केन्द्रीय लोक निर्माण विभाग

CENTRAL PUBLIC WORKS DEPARTMENT

COMPENDIUM FOR DESIGN OF CENTRAL GOVERNMENT HOUSING

सत्यमेव जयते

COMPENDIUM FOR

DESIGN OF

CENTRAL GOVERNMENT HOUSING

CPWD

CENTRAL PUBLIC WORKS DEPARTMENT
Nirman Bhawan, New Delhi-110011.

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सचिव भारत सरकार
Secretary to the Government of India

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New Delhi dated July 18th 2012

FOREWORD

I am glad to learn that CPWD is bringing out a compendium for design of Central Govt. Housing for dissemination in the organization making available all the norms/circulars/relevant data related to design of General Pool Residential Accommodation in a consolidated form. This compendium shall be very useful for all Architects and Engineers of the department engaged in planning and design of Central govt. Housing

In the present competitive environment, this is a very useful step & in the right direction which will save time & energy used in data collection most of the times. I am confident that CPWD will continue to innovate in this manner in other related fields as well.

I congratulate the Architects of CPWD to have brought out such a user friendly and comprehensive document & believe that the officers of CPWD will find it a very useful document.

18/7/12

(Sudhir Krishna)

PREFACE

General Pool Residential accomodation is being dealt in CPWD for a long time on the basis of Plinth Area Norms fixed by Ministry of Urban Development. With changing needs various modifications were proposed from time to time by the Director General, CPWD & MOUD with respect to norms & guidelines related to General Pool Residential Accomodation. Therefore a need was felt to compile all the relevant data for the use of Architects as well as Engineers of CPWD. Revisions which have been made in the Buildings Bye-Laws - Delhi, Master Plan of Delhi & National Building Code from time to time have also been included.

I would like to express my thanks to Sh. R.M.Aggarwal, Chief Architect (NR) for taking initiative and also appreciate the sincere efforts of Smt. Usha Batra, Sr. Architect and their entire dedicated team with whose efforts this Compendium has been brought out.

This compendium for design of Central Govt. Housing has been prepared specifically for use in CPWD for design of General Pool Housing. It is hoped that this will serve as useful reference material.

Place: New Delhi **S.K. Mittal**

Date: July 12, 2012 Director General, CPWD

INTRODUCTION

It has been observed that while planning for GPRA/Central Govt. Housing complete information w.r.t. the norms specifications, guidelines & various circulars etc. are not available with the planners & at times very important points are missed. A need therefore was felt to make a compilation of all relevant norms/circulars/ specifications/other related information on Building Bye Laws, Master Plan Delhi 2021, National building Code etc so that complete information is available with Architect/Engineer of the department while initiating any Govt. Housing Project.

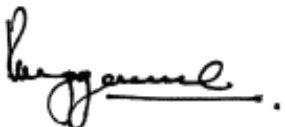
The compendium contains all data related to residential quarters as per norms laid down by the Ministry of Urban Development, various circulars related to designing of General Pool residential accomodation, Plinth Area Rates adopted by CPWD for preparation of estimates, Standard specifications issued by CPWD for different type quarters, Scale of amenities fixed by CPWD including sanitary fittings & electrical installations for various type quarters.

It also contains definitions of various terms used in Building Bye- laws related to Residential buildings, procedure for obtaining clearance from Local Bodies, General building requirements & requirements of parts of building & minimum infrastructural provisions required to be made as per Master Plan of Delhi 2021.

It also highlights some general guidelines for re-development schemes and planning in hilly areas and contains the basic provisions required to be made for fire & life Safety.

Relevant extracts from local building bye-laws,MPD-2021 & NBC 2005 have been incorporated, wherever required.

This compendium would be more useful for places where there are no Building Bye-Laws or the bye-laws are not exhaustive as this book will provide guidelines for such places. The Compendium is meant for internal circulation amongst CPWD Engineers and Architects.



Place : New Delhi
Dated 12.07.2012

R. M. AGGARWAL
Chief Architect (NR)

ACKNOWLEDGEMENT

I wish to show my deep gratitude to the esteemed Director-General, CPWD, Sh. S.K.Mittal for agreeing to publish this book. I am also very thankful to the ADG (Arch), Sh. R.M.Aggrawal who took initiative to forward the proposal to the DG, CPWD and also for the guidance and encouragement given by him in making available some very useful circulars and suggestions. I am also thankful to CA (NDR) Smt. Shobhana Chatterjee for making some good suggestions and also for making available some useful circulars.

Thanks are due to all the contributors namely Ms. Namita Patwal who helped in typing all the material. Architect, Sh. Anil Rastogi, who helped in checking the entire documents and also making useful suggestions. Dy. Architect, Sh. Piar Singh who assisted in data collection & Ms. Akanksha Batra who helped in the design of Front as well as Back Cover page.

Special mention must be made to Shri Ajay K. Mittal of M/s Kshitiz Enterprises for his untiring efforts in designing and printing the Compendium.

Usha Batra

USHA BATRA
Sr. Architect.
CPWD New Delhi

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CHAPTER-I

AREA NORMS & OTHER RELATED CIRCULARS FOR DIFFERENT TYPE QUARTERS.

No. 17020/2/86-W-2
Government of India
Ministry of Urban Development
(Works Division)

OFFICE MEMORANDUM

New Delhi 25th August, 1987

Subject:- Revision of plinth areas of residential accomodation to be constructed for Central Government employees and its applicability to all Government Departments.

The undersigned is directed to refer to this Ministry's O.M. No. 17020/1/71-72 dated the 30th March, 1981 on the above subject fixing the plinth areas for quarters Type-I(A) to Type V(E).

2. At present no General pool residential accomodation, having a plinth area of 1500 sft. or equivalent to present Type E(V), can be constructed as per the decision of the Cabinet Committee on Accomodations in August 1975. In fact no higher type of quarters has been constructed for over 20 years in the general pool houses whereas some of the old houses have been demolished for redevelopment/reconstruction. In the process, there has been quite shortage in the availability of houses in Type E(V) and above. This situation has been progressively deteriorating further and further as this Ministry has to cater to the demand from the Member/Chairman of high powered Commission /Committee being appointed from time to time.

3. In July 1982, this Ministry had sought the approval of the Cabinet Committee on Accomodation for construction of 28 special type flats, having plinth area of 2500 sft. besides servant quarters & garages.

4. A need was felt for construction of higher type of quarters with a view to ease the present problem. This Ministry, therefore, felt that in the first stage, proposal for the construction of higher type of houses be confined to type E1 (VI) having the plinth area of 2200 sft, for the main unit besides one servant quarter and a garage. This proposal has been approved by Cabinet Committee on Accomodation on 7.5.87.

5. The scale of plinth area for Type A(I) to Type E1(VI), as given in the Annexure should now be followed for all future construction in general pool houses and the houses for other Ministries/Department to be constructed by the CPWD and houses to be constructed by the other Ministries/Departments like Defence, Railway, All India Radio, Post and Telegraph, etc.

6. Normally no deviation from the prescribed scales should be made but in case it is desired that any deviation is to be made, this can be done only in semi urban and rural areas where only single storey construction is involved and proposal for such deviation should be sent to this Ministry for special clearance.

7. The public sector enterprises need not follow the scale prescribed by this Ministry but may follow the scales prescribed by Bureau of Public Enterprises.

Sd/-
(D.N.BHARGAVA)
DIRECTOR (WORKS)

ANNEXURE I

REVISED SCALE OF PLINTH AREA

[M.U.D., O.M. No. 17020/2/86-W-2, dated the 25th August, 1987]

Type		Pay range	Area of Unit		Staircase/ Circulation		Sleeping Out Balcony		Cycle/Scooter Shed/Garage		Remarks
			sq. mt.	sq. ft.	sq. mt.	sq. ft.	sq. mt.	sq. ft.	sq. mt.	sq. ft.	
I	(A)	Up to Rs. 949	34	365	5	54	7.45	80	2.5	27	Cycle shed-100%
II	(B)	Rs. 950-1,499	45	484	5	54	7.45	80	2.5	27	Cycle shed-100%
III	(C)	Rs. 1,500-2,799	55.75	600	5	54	7.45	80	4.2	45	Scooter shed-100%
IV	(D)	Rs. 2,800-3,599	83.6	900	5.5	59	7.8	84	4.2	45	Scooter shed-100%
V	(E)	Rs. 3,600-4,499									
		Main Unit	139.35	1500	6	65	9.85	106	20.9	225	Garage-75%
		Servant quarters attached to the Main Unit	18.6	200	4.5	50	—-	—-	—-	—-	—-
VI	(E1)	Rs. 4,500 and above									
		Main Unit	198	2200	6	65	11	118	20.9	225	Garage-100%
		One servant quarter	25	269	4.5	50	5	54	—-	—-	—-

NOTES:-

1. These plinth area standards shall be applicable to the construction of residential accomodation in all places in India.

2. Plinth areas proposed above are based on the wall thickness achieved with the standard brick size 9"x3" (normal). When standard size bricks are replaced by modular bricks (20cm x 10 cm x 10cm) in course of time the plinth areas specified above will not change. Where wall thickness has to be more for technical reasons, plinth areas may be suitably increased. In places where stone construction is more economical and is normally adopted, the plinth areas may be suitably increased to allow for additional thickness of walls. In areas, where standard size of brick is 10" an increase of plinth area to the extent of 4% will be allowed. In areas where local specifications permit use of thinner wall such as 'accra' walling or timber construction, the plinth areas would be reduced suitably.

3 (a) Sleeping out balconies shall be provided in regions of hot and dry climate and for construction which is more than two storeyed. In the case of regions with hot and humid climates, i.e. coastal regions, where it is not customary to sleep out during summer, sitting balconies with half of the areas stipulated above, shall be provided in lieu of sleeping out balconies in places other than Bombay and Calcutta (for which reduced standards as indicated at 3 (b) will apply). In regions of cold climate, viz, hill stations, glazed verandahs in lieu of sleeping out balconies may be provided with areas of sleeping out balconies. Where sleeping out balconies are provided, facility for use of terrace by occupants need not be provided.

(b) The area of sitting out balconies in Bombay and Calcutta will be 1.5 sq.Mt. (16.15 Sq.Ft.) for Type I, 2.5 Sq.Mt. (26.90 Sq.Ft.) for Type II, 3.5 Sq.Mt. (37.65 Sq.Ft.) for Type III, 4.5 Sq.Mt. (49 Sq.Ft.) for Type IV, 5.50 Sq,Mt. (60 Sq.Ft.) for Type V and 6.5 Sq.Mt. (71 Sq.Ft.) for Type VI (EI).

(c) Areas of sleeping out and sitting out balconies may vary with the type design, depending on Architectural and structural considerations. The areas stipulated in this statement are maximum that will be allowed.

(d) In hot and dry regions, sitting out balconies may be provided for two storeyed constructions.

4. In case of Type I, II and III quarters, the standard plinth area may exceed upto 2% when found necessary on Architectural consideration. This is to allow for some flexibility in Architectural planning.

5. In Type V quarters, Car garages will be provided for 75% of the number of units to be constructed. Out of these, 1/3rd of the garages will be partitioned temporarily so at to provide scooter sheds for remaining 50% of the allottees. Provision in planning and layout should be made for construction of additional garages for cars to an extent of 25% of the number of residential units.

6. In the case of double-storeyed quarters, cycle or scooter sheds shall not be provided. Also no Scooter/Cycle sheds will be provided in Bombay and Calcutta.

7. In case of main building areas for staircase/circulation are based on a stair width 3'- 6". Where bye-laws require more width than this, area to be provided will be increased suitably. For 4' wide stair, areas for staircase shall be 6.5 Sq.Mt.

8. Where local bye-laws so require, additional area for fire escape staircase will be allowed.

9. Sanitary pipe shafts open to sky, wherever provided, are not to be included within the standard plinth areas.

10. Areas required for services, such as garbage chutes, electric sub-station, pump room etc,. wherever necessary, will be allowed over and above the standard plinth areas.

11. In multi-storeyed flats, where lifts are necessary, additional areas over and above the standard plinth areas for the different types, will be allowed for the provision of one or more lifts and lift landings.

12. In the case of construction of four storeyed and above, in places other than Bombay and Calcutta, in respect of Types I to IV, cycle/scooter sheds may be provided separately for one or more quarters on the ground floor may be earmarked for covered parking of cycles and scooters.

No.22011/1/2008-W3
Government of India
Ministry of Urban Development
(Works Division)

Nirman Bhawan, New Delhi
Dated 11th December, 2008

OFFICE MEMORANDUM

Subject:- Fixation of plinth area of Type IV (Special) residential accomodation to be constructed for Central Government Employees and its applicability to all Government Departments.

Whereas plinth area norms for General Pool Residential Accomodation (GPRA) Quarters for Type- I(A) to Type-VIII are already fixed. Some of the quarters which were bigger in size than Type-IV quarter, were earlier categorized as Type IV (Special). But there were no fixed norms for Type IV (Special) quarters. Keeping in view the GPRA, the Government has approved the following scale of plinth area for Type IV (Special) quarters.

Type	Pay Range	Area of Unit		Staircase/ Circulation		Balcony		Remarks
		Sq.M.	Sq.F.	Sq.M	Sq.F.	Sq.M	Sq. F.	
Type-IV (Special)	Rs. 10000-11999/- (pre-revised)	111.48	1200	6	65	8.52	91.71	Additionally covered parking space as per local master plan norms subject to minimum one car per quarter will be provided.

2. This scale of plinth area for Type IV (Special) quarters shall be followed for all future constructions for GPRA Type IV (Special) quarters and for the quarters for other Ministries/Departments like Defence, Railway, All India Radio, Post and Telegraph, etc.

3. Normally no deviation from the prescribed scales should be made, but in case, any deviation becomes essential, proposal for such deviation should be sent for approval of this Ministry on case to case basis.

4. Notes:

   (i) These plinth area standards shall be applicable to the construction of residential accomodation in all places in India.

   (ii) Plinth areas proposed above are based on the wall thickness achieved with the standard brick size 9"x3" (normal). When standard size bricks are replaced by modular bricks (20cm x 10 cm x 10cm) in course of time the plinth areas specified above will not change. Where wall thickness has to be more for technical reasons, plinth areas may be suitably increased. In places where stone construction is more economical and is

normally adopted, the plinth areas may be suitably increased to allow for additional thickness of walls. In areas, where standard size of brick is 10" an increase of plinth area to the extent of 4% will be allowed. In areas where local specifications permit use of thinner wall such as 'accra' walling or timber construction, the plinth areas would be reduced suitably.

(iii) Balconies of specified size shall be provided in all regions for construction which is more than two storeyed.

However, area of balconies may vary with the design, depending on architectural and structural considerations. The areas stipulated in this statement are maximum that will be allowed.

(iv) In case of main building, areas for staircase/circulation are based on a stair width 3"6". Where bye-laws require more width than this, areas to be provided will be increased suitably. For 4'-0" wide stair, areas for staircase shall be 6.5 Sq.M.

(v) Where local bye-laws so require, additional area for fire escape staircase will be allowed.

(vi) Sanitary pipe shafts open to sky, wherever provided, are not to be included within the standard plinth areas.

(vii) Areas required for services, such as electric sub-station, Pump room etc., wherever necessary, will be allowed over and above the standard plinth areas.

(viii) In multi-storeyed flats, where lifts are necessary, additional areas over and above the standard plinth areas for the different types will be allowed for the provision of one or more lifts and lift landings.

5. This issue with the approval of Secretary (UD).

Sd/-
(ANIRUDDHA KUMAR)
DIRECTOR (WORKS)

No.11012/1/2004-WI
Government of India
Ministry of Urban Development
(Works Division)

New Delhi the 18th April 2006

OFFICE MEMORANDAM

Sub:- Fixation of plinth area norms for Type-VII and Type-VIII bungalows in Lutyen's Bungalow Zone.

1. No definite plinth area norms had been prescribed for the Type-VII and VIII bungalows which are located in the Lutyen's Bungalow Zone area, even though for the remaining categories of houses i.e. Type-I to Type-VI, specific norms have been prescribed from time to time. The existing bungalows which were mostly constructed during pre-independence period and vary greatly in terms of the size as well as ancillary facilities. In view of the changing requirement of the dignitaries now occupying these bungalows, their security considerations, additional facilities have also been created in these bungalows from time to time.

2. Subsequent to the issuance of Lutyen's Bungalow Zone construction guidelines, the matter of permitting additional construction in existing bungalows was considered in view of the increased functional requirements and also the fact that many of the Ministers, Supreme Court Judges, High Court Judge, Secretaries to the Govt. of India are often allotted bungalows below their entitlement. With the approval of Prime Minister's Office, guidelines for additional construction/up-gradation of bungalows were issued vide Ministry's O.M. No.11012/2/95-WI, dated 12.4.1996.

3. The 1996 guidelines allowed office accomodation to the extent of 500 sq.ft. in each bungalow. In addition to this, an additional residential accomodation with the ceiling of 500 sq.ft. subject to overall ceiling of 4498 sq. ft. was also permitted in case the occupant was allotted a bungalow below his entitlement. Besides, security structures like guard room, PSO shed and sentry post were allowed to be constructed.

4. It has since been decided by the competent authority, to fix norms for Type-VII and Type-VIII categories of bungalows in the Lutyen's Bungalow Zone area so that they act as a bench mark in the event of reconstruction of the existing bungalows or construction of new bungalows by way of redevelopment of existing sites.

5. The norms fixed for Type-VII and Type-VIII bungalows comprise the area permitted for main bungalow, office space, staff quarters, garages and security requirements. The details of the area to be provided for each of the above units have been given in the Annex. The total plinth area of Type-VII bungalow would come to 6889 sq.ft. in case of four staff quarters and 7319 sq.ft. in case of six staff quarters. The plinth area for Type-VIII bungalow shall be 9175 sq.ft.

The above scales of plinth area for Type-VII and Type-VIII bungalows shall be taken as the yardstick for the purpose of reconstruction/new construction of bungalows in the Lutyen's Bungalow Zone in future.

Sd/-
(S.M.Acharya)
Additional Secretary (UD)

DG(W), CPWD
All occupants of Type-VII & Type-VIII Bungalows in LBZ.

PLINTH AREA NORMS FOR Type-VII & VIII BUNGALOWS

Annexure to Ministry of Urban Development
O.M. No. 11012/I/2004-WI. Dated 18.4.2006

Type		Area of Unit		Staircase/ Circulation		Sleeping out Balconies		Car garages		Office		Security						Total	
												Guard Room		Frisking Room		Sentry Post			
		Sqm.	Sq.ft.	Sqm	Sq.ft.	Sqm.	Sq.ft.	Sqm.	Sq.ft.	Sqm.	Sq.ft.	Sqm.	Sq.ft.	Sqm.	Sq.ft.	Sqm.	Sq.ft.	Sqm.	Sq.ft.
Type VII Bunalow	Main Unit	316	3400	12	130	22	236	41.80 (2 No.)	450	92.90	1000	33.75	365	9.20	100	4.00 (2 No.)	43.00		
	Staff Quar-ters	80	860	13.50	145	15	160											573.70*	6889*
Type-VIII Bunalow	Main Unit	418	4500	12	130	22	236	83.60 (4 No.)	900	92.90	1000	33.75	365	9.20	100	4.00 (2 No.)	43.00		
	Staff Quar-ters	120*	1290	27	290	30	320											852.43	9175

Remarks

*In case, 6 staff quarters are provided for Type VII Bungalows, the total plinth area shall be 613.70 Sq.m or 7319 sq.ft.

Maximum permissible area for servant quarter as per MPD-2001 is 20 Sq. m.

No.41/2/82-CA
Government of India
Central Planning and Design Organisation
Central Public Works Department

Room No.301, A Wing,
Nirman Bhavan, New Delhi-11
Dated, the 27th December, 1983

To

All Senior Architects
Central PWD/PWD.

Sub:- Standard norms prescribed for General Pool Hostel buildings.

The Ministry of Works and Housing, Government of India has prescribed standard norms or yardstick for general pool hostel buildings throughout India vide their Order No. 17020/3/83-W2 dated 20.6.1983 and DG (W)'s Order No. 28(7)/83-WI(DG)/CIR.10/83 dated 1.7.1983.

2. There will be two kinds of hostels, one for touring officers and the other for families. Under Touring Officers, 10% of the rooms will be kept for V.I.Ps and under the family type hostels, accomodations for single officers and couples and families are provided.

3. The area prescribed in the attached note may be followed in designing of future hostels. The variable factors are sleeping balcony and parking which should be according to climate regions. The total area of the flat should not exceed the gross plinth area. Minor adjustments between various components etc. can be made.

Sd/-
(H.R. Laroya)
Chief Architect

	Description	Hostel for Touring Officers		Family Hostels		
		90% rooms	10% Rooms	Single 1 bedded suits	Married couple 2 bedded suites	Married family 2 bedded suites.
1	Eligibility Basic Pay.	All Govt. Officers on Official Tour		700/- to 999/- and above	1000/- and above	1500/- and above
2	**Accomodation**	Bed-sitter, Toilet, CB.	Sitting, bed, Toilet, CB.	Sitting, Bed, Kitchen, Toilet Walk in CB, Loft	Liv/Din/Kit, 2 bed Rooms, Bath & WC, Walk in Store Loft	Liv/Din./Kit. Stores+2 Bed Rooms+ Bath WC, Walk-in Store + Loft.
	Area	Sqm.	Sqm.	Sqm.	Sqm.	Sqm.
3	**MAIN UNIT**					
A)	Plinth Area of Units including Walls.	27	30	34	56	66
B)	Area of sleeping Balcony	4	4	7.5	7.5	7.5
C)	Area of Common @ Facilities	5	5	5	5	5
D)	Circulation Area upto 4 storeyed	12	12	12	14	14
4	**OUT HOUSES**					
	Servant Quarters					
A)	Percentage	-	-	-	50%	100%
B)	Plinth Area	-	-	-	23	23
5	**GARAGES**					
A)	Scooter %	-	-	100%	75%	50%
	Plinth Area	-	-	4	4	4
B)	Cars%	-	-	-	25%	50%
	Plinth Area	-	-	-	21	21
6	Gross plinth Area per Unit upto 4 storeyed	48	51	62.5	102	128

Note: @ Common facilities including lounges, laundry, stores, maintenance store, Caretaker's office, Janitor Closest, Garbage Chutes, Fire Cup-boards, pump room, Electrical room and space for security persons. Co-operative store to be provided where No. of suites are more than 50. As per Director of Estates, space for Bank, Post Offices, Police Post is to be provided in case the No. of suites are more than 400-500.

1. In Hostel for Touring Officers, the plinth area to be calculated for kitchen and dining @ 3 smt./ per Diner or 60 smt., whichever is more.

2. The necessary adjustments under different sub-heads can be made while designing the Hostel Buildings but not to exceed the prescribed gross plinth area. The Hostel should be designed in such a manner to have good cross ventilation. The height of balcony railing etc. should be sufficient and the gaps between vertical and horizontal members should be narrow so as to avoid any mishaps.

3. For Mulit-storeyed Hostel Buildings the circulation area should be 18 sq. meters; per unit for providing lifts, fire-escape staircase, etc.

4. The area of sit-out balconies should be provided as under:-

   a) Hot Humid/Coastal regions- 4 m^2

   b) Cold Climatic regions (Hills)- 4 m^2 (Glazed).

Sd/-
(H.R. Laroya)
Chief Architect, CPWD,
Nirman Bhavan, New Delhi.

Government of India
Ministry of Urban Affairs & Employment
(Works Division)

No.11011/2/95-WI New Delhi, the 12th Nov. 1996

OFFICE MAMORANDUM

Subject:- Guidelines for upgradation of Ministers/Supreme Court Judges/Secretaries to the Govt. bungalows in Lutyen's Bungalow zone.

1. The undersigned is directed to say that, at the instance of Prime Minister's office, guidelines for undertaking construction in the Lutyen's Bungalow Zone (LBZ) in New Delhi have been formulated. A copy of the guidelines as approved by the Prime Minister's Office, is sent herewith for taking further necessary action.

2. It may please be ensured that all construction works in Lutyen's Bungalow zone conform to these guidelines.

Sd/-
(Surender Paul)
Under Secretary to the Govt. of India

To

1. DG(W), CPWD (Shri K.K. Madan).
2. CE (NDZ)-I, CPWD (Shri K.K. Khanna).
3. CE (NDZ)-II, CPWD (Shri Gulzar Singh)
4. CE (NDZ)-III, CPWD (Shri Ravinder Lal), Sewa Bhavan, R.K. Puram.
5. Director (DD), Min. of UA&E.

GUIDELINES FOR UPGRADATION OF MINISTERS/SUPREME COURT JUDGE, HIGH COURT JUDGE/SECRETARIES TO GOVT. OF INDIA'S BUNGALOWS IN THE LUTYEN'S BUNGALOW ZONE

The guideline for construction in the Lutyen's bungalow zone stipulates no additional construction in the Bungalows. However to meet the functional demands, certain additional areas are required to be provided in the Ministers, Supreme Court Judge/High court judge/Secretaries to the Government of India's bungalows for additional residential accomodation, office accomodation & accomodation of security personnel in the Bungalows where the plinth area is below the entitlement of Minister/ Judges and Secretary to Government of India. To meet such additional requirements, temporary accomodations shown below may be provided for Minister/Supreme Court Judges/High Court Judges/ Secretaries to Government of India's Bungalows.

A) ADDITIONAL RESIDENTIAL ACCOMODATION

(i) Ministers

At present a minister is entitled to a plinth area of the bungalow as 4498sq.ft. In case the Minister is allotted a Type VII or below bungalow, additional construction to the extent of one bed room with attached toilet and temporary open sheds for multi- purpose usage etc. with a ceiling of 500 sq.ft. plinth area subject to overall ceiling of 4498 sq.ft. may be provided with temporary specifications.

(ii) Supreme Court Judges/ High Court Judges/Secretaries to Government of India.

In case Supreme court Judges, High Court Judges and Secretaries to Government of India are allotted accomodation below their entitlement, additional construction for residential purposes with a ceiling of 500sq.ft. plinth area may be provided with temporary specifications.

(B) OFFICE ACCOMODATION

For upgrading the bungalows to accommodate the Ministers, Supreme Court Judge/High Court judges, provision of office space as per norms laid down by the Government may be made by erecting semi portable structure with a life span of 5 years. Accomodation is to be provided with temporary specifications.

Cabinet Minister/Minister of State/Deputy Minister/Supreme Court Judges/High Court Judges.

Area = 46.45 Sq.m./500 Sq.ft.

Accomodation: 2 rooms with one toilet.

(c) Security Works:

I. Guard Rest Room: To be provided in the following configuration.

i. Cabinet Minister: Room for (2+8) guards with bath &W.C.

ii. Minister of State: Room for (1+4) guards with bath & W.C.

II. Frisking Room/PSO Shed: One Room.

III. Sentry Post: Nos of sentry post as per security arrangements.

Additional residential /Office Accomodation proposed to be provided to Ministers, Judges and Secretaries to Government of India would be as per Table 2

TABLE 2

Type of Addl. Accomodation	**Cabinet Minister Minister of State/ Dy. Minister/ Supreme Court/ High Court Judge**	**Secretary to Govt. of India**	**Specification**
Residential	46.45 sq.m (500sq.ft.)	46.45 sq.m (500sq.ft.)	Temporary
Official	46.45 sq.m (500sq.ft.)	-	Semi-portable
Security:-			
(i) Guard Rest Rest Room	33.75 sq.m Cabinet (365sq.ft.) Ministers (250 .ft.) for others	-	Semi-portable
(ii) Frisking Room PSO Shed	9.2 sq.m (100 sq.ft.)	-	Portable
(iii) Sentry Post	2sq.m (20 sq.ft)	-	Portable

The issue of construction of temporary sheds at the residences of Hon'ble Judges of Delhi High Court has been discussed in various meetings taken by Hon'ble Chief Justice of Delhi High Court. This matter has also been considered in this Department and it has now been decided that temporary shed of an area of 500 sq.ft. with variations upto 25% where inescapable, may be constructed with cement concrete flooring and fibre glass roofing for sit-out, sheds and cement concrete flooring with asbestos roofing for car sheds where ever the need for such structure is felt. There is no fixed cost ceiling and the expenditure will be governed by the specifications prescribed by the Department from time to time.

C) SPECIFICATIONS

(i) For temporary structure with life span of 5 years (for additional Residential Accomodation).

FOUNDATION	Brick work in foundation.
FLOORING/	PCC/Mosaic for office, tiles for toilet, and kota Stone
SKIRTING/DADO	for Verandah
SUPERSTRUCTURE	Brick work in mud mortar with cement plaster.
WINDOW	Steel Window with Grill.
DOOR	T-Iron/Pressed steel frame with suitable shutter.
ROOFING	Sand stone slabs on T-iron frame with suitable water proofing.
	OR
	A.C./CGI Sheet roofing with suitable false ceiling.
COST	Cost of structures with above specification Rs.4000/- per sq.m. (as on oct.1995)

(ii) For Semi-portable structure (for additional Office & Security Accomodation).

STRUCTURE	Mild steel frame structure placed on plinth.
CLADDING	Flexo Board outside & Gypsum Board or Novopan inside with insulation.
ROOFING	AC/CGI Sheet roofing with false ceiling. Fiberglass sheets roofing for sitting out sheds.
COST	Cost about Rs.6527/- per sq.m. (as on Oct. 1995.)

No.K-12011/27/2009-DDIB
Government of India
Ministry of Urban Development
(Delhi Division)

Date: 16/09/2009

To

The Chief Architect (NDR),
Central Public Works Department,
Ministry of Urban Development,
NirmanBhawan,
New Delhi.

Subject:- Relaxation of parking norms for Government Housing.

Sir,

I am directed to refer to your Note No.5/1/2006-CA(NDR) dated 4.8.2009 on the above subject matter and to convey the approval of the Central Government for adoption of the following parking norms for Government housing being undertaken or to be undertaken by CPWD in relaxation of the provisions of parking in the Master Plan for Delhi-2021 under para 4.2 thereof:-

Category	**ECS to be adopted**
Type-VIII	4
Type-VII	3
Type-VI	3
Type-V	2
Type-I	0.5

Yours faithfully
Sd/-
(P.K. Santra)
Under Secretary
Tel.No.23061681

Copy to:

1. DG (Works), CPWD, Nirman Bhawan, New Delhi.
2. Joint Director (MP), Delhi Development Authority, Vikas Minar, New Delhi with reference to their letter No.F.3(9)/2009-MP dated 10.6.2009

(P.K.Santra)
Under Secretary

No.K-12011/27/2009-DD.IB
Government of India
Ministry of Urban Development
(Delhi Division)

Nirman Bhavan
New Delhi
Date: 23 May,2012

To

The Chief Architect (NDR),
Central Public Works Department,
Ministry of Urban Development,
Nirman Bhawan,
New Delhi.

Subject:- Relaxation of parking norms for Government Housing.

Sir,

I am directed to refer to your letter No. SA(NDR)IV318/2011/330 dated 20.5.2011 forwarded by Works Division of the Ministry on the subject cited above and to convey the approval of the Central Government for adoption of the following parking norms for Government housing being undertaken or to be undertaken by CPWD in relaxation of the provisions of parking in the Master Plan for Delhi-2021 under para 4.2 thereof:-

Category	**ECS to be adopted**
Type	ECS proposed for CPWD projects
Ⅱ	No change i.e. 1 ECS per unit
Ⅲ	1.25 ECS per unit
IV & IV (Special)	2 ECS per unit

Yours faithfully

Sd/-
(Sunil Kumar)
Under Secretary (DDIB)
Tele fax 23061681

CENTRAL PUBLIC WORKS DEPARTMENT

OFFICE MAMORANDUM
NO.DGW/MAN/207

ISSUED BY AUTHORITY OF DIRECTOR GENRAL OF WORKS

NIRMAN BHAVAN, NEW DELHI DATED: 22.03.2010

Subject: **Variation of 5% in prescribed plinth area Qtrs. Type I, II, III, IV, IV (Spl.) & V allowed for Architectural Planning.**

Provisions of Para 4 of Appendix 5 of CPWD Works Manual 2007 are modified as under:-

Para	Existing Provisions	Modified Provisions
Appendix-5 Para 4	In case of Type I, II and III quarters, the standard plinth area may be exceeded upto 2% when found necessary on architectural consideration. This is to allow for some flexibility in architectural planning.	In case of Type **I, II, III, IV, IV (Spl.) & V,** the standard plinth area may be exceeded upto **5%** when found necessary on architectural consideration. This is to allow for some flexibility in architectural planning.

Superintending Engineer (C&M)

Issued from file no. CSQ/CM/M/16(1)/2008

Copy to :-

1. All ADGs, CPWD, E-in-C, PWD, Delhi Govt.
2. All CEs, All CAs, CPWD, PWD Delhi Govt.- They are requested **to endorse a copy of this to all SEs & EEs with further directions that they should bring this change to the notice of all the concerned.**
3. Director (Works), MoUD, Nirman Bhawan, New Delhi.

Executive Engineer (II)

PERMANENT EXTERNAL FINISH

DELHI URBAN ART COMMISSION
India Habitat Centre, Core 6 A
Lodhi Road, New Delhi-110003

No. 1(2)82-DUAC May 7, 2012

MEMORANDUM

Sub:- **Consideration of the proposals by the Delhi Urban Art Commission.**

The Delhi Urban Art Commission at its meeting held on March 23, 2012 has decided as follows:

"With a view to ensure the maintaining and enhancing the aesthetics of the environment, the Commission has made it mandatory that all public buildings should have permanent external finishing materials. Accordingly the Commission decided that in all such proposals being submitted to it, , the submission of typical section of walls of the buildings should be submitted on an appropriate scale to show the details of architectural elements, materials/treatment of external finishing.

Sd/-
Navneet Kumar
Secretary

1. Engineer-in Chief, PWD (GNCTD), MSO Bldg., I.P. Estate, New Delhi.
2. Chief Town Planner, MCD, MCD Civic Centre, Minto Road, New Delhi.
3. Executive Engineer (Bldg.), HQ, MCD, MCD Civix Cetnre, Minto Road, New Delhi.
4. The Chief Architect, DDA, Vikas Minar, I.P. Estate, New Delhi.
5. The Director (Bldg.), DDA, Vikas Sadan, INA, New Delhi.
6. The Chief Architect, NDMC, Palika Kendra, New Delhi.
7. The Chief Architect, (NDR), CPWD, Nirman Bhawan, New Delhi.
8. The Chairman-cum-Managing Director, DMRC, Metro Bhawan, Fire Brigade Lane, Barakhamba Road, New Delhi.
9. The Chief Engineer, DTTDC, 10th floor, Mayur Bhawan, Connaught Place, New Delhi.
10. The Additional Commissioner (Land & Bldg.), Delhi Police, Police HQ, MSO Bldg., I.P. Estate, New Delhi.
11. The General Manager (Arch.), Airport Authority of India, Rajiv Gandhi Bhawan, Safdarjung Airport, New Delhi.

1% OF THE PROJECT COST FOR THE WORK OF ART

DELHI URBAN ART COMMISSION
India Habitat Centre, Core 6 A
Lodhi Road, New Delhi-110003

No. 1(2)82-DUAC March 11, 2011

MEMORANDUM

Sub:- **Use of Traditional building crafts in buildings as Work or Art.**

The Central Government in 1972 through the then Ministry of Works and Housing, Memorandum No.18012 (23)-WI dated 5th June 1972 issued guidelines in terms of which every public project should earmark at least 1% of the project cost for the work of art in public buildings, Unfortunately these orders, except in the case of a few prestigious buildings, have largely not been acted upon. Often it is observed that the work of art is added to a building project as an afterthought. In many cased there is lack of clarity on the nature of work of art.

