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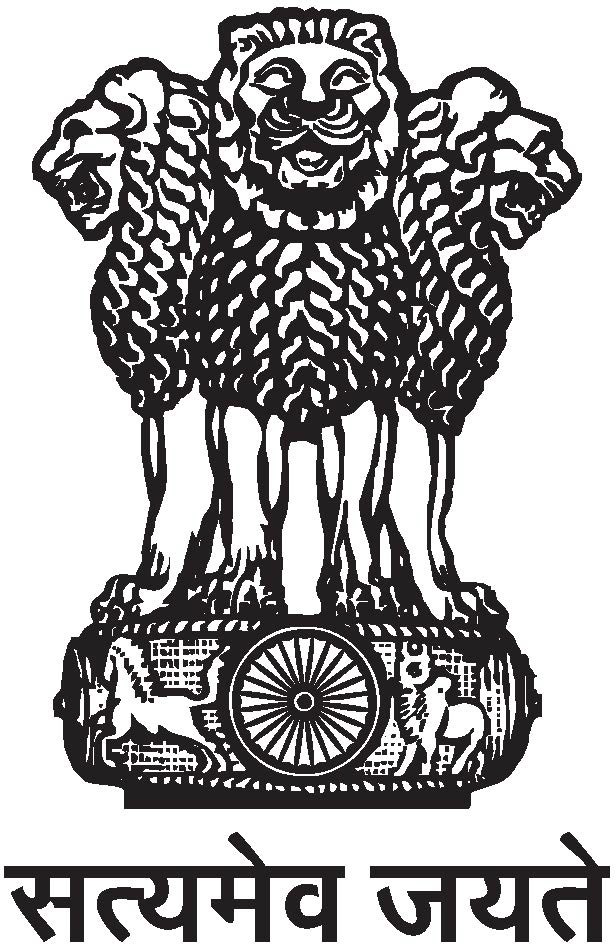
CENTRAL PUBLIC WORKS DEPARTMENT



CPWD



DIRECTOR GENERAL, CPWD, NIRMAN BHAWAN, NEW DELHI



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Government of India

**PLINTH AREA RATES**

**2019**

June 2019

Director General, CPWD, Nirman Bhawan, New Delhi



**PRABHAKAR SINGH Director General**



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**Government of India**

**CPWD**

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**Foreword**

Plinth Area Rates being published by CPWD from time to time is a comprehensive and useful Technical Document to arrive at preliminary cost of a Project. Apart from CPWD Engineers, this publication is used by most of Engineering Organizations and Builders in the country.

Last Plinth Area Rates were brought out in the year 2012, as such a need was felt to revise them incorporating revised GPRA norms approved by the Ministry of Housing & Urban Affairs in the year 2018.

I wish to place on record the commendable work done by Dr. K.M. Soni, ADG(Tech) Shri M.K. Malik, Chief Engineer (CSQ) (Civil) and team of CSQ (Civil and Electrical) in bringing out the Plinth Area Rates 2019 in a short time.

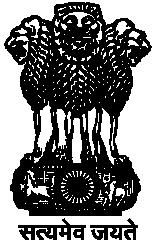


**(Prabhakar Sin h)**

Director General

DR. K.M.SONI

ADDITIONAL DIRECTOR GENERAL (TD) Central Public Works Department Nirman Bhawan, New Delhi



**PREFACE**



Plinth Area Rates are being published by Central Public Works Department from time to time and last were published in 2012. This is a comprehensive and useful technical document being used by CPWD, PWDs, Other Govt. Departments, Public Sector undertakings, Builders, Engineers and Valuation officers for preparation of Preliminary Estimates, Rough Cost Estimates etc. with respect to all kinds of buildings like Offices/Colleges/Schools/Hostels/Hospitals and Residential Buildings. CPWD has been publishing Plinth area rates for long but during post-independence era the first PAR was issued in 1955 with subsequent revisions in 1970, 1976, 1992, 2007, 2010 (2007- reprint) and the last in 2012. From last few years references from various stakeholders were received for revision of these Plinth Area Rates and possible simplifications.

Also in 2013, MoHUA revised the Plinth area norms for General Pool Residential Accommodation (GPRA) vide office Memorandum No. DG/Arch./6 dated 07.08.2013 and thus there has been a need to incorporate them in new Plinth Area Rates.

Considering the above issues, it was decided to issue New Plinth Area Rates - 2019 incorporating new norms of GPRA.

For arriving at some concisely acceptable rates in PAR-2019, data of various recently completed projects from various field units were called. Out of the data received in CSQ unit from various field units for few Non-Residential Buildings and two Residential Buildings, projects were analysed for working out the New Plinth Area Rates. For doing so the completed project costs were segregated and per sqm cost so derived was suitably enhanced by adding relevant cost index between the completion date and the prevailing cost index.

Accordingly, the new plinth area rates are prepared as Plinth Area Rates- 2019, with

01.04.2019 rates being considered as of base 100. Additionally, these are made concise with the following considerations;

I) Use of new technological items do not have much of cost bearing as such nothing extra is added for adoption of new and emerging technologies.

ii) Rates for office buildings, school buildings and colleges/institutions are merged into Non­ Residential buildings.The rates for hostels are merged into residential buildings.

iii) Plinth area rates for load bearing structures are now not given in separate sub head but at Sl.

No. 1.2 (1.2.1 & 1.2.3) in sub head I exceptt Sl. No. 1.3.5 and 1.3.6, other extras for load bearing structures shall remain same as that of RCC framed structures.

iv) In Annexure-IV(Proforma for calculation of cost index) weightages of items have been slightly modified considering current building technology, specifications and materials being adopted.

The Plinth Area Rates-2019 (with base 01.04.2019 as 100) comprises of following Annexures.

Annexure-I: New Plinth Area Rates with base 100 as on 01.04.2019 (for Non­ Residential/Residential Buildings in R.C.C. framed & Load bearing structures along with services and development of site components.

Annexure-11: Specifications for Residential Buildings, Scale of Amenities, Scale of Sanitary & Water Supply fittings and Elect. Installations in GPRA and Specifications for Non­ Residential Buildings.

Annexure-Ill: Guidelines for working out Plinth Area from Plans (for the purpose of calculating plinth area as per IS Code-3861 & as per Memo No. 29/2/58 (WI). Dated Oct. 1983.

Annexure-IV: Proforma for calculating cost index for future Cost indices with base 100 as on

01.04.2019 indicating revised weightages.

Annexure-V: PAR provisions for specialized E & M Works as on 01.04.2019.

All efforts have been made to compile these Plinth Area Rates-2019 user friendly by incorporating the views and feedback from various stakeholders and the field units and making necessary simplifications.

I would like to acknowledge the lead taken by Sh. M.K. Mallick, Chief Engineer, CSQ(Civil), Sh. C.K. Varma, Chief Engineer (E) (CSQ) and dedicated efforts of Sh. Divakar Agrawal, SE(TAS), Sh. O.K. Tulani, SE (E) TAS, Sh. Ashish Kumar Singh, Director (Finance), Shri M.L. Prasad, EE(TAS-11), Sh. V.K. Khetan, EE(E) TAS, Sh. Naresh Kumar, EE, (P&WA), Sh. D.S. Adhikari, AE(QA), CSQ, Sh. Sanjay Singh, AE(TAS), Shri Patta Madhu Kumar, AE(TAS), Sh. Kommalapati Madhu, AE(E), TAS, Ms. Shahana Shamim, Asstt, Architect 0/o CA(NDR), Sh. Mukesh Varma, Chief Estimator (C), DCC-6, Sh. Prabhat Singh, Sr. D/Man, (TAS), other staff of CSQ and field units officers who have provided valuable inputs/data in finalisation of Plinth Area Rates-2019.

Place: New Delhi

Date: June 2019

(DR. K.M. Soni)



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**PLINTH AREA RATES AS ON 01.04.2019**

**ANNEXURE – 1**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sl. No.** | **Description** | **Non-Residential Buildings** | | **Residential Buildings** |
| **Office/School**  **/College** | **Hospital** | **Hostels/Quarters**  **(Type- I to Type-VI Qtrs.) & Bunglows (Type-VII & VIII)** |
| (Rates in Rupees Per Sqm.) | | |
| 1.0 | **BUILDING COST (Specifications as per Annexure-II)** | | | |
| 1.1 | **RCC FRAMED STRUCTURE (Upto Six Storeys)** | | | |
| 1.1.1 | Floor ht. 3.60 m. | 25500 | 26800 | - |
| 1.1.2 | Floor ht. 2.90 m. | - | - | 19500 |
| 1.2 | **LOAD BEARING STRUCTURE (Upto Four Storeys)** |  |  |  |
| 1.2.1 | Floor ht. 3.60 m. | 21700 | 22800 |  |
| 1.2.2 | Floor ht. 2.90 m. | - | - | 16600 |
| 1.3 | **EXTRA FOR** | | | |
| 1.3.1 | Extra for every additional storey over six storeys upto twelve storeys (For RCC Framed Structure only) | 580 | | |
| 1.3.2 | Every 0.3 m. additional/lesser height of floor above normal floor height of 3.60 m./2.90 m. | 335 | | |
| 1.3.3 | Every 0.3 m. higher plinth over normal plinth height of  0.45 m. (on G.F. area only ) | 335 | | |
| 1.3.4 | Every 0.30 m. deeper foundations over normal depth of  1.20 m. (on G.F. area only) | 160 | | |
| 1.3.5 | Making stronger foundations to take load of one additional floor at a later date (on area of additional floor only) | 1470  (For RCC framed structures only) | | 550  (For load bearing structures only) |
| 1.3.6 | Resisting Earthquake forces | 1200  (For RCC framed structures only) | | 800  (For load bearing structures only) |
| 1.3.7 | R.C.C. Raft foundations (Ground floor only) | 5150 | | |
| 1.3.8 | Pile foundation (On ground floor area only) | 16600 | | |
| 1.3.9 | Stronger structural members to take heavy load above  500 Kgs./sqm. upto 1000 Kgs./Sqm. | 1660 | | |
| 1.4 | **BASEMENT FLOOR** |  | | |
| 1.4.1 | Floor ht. upto 3.35 m. with Kota Stones/HDPE  membrance i/c integral crystalline water proofing. | 30000 | | |
| 1.4.2 | Add or deduct for every 0.30 m. height against normal height of 3.35 m. | 900 | | |
| 1.5 | **FIRE FIGHTING** |  | | |
| 1.5.1 | With wet riser system | 800 | | |
| 1.5.2 | With wet riser and sprinkler system | 1200 | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **Sl. No.** | **Description** | **Non-Residential Buildings** | **Residential Buildings** |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  |  | |  |
| **Office/School**  **/College** | **Hospital** | **Hostels/Quarters**  **(Type- I to Type-VI Qtrs.) & Bunglows (Type-VII & VIII)** |
| (Rates in Rupees Per Sqm.) | | |
| 1.6 | **FIRE ALARM SYSTEM** |  | | |
| 1.6.1 | Manual Fire Alarm System | 250 | | |
| 1.6.2 | Automatic Fire Alarm System | 600 | | |
| 1.7 | Pressurized mechanical ventilation system in the basements with Supply duct of exhaust blowers (on basement area only) | 1050  (For RCC frame structures only) | | |
| 1.8 | **STILT PORTION** |  | | |
| 1.8.1 | Stilt Portion of Multistorey RCC framed structure (up to ht. of 3.60m) Applicable area only | 8000 | | |
| 1.8.2 | Every 0.30 m. additional height (above 3.60 m.) | 200 | | |

