electrification arrangements. 							


 for Engineer-in-Chief (Buildings) &
 Chief Engineer (Buildings), PWD,
 Chennai Region, Chennai-5


 16/8/16

ANNEXURE – IV
OTHER PROVISIONS

Sl. No.	Description of work	Rate
1	Construction of compound wall to a normal height of 1.50m from ground level with required number of gates, grills, etc.,	
(a)	With stub column, plinth beam, etc.,	Rs.1875/RM.
(b)	With load bearing foundation with brick work in cement mortar 1:5	Rs. 2735/RM.
2	Approach Road	
(a)	Forming approach road in layers of 450mm thick sand gravel mix of ratio 1:1 as base layer, W.B.M. Laid in two layers of 75 mm thick each (total 150 mm thick) including cost of small culverts come across, forming berms, etc.,	Rs.500/sqm.
(b)	Black topping over WBM including tack coat and seal coat	Rs.146/sqm.
3	Pavement all-round the building	
(a)	For a width of 1.2m	Rs.930/RM.
(b)	For a width of 2.0m	Rs.1500/RM.
Note: 1. Pavement all-round the building is to be done for a width of 1.20m if the sub soil is of ordinary nature; and it is to be done for a width of 2.0m, if the sub soil is of expansive soil. 2. The above rates include provision for earth work excavation to a depth of 450mm, PCC 1:5:10, sand filling, kerb wall with Brick work in cement mortar at external face of pavement, one impervious layer, cost of precast pavement slab of specified shape with pointing etc.,		
4	Finishing the Elevation	
(a)	For all buildings	Not exceeding 1% of total value of Building
(b)	For prestigious / Heritage Buildings	Not exceeding 2½% of total value of building
5	Soil investigation (minimum)	Rs.29,475/-
Note: If the area is more, higher provision towards soil investigation may be allowed.		

6	Advertisement Charges	Provision is to be made depending on the norms prescribed by Government time to time for publication in Newspapers.
7	Provision for foundation stone laying and inaugural function	To be made only for works costing over Rs.10.00 lakhs at Rs.13,000/- (Rs.3,000/- + Rs.10,000/-)
8	Rain Water Harvesting	Rs.12,520/- per pit
9	Provision for Lawn (optional)	
(a)	Residential	@ 1.5 % of building cost
(b)	Hospital & Non- Residential	@ 3.0 % of building cost
10	Labour Welfare Fund	@ 1.0 % of building cost
11	Unforeseen Items, Supervision Charges Petty and Contingencies	@ 2.5 % of building cost
12	Provision can be included for Price Adjustment Clause for works costing Rs.100.00 lakhs and above	@ 5.0 % of building cost Per one year of period of completion

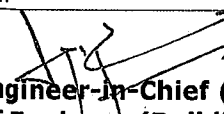
[Signature]
**for Engineer-in-Chief (Buildings) &
 Chief Engineer (Buildings), PWD,
 Chennai Region, Chennai-5**

[Signature]
 16/8/16.

ANNEXURE-V

**PLINTH AREA RATE FOR SUPER STRUCTURE
OF EARTH QUAKE RESISTANT STRUCTURES**

Sl. No.	Type of building	MOFFUSIL	TRICHY, SALEM, ERODE, MADURAI, TIRUNELVELI & THOOTHUKUDI DISTRICTS	CHENNAI, VELLORE, COIMBATORE & TIRUPPUR DISTRICTS
1	RESIDENTIAL			
(a)	Load bearing (upto G + 2)	7195	7570	7935
(b)	Framed Structure			
(i)	Upto Two Floors	9345	9810	10275
(ii)	3 & 4 th Floors	9345	9810	10275
(iii)	5 & 6 th Floors	10280	10780	11295
(iv)	7 & 8 th Floors	10280	10780	11295
(v)	Above 8 th Floor	10280	10780	11295
(vi)	Stilt Floor	6525	6590	7175
2	NON RESIDENTIAL			
(a)	Load bearing (upto G + 2)	6110	6415	6720
(b)	Framed Structure			
(i)	Upto Two Floors	7020	7365	7720
(ii)	3 & 4 th Floors	7020	7365	7720
(iii)	5 & 6 th Floors	7700	8080	8485
(iv)	7 & 8 th Floors	7700	8080	8485
(v)	Above 8 th Floor	8050	8445	8860
(vi)	Stilt Floor	4850	5135	5380
3	HOSPITAL			
(a)	Load bearing (upto G + 2)	6840	7185	7520
(b)	Framed Structure			
(i)	Upto Two Floors	9700	9810	10780
(ii)	3 & 4 th Floors	10790	11325	11870
(iii)	5 & 6 th Floors	10790	11325	11870
(iv)	7 & 8 th Floors	11775	12355	12945
(v)	Above 8 th Floor	11775	12355	12945
(vi)	Stilt Floor	6850	7190	7555
NOTE:				
1. For calculating the rates, the respective floor area has to be considered.				
2. For woks in special tracts like Jails, reserve forest, hill areas etc., the respective extra percentage over the moffusil rate is to be given.				


 for Engineer-In-Chief (Buildings) &
 Chief Engineer (Buildings), PWD,
 Chennai Region, Chennai-5


 16/8/16