The Delhi Urban Art Commission has from time to time emphasized that the work of art in public projects needs to be an integral part of the project and could include the following:-

1. Outdoor sculptures
2. Murals and frescos
3. Mobiles and bas-relief
4. Folk and Tribal Art
5. Artisan craft
6. Indoor sculptures
7. Other are forms relevant to the habitat

The Commission at its meeting held on 09.03.2011 has further resolved that building elements created using traditional building craft techniques using traditional materials and tools and used as an integral part of the building will be considered as 'art work' required to be included in public building. This can include hand carved stone elements, hand carved wood, terracotta, decorative wrought iron, amongst other traditional materials.Each region of India has traditional building crafts & this step is taken to encourage this craftsmanship in construction of new buildings and encourage the sensitive use of traditional materials.

It may be ensured that the work of art is conceptualized at the time of formulation of the project itself and be brought to the Commission so that it can be completed alongwith the building project. The Commission while considering cases for grant of NOC for completion certificates entertains applications for the same, only if these are accompanied with photographs of the works of art in place. Each project of work of art will be assessed separately on a case to case basis by the Commission.

The local bodies and other local authorities while sending proposals to the Commission are requested to ensure that the amount spent by the project proponent on the work of art is in terms of the aforesaid guidelines of the Government.

Sd/-
Navneet Kumar
Secretary

GRIHA-3 STAR RATING

CENTRAL PUBLIC WORKS DEPARTMENT
CONTRACT, SPECIFICATION & QUALITY
QUALITY ASSURANCE CORE WING
NIRMAN BHAWAN, NEW DELHI

NO. CE (CSO)/SE (QA) II/G-1/2011/ Dated: 16.11.2011

Subject:- Guidelines for Green Building Construction & Achieving Three Star Rating.

CPWD has decided vide letter No. 18/19/2010-WI(DG)/410 dated 31.3.2011 that provision for at least GRIHA-3 star ratings should be made in all new buildings and those at initial stage of construction. GRIHA Manuals issued by MNRE & TERI provide a comprehensive understanding of provision of Green building Parameters, their underlying criteria and the rating procedure.

2. In order to facilitate CPWD units for incorporating necessary features as per GRIHA rating system, guidelines suggesting the minimum score to be achieved against each parameter along with a self-evaluation form have been prepared for guidance of our planning & field units.

3. A copy of the guidelines is enclosed herewith for guidance of our field & planning units with the request to circulate these guidance amongst all SEs/SAs/Dir(H) & EEs/Dy. Archs /DD(H) under your jurisdiction.

Sd/-
(Vinayak Rai)
SE(QA)II

To:

1. All ADGs for information please.
2. All Chief Engineers (Civil/Electrical), Chief Architects & DDG (Hort.) for information & further circulation.
3. PPS to DG, CPWD for information please.
4. On CPWD Web site.

1. INTRODUCTION

Green building is the construction practice using processes that are environmentally responsible and resource-efficient throughout a building's life-cycle from siting to design, construction, operation, maintenance, renovation and deconstruction. This practice expands and complements the classical building design concerns of economy, utility, durability, and comfort. Green building is also known as a sustainable or high performance building.

In other words, a green building is one which can function using an optimum amount of energy, consume less water, conserve natural resources, generate less waste and create spaces for healthy and comfortable living, as compared to conventional buildings. Thus, a green building minimises the demand on fossil fuel based energy and maximises usage of renewable energy along with the reuse and recycle of resources. Green building design is a practical and climate conscious approach based on various factors -geographical location, prevailing climatic conditions, locally available and low embodied energy materials and design parameters relevant to the type of usage of the building. Such an approach ensures minimum harm to the environment while constructing and using the building.

CPWD has been constructing environment friendly buildings from pre-independence era. Planning and construction of these buildings is such that these have withstood test of time and natural disasters. CPWD banned use of timber in 1993. CPWD allowed use of Fly ash in bricks and cement concrete long back. Our Architectural designs are based on use of natural light to the maximum possible extent and mostly locally available materials are used in our construction.

As we are all aware that CPWD has taken a step further in promoting construction of green buildings and decided that all the future constructions shall be minimum 3-star on GRIHA Rating System. Therefore, need has arisen to lay down guidelines for achieving at least 3-star rating.

2. NEED FOR GREEN BUILDINGS

Buildings are major consumers of energy in their construction, operation and maintenance. At present India is experiencing heavy construction activities in all spheres -as a consequence the demand for energy is also increasing rapidly. This is partly due to the growing urbanisation and the increasing affordability of the people. Globally about 40 per cent of energy consumption is estimated to be in the building sector. However, the concept of clean and efficient development has also been gaining momentum and the Government of India is promoting green buildings as part of its strategy to mitigate fossil fuel based energy requirements and to meet the growing demand for energy through renewables and energy efficiency measures. Thus, Green buildings are the need of the hour to effect a reduction in energy consumption and for sustainable development. CPWD has also decided that all the future constructions shall be Green.

3. BENEFITS OF GREEN BUILDINGS

As compared to conventional buildings, a green building has following advantages:

(i) Consumes 40 to 60 per cent (depending on the range of measures adopted) lesser electricity due to passive architectural interventions in the building design, and high efficiency materials and technologies;

(ii) Works for on-site energy generation through renewable energy utilisation to cater to its energy needs;

(iii) Consumes 40 to 80 per cent lesser water as compared to conventional buildings by utilising ultra-low flow fixtures, dual plumbing systems, waste water recycling systems and rain water harvesting;

(iv) Generates lesser waste by employing waste management strategies on site;

(v) Generates lesser pollution both during construction as well as while in use, through best practices such as proper storage of construction materials, barricading of the site to prevent air and noise pollution during construction, proper storage and disposal of waste during construction and operation;

(vi) Ensures proper safety, health and sanitation facilities for the labourers (during construction) and the occupants (while in use);

(vii) Restricts the use of high ozone depleting potential (ODP) substances in its systems as well as in its finishes; and,

(viii) Offers higher image and marketability.

4. CRITERIA UNDER GRIHA GREEN BUILDING RATING SYSTEM.

CPWD Works Manual enumerates various criteria that have been categorized under Green Building Rating System. Based on these criteria, guidelines are prescribed for Architecture, Civil, Electrical & Horticulture units of CPWD by adopting which at least 3 star rating is ensured. Against each criteria, desired minimum score to be achieved has been prescribed, which shall eventually result in achieving 3-star rating.

These guidelines are attached as Annexure-I.

5. RATING SYSTEM

Building rating systems are a popular tool for measurement of the greenness of a building under certain prescribed criteria. At present two green building rating systems are in vogue in our country. One is LEED-India which gives buildings ratings of Platinum, Gold, Silver or LEED-certified and the other is the GRIHA rating system which rates buildings on a 1 to 5 star scale, with 5 stars signifying the most energy efficient green buildings. CPWD has decided to have their future constructions GRIHA rated and minimum 3 stars have to be achieved for every construction. Though, it has been decided that whether the constructions undertaken by CPWD are to be certified as Green or not shall be the prerogative of the client organization, but it has also been decided that CPWD shall have internal certification by its own officers. Accordingly, to facilitate our officers, based on GRIHA guidelines, a self-evaluation proforma is attached at Annexure-II for evaluation.

6. MISCELLANEOUS

Though guidelines are prescribed for different wings of CPWD to score minimum score as prescribed against each criteria, but these guidelines are illustrative only and not comprehensive. Detailed guidelines are already available in GRIHA Manuals and GRIHA Manuals should be referred in case of any doubts/ambiguity. Each unit should make efforts to score as much as points possible, within the approved cost, so that all our constructions are able to achieve higher rating than the prescribed minimum three star rating.

ANNEXURE-I

GRIHA GREEN BUILDING RATING SYSTEM

S No.	Criterion No.	Clause	Points	Whether Mandatory	Unit responsible	Guidelines	Desired Minimum Target Score
1	1	**Site Selection** The site plan must be in conformity with the development plan/Master Plan/UDPFI guidelines. This should comply with the provisions of eco-sensitive Zonal regulation, coastal Zone regulations, heritage areas, water body Zones, various hazard prone area regulation and others.	1	Partly Mandatory	Architecture	This is Mandatory, as far as possible i.e. site should be in conformity with the development plan/Master Plan/ UDPFI guidelines etc.	–
2	**2 Selectively Applicable Criteria**	**Preserve & Protect landscape during construction.** (i) Preserve top soil by employing requisite measures. (ii) Preserve existing vegetation by means of non-disturbance or damage to the trees and other form of vegetation or Trees/Plants replanted within site premises in ratio of 1:3	5	Partly Mandatory, if applicable	Architecture & Horticulture	This is partially Mandatory, if applicable. i.e in case of good quality top soil. Trees should be protected as far as possible, Trees to be planted.	3
3	**3 Selectively Applicable Criteria**	**Soil Conservation** (i) Proper top soil laying, stabilization of the soil, and maintenance of adequate fertility of the soil to support vegetative growth.	2		Civil	This is partially Mandatory, if applicable. i.e in case of good quality top soil.	1
4	**4**	**Design to include existing site features.** Minimize the disruption of the natural eco-system and design to harness maximum benefits of the prevailing micro-climate.	4		Architecture	This is Mandatory.	4

S No.	Criterion No.	Clause	Points	Whether Mandatory	Unit responsible	Guidelines	Desired Minimum Target Score
5	5	**Reduce hard paving on site and /or provide shaded hard-paved surface.** Minimize storm water run-off by reducing hard paving on-site.	2	Partly Mandatory	Architecture	This is partially Mandatory	1
6	6	**Enhance outdoor lighting system efficiency and use renewable energy system for meeting outdoor lighting requirements.** Meet Minimum allowable luminious efficacy (as per lamp type) and make progressive use of a renewable energy based lighting system	3		Electrical	This is Mandatory	3
7	**7**	**Plan utilities efficiently and optimize on-site circulation efficiency.** Minimize road and pedestrian walkway length by appropriate planning and provide aggregate corridors for utility lines.	3		Architecture	This is Mandatory	3
8	8	**Provide minimum level of sanitation/ safety facilities for construction workers.** (i) Ensure cleanliness of workplace with regard to disposal of waste and effluent, provide clean drinking water and latrines and urinals as per applicable standard. (ii) Compliance with National Building Code norms on construction safety for ensuring safety during	2	Mandatory	Civil	This is Mandatory clause. Hence, should be fulfilled.	2

S No.	Criterion No.	Clause	Points	Whether Mandatory	Unit responsible	Guidelines	Desired Minimum Target Score
9	**9**	**Reduce air pollution during construction.** (i) Ensure proper screening, covering stockpiles, covering brick and loads of dusty materials, wheel washing facility, and water spraying facility.	2	Mandatory	Civil	This is Mandatory clause. Hence, should be fulfilled.	2
10	**10**	**Reduce Landscape Water requirement.** (i) Landscape using native species and reduce l awn areas while enhancing the irrigation efficiency and reducing the water requirement for landscaping purposes.	3		Horticulture	This is Mandatory	3
11	11	Reduce water use in building (i) Reduce building water use by applying Low-flow fixtures and other similar tools.	2		Civil	This is mandatory	2
12	**12**	**Efficient water use during construction.** (i) Use materials such as premixed concrete for preventing loss during mixing. Use recycled treated water and control the waste of curing water.	1		Civil	This is Partially Mandatory. All measures should be taken to minimize the waste of water in curing operation.	1
13	**13**	**Optimize building design to reduce conventional energy demand.** (i) Plan appropriately to reflect climate responsiveness, including adequate day lighting as well as efficient artificial lighting.	8	Mandatory	Architecture	This is partially Mandatory clause. Hence, should be fulfilled to the extent mandatory.	6

S No.	Criterion No.	Clause	Points	Whether Mandatory	Unit responsible	Guidelines	Desired Minimum Target Score
14	**14**	**Optimize energy performance of building within specified comforts limit.** Ensure that the building complies with the mandatory compliance requirement of ECBC 2007 and meet thermal comfort conditions as per NBC 2005 as well as minimum benchmark for EPI as per GRIHA ensure reduction in EPI upto 40% under a specified category. (i) Meet thermal comfort conditions as per National Building Code 2005 and, minimum benchmark for energy performance index as per GRIHA. (ii) Ensure that energy consumption in building under a specified category is 10% -40% less than that benchmarked through a simulation exercise.	16	Partly Mandatory	Electrical	This is partially Mandatory. Hence, should be fulfilled to the extent mandatory.	12
15	**15**	**Utilization of fly-ash in building structure.** Use of fly-ash for RCC(reinforced cement concrete) structures with in-fill walls and load bearing structures, mortar and binders.	6		Civil	This is partially Mandatory.	5
16	**16**	**Reduce volume, weight and construction time by adopting efficient technologies (such as pre-cast systems)** Replace a part of the energy intensive materials with less energy-intensive materials and/or utilize regionally available materials, which use low energy/energy-efficient technologies **(4 points.)**	4		Civil	This is partially Mandatory.	2

S No.	Criterion No.	Clause	Points	Whether Mandatory	Unit responsible	Guidelines	Desired Minimum Target Score
17	**17**	**Use low-energy material in interiors.** Minimum 70% in each of the three categories of interiors (internal partitions, paneling/false ceiling/ interior wood finishes to minimize the usage of wood.	4		Architecture	This is partially Mandatory.	2
18	18	Renewable energy utilization. Rated capacity of proposed renewable energy systems is equal to or more than 1% of internal lighting and space conditioning connected load and meets energy requirements for a minimum of 5% of the internal lighting consumption (for general lighting or its equivalent from renewable energy source[sofar, wind, biomass, fuel cell and others]). Energy requirement will be calculated based on realistic assumptions which will be subject to verification during appraisal.	5	Partly Mandatory	Electrical	This is partially Mandatory.	2
19	**19 Selectively Applicable Criteria**	**Renewable energy-based hot water system.** Meet 20% or more of the annual energy required for heating water through renewable energy based water-heating system.	3		Electrical	This is Mandatory, wherever applicable	3
20	**20 Selectively Applicable Criteria**	**Waste water treatment.** Provide necessary treatment of water for achieving the desired concentration of effluents. This criterion shall not apply to projects that have waste water generation on site less than 10kL/day.	2		Civil	This is Mandatory in cases where there is no municipal disposal.	2

S No.	Criterion No.	Clause	Points	Whether Mandatory	Unit responsible	Guidelines	Desired Minimum Target Score
21	**21 Selectively Applicable Criteria**	**Water Recycle and Reuse (including Rainwater)** Provide on-site waste water treatment for achieving prescribed concentration, rainwater harvesting, reuse of treated waste water and rainwater for meeting the building's water and irrigation demand (2 points.)	5		Civil	This is Mandatory for rain water harvesting.	2
22	22	Reduction in waste during construction. Ensure maximum resource recovery and safe disposal of wastes generated during construction and reduce the burden on landfill. **(1 point)**	1		Civil	This is Mandatory	1
23	23	Efficient waste segregation. Use different coloured bins for collecting different categories of waste from the building **(1 point)**	1		Civil	This is Mandatory	1
24	**24 Selectively Applicable Criteria**	**Storage and disposal of wastes.** Allocate separate space for the collected waste before transferring it to the recycling/disposal stations. **(1 point)**	1		Civil	This is Mandatory	1
25	**25**	**Resource recovery from waste.** Employ resource recovery systems for biodegradable waste as per the Solid Waste Management and Handling Rules, 2000 of the MoEF. Make arrangements for recycling of waste through local dealers. **(2 points)**	2		Civil	This may be adopted as far as possible.	
26	26	Use Low-VOC paints/adhesives/sealants. Use only Low-VOC paints in the interior of the building. Use water-based rather than solvent-based sealants and adhesives. **(3 points)**	3		Civil	This is partially mandatory.	1

S No.	Criterion No.	Clause	Points	Whether Mandatory	Unit responsible	Guidelines	Desired Minimum Target Score
27	**27**	**Minimize ozone depleting substances.** Employ 100% zero ODP (ozone depletion potential) insulation, HCFC(hydrochloro-fluorocarbon)/ and CFC (chlorofluorocarbon) free HVAC and refrigeration equipment/and halon-free fire suppression and fire extinguishing systems (1 point)	1	Mandatory	Electrical	This is Mandatory clause. Hence, should be fulfilled.	1
28	**28**	**Ensure water quality.** Ensure water from all sources (such as ground water, municipal water, treated waste water) meets the water quality norms as prescribed in the Indian Standards for various applications Indian Standards for drinking [IS116241986], cooling towers (as given in NBC 2005). In case the water quality cannot be ensured, provide necessary treatment of raw water for achieving the desired concentration for various applications **(2 points)**	2	Mandatory	Civil	This is Mandatory clause. Hence, should be fulfilled.	2
29	**29**	**Acceptable outdoor and indoor voice levels.** Ensure outdoor noise level conforms to the CPCB (Central Pollution Control Board)Environment Standards-Noise (ambient standard) and indoor noise level conforms to the NBC(National Building Code of India) 2005 (BIS 2005a) **(2 points)**	2		Architecture	This is Mandatory	2
30	**30**	**Tobacco smoke control.** Zero exposure to tobacco smoke for non-smokers, and exclusive ventilation for smoking rooms (1 point)	1	Mandatory	Architecture	This is Mandatory clause. Hence, should be fulfilled.	1

S No.	Criterion No.	Clause	Points	Whether Mandatory	Unit responsible	Guidelines	Desired Minimum Target Score
31	**31**	**Provide at least the minimum level of accessibility for persons with disabilities.** To ensure accessibility and usability of the building and its facilities by employees, visitors, and clients with disabilities. **(1point)**	1		Architecture	This is Mandatory in Public buildings	1
32	**32**	**Audit and validation** To ensure that all energy and environmental systems in the building are performing as predicted during the design and development stage. **(0 point)**	0	Mandatory	Electrical	This is Mandatory clause. Hence, should be fulfilled.	0
33	**33**	**Operation and maintenance.** To ascertain efficient functioning of the building's systems through regular monitoring of building's energy and water consumption and implementation of appropriate operation and maintenance program **(2 points)**	2	Mandatory	Electrical	This is Mandatory clause. Hence, should be fulfilled.	2
			100 Points				**74 Points**
34	34	Innovation Points Probable Points are : (i) Alternative Transportation. (ii) Environmental Education (iii) Company Policy on Green Supply Chain. (iv) Life cycle cost analysis (v) Any other criteria proposed by applicant	4 Points				

ANNEXURE-II

SELF APPRAISAL PROFORMA

Appraisal Criteria Points	Achievable	Points Attempted/Earned
Criteria 1 Site Selection (Max. 1 Point)		
The site plan must be in conformity with the development plan/master plan/UDPFI guidelines (mandatory). This should comply with the provisions of eco-sensitive zone regulations, coastal zone regulations, heritage areas (identified in the master plan or issued separately as specific guidelines), water body zones (in such zones, no construction is permitted in the water-spread and buffer belt of 30 metre minimum around the FTL), various hazard prone area regulations, and others if the site falls under any such area (mandatory with no point allocation).	0	
The site should be located within ½ km radius of an existing bus stop, commuter rail, light rail or metro station and/or the proposed site must be a Brownfield site (to rehabilitate damaged sites where development is hindered by environmental contamination, thereby reducing pressure on undeveloped land)	1	
Criteria 2 Preserve and protect landscape during construction/compensatory depository forestation. (Max. 5 Points)		
Applicability Check 1 Top soil quality meets the quality standard of top preservation criteria as per criteria 3	Yes/No	
Applicability Check 2 There are existing several mature trees on site that can be preserved	Yes/No	
Construction has been planned in a way that excavation/ basement work, up to plinth level is not coinciding with rainy season and the site disruption is restricted to pre-designated areas	1	
Proper staging, spill prevention plan, sedimentation and erosion control systems in place.	1	
Top soil has been/shall be preserved (quantity to be determined by soil requirement in landscaping) Note: Applicable if answer is yes in Applicability Check 1 above	1	

Appraisal Criteria Points	**Achievable**	**Points Attempted/Earned**
Trees are preserved and protected properly Note: Applicable if answer is yes in Applicability Check 2 above	1	
Compensatory forestation is applied on site Note: Applicable if answer is yes in Applicability Check 2 above	1	
Criteria 3 Soil conservation (post construction) (Max. 2 Points)		
Top soil is fertile and properly laid for vegetative growth Note: Applicable if answer is yes in Applicability Check 1 above	1	
Measures taken for proper stabilization of soil Note: Applicable if answer is yes in Applicability Check 1 above	1	
Criteria 4 Design to include existing site features (Max. 4 Point)		
Building and site planning to minimize the disruption of natural ecosystems and to maximize benefits from prevailing micro-climate	4	
Criteria 4 Reduce Hard Paving on Site (Max. 2 Points)		
Net Paved area on site under parking, roads etc. to exceed 25% of the site area (minus the building footprint) or the net imperviousness factor of the site should not exceed the net imperviousness factors prescribed in the NBC 2005, whichever is more stringent.	1	
Total surface parking not to exceed as permitted by the local building by-laws	0	
More than 50% of the total paved area to have pervious paving or open grid pavements or grass pavers or shading through the use of vegetated pergolas or covered with coating of SRI>0.5 OR More than 50% of the total paved area to have a combination of the above.	1	
Criteria 6 Enhance outdoor lighting system efficiency (Max. 3 Points)		
Luminous efficacy of 100% of lamps used in outdoor lighting to meet the corresponding lamp luminous efficacy as mentioned in Table-1, as per GRIHA	1	

Appraisal Criteria Points	**Achievable**	**Points Attempted/Earned**
Automatic controls to be installed for 100% of outdoor lights	1	
15% of the total connected load for outdoor lighting is met through renewable energy or 2550% of the total fixtures used in outdoor lighting are connected to the renewable energy system, whichever is more stringent	1	
Criteria 7 Plan utilities efficiently and optimize on-site circulation efficiency (Max. 3 Points)		
Various transportation and service corridors shall be minimized and consolidated and the pedestrian walkways to be shaded.	1	
Aggregate utility corridors shall be used	1	
Utility corridors shall be consolidated along the previously disturbed areas or along new roads in order to minimize unnecessary cutting and trenching and ensure easy maintenance	1	
Criteria 8 Provide minimum level of sanitation/safety facilities for construction workers (Max. 2 Points)		
Ensure compliance with the NBC (2005) safety norms for providing the necessary safety equipment and measures for construction workers	1	
Provisions for drinking water, healthy and clean living conditions and sanitation facilities shall be provided for the workers	1	
Criteria 9 Reduce air pollution during construction (Max. 2 Points)		
Necessary measures to be taken on site to reduce air pollution for example providing site barricading to a height of 3 m on the site perimeter, carry out wheel washing of vehicles entering/exiting the site, sprinkle water on roads with loose dust etc.	2	
Criteria 10 Reduce landscape water demand (Max. 3 Points)		
If landscape water demand is reduced by up to 30%	1	
If landscape water demand is reduced by up to 40%	2	
If landscape water demand is reduced by up to 50%	3	

Appraisal Criteria Points	**Achievable**	**Points Attempted/Earned**
Criteria 11 Reduce building water use(Max. 2 Points)		
If building water demand is reduced by up to 25%	1	
If building water demand is reduced by up to 50%	2	
Criteria 12 Efficient water use during construction (Max. 1 Point)		
Efforts to be taken to reduce the use of potable water during construction for example use waste jute bags to cover columns and beams during curing, add admixtures to concrete which cause a reduction in the water required for curing etc	1	
Criteria 13 Optimize building design to reduce conventional energy demand (Max. 8 Points)		
The WWR and/or SSR shall be limited to the prescribed levels as per Table 2.1 (copy attached) and all fenestration shall meet the SHGC requirements of ECBC 2007.	2	
Minimum 25% of the living area shall be daylighted and shall meet the level of daylight prescribed in NBC 2005 (Table 2.2 attached)	2	
If the total daylighted area>50% of the total living area and meets the prescribed level of daylight	1	
If the total daylighted area>75% of the total living area and meets the prescribed level of daylight	1	
Over-design of artificial lighting system shall be avoided and the lighting levels in indoor spaces shall be maintained as recommended in NBC 2005.	2	
Criteria 14 Optimize energy performance of building within specified comfort limits (Max. 16 Points)		
All mandatory compliance measures (for all applicable buildings) as recommended in the Energy Conservation Building Code 2007 of BEE shall be complied with.	6	
The thermal comfort conditions and benchmark EPI, specified in GRIHA, shall be met.	2	
If the reduction in energy consumption is >= 10% of the benchmarked figure and the thermal comfort criteria are fully met	2	

Appraisal Criteria Points	Achievable	Points Attempted/Earned
If the reduction in energy consumption is >= 20% of the benchmarked figure and the thermal comfort criteria are fully met	4	
If the reduction in energy consumption is >= 30% of the benchmarked figure and the thermal comfort criteria are fully met	6	
If the reduction in energy consumption is >= 40% of the benchmarked figure and the thermal comfort criteria are fully met	8	
Criteria 15 Optimize building design to reduce conventional energy demand (Max. 6 Points)		
Replace 15-30 % of OPC by weight with fly-ash in structural concrete	1	
Replace more than 30 % of OPC by weight with fly-ash in structural concrete	2	
100% of the building blocks shall have at least 40% fly ash (by volume)	2	
Minimum 30% of OPC, used for masonry and plaster mortar, shall be replaced by fly ash.	2	
Criteria 16 Reduction in embodied energy of the building (Max. 4 Points)		
The embodied energy of the building structure shall be reduced by 5% for 100% of the structural system in the building	2	
The embodied energy of building blockwork in the building shall be reduced by 5% (by volume) for 100% of building blockwork	2	
Criteria 17 Use low-energy materials in Interiors (Max. 4 Points)		
Minimum 70% of the total quantity of materials used for sub-assembly/internal partitions /panelling/false-ceiling/in-built furniture shall be low-energy materials	2	
Minimum 70% of the total quantity of materials used for flooring shall be low-energy materials	1	
Minimum 70% of the total quantity of materials used for door, windows and frames shall be low-energy materials	1	

Appraisal Criteria Points	**Achievable**	**Points Attempted/Earned**
Criteria 18 Renewable energy utilization (Max. 5 Points)		
The minimum size of the renewable energy system should be equal to 1% of the total connected load for artificial lighting and space conditioning loads	1	
If the total energy generated by the renewable energy system is equivalent to 5% or more of the total annual energy consumption for artificial lighting	1	
If the total energy generated by the renewable energy system is equivalent to 10% or more of the total annual energy consumption for artificial lighting	2	
If the total energy generated by the renewable energy system is equivalent to 20% or more of the total annual energy consumption for artificial lighting	3	
If the total energy generated by the renewable energy system is equivalent to 30% or more of the total annual energy consumption for artificial lighting	4	
Criteria 19 Renewable energy based hot water system (Max. 3 Points)		
Applicability Check 3 The total hot water requirement is more than 500 litres per day	Yes/No	
If the renewable hot water system saves 20-50% of the annual energy required for hot water Note: Applicable if answer is yes in Applicability Check 3 above	1	
If the renewable hot water system saves 50-70% of the annual energy required for hot water Note: Applicable if answer is yes in Applicability Check 3 above	2	
If the renewable hot water system saves more than 70% of the annual energy required for hot water Note: Applicable if answer is yes in Applicability Check 3 above	3	
Criteria 20 Waste water treatment (Max. 2 Points)		
Applicability Check 4 The total waste water generation on site is more than 10kL per day.	Yes/No	

Appraisal Criteria Points	**Achievable**	**Points Attempted/Earned**
The treated waste water shall meet the BIS recommended disposal standards, as per table 3 attached Note: Applicable if answer is yes to Applicability Check 4 above	2	
Criteria 21 Water recycle and reuse (including rainwater) (Max. 5 Points)		
Applicability Check 5 Ground water table is high and ground water recharge is not advisable as per Central Ground Water Board norms.	Yes/No	
If the project demonstrates 25% annual water reuse Note: Applicable if answer is yes to Applicability Check 4 above	1	
If the project demonstrates 50% annual water reuse Note: Applicable if answer is yes to Applicability Check 4 above	1	
If the project demonstrates 75% annual water reuse Note: Applicable if answer is yes to Applicability Check 4 above	1	
The surplus rainwater is recharged in to the ground after necessary filtration Note: Applicable if answer is yes to Applicability Check 5	2	
Criteria 22 Reduction in waste during construction (Max. 1 Point)		
Hazardous and inert waste shall be segregated during construction The segregated waste shall be recycled and/ or safely disposed	1	
Criteria 23 Efficient Waste segregation(Max. 1 Point)		
Multi-coloured bins shall be provided to segregate waste at source	1	
Criteria 24 Storage and disposal of wastes (Max. 1 Point)		
Separate space shall be allocated for collection of waste before transfer for recycling	1	

Appraisal Criteria Points	**Achievable**	**Points Attempted/Earned**
Criteria 25 Resource recovery from waste (Max. 2 Points)		
Applicability Check 6 Organic solid waste generation on site is more than 100 kg/ day	Yes/No	
Appropriate measures to be taken for zero-waste generation from site Note: Applicable if answer is yes to Applicability Check 6	2	
Criteria 26 Use of low-VOC paints/adhesives/sealants (Max. 3 Points)		
100% of all paints used in building interior shall be low/zero-VOC, as per GRIHA (Table 4.1 attached)	1	
100% of all adhesives and sealants used shall be low/zero-VOC, as per GRIHA (Table 4.2 & 4.3 attached)	1	
100% of all composite wood products shall not use urea-formaldehyde	1	
Criteria 27 Minimize ozone depleting substances (Max. 1 Point)		
All insulation to be used in the building shall be CFC and HCFC free All HVAC and refrigeration equipment shall be CFC free. The fire-suppression systems and fire extinguishers shall be halon free	1	
Criteria 28 Ensure water quality(Max. 2 Points)		
Water used for various purposes like drinking, irrigation etc. shall conform to the BIS standards	2	
Criteria 29 Acceptable outdoor and indoor noise levels (Max. 2 Points)		
The measured outdoor noise levels on site conform to the standard set by the CPCB (Table 5.1 attached)	1	
The measured indoor noise levels inside the building meet the noise levels recommended by NBC 2005 (Table 5.2 attached)	1	

Appraisal Criteria Points	**Achievable**	**Points Attempted/Earned**
Criteria 30 Tobacco and smoke control (Max. 1 Point)		
Smoking is prohibited on site OR Necessary provisions shall be provided in the mechanical ventilation system by the HVAC consultant	1	
Criteria 31 Provide at least the minimum level of accessibility for persons with disabilities (Max. 1 Point)		
Buildings shall be designed in compliance with the NBC code in order to be disabled friendly	1	
Criteria 32 Energy audit and validation (No Point)		
A mandatory energy audit shall be conducted by a BEE certified energy auditor	0	
Criteria 33 Operation and Maintenance (Max. 2 Points)		
An O & M protocol to be specified for operation and maintenance of the various systems in the building. Additionally	2	
	100 Points	
Criteria 34 Innovation Points (Max. 4 Points)		
Point for innovation 1	1	
Point for innovation 1	1	
Point for innovation 1	1	
Point for innovation 1	1	

TABLE-1

MINIMUM ALLOWABLE VALUES OF LUMINOUS EFFICACY OF OUTDOOR

lighting system	**Light source Minimum allowable luminous efficacy (lm/w)**
CFL(Compact fluorescent lamp)	50
FL(fluorescent lamps)	75
MH(Metal halide)	75
HPSV (high pressure sodium vapour lamp)	90
LEDs (light emitting diodes)	50

TABLE-2.1

SHGC REQUIREMENT FOR VERTICAL FENESTRATION AND SKYLIGHT

Climate	**Maximum SHGC**			
	WWR < 40%	**40% <WWR <60% 0**	**% < SRR < 2%**	**2.1% < SRR < 5%**
Composite	0.25	0.2	0.4	0.25
Hot-dry	0.25	0.2	0.4	0.25
Warm - Humid	0.25	0.2	0.4	0.25
Moderate	0.4	0.3	0.61	0.4
Cold	0.51	0.51	0.61	0.4

Note : WWR - Window to Wall Ratio

SHGC - Solar heat gain coefficient

SRR - Skylight-roof-ratio

TABLE-2.2

RECOMMENDED DAYLIGHT FACTORS FOR VARIOUS LIVING AREAS.

S.No.	Location	Daylight factors
1.	Dwellings	
	Kitchen	2.5
	Living room	0.625
	Study room	1.9
	Circulation	0.313
2.	Schools	
	Classroom Desktop, blackboard	1.9 –3.8
	Laboratory	2.5—3.8
3.	Offices	
	General	1.9
	Drawing, Typing	3.75
	Enquiry	0.625—1.9
4.	Hospitals	
	General wards	1.25
	Pathological laboratory	2.5-3.75
5.	Libraries	
	Stockroom	0.9—1.9
	Reading room	1.9—3.75
	Counter area	2.5—3.75
	Catalogue room	1.9—2.5

TABLE -3

CHARACTERISTICS OF WASTEWATER BEFORE AND AFTER TREATMENT.

Parameter	Before Treatment	After Treatment
Dissolved oxygen(mg/litre)	-	-
Biological oxygen demand(mg/litre)		<100
Total coliform bacteria(MPN/100 ml)	-	-
Total dissolved solids(mg/litre)	-	<1000
Chloride as chlorine(mg/litre)	-	<500
Colour	-	-
Boron(mg/litre)	-	-
Sulphates(mg/litre)	-	<500
pH	-	-
Arsenic(mg/litre)	-	-
Fluorides(mg/litre)	-	<2
Iron(mg/litre)	-	-
Copper(mg/litre)	-	
Lead(mg/litre)	-	-
Sulphides	-	<2
Oil and grease	-	<12
TSS	200	<20
COD 2	50	<100
Total residual chlorine	-	<1

TABLE-4.1

VOC LIMITS FOR PAINTS

Paint applications	**VOC limits(grams of VOC per litre)**	
Interior coatings	Flat	<50
	Non-flat	<150
Exterior coatings	Flat	<200
	Non-flat	<100
Anti corrosive	Gloss, semi gloss, flat	<250

TABLE-4.2

VOC CONTENT LIMIT FOR ADHESIVES

Architectural adhesive application	**VOC content limit (grams of VOC per litre)**
Wood flooring	100
Industrial/rubber flooring	60
Ceramic tile	65
Structural glazing	100
Multi-purpose construction	70
Sub-floor	50
Wall Boards/panel	50
PVC welding	285
Adhesive primer for plastic	250
Structural wood member	140
Sub-specific use metal to metal	30
Wood	30
Fibre glass	80
Plastic foams/porous materials(except wood)	50

TABLE-4.3

VOC CONTENT LIMIT FOR SEALANTS

Sealant application	VOC content limit (grams of VOC per litre)
Architectural/roadways	250
Single-ply roof material installation/repair	450
Others	420
Sealant primer applications architectural non-porous	250
Sealant primer applications architectural porous	775
Other sealant primer applications architectural	750

TABLE 5.1

NOISE (AMBIENT STANDARDS)

Area Code	Area category	Limit in dB(A) Leg(equivalent sound level	
		Day time	Night time
A	Industrial area	75	70
B	Commercial area	65	55
C	Residential area	55	45
D	Silence Zone	50	40

TABLE 5.2

ACCEPTABLE NOISE LEVELS FOR VARIOUS BUILDINGS

Location	Noise level dB(A)
Auditoria and concert halls	20-25
Radio and television studios	20-25
Music rooms	25-30
Hospitals and cinema theatres	35-40
Apartments, hotels and homes	35-40
Conference rooms, small offices, and libraries	35-40
Court rooms and class rooms	40-45
Large public offices, banks, and stores	45-50
Restaurants	50-55

CENTRAL PUBLIC WORKS DEPARTMENT

OFFICE MEMORANDUM
NO.DGW/MAN/170

ISSUED BY AUTHORITY OF DIRECTOR GENRAL OF WORKS

NIRMAN BHAVAN, NEW DELHI Dated: 19.01.2009

Sub: Environment Impact Assessment (EIA) to precede allotment of land for infrastructure development.

It is enjoined upon all that it is now mandatory for all the infrastructural development agencies/ land owning agencies to conduct Environment Impact Assessment (EIA) before allotting the land for any activity. Such agencies should decide whether the intended land use in the area could be permitted or not on the basis of EIA.