**Note :- 1) The rates for items are applicable on entire plinth area except items no. 1.3.3, 1.3.4, 1.3.5, 1.3.7, 1.3.8, 1.5.1, 1.5.2,**

**1.6.1, 1.6.2, 1.7, 1.8.1, 1.8.2.**

**2) The rates mentioned above are inclusive of all taxes, but excluding statutory provisions.**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | | **Non-Residential Buildings** | | | **Residential Buildings** | |
| **Sl. No.** | **Description** | **Office & College** | **Hospitals** | **Schools** | **Hostels** | **(Type- I to Type- VIII Qtrs.)** |
| **2.0** | **SERVICES** | | | | |  |
| 2.1 | Internal Water Supply  &  Sanitary Installations | 4% | 10% | 5% | 12% with  attach ed toilets,  8% with common toilets. | 9% |
| 2.2 | External Service connections |  | | | |  |
| 2.2.1 | Electrical External Service  Connections | 3.75% | 3.75% | 3.75% | 3.75% | 3.75% |
| 2.2.2 | Civil External Service Connections | 1.25% | 1.25% | 1.25% | 1.25% | 1.25% |
| 2.3 | Internal electric installations | 12.5% | 12.5% | 12.5% | 12.5% | 12.5% |
| 2.6 | **EXTRA FOR** | | | | | |
| 2.6.1 | Power wiring and plugs | 4% | 4% | 4% | 4% | 4% |
| 2.6.2 | Central Call bell system | 0.5% | 0.5% | 0.5% | 0.5% | - |
| 2.6.3 | Lightning conductors | 0.25% | 0.25% | 0.25% | 0.25% | - |
| 2.6.4 | Telephone conduits | 0.25% | 0.25% | 0.25% | 0.25% | - |
| 2.6.5 | Centralized Intercom system | - | - | - | - | 1% |
| 2.6.6 | Third Party Quality Assurance | 1% | 1% | 1% | 1% | 1% |

Note:-

1. Third Party Quality Assurance charge of 1% shall be taken in estimate only when client department request for TPI.

2. For modular furniture to be provided in offices etc. extra provision for raceways, conducting and LAN shall be made as per requirement.

3. LED fitting/fixtures are inclusive in Internal Electrical Installation rates. No separate provision shall be made.

4. Percentage mentioned above means the percentage of building cost as per item 1.1/1.2.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **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 |
| **3.0** | **LIFTS** |  |  |  |  |  |  |  |  |
| 3.1 | **Passenger lifts** |  |  |  |  |  |  |  |  |
| 3.1.1 | Passenger lift | 8 | 544 Kg. | 1.0 | G+4 | Power operated | ACV VVF | 16 | 90,000 |
| 3.1.2 | Passenger lift | 8 | 544 Kg. | 1.5 | G+5 | Power operated | ACV VVF | 18 | 90,000 |
| 3.1.3 | Passenger lift | 13 | 884 Kg. | 1.0 | G+4 | Power operated | ACV VVF | 18 | 90,000 |
| 3.1.4 | Passenger lift | 13 | 884 Kg. | 1.5 | G+5 | Power operated | ACV VVF | 20 | 90,000 |
| 3.1.5 | Passenger lift | 16 | 1088 Kg. | 1.0 | G+4 | Power operated | ACV VVF | 24 | 1,10,000 |
| 3.1.6 | Passenger lift | 16 | 1088 Kg. | 1.5 | G+5 | Power operated | ACV VVF | 26 | 1,10,000 |
| 3.1.7 | Passenger lift | 16 | 1088 Kg. | 2.5 | G+12 | Power operated | ACV VVF | 70 | 1,10,000 |
| 3.1.8 | Passenger lift  (Bed lift) | 20 | 1360 Kg. | 0.75 | G+4 | Power operated | ACV VVF | 24 | 1,10,000 |
| 3.1.9 | Passenger lift | 20 | 1360 Kg. | 1.5 | G+5 | Power operated | ACV VVF | 27 | 1,10,000 |
| 3.1.10 | Passenger lift | 20 | 1360 Kg. | 2.5 | G+12 | Power operated | ACV VVF | 75 | 1,10,000 |
| 3.2 | Goods lifts  (2 speed ) |  |  |  |  |  |  |  |  |
| 3.2.1 |  | 1 Ton | - | 0.5 | G+4 |  |  | 26 | 85,000 |
| 3.2.2 |  | 2 Ton | - | 0.5 | G+4 |  |  | 33 | 85,000 |
| 3.2.3 |  | 3 Ton | - | 0.25 | G+4 |  |  | 41 | 1,00,000 |

Note:- 1. ACV VVF=AC variable voltage variable frequency.

2. Provision for lift may also be taken for the buildings having floor less than G+4.

|  |  |  |
| --- | --- | --- |
| **Sl. No.** | **Description** | **Rates in Rupees** |
| **4** | **WATER TANK (RCC ONLY )** |  |
| 4.1 | Overhead tank without independent staging | 18 / Litre. |
| 4.2 | Overhead tank upto staging height 20 metres | 30/ Litre. |
| 4.3 | Overhead tank with staging height between 20 metres and upto 30 metres | 35/ Litre. |
| 4.4 | Overhead tank with staging height between 30 metres and 40 metres | 40/ Litre. |
| 4.5 | Underground sump | 18 / Litre |

|  |  |  |
| --- | --- | --- |
| **Sl. No.** | **Description** | **Rates in Rupees** |
| 5 | **DEVELOPMENT OF SITE** |  |
| 5.1 | Levellling | 160/ sqm. |
| 5.2 | **Internal roads & paths** |  |
| 5.2.1 | Internal road with WBM and Bituminous top | 175/sqm |
| 5.2.2 | Internal road with WMM and Bituminous top | 190/sqm |
| 5.2.3 | Cement Concrete pavement with vaccum dewatered concrete | 85/sqm |
| 5.2.4 | Footpath with kerb stone | 85/sqm |
| 5.3 | Sewer | 165/sqm |
| 5.4 | Filter Water Supply | |
| 5.4.1 | Distribution lines100 mm dia and below | 100/sqm |
| 5.4.2 | Peripheral grid 150 mm to 300 mm dia pipes | 100/sqm |
| 5.4.3 | Unfiltered water supply distribution lines | 65/sqm |
| 5.5 | Storm water drains | 130/ sqm. |
| 5.6 | Rain Water Harvesting (RWH) | 90/sqm |
| 5.7 | Trenchs for services | 585/meter |
| 5.8 | Boundary wall with 1.5 metre. normal height from GL & 0.60 meter high MS  grill, and required no. of steel gates/wicket gates etc. |  |
| 5.8.1 | With load bearing brick wall and plastering on either side and with/without intermediate columns and plinth beams. | 9000/metre |
| 5.8.2 | With precast RCC columns & 1.80/2.40 metre long, 200/250mm wide and 80 to  100mm thick precast RCC horizontal panels having required foundation footings. | 7500/metre |
| 5.9 | **Horticulture Works** |  |
| 5.9.1 | Horticulture Operations including 30 cm earth filling , grassing, tree plantations/shrubs and potted plants etc. | 250/sqm. |
| 5.9.2 | Vertical plantations | 40/sqm |

**Note :-**

1. The rates are per sqm. and are to be applied on the entire area of the plinth/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 services, from large distances, then additional provision should be made.

3. Cost of bulk services water supply, sewage disposal e.g.

(a) Tube wells, pumps, open wells, treatment plant, extension of lines from source of local bodies, head works at water source etc.

(b) 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 conditions may be made for these.

4. None of the specialize E&M services are included in the above rates and necessary provisions as may be required as per design requirements must be considered and rates as per items provided in Annexure-V of this PAR may be referred.

5. The green measures considered for Civil & Electrical works.

(a) Over deck insulation and Application of high SRI reflective paint on the roof.

(b) Masonry work in super structure with Autoclave Aerated Concrete (AAC) blocks/ fly ash bricks.

(c) Window with reflective glass coating / High performance double glazed unit.

(d) Paints with low VOC options.

(e) Rain water harvesting.

(f) Replacement of conventional pillar cock with pillar cock having infrared sensor and foam flow technology (in offices and

Hospitals).

(g) AC plant with VVVF drives and ECBC compliant chillers, high efficiency motors, plant optimizers etc. (cost of plant not included.)

(h) Automated lighting controls with day light sensors and PIRs etc.

(i) Dual plumbing system.