CPWD officers should therefore ensure that their recommendation for allotment of land for any infrastructural developmental should be supported with EIA clearance even though actual allotment of land is done by Ministry of Urban Development. Further, for development of any new campus, the client department should be made aware of the essentiality of EIA requirement in terms of judgment of Hon'ble Supreme Court in Civil Appeal No. 7425 of 2000.

Sd/-
Superintending Engineer (C&M)

Issued from File No. CSQ/CM/M/16(1)/2008

Copies as per mailing list;

RELEVANT EXTRACTS FROM MOEF NOTIFICATION Dtd. 14.09 2006

2. REQUIREMENTS OF PRIOR ENVIRONMENTAL CLEARANCE (EC)

The following projects or activities shall require prior environmental clearance from the concerned regulatory authority, which shall hereinafter referred to be as the Central Government in the Ministry of Environment and Forests for matters falling under Category 'A' in the Schedule and at State level the State Environment Impact Assessment Authority (SEIAA) for matters falling under Category 'B' in the said Schedule, before any construction work, or preparation of land by the project management except for securing the land, is started on the project or activity:

(i) All new projects or activities listed in the Schedule to this notification;

(ii) Expansion and modernization of existing projects or activities listed in the Schedule to this notification with addition of capacity beyond the limits specified for the concerned sector, that is, projects or activities which cross the threshold limits given in the Schedule, after expansion or modernization;

4. CATEGORIZATION OF PROJECTS AND ACTIVITIES

(i) All projects and activities are broadly categorized in to two categories - Category A and Category B, based on the spatial extent of potential impacts and potential impacts on human health and natural and man made resources.

(ii) All projects or activities included as Category 'A' in the Schedule, including expansion and modernization of existing projects or activities and change in product mix, shall require prior environmental clearance from the Central Government in the Ministry of Environment and Forests (MoEF) on the recommendations of an Expert Appraisal Committee (EAC) to be constituted by the Central Government for the purposes of this notification;

(iii) All projects or activities included as Category 'B' in the Schedule, including expansion and modernization of existing projects or activities as specified in sub paragraph (ii) of paragraph 2, but excluding those which fulfill the General Conditions (GC) stipulated in the Schedule, *will* require prior environmental clearance from the State/Union territory Environment Impact Assessment Authority (SEIAA). The SEIAA shall base its decision on the recommendations of a State or Union territory level Expert Appraisal Committee (SEAC) as to be constituted for in this notification. In the absence of a duly constituted SEIAA or SEAC, a Category 'B' project shall be treated as a Category 'A' project;

6. APPLICATION FOR PRIOR ENVIRONMENTAL CLEARANCE (EC)

An application seeking prior environmental clearance in all cases shall be made in the prescribed Form 1 annexed herewith and Supplementary Form 1A, if applicable, as given in Appendix II, after the identification of prospective site(s) for the project and/or activities to which the application relates, before commencing any construction activity, or preparation of land, at the site by the applicant. The applicant shall furnish, along with the application, a copy of the pre-feasibility project report except that,

in case of construction projects or activities (item 8 of the Schedule) in addition to Form 1 and the Supplementary Form 1A, a copy of the conceptual plan shall be provided, instead of the pre-feasibility report.

10. POST ENVIRONMENTAL CLEARANCE MONITORING

(i) It shall be mandatory for the project management to submit half-yearly compliance reports in respect of the stipulated prior environmental clearance terms and conditions in hard and soft copies to the regulatory authority concerned, on 1st June and 1st December of each calendar year.

(ii) All such compliance reports submitted by the project management shall be public documents. Copies of the same shall be given to any person on application to the concerned regulatory authority. The latest such compliance report shall also be displayed on the web site of the concerned regulatory authority.

11. TRANSFERABILITY OF ENVIRONMENTAL CLEARANCE (EC)

A prior environmental clearance granted for a specific project or activity to an applicant may be transferred during its validity to another legal person entitled to undertake the project or activity on application by the transferor, or by the transferee with a written "no objection" by the transferor, to, and by the regulatory authority concerned, on the same terms and conditions under which the prior environmental clearance was initially granted, and for the same validity period. No reference to the Expert Appraisal Committee or State Level Expert Appraisal Committee concerned is necessary in such cases.

12. Operation of EIA Notification, 1994, till disposal of pending cases:

From the date of final publication of this notification the Environment Impact Assessment (EIA) notification number S.O.60 (E) dated 27th January, 1994 is hereby superseded, except in suppression of the things done or omitted to be done before such suppression to the extent that in case of all or some types of applications made for prior environmental clearance and pending on the date of final publication of this notification, the Central Government may relax any one or all provisions of this notification except the list of the projects or activities requiring prior environmental clearance in Schedule I , or continue operation of some or all provisions of the said notification, for a period not exceeding one year from the date of issue of this notification.

[No. J-11013/56/2004-IA-II (I)]

(R.CHANDRAMOHAN)
JOINT SECRETARY TO THE GOVERNMENT OF INDIA

LIST OF PROJECTS OR ACTIVITIES REQUIRING PRIOR ENVIRONMENTAL CLEARANCE

Project or Activity		**Category with threshold limit**		**Conditions if any**
		A	**B**	
(1)	**(2)**	**(3)**	**(4)**	**(5)**
8		Building /Construction projects/Area Development projects and Townships		
8(a)	Building and Construction projects		≥ ”20000 sq.mtrs and <1,50,000 sq.mtrs. of built-up area#	#(built up area for covered construction; in the case of facilities open to the sky, it will be the activity area)
8(b)	Townships and Area Development projects.		Covering an area ≥” 50 ha and or built up area ≥”1,50,000 sq .mtrs ++	++All projects under Item 8(b) shall be appraised as Category B1

Note:-

GENERAL CONDITION (GC):

Any project or activity specified in Category ‘B’ will be treated as Category A, if located in whole or in part within 10 km from the boundary of: (i) Protected Areas notified under the Wild Life (Protection) Act, 1972, (ii) Critically Polluted areas as notified by the Central Pollution Control Board from time to time, (iii) Notified Eco-sensitive areas, (iv) inter-State boundaries and international boundaries.

APPENDIX I

(See paragraph – 6)

FORM 1

(I) Basic Information

Name of the Project:

Location / site alternatives under consideration:

Size of the Project: *

Expected cost of the project:

Contact Information:

Screening Category:

- Capacity corresponding to sectoral activity (such as production capacity for manufacturing, mining lease area and production capacity for mineral production, area for mineral exploration, length for linear transport infrastructure, generation capacity for power generation etc.,)

(II) Activity

1. Construction, operation or decommissioning of the Project involving actions, which will cause physical changes in the locality (topography, land use, changes in water bodies, etc.)

S.No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities / rates, wherever possible) with source of information data
1.1	Permanent or temporary change in land use, land cover or topography including increase in intensity of land use (with respect to local land use plan)		
1.2	Clearance of existing land, vegetation and buildings?		
1.3	Creation of new land uses?		
1.4	Pre-construction investigations e.g. bore houses, soil testing?		
1.5	Construction works?		
1.6	Demolition works?		
1.7	Temporary sites used for construction works orhousing of construction workers?		

1.8	Above ground buildings, structures orearthworks including linear structures, cut andfill or excavations		
1.9	Underground works including mining or tunneling?		
1.10	Reclamation works?		
1.11	Dredging?		
1.12	Offshore structures?		
1.13	Production and manufacturing processes?		
1.14	Facilities for storage of goods or materials?		
1.15	Facilities for treatment or disposal of solid waste or liquid effluents?		
1.16	Facilities for long term housing of operational workers?		
1.17	New road, rail or sea traffic during construction or operation?		
1.18	New road, rail, air waterborne or other transport infrastructure including new or altered routes and stations, ports, airports etc?		
1.19	Closure or diversion of existing transport routes or infrastructure leading to changes in trafficmovements?		
1.20	New or diverted transmission lines or pipelines?		
1.21	Impoundment, damming, culver ting, realignment or other changes to the hydrology of watercourses or aquifers?		
1.22	Stream crossings?		
1.23	Abstraction or transfers of water form ground or surface waters?		
1.24	Changes in water bodies or the land surface affecting drainage or run-off?		
1.25	Transport of personnel or materials for construction, operation or decommissioning?		

1.26	Long-term dismantling or decommissioning or restoration works?		
1.27	Ongoing activity during decommissioning which could have an impact on the environment?		
1.28	Influx of people to an area in either temporarily or permanently?		
1.29	Introduction of alien species?		
1.30	Loss of native species or genetic diversity?		
1.31	Any other actions?		

2. **Use of Natural resources for construction or operation of the Project (such as land, water, materials or energy, especially any resources which are non-renewable or in short supply):**

S.No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities / rates, wherever possible) with source of information data
2.1	Land especially undeveloped or agricultural land (ha)		
2.2	Water (expected source & competing users) unit: KLD		
2.3	Minerals (MT)		
2.4	Construction material – stone, aggregates, sand / soil (expected source – MT)		
2.5	Forests and timber (source – MT)		
2.6	Energy including electricity and fuels (source, competing users) Unit: fuel (MT), energy (MW)		
2.7	Any other natural resources (use appropriate standard units)		

3. Use, storage, transport, handling or production of substances or materials, which could be harmful to human health or the environment or raise concerns about actual or perceived risks to human health.

S.No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities / rates, wherever possible) with source of information data
3.1	Use of substances or materials, which are hazardous (as per MSIHC rules) to human health or the environment (flora, fauna, andwater supplies)		
3.2	Changes in occurrence of disease or affect disease vectors (e.g. insect or water borne diseases)		
3.3	Affect the welfare of people e.g. by changing living conditions?		
3.4	Vulnerable groups of people who could be affected by the project e.g. hospital patients, children, the elderly etc.,		
3.5	Any other causes		

4. Production of solid wastes during construction or operation or decommissioning (MT/ month)

S.No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities / rates, wherever possible) with source of information data
4.1	Spoil, overburden or mine wastes		
4.2	Municipal waste (domestic and or commercial wastes)		
4.3	Hazardous wastes (as per Hazardous Waste Management Rules)		
4.4	Other industrial process wastes		
4.5	Surplus product		
4.6	Sewage sludge or other sludge from effluent treatment		
4.7	Construction or demolition wastes		
4.8	Redundant machinery or equipment		
4.9	Contaminated soils or other materials		
4.10	Agricultural wastes		
4.11	Other solid wastes		

5. Release of pollutants or any hazardous, toxic or noxious substances to air (Kg/hr)

S.No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities / rates, wherever possible) with source of information data
5.1	Emissions from combustion of fossil fuels from stationary or mobile sources		
5.2	Emissions from production processes		
5.3	Emissions from materials handling including storage or transport		
5.4	Emissions from construction activities including plant and equipment		
5.5	Dust or odours from handling of materials including construction materials, sewage and waste		
5.6	Emissions from incineration of waste		
5.7	Emissions from burning of waste in open air (e.g. slash materials, construction debris)		
5.8	Emissions from any other sources		

6. Generation of Noise and Vibration, and Emissions of Light and Heat:

S.No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities / rates, wherever possible) with source of information data
6.1	From operation of equipment e.g. engines, ventilation plant, crushers		
6.2	From industrial or similar processes		
6.3	From construction or demolition		
6.4	From blasting or piling		
6.5	From construction or operational traffic		
6.6	From lighting or cooling systems		
6.7	From any other sources		

7. Risks of contamination of land or water from releases of pollutants into the ground or into sewers, surface waters, groundwater, coastal waters or the sea:

S.No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities / rates, wherever possible) with source of information data
7.1	From handling, storage, use or spillage of hazardous materials		
7.2	From discharge of sewage or other effluents to water or the land (expected mode and place ofdischarge)		
7.3	By deposition of pollutants emitted to air into the land or into water		
7.4	From any other sources		
7.5	Is there a risk of long term build up of pollutants in the environment from these sources?		

8. Risk of accidents during construction or operation of the Project, which could affect human health or the environment

S.No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities / rates, wherever possible) with source of information data
8.1	From explosions, spillages, fires etc from storage, handling, use or production of hazardous substances		
8.2	From any other causes		
8.3	Could the project be affected by natural disasters causing environmental damage (e.g. floods, earthquakes, landslides, cloudburst etc)?		

9. Factors which should be considered (such as consequential development) which could lead to environmental effects or the potential for cumulative impacts with other existing or planned activities in the locality

S.No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities / rates, wherever possible) with source of information data
9.1	Lead to development of supporting**.** lities, ancillary development or developmentstimulated by the project which could have impact on the environment e.g.:		
	• Supporting infrastructure (roads, power supply, waste or waste water treatment, etc.)		
	• housing development		
	• extractive industries		
	• supply industries		
	• other		
9.2	Lead to after-use of the site, which could havean impact on the environment		
9.3	Set a precedent for later developments		
9.4	Have cumulative effects due to proximity to other existing or planned projects with similar effects		

(III) ENVIRONMENTAL SENSITIVITY

S.No.	Areas	Name/ Identity	Aerial distance (within 15 km.) Proposed project location boundary
1	Areas protected under international conventions, national or local legislation for their ecological, landscape, cultural or other related value		
2	Areas which are important or sensitive for ecological reasons - Wetlands, watercourses or other water bodies, coastal zone, biospheres, mountains, forests		
3	Areas used by protected, important or sensitive species of flora or fauna for breeding, nesting, foraging, resting, over wintering, migration		
4	Inland, coastal, marine or underground waters		
5	State, National boundaries		
6	Routes or facilities used by the public for access to recreation or other tourist, pilgrim areas		
7	Defence installations		
8	Densely populated or built-up area		
9	Areas occupied by sensitive man-made land uses *(hospitals, schools, places of worship, community facilities)*		
10	Areas containing important, high quality or scarce resources*(ground water resources, surface resources, forestry, agriculture, fisheries, tourism, minerals)*		
11	Areas already subjected to pollution or environmental damage. *(those where existing legal environmental standards are exceeded)*		
12	Areas susceptible to natural hazard which could cause the project to present environmental problems(*earthquakes, subsidence, landslides, erosion, floodingor extreme or adverse climatic conditions*)		

(IV). Proposed Terms of Reference for EIA studies

APPENDIX II
(See paragraph 6)

FORM-1 A (only for construction projects listed under item 8 of the Schedule)

CHECK LIST OF ENVIRONMENTAL IMPACTS

(Project proponents are required to provide full information and wherever necessary attach explanatory notes with the Form and submit along with proposed environmental management plan & monitoring programme)

1. LAND ENVIRONMENT

(Attach panoramic view of the project site and the vicinity)

1.1. Will the existing landuse get significantly altered from the project that is not consistent with the surroundings? (Proposed landuse must conform to the approved Master Plan / Development Plan of the area. Change of landuse if any and the statutory approval from the competent authority be submitted). Attach Maps of (i) site location, (ii) surrounding features of the proposed site (within 500 meters) and (iii)the site (indicating levels & contours) to appropriate scales. If not available attach only conceptual plans.

1.2. List out all the major project requirements in terms of the land area, built up area, water consumption, power requirement, connectivity, community facilities, parking needs etc.

1.3. What are the likely impacts of the proposed activity on the existing facilities adjacent to the proposed site? (Such as open spaces, community facilities, details of the existing landuse, disturbance to the local ecology).

1.4. Will there be any significant land disturbance resulting in erosion, subsidence & instability? (Details of soil type, slope analysis, vulnerability to subsidence, seismicity etc may be given).

1.5. Will the proposal involve alteration of natural drainage systems? (Give details on a contour map showing the natural drainage near the proposed project site)

1.6. What are the quantities of earthwork involved in the construction activity-cutting, filling, reclamation etc. (Give details of the quantities of earthwork involved, transport of fill materials from outside the site etc.)

1.7. Give details regarding water supply, waste handling etc during the construction period.

1.8. Will the low lying areas & wetlands get altered? (Provide details of how low lying and wetlands are getting modified from the proposed activity)

1.9. Whether construction debris & waste during construction cause health hazard? (Give quantities of various types of wastes generated during construction including the construction labour and the means of disposal)

2. WATER ENVIRONMENT

2.1. Give the total quantity of water requirement for the proposed project with the breakup of requirements for various uses. How will the water requirement met? State the sources & quantities and furnish a water balance statement.

2.2. What is the capacity (dependable flow or yield) of the proposed source of water?

2.3. What is the quality of water required, in case, the supply is not from a municipal source? (Provide physical, chemical, biological characteristics with class of water quality)

2.4. How much of the water requirement can be met from the recycling of treated wastewater? (Give the details of quantities, sources and usage)

2.5. Will there be diversion of water from other users? (Please assess the impacts of the project on other existing uses and quantities of consumption)

2.6. What is the incremental pollution load from wastewater generated from the proposed activity? (Give details of the quantities and composition of wastewater generated from the proposed activity)

2.7. Give details of the water requirements met from water harvesting? Furnish details of the facilities created.

2.8. What would be the impact of the land use changes occurring due to the proposed project on the runoff characteristics (quantitative as well as qualitative) of the area in the post construction phase on a long term basis? Would it aggravate the problems of flooding or water logging in any way?

2.9. What are the impacts of the proposal on the ground water? (Will there be tapping of ground water; give the details of ground water table, recharging capacity, and approvals obtained from competent authority, if any)

2.10. What precautions/measures are taken to prevent the run-off from construction activities polluting land & aquifers? (Give details of quantities and the measures taken to avoid the adverse impacts)

2.11. How is the storm water from within the site managed?(State the provisions made to avoid flooding of the area, details of the drainage facilities provided along with a site layout indication contour levels)

2.12. Will the deployment of construction labourers particularly in the peak period lead to unsanitary conditions around the project site (Justify with proper explanation)

2.13. What on-site facilities are provided for the collection, treatment & safe disposal of sewage? (Give details of the quantities of wastewater generation, treatment capacities with technology & facilities for recycling and disposal)

2.14. Give details of dual plumbing system if treated waste used is used for flushing of toilets or any other use.

3. VEGETATION

3.1. Is there any threat of the project to the biodiversity? (Give a description of the local ecosystem with it's unique features, if any)

3.2. Will the construction involve extensive clearing or modification of vegetation? (Provide a detailed account of the trees & vegetation affected by the project)

3.3. What are the measures proposed to be taken to minimize the likely impacts on important site features (Give details of proposal for tree plantation, landscaping, creation of water bodies etc

along with a layout plan to an appropriate scale)

4. FAUNA

4.1. Is there likely to be any displacement of fauna- both terrestrial and aquatic or creation of barriers for their movement? Provide the details.

4.2. Any direct or indirect impacts on the avifauna of the area? Provide details.

4.3. Prescribe measures such as corridors, fish ladders etc to mitigate adverse impacts on fauna

5. AIR ENVIRONMENT

5.1. Will the project increase atmospheric concentration of gases & result in heat islands? (Give details of background air quality levels with predicted values based on dispersion models taking into account the increased traffic generation as a result of the proposed constructions)

5.2. What are the impacts on generation of dust, smoke, odorous fumes or other hazardous gases? Give details in relation to all the meteorological parameters.

5.3. Will the proposal create shortage of parking space for vehicles? Furnish details of the present level of transport infrastructure and measures proposed for improvement including the traffic management at the entry & exit to the project site.

5.4. Provide details of the movement patterns with internal roads, bicycle tracks, pedestrian pathways, footpaths etc., with areas under each category.

5.5. Will there be significant increase in traffic noise & vibrations? Give details of the sources and the measures proposed for mitigation of the above.

5.6. What will be the impact of DG sets & other equipment on noise levels & vibration in & ambient air quality around the project site? Provide details.

6. AESTHETICS

6.1. Will the proposed constructions in any way result in the obstruction of a view, scenic amenity or landscapes? Are these considerations taken into account by the proponents?

6.2. Will there be any adverse impacts from new constructions on the existing structures? What are the considerations taken into account?

6.3. Whether there are any local considerations of urban form & urban design influencing the design criteria? They may be explicitly spelt out.

6.4. Are there any anthropological or archaeological sites or artefacts nearby? State if any other significant features in the vicinity of the proposed site have been considered.

7. SOCIO-ECONOMIC ASPECTS

7.1. Will the proposal result in any changes to the demographic structure of local population? Provide the details.

7.2. Give details of the existing social infrastructure around the proposed project.

7.3. Will the project cause adverse effects on local communities, disturbance to sacred sites or other cultural values? What are the safeguards proposed?

8. BUILDING MATERIALS

8.1. May involve the use of building materials with high-embodied energy. Are the construction materials produced with energy efficient processes? (Give details of energy conservation measures in the selection of building materials and their energy efficiency)

8.2. Transport and handling of materials during construction may result in pollution, noise & public nuisance. What measures are taken to minimize the impacts?

8.3. Are recycled materials used in roads and structures? State the extent of savings achieved?

8.4. Give details of the methods of collection, segregation & disposal of the garbage generated during the operation phases of the project.

9. ENERGY CONSERVATION

9.1. Give details of the power requirements, source of supply, backup source etc. What is the energy consumption assumed per square foot of built-up area? How have you tried to minimize energy consumption?

9.2. What type of, and capacity of, power back-up to you plan to provide?

9.3. What are the characteristics of the glass you plan to use? Provide specifications of its characteristics related to both short wave and long wave radiation?

9.4. What passive solar architectural features are being used in the building? Illustrate the applications made in the proposed project.

9.5. Does the layout of streets & buildings maximise the potential for solar energy devices? Have you considered the use of street lighting, emergency lighting and solar hot water systems for use in the building complex? Substantiate with details.

9.6. Is shading effectively used to reduce cooling/heating loads? What principles have been used to maximize the shading of Walls on the East and the West and the Roof? How much energy saving has been effected?

9.7. Do the structures use energy-efficient space conditioning, lighting and mechanical systems? Provide technical details. Provide details of the transformers and motor efficiencies, lighting intensity and air-conditioning load assumptions? Are you using CFC and HCFC free chillers? Provide specifications.

9.8. What are the likely effects of the building activity in altering the micro-climates? Provide a self assessment on the likely impacts of the proposed construction on creation of heat island & inversion effects?

9.9. What are the thermal characteristics of the building envelope? (a) roof; (b) external walls; and (c) fenestration? Give details of the material used and the U-values or the R values of the individual components.

9.10. What precautions & safety measures are proposed against fire hazards? Furnish details of emergency plans.

9.11. If you are using glass as wall material provides details and specifications including emissivity and thermal characteristics.

9.12. What is the rate of air infiltration into the building? Provide details of how you are mitigating the effects of infiltration.

9.13. To what extent the non-conventional energy technologies are utilised in the overall energy consumption? Provide details of the renewable energy technologies used.

10. ENVIRONMENT MANAGEMENT PLAN

The Environment Management Plan would consist of all mitigation measures for each item wise activity to be undertaken during the construction, operation and the entire life cycle to minimize adverse environmental impacts as a result of the activities of the project. It would also delineate the environmental monitoring plan for compliance of various environmental regulations. It will state the steps to be taken in case of emergency such as accidents at the site including fire.

ADOPTION OF PPP MODE

SUDHIR KUMAR **NO 18/2/2012**

DTD. 3-2-2012

Respected Sir,

Secretary (UD) during the review meeting held on 18.01.2012 has desired that all the proposal for development of GPRAs and GPOAs should henceforth be based on (a) Maximization of FAR and (b) adoption of PPP mode on the lines of East Kidwai Nagar. The objective should be to maximize the land utilization while making the net financial burden on Government to close to zero, if not negative. He also desired that the old GRPAs/GPOAs should also be undertaken for redevelopment in PPP mode on the same principles.

You are requested to keep these directions in mind while formulating schemes of GPRA/GPOA development/re-development and give specific recommendation whether these can be undertaken under PPP mode.

With regards

Yours sincerely

Sd/-
Sudhir Kumar

Shri R.M.Agrawal
Addl. Director General (Arch.)
CPWD, Nirman Bhawan,
New Delhi-110108

Copy to : (through PIMS e-mail also)

1. All ADGs for information.
2. ED (CSO) to take up the Re-development of Srinivaspuri government quarters as a model project under PPP. He should submit the report and road map by 15.02.2012.

Sudhir Kumar

No.12032/1/2004-Pol.III
Government of India
Ministry of Urban Development
Directorate of Estates

Nirman Bhawan, New Delhi,

Dated 7/3/2006

To
Joint Secretary (Admn)
All Ministries/Departments
Of Government of India

Sub:- Construction of residential accomodation by various Ministries/Departments of Government of India.

Sir,

The Directorate of Estate is responsible for allotment of General Pool Residential accomodation under its administrative control to the Central Government employees working in the offices declared eligible specifically for such accomodation. In addition to Delhi, General Pool residential accomodation is also available at 32 stations for Central Government employees.

2. Of late, it has been observed that various Ministries/Departments have constructed their own departmental pool for allotment to their employees at various stations. Such construction has been undertaken without ascertaining the availability or General Pool residential accomodation at the particular station, and after such construction, the employees of these departments becomes ineligible for allotment of General Pool residential accomodation. This has resulted in surplus accomodation at that particular station, and disturbs the demand-availability scenario.

3. The matter has been considered in this Ministry. It has now been decided that before undertaking construction or augmentation of any departmental residential pool, the Ministry/Department concerned should invariably consult the Directorate of Estates, Ministry of Urban Development, to ascertain the availability of General Pool residential accomodation and undertake the construction only after obtaining the 'No Objection Certificate' from the Directorate of Estates. The Directorate of Estates will ensure that 'No Objection Certificate' is issued within a period of one month from the reference. While making reference to the Directorate of Estates, the following information may be furnished to enable processing of the case:

i. Name of the city/town where construction is proposed.

ii. No. of employees posted at that station eligible for accomodation (type wise);

iii. No. of residential units available in various types in the departmental pool (if already existing);

iv. No. of employees of the department concerned already occupying General Pool residential accomodation at the station.

v. No. of residential units proposed to be constructed in various types;

vi. How the housing requirements of the employee are being fulfilled so far (in case the office is already in existence at the town/city).

4. All the Ministries/Departments are requested to circulate the above decision to their attached/ subordinate offices and ensure that the Directorate of Estates should be consulted invariably before undertaking any new construction of residential accomodation.

Yours faithfully

Sd/-
(Vijay Dev)
Director of Estates
Tele: 23062005

MODIFICATION OF WINDOW DESIGN

F.No. 11014/1/2008-W.3
Government of India
Ministry of Urban Development
(Work Division)

Nirman Bhawan, New Delhi
Dated the 30th November, 2011

OFFICE MEMORANDUM

Subject:- Change/modification of window design for installation of Air conditioners in GPRA quarters.

The undersigned is directed to refer to the subject mentioned above and say that the issue has been decided with respect to change of window design for installation of Air conditioners in GPRA quarters.

1. All existing windows should be modified to enable installation of window Air conditioners with the provision for fixing the air vent for split AC subject to the availability of funds.

2. In all the future works/projects the provision for window AC and split AC, to be invariably made part of design of all windows (except in bathrooms).

This issues with the approval of UDM and has the concurrence of IFD.

Hindi Version will follow.

Sd/-
(Anil Kumar)
Under Secretary to the Govt. of India
Tele # 23063079

1. All Ministers/Departments of the Government of India.
2. CAG of India, Bahadur Shah Zafar Marg, New Delhi.
3. Secretary General, Rajya Sabha/Lok Sabha Secretariat, New Delhi.
4. Chief Secretaries of Union Territories.
5. Director of Estates, Ministry of Urban Development, New Delhi.
6. Director General (Works), CPWD, New Delhi.
7. CMD, NBCC, NBCC Bhawan, Lodhi Road, New Delhi.

PROVISION OF MAIL BOXES

No.11014/15/91-W.3
Government of India
Ministry of Urban Development
(Works Division)

Nirman Bhawan, New Delhi,

Dated 7/1/1992

To

The DG (W),
CPWD
New Delhi (Shre O.P. Goel, ADG (S&P)

Sub:- Provision of Mail Boxes in Multistoried Residentional Buildings in General Pool

I am directed to refer to your office U.O. No. 18/1/90/WI (DG), dt. 29.10.91 on the subject mentioned above and to convey the approval of this Ministry to the provision of mail boxes for residents of the existing Govt. residential buildings, having three storeys or more, in order to comply with the provisions of Ministry of Communications Notification, S.O. 300 (E), dt. 29th May, 1991. Such mail boxes, however, will not be provided for the residents of ground floor of more than two storeyed buildings. Mail boxes in the case of two storeyed buildings are to be provided by the allotteess themselves. The expenditure on the work will be met out of the budget allocation for the current year i.e., 1991-92 or by making provision in the next year.

2. This issues with the concurrence of Fin. Dn. (W&E) vide their No. 1969-F/JS (F) dt. 27.12.91.

Yours faithfully,
Sd/-
(S.K. BHATNAGAR)
Section Officer (Special)
Tel. No. 3013079

GOVERNMENT OF INDIA
CENTRAL PUBLIC WORKS DEPARTMENT
DIRECTORATE GENERAL OF WORKS

No. 7-54/TADC/1799-2799 Dated : 24-3-93

Sub:- Provision of W.C. Pans in General Pool Quarters

A study has recently been conducted by TAD Cell on the subject of providing Indian, European and Anglo-Indian W.C. pans in toilets. The opinion of Engineers and Architects was obtained and user satisfaction was also considered. The outcome of the study has been examined as to whether we need to change our practice and provide Anglo-Indian W.C. in bathrooms of residential units.

The conclusions of the study are given below for general guidance:

1. The present practice of providing one Indian and one European W.C. should continue.
2. In case there is only one W.C. Indian type W.C. pan should be provided.
3. Anglo-Indian W.C. pan should be provided only when it is specifically required by the occupant.

Sd/-
Director General (Works)
Central Public Works Deptt.
Nirman Bhawan
New Delhi

Entitlement for Allotment of Various Type Quarters

THE GAZETTE OF INDIA: FEBRUARY 14, 2009/MAGHA 25, 1930

MINISTRY OF URBAN DEVELOPMENT
(DIRECTORATE OF ESTATES)
New Delhi, the 3rd February, 2009

G.S.R. 20- In pursuance of the provision of rule 45 of the Fundamental Rules, the President hereby makes the following rules further to amend the Allotment of Government Residences (General Pool in Delhi) Rules, 1963, namely:-

1. Short Title & Commencement:- (1) These rules may be called the Allotment of Government Residences (General Pool in Delhi) Amendment Rules, 2009.

(2) They shall come into force from the 1st day of April, 2009.

2. Substitutions of new SR for SR-317-B-5:- In the Allotment of Government Residences (General Pool in Delhi) Rules, 1963 for Supplementary Rule SR-371-B-5, the following rule shall be substituted, namely:-

CLASSIFICATION OF RESIDENCES SR-317-B-5:- (1) Save as otherwise provided by these rules, an officer shall be eligible for allotment of a residence of the type shown in column-1 of the Table below:-

TABLE

Type of Residences	Grade Pay
(1)	(2)
I	Rs.1,300, Rs.1,400, Rs. 1,600, Rs.1,650 and Rs.1,800
II	Rs.1,900, Rs. 2,000, Rs. 2,400 and Rs. 2,800
III	Rs.4,200, Rs.4,600 and Rs.4,800
IV	Rs.5,400 to Rs.6,600
IV (Spl.)	Rs.6,600
V-A (D-II)	Rs.7,600
V-B (D-I)	Rs.8,700 and Rs.8,900
VI-A (C-II)	Rs.10,000
VI-B (C-I)	Rs.12,000

Where accomodation higher than Type-VI-B is available, eligibility of allotment shall be such as shown as shown in the Table below:

TABLE

Type of Residences	Basic Pay
(1)	(2)
VII	Rs.75,000 to Rs.80,000
VIII	Rs.80,000 and above

An officer of All India Service in Grade Pay of Rs. 12,000/- shall also be eligible for Type-VII accomodation provided his/her pay plus Grade Pay reaches Rs. 75,000 or above.

(2) Hostel Accomodation:- Save as otherwise provided by these rules, an officers shall be eligible for allotment of type of hostel accomodation as shown in column-1 of the Table below:-

TABLE

Type of Hostel	Category of officer or his Grade Pay as on such dates as may be specified by the Central Government for the purpose
(1)	(2)
Single Suite (Without Kitchen)	Rs 4,200 and above
Single Suite (With Kitchen)	Rs.4,200 and above
Double Suite	Rs 5,400 and above
Working Girl Hostel	All lady officers without limit of emolument shall be eligible

ADDITIONS/ALTERATIONS IN GENERAL POOL RESIDENTIAL ACCOMODATIONS

DIRECTORATE OF GENERAL OF WORKS
CENTRAL PUBLIC WORKS DEPARTMETNT
WI SECTION NIRMAN BHAWAN

File No. 18/23/2003-WI(DG)/Vol.IV/1339 Dated the 14.10.2009

OFFICE MEMORANDUM

Subject:- Additions/Alterations in General Pool Residential Accomodations.

The undersigned is directed to refer to this Directorate O.M. of even no. dated 5.4.2008 on the above mentioned subject circulated to CE's alongwith copy of Ministry of UD's O.M. No. 11014/1/2008-W3 dated 14.3.2008 on the above mentioned subject.

At present, glazing of verandah/Balcony, using MS window section/power coated aluminum section of matching shade, as the case may be, is permissible under the above said guidelines but the same is to be done alongwith whole upgradation works, which is taken up as per turn in serial order.

The matter has been reviewed in the Ministry and it has been decided by the Ministry, vide their O.M. 11014/1/2008/W3 dated 30.9.2009, to de-link the facility of covering of balconies from upgradation works, i.e, balconies can be covered on the request of allottees, without waiting for their turn for complete upgradation work. The design of grill/glazing may be decided in consultation with concerned Senior Architect.

Sd/-
(B.N. Malhotra)
Director (P & WA)

To: As per list enclosed

F.No. 1014/1/2008-W3
Government of India
Ministry of Urban Development
Nirman Bhawan, New Delhi-100011
14th March 2008

OFFICE MEMORANDUM

Subject:- Additions/alteration in General Pool Residential Accomodation

1. The undersigned is directed to state that under this Ministry's Office Memoranda No. 28012/1/203-WI dated 19th Feb. 2004 and 20th Feb. 2004, it has been provided that works of addition/alteration of non-structural nature can be carried out in General Pool Residential Quarters at the request of the occupants and to provide these facilities on vacation of residential quarters and also on payment of a part of cost by the allottees in respect of occupied quarters.

2. It has now been decided to provide the prescribed facilities subject to availability of funds in all GPRA quarters as well as quarters in other pools which are being maintained by CPWD whether occupied or vacant (except for Type-I Quarters) in serial order in each colony with the consent of the concerned allottee. Instructions for Type-I quarters shall be issued separately.

3. A list of permissible civil and electrical items/works or additions/alterations is enclosed as Annexure-I.

4. The list of civil and electrical items of additions/alteration which may be carried out at the request of the allottee and on the allottee paying the specified percentage of the cost of the works has been revised and is at Annexure-II.

5. No other work of additions/alternation which involves structural changes in the allotted quarters would be carried out. The decision of the CPWD as to whether any work of addition/alteration requested by an allotee is of a structural nature shall be final.

6. The works of addition/alternation in a house as per prescribed specification shall be completed within a maximum period of two months from the date of handing over the possession of house to CPWD.

7. This Memorandum issues in supersession of all previous instructions, including the OM mentioned in paragraph 1 above and with concurrence of integrated Finance Division vide Dy. No. 02F dated 01/01/2008.

Sd/-
Under Secretary to the Government of India

ANNEXURE-1

Specification prescribed for Up-grading on vacation as well as in occupied quarters (free of cost)

S.N.	DESCRIPTION OF ITEM	

		TYPE II	TYPE III	TYPE IV	TYPE V	TYPE VI
	A. CIVIL WORKS					
1.0	**KITCHEN**					
	1.1 General:					
	1.1.1 Removal of chimney wherever existing.	Y	Y	Y	Y	Y
	1.1.2 Covering of shelves below kitchen counter with cupboard shutter or built in cupboard where concrete/ stone shelves are not existing (except gas area) (Items to be done as per approved and demonstrated design)	Y	Y	Y	X	X
	1.1.3 Covering of shelves below kitchen counter with cupboard shutter or built in cupboard where concrete/stone shelves are not existing (except gas area) and overhead cabinets (With preliminated board with beige/grey shade) (Items to be done as per approved and demonstrated design)	X	X	X	Y	Y
	1.1.4 Plumbing for water purifier and geyser.	Y	Y	Y	Y	Y
	1.1.5 Addition of water storage capacity upto 300 lt per DU by providing additional tank at terrace. If not possible 10/150 litre capacity loft tank including connected plumbing work in kitchen and toilets.	Y	Y	Y	Y	Y
	1.2 Kitchen Sink:					
	1.2.1 Stainless steel kitchen sink without drain board	Y	Y	Y	X	X
	1.2.2. Stainless steel kitchen sink with drain board wherever possible.	X	X	X	Y	Y
	Note: Y for Yes & X for No					

Specification prescribed for Up-grading on vacation as well as in occupied quarters (free of cost)

S.N.	DESCRIPTION OF ITEM					
		TYPE II	TYPE III	TYPE IV	TYPE V	TYP E VI
	1.3 Dado:					
	60 cm high white glazed tiles (Size 8"x12") above and along the work platform and around and below kitchen sink.	Y	Y	Y	X	X
	1.3.2 60 cm high white glazed tiles (Size 8"x12") dado from skirting level upto 60 cm height above the kitchen platform above and along the worktop and around and below kitchen sink excluding areas where built in cupboards are fixed.	X	X	X	Y	Y
	1.4 Worktop:					
	1.4.1 Green marble-prepolished with premoulded nosing nosing.	Y	Y	Y	X	X
	1.4.2 Granite with pre-polished and premoulded nosing.	X	X	X	Y	Y
	1.5 Flooring:					
	1.5.1 Ceramic floor tiles (Size 12"x12" Mat finish) flooring over existing floors.	Y	Y	Y	X	X
	1.5.2 Rectified Ceramic floor tiles (Size 16"x16" Matt finish) flooring over existing floors.	X	X	X	Y	Y
2.0	**Toilets & Bathrooms**					
	2.1 Wash basin & Mirror:					
	2.1.1 One wash basin with one pillar tap at appropriate location.	Y	Y	Y	X	X
	2.1.2 One looking mirror with PTMT frame and with one glass shelf with anodized aluminium frame.	Y	Y	Y	X	X
	Note: Y for Yes X for No					

Specification prescribed for Up-grading on vacation as well as in occupied quarters (free of cost)

S. N.	DESCRIPTION OF ITEM					
		TYPE II	TYPE III	TYPE IV	TYPE V	TYPE VI
	2.1.3 Anodized aluminum Pegs in bathroom/ towel rings (1 No) as per feasibility.	Y	Y	Y	X	X
	2.1.4 CP Brass pegs and towel rail in bathroom, towel ring at washbasin with CP brass mixer tap (preferably single lever)	X	X	X	Y	Y
	2.1.5 Looking mirror with PTMT frame and glass shelves with stainless steel/CP Brass frame at washbasins.	X	X	X	Y	Y
	2.2 Flooring & Dado					
	2.2.1 Flooring					
	2.2.1.1 Ceramic flooring tile (Size 12"x12" Matt finish) of approved design.	Y	Y	Y	X	X
	2.2.1.2 Rectified ceramic floor tiles (Size 16"x16") of approved design.	X	X	X	Y	Y
	2.2.1.3 Pre-finished/Pre-polished granite threshold 100mm high and 100 mm wide in shower area in combined toilet.	X	X	X	Y	Y
	Note: Y for Yes X for No					

Specification prescribed for Up-grading on vacation as well as in occupied quarters (free of cost)

S.N.	DESCRIPTION OF ITEM					
		TYPE II	TYP E III	TYP E IV	TYPE V	TYPE VI
	2.3 Dado					
	2.3.1 Creamic white glazed tile (Minimum Size 8"x12") up to door lintel level.	Y	Y	Y	Y	Y
3.0	**Bed Rooms/Living Rooms**					
	3.1 Flooring in rooms and internal areas.					
	3.1.1 Grey/Beige color Ceramic floor tile (Size 12"x12" Matt finish) of approved design.	Y	Y	Y	X	X
	3.1.2 Grey/Beige color rectified ceramic floor tile (Size 16"x16" Matt finish) of approved design)	X	X	X	Y	Y
4.0	**In common circulation areas and staircases.**					
	4.1 Kota stone flooring and matching skirting. In staircase. single piece pre-polished kota stone slab with pre-finished nosing shall be used.	Y	Y	Y	Y	Y
	4.2 Dado of ceramic tile light grey/dull green shade 12"x112" size up to 120 cm height above skirting including green marble nosing.	Y	Y	Y	Y	Y
	Note: Y for Yes X for No					

Specification prescribed for Up-grading on vacation as well **as in occupied quarters (free of cost)**

S.N.	DESCRIPTION OF ITEM					
		TYPE II	TYPE III	TYPE IV	TYPE V	TYPE VI
5.0	Other fixtures and ammenities:					
	5.1 Magic eye in the main entry door.	Y	Y	Y	Y	Y
	5.2 Curtain rods with brackets.	Y	Y	X	X	X
	5.3 Drapery rods with brackets.	X	X	Y	Y	Y
	5.4 Built in cupboards in bedrooms as per standard drawings where no cupboard provided earlier, where openings are available the same will be covered with built in cupboard as per approved drawings. In case of such openings with existing concrete/stoneshelves, only cupboard shutters with wooden frames shall be provided.	Y	Y	Y	Y	Y
	5.5 Glazing of verandah/balcony, using M.S. window section. (to be done as per approved design) if requisitioned by the allottee.	Y	Y	Y	X	X
	5.6 Glazing of verandah/balcony, with powder coated aluminum section of matching shade. (to be done as per approved design) if requisitioned by the allotee.	X	X	X	Y	Y
	5.7 Wire-gauze shutters for windows with hard wood/LVL	Y	Y	Y	X	X
	Note: Y for Yes X for No					

Specification prescribed for Up-grading on vacation as well **as in occupied quarters (free of cost)**

S.N.	DESCRIPTION OF ITEM					
		TYPE II	TYPE III	TYPE IV	TYPE V	TYPE VI
	5.8 Wire-gauze shutters for window with 2nd class teak wood.	X	X	X	Y	Y
6.0	**Internal finishing:-**					
	6.1 All walls and ceiling to be treated with 2mm thick POP (one time only) followed by oil bound distemper. Synthetic enamel paint on all wood work and steel work.	Y	Y	Y	X	X
	6.2 All walls and ceiling to be treated with 2mm thick OPP (one time only) followed by plastic emulsion paint. Synthetic enamel paint on all wood work and steel work.	X	X	X	Y	Y
	B. Electrical Works					
1.0	1.1 Power Points (15 Amp. 60 Pins) (in Numbers)	3	4	5	6	7
	1.2 Power Points (15 Amp. 6 – Pins) Servant quarter and garage where ever available (In numbers)	X	X	X	1	1
	1.3 Power sockets (DP-MCB type) for air conditioner/geyser (in Numbers)	1	1	2	4	5
2.0	**Ceiling Fans (in Numbers)**					
	2.1 Additional ceiling fan to be provided in balcony/ verandah. (in Numbers)	3	4	5	6	7
	2.2 Additional ceiling fan to be provided in balcony/verandah	Y	Y	Y	Y	Y
	Note: Y for Yes & X for No					

Specification prescribed for Up-grading on vacation as well **as in occupied quarters (free of cost)**

S.N.	DESCRIPTION OF ITEM					
		TYPE II	TYPE III	TYPE IV	TYPE V	TYPE VI
3.0	**3.1 Fluorescent light fittings** (excluding tube lights and starter) (In Numbers).	3	4	5	7	8
	3.2 Servant quarters/garage (1Numbers)	Y	Y	Y	Y	Y
4.0	4.1 Electrical Points including light, fan, call bell and 5 Amp. Plug points (in Numbers)	20	23	27	38	44
5.0	**Others**					
	5.1 One No. Door call bell	Y	Y	Y	Y	Y
	5.2 Call bell from main house to servant's qtr. (Wherever existing)	X	X	X	Y	Y
	5.3 Recessed conduit wiring.	Y	Y	Y	Y	Y
	5.4 Call bell point from ground floor at stair entrance to first floor quarters where grill door has been provided on stair entry.	Y	Y	Y	Y	Y
	5.5 Fresh air fan in kitchen and toilets (In Numbers)	1	2	2	3	3
	5.6 Tube light fittings with tube light / CFL fitting with CFL in common circulation areas/staircase.	Y	Y	Y	Y	Y
	Note: Y for Yes X for No					

Specification prescribed for Up-grading on vacation as well **as in occupied quarters (free of cost)**

S.N.	DESCRIPTION OF ITEM					
		TYPE II	TYPE III	TYPE IV	TYPE V	TYPE VI
	5.7 Cable TV Point (In Numbers)	1	1	1	2	2
	5.8 Telephone Points (In Numbers)	X	X	1	2	2
	Note: Y for Yes X for No					

ANNEXURE-II

ITEMS OF WORKS UNDER PAYMENT BASIS OF THE ESTIMATED COST

(Balance item excluding the items already covered in up-gradation works)

A. CIVIL WORKS

(i) Items for which 10% of the estimated cost is to be changed from allottees:

- Pavement of areas around the premises with suitable material in an approved manner.

Note: Pavement of areas to be done with chequered tile or plain cement concrete or interlocking blocks including C.D. edging.

(ii) Items for which 100% of the estimated cost is to be charged from allottees:

- Changing of Indian WC to European WC & vice versa. (It will be free of cost once for an allottee.

Note: All connected costs of dismantling, relaying tiles, finishing etc. to be included for changing of Indian WC to European WC & vice versa.

B. ELECTRICAL WORKS

(I) Items for which 10% of the estimated cost is to be charged from allottees:

- Additional power plug points/light plug points/ light points.

Note: Additional points to be provided only when feasible as per electrical load,

(ii) Items which 100% of the estimated cost is to be charged from allottees:

- Fancylight fitings.
- Change of cable from feeder pillar to house, if required due to increased load in house.

F.No. 11014/1/2008-W-3
Government of India
Ministry of Urban Development
(Works Division)

Nirman Bhawan, New Delhi
Dated: 22nd April, 2008

CORRIGENDUM

Subject: Additions/ Alterations in General Pool Residential Accomodation.

In partial modification of O.M. of even number dated 14.3.2008, the following items shall be inserted under the heading "A-Civil Works" and sub-heading "5-Other fixtures and amenities" after item No. 5.8 as item Nos. 5.9 & 5.10 in Annexure-I of the said O.M. dated 14.3.2008:-

Specification prescribed for Up-gradation on vacation as well as in occupied quarters (Free of cost)

Description of item	Type-II	Type-III	Type-IV	Type-V	Type-VI
5.9 Wire gauze shutters for main entrance door. This will be made of MS tube/angle iron with grills and wire gauge as per approved design	Y	Y	Y	Y	Y
5.10 Pre-coated chain link fencing with iron gate, if feasible. The height of pre-coated chain link fencing with 90cm over 30cm high toe wall with permanent finish to be provided. (Area around the quarter to be defined/ restricted for proper aesthetics and to facilitate parking of vehicles of proper floor houses as per site condition and in an approved uniform manner.)	Y	Y	Y	Y	Y

Note: 'Y' for Yes

Sd/-
(Surat Singh)
Under Secretary to the Government of India

To

1. All Ministers/Departments of the Government of India.
2. CAG of India, Bahadur Shah Zafar Marg, New Delhi.
3. Secretary General, Rajya Sabha/Lok Sabha Secretariat, New Delhi.
4. Director General (Works), CPWD, New Delhi.
5. Chief Secretaries of Union Territories.
6. Director of Estate, Ministry of Urban Development, New Delhi.

GOVT. OF INDIA
CENTRAL PUBLIC WORKS DEPARTMENT

No. 23(Est.)DCC-XI/10/10 New Delhi dated 7.1.2010

To

The Chief Engineer (NDZ-IV),
CPWD, R.K.Puram,
New Delhi-66

Sub:- UPGRADATION OF TYPE-I G.P.R.A. QRS.

It has been decided by the Ministry of Urban Development vide O.M. No. 11014/12009/W-3, dated 12.10.09 to the upgrade of Type-I G.P.R.A. Qrs. (copy enclosed for ready ref.).

Colour wash has been mentioned as internal finishing in Para 6 of this O.M.

Kindly see specifications issued in plinth area rates applicable as on 1.10.07.

Following specifications has been mentioned:-

"All walls and ceilings to be treated with 2mm thick POP followed with a coat of acrylic/oil bound distemper except kitchen, bath & WC and all ceiling which will be done with white wash. Synthetic enamel paint on all wood work and steel work.

It is requested that anomalies in both the specifications may be removed.

Encl:- As Stated

Sd/-
(ER. A.K.GARG)
SUPERINTENDING ENGINEER
Delhi Central Circle No. XI,
CPWD, Pushp Bhawan,
New Delhi-62

Copy to:-

1. The Addl. Director General of Works (TD), CPWD, Nirman Bhawan, New Delhi-11 for kind information alongwith above enclosures.
2. The Ex. Engineer, PVMD, CPWD, New Delhi-62.
3. The Ex. Engineer, P-Divn., CPWD, Andrews Ganj, New Delhi-49.
4. The Ex. Engineer, V-Division, CPWD, Sarojini Nagar, New Delhi-23.

SUPERINTENDING ENGINEER

F.No. 11014/1/2009-W-3
Government of India
Ministry of Urban Development
Nirman Bhawan, New Delhi-110011
Dated: 12th October, 2009

OFFICE MEMORANDUM

Sub:- Additions/alterations in Type-I General Pool Residential Accomodation.

It is to mention that norms for addition/alterations for quarters from Type-II to Type-VI are already existing and there has been a demand for fixing of norms for addition/alteration of Type-I quarters also. It has now been decided to provide the prescribed facilities free of cost subject to availability of funds in Type-I GPRA quarters in serial order with the consent of the concerned allottees. In exceptional cases Chief Engineer, after recording the reasons in writing, may allow in situ upgradation of quarters on out of turn basis. A list of permissible civil and electrical items/works of additions/alterations is enclosed as **Annexure.**

No other work of addition/alteration which involves structural changes in the allotted quarters would be carried out. The decision of the CPWD as to whether any work of addition/alteration requested by an allottee is of a structural nature shall be final.

The works of additions/alteration in a house as per prescribed specification shall be completed within a maximum period of 30 days from the date of handing over the possession of house to CPWD.

Hindi version will follow

Sd/-
(Surat Singh)
Under Secretary to the Government of India

To

1. All Ministers/Departments of the Government of India.
2. CAG of India, Bahadur Shah Zafar Marg, New Delhi.
3. Secretary General (Works), CPWD, New Delhi.
4. Chief Secretaries of Union Territories.
5. Director of Estate, Ministry of Urban Development, New Dedlhi.

ANNEXURE

SPECIFICATIONS PRESCRIBED FOR UPGRADATION OF TYPE 1 QUARTER (FREE OF COST)	
S.No.	**Description of Items**
	A. CIVIL WORKS
1.0	**Kitchen**
	1.1 General
	1.1.1 Removal of chimney wherever existing
	1.1.2 Addition of water storage capacity upto 150 lt. Per DU by providing additional loft tank including connected plumbing work in kitchen and toilets.
	1.2 Kitchen sink:
	1.2.1 Ceramic kitchen sink without drain board
	1.3 Dado:
	1.3.1 60 cm high white glazed tiles (Size 8"x8") above and along the work platform and around and below kitchen sink
	1.4 Worktop:
	1.4.1 Green marble-pre-polished with premoulded nosing
	1.5 Flooring:
	1.5.1 Ceramic floor tiles (Size 8"x8" Matt finish) flooring over existing floors.
2.0	**Toilet & Bathroom**
	2.1 Wash basin & Mirror:
	2.1.1 One wash basin with one pillar tap at appropriate location as per the space available
	2.1.2 Plumbing for geysers
	2.2 Flooring & Dado:
	2.2.1 Flooring
	2.2.1.1 Ceramic floor tile (Size 8"x8" Matt finish) of approved design
3.0	**Bed Room/Living Room**
	3.1 Flooring in rooms and internal areas.
	3.1.1 Grey/Beige color Ceramic floor tile (Size 8"x8" Matt finish) of approved design

4.0	**In common circulation areas and staircases:**
	4.1 Kota stone flooring and matching skirting in common circulation area. In staircase, single piece pre polished kota stone slab with pre-finished nosing shall be used
5.0	**Other fixtures and amenities:-**
	5.1.1 Curtain rods with brackets.
	5.1.2 Wire-gauze shutters for windows, with steel sections
6.0	**Internal finishing**
	6.1 Repair of all walls and ceiling (one time only) followed by colour-wash. Synthetic enamel paint on all wood work and steel work.
	B. ELECTRICAL WORKS
1.0	1.1 Power Points one in kitchen and one in bedroom (DP MCB Type) Total in Number-TWO
2.0	2.1 Ventilation fan one in kitchen and one for WC (in Numbers)-two

CHAPTER-II

PLINTH AREA RATES, AMENITIES & SPECIFICATIONS OF GPRA.

Plinth Area Rates As On 01.10.2007 (REPRINT 2010)

ANNEXURE-1

Sl. No.	Description	Office/ College/ Hospitals	Schools	Hostel	Residential
1	2	3	4	5	6
1.0 (A)	**RCC FRAMED STRUCTURE** (Specification as per Annexure-II)	Rates in Rs. Per sq. metre			
1.1(A)	RCC framed structure up to six storeys				
1.1.1(A)	Floor ht.3.35 mtr.	13200	9150		
1.1.2(A)	Floor ht. 2.90 mtr			9100	9000
1.0(B)	**RCC FRAMED STRUCTURE** (Normal Building)				
1.1(B)	RCC framed structure up to six storeys				
1.1.1(B)	Floor ht. 3.35 mtr.	10900	8650		
1.1.2(B)	Floor ht. 2.90 mtr.			8600	8500
1.2	**EXTRAS FOR**				
1.2.1	Every additional storey over six storeys upto nine storeys	310	310	310	310
1.2.2	Every additional storey over nine storeys upto twelve storeys	320	320	320	320
1.2.3	Every 0.3 mt. additional height of floor above normal floor hight of 3.35 mt./ 2.90 mts.	150	150	150	150
1.2.4	Every 0.3 mt. higher plinth over normal plinth height of 0.6 mt. (on G.F. area only)	150	150	150	150
1.2.5	Every 0.30 mt. deeper foundation over normal depth of 1.20 mtr (on G.F. area only)	150	150	150	150
1.2.6	Making stronger foundations to take load of one additional floor at a later date (on area of additional floor only)	1250	1250	1250	1250
1.2.7	Strip foundation in poor soil having bearing capacity less than 10 tonnes/ sqmt.	286	286	286	286

1.2.8	Resisting Earthquake forces	630	630	630	630
1.2.9	R.C.C. Raft foundations (ground floor only)	3560	3560	3560	3560
1.2.10	Pile foundation up to a depth of 15 mts (on ground floor area only.)	6470	6470	6470	6470
1.2.11	Stronger structural members to take heavy load above 500 Kgs./sqm. upto 1000 Kgs./sqm.	850	850	850	850
1.2.12	Larger modules over 35 sqm.	990	990	990	990
1.3	**BASEMENT FLOOR**				
1.3.1	Floor ht. 3.35 mtr. With normal water proofing treatment with bituminous felt	10452	-	-	-
1.3.2	**EXTRA FOR BASEMENT WITH**				
1.3.2.1	Mastic Asphalt W.P.T.	1144	-	-	-
1.3.2.2	Every 0.3 mt. addl. Height (above 3.35 mt.)	1274	-	-	-
1.3.2.3	Reduction for every 0.5 m. less height of basement than normal height 3.35 mt.	(-) 728	-	-	-
1.4	**FIRE FIGHTING**				
1.4.1	With wet riser system	300	300	300	300
1.4.2	With sprinkler system	450	450	450	-
1.5	**FIRE ALARM SYSTEM**				
1.5.1	Manual Fire Alarm System	-	-	-	155
1.5.2	Automatic Fire Alarm System	300	300	300	-
1.6	Pressurized mechanical ventilation system in the basements (with supply of Exhaust blowers)	50	50	50	-

Sl. No.	Description	Non-Residential			Residential		
		Office/ College/ Hospitals	Schools	Hostel	Type-1,II,III & servant Qtrs.	Type-IV Qtrs.	Type-V, VI and above
1	2	3	4	5	6	7	8
2	**LOAD BEARING CONSTRUCTION**						
2.1	**Floor height 3.35 mt.**						
2.1.1	Single storeyed	8250	7505	-	-	-	-
2.1.2	Doubled storeyed	7900	6740	-	-	-	-
2.1.3	Three storeyed	8250	7505	-	-	-	-
2.1.4	Four storeyed	8715	7555	-	-	-	-
2.2	**Floor height 2.90 mt.**						
2.2.1	Single storeyed	-	-	7315	6390	7030	7555
2.2.2	Doubled storeyed	-	-	6425	6200	6820	7205
2.2.3	Three storeyed	-	-	7315	6390	7030	7355
2.2.4	Four storeyed	-	-	7665	6740	7410	7900
2.3	**Scooter & Cycles sheds**	-	-	-	5805	5805	5805
2.4	**Garages**	-	-	-	5455	5455	5455
2.5	**Extra for**						
2.5.1	Every 0.3 mt. additional height above normal height 3.35 mt./2.90 mt.	150	150	150	150	150	150
2.5.2	Every 0.3 mt. higher plinth over noraml plinth height of 0.60 mt. (on ground floor area only)	150	150	150	150	150	150
2.5.3	Every 0.3 mt. deeper foundations over normal depth of 1.20 mt. (on G.F. area only)	150	150	150	150	150	150
2.5.4	Making stronger foundations to take load of one additional floor at a later date (on area of additional floor only)	430	430	430	430	430	430

2.5.5	Foundations on poor soils having bearing capacity less than 10 T/sqmt.	286	286	286	286	286	286
2.5.6	Foundations on poor soils requiring under reamed pile 6 mt. long	3085	3085	3085	3085	3085	3085
2.5.7	R.C.C. Raft foundation (G.F. area only)	3560	3560	3560	3560	3560	3560
2.5.8	Pile foundation up to a depth of 15 mtr. (G.F. area only)	6470	6470	6470	6470	6470	6470
2.6	**Extra for resisting Earth-quake Forces**						
2.6.1	In Zone V	588	588	588	588	588	588
2.6.2	Building of two storeyes or more in Zone III & IV	286	286	286	286	286	286
2.6.3	Resisting earthquake forces in Zone II and single storey buildings in Zone III & IV	Nil	Nil	Nil	Nil	Nil	Nil
2.7	**Stronger structural members to take heavy loads above 500 Kg/sqm. Up to 1000 Kg/sqmt.**	850	850	850	850	850	850
2.8	**Larger modules over 35 sqmt.**	990	990	990	990	990	990
2.9	**Fire-fighting**						
2.9.1	With wet riser system	300	300	300	300	300	300
2.9.2	With sprinkler system	450	450	450	450	450	450
2.1	**Fire Alarm System**						
2.10.1	a) Manual Fire Alarm system	-	-	-	155	155	155
2.10.2	b) Automatic Fire Alarm System	300	300	300	-	-	-

Note: Rates for items are applicable on entire plinth area except for items 1.2.4, 1.2.5, 1.2.6, 1.2.9, 1.2.10, 1.5, 2.5.2, 2.5.3, 2.5.4, 2.5.7 and 2.5.8.

Sl. No.	Description	Office & College	Hospitals	Schools	Hostels	Type of Quarters				
						I	II	III	IV	V, VI & above
1	2	3	4	5	6	7	8	9	10	11
3	**SERVICES**									
3.1	Internal Water supply & sanitary installations	4%	10%	5%	15% with attached toilets, 10% with common toilets	12%	12%	12%	12%	12%
						% age means % age of building cost of normal Building (1.0B)				
3.2	External service connections	5%	5%	5%	5%	5%	5%	5%	5%	5%
3.3	Internal electric installations									
						Note: The above does not include service connection Charges & electrification				
3.4	Internal electric installations for laboratories of schools	-	-	15% of building cost of **normal building (1.0B)**	-	-	-	-	-	-
3.5	Internal electric installations for terminal building and other allied structures in airports	15% of building cost	-	-	-	-	-	-	-	-
3.6	Extra for:									
3.6.1	Power wiring and plugs	4%	4%	-	-	-	-	-	-	-
3.6.2	Central Call bell system	1%	-	-	-	-	-	-	-	-
3.6.3	Lightening conductors									
3.6.3.1	Upto 4 storeyed building	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%
3.6.3.2	5 to 8 storeyed building	0.33%	0.33%	0.33%	0.33%	0.33%	0.33%	0.33%	0.33%	0.33%
3.6.3.3	Beyond 8 storeyed building	0.25%	0.25%	0.25%	0.25%	0.25%	0.25%	0.25%	0.25%	0.25%

3.6.4	Telephone conduits	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%
3.6.5	Centralized intercorn system	-	-	-	-	1%	1%	1%	1%	1%
3.6.6	Computer conducting	0.50%	0.50%	0.50%	0.50%					
3.6.7	Quality assurance	1%	1%	1%	1%	1%	1%	1%	1%	1%

Sl. No.	Type of lift	Capacity/ Persons	Weight	Speed in M/Sec.	Travel	Doors	Control	Price (Rs. In lacs)	Addl. Price for each additional floor (Rs.)
1	2	3	4	5	6	7	8	9	10
4	**LIFTS**								
4.1	**Passenger lifts**								
4.1.1	Passenger lifts	8	544 Kg.	1	G+4	Power operated	ACV VVF	13.5	90,000.00
4.1.2	Passenger lifts	8	544 Kg.	1.5	G+4	Power operated	ACV VVF	18	90,000.00
4.1.3	Passenger lifts	13	884 Kg.	1	G+4	Power operated	ACV VVF	18	90,000.00
4.1.4	Passenger lifts	13	884 Kg.	1.5	G+4	Power operated	ACV VVF	19	90,000.00
4.1.5	Passenger lifts	16	1088 Kg.	1	G+4	Power operated	ACV VVF	17	1,10,000.00
4.1.6	Passenger lifts	16	1088 Kg.	1.5	G+4	Power operated	ACV VVF	19.5	1,10,000.00
4.1.7	Passenger lifts	16	1088 Kg.	2.5	G+4	Power operated	ACV VVF	57	1,10,000.00
4.1.8	Passenger lifts (Bed lift)	20	1360 Kg.	0.75	G+4	Power operated	ACV VVF	21.5	90,000.00
4.1.9	Passenger lifts	20	1360 Kg.	1.5	G+4	Power operated	ACV VVF	27	1,10,000.00
4.1.10	Passenger lifts	20	1360 Kg.	2.5	G+4	Power operated	ACV VVF	59	1,30,000.00
4.2	**Goods lifts (2 speed)**								
4.2.1		1 Ton	-	0.5	G+4			14.75	50,000.00
4.2.2		2 Ton	-	0.5	G+4			19	50,000.00
4.2.3		3 Ton	-	0.25	G+4			23.25	60,000.00

Note:- ACVVVF= AC variable voltage variable frequency.

Sl.No.	Description	Rates in Rupees
5	**WATER TANK (RCC ONLY)**	
5.1	Overhead tank without independent staging	9.00 / Litre.
5.2	Overhead tank upto staging height 20 metres	15.20/ Litre.
5.3	Overhead tank with staging height between 20 metres and upto 30 metres	17.30/ Litre.
5.4	Overhead tank with staging height between 30 metres and 40 metres	21.00/ Litre.
5.5	Underground sump	9.00/ Litre.
6	**DEVELOPMENT OF SITE**	
6.1	**Levelling**	55.00/sqm.
6.2	**Internal roads & paths**	83.00/ sqm.
6.3	**Sewer**	63.00/ sqm.
6.4	**Filter Water Supply**	
6.4.1	Distribution lines 100 mm dia and below	46.00/ sqm.
6.4.2	Peripheral grid 150 mm to 300 mm dia pipes	35.00/ sqm.
6.4.3	Unfiltered water supply distribution lines	27.00/ sqm.
6.5	**Storm water drains**	50.00/ sqm.
6.6	**Horticulture Operations**	47.00/ sqm,
6.7	**Street lighting**	
6.7.1	With fluorescent lamps	55.00/ sqm.
6.7.2	With HPMV Lamps	75.00/ sqm.
6.7.3	With HPSV Lamps	95.00/ sqm.
6.7.4	Exit sign board i/c electric signage.	50.00/ sqm.

Note:- 1. The rates are per sqm. and are to be applied on the entire areas of the plot to be developed.

2. These rates will apply to normal conditions and normal layout plans. If any extras are required due to nature of layout involving filling, cutting or bringing service from large distance, than additional provision should be made.
3. Cost of bulk services water supply, sewage disposal e.g.
   - 3.1 Tube well, pumps, open wells, treatment plant, extension of lines from source of local bodies, head works at water source etc.
   - 3.2 Sewage pumps, sewage treatment plants, septic tanks, extension of cut-fall sewer up to point of disposal etc. are not included in these rates. Extra provision depending upon site condition may be made for these.
4. The cost of providing Green Building & Water harvesting are to be taken as per actual.
5. Cost of HT sub-station equipments, LT distribution system, DG sets, pumps, air-conditioning and other specialized works like aesthetic external lighting with metal halide lamp for facade lighting, addressable fire alarm system, rising mains, UPS, aviation obstruction lights, external service connections, storage water cooler, IBMS, CCTV, access control system for security, solar water heating system, solar lighting etc. are not included in above rates and the same are to be taken as per actual based on functional/ utility of the proposed building.
6. Clause 1.0 (A) shall be adopted for GPO and GPRA.
   Clause 1.0 (B) may be adopted for other building

SCALE OF AMENITIES FOR GENERAL POOL RESIDENTIAL ACCOMODATION

Item No.	Item	Type I	Type II	Type III	Type IV	Type V/VI
1	**Kitchen**					
(i)	Shelves in tiers not more than 400mm wide along one wall 1'' thick	Yes	Yes	Yes	Covered cupboard above sill level with pre-laminated decorative board	Same as Type IV
(ii)	**Kitchen sink**	Stainless steel sink without drain board	Same as Type-I	Same as Type-I	Stainless steel sink with drain board	Same as Type -IV /vitreous china sink with draining board
(iii)	Dado Ceramic glazed tiles (size 8'' X 12'') for 60cm above and along worktop and around and below kitchen sink	Yes	Yes	Yes	Yes	Ceramic glazed tiles (size 8''X 12'') 60cm high dado from skirting level upto 60cm ht. above kitchen platform above and along the work top and around and below kitchen sink excluding areas where building in cupboards are fixed.
(iv)	Built in cupboard with open shelves below cooking platform, shutters of pre-laminated particle board 18mm thick below window sill level of cooking platform along one wall	Yes	Yes	Yes	Yes, with 2 drawers	Yes, with 2 drawers
(v)	Cooking platform standing	Yes	Yes	Yes	Yes	Yes

2(i)	**Wardrobes** Built in cupboard with R.C.C./pre-laminated particle board/Kota stone shelves and shutter upto ceiling height	(One in each Bed Room) 7'-00" height	One in each Bed Room, 7'-00" height	One in each Bed Room, 7'-00" height	One in each Bed Room) upto ceiling height	One in each Bed Room) upto ceiling height
(ii)	Magic eye in front door	One	One	One	One	One
(iii)	Window sill lining 18mm thick projected with Kota stone/marble	Kota Stone	Kota Stone	Kota Stone	Kota Stone	Marble
(iv)	Curtain rods with brackets	All rooms	All rooms	All rooms	Drapery rods	Drapery rod
(v)	Set of Pegs	In bath and bed rooms	In bath and bed rooms	In bath, bed and wardrobes	In bath, bed and wardrobes	In bath, bed and wardrobes

SCALES OF SANITARY FITTINGS FOR GENRAL POOL RESIDENTIAL ACCOMMODATION

Item No.	Item	Type I	Type II	Type III	Type IV	Type V/VI
1	Indian W.C. Pan with flushing cistern	One WC Pan Orissa pattern with low level PVC Flushing Cistern	One -Same as Type I	One -Same as Type I	One -Same as Type I	One + One for servant quarter
2	European type W.C. with low level flushing cistern	-	-	-	One -with low level PVC flushing cistern	One (symphonic type) with matching low level cistern
2(a)	Water Jet with low level European W.C.	-	-	-	One	One
3	Wash basin with one pillar tap each	One	One	One	Two - CP Brass mixer type -for hot and cold water with single lever	Three -CP Brass mixer type -for hot and cold water with single lever
4	Tap (kitchen bath & W.C.) C.P. Brass/ PTMT	4 PTMT	4 PTMT	4 C.P. brass	5 C.P/ brass	12(1 PTMT + 11 CP brass)
5	Shower C.P. Brass/ PTMT	One PTMT	One PTMT	One PTME	Two C.P. brass	Three C.P. Brass
6	Towel rail C.P. Brass/ PTMT	One PTMT	One PTMT	One PTME	Two C.P. brass	Three C.P. Brass
7	Mirror/ Bevelled edge/ P.V.C. frame with PTMT glass shelf	One	One	One	Two	Three
8	Soap rack (Nitch in W.C./Bath)	One	One	One	Two	Three
9	Liquid soap container	-	-	-	Two	Three
10	Storage tank	500 ltr.	500 ltr.	500 ltr.	750 litre	1000 litre+ 500 litre for servant quarters
11	Nitch with Kota stone sill in bath room	One	One	One	Two	3+1 for servant quarter
12	Plumbing for water purifier and Geyser	Yes	Yes	Yes	Yes	Yes

Note: Waste coupling in wash basins and grating over the floor trap shall be only of PTMT.