**SPECIFICATIONS FOR RESIDENTIAL BUILDINGS**

**Annexure-II**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Sl. No.** | **Description** | **Latest applicable specifications** | | | | **Remarks** |
| **Type-I, II & III** | **Type-IV, IV (Spl.)** | **Type-V & VI** | **Type-VII & VIII** |
| **1** | **FOUNDATION** | | | | | |
| Foundation  & Structure | As per structural  requirements | Same as Type-1,  II & III | Same as Type-1, II &  III | Same as Type-1, II  & III | The design shall  vary as per soil conditions |
| ***2*** | **SUPERSTRUCTURE** | | | | | |
| For multi-  storey framed structure | RCC framed & Filler  walls of Aerated Cement Concrete (ACC) **/** Cellular Concrete Block (CLC)  /' Brick work / Fly-ash brick | Same as Type-1,  II & III | Same as Type-1, II &  Type-111 | Same as Type-1, II  &III | Any other energy  efficient suitable local material in consultation with Architect and Structural Engineer. |
| For Load  bearing  Construction | Brick-work/stone wall  / ACC /CLC as per requirement /Fly-ash brick | Same as Type-1,  II & III | Same as Type-1, II &  III | Same as Type-1, II  &III | Any other energy  efficient suitable local material in consultation with Architect and Structural Engineer. |
| Internal  Partition | Half brick thick  masonry in ACC/CLC/Fly-ash Bricks | Same as Type-1,  II&III | Same as Type-1, II  &III | Same as Type-1, II  & III | Any other energy  efficient suitable local material in consultation with Architect and Structural  Engineer |
| **3** | **DOORS AND WINDOWS** | | | | | |
| **a) Frames(except of toilet/bath& WC)** | | | | | |
| i) Door | 2nd class teak  wood/UPVC extruded frame sections with wall thickness minimum 2.0mm / powder coated or anodized aluminum extruded/tubular section/Engineered wood section | Same as type-1,  II & III | Same as type-1, II &  III | All frames external  doors windows must have double rebates for Fixing of mosquito proof wire-mesh shutters on external side. |  |
| ii)Window | 2nd class teak wood /  UPVC extruded frame sections with wall thickness minimum  2.0mm/ powder coated or anodized aluminum extruded tubular section / Engineered wood section along with the provision of sub frame of suitable material. | Same as type-1,  II & III | Same as type-1, II &  III | Any other locally  available material, with the approval of concerned Chief Architect. |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | iii) Doors &  Windows of toilet/bath/ WC | 2nd class teak  wood/UPVC extruded frame sections with wall thickness minimum 2.0mm / powder coated or anodized aluminum extruded tubular section/ Engineered wood section | Same as Type-1,  II& III | Same as Type-!. II &  III |  |  |
| iv) Door  /Window frames in servant area | N.A. | For servant  quarters same as  Type-I to Ill | For servant quarters  same as Type-I to Ill |  |  |
| **b) Shutters** | | | | | |
| i)Main  Door/ External Door Shutters | Double shutters one  with painted iron grill with stainless steel Grade-304mosquito proof wire mesh and other 35 mm thick factory made hardwood framed paneled shutter with melamine polish Or  35mm Thick MS tubular box section styles and rails frame with hard wood panels Or  Factory made flush door | Same as Type-1  to III except that pre-laminated particle board paneling will be decorative on both sides. Or  35 mm thick factory made exterior grade both side decorative type flush door shutter with natural veneer and melamine polish. | Double shutters one  Safety door in Stainless steel frame with mosquito proof S.S. wire-mesh and SS fittings and other with  35mm thick 2nd class teak wood framed paneled with decorative veneer on both sides /35 mm thick factory made exterior grade both side decorative veneered type flush door shutter with melamine polish. Or  UPVC extruded section of wall thickness minimum  2.0mm framed glazed/paneled  shutters  For Servant quarters same as Type-1 to III. | Same as Type-V  &VI |  |
| ii) Servant's  Area | N.A. | For Servant  quarters same as  Type-1 to III. |  | For Servant  quarters same as  Type-1 to III. |  |
| Kitchen door | 35mm thick shutter having 12mm thick  pre-laminated (one side decorative and other side balancing)  particle board panel at the bottom part and stainless steel wire mesh at upper part. | Same as Type-1, II & III | 35mm thick shutter having 12mm thick  both side decorative pre-laminated / veneered particle  board panel/2nd class teak wood with melamine polish at the bottom part and stainless ;steel wire mesh at upper part. | Same as Type-V  &VI |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Bath , WC  & Toilet  Door | 35 mm thick, pre-  laminated flush door (one side decorative other side balancing) « | Same as Type-1  to Ill | 35 mm thick, pre-  laminated flush door (one side decorative other side balancing) | Some as Type-  V&VI |  |
| Other Door | 35mm thick hardwood  styles and Rails with paneling with both sides' decorative pre- laminated particle board and finish in melamine polish / Factory made flush door | Same as Type 1,  II & III | 35 mm, thick,2nd class  teakwood Styles & Rails paneled of  12mm thick both side  natural wood veneer finish paneled/ Glazed paneled shutter with  5.5 mm thick float glass panes and finished in melamine polish. | Same as Type-  V&VI |
| c) Window  Shutters Ali windows shutters | Double shutter one  with M.S. tubular box section / hardwood framed glazed panel and other with wire- mesh shutter *M* | Same as Type 1,  II & III | Double shutter one  with 2nd class teakwood framed glazed pane! and other with wire-mesh shutter  Or UPVC extruded  section of wall thickness minimum  2.0mm framed glazed  / paneled shutters | Same as Type-V &  VI |  |
| Servant's  Area (Door  & Windows) | N.A. | For servant  quarters same as  Type Ito III | For servant quarters  same as Type Ito III | For servant  quarters same as  Type Ito II! | Shutters in all  respective rooms shall be as per the finishes of Type-1 to III in those rooms |
| **d)** Hardware  & Fitting  Main Units Servant's Area | Powder coated/  anodized Aluminum  S.S. fittings N.A. | Powder coated/  anodized  Aluminum S.S. fittings Powder coated M.S fittings. | Same as type-IV & IV  special Powder coated  M.S fittings. | Stainless Steel / Chromium plated  brass/ Nickeled Chromium Brass. Powder coated M.S  fittings. | Rubberized Door flashing at the  bottom rails of all externals doors shall be provided  for protection from insects and rainwater etc. |
| **4** | **FLOORING, SKIRTING & DADO** | | | | | |
| **Flooring** living/Drawi ng Room, Dining & Family Lounge | Vitrified / Ceramic tile flooring of size not less than 400mm x  400mm | Vitrified tile flooring of size not less than  600mm x  600mm | 18mm thick gang-saw cut pre-polished granite / marble/ stone of approved shade/ double charged vitrified tile flooring of size not less than  600x600mm Scratch resistant Engineered wood or laminated wooden flooring only in Living /drawing room. Granite, Marble, Stone & Tiles. | Same as Type V & VI |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Office area | N.A. | N.A. | N.A. | Scratch resistant  Engineered wood or laminated wooden flooring |  |
| Bedrooms | Scratch resistant  Ceramic tiles / Vitrified tiles of size not less than 400mm x  400 mm with joints finished with matching grout | Scratch resistant  Ceramic / verified tiles of size not less than  600mm x 600 mm with joints finished with matching grout | Vitrified/double  charged vitrified tiles (with water absorption less than 0.08%) of size not less than  600mm X  600mmScratch  resistant Ceramic tiles with joints finished with matching grout. Engineered wood or laminated wooden flooring in one bedroom. | Same as Type-V  &VI |  |
| Kitchen | Anti skid vitrified tiles  of size no less than  300x300 mm with water absorption less than 0.08% lair with joints finished with matching grout | Same as Type-  1II & III | Anti skid vitrified tiles  of size not less than  400x400mm with water absorption less than 0.08% laid seamless with joints finished with matching grout. | Anti-skid vitrified  tiles of size not less than 600x600mm with water absorption less than 0.08% laid seamless with joints finished with matching grout |  |
| Kitchen  Counter | Udaipur green  marble/granite stone with nosing | Udaipur green  marble /granite stone with nosing | 18mm thick gang-saw  cut pre-polished granite with nosing as per design | Same as Type-V  &VI |  |
| Common  circulation area | Mirror-polished Kota  stone / locally available stone as approved by architect and matching skirting as per architectural drawing. | Same as Type-1,  II &Type -III | 18mm thick pre-  polished granite / Vitrified tiles (with water absorption less than 0.08%) flooring not less than 600mm x600mm | 18mm thick gang-  saw cut pre- polished granite / marble stone of approved shade/ vitrified tiles (with water absorption less than 0.08%) size not less than  600x600 mm |  |
| Servant's  Area  (Flooring) | N.A. | For Servant  quarters Same as  Type 1 to III | For Servant quarters  Same as Type 1 to III \ | For Servant  quarters Same as  Type 1 to III | Finishes in all  rooms shall be as per the finishes of Type-1 to III in respective rooms |
| Common  circulation area in servant quarters | N.A. | Mirror-polished  Kota stone / locally available stone | Same as Type-IV &  Type-IV(Special) | Same as Type-IV  & Type- IV(Special) | Use of locally  stone shall be as per approval of Chief Architect |
| Staircase - Main | Pre-polished Kota stone in single length  of treads & risers | Same as Type-1, II &III | 18mm thick Pre- polished / honed /  flamed finish Granite in single length of  Treads & Risers | Same as Type-V & VI | Nosing design in treads shall be as  per Architectural design |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Fire escape  Staircase | Pre-polished Kota  stone in single length of tread & risers | Same as Type-1,  II &III | Single length pre-  polished Kota stone in  Tread & Risers | Same as Type V &  VI | - Do - |
| Toilets /  Bathroom/ WC | Glazed ceramic anti-  skid of size not less than 300X300 mm. including grouting the joints. | Same as Type-1,  II & III | Rectified Ceramic  antiskid tiles of size not less than 300X300 | Anti-skid vitrified/  Ceramic tiles (with water absorption less than 0.08% not less than  300x300mm Or  18mm thick gang- saw cut pre- polished granite stone |  |
| Skirting in  rooms and other areas | 100 to 150 mm high  skirting matching the floor material. | 100 to 150 mm  high skirting matching the floor material. | 100 to 150 mm high  skirting matching with the floor material. | 100 to ISO mm  high skirting matching the floor material. |  |
| b) Dado  Kitchen  Dado | Ceramic tiles of size  not less than 200 x 300 as per design from floor up to full height. | Same as Type-1,  II & III | Ceramic tiles of size  not less than 300 x  450mmas per design from floor to full height | Ceramic tiles of  size not less than  300 x 450mmas per design from floor to full ht. | Must be read with  Scale of Amenities in the respective categories |
| Toilets/  bathrooms / WC Dado | Glazed ceramic tiles of  size not less than 200 x 300 up to full height with decorative bands at certain intervals. | Same as Type-1,  II &III | Glazed ceramic tiles of  size not less than  300x450 up to full height with bands at certain intervals | Glazed ceramic  tiles \*of size not less than  300x450nim up to full height with a decorative bands at certain intervals. | 1 |
| **5** | **FINISHES** | | | | | |
| Internal  Finishes | All walls & ceiling to be treated with 2 mm thick POP (one time only) and painted with low VOC Acrylic washable distemper/  Synthetic enamel paint on all wood works and steel works | All walls & ceiling to be treated with 2 mm thick POP (one time only)  & painted with low VOC Acrylic washable distemper/ Synthetic enamel paint on all wood works &steel works | All wails & ceiling to be treated with 6 mm thick POP punning (one time only) and painted with low VOC Premium acrylic  Emulsion paints. Synthetic enamel paint on POP and on ail wood works and steel works | Premium acrylic emulsion paint with low VOC of approved shade in roller finish over6 mm thick POP wall  punning |  |
| External  Finishes | Quartz reinforced  Texture Acrylic paint  finish/Premium  Acrylic smooth water proof exterior finish / washed mosaic plaster in premium cement. Synthetic enamel paint on all wood work & steel work | Same as Type-1, II & III. | Quartz reinforced texture Acrylic paint  finish of approved shade /premium Acrylic smooth water  proof exterior finish / washed mosaic plaster in premium cement  /exposed brick / stone work/GRC / Designer cement concrete tile cladding/ACP  cladding in  combination with structural glazing | Same as Type-V & VI | In case of large campus etc., the  External finishes of the residences shall match the  overall colour & texture finishes within the campus |

**SCALE OF AMENITIES FOR GENERAL POOL RESIDENTIAL ACCOMODATION**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **ITEM**  **NO.** | **ITEM** | **TYPE-I/II**  **/III** | **TYPE-IV/IV**  **SPECIAL** | **TYPE-**  **V/VI** | **TYPE-VII/**  **VIII** | **SERVANT**  **QTRS.** |
| **1** | **Kitchen Cabinets** |  |  |  |  |  |
| i) | Cooking Platform | Yes | Yes |  |  | Yes |
| ii) | Stainless steel AISI 304(18/) Kitchen  sink as per IS 13983 with drain board | Yes | Yes |  |  | Yes |
| iii) | Built in cupboard without any shelves  but with shutters of 18mm thick pre- laminated decorative particle board below cooking platform as per architectural design and specifications. | Yes | Yes, with  drawers |  |  |  |
| iv) | 25mm thick and not more than  400mm wide pre-laminated non decorative particle board/plywood shelves in tiers upto 2.10 meter height covered with pre-laminated decorative particle board shutters along one wall as per architectural design and specifications. | Yes | Yes |  |  | Yes |
| v) | Factory made modular kitchen having  sink with double bowl & double drain- board, cooking platform and electric chimeny of reputed company. |  |  | Yes | Yes |  |
| **2** | **Wardrobes** |  |  |  |  |  |
|  | Built in cupboard 650mm wide with  1800 thick pre-laminated non decorative particle board as shelves and 18mm thick pre-laminated decorative particle board as shutters/steel almirahas. | One in each  bed room upto ceiling height | One in each bed  room upto ceiling height |  |  | One upto 7-  0" height |
|  | Factory made wardrobe carcases,  shelves, drawers etc. manufactured in  19mm thick particle/block board & finished in emulsion paint and wardrobe shutter in 19mm thick particle/block board/plywood finished with exterior grade post formed lamination/natural veneer with melamine polish as per the approved sample. |  |  | One in  each bed room upto ceiling height | One in each  bed room upto ceiling height |  |
| 3 | Magic eye in front entry door. | One | One | One | One | One |
| 4 | Curtain road with required  accessories. | In all  windows doors in all rooms except kitchen except kitchen, toilets/bath/ WC | Drapery roads  on all windows and doors in all rooms except kitchen, toilets/bath/WC | Same as  Type IV & IV (Special) | Same as  Type IV & IV (Special) | Same as  Type I,II & III |
| 5 | Set of pegs. | In all  toilets/bath/wc | In all  toilets/bath/WC  and wardrobes | In all  toilets/bath/ WC and wardrobes | In all  toilets/bath/ WC and wardrobes |  |
| 6 | 18mm thick projected window sill  lining, window jhambs. | Kota  stone/green marble | Kota  stone/granite | Marble/  Granite | Marble/  Granite | Kota stone |

**SCALE OF SANITARY AND WATER SUPPLY FITTING FOR GENERAL POOL RESIDENTIAL ACCOMODATION**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **S.**  **NO.** | **ITEM** | **TYPE-I/II/III** | **TYPE-IV/IV**  **SPECIAL** | **TYPE-V/VI** | **TYPE-**  **VII/VIII** | **SERVANT**  **QTRS.** |
| 1 | Orissa WC pan (European  style) with low level dual flushing PVC cistern | One | One | One | One | One |
| 2 | European type floor  mounted/wall-hung WC with seat, lid and low dual flushing PVC cistern. | Yes | Yes | Yes | Yes |  |
| 3 | Water jet/health faucet with  European WC. | Health faucet  with each WC | Health faucet  with each WC | Health faucet  with each WC | Health faucet  with each  WC |  |
| 4 | Wash basin with CP brass  mixture type for hot & cold water with single lever with quarter turns ceramic cartridges. | One | One in each  toilet & one for dining area as per design. | One in each  toilet & one for dining area as per design. | One in each  toilet & one for dining area as per design. | One |
| 5 | Tap (kitchen, toilet, bath &  WC) CP brass/PTMT bic cock provided with quarter turns ceramic cartridges. | 2 in kitchen  1 in each toilet, bath & WC PTMT in Type-I & II/CP brass in Type- III | 2 in kitchen  1 in each toilet, bath & WC-CP brass | 2 in kitchen  1 in each toilet, bath & WC-CP brass | 2 in kitchen  1 in each toilet, bath & WC-CP brass | 2 in kitchen  1 in each toilet, bath  & WC- PTMT |
| 6 | Shower with CP brass  mixture type tap for hot & cold water with single lever, ceramic cartridges quarter turn. | 1 in each  toilet/bath | 1 in each  toilet/bath | 1 in each  toilet/bath | 1 in each  toilet/bath |  |
| 7 | Towel rail CP brass/PTMT. | One PTMT in  each toilet/bath | One CP brass in  each toilet | One CP brass in  each toilet | One CP brass  in each toilet | One PTMT  toilet/bath |
| 8 | Mirror with PTMT glass  shelf. | 600x450mm  with each wash basin | 600x450mm  with each wash basin | As per design  with each wash basin. | As per design  with each wash basin. | 600x450mm  with each wash basin |
| 9 | CP brass/ceramic toilet paper holder with European WC. | Yes in Type-III  only | Yes | Yes | Yes |  |
| 10 | Soap rack/niche as per  architectural design and specification. | One in each  bath/toilet | One in each  toilet | One in each  toilet | One in each  toilet |  |
| 11 | Plumbing for water purifier  and geyser. | Yes | Yes | Yes | Yes | Yes |
| 12 | Storage tank of capacity as per NBC 2005 provision of  separate tank for WC &  drinking water. | Separate tanks for kitchen and  toilets as per requirements  for dual flushing  system. | Separate tanks for kitchen and  toilets as per requirements for dual flushing system. | Separate tanks for kitchen and  toilets as per requirements  for dual flushing system. | Separate  tanks for  kitchen and toilets as per requirements for dual flushing system. | Separate water tanks  to be provided for servants in each category. |