SPECIFICATION FOR ELECTRICAL INSTALLATION IN RESIDENTIAL QUARTERS

Item No.	Description	Type I	Type II	Type III	Type IV	Type V (excluding quarter & Garage)	Type VI (excluding servant quarter & Garage)	Servant Qtrs& Garage
1	Power Points (15 amperes, 6 pins)	2	3	4	5	6	7	1
2	MCB connected socket outlet for A.C. unit/Geyser complete with wiring	1	1	1	2	4	5	-
3	Ceiling Fans	2	3	4	5	6	7	1
4	Exhaust Fans	1	1	2	2	3	3	-
5	Call bells	1	1	1	1	2	3	-
6	Light/Fans/Call bell/ 5A Plug Points	17	20	23	27	38	44	5
7	F.I. Fittings excluding Tube and Starter	2	3	4	5	7	8	1
	Type of Wiring	Recessed Conduit wiring			Concealed conduit wiring			
8	EDB MCB Type							
	A. Single Phase	1	1	1	-	-	-	1
	B. 3 Phase	-			1	1	1	-
9	Cable TV Point	1	1	1	1	2	2	-
10	Telephone Point	-			1	2	2	-

SPECIFICATIONS FOR RESIDENTIAL BUILDINGS ANNEXURE-II

Item no.	Item	Type I, II, III & Servant Qtrs.	Type-IV	Type-V/VI	Hostel
1.1	Foundation	Bearing capacity 10 tonnes per sq. metre.	Applicable to all		
1.2		Type-spread foundation in RCC isolated/ combined, continuous wall footing with lean concrete.			
1.3		Depth upto 1.2 metres below ground level			
2.1	Super structure	RCC framed construction with filler walls in brick work or load bearing construction in brick/stone masonry with intermediate columns where found necessary.			
2.2		Internal partition- half brick masonry in cement mortar 1:4			

Sl. No.	Item	Type I, II, III & Servant Qtrs.	Type IV	Type V and VI
3.1	**Frames**			
3.1.1	Window	Pressed steel frames made out of corrosion resistant coated shutters of 1.6mm thick with double rebate	Pressed steel frames made out of corrosion resistant coated shutters of 1.6mm thick with double rebate/ scratch proof aluminum sheets/poly-propylene windows	Same as Type IV
3.1.2	Door	T-Iron /Pressed steel/Pre-cast R.C.C. frames	Pressed steel frames made out of corrosion resistant coated shutters of 1.6mm thick with single rebate/ factory manufactured precast RCC frames.	Same as Type IV
3.2	**Shutters**			
3.2.1	Window	M.S. tubular box section corrosion resistant coated shutters. Wire mesh shutters may also be provided at the discretion of Zonal Chief Engineer.	M.S. tubular box section corrosion resistant coated shutters. Wire mesh shutters may also be provided at the discretion of Zonal Chief Engineer/ Scratch proof aluminum window. Shutters to match with frame.	Same as Type IV

3.2.2	Main Door	Double door, one with iron grill with wire mesh mosquito proof and other 35mm thick paneled shutter with hard wood stile and rail with paneling of pre-laminated particle board, one side decorative other side balancing white.	Same as Type I to III.	Same as Type I to III except that paneling will be of both side decorative, Pre-laminated particle board.
3.2.3	W.C/ Bath room	Solid PVC shutters 28mm thick	Same as Type I to III	Same as Type I to III
3.2.4	Kitchen door	Partly paneled and partly wire mesh with stainless steel wire mesh. The paneling with pre-laminated particle board, one side decorative-35 mm thick paneled shutter with hard wood stile and rails.	Same as Type I to III	Partly paneled and partly wire mesh with stainless steel wire mesh, The paneling with pre-laminated particle board, both sides decorative 35mm thick paneled shutter with hard wood stile and rails.
3.2.5	Other doors	35 mm thick paneled shutters with hard wood stile and rail with paneling or prelaminated board, one side decorative.	Same as Type I to III	35mm thick paneled shutters with hard wood style and rail with paneling or pre laminated board, both sides decorative.
3.3	**Fittings**	Powder coated M.S. fittings / stainless steel fittings	Power coated aluminum/ stainless steel fittings	Same as Type IV
3.4	Peep hole and security chain for external door only	Yes	Yes	Yes

Note :

1. In item no.3 of Wood work, if any other option of local material is available, the same can also be used by the respective Chief Engineers.
2. External sliding door bolt and handles will be in powder coated M.S. or stainless steel.
3. Koba treatment on roofing in all type of quarters.

Sl. No.	Item	Type I, II, III & Servant Qtrs.	Type IV	Type V and VI
4	**Flooring**			
4.1	Bedrooms/ living rooms	Grey/ Beige color ceramic floor tiles (size 12" x 12" Matt finish) of approved design	Same as Type I to III	Grey/Beige color rectified ceramic floor tiles (size 16" x 16" Matt finish) of approved design.
4.2	Kitchen, internal circulation	Ceramic floor tiles (size 12" x 12" Matt finish) of approved design.	Same as Type I to III	Rectified ceramic floor tiles (size 16" x 16" Matt finish) of approved design
4.3	Common circulation area, staircase	(i) Kota stone flooring and matching skirting. In staircase, single piece pre-polished kota stone slab with pre-finished nosing be used. (ii) Dado of ceramic tile light grey/dull green shade 12" x 12" size upto 120cm ht. above skirting i/c green marble nosing	Same as Type I to III	Same as Type IV
4.4	Kitchen work top	Green marble pre-polished with pre-polished with pre-moulded nosing	Same as Type I to III	Granite with pre- polished and premoulded nosing
4.5	Toilets	Ceramic floor tiles (Size 12" x 12") Matt finish/anti skid of approved design.	Same as Type I to III	Rectified ceramic floor tiles (size 16" x 16") Matt finish/anti skid of approved design
4.6	Skirting/ Dado in toilets	Ceramic white glazed tiles (min. size 8" x 12") upto door lintel level	Same as Type I to III	Ceramic white giazed tiles (min size 8" x 12") upto ceiling ht. with decorative band of tiles.
5	**Finishing**			
5.1	**External**	Acrylic smooth exterior finish or washed stone grit plaster or exposed brick work	Premium Acrylic smooth exterior finish with additive of silicone or washed mosaic plaster in ordinary cement or exposed brick work.	Premium Acrylic smooth exterior finish with additives of silicone or washed mosaic plaster in ordinary cement or exposed brick work.

5.2	**Internal**	All wall and ceilings to be treated with the 2 mm thick POP followed with a coat of acrylic/oil bound distemper except kitchen, bath & WC and all ceiling, which will be done with white wash. Synthetic enamel paint on all wood work and steel work.	Same as Type I to III	All walls & ceiling to be treated with 2mm thick POP plaster and cornices followed with a coat of plastic emulsion paint except kitchen, bath and WC and all ceilings, which will be done with white wash. Synthetic enamel paint on all wood work and steel work.

PROFORMA FOR CALCUCATION OF COST INDEX

Sl. No	Description		Unit	Rates As On 1.10.2007 In Rs.	Weight-age	Rate At The Time Of Revision Of Cost Index	Cost Index
1	Bricks		1000 Nos.	2000/-	8.00		
2	Cement (OPC)		Qtl.	457/-	14.50		
3	Steel a) 8 & 10 MM (Tor Steel) b) 12 & 16 MM (Tor Steel)	 50% 50%	Qtl.	3280/-	19.50		
4	Aggregate 20 MM Size		Cum.	700/-	6.50		
5	Sand (Coarse Sand)		Cum.	650/-	3.00		
6	Flooring Items a) Mosaic Tiles b) Ceramic Tiles c) Kota Stone d) Granite Stone	 40% 40% 10% 10%	Sqm.	381.10	3.00		
7	Paints a) Synthetic Enamel Paint b) O.B.D c) Plastic Emulsion Paint	 33.33% 33.33% 33.33%	Litre	100/-	3.00		
8	Ply And Comm. Wood (i) 12 MM Thick Particle Board (ii) Steel Window Standard 'Z' Section (iii) Aluminium Window	 33.33% 33.33% 33.33%	Sqm.	1281.33	5.00		
9	Pipes (i) 15 MM G.i. Pipe (ii) 100MM Sci Pipes (iii) 20 MM Black Conduit	 33.33% 33.33% 33.33%	Mtr.	144.50	2.50		
10	Lamps & Fans (i) Ceiling Fans 48" (ii) 1.20 M Fluorscent Tube With Fitting	 50% 50%	Each	655/-	3.50		
11	Elect Machinery Fitting Motors 7.5 HP (Pump Set) 1500 Rpm (Kirloskar)		Each	35000/-	2.50		
12	Wires & Cables (Copper Wires) a) 1.5 Sqmm b) 4.0 Sqmm	 70% 30%	100 Mtr.	825	4		
13	Labour (i) Skilled (ii) Unskilled	 50% 50%	Each	143.38	25.00		

Govt. of India
Directorate General
Central Public Works Department
(Technology Application and Standards Unit)
Nirman Bhawan, New Delhi

No: 62/SE(TAS)/PAR-2007/2010/294-E Dated: 19/10/2010

OFFICE MEMORANDUM

It has been reported that while framing the estimates, various provisions/ rates given in Plinth Area Rates-2007 (Reprint-2010) are not being adopted uniformly due to lack of clarity.

Some of the doubts which have been brought to the notice of the Directorate are clarified here as under for guidance and necessary adoption.

1. Provision of basement is being made in the estimates. Additional provision for raft foundation is also being made in such estimates. Since the element of raft is included in the basement, it is clarified that additional provision for raft is not required to be made.
2. Provisions for extra cost for earthquake forces are being made even for basement area. It is clarified that such a provision is not required to be made for basements area.
3. Extra provision exists in the DPAR for heights over six storeys and over nine storeys. It is observed that while preparing estimates field units are adding such provisions for each additional storeys over 6 or 9 storeys. As such the additional rates for different storeys, above 6th storey is projected as;

Rate for seventh storey is taken as	1 x 310 = 310
Rate for eighth storey is taken as	2 x 310 = 620
Rate for ninth storey is taken as	3 x 310 = 930

In this respect correction slip no. 4 is being issued deleting the word “every additional storeys” in item no. 1.2.1 and 1.2.2. Additional rate for different storeys, above need not to be changed as explained below:-

Rate of seventh storey is to be taken as	Rs. 310/-
Rate of eighth storey is to be taken as	Rs. 310/- and not Rs. 620.
Rate of ninth storey is to be taken as	Rs. 310/- and not Rs. 930

All the fields as well as planning units are advised to follow these guidelines strictly.

This issues with the approval of Director General, CPWD.

Sd/-
(A K Agarwal)
Executive Engineer (S&S)-I

Copy to:-

1) PPS to DG., CPWD, Nirman Bhawan, New Delhi.
2) All ADGs, CPWD.
3) DDG(Director), DD, Horticulture, CPWD.
4) All CAs, SAs & Architects

Sd/-
(A K Agarwal)
Executive Engineer (S&S)-I

Govt. of India

(Technology Application and Standards Unit)
CPWD, Nirman Bhawan, New Delhi

No: 62/SE(TAS)/PAR-2007/2010/293-E Dated: 19/10/2010

Correction slips no. 4 to Delhi Plinth Area Rates 2007. (Reprint 2010)

Existing				**Modified**			
Sl. No.	Page no.	Item no.	Description	Sl. No.	Page no.	Item no.	Description
1	3	1.2.1	Every additional storey over six storey upto nine storeys	1	3	1.2.1	Over six storeys upto nine storeys
		1.2.2	Every additional storey over nine storeys upto twelve storeys		3	1.2.2	Over nine storeys upto twelve storeys

New Item described as below is incorporated to DPAR-2007 (Reprint-2010)

Sl. No.	Item No.	Page No.	Description	Rates (Rs. Per Sqm.)			
				Office/College/ Hospital	School	Hostel	Residential
1.8	1.8.1	4	Stilt portion of a multi storey RCC structuure (upto height of 3.35 m.)	5421	5421	5421	5421
	1.82	4	Every 0.30 mts. Additional height (above 3.35 mtr.)	260	260	260	260

This issues with the approval of Director General, CPWD.

Sd/-
(A K Agarwal)
Executive Engineer (S&S)-I

CHAPTER-III

RELEVANT EXTRACTS FROM DELHI BUILDING BYE-LAWS

RELEVANT EXTRACTS FROM DELHI BUILDING BYE-LAWS APPLICABLE TO DELHI

PROCEDURE FOR OBTAINING APPROVAL OF DRAWINGS FROM LOCAL BODY

5. BUILDING PERMIT REQUIRED

5.1 No person shall erect, re-erect or make alterations or demolish any building or cause the same to be done without· first obtaining a separate building permit for each such building from the Authority.

5.2 **Pre-Code Building Permit** -If any building, permit for which had been issued before the commencement of the Bye-laws, if not wholly completed within a period of two years, from the date of such permit, the said permission shall be deemed to have lapsed and fresh permit shall be necessary to proceed further with the work in accordance with the provision of the Bye-laws.

6. PROCEDURE FOR OBTAINING BUILDING PERMIT

6.1 **Notice-** Every person who intends to erect, re-erect or make alterations in any place in a building or demolish any building shall give notice in writing to the Authority of his said intention in the prescribed form (See Appendix A) and such notice shall be accompanied by plans and statements in sufficient (See-Bye-Law No. 6.1.1) copies, as required under Bye-law No. 6.2 & 6.3. The plans may be ordinary prints on ferro paper or any other type. One of them shall be cloth mounted. One set of such plans shall be released and the rest retained in the office of the Authority for record after the issue of permit or a refusal.

APPENDIX 'A'
(Bye-law No. 6.1)
Form 1

Form for First Application to Erect, Re-erect or to Make Material Alteration in any Place in a Building

To

*[The Vice-Chairman,

Delhi Development Authority,

New Delhi

Sir, I hereby give notice that I intend to erect/re-erect/demolish or to make alternation in the Building No. …… or to ……..on/in Plot No. …….. Block No. ……..House No. …….. situated at …….. Scheme…….. and in accordance with the Buildings Bye-laws of Delhi, Bye-laws No. …….. And I forward herewith, the following plans and specification duly signed by me and ……..(name in block letters), the Licensed Architect/Engineer/Supervisor/Group-License No.

…… who have prepared the plans, designs etc. and who will supervise its erection and a copy of other statements/documents (as applicable) :

1. Site Plan
2. Building Plan
3. Service Plan
4. General Specification (in attached from)
5 Ownership Title
6. Attested copy of Receipt for payment of application fee
7. Other documents, as required.

I request that the construction may be approved and permission accorded to me to execute the work.

Signature of Owner……..
Name of Owner ……...
(in block letters)
Address of Owner……..….
.....……
……..……
……

Dated ……..

*Substitute "The Commissioner, Municipal Corporation of Delhi, Delhi" in case of MCD.

6.1.1 Copies of Plans and Statements- Normally 4 copies of plans and statements shall be made available alongwith the notice. In case of building schemes where the clearance is required from Delhi Fire Service the number of copies of the plan and statements accompanying the notice shall be 6. In case of schemes requiring clearance of Delhi Urban Arts Commission, the number of copies shall be 8 and in addition special drawings and models as desired by Delhi Urban Arts Commission shall be made available. In case of sites requiring the clearance of Land and Development Office, 9 copies of the plan shall be made available.

6.2 Information Accompanying Notice- The notice shall be accompanied by the site plan, building plans, services plans, specification and certificate of supervision and ownership title and other documents as prescribed by the Authority and in clauses 6.2.1 to 6.2.6

6.2.1 SIZE OF DRAWING SHEETS AND COLOURING OF PLANS

6.2.1.1 The size of drawing sheets shall be any of those specified in **Table 1**.

TABLE 1

DRAWING SHEET SIZE

Sl.No.	Designation	Trimmed Size, mm
1.	A0	841 X 1189
2.	A1	594 X 841
3.	A2	420 X 594
4.	A3	297 X 420
5.	A4	210 X 297
6.	A5	148 X 210

6.2.1.2 Colouring Notations for Plans- The plans shall be coloured as specified in Table 2. Further, prints of plans shall be on one side of paper only.

6.2.1.3 Dimensions-All dimensions shall be indicated in metric units.

TABLE 2

COLOURING OF PLAN

Sl. No.	Item	Site Plan			Building Plan		
		White plan	Blue print	Ammonia print	White plan	Blue print	Ammonia print
1	Plot Lines	Thick Black	Thick Black	Thick Black	Thick Black	Thick Black	Thick Black
2	Existing Street	Green	Green	Green	-	-	-
3	Future Street, if any	Green dotted	Green dotted	Green Dotted	-	-	-
4	Permissible building lines	Thick dotted Black	Thick dotted Black	Thick dotted Black	-	-	-
5	Open spaces				No Colour		
6	Existing work	Black (outline)	White	Blue	Black	White	Blue
7	Work proposed to be demolished	Yellow hatched	Yellow hatched	Yellow hatched	Yellow hatched	Yellow hatched	Yellow hatched
8	Proposed work	Red filled in	Red	Red	Red	Red	Red
9	Drainage & sewerage work	Red dotted	Red Dotted	Red Dotted	Red Dotted	Red Dotted	Red Dotted
10	Water supply work	Black dotted thin	Black dotted thin	Black dotted thin	Black dotted thin	Black Dotted thin	Red Dotted thin

6.2.2 Key Plan and Approval of Site- A key plan drawn to a scale of not less than 1: 10,000 shall be submitted alongwith notice, showing boundary, location of the site with respect of neighborhood landmarks, in areas where there is no approved layout plans. In case the site falls in built up area declared slum under the Slum (Improvement and clearance) Act, 1956, no objection certificate from the Commissioner (Slum) and/or Delhi Development Authority from slum clearance and land use point of view is to be submitted. In case the application is for farm houses, a no objection certificate from Land and Building Department of Delhi Administration/ [1][DDA] shall be obtained. In case of lease hold plot, clearance from the 'lessor' regarding lease conditions shall be obtained.

6.2.3 Site Plan- The site plan sent with an application for permit shall be drawn to a scale of not less than 1: 1000 and shall show:-

a) The boundaries of the site and of any contiguous land belonging to the owner thereof;

b) The position of the site in relation to neighbouring street;

c) The name of the streets in which the building is proposed to be situated, if any;

d) All existing buildings standing on, over or under the site;

e) The position of the building and of all other buildings (if any) which the applicant intends to erect upon his contiguous land referred to in (a) in relation to:-

i. The boundaries of the site and in case where the site has been partitioned, the boundaries of the portion owned by the applicant and also of the portions owned by others;

ii. All adjacent streets, building (with number of storeys and height) and premises within a distance of 2 m of the site and of the contiguous land (if any) referred to in (a); and

iii. if there is no street within a distance of 12m of the site, the nearest existing street;

f) The means of excess from the street of the building, and to all other buildings (if any) which the applicant intends to erect upon his contiguous land referred to in (a);

g) Space to be left about the building to secure a free circulation of air, admission of light and access for scavenging purpose;

h) The width of the street (if any) in front and of the street (if any) at the side or rear of building;

i) The direction of north point relative to the plan of the buildings;

j) Any existing physical feature, such as wells, drains, trees etc;

k) The ground area of the whole property and the breakup of covered area on each floor with the calculations for percentage covered in each floor in terms of the total area of the plot as required under the Bye-laws governing the coverage of the area;

l) Parking plans indicating the parking spaces for all buildings except for individual residential building;

m) Such other particulars as may be prescribed by the Authority; and

n) Holding number or plot No. of the property on which the building is intended to be erected is to be indicated on the drawing.

6.2.4 Building Plan- The plans of the building and elevations and sections accompanying the notice shall be drawn to a scale of 1:50 for plots measuring upto 250 sq. mtrs. and plots measuring above 250 sq. mtrs. to a scale of 1 :100. The plan shall:

a) Include floor plans of all floors together with the covered area clearly indicating the size and spacing of all framing members and sizes of rooms and the position and width of stair cases, ramps and other exit ways, lift well, lift machine room and lift pit details;

b) Show the use or occupancy of all parts of the buildings;

c) Show exact location of essential services, for example W.C., sink, bath and the like;

d) Include sectional drawings showing clearly the size of the footings, thickness of basement wall, wall construction, size and spacing of framing members, floors slabs and roof slabs with their materials. The section shall indicate the heights of building and room and also the height of the parapet; and the drainage and the slope of the roof. At least one section should be taken through the staircase, kitchen and toilet, bath and W.C.

e) Show all elevations;

f) Indicate details of service privy, if any;

g) Give dimensions of the projected portions beyond the permissible building line;

h) Include terrace plan indicating the drainage and the slope of the roof;

i) Give indications of the north point relative to the plan;

j) Details of parking spaces provided;

k) Give indication of all doors, windows and other openings including ventilators with sizes in proper schedule form; and

l) Such other particulars as may be required to explain the proposal clearly and as prescribed by the Authority.

6.2.4.1 Building Plans for Multistoreyed/Special Buildings- For multi-storeyed buildings which are more than 15m height and for special buildings like assembly, institutional, industrial, storage and hazardous occupancies the following additional information shall be furnished indicated in the Building Plans in addition to the items (a) to (1) of Bye-laws No. 6.2.4:-

a) Access to fire appliances/vehicles with details of vehicular turning circle and clear motorable access way around the building;

b) Size (width) of main and alternate staircases alongwith balcony approach, corridor, ventilated lobby approach;

c) Location and details of lift enclosures;

d) Location and size of fire lift;

e) Smoke stop lobby/door where provided;

f) Refuse chutes, refuse chamber, service duct, etc.

g) Vehicular parking spaces

h) Refuge area, if any;

i) Details of Building Services-air conditioning system with position of dampers, mechanical ventilation system, electrical services, boilers, gas pipes etc.

j) Details of exits including provision of ramps, etc. for hospitals and special risks;

k) Location of generator, transformer & switch gear room,

l) Smoke exhauster system, if any;

m) Details of fire alarm system net work;

n) Location of centralized control, connecting all fire alarm, system, built-in fire protection arrangements and public address system, etc.:

o) Location and dimension of static water storage tank and pump room;

p) Location and details of fixed fire protection installation such as sprinklers, wet risers, hose reels, drenchers. CO_2 installations etc.; and

q) Location and details of first aid fire fighting equipments/installations;

6.2.5 Service Plan- Plans, elevations and sections of private water supply, sewage disposal system and details of building services, where required by the Authority, shall be made available on a scale not less than 1: 100.

6.2.6 Specifications- General specifications of the proposed construction giving type and grade of material of public use in the form given in Appendix' A' duly signed by the licenced Architect/ Engineer/Supervisor/Group may be shown accompanying the notice.

6.2.7 Supervision- Notice shall be further accompanied by a certificate or supervision in prescribed form given in Appendix 'B' by the licensed Architects Engineers/Supervisors/ Group as the case may be.

6.2.8 Execution of Drainage/Sanitary Works- Notice shall be further accompanied by a certificate of supervision/execution of the water supply and drainage works etc. in the prescribed form and in Appendix 'B' duly signed by licensed Plumber/Engineer.

6.2.9 Documents- Application for building permit shall be accompanied by the following documents:-

a) Ownership Documents/Lease-deed sale-deed etc. duly accompanied by an annexed site plan giving the physical description of the plot/property. In such cases where lease-deed has not been executed, no objection certificate from the Competent Authority shall be submitted;

b) Document under Urban Land (Ceiling and Regulations) Act, 1976.

c) Undertaking for non-stacking of building material on public property/road in case of plot measuring more than 418 sq. mtr. in area to be submitted in the proforma as given in **Appendix 'M'**;

APPENDIX - 'A'

APPENDIX - 'B'

APPENDIX - 'M'

AFFIDAVIT/UNDERTAKING FOR NON-STACKING

(To be submitted on non-judicial stamp paper of Rs. 10/- duly attested by Oath Commissioner)

That I/we have submitted building plans for construction of buildings on Plot No. ……. Block No. …….. Located at …….. to the *[D.D.A. under section 12 of the DD Act] for favour of sanction. That I/we hereby give an undertaking that during the course of construction of my/our building as per sanction given by the **[DDA], I/we shall not stack building material/ mulba on the **[DDA], land/road. That in case, I/we am/are found stacking the building material/mulba on **[DDA] land/road then the Authority shall be at liberty to charge the stacking charges @ Rs. 2/- per sq. mtr. Besides any other action which the **[DDA] might like to take as per the rules including payment of the penalty of Rs. 500.

DEPONENT

VERIFICATION

I/we the above named deponent do hereby solemnly affirm and verify that I/we have voluntarily made the above affidavit and its contents are true to the best of my/our knowledge.
Verified at Delhi on this day …….. of ……..

DEPONENT

*Substitute "MCD under Sections 333 & 334 of the MCD Act, 1957" in case of MCD.

** Substitute "MCD" in case of MCD.

d) In case of any deviation from the terms and conditions stipulated in the lease-deed ownership document, necessary clearances form the Competent Authority;

e) No Objection Certificate from the Competent Authority regarding land use as per Master/ Zonal Plan, if required;

f) Approval from the Chief Inspector of Factories in case of Industrial Buildings;

g) Approval from Chief Controller of Explosives, Nagpur and Chief Fire Officer, Delhi, in case of hazardous buildings; and

h) Indemnity Bond in case of proposal for the construction of a basement as given in Appendix- 'N'.;

i) The certificate as indicated in Annexure-B and C to be signed by the owner, the Architect and the structural engineer.

APPENDIX 'N'

Indemnity Bond for Basement

(For DDA)*

(To be submitted on non-judicial stamp paper of Rs. 100/- duly attested by one Oath Commissioner)

This Indemnity Bond is executed by Shri…… and Shri …….. S/o Shri …….. Residents of …….. here in after called the owners of Plot No. …….. in …….. New Delhi in favour of DDA, its successor or entitled. WHEREAS the owners have submitted the plan of basement under and whereas the owners have represented to the DDA that if sanction is granted for the construction of the said basement the owners shall indemnify the DDA of any loss at the time of digging of foundation of the said basement or in the course of construction of the basement or even thereafter.

AND WHERAS the said owners have further agreed to indemnify the DDA of any claims put up against the DDA either by way of damage, compensation or in the other way in case the DDA is required to pay any such amount to any person or the owner or owners of the adjoining properties. The owners hereby agree and undertake to indemnify the DDA to pay the full extent of the amount the DDA may require to pay in the extent hereinabove mentioned.

The owners further undertake and agree to indemnify the DDA for any such amount the DDA may require to pay either by way of compensation or damage or any other amount and further undertake to indemnify the DDA of all cost and expenses that the DDA may require to defend any such action in any court of law. The owners undertake that no excavation shall be carried out beyond the boundaries of the plot. Any damage occurring during or due to the excavation made at site to public sewers, water drains shall have to be made good by the owners.

In consideration of the above matter, undertaking and indemnity given by the said owners, the DDA hereby under in this behalf grant the sanction in the said basement to the said owners.

IN WITNESS THEREOF, the owners above-mentioned put their hands and seal to the said indemnity bond on this …….. Day of ……

Witnesses:

1. …… 1. ……

2. …… 2. ……

(EXECUTANTS)

[1]ANNEXURE 'B'

(Under Clause 6.2.9)

Certificate: The following certificate is to be submitted along with the Building Drawing while submitting the plans for obtaining Building Permission:

1. Certified that the building plans submitted for approval satisfy the safety requirements as stipulated under Clause 18 of Building Bye-laws, 1983 and the information given therein is factually correct to the best of our knowledge and understanding.

2. It is also certified that the structural design including safety from natural hazards based on soil conditions has been duly incorporated in the design of the buildings and these provisions shall be adhered to during the construction.

Signature of the Owner with date	Signature of Architect with date	Signature of Structural Engineer with date (as defined in NBC of India)
Name in Block Letters Address	Name in Block Letters Address	Name in Block Letters Address

6.3 **Signing the Plans-** All the plans shall be duly signed by the owner/licenced Architect registered with Council of Architecture and shall indicate their names, address, licence and enrolment number. However, plans in respect of plots upto 500 Sq. meters and upto 4 storeys may be signed by a licenced engineer and for plots upto 100 Sq. meters and upto 2 storeys by a licenced supervisor, instead of licenced Architect subject to its being approved by the Competent Authority.

6.4 **Notice for Alteration Only-** When the notice is only for an alteration of the building (See Bye-Law No. 3.5), only such plans and statement as may be necessary, shall accompany the notice.

6.4.1 No notice and building permit is necessary for the following alterations, which do not otherwise violate any provisions regarding general building requirements, structural stability and fire safety requirements of the Bye-Laws:-

a) Plastering and patch repairs;

b) Re-roofing or renewal of roof including roof of intermediate floor at the same height;

c) Flooring and re-flooring;

d) Opening and closing windows, ventilators and doors not opening towards other's property;

e) Replacing fallen bricks, stones, pillars, beams etc.;

f) Construction or re-construction of sunshade not more than 75cm in width within one's own land and not overhanging over a public street;

g) Construction or reconstruction of parapet exceeding 1 m and not more than 1.5 m in height and also construction or re-construction of boundary walls as permissible under these Bye-laws;

h) Reconstruction. of portions of buildings damaged by storm, rains, fire, earthquake or any other natural calamity to the same extent and specification as existed prior to the damage, provided the use conforms to provisions of Master Plan;

i) White washing, painting etc. including erection of false ceiling in any floor at the permissible clear height provided that the false ceiling in no way can be put to use as a loft/mezzanine etc.; and

j) Erection or re-erection of internal partitions provided the same are within the preview of the Bye-laws.

6.5 **Building Permit Fees-** No notice as referred in 6.1 shall be deemed valid unless and until the owner giving notice has paid the requisite building permit fee to the Authority and receipt of such payment attached with the Notice. The schedule of fee is given below:-

a) Building permit fee for all buildings shall be calculated @ Rs. 1.00 per sq. mtr. of covered area (including basement floor, Mezz. floor and loft);

b) Fees for Additions/Alterations/Revised plans-The fee for internal additions/ alterations shall be 50% of the original building permit fee paid for the plan in question. In case

original building permit fee is not known, than fee for the whole building shall be calculated on area basis and 50% of this shall be charged as plan submission fee.

In case part plans for additions/alterations are accepted by the Authority then the plans submission fee shall be 50% of the fee for area affected by addition/alterations. This too shall be calculated on area basis. Apart from internal alterations if some additional area is proposed to be covered then the fee for this area shall be worked on the area basis and shall separately be added to the above fees.

c) *Revalidation of Plans-The* revalidation fee after the expiry of the validity period of original sanctioned plan shall be @ 25% of the original sanctioned plan permit fee per year.

Note: In no case the building permit fee as given in clause 6.5(a), 6.5(b) & 6.5(c) above shall be less than *Rs.25.*

d) Plans submission fee for the approval of layout for development/sub-division of land shall be calculated @ 100 per acres.

e) Fee for inspection of underground drainage work at the time of approval of form' C' shall be Rs. 10/-.

f) Fee for final inspection of drainage works etc. at the time of approval of 'D' form shall be Rs.15*/-.*

g) Fee for submission of NOC shall be Rs. 20/-.

CHECK LIST FOR CLEARANCES REQUIRED

(This is not part of Delhi Building Bye-Laws)

Sub:- **Check list for clearance which are required for initiation of any large construction projects.**

Check List

1. In principle Approval of Ministry in case of project of MoUD.
2. Administrative Approval & Expenditure Sanction from Competent Authority of Client Department.
3. Approval of Cabinet for the project costing more than 300 Cr. And project in PPP mode.
4. Consultation with power supply agencies, like BSES, NDMC, DTL and NDPL etc. regarding requirement of ESS and land therefor.
5. Consultation with drinking water supply agencies like DJB, NDMC etc. regarding availability of drinking water, its supply requirement, storage and augmentation etc.
6. Approval of layout Plan/Local Area Plan and Urban Design Proposal from:-

Sl. No.	Mandatory for all projects	Required in some cases	Remarks
i.	Local Body i.e. MCD/NDMC/DDA depending upon jurisdiction of project land area.		
ii.	Delhi Fire Service		
iii.	Airport Authority of India		Regarding proposed height of buildings
iv.	Forest Department for tree cutting & transplantation		
v.		ASI	When the project is within 300m. Radius from boundary of any monument protected under ASI Act.
vi		DMRC	When the project is within 50 mt. on either sides of MRTS corridor
vii		GNCTD	When the project is within 500 mt, on either sides of Major Transport Corridor like. BRTS
viii		Heritage Conservation Committee (i.e. HCC)	When the project has any link/ relation with any listed heritage building and precinct
ix		NOC from Central Vista Committee	When the project falls within Central Vista Area

x		NOC from Delhi Traffic Police	When the proposal proposed disruption of general traffic circulation temporarily or permanently during and after the construction
xi		NOC from Road Owning agency	When cutting of footpath or road is involved
xii	NOC from L & DO		When L & DO is owner of Land.
xiii		Approval of DDA	If density relaxation in case of Group Housing projects or setback relaxation for all type of projects, if required
xix	UTTIPEC of DDA		
xv	Delhi Urban Art Commission		
xvi	Environmental Clearance		

7. Approval of Building Plans, after Approval of Layout Plan, from:-

Sl. No.	**Mandatory for all projects**	**Required in some cases**	**Remarks**
i.	Local Body i.e. MCD/NDMC/DDA depending upon jurisdiction of project land area		
ii.	Delhi Fire Service		
iii.		Heritage Conservation Committee (i.e. HCC)	When the project has any link/ relation with any listed heritage building and precinct
iv.		NOC from DCP licensing of Delhi Police	When the proposal includes construction of Auditorium/Theatre/ Conference Room etc. for public amusement
v.		Approval from the Chief Controller of Explosives, Nagpur	In case of Hazardous Building and storing of hazardous materials in the buildings
vi.		Approval from the Chief Inspector of Factories	In case of Industrial Building
vii.	Delhi Urban Art Commission		

8. Approval of Completion Plan from;-

Sl. No.	**Mandatory for all projects**	**Required in some cases**	**Remarks**
i.	Local Body i.e. MCD/NDMC/DDA depending upon jurisdiction of project land area		
ii.	Delhi Fire Service		
iii.	Clearance from power supply Authority		
iv.		Heritage Conservation Committee (i.e. HCC)	When the project has any link/ relation with any listed heritage building and precinct
v.		NOC from DCP licensing of Delhi Police	When the proposal includes construction of Auditorium/Theatre/ Conference Room etc. for public amusement
vi.	Delhi Urban Art Commission		

PART II - GENERAL BUILDING REQUIREMENTS

10. REQUIREMENT OF SITE

10.1 **Damp Sites**- Wherever the dampness of a site or the nature of the soil renders such precautions necessary, the ground surface of the site between the walls of any building erected thereon shall be rendered damp-proof to the satisfaction of the Authority.

10.2 **Distance from Electric Lines-** No verandah, balcony, saiban or the like shall be allowed to be erected or re-erected or any additions or alterations made to a building within the distance quoted below in accordance with the current Indian Electricity Rules and its amendments from time to time between the building and overhead electric supply line:

		Vertically (m)	Horizontally (m)
(a)	Low and medium voltage lines and service	2.4	1.22 lines
(b)	High voltage lines up to and including 33000V.	3.66	1.83
(c)	Extra high voltage lines beyond 33000V.	(Plus 0.3 m for every additional 33000V or part thereof)	(Plus 0.3m for every additional 33000V of part thereof)

10.3 **Minimum size of site-** The minimum size of sites for the construction of different types of buildings for different use groups, shall be in accordance with provisions of the Master Plan and any land development Rules and Regulations brought out by Delhi Development Authority.

11. MEANS OF ACCESS

11.1 No building shall be erected so as to deprive any other building of the means of access.

11.2 Every person who erects a building shall not at any time erect or cause or permit to erect or re-erect any building which in any way encroaches upon or diminishes the area set apart as means of access .

11.3 For building identified in Bye-law No. 6.2.4.1, the following provisions of means of access shall be ensured-

a) The width of the main street on which the building abuts shall not be less than 9 meters.

b) A building shall abut on a street or streets or upon spaces directly connected from the street by a hard surface approach, width of which is not less than 9 m.

c) If there are any bends or curves on the approach road, a sufficient width shall be provided at the curve to enable the fire appliances to turn, the turning circle being at least of 9.0 m radius.

d) The approach to the building and open spaces on it all sides (See Bye-law No. 12.4b) shall be of 6m width and the layout for the same shall be done in consultation with Chief Fire Officer, Delhi Fire Service and the same shall be of hard surface capable of taking the weight of fire engine, weighing upto 18 tonnes. The said open space shall be kept free of obstructions and shall be motorable.

e) Main entrances to the premises shall be of adequate width to allow easy access to the fire engine and in no case it shall measure less than 5 metres. The entrance gate shall

fold back against the compound wall of premises, thus leaving the exterior access way within the plot free for movement of fire service vehicles. If archway is provided over the main entrance the height of the archway shall not be at a height less than 4m.

f) For multistoreyed group housing schemes on one plot, the approach road shall be 9m in width and between individual buildings, there shall be a space of 6m around.

11.4 In addition, the provisions for means of access of Indian Road Congress Rules shall be taken into account for trafficable and non-trafficable road of 9m and 4.5m respectively.

12. OPEN SPACES, AREA AND HEIGHT LIMITATION

12.1 Every room intended for human habitation shall abut on an interior or exterior open space or an open verandah open to such interior or exterior open space.

12.2 The open spaces to be left around the building including setbacks, covered area, total built up area limitations, through F.A.R. shall be as per Master Plan/Zonal Plan recommendation.

12.3 **Interior Open space for Light and Ventilation**- The whole or part of one side of one or more rooms intended for human habitation and not abutting on either the front, rear or side, open spaces shall abut on an interior open space whose minimum widths in all direction shall be 3m in case of buildings not more than 10 meters in height and subject to the provisions of increasing the same with increasing height as per the provisions of Bye-law No. 12.4(b).

Note:- Where only kitchen is abutting on interior open space, the minimum width as specified above can be reduced by 0.55 meters correspondingly.