**SCALE FOR ELECTRICAL INSTALLATION IN GENERAL POOL RESIDENTIAL ACCOMODATION**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Sl. No.** | **Description** | **Type-I** | **Type-Ii** | **Type-Iii** | **Type-Iv & Iv**  **(Spcl.)** | **Type-V** | **Type-Vi** | **Type-Vii & Viii** | **Servant**  **Qtrs.** |
| 1 | Power Points  (15 amp 6 pins) | 2 in each  room 1 in kitchen 1 in utility area | 2 in each  room 1 in kitchen 1 in utility area | 2 in each  room 1 in kitchen 1 in utility area | 2 in each  room 1 in kitchen 1 in utility area | 3 in drawing  room 3 in dining room 2 in each bedroom 2 in kitchen 1 in utility area | 3 in drawing  room 3 in dining room  2 in each bedroom 2 in kitchen 1 in utility area | 2 in office  4 in drawing room  3 in dining room  2 in family lounge  2 in each bedroom  2 in kitchen 1 in utility area | Total 2 |
| **Total 6** | **Total 8** | **Total 8** | **Total 12** | **Total 15** | **Total 17** | **Total 22** |  |
| 2 | Plug Points  (5 amp) | 1 in each  room 1 in kitchen 1 in balcony area | 1 in each  room 1 in kitchen 1 in balcony area | 1 in each  room 1 in kitchen 1 in balcony area | 1 in each  room 1 in kitchen 1 in balcony area | 1 in each room 1  in kitchen 01 in store 1 in main balcony | 1 in each room  1 in kitchen 1 in store 1 in each balcony | 1 in office 1 in  each room 1 in kitchen 1 in store  1 in each balcony | Total 2 |
| **Total 4** | **Total 5** | **Total 5** | **Total 7** | **Total 8** | **Total 9** | **Total 12** |  |
| 3 | Bracket Lights  (with normal fittings excluding lamp/bulb) | 1 in each  room 1 in kitchen 1 in each toilet 1 in utility | 1 in each  room 1 in kitchen 1 in each toilet 1 in utility | 1 in each  room 1 in kitchen 1 in each toilet  1 in utility | 1 in each  room 1 in kitchen 1 in each toilet 1 in utility | 1 in store  1 in each toilet  1 in utility | 1 in store  1 in each toilet  1 in utility | 1 in store  1 in each toilet  1 in utility | Total 3 |
| **Total 3** | **Total 4** | **Total 4** | **Total 11** | **Total 10** | **Total 12** | **Total 12** |  |
| 4 | Ceiling Fans | 1 in living  room 1 in each bedroom | 1 in living  room 1 in each  bedroom | 2 in living  room 1 in each bedroom | 2 in living  room 1 in dining room  1 in each bedroom | 2 in drawing  room 1 in dining room 1 in each bedroom 1 in each balcony | 2 in drawing  room 1 in dining room  1 in family lounge 1 in each bedroom  1 in each balcony | 2 in drawing room  1 in dining room  1 in family lounge  1 in each bedroom  1 in each balcony | Total1 |
| **Total 3** | **Total 3** | **Total 4** | **Total 6** | **Total 6** | **Total 12** | **Total 14** |  |
| 5 | Call Bell Points | 1 | 1 | 1 | 2 | 3 | 3 (One with  image display system) | 4 (One with image  display system) |  |
| 6 | Exhaust Fans | 1 each in kit  & bath & WC | 1 each in kit  & bath & WC | 1 each in kit  & bath & WC | 1 each in kit  & bath & WC | 1 each in kitchen  & toilets | 1 each in  kitchen &  toilets | 1 each in kitchen  & toilets | Total 2 |
| 7 | AC Points  (With MCB connected socket outlet with wiring) | 1 in each  room except kitchen & toilet | 1 in each  room except kitchen & toilet | 1 in each  room except kitchen & toilets | 1 in each  room except kitchen & toilets | 1 in each room  except kitchen &  toilets | 1 in each room  except kitchen  & toilets | 1 in each room  except kitchen &  toilets |  |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Sl. No.** | **Description** | **Type-I** | **Type-Ii** | **Type-Iii** | **Type-Iv & Iv**  **(Spcl.)** | **Type-V** | **Type-Vi** | **Type-Vii & Viii** | **Servant**  **Qtrs.** |
| 8 | Geyser Point  (With MCB connected socket outlet with wiring) | 1 in bath | 1 each in  bath & toilet | 1 each in  toilets | 1 in kitchen 1  in each toilet | 1 in kitchen 1 in  each toilet | 1 in kitchen 1  in each toilet | 1 in kitchen 1 in  each toilet | 1 in toilet |
| 9 | EDB/MCB Point  (single phase) | 1 | 1 | 1 |  |  |  |  | 1 |
| 10 | EDB/MCB  (3 phase) |  |  |  | 1 | 1 | 1 | 1 |  |
| 11 | Cable TV point | 1 in living  room1 in each bedroom | 1 in living  room1 in each  bedroom | 1 in living  room1 in each bedroom | 1 in drawing  room1 in each bedroom | 1 in drawing  room1 in each bedroom | 1 in drawing  room1 in dining room1 in each bedroom | 1 in office1 in  drawing room1 in dining room1 in family lounge1 in each bedroom | 1 |
| 12 | Telephone Point  As per the app. of competent authority | 1 in living  room | 1 in living  room | 1 in living  room | 1 in drawing  room | 1 in drawing  room  1 in each bedroom | 1 in office  1 in drawing room  1 in dining room  1 in each  bedroom | 1 in office  1 in drawing room  1 in dining room  1 in family lounge  1 in each bedroom | 1 |
| 13 | Decorative Light  Fittings for LED  bulbs (without bulbs) |  |  |  |  | 3 in drawing room 3 in dining  room 2 in each bedroom 1 in kitchen | 3 in drawing room 3 in  dining room  2 in each bedroom 2 in kitchen | 3 in office  3 in drawing room  3 in dining room  3 in family lounge  2 in each bedroom  2 in kitchen |  |
|  | | | | | | **Total 13** | **Total 16** | **Total 22** |  |
| 14 | LED tube light  fittings (excluding tubes) | 1 in each  room 1 in kitchen | 1 in each  room 1 in kitchen | 1 in each  room 1 in kitchen | 1 in each  room 1 in kitchen | 1 in drawing  room 1 in dining room 1 in each bedroom 1 in kitchen | 1 in drawing  room 1 in dining room  1 in each bedroom 1 in kitchen | 1 in office  1 in drawing room  1 in dining room  1 in family lounge  1 in each bedroom |  |
|  |  | **Total 3** | **Total 4** | **Total 4** | **Total 6** | **Total 6** | **Total 7** | **Total 9** |  |
| 15 | Modular Switches | **---** | **---** | **---** | **---** | **Yes** | **Yes** | **Yes** | **---** |

**Note:- All the common area e.g. Lifts & Staircases Lobbies, Connecting Corridors etc. shall have lighting arrangement along with LED light fixtures as per actual design. As far as possible concealed wiring shall be used in all electrical works. LED shall only be used as per directives of competent authority.**

**SPECIFICATIONS FOR NON - RESIDENTIAL BUILDINGS**

|  |  |  |
| --- | --- | --- |
| **ITEM NO.** | **DESCRIPTION** | **SPECIFICATION** |
| **1.0** | **FOUNDATION** | As per structural design based on soil investigation. |
| **2.0** | **SUPER STRUCTURE** | |
| 2.1 | Structure | R.C.C. framed construction with filler walls with fly ash bricks /brick work/ ACC blocks or load bearing construction in /brick work/fly ash bricks/ stone masonry with intermediate columns as per design. |
| 2.2 | Internal partitions. |  |
| 2.2.1 | Light weight auto claved aerated concrete blocks. |
| 2.2.2 | Gypsum Blocks. |
| 2.2.3 | Non asbestos double skin cement boards. |
| 2.2.4 | Fly ash bricks. |
| **3.0** | **DOORS & WINDOWS** | |
| 3.1 | Frames | |
| 3.1.1 | Door frames | Door frames of 2nd class Indian teakwood or equivalent in officer’s room.  Anodized / Powder coated/ Polyester powder coated Aluminium sections/ |
| 3.1.2 | Window frame | Standard sections of UPVC window frame members/Extruded Aluminium tubular sections |
| 3.2 | Door Window Shutters | |
| 3.2.1 | Door Shutter | Panelled type in 2nd class teak wood or flush door with teak veneered ply/  commercial ply as per CPWD Specifications/as per design. |
| 3.2.2 | Anodized/powder coated/ Polyester powder coated Aluminium shutters with toughened glass glazing/paneling where required. |
| 3.2.3 | Frame and shutters in wet area | PVC/FRP door frames & shutters in wet areas. |
| 3.3 | Window shutters | Factory made Anodised/ powder coated/ Polyester powder coated ‘Z’ section aluminium shutters/ standard UPVC section for windows with toughened glass glazing |
| 3.4 | Fittings | Anodized aluminium /stainless steel or equivalent. |
| 3.5 | Fire check door | As per fire safety specifications |
| **4.0** | **FLOORING** | |
| 4.1 | Main entrance hall | Pre polished granite flooring. |
| 4.2 | Corridors | Matt finished vitrified tiles/Granite flooring/combination of marble and granite |
| 4.3 | Rooms | Granite tiles/Vitrified tiles/Engineered wood flooring (in officers chambers) |
| 4.4 | Lavatory Blocks | Granite flooring. |
| 4.5 | Flooring in basement | Vacuum dewatered concrete. |
| 4.6 | Rest of the area | Kota Stone flooring. |
| **5.0** | **STAIRCASE** | |
| 5.1 | Internal staircases | Single piece Granite or marble flooring in treads & risers with dado of matching permanent finish specifications. |
| 5.2 | Fire escape staircase | Single piece Kota stone flooring in treads & risers with dado of matching permanent finish specifications. |
| **6.0** | **RAILING** | Stainless steel railings. |
| **7.0** | **TOILETS** | Granite flooring. Glazed tiles of size not less than 300 x 450/400 x 600 mm in dado upto ceiling height. Granite counters. Rimless counter sunk basins/Stainless steel sinks. Mirrors with moulded PVC frame. FRP/PVC doors with frames. |

|  |  |  |
| --- | --- | --- |
| **8.0** | **ROOFING** | |
| 8.1 | Roof treatment | Coba treatment/over deck insulation with Puf slab. |
| 8.2 | False ceiling | False ceiling in office area & toilets to cover the services as per design requirement. |
| **9.** | **FINISHING** | |
| 9.1 | External | Dry stone cladding/washed grit plaster/water proof weather coat paints/ Structural  Glazing/ ACP cladding conforming to Energy Conservation Building Code**.** |
| 9.2 | Internal | |
| 9.2.1 |  | Gypsum plaster in dry areas. |
| 9.2.2 | Cement plaster in wet areas |
| 9.2.3 | Dry acrylic distemper in service area & basement. |
| 9.2.4 | Acrylic emulsion paint/ Textured paint (low V.O.C) |
| 9.2.5 | Wall panelling as per approved Architecture Design upto sill level/1.2 meter, height or ceiling height. |
| 9.3 | Painting | Doors & windows – Painting/polishing on wood work as per design requirement. |
| **10.0** | **PROVISION FOR BARRIER FREE BUILDING** | Ramps, toilets for physically challenged, chequered tiles use of Braille signages  & lifts etc.GRC (Glass reinforced concrete) tiles in Ramp area. |

**Rules for working out plinth area from plans**

**(for the purpose of calculating plinth areas as per IS Code 3861 & as per Memo No. 29/21/58/WI) Dated: New Delhi, Oct.1983).**

**ANNEXURE –III**

In order to ensure the adoption of a uniform method of working out plinth areas from plans, the following rules are laid down. These rules are general in nature and should be taken as a guide. They are based on the fundamental principle that the plinth area of a building should present a true picture of the covered floor area provided in the plan.