12.4 a) The setbacks of the respective buildings shall be as per zoning Regulations of the. Master Plan, detailed layout plan, general development plan and/or as prescribed in the bye-law 12.4 (b)

b**)** **For buildings identified in Bye-law No. 6.2.4.1, the provision of exterior open spaces around the building shall be as given below**:-

S.No.	Ht. of the building up to	Exterior Open spaces to be left out on all sides* (front, rear and sides in each plot)
1	10m	3m
2	15m	5m
3	18m	6m
4	21m	7m
5	24m	8m
6	27m	9m
7	30m	10m
8	35m	11m
9	40m	12m
10	45m	13m
11	50m	14m
12	55 m and above	16m

*Note: On sides where no habitable rooms front, a minimum space of 9 m shall be left for heights above 27 m.

12.5 Joint Open Air Space- Every such interior or exterior open air space, unless the latter is a street, shall be maintained for the benefit of such building exclusively and shall be entirely within the owner's own premises.

12.5.1 If such interior or exterior open air space is intended to be used for the benefit of more than one building belonging to the same owner, then the width of such open air space shall be the one specified for the tallest building as specified in Bye-law No. 12.4 abutting on such open air space.

12.6 Exemption to Open Spaces/Covered Area

12.6.1 The following exemption to open spaces shall be permitted.

Projections into open spaces:

a) Every open space provided either interior or exterior shall be kept free from any erection thereon and shall be open to the sky. Nothing except cornice, Chajja or weather shade (not more than 0.75 mtrs. wide) shall overhang or project over the said open space so as to reduce the width to less than minimum required.

Note: - Such projections shall not be allowed at a height more than 2.2 m from the corresponding finished floor level.

b) A canopy or canopies each not exceeding 4.5 m in length and 2.4 m in width in the form of cantilever or cantilevers, over the main entrance/entrances, providing a minimum clear height of 2.2 m below the canopy.

In one stroeyed residential buildings, only such canopy shall be permitted for each individual detached block. In more than one storeyed residential building, two canopies shall be permitted over ground floor/higher floor entrances.

c) In case of Residential buildings only, a balcony or balconies at roof level of a width of 0.9 m overhanging in set-backs within one's own land courtyards provided the minimum area required shall not be reduced by more than 30% of such open spaces as in bye-laws No. 12.3 & 12.4.

d) The projections (cantilever) of cupboards and shelves shall be permitted and are exempted from covered area calculations in case of residential buildings only. Such projections shall be up to 0.75 m in depth provided:

i) That no cup-board shall project in the side set back on the ground floor.

ii) That outer length of cup-board overhanging in the setbacks shall not exceed 2.0 m per habitable room. In addition to this, cupboard under and above the windows can be provided.

Note:- Cup-board means a space used for storage of house-hold goods/dress having shelves/ partitions not more than 1.5m apart.

iii) Only one pergola shall be permitted in a residential building if constructed in the exterior open spaces or terrace.

Such pergola shall not exceed 3.4 sq. m. in area on which 40% shall be void and shall have a clear height of 2.2m.

12.6.2 In addition to Bye- law No. 12.6.1 (a), (b), (c) and (d), the following shall not be included in covered area for FAR calculations:-

a) A Mumty over staircase on top floor.

b) Machine room for lift on top floor**.**

Note:- The shaft provided for lift shall be taken for covered area calculations only on one floor.

c) Rockery, well and well structures, plant nursery, water pool, swimming pool, (if uncovered) platform round a tree, tank, fountain, bench, chabutra with open top and enclosed sides by walls, open ramps, compound wall, gate, slide swing, uncovered staircase (covered and unenclosed on three side except for a 0.9 m high railing/ wall and open to sky) overhead water tank on top of building, open shafts and watchman's cabin (when permitted) upto 4.5 sq. mts.

d) Culvert on municipal drains.

e) Covered space of passage upto 1m in width between mumti and barsati in Ministry of Rehabilitation Colonies upto plot size of 80 sq. m (100 sq. yards).

12.7 Height Limit- The height and number of storeys shall be related to provisions of F.A.R and the provisions of open spaces given in Bye-law 12.4 and the following :-

a) The maximum height of building shall not exceed 1.5 times the width of road abutting plus the front open spaces.

b) If a building abuts on two or more streets of different widths, the building shall be deemed to face upon the street that has the greater width, and the height of the building shall be regulated by the width of the street and may be continued to this height to a depth of 24 m along the narrower street subject to conformity of Bye-law No. 12.4.

c) For buildings in the vicinity of the aerodromes, the maximum height of such building shall be subjected to value framed by the Civil Aviation Authority from time to time and to this effect a No Objection Certificate issued by that authority shall be submitted by the applicant along with plans to the sanctioning authority.

Note:- The location of slaughter house/butcher house and other areas for activities like depositing of garbage dumps which would generate the collection of high flying birds like eagle/ hawks etc. shall not be permitted within a radius of 10 km. from aerodrome reference point.

12.7.1 Height Exceptions- The following appurtenant structures shall not be included in the height of building covered under bye-law No. 12.7, roof tanks and their supports not exceeding 1.0m in ht., ventilating, air-conditioning and Lift rooms and similar service equipments, stair covered with mumty not exceeding 3.0 m in ht., Chimneys and parapet wall and architectural features not exceeding 1.5 m in ht. unless the aggregate area of such structures including barsati, exceeds 1/3 of the roof of the building upon which they are erected.

13. PARKING SPACES

13.1 The parking spaces to be provided in building shall be as per the recommendations contained in Master Plan/Zonal Plans and the regulations of Delhi Development Authority. In areas not covered specifically by the above and for occupancies where specific provisions are not made, the parking spaces shall be in accordance with Bye-law No. 13.2.

13.2 One car space per 92.93 sq. m. of the covered area. This parking can be provided in any manner, i.e. covered, or open. In providing the parking, care has to be taken that 50% of the open space is left for landscaping and is not accounted for into parking calculations.

Note:- *Area for each Car space.*

i)	Basement	35 sq. m.
ii)	Stilts	30 sq. m.
iii)	Open	25 sq. m.

13.3 Parking space shall be provided with adequate vehicular access to a street and the area of drive, aisles and such other provisions required for adequate maneuvering of vehicle shall be inclusive of the parking space stipulated in these rules.

13.4 If the total parking space required by these rules is provided by a group of property owners for their mutual benefits, such parking shall meet the requirements under these rules subject to the approval of the Authority.

13.5 In addition to the parking spaces provided, for buildings of Mercantile (Commercial), Industrial and Storage, at the rate of one such space for loading and unloading activities for each 100 sq. m. of floor area or fraction thereof exceeding the first 200 sq.m of floor area shall be provided.

13.6 Parking lock-up garages shall be included in the calculation for floor space for F.A.R. calculations unless they are provided in the basement of a building, or under a building constructed on stilts with no external wall.

13.7 Parking spaces shall be paved and clearly marked for different types of vehicles.

13.8 In the case of parking spaces provided in basements, at least two ramps of adequate width and slope (see Bye-law No. 16) shall be provided, located preferably at opposite ends.

14. REQUIREMENT OF PARTS OF BUILDINGS

14. 1 Plinth

14.1.1 Main Buildings-The plinth of any part of a building or outhouse shall be so located with respect to surrounding ground level that adequate drainage of the site is assured but not at a height less than 45 cm.

14.1.2 Interior Court-yards-Every interior courtyard shall be raised at least 15 cm above the level of the centre of the nearest street and shall be satisfactorily drained.

14.2 Habitable Rooms:

14.2.1 Size- No habitable room shall have a floor area of less than 9.5 sq. mtrs. except in the hostels attached to recognized educational institution. The minimum size of a habitable room for the

residence of a single person shall be 7.5 sq. mtrs. The minimum width of a habitable room shall be 2.4 sq. mtrs. Where there are two rooms, one shall be not less than 9.5 sq. mtrs. and other 7.5 sq. mtrs.

14.2.2 Height-The maximum height of the rooms in the residential buildings, office buildings and shops shall not be more than 4 meters measured from the surface of the floor to the lowest point of the ceiling (bottom of slab).

14.3 KITCHEN:

14.3.1 Size-The area of kitchen shall not be less than 4.5 sq. mtrs. with a minimum width of 1.5 mtrs. A kitchen which is also intended to be used as a dining room shall have a floor area not less than 9.5 sq. mtrs. with a minimum width of 2.4 m.

14.3.2 Height-The room height of a kitchen measured from the surface of a floor to the lowest point in the ceiling (bottom of slab) shall not be less than 2.75 mtrs. except for the portion to accommodate floor trap of the upper floor.

14.3.3 Other Requirements-Every room to be used as kitchen shall have:

a) Unless separately provided in a pantry, means for the washing of kitchen utensils which shall lead directly or through a sink to grated and trapped connection to the waste pipe:

b) An impermeable floor;

c) A chimney not less than 500 sq. cm. in area after plastering if fire wood, coal or like material is used which will generate smoke;

d) Window of not less than 1 sq. m. in area, opening directly on to an interior or exterior open space, but not into a shaft (See bye-law No. 14.14.3) ; and

e) In case of multistoreyed residential buildings more than 15 m in height, refuse chutes.

14.4 Pantries-Pantries shall have.

a) A floor area of not less than 3 sq. m. with the smaller side not less than 1.4 m;

b) A sink for the cleansing of kitchen's utensils which shall drain through a grated and trapped connection to the soil pipe where water borne sewerage system is available; in case water borne sewerage system does not exist the grated connection should be made to the pucca surface drain leading to a soak pit, or other approved system of disposal; and

c) An impermeable floor and an impermeable dado 0.9 m high.

14.5 BATHROOMS AND WATER CLOSETS

14.5.1 Size-The size of a bathroom shall be not less than 1.8 sq. meter with a minimum width of 1.2 mtrs. The minimum size of water closet shall be 1.1 sqm with a minimum width of 0.9 mtr. If it is a combined bath room and water closet, the minimum area shall be 2.8 sqm , with a minimum side of 1.2 mtrs.

14.5.2 Height-The height of a bathroom or water closet measured from the surface of the floor to the lowest point in the ceiling (bottom of slab) shall be not less than 2.2 m.

14.5.3 Other Requirement-Every bathroom or water closet shall.

(a) Be so situated that at least one of its walls shall open to external air (See Bye-law No.14.3) & shall have a minimum opening in the form of Window or Ventilation to the extent 0.37 sqm.

(b) Not be directly over or under any room other than another latrine, washing place, bath or terrace unless it has a water-tight floor:

(c) Have the platform or seat made of water tight non-absorbent material;

(d) Be enclosed by walls or partitions and the surface of every such wall partition shall be finished with a smooth impervious material to a height of not less than 1 m. above the floor of such a room; and

(e) Be provided with an impervious floor covering, sloping towards the drain with a grade and not towards verandah or any other room.

14.5.4 No room containing water closets shall be used for any purpose except as a lavatory and no such room shall open directly into any kitchen or cooking space by a door, window or other opening. Every room containing water closet shall have a door completely closing the entrance to it.

14.6 Lofts shall be permitted in residential buildings and shops only. Area of such loft shall be restricted to 25% of the covered area of respective floor. Maximum height between loft & ceiling shall be 1.75 m and the clear height below the loft shall be as given in the bye-law for the space below it.

14.7 LEDGE OR TAND

14.7.1 Size-A ledge or tand in a habitable room shall not cover more than 25 per cent of the area of the floor on which it is constructed and shall not interfere with the ventilation of the room under any circumstances.

14.7.2 Height-The ledge shall be provided at a minimum height of 2.2 m

14.7.3 The projections of cup-boards and shelves shall be permitted and would be exempted from covered area calculations. Such projections shall project upto 0.75 m in the setbacks for residential buildings provided the width of such cup-boards shelves does not exceed 2.0 m and there is not more than one such cup-board/shelf in each room.

Notwithstanding the above, continuous cup-board/shelves with 75 cm projection shall be permitted provided the same is constructed underneath the sill portion of the window (not exceeding 90 cm. from floor) and over the lintel of windows (at height above 2.00 m and above floor level). These projections shall not be counted towards the covered area.

14.8 Mezzanine Floor

14.8.1 Size- Mezzanine floor shall be permitted only between ground floor and first floor in all types of buildings. The mezz area upto 25% of the actual covered area on the ground floor is permissible and shall not be counted toward FAR calculations.

14.8.2 Height-The height of Mezz. floor shall not be less than 2.20 m and not more than 2.70m.

14.8.3 Other Requirements-A mezzanine floor may be permitted over a room or a compartment provided that:

a) The mezzanine shall have direct light and ventilation to the extent of 10% of its floor area;

b) It is so constructed as not to interfere under any circumstances with the ventilation of the space over and under it and does not violate any other bye-law;

c) Such mezzanine floor or any part of it shall not be used as kitchen; and

d) In no case a mezzanine floor shall be closed so as to make it liable to be converted into unventilated compartments

1.4.9 Store Room

14.9.1 Size-The area of a store room shall not be less than 3 sq. mtrs. In case, the area of the area room is more than 3sq. mtrs., the light and ventilation requirement to the extent of 10% of the floor area shall be provided.

14.9.2 Height- The height of a store room shall not be less than 2.2 m.

14.10 GARAGE

14.10.1 Garage -The size of a garage in residential building shall be not less than 2.75 m. x 5.4 m. When a room is provided on top of a garage in a residential building, it shall confirm to the requirements of habitable room. The minimum head room of garage shall be 2.4 m.

14.12 Basement

14.12.1 The construction of the basement shall be allowed by the Authority in accordance with the land use and other provisions specified under the Master Plan.

14.12.1.1 Where the use, setbacks and coverage is not provided in the Master Plan provisions, the same shall be allowed to be constructed in the plot leaving mandatory setbacks and could be put to any of the following uses:

i. Storage of house-hold or other goods of non-flammable materials;

ii. Dark room;

iii. Strong rooms, bank cellars etc.;

iv. Air-conditioning equipment and other machines used for services and utilities of the building;

v. Parking places and garages;

vi. Stack rooms of libraries; and

vii. Office or commercial purpose provided it is air-conditioned.

Note: Uses of basement from 14.12.1.1 (i) to (vi) shall not be reckoned for the purposes of FAR whereas for uses in 14.12.1.1(vii), the basement coverage shall be reckoned for the purpose of F.A.R.

14.12.1.2 The basement shall not be used for residential purposes.

14.12.2 The basement shall have the following requirements:

i. Every basement shall have to be in every part at least 2.4m in height from the floor to the underside of the roof slab or ceiling.

ii. Adequate ventilation shall be provided for the basement. The standard of ventilation shall be the same as required by the particular occupancy according to Bye-laws. Any deficiency may be met by providing adequate mechanical ventilation in the form of blowers, exhaust fans (one exhaust fan for 50 sqm of basement area), air-conditioning system etc.

iii. The minimum height of the ceiling of any basement shall be 0.9 m and maximum of 1.2 m above the average surrounding ground level.

iv. Adequate arrangement shall be made such that surface drainage does not enter the basement.

v. The walls and floors of the basement shall be water-tight and be so designed that the effect of the surrounding soil and moisture, if any, are taken into account in design and adequate damp proofing treatment is given.

vi. The access to the basement shall be separate from the main and alternate staircase providing access and exit from higher floors. Where the staircase is continuous the same shall be enclosed type serving as a fire separation from the basement floor and higher floors. Open ramps shall be permitted if they are constructed within the building line subject to the provision of (iv).

vii. In the case of basement for office and commercial occupancies sufficient number of exit ways and access ways shall be provided with a travel distance not more than 15 m.

viii. The basement shall not be partitioned. In case the partitions in the basements are allowed by the Authority, no compartment shall be less than 500sq. ft. in area and each compartment shall have ventilation standards as laid down in sub-clause (ii) separately and independently. The basement partitions shall however conform to the norms laid down by the Chief Fire Officer, Delhi.

ix. Kitchen, bathroom and toilet shall not be permitted in the basement unless the sewer levels permit the same and there is no chance of back flow and flooding of sewerage. If permitted, this shall be placed against an external wall of the basement (which shall also be external wall of the building) and shall be adequately lighted and ventilated. The area of kitchen, bathroom and toilet so permitted in the basement shall be counted towards FAR calculations.

x. A kitchen when permitted in the basement shall be equipped with electric ovens, stoves, gas or similar equipments.

14.13 CHIMNEYS:

14.13.1 Chimneys, where provided (See Bye-law No. 14.3.3 (c), shall confirm to the requirements of IS: 1 645-1960-Indian Standard Code of Practice for Fire Safety of Building (General), Chimneys, Flues, Flue Pipes and Hearths.

14.13.2 Notwithstanding the provisions of Bye-law No. 14.13.1, the chimneys shall be built at least 0.9m above flat roofs provided the top of the chimneys shall not be below the tops of adjacent parapet wall. In the case of sloping roofs, the chimney top shall not be less than 0.6 m above the ridge of the roof in which the chimney penetrates.

14.14 LIGHTING AND VENTILATION OF ROOMS

14.14.1 All habitable room shall have for the admission of light, and air one or more apertures, such as windows, glazed doors and fan lights, opening directly to the external air or into an open verandah not more than 2.4 m in width. In case light and ventilation to habitable space are through an internal courtyard, the minimum dimensions of such court yard shall not be less than 3m x 3m for bldgs. upto 10.0 m ht. For higher buildings the minimum dimensions of the internal court-yard shall be as given in bye-law No. 12.3 and 12.4.

14.14.2 Where the lighting and ventilation requirements are not met through day lighting and natural ventilation, the same shall be ensured through artificial lighting and mechanical ventilation as per Part VIII Building Services Section 1, 'Lighting and Ventilation' of National Building Code of India published by the Indian Standards Institution. The latest version of the National Building Code of India shall be taken into account at the time of enforcement of the Building Bye-laws.

Notwithstanding the above the minimum aggregate area of openings of habitable rooms and kitchens excluding doors shall be not less than 1/10 of the floor area.

No portion of a room shall be assumed to be lighted if it is more than 7.5 m from the opening assumed for lighting that portion.

14.14.3 Ventilation Shaft-For ventilating the spaces for water closets and bath room, if not opening on the front, side, rear and interior open spaces, shall open on the ventilation shaft, the size of which shall not be less than the values given below:

Height of Buildings in m.	Size of Ventilation shaft in sqm	Minimum size of shaft in m
9	1.5	1.0
12	3	1.2
15 and above*	4.0	1.5

For buildings above 15m, mechanical ventilation system shall be installed besides the provision of minimum ventilation shaft.

14.15 Parapet-Parapet wall and handrails provided on the edges of roof terrace, balcony shall not be less than 1m and more than 1.5 m in height.

Note: The above shall not apply where roof terrace is not accessible by a staircase.

15. Provision of lifts: - Provision of lift shall be made for all bldgs. more than 15 m in height.

16. EXIT REQUIREMENTS

16.1 General- Following general requirements shall apply to exits:-

(a) Every building meant for human occupancy shall be provided with exits sufficient to permit safe escape to occupants in case of fire or other emergency.

(b) In every building exit shall comply with the minimum requirement of this part, except those not accessible for general public use.

(c) All exits shall be free of obstructions.

(d) No building shall be altered so as to reduce the number, width or protection of exits to less than that required.

(e) Exits shall be clearly visible and the routes to reach the exit shall be clearly marked and sign posted to guide the population of floor concerned.

(f) All exit ways shall be properly illuminated.

(g) Firefighting equipment where provided along exits shall be suitably located and clearly marked but must not obstruct the exit way and yet there should be clear indication about its location from either side of the exit way.

(h) Alarm devices shall be installed to ensure prompt evacuation of the population concerned through the exits.

(i) All exits shall provide continuous means of egress to the exterior of a building or to an exterior open space leading to a street.

(j) Exits shall be so arranged that they may be reached without passing through another occupied unit, except in the case of residential buildings.

16.2 Types of Exits

(a) Exits shall be either of horizontal or vertical type. An exit may be doorway, corridor, passage ways to an internal staircase or external staircase, ramps or to a verandah and/or terraces which have access to the street or to roof of a building. An exit may also include horizontal exit leading to an adjoining building at the same level;

(b) Lifts and escalators shall not be considered as exits.

16.3 Number and Size of Exits-The requisite number and size of various exits shall be provided, based on the population in each room, area and floor based on the occupant load, capacity of exits, travel distance and height of buildings as per provisions of Bye-laws No. 16.3.1 to 16.3.3.

16.3.1 Arrangement of Exits-Exits shall be so located so that travel distance on the floor shall not exceed 22.5 m for residential, educational, institutional and hazardous occupancies and 30 m for assembly, business, mercantile, industrial and storage occupancies. Whenever more than one exit is required for a floor of a building, exits shall be placed as remote from each other as possible. All the exits shall be accessible from the entire floor area at all floor levels.

16.3.2 Occupant Load-The population in rooms, areas of floors shall be calculated based. on the occupant load given in **Table 5**.

Table 5

Sl No.	Group of Occupancy	Occupant Load Gross Area* in m^2/person
1.	Residential	12.5
2.	Educational	4.0

*The gross area shall mean plinth area or covered area.

+Occupant load in dormitory portions of homes for the aged, orphanages, insane asylums, etc. where sleeping accomodation is provided, shall be calculated at not less than 7.5 sqm gross area/ person.

++The gross area shall include, in addition to the main assembly room or space, any occupied connection open or space in the same storey or in the storeys above or below, where entrance is common to such rooms and spaces and they are available for use by the occupants of the assembly place. No deductions shall be made in the gross area for corridors, closets or sub-divisions; one area shall include all space serving the particular assembly occupancy.

16.3.3 Capacity of Exits-The capacity of exits (doors and stairways) indicating the number of persons that could be safely evacuated through a unit exit width of 50 cm shall be as given in **Table 6**.

TABLE 6

OCCUPANTS PER UNIT EXIT WIDTH

Sl.No.	Group of Occupancy	Number of Occupants	
		Stairways	Doorways/Horizontal Exit
1.	Residential	25	75
2.	Educational	25	75

NOTES:-

1. *Sprinkler Allowance*- When a building is protected with automatic sprinkler system and such a system is not required specifically by the Code, the capacity per storey per unit width of exit of stairways in Table 6 may be increased by 50%.
2. *Horizontal Exit Allowance*- When horizontal exit is provided in buildings of mercantile, storage, industrial, business and assembly occupancies, the capacity per storey per unit width of exit of stairways in Table 3 may be increased by 50 percent; and in buildings of institutional occupancy by 100 percent.
3. *Combined Total Allowance*- When both automatic sprinklers and horizontal exit are provided, the capacity per unit width of exit of stairways may be double the values specified in Table 3.

16.3.4 For building identified in By-law No.6.2.4.1, there shall be a minimum of two staircases and one of them shall be an enclosed stairway and the other shall be on the external walls of buildings

and shall open directly to the exterior, interior, open space or to any open place of safety.

16.3.5 Notwithstanding the detailed provision for exits as per Bye-law No. 16.3.1 to 16.3.3 the following minimum width provision shall be made for each stairways:

(a)	(i)	Residential building upto $3^{1/2}$ storey ht.	0.9m
	(ii)	Other residential building e.g. hotels, flats, groups housing etc.	1.25m
(b)		Assembly building like auditorium, theatres and cinemas	1.5m
(c)		All other buildings	1.25m
(d)		Institutional buildings like hospitals	2.0m
(e)		Educational buildings like schools, colleges	1.5m

16.3.6 Notwithstanding the detailed provisions as per buy-law No. 16.3.1 to 16.3.3, the following minimum width provisions shall be made for each passage way:

(a)	(i)	Residential buildings, dwelling unit type	0.9m
	(ii)	Residential buildings e.g. hostels, hotels etc.	1.25m
(b)		Assembly buildings like auditorium, theatres and cinemas	1.5m
(c)		All other buildings	1.25m

16.4.1 Doorways

(a) Every doorway shall open into enclosed stairway, a horizontal exit, on a corridor or passageway providing continuous and protected means of egress.

(b) No exit doorway shall be less than 100 cm in width. Doorways shall be not less than 200 cm in height. Doorways for bathrooms, water closet, stores etc. shall be not less than 75 cm wide.

(c) Exit doorways shall open outwards, that is, away from the room but not obstruct the travel along any exit. No door, when opened, shall reduce the required width of stairway or landing to less than 90 cm, overhead or sliding doors shall not be installed.

(d) Exit door shall not open immediately upon a flight or stairs; a landing equal to at least the width of the door shall be provided in the stairway at each doorway, level of landing shall be the same as that of the floor which it serves.

(e) Exit doorways shall be openable from the side which they serve without the use of a key.

16.4.2 Revolving Doors

(a) Revolving doors shall not be used as required exits except in residential, business and mercantile occupancies, but shall not constitute more than half the total required door width.

(b) When revolving doors are considered as required exit way the following assumptions shall be made:-

i) Each revolving door shall be counted one half a unit exit width.

ii) Revolving doors shall not be located at the foot of a stairway. Any stairway served by a revolving door shall discharge through a lobby or foyer.

16.4.3 Stair ways-

(a) Interior stairs shall be constructed of non-combustible materials throughout.

(b) Interior staircase shall be constructed as a self-contained unit with at least one side adjacent to an external wall and shall be completely enclosed. For buildings more than 15m height, all staircases shall be enclosed.

(c) A staircase shall not be arranged round a lift shaft unless the latter is entirely enclosed by a material of fire-resistance rating as that for type of construction itself. For buildings more than 15m in height, the staircase location shall be to the satisfaction of Chief Fire Officer, Delhi Fire Service.

(d) Hollow combustible construction shall not be permitted.

(e) The minimum width of internal staircase shall be 1.00m and as given in Bye-law No.16.3.5.

(f) The minimum width of treads without nosing shall be 25 cm for an internal staircase for residential buildings. In the case of other buildings the minimum tread shall be 30 cm. The treads shall be constructed and maintained in a manner to prevent slipping. Winders shall be allowed in residential buildings provided they are not at the head of a downward flight.

(g) The maximum height of riser shall be 19 cm in the case of residential buildings and 15 cm in the case of other buildings. They shall be limited to 12 per flight.

(h) Handrails shall be provided with a minimum height of 90 cm from the centre of the tread.

(i) The minimum headroom in a passage under the landing of a staircase and under the staircase shall be 2.2 m.

(j) For buildings more than 24 m height, access to main staircase shall be gained through at least half an hour fire resisting automatic closing doors placed in the enclosing walls of the staircases. It shall be a swing doors opening in the direction of the escape.

(k) No, living space, store or other fire risk shall open directly into the staircase or staircases.

(l) External exit door of staircase enclosure at ground level shall open directly to the open spaces or can be reached without passing through any door other than a door provided to form a draught lobby.

(m) The exit sign with arrow indicating the way to the escape route shall be provided at a height of 0.5m from the ceiling level on the wall and shall be illuminated by electric light connected to corridor circuits. All exit way marking signs should be flushed with the wall and so designed that no mechanical damage shall occur to them due to moving of furniture or other heavy equipments. Further, all landings of floor shall have floor indication boards indicating the number of floor. The floor indication board shall be placed on the wall immediately facing the flight of stairs and nearest to the landing. It shall be of size not less than 0.5 x 0.5 m.

(n) Individual floors shall be prominently indicated on the wall facing the staircases.

(o) In case of single staircase it shall terminate at the ground floor level and the access to the basement shall be by a separate staircase. However, the second staircase may lead to basement levels provided the same is separate at ground level by either a ventilated lobby with discharge points at two different ends or through enclosures [see bye-law No. 14.12.2 (vi)]

16.4.4 Fire Escapes or External Stairs

a. Fire escapes shall not be taken into account in calculating the evacuation time of a building.

b. All fire escapes shall be directly connected to the ground.

c. Entrance to fire escape shall be separate and remote from the internal staircase.

d. The route to fire escape shall be free of obstructions at all times, except a doorway leading to the fire escape which shall have the required fire resistance.

e. Fire escape shall be constructed of non-combustible materials.

f. Fire escape stairs shall have straight flight not less than 75 cm wide with 25 cm treads and risers not more than 19 cm. The number of risers shall be limited to 16 per flight.

g. Handrails shall be of a height not less than 90 cm.

16.4.5 Spiral Stairs (fire escape) - The use of spiral staircase shall be limited to low occupant load and to a building of height 9 m unless they are connected to platforms, such as balconies and terraces to allow escapee to pause.

A spiral fire escape shall be not less than 150 cm in diameter and shall be designed to give adequate head room.

16.4.6 Ramps

a. Ramps with a slope of not more than 1 in 10 may be substituted for and shall comply with all the applicable requirements of required stairways as to enclosure, capacity and limiting dimensions. Larger slopes shall be provided for special uses but in no case greater than 1 in 8. For all slopes exceeding 1 in 10 and where the use is such as to involve danger of slipping, the ramp shall be surfaced with approved non-slipping material.

b. The minimum width of the ramps in hospitals shall be 2.25m.

c. Handrails shall be provided on both sides of the ramp.

d. Ramps shall lead directly to outside open space at ground level or courtyards or safe place.

e. For building above 24 in height, access to ramps from any floor of the building shall be through smoke stop door.

16.4.7 Corridors

(a) The minimum width of a corridor in a residential building shall be 1.0 m and in all other

buildings shall be 1.5 m.

(b) In case of more than one main staircase of the building inter-connected by a corridor or other enclosed space, there shall be at least one smoke stop door across the corridor or enclosed space between the doors in the enclosing walls of any two staircases.

16.4.8 Refuge Area

For all buildings exceeding 15 m in height, refuge area shall be provided as follows:

(a) For floors above 15m and upto 24 m- one refuge area on the floor immediately above 18 m.

(b) For floors above 24 m and upto 36 m- one refuge area on the floor immediately above 24 m.

(c) For floors above 36 m- one refuge area per every five floors above 36 m.

16.4.8.1 Refuge area shall be provided on the external walls as cantilever projections or in any other manner (which will not be covered in FAR) with a minimum area of 15 sq. mtrs. and to be calculated based on the population on each floor at the rate of 1 sq. m. per person.

16.4.9 Lifts

(a) All the floors shall be accessible for 24 hours by the lifts. The lifts provided in the buildings shall not be considered as a means of escape in case of emergency.

(b) Grounding switch at ground floor level to enable the fire service to ground the lift in case of an emergency shall also be provided.

(c) The lift machine room shall be separate and no other machinery shall be installed therein.

CHAPTER-IV

RELEVANT EXTRACTS

FROM MPD 2021

RELEVANT EXTRACTS FROM MPD-2021

3.2.2 HIERARCHY OF URBAN DEVELOPMENT

A planned city for an environment of convenience should have a hierarchical cellular structure; with nuclei to contain essential facilities and services at different levels. The pattern of a community module is conceived as residential area containing a **'neighbourhood'** with Senior Secondary School and Shopping Facilities for day-to-day needs. The higher level of additional facilities is to be provided at Community levels. Such a structure could be maintained in the process of the preparation of plans on the basis of the standards set in the Table 3.3:

TABLE 3.3

Level	Facilites	Area in sq.m.			To be provided/ indicated	
		No.	Per Unit	Total	LOP	ZP*
1. Housing Area	1. Convenience shopping	1	1000	1000	•	
Population-5,000	2. Totlot	20	125	2500	•	
	3. Housing area Park	1	5000	5000	•	
	4. Housing area Play ground	1	5000	5000		
	5. Anganwari	2	200-300	400-600	•	
	6. Milk Booth	1	As per standard design of the concerned Department		•	
2. Neighborhood	1. Primary School	1	2000-4000	2000-4000	•	
Population-10,000					•	
	2. Sr. Secondary School	1	6000-8000	6000-8000	•	
	3. Religious building	2	400	800	•	
	4. Electric Sub Station 11 KV	1	80	80	•	
	5. Banquet Halls	1	800-2000	800-2000	•	
	6. Local shopping	1	3000	3000	•	
	7. Service Market	1	2000	2000	•	
	8. Informal Bazaar/Rehri Bazar	1	1000	1000		
	9. Three wheeler & Taxi Stand	1	400	400	•	
	10. Neighborhood Park	1	1000	1000	•	
	11. Neighborhood Play Area	1	5000-10000	5000-10000	•	
	12. Underground water tank with booster station and OHT	1	2000	2000	•	
	13. Sewage Pumping Station	1	500	500	•	

Level	Facilites	Area in sq.m.			To be provided/ indicated	
		No.	Per Unit	Total	LOP	ZP*
	14. Coaching centres, IT & language training certres	1	500	500	•	
	15. Dhalao including segregation	1	200	200	•	
	16. Dispensary	1	800-1200	800-1200	•	
	17. Local level waste water treatment facility	As per requriement			•	
3. Community	1. Hospital 'C' (101 beds & 200 beds)	1	5000-10000	5000-10000	•	•
Population-1,00,000	2. Hospital 'D' (upto 100 beds)	1	2500-5000	2500-5000	•	•
	3. a) Family Welfare Centre	1	500-800 each	500-800 each		
	b) Pediatric Centre	1			•	
	c) Geriatric centre	1				
	d) Nursing Home/Polyclinic	1				
	4. Maternity Home	2	1000-2000	2000-4000	•	•
	5. Nursing Home/ Polyclinic	2	1000-2000	2000-4000	•	•
	6. Dispensary for pet animals & birds	1	300	300	•	
	7. Police Post	1	1000	1000	•	
	8. Community Recreational club	1	2000	2000	•	
	9. Socio-Cultural activities (auditorium, music, dance & drama centre/meditation & spiritual centre)	1	1000	1000	•	
	10. Night Shelter	1	1000	1000	•	
	11. Multipurpose Community hall (provison for marriage, small public gathering, function, eating joint and library, gym etc.	1	2000	2000	•	•
	12. LPG Godowns	3 LPG Godown per 1 lakh population			•	
	13. SKO/LDO outlet	As per standard design of the concerned department			•	
	14. Electric sub station 66 KV	2	8550	17000		•

Level	Facilites	Area in sq.m.			To be provided/ indicated	
		No.	**Per Unit**	**Total**	**LOP**	**ZP***
	15. Community Centre	As per norms/ requirement			•	•
	16. Informal Bazaar	1	1000	1000	•	•
	17. Community Park	1				
	a) Park	1	50,000			•
	b) Multipurpose Park/ground	1	20,000		•	•
	18. Community Sports Centre	1	10,000-30,000	10,000-30,000	•	
	19. Bus Terminal	1	1,000	1,000		•
	20. Waste water treatment facility	As per requriement			•	•
	21. Sewage Pumping Station	1	2000	2000		•
	22. Parking space for parking of buses, LMV, IPTs, etc.	2	3000	6000		•

4.2 SUB-DIVISION OF RESIDENTIAL ZONE (RD) INTO USE PREMISES

The provision of requisite social infrastructure for large campuses shall be governed by the norms for residential neighbourhood of 10,000 populations. In any residential sub division plan the minimum area reserved for social infrastructure shall be about **7 sqm per person**.

Table 4.2 Infrastructure Requirement for layout at Residential Neighbourhood level

S.No.	Use Premises	No. of units	Unit Area (ha.)	Total land (ha.)
(a)	**Education**			
	1. Primary School	1	0.20-0.40	0.20-0.40
	2. Senior Secondary School	1	0.60-0.80	0.60-0.80
(b)	**Shopping**			
	3. Local Convenience shopping	1	0.4	0.4
	4. Sevice Market	1	0.2	0.2
	5. Informal Bazaar	1	0.1	0.1
(c)	**Other Community Facilites**			
	6. Malik Booth	-	As per standard norms (in LSC)	
	7. Banquet Hall	1	0.08-0.20	0.08-0.20
	8. Religious Building	2	0.04	0.08
	9. Housing Area Play ground	2	0.5	1.0
	10. Neighbourhood Play area	1	1.0	1.0
	11. Anganwari	2	0.02-0.03	0.04-0.06
(d)	**Recreational**			
	12. Tot lot @ 0.50 sq.m / person	-	0.0125	0.5
	13. Housing Area Park	2	0.5	1.0
	14. Neighbourhood Park	1	1.0	1.0
(e)	**Utilities**			
	15. Dhalo including segregation	1	0.02	0.02
	16. Underground water tank	1	0.2	0.2
	17. Local level waste water treatment facilitiy		Wherever	Feasible
(f)	**Transportation**			
	18. Three wheeler and Taxi Stand	1	0.04	0.04

Notes:

(i) These facilities should preferably be located along internal roads with minimum 12 m ROW, unless specified.The development of the infrastructure should be monitored to assess the achievement in the relevant sectors.