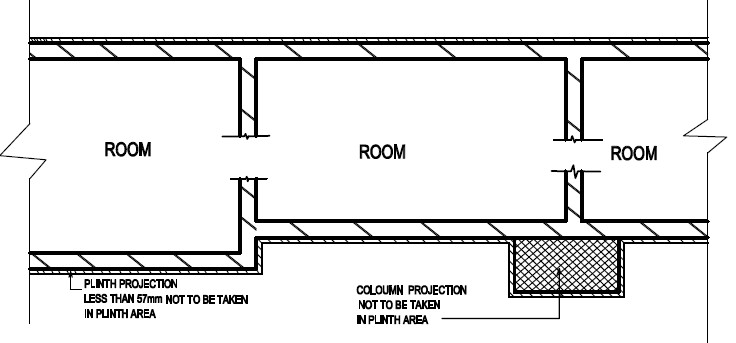
**1. GENERAL**

The total plinth area of a building shall be the sum total of the plinth area at every floor including the basement, if any.

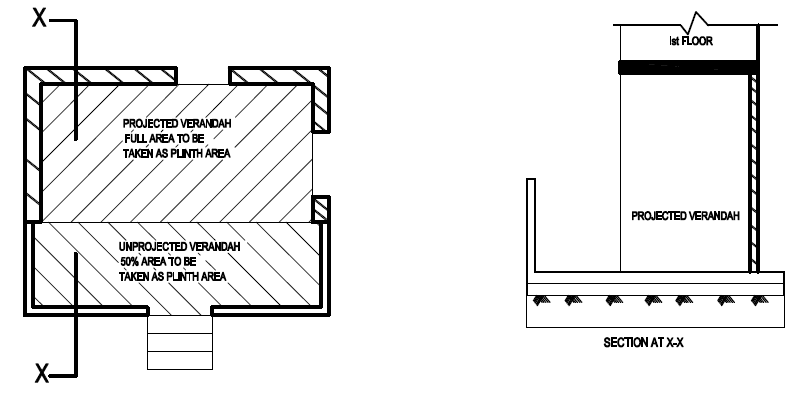
**PLINTH AREA OF GROUND FLOOR**

(a) The plinth area of the ground floor shall be calculated at the plinth level excluding the plinth off-sets provided such plinth off-sets are not more than 58mm. In cases where the building consists of columns projecting beyond cladding, the plinth area shall be taken up to the external face of the cladding and shall not be included the projections of the columns.

Note — In case. a common wall is owned jointly by two owners, only half the area of such walls shall be included in the plinth area of one owner.



(b) In case open verandah with parapets are protected at the ground floor projecting out of the building, the full area shall be taken up to the outer line of the external verandah lintel and only 50% of area shall be taken for the unprotected verandah. Open platform without parapets and terraces at ground floor and porches, shall not be included in the plinth area but shall be allowed for separately for costing purposes.

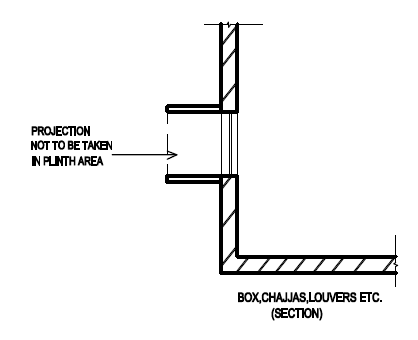


(c) Shafts for sanitary, water supply installations, garbage chute, telecommunication, electrical, firefighting, air - conditioning and lifts etc. less than 2.00 sqm. in area shall be included in plinth area whereas the said opening with more than 2.00 sqm. in area shall be excluded from the plinth area.

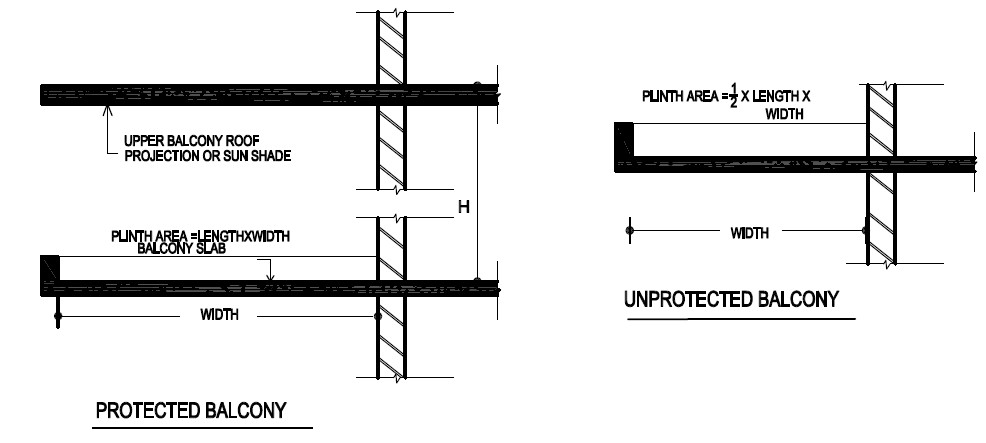
(d) Stair case;

**PLINTH AREA AT FIRST AND HIGHER FLOORS**

(a) The plinth area of first and higher floors shall be calculated at the relevant floor levels. Architectural bands, cornice etc. shall not be included in the plinth area even though they may occur at the floor level, vertical sun breakers or box louvers projecting out also shall not be include in plinth area. See illustrative sketch below.



(b) In the case of projecting balconies protected to their full width by the shades full width roof projections or by upper in the case of unprotected balconies equivalent area to the extent of 50% of the area of the balconies shall be included in the plinth area. See illustrative sketch given below:



(c) In case of alcove (box projection like storage below sill level and cupboards etc.) made by cantilevering a slab beyond external wall:

1. 25 percent of the area for the alcove of height up to 1 m,

2. 50 percent of the area for the alcove of height more than 1m and up to 2 m, and

3. 100 percent of the area for the alcove of height more than 2 m.

**GALLARIES, MEZZANINE FLOORS, LOFTS.**

(a) Area of galleries i.e. upper floor of seats in an assembly hall, Auditorium, theatres, etc. shall be fully included in the plinth area.

(b) Area of mezzanine floor i.e. an intermediate floor introduced between two main floors, shall be included in the

plinth area, if no separate provision is made for the same.

(c) The area of a loft i.e. an intermediate slab just beneath the floor of roof without any direct staircase leading to it and used for storage purpose shall not be included in the plinth area.

**The following shall not be included in the plinth area:**

a) Area of loft;

b) Area of architectural band, cornice, etc;

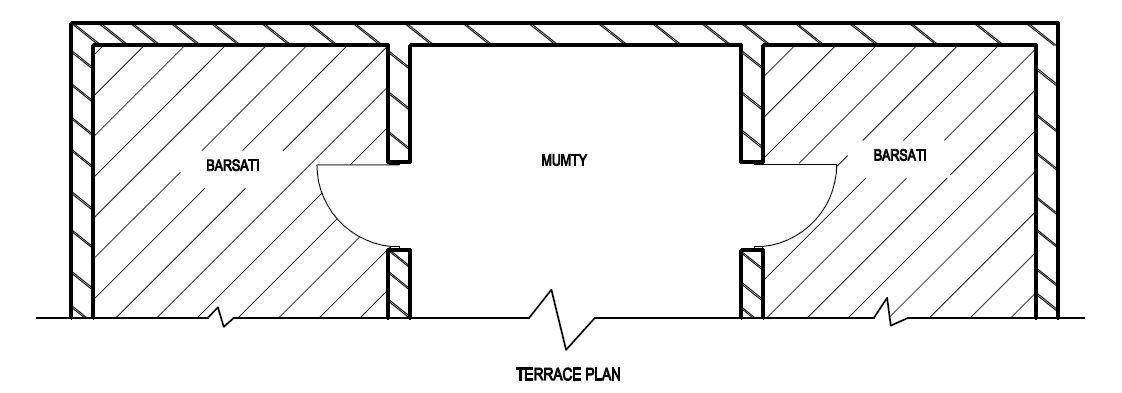
c) Area of vertical sun breaker or box louver projecting out and other architectural features, for example slab projection for flower pot, etc;

d) Open platform;

e) Terrace;

f) Open spiral/service stair cases; and

g) Area of mumty, machine room, towers, turrets, domes projecting above terrace level.



**PROFORMA FOR CALCULATION OF BUILDING COST INDEX**

**ANNEXURE –IV**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SI. No** | **Description** | **Unit** | **%age** | **Rates as on**  **01.04.2019** | **Proportio- nate value** | **Weightage rates** | **Weight- age of Compo-**  **nent** | **Rates at the time of**  **revision of cost index** | **Cost**  **Index** |
| 1 | Bricks (Fly Ash) | 1000  Nos. | 100% | 4400.00 | 4400.00 | 4400.00 | 8.00 | - | - |
| 2 | Cement (OPC) | Qtl. | 100% | 600.00 | 530.00 | 530.00 | 14.50 | - | - |
| 3 | **TMT Steel** | | | | | | | | |
| a. | 8 & 10 mm dia | Qtl. | 50% | 4300.00 | 2150.00 | 4300.00 | 19.50 | - | - |
| b. | 12 & 16 mm dia | 50% | 4300.00 | 2150.00 | - | - |
| 4 | Aggregates 20 mm  a) Natural sources | Cum | 75% | 1400.00 | 1050.00 | 1312.50 | 6.50 | - | - |
| b) Aggregates 20mm  (RCA) | 25% | 1050.00 | 262.50 | - | - |
| 5  (a) | Sand (Coarse Sand)  Natural Sources | Cum | 75% | 1400.00 | 1050.00 | 1225.00 | 3.00 | - | - |
| (b) | Sand (Coarse Sand) RA | 25% | 700.00 | 175.00 | - | - |
| 6 | **Flooring Items** | | | | | | | | |
| a. | Vitrified tiles | Sqm | 50% | 660.00 | 330.00 | 770.00 | 5.00 | - | - |
| b. | Ceramic Tiles | 20% | 260.00 | 52.00 | - | - |
| c. | Kota Stone | 10% | 280.00 | 28.00 | - | - |
| d. | Granite Stone | 20% | 1800.00 | 360.00 | - | - |
| 7 | **Paints** | | | | | | | | |
| a. | Synthetic Enamel Paint | Litre | 33.33% | 160.00 | 53.33 | 143.33 | 3.00 | - | - |
| b. | Acrylic Washable  distemper | 33.33% | 50.00 | 16.67 | - | - |
| c. | Premium acrylic paint | 33.33% | 220.00 | 73.33 | - | - |
| 8 | **Door/Windows-Wooden/ uPVC/Aluminium/Steel** | | | | | | | | |
| a. | 35mm thick flush door shutters both side  commercial veneering | Sqm | 30.00% | 950.00 | 285.00 | 1978.60 | 7.00 | - | - |
| b. | Factory made, standard  Z-section steel windows | 15.00% | 1712.00 | 258.30 |  |  |
| c. | uPVC windows | 20.00% | 3295.00 | 659.00 | - | - |
| d. | Aluminium Window | 35.00% | 2218.00 | 776.30 | - | - |
| 9 | **Pipes** | | | | | | | | |
| a. | 15 mm GI Pipe | Metre | 10.00% | 85.00 | 8.50 | 292.66 | 2.50 |  |  |
| b. | 100 mm CI Pipes | 40.00% | 630.50 | 252.22 |  |  |
| c. | 20 mm Black Conduits | 20.00% | 43.00 | 8.60 |  |  |
| d. | 20mm CPVC pipes | 30.00% | 77.80 | 23.34 |  |  |
| 11 | **Lamps & Fans** | | | | | | | | |
| a. | Ceiling Fans 1200 mm | Each | 50% | 1500.00 | 750.00 | 1318.00 | 4.50 |  |  |
| b. | 1200 mm LED tube  lights with fittings | 40% | 1400.00 | 560.00 |  |  |
| c. | LED bulbs | 10% | 80.00 | 8.00 |  |  |
| 12 | Electrical Machinery,  Motor 7.5 HP (Pump set) 1500 RPM (Kirloskar) | Each | 100% | 27500.00 | 27500.00 | 27500.00 | 2.50 |  |  |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 13 | **Wires & Cables** |  |  |  |  |  |  |  |  |
| a. | Copper Wire 1.5 Sq.  mm | 100  Metre | 70% | 900.00 | 630.00 | 1290.00 | 4.00 |  |  |
| b. | Copper Wire 4.0 Sq.  mm | 30% | 2200.00 | 660.00 |  |  |
| 14 | **Labour** | | | | | | | | |
| a. | Skilled | Each | 50% | 710.00 | 355.00 | 647.00 | 20.00 |  |  |
| b. | Unskilled | 50% | 584.00 | 292.00 |  |  |
| **Total** | | | | | | | **100.00** |  |  |

**STATEMENT OF COST INDICES OF DELHI/NCR SINCE 1955**

|  |  |  |  |
| --- | --- | --- | --- |
| **Year** | **Effective**  **Date** | **Cost**  **Index** | **Base 100**  **of PAR** |
| 2002 | 01.04.2002 | 176 | 1992 |
| 2003 | 01.04.2003 | 197 | 1992 |
| 2004 | 01.04.2004 | 209 | 1992 |
| 2005 | 01.04.2005 | 223 | 1992 |
| 2006 | 01.04.2006 | 236 | 1992 |
| 2007 | 01.04.2007 | 254 | 1992 |
| 2007 | 01.10.2007 | 260 | 1992 |
| 2007 | 01.10.2007 | 100 | 2007 |
| 2008 | 01.04.2008 | 114 | 2007 |
| 2008 | 01.10.2008 | 119 | 2007 |
| 2009 | 01.04.2009 | 113 | 2007 |
| 2009 | 01.10.2009 | 126 | 2007 |
| 2010 | 01.04.2010 | 136 | 2007 |
| 2010 | 01.10.2010 | 139 | 2007 |
| 2011 | 01.04.2011 | 149 | 2007 |
| 2011 | 01.10.2011 | 151 | 2007 |
| 2012 | 01.04.2012 | 161 | 2007 |
| 2012 | 01.10.2012 | 170 | 2007 |
| 2012 | 01.10.2012 | 100 | 2012 |
| 2013 | 01.04.2013 | 100 | 2012 |
| 2014 | 01.04.2014 | 105 | 2012 |
| 2014 | 01.10.2014 | 107 | 2012 |
| 2015 | 01.04.2015 | 104 | 2012 |
| 2015 | 01.10.2015 | 103 | 2012 |
| 2016 | 01.04.2016 | 102 | 2012 |
| 2016 | 01.10.2016 | 101 | 2012 |
| 2017 | 01.04.2017 | 111 | 2012 |
| 2017 | 01.10.2017 | 115 | 2012 |
| 2018 | 01.04.2018 | 116 | 2012 |
| 2018 | 01.10.2018 | 118 | 2012 |
| 2019 | 01.04.2019 | 120 | 2012 |
| 2019 | 01.04.2019 | 100 | 2019 |
| 1. PAR 1955 base 100 is effective from 17.05.1955  2. PAR 1970 base 100 is effective from 01.01.1970.  3. PAR 1976 base 100 is effective from 01.10.1976.  4. PAR 1992 base 100 is effective from 01.01.1992.  5. PAR 2007 base 100 is effective from 01.10.2007.  6. PAR 2012 base 100 is effective from 01.10.2012.  7. PAR 2019 base 100 is effective from 01.04.2019. | | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **Year** | **Effective**  **Date** | **Cost**  **Index** | **Base 100**  **of PAR** |
| 1955 | 17.05.1955 | 100 | 1955 |
| 1962 | 12.01.1962 | 118 | 1955 |
| 1962 | 18.09.1962 | 131 | 1955 |
| 1966 | 19.07.1966 | 148 | 1955 |
| 1969 | 15.01.1969 | 157 | 1955 |
| 1969 | 17.06.1969 | 168 | 1955 |
| 1969 | 15.10.1969 | 181 | 1970 |
| 1970 | 01.01.1970 | 100 | 1970 |
| 1971 | 05.04.1971 | 120 | 1970 |
| 1972 | 03.05.1972 | 134 | 1970 |
| 1973 | 24.12.1973 | 166 | 1970 |
| 1975 | 26.06.1975 | 180 | 1970 |
| 1976 | 01.10.1976 | 180 | 1970 |
| 1976 | 01.10.1976 | 100 | 1976 |
| 1977 | 30.12.1977 | 113 | 1976 |
| 1978 | 31.03.1978 | 116 | 1976 |
| 1979 | 31.03.1979 | 130 | 1976 |
| 1980 | 10.04.1980 | 176 | 1976 |
| 1981 | 23.04.1981 | 200 | 1976 |
| 1982 | 29.01.1982 | 217 | 1976 |
| 1982 | 30.03.1982 | 221 | 1976 |
| 1983 | 16.03.1983 | 245 | 1976 |
| 1984 | 13.03.1984 | 274 | 1976 |
| 1985 | 27.06.1985 | 312 | 1976 |
| 1986 | 09.07.1986 | 340 | 1976 |
| 1987 | 16.06.1987 | 370 | 1976 |
| 1988 | 31.03.1988 | 397 | 1976 |
| 1988 | 01.11.1988 | 421 | 1976 |
| 1989 | 31.10.1989 | 494 | 1976 |
| 1990 | 31.03.1990 | 521 | 1976 |
| 1991 | 11.02.1991 | 564 | 1976 |
| 1991 | 31.03.1991 | 595 | 1976 |
| 1992 | 31.12.1991 | 664 | 1976 |
| 1992 | 01.01.1992 | 100 | 1992 |
| 1992 | 31.03.1992 | 104 | 1992 |
| 1994 | 01.01.1994 | 117 | 1992 |
| 1995 | 01.06.1995 | 132 | 1992 |
| 1996 | 01.06.1996 | 142 | 1992 |
| 1997 | 01.06.1997 | 145 | 1992 |
| 1998 | 01.06.1998 | 148 | 1992 |
| 1999 | 01.09.1999 | 158 | 1992 |
| 2000 | 01.07.2000 | 162 | 1992 |
| 2001 | 01.04.2001 | 166 | 1992 |

|  |  |  |  |
| --- | --- | --- | --- |
| **PLINTH AREA RATES FOR SPECIALISED E&M WORKS**  **Annexure-V** | | | |
| **Sl. No.** | **Description of Item** | **Unit** | **Rate** |
| 1 | SUB-STATION EQUIPMENTS |  |  |
| Supplying, installation, testing and commissioning of 33kV/0.433kV or  11kV/0.433 kV substation equipments comprising HT Panel, Dry type Transformers, HT cable, Bus trunking from Transformer to LT Panel, LT Panel, Automatic Power factor correction panel, Active Harmonic Filters, TVSS (Transient Voltage suppression system),SPD ( Surge protection system), Essential panel, Earthing, required inter-connections,substation safety equipments including LT cabling from sub station to the buildings fed by the sub station. | per KVA | 9000 |
| 2 | DIESEL GENERATING SETS |  |  |
| Supplying, installation, testing and commissioning of Silent Type DG Sets,AMF Panel, Bus Ducting/ Cables from DG Sets to Essential Panel, Synchronizing Panel  where required, DG Set enclosure room sound insulation/ventilation/smoke exhaust as required, Earthing of DG Set system, control cabling, Fuel tank/piping,  DG set Exhaust piping/ Exhaust Chimney as per CPCB norms, Civil works connected with DG Sets including Foundation as required. | per KVA | 11000 |
| 3 | 33 KV RECEIVING SUBSTAION AND 33KV/11KV HT CABLING |  |  |
| (i) Supplying, installation, testing and commissioning of 33 kV Substation comprising 33 kV HT Panel, transformers 33kV/11 kV, 11 kV HT Panel, inter  connections, 11kV HT UG cabling to the distribution substations on Ring main system, Substation earthing, substation safety equipments. | per KVA | 6000 |
|  | (ii) Supplying, Installation, testing & Commissioning of 33 kV Switch room  comprising of 33 kV HT panel, inter connections, 33 kV HT UG cabling to the distribution substations, on ring main system, earthing, safety equipments. | per KVA | 6000 |
| 4 | UNINTERRUPTED POWER SUPPLY |  |  |
| Supplying, installation, testing and commissioning of online 3 phase UPS System with 30 minutes back up including batteries, interconnecting cables, battery racks  etc. | per KVA | 20000 |
| 4.1 | Add for every additional 30 minutes backup | per KVA | 9000 |
|  | Note: For assessment of kVA estimation of a building, Para 4.4 and other relevant  Paras of "Guidelines for Substation & Power Distribution Systems of Buildings-  2019" which is available on CPWD Website may be referred. |  |  |
| 5 | CENTRAL AC PLANT |  |  |
| Supplying, installation, testing and commissioning of energy efficient central AC  Plant including low side works | per TR | 85000 |
|  | Extra for stand by chilling units High side | per TR | 38000 |
| 6 | VRV/ VRF AC System |  |  |
| Supplying, installation, testing and commissioning of VRV/VRF System  including indoor /outdoor units, piping, electrical power distribution/wiring, electrical panel, treated fresh air system etc. | per HP | 55000 |
| 7 | PRECISION AIRCONDITIONING SYSTEM |  |  |
| Supplying, installation, testing and commissioning of PRECISION Air  Conditioning System including piping, electrical cabling, controller etc. required for the system | per TR | 110000 |