(ii) The open space at the neighbourhood level shall be provided @ 4.5 sqm. per person Minimum size of tot lot at cluster level shall be 125 sq.m.

(iii) The location of schools and Anganwaris should be made in the layout plan in cluster form to facilitate sharing of common parking space and playground.

(iv) The planning of physical infrastructure shall be governed by the following norms:

- (a) Under ground tank, sewerage-pumping system shall be provided as per requirement.
- (b) Rainwater harvesting shall be an integral part of the storm water drainage plan at the time of sanction of layout plan for all the plots.
- (c) The natural drainage pattern is not to be disturbed.
- (d) Dual pipe system of recycled water is recommended in new areas and redevelopment schemes.
- (e) Dhalaos including facility of segregation of biodegradable and recyclable solid waste should be provided.
- (f) Electric sub station shall be provided as per requirement.
- (g) Pole mounted electric transformers for augmenting electric supply in already developed areas are recommended.
- (h) Non-conventional sources i.e. solar energy etc is recommended for public areas in all the establishments.
- (i) Provisions for decentralised sewerage treatment plant and segregated waste disposal shall be made where centralised system is not available. It shall be ensured that no untreated effluent is allowed to exit / spill out of the scheme area.

(v) Planning of the residential neighbourhood regarding circulation system, including safety requirements shall be governed by the BIS standards or as per the norms of the concerned agencies.

(vi) Suitable landscape plans for the neighbouhood shall be prepared, indicating in reasonable detail, the landscape developmet of the parks and roadside plantaion etc.

(vii) These are suggestive norms and lower norms could be adopted in built up areas/Special Areas, etc.

Table 4.3: Uses / Use Activities Permitted in Use Premises

Use Premises	Definition	Use/ Use Activities Permitted
* Residential Plot - Plotted Housing	A Premise for one or more than one dwelling unit and may have on it one main building block and one accessory block for garages and service personnel.	Residence, mixed use activity as per the Master Plan provisions/ Registered RWA/Society Office (50 sq.m.)
Residential Plot - Group Housing	A premise of size not less than 3000 sqm comprising of residential flats with basic amenities like parking, park, convenience shops, public utility etc.	Residential flat, mixed use activity as per the Master Plan provisions, retail shops of confectionery, grocery & general merchandise, books and stationery, Chemist, Barber, Laundry, Tailor, Vegetable Shop (On ground floor with an area up to 20 sqm. each). Community Room, Society office, Crèche / Day Care Centre, religious, Senior citizen recreation room, swimming pool.
Residential Flat	Residential accomodation for one family / household as part of group housing.	Residence, mixed use activity as per the Master Plan provisions
Residential Premises Special Area	A residential premise in Special Area.	As per Special Area Regulations
Hostel	A premise in which residential accomodation in the form of rooms is provided, usually attached to an institution, with or without dining facility.	Hostel, Old Age Home, Watch and Ward Residence (20 sqm), Service Shops of Barber, Laundry, Soft Drink and Snack Stall (max. 20 sq.m. each) Guest Rooms, Watch and Ward Residence (20 sqm), Service Shops of Barber, Laundry, Soft Drink and Snack Stall (upto 20 sqm each)
Guest House Lodging & Boarding House	A premise providing temporary accomodation for short durations.	Guest rooms, Watch and Ward Residence (20 sqm), Service Shops of Barber, Laundry, Soft Drink and Snack Stall (max. 20 sq.m. each) Guest Rooms, Watch and Ward Residence (20 sqm), Service Shops of Barber, Laundry, Soft Drink and Snack Stall (upto 20 sqm each)

4.4.3 CONTROL FOR BUILDING/BUILDINGS WITHIN RESIDENTIAL PREMISES

A. Residential Plot-Plotted Housing

Maximum ground coverage, FAR, number of dwelling units for different size of residential plots shall be as per the following table:

	Area of Plot (sq. m)	Max. Ground Coverage %	FAR	No. of DUs
1	Below 32	90*	350	3
2	Above 32 to 50	90*	350	3
3	Above 50 to 100	90*	350	4
4	Above 100 to 250	75**	300**	4
5	Above 250 to 750	75	225	6
6	Above 750 to 1000	50	150	9
7	Above 1000 to 1500	40	120	9
8	Above 1500 to 2250	40	120	12
9	Above 2250 to 3000	40	120	15
10	Above 3000 to 3750	40	120	18
11	Above 3750	40	120	21

Note:-

1. The local body concerned shall be competent to disregard variation of upto 2% in plot size, arising from conversion of area from sq. yard to sq.m. and to grant the norms applicable to the lower category of plot size in accordance to para (ii) below.
2. * 100% ground coverage shall be eligible for regularization of construction, already existing as on 22.09.06 on payment of charges as notified.
3. Minimum size of the residential plot shall be 32 sqm. However, in case of Government sponsored economically weaker section schemes, size could be reduced further.
4. ** 100% ground coverage and 350 FAR shall be eligible for regularization of construction already existing as on 22.09.06 on payment of charges as per the notification, in respect plot size between 100 to 175 sqm.
5. Permissible FAR and Dwelling Units shall not be less than MPD-2001 norms.

Terms and Conditions:

(i) The additional number of dwelling units would be subject to payment of levy for the augmentation of civic infrastructure.

(ii) The total coverage and FAR permissible in any plot in a category, shall not be less than that permissible and available to the largest plot in the next lower category.

(iii) **Height:**The maximum height of the building in all plots shall be 15 metres.

(iv) Subdivision of plots is not permitted. However, if there are more than one buildings in one residential plot, the sum of the built up area and ground coverage of all such buildings, shall not exceed the built up area and ground coverage permissible in that plot.

(v) The mezzanine floor, and service floor, if constructed, shall be counted in the FAR.

(vi) **Basement:** Basement shall not be counted towards FAR if used for purposes permissible under Building byelaws namely household storage and parking. Basement area shall not extend beyond the coverage on the ground floor as per permissible and sanctioned built up area, but may extend to the area below the internal courtyard and shaft. Basement if used in terms of Chapter 15.0. Mixed Use regulations shall count towards FAR and shall be liable to payment of appropriate charges, if it exceeds the permissible FAR.

(vii) **Stilts:** If the building is constructed with stilt area of non-habitable height (less than 2.4m), used for parking, such stilt area shall not be included in FAR but would be counted towards the height of the building.

(viii) **Parking:** Parking space shall be provided for within the residential plot as follows:

(a) 2 Equivalent Car Space (ECS) in plots of size 250-300 sq.m.

(b) 1 ECS for every 100 sqm. built up area, in plots exceeding 300 sq.m., provided that, if the permissible coverage and FAR is not achieved with the above-mentioned parking norms in a plot, the parking norms of the preceding category shall be allowed.

(ix) **Density:** For the purpose of density calculations, the dwelling unit shall be considered to accommodate 4.5 persons and the servant quarter to accommodate 2.25 persons.

(x) The minimum setbacks shall be as given in the following table :

S.No	Plot size (in sq.m.)	Minimum Setbacks (in metre)			
		Front	Rear	Side(1)	Side(2)
1	Below 100	0	0	0	0
2	Above 100 and upto 250	3	0	0	0
3	Above 250 and upto 500	3	3	3	0
4	Above 500 and upto 2000	6	3	3	3
5	Above 2000 and upto 10000	9	6	6	6
6	Above 10000	15	9	9	9

(a) In case the permissible coverage is not achieved with the above-mentioned setbacks in a plot, the setbacks of the preceding category may be allowed.

(b) In the case of construction in the future, a minimum 2m x 2m open courtyard shall be provided for in residential plots of area of 50 sqm. to 100 sqm.

(xi) Number of servant quarters shall be provided as per approved layout plan and shall be constructed within the stipulated height. However, if the garage block space is merged

with the main building, no separate servant quarter block or servant quarter, as part of main building shall be allowed. However, provision for a servant's room as part of the dwelling unit within the permissible coverage/ FAR shall be allowed.

(xii) Each servant quarter shall comprise of one habitable room of area not less than 11 sqm. floor area, exclusive of cooking verandah, bathroom and lavatory. The maximum size of servant quarter shall be 25 sqm. If larger in size, the servant's quarter shall be counted in density as a full dwelling unit.

(xiii) Plot owners / allottees seeking extra coverage, additional floor or part thereof, over and above Gazette Notification dated 23.07.98, as per above mentioned norms shall be charged betterment levy (or additional FAR charges) at the rates notified with the approval the Government from time to time. This is in addition to the levy payable on the additional FAR allowed vide notification dated 23.07.98 and over the FAR allowed vide notification dated 15.05.95.

(xiv) Plot owners / allottees seeking regularization of construction in terms of the additional coverage allowed under this notification, shall have to pay a penalty and compounding charges notified with the approval of the Government, over and above the betterment levy referred to in para (xiii) above.

(xv) Plot owners / allottees seeking regularization of additional height in terms of this notification, will have to pay penalty and special compounding charges notified with the approval of the Government, in addition to betterment levy referred to in para (xiv).

(xvi) The amount so collected is deposited in an escrow account by the local body concerned for incurring expenditure for developing parking sites, augmentation of amenities / infrastructure and environmental improvement programmes and a quarterly statement of the income and expenditure of the account shall be rendered by the local bodies to the Government.

(xvii) Encroachment on public land shall not be regularized and shall be removed before the local body grants sanction for regularization of additional construction or height.

(xviii) Every applicant seeking sanction or regularization of additional FAR and/ or height shall submit a certificate of structural safety obtained from a structural engineer. Where such certificate is not submitted or the Building is otherwise found to be structurally unsafe, formal notice shall be given to the owner by the local body concerned, to rectify the structural weakness within a reasonable stipulated period, falling which the building shall be declared unsafe by the local body concerned and shall be demolished by owner or the local body.

(xix) **Standard Plans:** There are a number of standard building plans designed and approved by the Authority. Such plans shall continue to operate whenever applicable. Such plans shall be modified as per the applicable development controls.

B. RESIDENTIAL PLOT -GROUP HOUSING

Minimum size of plot	3000 sq.m.
Maximum Ground Coverage	33.3%
Maximum FAR	200
Height	NR (Subject to clearance from AAI/Fire Department and other statutory bodies. Parking 2.0 ECS/100 sqm built up area

I. The density may vary (10% variation permissible in all categories) for specific categories as given below:

(a)	Category I (upto 40 sq.m)	500 DUs/Ha.
(b)	Category II (above 40-upto 80 sqm)	250 DUs/Ha.
(c)	Category III (above 80sqm)	175 Dus/Ha.

II. Plots for group housing should be located on roads facing a minimum width of 18 m ROW (13.5 m ROW for redevelopment areas and 9m ROW for Slum Rehabilitation / Special Area and Villages).

III. Additional floor area up to a maximum of 400 sq.m shall be allowed to cater to community needs such as community / recreational hall, crèche, library, reading room and society office. In addition to above, 100 sqm. area shall be permissible for Senior Citizen Recreation Room.

IV. The Central Government in consultation with the DDA may relax density and other norms for public housing and projects of national importance.

V. The developer shall ensure that minimum 15% of FAR or 35% of the dwelling units, whichever is more, are constructed for Community-Service Personnel / EWS and lower category. Such flats should have a carpet area between 25 - 40 sqm.[This 15% FAR or 35% of the Dwelling units for Community Service Personnel/ EWS and lower income category housing would be over and above Permissible FAR and Density mentioned at (i)(a),(b),(c) above. Employer housing of Central Govt.,State Govt. and other Govt. agencies are not required to follow the requirement of FAR or dwelling units for Community Service Personnel/ EWS and lower income category

VI. Ground coverage up to 40% may be allowed to achieve low-rise high-density housing without lifts.

VII. Levy on additional FAR shall be at rates notified with the approval of Government from time to time.

VIII. Stilts: If the building is constructed with stilt area of non- habitable height and is proposed to be used for parking, landscaping etc. the stilt floor need not be included in FAR and shall be counted towards height.

IX. Basement, if constructed, and used only for parking, utilities and services shall not be counted towards FAR.

C. CLUSTER COURT HOUSING

Minimum size of plot	3000 sqm.
Maximum FAR	175
Maximum height	15.0 m with maximum coverage 100% subject to light and ventilation condition

(i) The net housing density permissible shall be 225 DUs per Ha. with 15% variation on either side and could be averaged for more than one pocket.

(ii) Minimum street in front of pocket to be 12 m.

(iii) No projection outside the building envelope allowed.

(iv) Each cluster court house is for one dwelling for a single family. .

(v) **Basement:**

(a) Basement if constructed shall not be included in FAR calculations.

(b) Basement shall be below the ground floor. Basement area may, however, be extended below the internal courtyard and shaft.

(vi) **Stilts:** If the building is constructed with the stilt area of non-habitable height and is proposed to be used for parking, landscaping etc., the stilt floor need not be included in the FAR but would be counted towards height (within stipulated height).

(vii) **Parking:** Parking shall be provided as per group housing norms.

(viii) **Density:** For the purpose of density calculations, the dwelling unit shall be considered to accommodate 4.5 persons and the servant quarter to accommodate 2.25 persons.

(ix) **Servant quarter:** No separate servant quarter block or servant quarter as part of main building shall be allowed if the garage block space is merged with the main building. Provision for a servant's room as part of the dwelling unit within the permissible coverage and FAR shall be allowed with maximum size of servant quarter as 25 sqm and if larger in size would be counted as a full dwelling unit.

E. HOSTEL/GUEST HOUSE/LODGING & BOARDING HOUSE/DHARAMSHALA

Min. Plot size	500 sqm.
Maximum ground coverage	30%
Maximum floor area ratio	120
Maximum height	15m

(i) Parking to be provided @ 2 ECS per 100 sqm. of built up area.

17 DEVELOPMENT CODE

8 (4) PARKING STANDARDS

Parking Standards have been prescribed in each use premises. However, where it is not prescribed, it will be followed as given in the **Table 17.2**.

Table 17.2: Parking Standards

S.No	Use Premises	Permissible Equivalent Car Spaces (ECS) per 100 sqm. of floor area
1.	Residential	2.0
2.	Government	1.8
3.	Public and Semi Public-Facilities	2.0

(i) In existing buildings having plot area of more than 2000 sqm. an extra ground coverage of 5% shall be permissible for construction of automated multi-level parking to provide dedicated parking structures for additional needs.

(ii) For the provision of car parking spaces, the space standards shall be as given in **Table 17.3**.

Table 17.3: Space Standards for Car Parking

S.No.	Type of Parking	Area in sqm. per ECS
1.	Open	23
2.	Ground floor covered	28
3.	Basement	32
4.	Multi level with ramps	30
5.	Automated multilevel with lifts	16

(iii) In the use premises, parking on the above standards shall be provided within the plot.

8 (5) BASEMENTS

(a) Basement(s) upto the setback line maximum equivalent to parking and services requirement, such as Air Conditioning Plant and equipment, water storage, Boiler, Electric Sub-Station HT and LT Panel rooms, Transformer Compartment, Control Room, Pump House, Generator Room and other mechanical services and installation of electrical and fire fighting equipments, and other services required for the maintenance of the building with prior approval of the concerned agencies, could be permitted and not to be counted in FAR. However, the area provided for services should not exceed 30 % of the basement area.

(b) The basement(s) above the plot level shall be kept flushed with the ground and shall be ventilated with mechanical means of ventilation; and

(c) Basement(s) shall be designed to take full load of the fire tender, wherever required and subject to adequate safety measures.

(d) In case the basement is used for activity in conformity with the use premises, wherever permitted, the same shall be counted in FAR subject to clearance from the Fire Authorities and other statutory bodies.

(e) Parking area, if misused, is liable to be municipalized / taken over by the Local Body / Authority.

(f) The ESS, fire fighting installations and underground water tank shall neither be counted in ground coverage nor in FAR.

3.3.2 GUIDELINES FOR REDEVELOPMENT SCHEMES

The basic objective of redevelopment is to upgrade the area by implementing specific schemes on the basis of existing physical and socio-economic conditions in the following way:

(i) Influence Zone along MRTS Corridor and the Sub-Zones for redevelopment and renewal should be identified on the basis of physical features such as metro, roads, drains, high tension lines and control zones of Monuments/ Heritage areas, etc.

(ii) The residents / cooperative societies/ private developers should get the layout and services plan prepared in consultation with the concerned authority for approval.

(iii) Within the overall Redevelopment / Regularisation plans, building plan approval shall follow

(a) Planning Permission for an area of around 4 Ha. This permission may not be required in case an approved layout / Redevelopment / Regularisation plan exists.

(b) The norms of Group Housing with respect to ground coverage, basement, parking, set backs etc. (except FAR) shall be applicable.

(iv) Amalgamation and reconstitution of the plots for planning purpose will be permitted.

(v) To incentivise the redevelopment a maximum overall FAR of 50% over and above the existing permissible FAR on individual plots subject to a maximum of 400 shall be permissible. Higher FAR shall however not be permissible in redevelopment of Lutyens Bungalow Zone, Civil Lines Bungalows Area and Monument regulated Zone.

(vi) In case of plots with service lanes, the lane area may be included in the scheme. However, no FAR / coverage will be granted and the area shall be used as public area.

(vii) The standards of housing density, minimum width of roads and community facilities can be relaxed, wherever justified, by planning considerations (e.g., pedestrianization of the area).

(viii) The Public and Semi-public uses and services like hospitals, dispensaries, colleges, schools, police stations, fire stations, post offices, local government offices, parking etc. shall be retained in their present locations as far as possible and if not, relocated as part of the redevelopment scheme. Alternative sites shall be indicated in the Redevelopment Schemes / Zonal Development Plans. Any change or addition there of shall be in accordance with the overall policy frame prescribed in the plan.

(ix) Reduced space standards may be adopted for community facilities / social infrastructure for the Unauthorized /Regularized Unauthorized colonies. The land required for any public purpose may be acquired with the consent of the owner through issue of Development Rights Certificate in lieu of payment towards cost of land as per the prescribed regulations. The concept of Accomodation Reservation i.e. allowing construction of community facilities without counting in FAR may also be utilized.

(x) Subject to preparation and approval of integrated / comprehensive Redevelopment schemes and provision of parking and services, up to 10% of the FAR may be allowed for commercial use and 10% of the FAR for community facilities with a view to trigger a process of self-generating redevelopment.

(xi) The circulation pattern should include segregation of pedestrian and vehicular traffic, entry control, access of emergency vehicles to every block, provision of adequate parking etc.

(xii) Appropriate levies for increased FAR, and landuse conversion shall be charged from the beneficiaries by the competent authority as per prevailing rules / orders.

(xiii) Urban Design and Heritage to be ensured as per the guidelines.

(xiv) The land use shall be governed as per the Master Plan / Zonal Development Plan. The non-residential use will be permitted as per the provisions of the Mixed Use Regulations and Special Area Regulations.

CHAPTER-V

RELEVANT EXTRACTS FROM NBC 2005 PART 3- GENERAL DEVELOPMENT CONTROL RULES & GENERAL BUILDING REQUIREMENTS.

RELEVANT EXTRACTS FROM NATIONAL BUILDING CODE OF INDIA PART 3

4 MEANS OF ACCESS

4.3 Width of means of access

The residential plots shall abut on a public means of access like street/road. Plots which do not abut on a street/road shall abut/front on a means of access, the width and other requirements of which shall be as given in **Table 1**.

Table 1

Width and Length of Means of Access

(Clause 4.3)

Sl. No.	Width of Means of Access m	Length of Means of Access m
(1)	(2)	(3)
i)	6.0	75
ii)	7.5	150
iii)	9.0	250
iv)	12.0	400
v)	18.0	1000
vi)	24.0	above 1000

NOTE- If the development in only on one side of the means of access, the prescribed widths may be reduced by 1 m in each case.

In no case, development on plots shall be permitted unless it is accessible by a public street of width not less than 6 m.

5 COMMUNITY OPEN SPACES AND AMENITIES

5.5 Other Amenities

In addition to community spaces, layout shall provide for the amenities as under

5.5.1 Education Facilities

			Land Area Required, Min
a)	**Pre- Primary to Secondary Education**		
1)	Pre-primary, nursery school (1 for every 2,500 population)		
	i)	Area per school	0.08 ha
	ii)	Location of pre-primary/ nursery school	Near a park
2)	Primary school (class 1 to 5) (1 for every 5,000 population)		
	i)	Strength of school-500 students	
	ii)	Area per school	0.40 ha
		a) School building area	0.20 ha
		b) Play field area (with a minimum of 18 m x 36 m to be ensured for effective play)	0.20 ha
3)	Senior Secondary school (class 6 to 12 - 1 for every 7500 population)		
	i)	Strength of the school- 1,000 students	
	ii)	Area per school	1.80 ha
		a) School building area	0.60 ha
		b) Play field area (with a minimum of 68 m x 126 m to be ensured for effective play)	1.00 ha
		c) Parking area	0.20 ha
4)	Integrated school without hostel facility (class 1 to 12 - 1 for every 90,000 to 1,00,000 populations)		
	i)	Strength of the school-1,500 students	
	ii)	Area per school	3.50 ha
		a) School building area	0.70 ha
		b) Play field area	2.50 ha
		c) Parking	0.30 ha
5)	Integrated school with hostel facilities (class 1 to 12 - 1 for every 90,000 to 1,00,000 population)		
	i)	Strength of school-1,500 students	

	ii)	Area per school	3.90 ha
		a) School building area	0.70 ha
		b) Play field area	2.50 ha
		c) Residential (including hostel area)	0.40 ha
		d) Parking area	0.30 ha
6)	School for physically challenged (class 1 to 12 - 1 for every 45,000 population)		
	i)	Strength of school-400 students	
	ii)	Area per school	0.70 ha
		a) School building area	0.20 ha
		b) Play field area	0.30 ha
		c) Parking area	0.20 ha

5.5.2 Health Care Facilities		**Land Area Required, Min**
1)	Dispensary (1 for every 15,000 population) Area	0.08 ha to 0.12 ha
2)	Nursing home, child welfare and maternity centre (1 for every 45,000 to 1,00,000 population)	
	i) Capacity 25 to 30 beds	
	ii) Area	0.20 ha to 0.30 ha
3)	Poly-clinic with some observation beds (1 for every 1,00,000 population) Area	0.20 ha to 0.30 ha
4)	Intermediate hospital (category B) (1 for every 1,00,000 population)	
	i) Capacity 80 beds (initially the provision may be for 50 including 20 maternity beds)	
	ii) Total area	1.00 ha
	a) Area for hospital	0.60 ha
	b) Area for residential accomodation	0.40 ha
5)	Intermediate hospital (category A) (1 for every 1,00,000 population)	
	i) Capacity 200 beds (initially the provision may be for 100 beds)	
	ii) Total area	3.70 ha
	a) Area for hospital	2.70 ha
	b) Area for residential accomodation	1.00 ha

6)	General hospital (1 for every 2,50,000 population)		
	i)	Capacity 500 beds (initially the provision may be for 300 beds)	
	ii)	Total area	6.00 ha
		a) Area for hospital	4.00 ha
		b) Area for residential accomodation	2.00 ha
7)	Multi-specialty hospital (1 for 1,00,000 population)		
	i)	Capacity 200 beds (initially the provision may be for 100 beds)	
	ii)	Total area	9.00 ha
		a) Area for hospital	6.00 ha
		b) Area for residential accomodation	3.00 ha
8)	Specialty hospital (1 for every 1,00,000 population)		
	i)	Capacity 200 beds (initially the provision may be for 100 beds)	
	ii)	Total area	3.70 ha
		a) Area for hospital	2.70 ha
		b) Area for residential accomodation	1.00 ha

5.5.3	**Socio-Cultural Facilities**	**Land Area Required, Min**
1)	Community room (1 for every 5,000 population) Area	750 m^2
2)	Community hall, mangalkaryalaya/ kalyana/ baratghar/ library (1 for every 15,000 population) Area	2,000 m^2
3)	Recreational club (1 for every 1,00,000 population) Area	10,000 m^2
4)	Music, dance and drama centre (1 for every 1,00,000 population) Area	1,000 m^2
5)	Meditation and spiritual centre (1 for every 1,00,000 population) Area	5,000 m^2
6)	Socio-cultural centre (1 for every 1,00,000 population) Area	15 ha

6 REQUIREMENTS OF PLOTS

6.4 Distance from Electric Lines

No VERANDAH, balcony, or the like shall be allowed to be erected or re-erected or any addition or alterations made to a building within the distances quoted below in accordance with the current Indian Electricity Rules as amended from time-to-time between the building and any overhead electric supply line:

		Vertically (in meters)	Horizontally (in meters)
1	**2**	**3**	**4**
a)	Low and medium voltage lines and service lines	2.5	1.2
b)	High voltage lines up to and including 11,000 V	3.7	1.2
c)	High voltage lines above 11,000 V and up to and including 33,000 V	3.7	2.0
d)	Extra high voltage line beyond 33,000 V	3.7 (plus 0.3 m for every additional 33,000 V or part thereof)	2.0 (plus 0.3 m for every additional 33,000 V or part thereof)

6.6 Size of Plots

6.6.1 Residential

Each plot shall have a minimum size/frontage corresponding to the type of development as given below:

Type of Development (1)	Plot Size (in Sqm) (2)	Frontage (in meter) (3)
Detached building	Above 250	Above 12
Semi-detached building	125-250	8 to 12
Row type building	50-125	4.5 to 8

8 OPEN SPACES (WITHIN A PLOT)

8.1 General

Every room intended for human habitation shall abut on an interior or exterior open space or an open VERANDAH open to such interior or exterior open space.

8.1.1 The open spaces insides and around a building have essentially to cater for the lighting and ventilation requirements of the rooms abutting such open spaces, and in the case of buildings abutting on streets in the front, rear or sides, the open spaces provided shall be sufficient for the future widening of such streets.

8.1.2 Open Spaces Separate for each Building or Wing

The open spaces shall be separate or distinct for each building and where a building has two or more wings, each wing shall have separate or distinct open spaces for the purpose of lighting and ventilation of the wings.

However, separation between accessory and main building more than 7m in height shall not be less than 1.5m; for building up to 7 m in height no such separation shall be required.

8.2 Residential Buildings

8.2.1.3 Side open space

a) Every semi-detached and detached building shall have a permanently open air space, forming an integral part of the site as below:

1) For detached buildings there shall be a minimum side open space of 3 m on both the sides.

Note- For detached residential buildings up to 7 m in height on plots with a frontage less than 12 m (see 6.6.1), one of the side open spaces may be reduced to 1.5 m.

2) For semi-detached buildings, there shall be a minimum side open space of 3 m on one side.

Note- For semi-detached buildings up to 7 m in height on plots with a frontage less than 9 m (see 6.6.1), the side open spaces may be reduced to 1.5 m.

3) For row-type buildings, no side open is required.

b) In the case of semi-detached buildings, the open spaces provided on one side shall be as in 8.2.1.3 (a) and all habitable rooms shall abut either on this side open space or front and rear open spaces or an interior open space (see 8.2.5).

8.2.2. The provisions of **8.2.1.3** are not applicable to parking lock-up to 3 m in height located at a distance of 7.5 m from any street line or front boundary of the plot.

8.2.3 The open spaces mentioned in **8.2.1.3** shall be for residential buildings up to a height of 10 m.

8.2.3.1 For buildings of height above 10 m, the open spaces (side and rear) shall be as given in Table 2. The front open spaces for increasing heights of buildings shall be governed by **9.4.1** (a). which says that the maximum height of building shall not exceed 1.5 times the width of road abutting plus the front open spaces.

TABLE 2
Side and Rear Open Spaces for Different Heights of Buildings
(clause 8.2.3.1)

Sl. No.	Height of Buildings (in meters)	Side and Rear Open Spaces to be Left Around Building (in meters)
(1)	**(2)**	**(3)**
i)	10	3
ii)	15	5
iii)	18	6
iv)	21	7
v)	24	8
vi)	27	9
vii)	30	10
viii)	35	11
ix)	40	12
x)	45	13
xi)	50	14
xii)	55 and above	16

NOTES

1. For buildings above 24 m in height, there shall be a minimum front open space of 6 m.

2. Where rooms do not derive light and ventilation from the exterior open space, the width of such exterior open space as given in col 3 may be reduced by 1 m subject to a minimum of 3 m and a maximum of 8 m. No further projections shall be permitted.

3. If the length or depth of the building exceeds 40 m, add to col (3) 10 percent of length or depth of building minus 4.0 m.

8.2.3.2 For tower-like structures, as an alternative to **8.2.3.1**, open spaces shall be as below:

a) Up to a height of 24 m, with one set-back, the open spaces at the ground level, shall be not less than 6 m;

b) For heights between 24 m and 37.5 m with one set-back, the open spaces at the ground level, shall be not less than 9 m;

c) For heights above 37.5 m with two set-backs, the open spaces at the ground level, shall be not less than 12 m; and

d) The deficiency in the open spaces shall be made good to satisfy **8.2.3.1** through the set-backs at the upper level; these set-backs shall not be accessible from individual rooms/flats at these levels.

8.2.5 Interior Open Spaces

a) **Inner courtyard-** In case the whole of one side of every room excepting bath, WC and store room is not abutting on either the front, rear or side open spaces, it shall abut on an inner courtyard, whose minimum width shall be 3 m.

Further, the inner courtyard shall have an area, throughout its height, of not less than the square of one-fifth the height of the highest wall abutting the courtyard. Provided that when any room (excluding staircase bay, bathroom and water-closet) is dependent for its light and ventilation on an inner courtyard, the dimension shall be such as is required for each wing of the building.

Where only water-closet and bath room are abutting on the interior courtyard, the size of the interior courtyard shall be in line with the provision for ventilation shaft as given in **8.2.5** (b).

b) **Ventilation shaft-** For ventilating the spaces for water-closets and bath rooms, if not opening on to front, side, rear and interior open spaces, these shall open on the ventilation shaft, the size of which shall not be less than the values given below:

Height of Buildings **m**	**Size of Ventilations Shaft** **m^2**	**Minimum One Dimension of the Shaft** **m**
(1)	(2)	(3)
Up to 10	1.2	0.9
12	2.8	1.2
18	4.0	1.5
24	5.4	1.8
30	8.0	2.4
Above 30	9.0	3.0

NOTES

1. For buildings of height above 30 m, a mechanical ventilation system shall be installed besides the provision of minimum ventilation shaft.

2. For fully air-conditioned residential buildings for lodging purpose, the ventilation shaft need not be insisted upon, provided the air conditioning system works in an uninterrupted manner, also, provided there is an alternative source of power supply.

c) **Outer courtyard-** The minimum width of the outer courtyard (as distinguished from its depth) shall be not less than 2.4 m. If the width of the outer courtyard is less than 2.4m, it shall be treated as a notch and the provisions of outer courtyard shall not apply. However, if the depth of the outer courtyard is more than the width, the provision of **8.1.2** shall apply for the open spaces to be left between the wings.

9.5 RESTRICTIONS IN THE VICINITY OF AERODROMES

9.5.1 For buildings in the vicinity of aerodromes, the maximum height of such buildings shall be decided in consultation with the Civil Aviation Authorities. This shall be regulated by the rules for giving no objections certificate for construction of buildings in the vicinity of aerodromes of Directorate General of Civil Aviation. However, the latest rules of Directorate General of Civil Aviation shall be followed in all cases of buildings coming up in the vicinity of an aerodrome.

9.5.1.1 For the purpose of 9.5.1 new buildings, structures which rise to 30 m or more in height and are to be located within 20 km of the aerodrome reference point shall be constructed only if no objection certificate has been obtained from the Directorate General of Civil Aviation.

9.5.1.2 In the case of buildings to be erected in the vicinity of defence aerodromes, the maximum height of such buildings shall be decided by the Defence Authority.

9.6 GROUP HOUSING

9.6.1 Group housing development may be in low rise house, clusters or multi-storeyed apartments for high density development.

9.6.2 No limit to floors and height shall be applicable, but the coverage and floor area ratio for various densities may be as given in **Table 4** unless otherwise provided in the Master Plan and local development control rules.

Table 4
Floor Area Ration and Coverage for Group Housing
(Clause 9.6.2)

Sl.No.	Net Residential Density in Dwelling Units/ Hectare	Maximum Coverage in Percent	Floor Area Ratio
(1)	(2)	(3)	(4)
i)	25	25	0.50
ii)	50	30	0.75
iii)	75	33	0.90
iv)	100	35	1.00
v)	125	35	1.25
vi)	150	35	1.50
vii)	175	35	1.75

NOTE The coverage shall be calculated on the basis of the whole area reserved for group housing.

9.6.3 The minimum size of the site for group housing multi-storeyed apartment shall be 3,000 m^2.

9.6.3.1 The number of dwelling units are calculated on the basis of the density pattern given in the Development Plan taking into consideration a population of 4.5 persons per dwelling unit.

9.6.3.2 The basement may vary between 33.33 to 50 percent of the plot area and is to be used for

parking, servicing and for essential household storage without counting in FAR.

9.6.3.3 One car parking space for every two flats up to 90 m^2 floor area and one for every flat for 100 m^2 or more shall be provided.

9.6.4 With a view to providing adequate parking for occupancies and vehicular load, appropriate off-street parking provisions have to be permitted in basement areas and the footprint for the basement parking can exceed the ground coverage of the building subject to no basement building construction to cross the buildings line and all other safety features for structural, fire, health and public safety being ensured.

10. OFF STREET PARKING SPACES

10.3 Each off-street parking space provided for vehicles shall be as follows:

a) For car, the minimum parking space to be 3 m x 6 m when individual parking space is required and 2.75 m x 5 m when common parking space is required.

b) Space for scooter/two wheeler and bicycle to be not less than 1.25 m^2 and 1.00 m^2 respectively.

c) Area for each equivalent car space inclusive of circulation area is 23 $m^2$for open parking, 28 $m^2$for ground floor covered parking and 32 $m^2$for basement.

12 REQUIREMENTS OF PARTS OF BUILDINGS

12.2 Habitable Room

12.2.1 Height

The height of all rooms for human habitation shall not be less than 2.75 m measured from the surface of the floor to the lowest point of the ceiling (bottom of slab). In the case of pitched roof, the average height of rooms shall not be less than 2.75 m. The minimum clear head room under a beam, folder plates or eaves shall be of not less than 2.4 m measured from the surface of the floor to the lowest point of air-conditioning duct or the false ceiling shall be provided.

12.2.1.1 The requirements of **12.2.1** apply to residential, business and mercantile buildings. For educational and industrial buildings, the following minimum requirements apply:

a) Educational Buildings Ceiling height 3.6 m for all regions; in cold regions, 3m

12.2.2 Size

The area of habitable room shall not be less than 9.5 m^2 where there is only one room with a min. width of 2.4m. Where there are two rooms, one of these shall not be less than 9.5m^2 and the other not less than 7.5m^2 with a minimum width of 2.1 m.

12.3.1 Kitchen

12.3.1.1 Height

The height of a kitchen measured from the surface of the floor to the lowest point in the ceiling (bottom slab) shall not be less than 2.75 m, except for the portion to accommodate floor trap of the upper floor.

12.3.2 Size

The area of a kitchen where separate dining area is provided, shall be not less than 5.0 $m^2$with a minimum width of 1.8 m. Where there is a separate store, the area of the kitchen may be reduced to 4.5 m^2. A kitchen, which is intended for use as a dining area also, shall have a floor area of not less than 7.5 m^2 with a minimum width of 2.1 m.