|  |  |  |  |
| --- | --- | --- | --- |
| **Sl.**  **No.** | **Description of Item** | **Unit** | **Rate** |
| 8 | SOLAR PHOTO VOLTAIC POWER GENERATION SYSTEM |  |  |
| Supplying, installation, testing and commissioning of Grid interactive roof top  solar photo voltaic power generation system including space frame | per KWp | 65000 |
| 9 | SOLAR WATER HEATING SYSTEM |  |  |
| Supplying, installation, testing and commissioning of solar water heating system  with heat exchanger type including electrical heater backup , make up water tank but without piping | 100 liters per day | 22500 |
| Note: For higher capacity, multiply the rate |  |  |
| 10 | CCTV SYSTEM |  |  |
| Supplying, installation, testing and commissioning of IP Based CCTV system for  building security comprising of PTZ Fixed camera, cabling, recording , display system and hard ware software support | per sqm.(for  Indoor) | 200 |
| per sqm.(for external  surveillance of plot area) | 200 |
| Note: Rate includes peripheral IP Based PTZ camera besides indoor camera at  reception, corridors, lift lobby etc., wiring upto CCTV room and setting up monitoring unit/ units, as required. |  |  |
| 11 | ACCESS CONTROL SYSTEM |  |  |
| Supplying, installation, testing and commissioning of Access control system for  building security comprising of controller, E&M Locks, Reader, Smart Cards, cabling, recording, display system, hardware and software support as required | per sqm. | 200 |
| 12 | IBMS: INTEGRATED BUILDING MANAGEMENT SYSTEM |  |  |
| Supplying, installation, testing and commissioning of Integrated Building  Management System for Digital/electronic display and monitoring of all E&M systems like substation, DG sets, Ups, Solar power, Lifts, AC Plants, Ventilation systems, Fire protection systems, Pumps etc. to include cabling, monitors, recording, display system, hardware, software support(upto 10,000 sq.m) | upto 10,000 sqm. | 400 |
| 12.1 | Add extra for built up area above 10, 0000 sq mtr. | per sqm. | 125 |
| 13 | HYDROPNEUMATIC WATER SUPPLY SYSTEM |  |  |
| Supplying, installation, testing and commissioning of Hydropneumatic water  supply system consisting of pumps, pneumatic tank, Microprocessor based control panel, VFD, inter connecting pipes, valves, cabling, switchgear etc. as required | per LPM | 1500 |
| 14 | LIGHTING AUTOMATION INCLUDING OCCUPANCY SENSORS |  |  |
| Supplying, installation, testing and commissioning of lighting automation  including occupancy sensors | per sqm. | 200 |
| 15 | BASIC HOME SECURITY FOR RESIDENTIAL COLONY |  |  |
| Supplying, installation, testing and commissioning of basic security system in the  residential colony to include control room at the gate and intercom connection to each dwelling unit, and basic CCTV system to be installed at the entry and exit points, Parking areas, entry point of each dwelling unit and other common areas as required including CCTV control room, required UG cabling, recording system and monitor/ monitors in the control room |  |  |
| 15.1 | Intercom system | per sqm. of  residential  Area | 300 |
| 15.2 | CCTV system | per sqm. of plot Area | 300 |

|  |  |  |  |
| --- | --- | --- | --- |
| **Sl.**  **No.** | **Description of Item** | **Unit** | **Rate** |
| 16 | LAN SYSTEM |  |  |
| Supplying, installation, testing and commissioning of LAN System comprising of  Core switches & L2 switches with 10 G, 10 Giga SFP modules, WIFI Access points, WIFI controller, Network Management Software, Racks, CAT 6A cable, Patch Panels, OFC etc. | per sqm. of covered area | 500 |
| 17 | IP BASED EPABX SYSTEM |  |  |
| Supplying, installation, testing and commissioning of IP based EPABX System  comprising of Core switches & L2 switches with 10 G, 10 Giga SFP modules, Industry Standard Appliance Server, Cloud- based, enterprise-grade UC Solution, MID/ENTRY Level IP/SIP Phone with, Dual 1 Gig Ports, Racks, CAT 6A cable, Patch Panels, OFC etc. | per sqm. of covered area | 900 |
| NOTE: It will be economical to use common infrastructure of switches, OFC,  CAT 6A cable for both voice and Networking |  |  |
| 18 | Conference Hall: Supplying, installation, testing and commissioning of Audio  Visual/Conference System | per sqm. | 10000 |
| 19 | Auditorium: Supplying, installation, testing and commissioning of Sound reinforcement, Stage Lighting, Stage curtains | per sqm. | 12500 |
| 20 | STREET LIGHTING WITH LED |  |  |
| Supplying, installation, testing and commissioning of LED Street/ Compound/  High mast/ Pathway/ Landscape Lighting for the entire Campus | per sqm.  (Plot Area) | 150 |
| Note: This is applicable for plot sizes more then 1 acre. For smaller plot sizes  actual requirements may be worked out |  |  |
|  | Note : - Cost for General Façade lighting, if required, with IP 66/67 LED  fixtures (RGB/Tunable/Mono) along with controls  (hardware and software) and cabling may be assessed on case to case basis. |  |  |
| 21 | STP/ETP PLANT |  |  |
| Supplying, installation, testing and commissioning of STP/ETP of appropriate  technology including Civil Works (except plant room), Tertiary Treatment etc. for the Building/ campus |  |  |
| 21.1 | Per Day for Plant size upto 50,000 LPD | per thousand  Ltr. | 75000 |
| 21.2 | Per Day for Plant size above 50,000 upto 1,00,000 LPD | per thousand  Ltr. | 60000 |
| 21.3 | Per Day for Plant size above 1,00,000 LPD | per thousand  Ltr. | 50000 |
| 22 | DRIVER FACE AND AUTOMATIC NUMBER PLATE RECORDING SYSTEM/RECOGNITION SYSTEM |  |  |
| 22.1 | Supplying, installation, testing and commissioning of Driver face and automatic  number plate recording system / recognition system Including High resolution camera and software set for the driver face capture and automatic number plate recording | per set | 725000 |
| 23 | BAGGAGE SCANNERS |  |  |
| 23.1 | Baggage scanner small: computer based multi energy X-Ray Baggage Inspection  System mounted on castor wheels capable of passing through bags of dimensions  540 mm (W) X 350 mm (H), belt height 750 mm to 850 mm, 22”/24 LCD  Monitor, Input / Output rollers with frames | per unit | 2125000 |
| 23.2 | Baggage scanner Big: computer based multi energy X-Ray Baggage Inspection  System capable of passing through bags/parcels of dimension 940mm (W) x  640mm (H) with Belt Height – 750mm –850mm with 22”/24” LCD Monitor,  Input/ Output rollers with frames | per unit | 3500000 |

|  |  |  |  |
| --- | --- | --- | --- |
| **Sl.**  **No.** | **Description of Item** | **Unit** | **Rate** |
| 24 | DOOR FRAME METEL DETECTOR |  |  |
| 20 zone or above Door frame Metal detector nominal Size: 760 mm (W) x 2050  mm (H) x 700 mm (D) loaded with necessary software | per set | 350000 |
| 25 | MEDICAL GAS PIPELINE SYSTEM |  |  |
| Medical Gas pipeline system (as per international standards) comprising of  oxygen, carbon dioxide, nitrous oxide, AGSS, Air-4, Air-7, Vacuum outlets, manifolds, pressure alarms, fully automatic gas control system, Bed head panels, copper piping, cylinder banks, plant equipment such as compressors, Vacuum pumps etc. | per bed | 60000 |
| 26 | MODULAR OPERATION THEATER |  |  |
| MOT comprising of walls & ceiling system for operating area, steel framework,  static dissipative flooring, laminar flow, double dome OT light, touch screen surgeon’s control panel, scrub station, X ray viewing screen, hatch box, automatic sliding doors, anesthesia pendent, surgeon pendent etc. |  |  |
| 26.1 | With stainless steel technology | per OT | 8500000 |
| 26.2 | With SMS technology | per OT | 12500000 |
|  | Note: The above rates are based on minimum OT size of 550 sq ft. |  |  |
| 27 | NURSING CALL SYSTEM |  |  |
| 27.1 | Nursing call system comprising of VDE 0834/UL approved Nursing call system,  System Switch for de-centralized communications, Nurse Station Terminal, Patient Handset, Event Data base Software, Nurse Call Server along with its Integration with LAN and EPBAX, cabling etc. | per Bed | 42000 |
| 27.2 | Nursing call system (INDIAN) comprising of System Switch for de-centralized  communications, Nurse Station Terminal, Patient Handset, Event Database  Software, Nurse Call Server, Cabling etc. | per Bed | 21500 |
| 28 | BOOM BARRIER |  |  |
| 28.1 | Boom Barrier for car: Electromechanical parking barrier with all accessories upto  6 meter length |  | 125000 |
| 29 | CAR PARKING SYSTEM |  |  |
| 29.1 | Sensor based car parking system with controller, display etc. as required. (Cost  based on minimum car quantity of 250 cars) | per car | 10000 |
| 30 | EMERGENCY LIGHT & ILLUMINATED SIGNAGES |  |  |
| 30.1 | Illuminated signages | per sqm. of covered Area | 20 |
| 31 | MOTORIZED STEEL GATES | per gate upto  5.00 m. Width | 500000 |

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