12.3.3 Other Requirements

Every room to be used as kitchen shall have:

a) Unless separately provided in a pantry, means for the washing of kitchen utensils which shall lead directly or through a sink to a grated and trapped connection to the waste pipe:

b) An impermeable floor;

c) A flue, if found necessary; and

d) A window or ventilator or opening of size not less than a specified in **15.1.1** subject to increase in area of opening in accordance with Note 3 of **15.1.2.**

15.1.1 Lighting And Ventilation Of Rooms

Rooms shall have, for the admission of light and air, one or more openings, such as window and ventilators, opening directly to the external air or into an open VERANDAH.

15.1.2 The area of opening excluding doors inclusive of frames, shall be not less than:

a) One-tenth of the floor area for dry hot climate;

b) One-sixth of the floor area for wet hot climate;

c) One-eighth of the floor area for intermediate climate; and

d) One-twelfth of the floor area for cold climate.

Note

1 If a window is partly fixed, the openable area shall be counted.

2 No portion of a room shall be assumed to be lighted, if it is more than 7.5 m away from the opening assumed for lighting that portion.

3 The area of openings as given in (a) to (d) above shall be increased by 25 percent in the case of a kitchen [see 12.3.3(d)].

12.4 BATHROOMS AND WATER-CLOSETS

12.4.1 Height

The height of a bathroom or water-closet measured from the surface of the floor to the lowest point in the ceiling (bottom of slab) shall not be less than 2.1 m.

12.4.2 Size

The area of a bathroom shall not be less than 1.8 m^2 with a minimum width of 1.2m. The floor area of water-closet shall be 1.1m^2 with a minimum width of 0.9m. If bath and water-closet are combined, its floor area shall not be less than 2.8 m^2 with a minimum width of 1.2m.

12.4.3 Other Requirements

Every bathroom or water-closet shall:

a) Be so situated that at least one of its walls shall open to external air;

b) Not be directly over or under any room other than another water-closet, washing place, bath or terrace, unless it has a water-tight floor;

c) Have the platform or seat made of water-tight non-absorbent material;

d) Be enclosed by walls or partitions and the surface or every such wall or partition shall be finished with a smooth impervious material to a height of not less than 1 m above the floor of such a room;

e) Be provided with an impervious floor covering, sloping towards the drain with a suitable grade and not towards VERANDAH or any other room; and

f) Have a window or ventilator, opening to a shaft or open space, of area not less than 0.3 m^2 with side not less than 0.3 m.

12.4.4 No room containing water-closets shall be used for any purpose except as a lavatory and no such room shall open directly into any kitchen or cooking space by a door, window or other opening. Every room containing water-closet shall have a door completely closing the entrance to it.

12.5 Ledge Or Tand/Loft

12.5.1 Height

The minimum head-room of ledge of TAND/loft shall be 2.2m. The maximum height of loft shall be 1.5m.

12.5.2 Size

A ledge or TAND/loft in a habitable room shall not cover more than 25 percent of the area of the floor on which it is constructed and shall not interfere with the ventilation of the room under any circumstances.

12.6 MEZZANINE FLOOR

12.6.1 Height

It shall have a minimum height of 2.2 m.

12.6.2 Size

The minimum size of the mezzanine floor, if it is to be used as a living room, shall not be less than 9.5 m^2. The aggregate area of such mezzanine floor in a building shall in no case exceed one-third the plinth area of the buildings.

12.6.3 Other Requirements

A mezzanine floor may be permitted over a room or a compartment provided:

a) It confirms to the standard of living rooms as regards lighting and ventilation in case the size of mezzanine floor is 9.5 m^2or more.

b) It is so constructed as not to interfere under any circumstances with the ventilation of the space over and under it;

c) Such mezzanine floor is not sub-divided into smaller compartments;

d) Such mezzanine floor or any part of it shall not be used as a kitchen; and

e) In no case shall a mezzanine floor be closed so as to make it liable to be converted into unventilated compartments.

12.7 STORE ROOM

12.7.1 Height

The Height of a store room shall be not less than 2.2 m.

12.7.2 Size

The size of a store room, where provided in a residential building, shall be not less than 3 m^2.

12.8 GARAGE

12.8.1 Height

The height of a garage shall be not less than 2.4 m.

12.8.2 Size

The size of garages shall be as below:

a) Garage-3.0m x 6.0 m, minimum.

12.9 BASEMENT

12.9.1 The basement shall not be used for residential purpose.

12.9.2. The construction of the basement shall be allowed by the Authority in accordance with the land use and other provisions specified under the Development Control Rules.

12.9.2.1 The basement to be constructed within the buildings envelope and subject to maximum coverage on floor 1 (entrance floor) may be put to only the followings uses:

a) Storage of household or other goods of ordinarily non-combustible material;

b) Strong rooms, bank cellars, etc;

c) Air-conditioning equipment and other machines used for services and utilities of the buildings; and

d) Parking space.

12.9.3 The basement shall have the following requirements:

a) Every basement shall be in every part at least 2.4m in height from the floor to the underside of the roof slab or ceiling;

b) Adequate ventilation shall be provided for the basement. The ventilation requirements shall be the same as required by the particular occupancy according to byelaws. Any deficiency may be met by providing adequate mechanical ventilation in the form of blowers, exhaust fans, air-conditioning systems, etc.

c) The minimum height of the ceiling of any basement shall be 0.9 m and the maximum1.2 m above the average surroundings ground level;

d) Adequate arrangements shall be made such that surface drainage does not enter the basement;

e) The walls and floors of the basement shall be water tight and be so designed that the effects of the surroundings soil and moisture, if any are taken into account in design and adequate damp proofing treatment is given; and

f) The access to the basement shall be separate from the main and alternative staircase providing access and exit from higher floors. Where the staircase is continuous in the case of buildings served by more than one staircase, the same shall be of enclosed type serving as a fire separation from the basement floor and higher floors. Open ramps shall be permitted if they are constructed within the buildings line subject to the provision of (d).

12.10 CHIMNEYS

The chimneys shall be built at least 0.9 m above flat roofs, provided the top of the chimneys is not below the top of the adjacent parapet wall. In the case of sloping roofs, the chimney top shall not be less than 0.6 m above the ridge of the roof in which the chimney penetrates.

12.11 PARAPET

Parapet walls and handrails provided on the edges of roof terraces, balcony, Varandah, etc shall not be less than 1.0 m and not more than 1.2 , in height from the finished floor level**.**

12.13 BOUNDARY WALL

12.13.1 The requirements of the boundary wall are given below:

a) Except with the special permission of the Authority, the maximum height of the compound wall shall be 1.5 m above the centre line of the front street. Compound wall upto 2.4 m height may be permitted if the top 0.9 m is of open type construction of a design to be approved by the Authority.

b) In the case of a corner plot, he height of the boundary wall shall be restricted to 0.75 m for a length of 10 m on the front and side of the inter-sections and the balance height of 0.75 m if required in accordance with (a) may be made up of open type constructions (through railings) and of design to be approved by the Authority.

c) However, the provision of (a) and (b) are not applicable to boundary walls of jails. In industrial buildings, electric sub-stations, transformer stations, institutional buildings like sanitoria, hospital, industrial buildings like workshops, factories and educational

buildings like schools, colleges, including hostels, and other uses of public utility undertakings and strategically sensitive buildings, a height up to 2.4 m may be permitted by the Authority.

12.16 OFFICE-CUM-LETTER BOX ROOM

In the case of multi-storeyed multi-family dwelling apartments, an office-cum-letter box room of dimension 3.6 m x 3 m shall be provided on the ground floor. In case the number of flats is more than 20, the maximum size of the office-cum-letter box room shall be 20 m^2.

12.18 STAIRCASE/EXIT REQUIREMENTS

12.18.1 The minimum clear width, minimum tread width and maximum riser of staircase for buildings shall be as given in 12.18.1.1 to 12.18.1.3.

12.18.1.1 Minimum width- The minimum width of staircase shall be as follows:

a)	Residential buildings (dwellings)	1.0 m
	Note- For row housing with 2 storeys, the minimum width shall be	0.75 m.
b)	Residential hotel buildings	1.5 m
c)	Assembly buildings like auditoria, theatres and cinemas	2.0 m
d)	Educational buildings	1.5 m
e)	Institutional buildings	2.0 m
f)	All other buildings	1.5 m

12.18.1.2 Minimum tread

The minimum width of tread without nosing shall be 250 mm for residential buildings. The minimum width of tread for other buildings shall be 300 mm.

12.18.1.3 Maximum riser

The maximum height of riser shall be 190 mm for residential buildings and 150 mm for the other buildings and these shall be limited to 12 per flight.

12.18.2 The minimum head-room in a passage under the landing of a staircase shall be 2.2m.

12.19.4 It is desirable to conserve rain water using suitable rain water harvesting techniques including by roof water collection.

Annex- 'G' (Clause 12.24)
SPECIAL REQUIREMENTS FOR DEVELOPMENT PLANNING IN HILLY AREAS

G-1 GENERAL

G-1.1 These guidelines provide requirements relating to development planning and design of buildings in hilly area. Any area above 600m in height form mean sea level may be classified as hilly, or any area with average slope of 30^{o}may also be classified as hilly, considering the sensitive and fragile eco-system of hills and mountains. However, the State Governments may identify and notify area to be covered under 'Hilly Area', which need to be dealt with special consideration, when developmental activities are taken up.

G-1.2 Hilly areas have one of the most fragile eco-systems, which need to be conserved. Therefore planning and development strategies for hilly areas shall have to be designed with added sensitivity and stress and on integrated development. The development approach shall comprise sound land use planning and settlement planning.

G-1.3 Settlement planning in the hill areas has extremely large implications on the environment. For planning of the new settlements or working out the strategies for the growth of the existing settlements, it is necessary to conduct detailed environmental inventory/impact assessment. The inventory would involve geological investigations, slope analysis, soil, flora and fauna analysis, climate inventories, vulnerability to natural disasters, etc. In addition to this the aesthetic factors, cultural, architectural and historical heritage, scenic/landscape value should also be taken into consideration. Keeping in view the scarcity of good buildable land and also the high cost of the construction, it is necessary to optimize the use of land and at the same time, use cost effective, appropriate buildings materials and technologies.

G-2 LAND USE PLANNING

G-2.1 The following land use structure shall be adopted in Development Planning in Hilly area:

Land Use	Percentage of Developed Area		
	Small Towns	Medium Towns	Large Cities
(1)	(2)	(3)	(4)
Residential	50-55	48-52	45-50
Commercial	2-3	2-3	4-5
Industrial	3-4	4-5	5-7
Public and semi-public	8-10	8-10	12-15
Recreational	15-18	15-18	18-20
Transport and commerce	5-6	5-6	6-8
Ecological	8-10	8-10	8-10

G-3 OPEN SPACES

G-3.1 The following standards shall be adopted in Development Planning in Hilly area.

Type	Area Range (in ha)	Area per 1,000 Population (in ha)	Remarks
(1)	(2)	(3)	(4)
Tot lot	0.03-0.05	-	Minimum width 15 m
Playground	0.50-1.00	0.12 to 0.20	One for every 5,000 may be combined with schools.
Parks	1.20-2.00	0.12 to 0.20	One for every 10,000 populations.
City parks/ playgrounds/ maidan/exhibition grounds/ cultural gathering grounds	-	0.12 to 0.20	For the entire town at one of more sites, depending upon design and space availability.
Botanical garden	10-20	-	One for every town
Recreational complex including zoo	10-20	-	One for every settlement with tourist potential

G-4 ROADS AND PATHS

G-4.1 Street orientations shall preferably be East-West to allow for maximum South sun to enter the buildings. The street shall be wide enough to ensure that the buildings on one side do not shade those on the other.

G-4.2 The followings road width shall be adopted for urban roads in Hilly areas.

Road Type	**Width (in m)**		
	Open Areas	**Built-up Area**	**Plains**
(1)	**(2)**	**(3)**	**(4)**
Arterial road	18-24	15-18	50-60
Sub-arterial road	15-18	12-15	30-40
Collector road	9-12	7.5-9	20-30
Local street	4.5-6	3-6	10-20
Loop street (maximum length = 500m)	4.5	4.5	9
Cul-de-sac (maximum length = 500m)	4.5	4.5	7.5
Pedestrian path	1.5-2.5	1-1.5	1.5-4.5

G-4.3 Hill Road Manual (IRC:SP:48-1998), a publication of the Indian Roads Congress shall be referred to for detailed guidelines for planning roads in Hilly areas.

G-5 COMMUNITY FACILITIES AND SERVICES

G-5.1 The following standards shall be adopted for community facilities and Services in Hilly areas.

	Type	Population	Distance	Area Range (in ha)
	1	2	3	4
A.	Educational			
	Primary school	4,000	1-2	0.20 to 0.30
	Secondary school (10+2)	15,000	5-7	0.30 to 0.50
	Industrial training centre	-	8-12	0.30 to 0.60
	College	30,000	8-12	2.00 to 3.00
B.	Health			
	Health sub-centre	3,000	2-4	0.025 to 0.067
	Primary health centre	20,000	16-20	0.105- to 0.210
	(25-50 beds)	80,000	16-20	0.840 to 2.100
	Hospital (200-250 beds)	1,000	16-20	0.050 to 0.100
	Veterinary centre			
C.	Other facilities			
	Community welfare centre	16,000	5-7	0.10 to 0.15
D.	Services			
	Fire station	50,000	-	0.30 to 0.80
	General post office	50,000	10-15	0.20 to 0.40
	Post office	10,000	5-7	0.10 to 0.15
	Rural post office	2,000	2-4	0.025 to 0.050
	Rural post office	1,000	1-2	-
	Bank (tribal areas)	10,000	16-20	0.100 to 0.150
	Telephone exchange	50,000	10-15	0.20 to 0.40
	Electric sub-station (66 kV)	-	-	1.00
	Electric sub-station (11 kV)	-	-	0.05
	LPG godown	-	-	0.15

G-6 GENRAL BUILDING REQUIREMENTS

G-6.1 General

The Provisions contained in this Part shall apply excepting for the specific provision given hereunder.

G-6.2 Siting

G-6.2.1 No house shall preferably be located closer than 1 m to another house.

G-6.2.2 No house shall be located closer than 10 m to a steep slope.

G-6.2.3 No house shall be built on a landfill or on the edge of a slope known to have been leveled.

G-6.2.4 Buildings in hills shall be clustered together to minimize the exposure to cold winds. Open spaces provided shall allow for maximum South sun.

G-6.2.2 Buildings shall be located on the south slope of a hill or mountain for better exposure to solar radiation. At the same time, exposure to cold winds may be minimized by locating the building on the leeward side.

G-6.3 Passive Systems for Climate Control

G-6.3.1 Appropriate solar passive methods, such as orientation, double-glazing, trombe walls and solar collectors, shall be adopted to achieve climatic comfort with little use of conventional energy.

G-6.3.2 Care shall be taken in siting and design of buildings to provide passive controls to modify the effect of cold/strong winds.

G-6.4 Flat land is normally not available in hilly regions. The houses are required to be constructed on partially sloping land made available by cutting and filling. It shall be necessary to protect the house by building retaining walls/breast walls to avoid landslides occurring at time of earthquakes or heavy rains.

G-6.5 Disaster Resistance

All necessary steps shall be taken in designing and buildings in hilly regions to achieve disaster resistance as per the relevant code. All natural disasters likely to affect the locality shall be taken into consideration, namely earthquakes, cyclones, avalanches, flash floods, landslides etc.

CHAPTER-VI

RELEVANT EXTRACT FOR NBC 2005

PART 4- FIRE & LIFE SAFETY

RELEVANT EXTRACT FROM NBC. 2005 PART 4

1 SCOPE

This Part covers the requirements for fire prevention, life safety in relation to fire and fire protection of buildings. The Code specifies construction, occupancy and protection features that are necessary to minimize danger to life and property from fire.

2 TERMINOLOGY

2.0 For the purpose of this Part, the following definitions shall apply.

2.1 **Automatic Fire Detection and Alarm System —** Fire alarm system comprising of components for automatically detecting a fire, initiating an alarm of fire and initialing other actions as appropriate.

NOTE : The system may also include manual fire alarm call point.

2.2 **Automatic Sprinkler System —** A system of water pipes fitted with sprinkler heads at suitable intervals and heights and designed to actuate automatically, control and extinguish a fire by the discharge of water.

2.4 **Building, Height of —** The vertical distance measured in the case of flat roofs, from the average level of the ground around and contiguous to the building or as decided by the Authority to the terrace of the last livable floor of the building adjacent to the external wall; and in the case of pitched roofs, up to the point where the external surface of the outer wall intersects the finished surface of the sloping roof; and in the case of gables facing the road, the mid-point between the eaves level and the ridge. Architectural features serving no other function except that of decoration shall be excluded for the purpose of measuring heights.

2.7 **Down-comer —** An arrangement of fire fighting within the building by means of down-comer pipe connected to terrace tank through terrace pump, gate valve and non-return valve and having mains not less than 100 mm internal diameter with landing valves on each floor/landing. It is also fitted with inlet connections at ground level for charging with water by pumping from fire service appliances and air release-valve at roof level to release trapped air inside.

2.8 **Dry Riser —** An arrangement of fire fighting within the building by means of vertical rising mains not less than 100 mm internal diameter with landing valves on each floor/landing which is normally dry but is capable of being charged with water usually by pumping from fire service appliances..

2.13 **Fire Exit —** A way out leading to an escape route having panic bar hardware provided on the door.

2.14 **Fire Lift —** The lift installed to enable fire services personnel to reach different floors with minimum delay, having such features as required in accordance with this Part.

2.18 **Fire Resistance —** Fire resistance is a property of an element of building construction and is the measure of its ability to satisfy for a stated period some or all of the following criteria:

a) Resistance to collapse,

b) Resistance to penetration of flame and hot gases, and

c) Resistance to temperature rise on the unexposed face up to a maximum of I80°C and/ or average temperature of I50°C.

2.19 Fire Separation — The distance in metres measured from the external wall of the building concerned to the external wall of any other building on the site, or from other site, or from the opposite side of street or other public space for the purpose of preventing the spread of fire.

2.22 Fire Tower — An enclosed staircase which can only be approached from the various floors through landings or lobbies separated from both the floor areas and the staircase by fire-resisting doors and open to the outer air.

2.25 High Rise Building — For the purpose of this Part, all buildings 15m or above in height shall be considered as high rise buildings.

2.26 Horizontal Exit — An arrangement which allows alternative egress from a floor area to another floor at or near the same level in an adjoining building or an adjoining part of the same building with adequate fire separation..

2.30 Pressurization — The establishment of a pressure difference across a barrier to protect a stairway, lobby, escape route or room of a building from smoke penetration.

2.32 Roof Exits — A means of escape on to the roof of a building, where the roof has access to it from the ground. The exit shall have adequate cut-off within the building from staircase below.

2.35 Travel Distance — The distance to be travelled from any point in a building to protected escape route, external escape route or final exit.

2.39 Wet Riser — An arrangement for firefighting within the building by means of vertical rising mains not less than 100 mm nominal diameter with landing valves on each floor/landing for fire fighting purposes and permanently charged with water from a pressurized supply.

3 FIRE PREVENTION

3.1 Classification of Building Based on Occupancy

3.1.1 General Classification

All buildings, whether existing or hereafter erected shall be classified according to the use or the character of occupancy in one of the following groups:

Group A	Residential
Group B	Educational
Group C	Institutional
Group D	Assembly
Group E	Business
Group F	Mercantile
Group G	Industrial
Group H	Storage
Group J	Hazardous

3.1.1.1 Minor occupancy incidental to operations in another type of occupancy shall be considered as part of the main occupancy and shall be classified under the relevant group for the main occupancy.

3.1.2 Group A Residential Buildings

These shall include any building in which sleeping accomodation is provided for normal residential purposes with or without cooking or dining or both facilities, except any building classified under Group C.

Buildings and structures under Group A shall be further sub-divided as follows:

Sub-division A-1 Lodging or rooming houses

Sub-division A-2 One or two-family private dwellings

Sub-division A-3 Dormitories

Sub-division A-4 Apartment houses (flats)

a) **Sub-division A - / Lodging or rooming houses—** These shall include any building or group of buildings under the same management, in which separate sleeping accomodation for a total of not more than 40 persons (beds), on transient or permanent basis, with or without dining facilities but without cooking facilities for individuals is provided. This includes inns, clubs, motels and guest houses.

A lodging or rooming house shall be classified as a dwelling in sub-division A-2 if no room in any of its private dwelling units is rented to more than three persons.

b) **Sub-division A-2 One or two-family private dwellings —** These shall include any private dwelling which is occupied by members of one or two families and has a total sleeping accomodation for not more than 20 persons.

If rooms in a private dwelling are rented-to outsiders, these shall be for accommodating not more than three persons per room. If sleeping accomodation for more than 20 persons is provided in any one residential building, it shall be classified as a building in sub-division A-1, A-3 or A-4 as the case may be.

c) **Sub-division A-3 Dormitories —** These shall include any building in which group sleeping accomodation is provided, with or without dining facilities for persons who are not members of the same family, in one room or a series of closely associated rooms under joint occupancy and single management, for example school and college dormitories, students, and other hostels and military barracks.

d) **Sub-division A-4 Apartment houses (flats) —** These shall include any building or structure in which living quarters are provided for three or more families, living independently of each other and with independent cooking facilities, for example, apartment houses, mansions and chawls.

3.1.3 Group B Educational Buildings

These shall include any building used for school, college, other training institutions for day-care purposes involving assembly for instruction, education or recreation for not less than 20 students.

Buildings and structures under Group B shall he further sub-divided as follows:

Sub-division B-I Schools up to senior secondary level

Sub-division B-2 all others/training institutions.

a) Sub-division B-I Schools up to senior secondary level- This sub-division shall include any building or a group of buildings under single management which is used for students not less than 20 in number.

b) Sub- division B-2 All others/training institutions- This sub-division shall include any building or a group of buildings under single management which is used for students not less than 100 in number.

In the case of temporary buildings/structures which are utilized for educational purpose the provisions of 3.2.5.3 shall apply, which says adequate fire precautionary measures in construction of temporary structure and PANDALS shall be taken in accordance with good practice.

If residential accomodation is provided in the schools/institutions that portion of occupancy shall be classified as a buildings in sub-division A-3.

4 LIFE SAFETY

4.2 General Exit Requirement

4.2.1 An exit may be a doorway; corridor; passageway(s) to an internal staircase, or external staircase, or to a VERANDAH or terrace(s), which have access to the street, or to the roof of a building or a refuge area. An exit may also include a horizontal exit leading to an adjoining building at the same level.

4.2.2 Lifts and escalators shall not be considered as exits.

4.2.3 Every exit, exit access or exit discharge shall be continuously maintained free of all obstructions or impediments to full use in the case of fire or other emergency.

4.2.4 Every building meant for human occupancy shall be provided with exits sufficient to permit safe escape of occupants, in case of fire or other emergency.

4.2.5 In every building or structure, exits shall comply with the minimum requirements of this part, except those not accessible for general public use.

4.2.6 No building shall be so altered as to reduce the number, width or protection of exits to less than that required.

4.2.7 Exits shall be clearly visible and the route to reach the exits shall be clearly marked and signs posted to guide the occupants of the floor concerned. Signs shall be illuminated and wired to an independent electrical circuit on an alternative source of supply. The sizes and colours of the exit signs shall be in accordance with good practice. The colour of the exits signs shall be green.

Note : This provision shall not apply to A-2 & A-4 occupancies less than 15 m in height.

4.2.8 The floors of areas covered for the means of exit shall be illuminated to values not less than 1 ft candle (10 lux) at floor level.

4.2.9 Fire doors with 2 h fire resistance shall be provided at appropriate places along the escape route and particularly at the entrance to lift lobby and stair well where a 'funnel or flue effect' may be created, including an upward spread of fire to prevent spread of fire and smoke.

4.2.10 All exits shall provide continuous means of egress to the exterior of a building or to an exterior open space leading to a street.

4.2.11 Exits shall be so arranged that they may be reached without passing through another occupied unit.

4.3 OCCUPANT LOAD

For determining the exits required, the number of persons within any floor area or the occupant load shall be based on the actual number of occupants, but in no case less than that specified in Table 20.

4.3.1 Mezzanine

The occupant load of a mezzanine floor discharging to a floor below shall be added to that floor occupancy and the capacity of the exits shall be designed for the total occupancy load thus established.

4.4 CAPACITIES OF EXITS

4.4.1 The unit of exit width, used to measure the capacity of any exit, shall be 500 mm. A clear width of 250mm shall be counted as an additional half unit. Clear widths less than 250 mm shall not be counted for exit width.

Note: The total occupants from a particular floor must evacuate within $2^{1/2}$ minutes for Type 1 construction, $1^{1/2}$ minutes for Type 2 construction and 1 minute for Type 3 construction. Size of the exit door/exit way shall be calculated accordingly keeping in view the travel distance as per Table 22.

4.4.2 Occupants per unit exit width shall be in accordance with Table 21.

Table 20 Occupant Load
(Clause 4.3)

Sl. No.	Group of Occupancy	Occupant Load,Floor Area in m^2/person
(1)	(2)	(3)
i)	Residential (A)	12.5
ii)	Educational (B)	4

Note:- The gross floor area shall include, in addition to the main assembly room or space, any occupied connecting room or space in the same storey or in the storeys above or below, where entrance is common to such rooms and spaces and they are available for use by the occupants of the assembly place. No deductions shall be made in the gross area for corridors, closets or other sub-division; the area shall include all space serving the particular assembly occupancy.

Table 21 Occupants per Unit Exit Width

(Clauses 4.4.2 and 4.4.3)

Sl. No.	Group of Occupancy	Number of Occupants		
		Stairways	Ramps	Doors
(1)	(2)	(3)	(4)	(5)
i)	Residential (A)	25	50	75
ii)	Educational (B)	25	50	75

4.5 ARRANGEMENT OF EXITS

4.5.1 Exit shall be so located that the travel distance on the floor shall not exceed the distance given in Table 22.

4.5.2 The travel distance to an exit from the dead end of a corridor shall not exceed half the distance specified in Table 22, except in assembly and institutional occupancies in which case it shall not exceed 6 m.

4.5.3 Whenever more than one exit is required for any room space or floor of a building, exits shall be placed as remote from each other as possible and shall be arranged to provide direct access in separate directions from any point in the area served.

TABLE-22

Travel Distance for Occupancy and Type of Construction

(clause 4.4.1, 4.5.1 and 4.5.2)

Sl. No.	Group of Occupancy	Maximum Travel Distance Construction	
		Types 1 & 2(m)	Types 3 & 4(m)
(1)	(2)	(3)	(4)
i)	Residential (A)	30.0	22.5
ii)	Educational (B)	30.0	22.5
iii)	Institutional (c)	30.0	22.5
iv)	Assembly (D)	30.0	30.0
v)	Business (E)	30.0	30.0
vi)	Mercantile (F)	30.0	30.0
vii)	Industrial (G)	45.0	[1)]
viii)	Storage (H)	30.0	[1)]
ix)	Hazardous (J)	22.5	[1)]

NOTES

1. For fully sprinklered building, the travel distance may be increased by 50 percent of the values specified.

2. Ramps shall be protected with automatic sprinkler system and shall be counted as one of the means of escape.[1)] Construction of type 3 or 4 is not permitted.

4.6 NUMBER OF EXITS

4.6.1 General

The general requirements of number of exits shall supplement the requirement of different occupancies in **6.1** to **6.9.** This book covers for residential only i.e. A-1 to A-4 . Refer 6- Additional occupancy –wise requirements.

4.6.2 All buildings, which are 15 m in height or above, and all buildings used as educational, assembly, institutional, industrial, storage, and hazardous occupancies and mixed occupancies with any of the aforesaid occupancies, having area more than 500 m^2 on each floor shall have a minimum of two staircase. They shall be of enclosed type; at least one of them shall be on external walls of buildings and shall open directly to the exterior, interior open space or to an open place of safety. Further, the provision or otherwise of alternative staircase shall be subject to the requirements of travel distance being complied with.

4.9.6 Internal Staircase

The following minimum width shall be provided for staircase:

a)	Residential buildings (dwellings)	1.0 m
b)	Residential hotel buildings	1.5 m
c)	Assembly building like auditorium, theatres and cinemas	2.0 m
d)	Educational buildings up to 30 m in height	1.5 m
e)	Institutional buildings like hospitals	2.0 m
f)	All other buildings	1.5 m

4.9.7 The minimum width of tread without nosing shall be 250 mm for internal staircase of residential building. This shall be 300 mm for assembly, hotels, educational, institutional, business and other buildings. The treads shall be constructed and maintained in a manner to prevent slipping.

4.9.8 The maximum height of riser shall be 190 mm for residential buildings and 150 mm for other buildings and the number shall be limited to 15 per flight.

4.9.10 The number of people in between floor landings in staircase shall not be less than the population on each floor for the purpose of design of staircase. The design of staircase shall also take into account the following.

a) The minimum headroom in a passage under the landing of a staircase and under the staircase shall be 2.2 m.

b) For building 15 m in height or more, access to main staircase shall be through a fire/ smoke check door of a minimum 2 h fire resistance rating. Fire resistance rating may be reduced to 1 h for residential buildings (except hotels and starred hotels).

c) The main and external staircases shall be continuous from ground floor to the terrace level.

d) Beams/columns and other building features shall not reduce the head room/width of the staircase.

4.12 HORIZONTAL EXITS

4.12.3 For building more than 24 m in height, refuge area of 15 m^2 or an area equivalent to 0.3 m^2 per person to accommodate the occupants of two consecutive floors, whichever is higher, shall be provided as under:

The refuge area shall be provided on the periphery of the floor or preferably on a cantilever projection and open to air at least on one side protected with suitable railings.

a) For floors above 24 m and Up to 39 m- One refuge area on the floor immediately above 24 m.

b) For floors above 39 m- One refuge area on the floor immediately above 39 m and soon after every 15 m. Refuge area provided in excess of the requirement shall be counted towards FAR.

NOTE- Residential flats in multi-storied building with balcony, need not be provided with refuge area, however flats without balcony shall provide refuge area as given above.

Table 23 Minimum Requirements for Fire Fighting Installations

Sl. No.	Type of Building Occupancy	Type of Installation									Water Supply (in l)		Pump Capacity (in l/min)	
		Fire Extin-gusher	Hose Reel	Dry Riser (see Note 6)	Wet Riser	Down-Comer	Yard Hydrant	Automatic Sprinkler System	Manually Operated Electric Fire Alarm Systems	Automatic Detection and Alarm System	Under ground Static Water Storage Tank	Terrace Tank	Pump Near Under ground Static Tank (Fire Pump) with Minimum Pressure of 3.5 kg/cm2 at Terrace Level	At the Terrace Tank Level with Minimum Pressure of 2.0 kg/cm2
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
RESIDENTIAL BUILDINGS (A)														
a)	**Lodging or Rooming Houses (A-1)** (see Note 1)													
1)	Less than 15m in height													
	i) Up to 15 rooms	R	NR	NR	NR	NR	NR	R (see Note 2)	NR	NR	NR	5,000 (see Note 3)	NR	NR
	ii) More than 15 and up to 30 rooms	R	R	NR	NR	NR	NR	R {see Note 2}	NR	NR	NR	5,000 {5000} (see Note 4)	NR	450 {450} (see Note 4)
b)	**One or two Family Private Dwellings (A-2)** (see Note 1)	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
c)	**Dormitories (A-3) Apartment house (A-4)**													
1)	Less than 15m in height	R	R	NR	NR	NR	NR	R (see Note 2)	NR	NR	NR	5000 {5000} (see Note 4)	NR	450 {450} (see Note 4)
2)	15 m and above but not exceeding 35 m in height	R	R	NR	NR	R	NR	R (see Note 2)	R (see Note 7)	NR	NR	25000	NR	900
3)	Above 35 m but not exceeding 45 m in height	R	R	NR	R	NR	NR	R (see Note 2 and 8)	R	NR	75000	5000 {5000} (see Note 4)	(see Note 10)	NR
4)	Above 45 m in height but not exceeding 60 m in height	R	R	NR	R	NR	R	R	R	NR	75,000	10,000	(see Note 11)	NR
5)	Above 60 m in height	R	R	NR	R	NR	R	R	R	R	1,00,000	25,000	(see Note 12)	NR

NOTES

1. Buildings above 15 m in height not to be permitted for occupancies A-1 and A-2.
2. Required to be installed in basement if area of basement exceeds 200 m2.
3. Required to be provided if basement area exceeds 200 m2.
4. Additional value given in parenthesis shall be added if basement area exceeds 200 m2.
5. Required to be provided for buildings with more than two storeys (Ground + One).
6. As per the requirement of local authority Dry Riser may be used in hilly areas, industrial areas or as required.
7. Required to be provided for buildings with height above 15 m.
8. To be installed in basement. If basement provided is used for car parking and area thereof exceeds 750 m2 then the sprinklers shall be fed water from both underground static water tank and terrace tank.
9. Required to be provided for building with more than one storey.
10. One electric and one diesel pump of capacity 1620 1/min and one electric pump of capacity 180 1/min.
11. One electric and one diesel pump of capacity 2280 1/min and one electric pump of capacity 180 1/min.
12. Two electric and one diesel pump of capacity 2280 1/min and one electric pump of capacity 180 1/min.

6 ADDITIONAL OCCUPANCY-WISE REQUIREMENTS

6.1 Requirements of Residential Buildings (Group A)

6.1.1 In addition to the general requirement for the type of construction and occupancy group specified in **3.4** and the exit requirements given in **4**, the requirements **6.1.2** to **6.1.4.10** shall be complied with. The capacity of any open mezzanine or balcony shall be added to the capacity of the floor below for the purpose of determining exit capacity.

6.1.2 Fire Detection/Extinguishing System

The requirements for occupancy sub-division A-1 to A-5 as specified in Table 23 and Annex C (for High Rise Buildings) shall apply.

6.1.3 Exit Facilities

The capacity of any open mezzanine or balcony shall be added to the capacity of the floor for the purpose of determining the exit capacity.

6.1.3.1 In addition to requirements specified for occupancy sub-division A-2, the following shall be provided for occupancy sub-division A-1:

Every sleeping room above the street floor shall have access to two separate means of exits, at least one of which shall consist of an enclosed interior stairway, or a fire escape or horizontal exit and so arranged as to provide a safe path of travel to the outside of the building without traversing any corridor or space exposed to an unprotected vertical opening.

6.1.3.2 For occupancy sub-division A-2 of more than two rooms, every occupied room, excluding areas used solely for storage shall have at least two means of exits, at least one of which shall be a door or a stairway providing a means of un-obstructed travel to the outside of the building or street or grade level. No room or space shall be occupied which is accessible only by a ladder, folding stairs or through a trap door.

Further the following provisions shall be made:

All locking devices, which would impede or prohibit exit, such as chain type bolts, limited opening sliding type locks and burglar locks, which are not dis-engaged easily by quick releasing catches, shall be prohibited. All closet door latches shall be such that even children can open the doors from insides. All bathroom door locks or fasters shall be designed to permit the opening of the locked or closed door from the outside in an emergency without the use of a special key.

6.1.3.3 For occupancy sub-division A-3, the following provision shall apply:

All dormitories shall have exits so arranged that from any sleeping room or open dormitory sleeping area, there shall be access to two separate and distinct exits in different directions with no common path of travel unless the room or space is subject to occupancy by not more than 10 persons and has a door opening directly to the outside of the building at street or grade level, or to an outside stairway in which case one means of exit may be accepted.

6.1.3.4 For occupancy sub-division A-4, the following provision shall apply:

a) Every individual living unit covered by occupancy sub-division A-4 shall comply with the requirement for occupancy sub-division A-2 in respect of exits.

b) Every living unit shall have access to at least two separate exits, which are remote from each other and are reached by travel in different directions, excepts that a common path of travel may be permitted for the first 6 m (that is a dead end corridor up to 6 m long may be permitted) provided that single exit may be permitted under any of the conditions given under (c).

c) Any part of building lower than the grade level shall have direct accessibility from outside.

d) At least half of required exits shall discharge direct to the outside of the building; any other exit shall be the same as required for hotels.