

URBAN DEVELOPMENT AND PUBLIC HEALTH DEPARTMENT

Mantralaya, Bombay 400 032, dated 2nd November 1979

MAHARASHTRA MUNICIPALITIES ACT, 1965

No. TPS. 3678/814-II-UD-5(2).-In exercise of the powers conferred by sub-section (1) of section 323 of Maharashtra Municipalities Act, 1965 (Mah. XL of 1965), and all other powers enabling it in that behalf, and in super session of the previous Model Building Bye-laws made on the subject and published in Government Notification, Urban Development, Public Health and Housing Department, No, BYM. 1671/67907-1, dated the 2nd April 1974, the Government of Maharashtra hereby makes the following Standardized Building Bye-laws and Development Control Rules, namely:

STANDARDISED BUILDING BYE-LAWS AND DEVELOPMENT CONTROL RULES FOR "B" AND "C" CLASS MUNICIPAL COUNCILS OF MAHARASHTRA

PART I-ADMINISTRATION

1. Short Title, Extent and Commencement

1.1. These bye-laws and rules shall be called the "Building Bye-laws and Development Control Rules of _____ * Municipal Council _____ **

1.2. These bye-laws shall apply to building activity and development work on lands within the jurisdiction of _____ * Municipal Council.

1.3. These bye-laws shall come into force from _____ ** and these shall replace all existing building bye-laws and Development Control Rules in force framed under the Maharashtra Municipalities Act, 1965 and the Maharashtra Regional and Town Planning Act, 1966.

2. Definitions

2.0. For the purpose of these bye-laws, the following definitions shall apply having the meaning indicated against each:-

2.1. Assembly Building.- Any Building or part of a building where groups of people congregate or gather for amusement, recreation, social, religious, patriotic, civil, travel and similar purposes; for example, theatres, town halls, motion picture houses, assembly halls, auditoria, exhibition halls, museums, gymnasium, restaurants, places of worship, dance halls, club rooms, passenger stations, and terminals of air, surface and other public transportation services recreation piers and stadia.

2.2. Authority.- The Authority which has been created by a statute and which for the purpose of administering the bye-Laws may authorize a Committee or an official to act on its behalf: hereinafter called the Authority.

2.3. Balcony.- A horizontal cantilevered projection, including a handrail or balustrade, to serve as passage or sitting out place.

2.4. Building.- Any structure for whatsoever purpose and of whatsoever materials constructed and every part thereof whether used as human habitation or not and includes foundation, plinth, walls, floors, roofs, chimneys, plumbing and building services, fixed platforms, varandah, balcony, cornice or projection, part of a building or anything affixed thereto or any wall enclosing or intended to enclose any land or space and signs and outdoor display structures. Tents, Shamianas and tarpaulin shelters shall not be considered as buildings.

2.5. Built-in-Area.- Any area covered with structures of any sort either with plinth or otherwise and which will fall within the definition of building. The built-up area shall not include certain spaces as given under Bye-law No. 20.6.2.

- 2.6. Business Buildings.-** Any building or part of a building, which is used for transaction of business for the keeping of accounts and records for similar purposes; professional establishments, court houses, record and reference libraries shall be classified in this group in so far as principal function of these is transaction of public business and the keeping of books and records.
- 2.7. Chajja.-** A sloping or horizontal structural overhang usually provided over openings on external walls to provide protection from sun and rain.
- 2.8. Combustible Material:-** A material, if it burns or adds heat to a fire when tested for combustibility in accordance with IS: 3808-1966 Method of test for Combustibility of Building Materials.
- 2.9. Development:-** "Development" with grammatical variations means the carrying out of building, engineering, mining or other operations in, or over, or under land or water, or the making of any material change, in any building or land, or in the use of any building or land, and includes redevelopment and layout and sub-division of any land; and to develop shall be constructed accordingly.
- 2.10. Drain:-** A line of pipes including all fittings and equipment, such as manholes, inspection chambers, traps, gullies, and floor traps, used for the drainage of a building or a number of buildings, or yards appurtenant to the buildings within the same curtilage. Drain shall also include open channels used for conveying surface water.
- 2.11. Educational Building:-** Any building used for school college or day-care purposes for more than 8 hours per week involving assembly for instruction, education or recreation incidental to educational buildings.
- 2.12. Exit:-** A passage, channel or means of egress from any building, storeys or floor area to a street or other open space of safety.
- 2.13. Group Housing Scheme:-** A housing scheme, wherein dwelling houses are not constructed in separate individual plot, but where a group of buildings is proposed in one plot.
- 2.14. Habitable Room:-** A room occupied or designed for occupancy by one or more persons for study, living, sleeping, eating, kitchen if it is used as a living room but not including bathrooms, water closet compartments, laundries, serving and storage pantries, corridors, cellars, attics and spaces that are not used frequently or during extended periods.
- 2.15. Hazardous Building:-** These shall include any building or part of a building which is used for the storage, handling, manufacture or processing of highly combustible or explosive materials or products which are liable to burn with extreme rapidity and/or which may produce poisonous fumes or explosions for storage, handling, manufacturing or processing which involve highly corrosive, toxic or noxious alkalies, acids or other liquids or chemicals producing flame, fumes and explosive mixtures of dust or which result in the division of matters into fine particles subject to spontaneous ignition.
- 2.16. Industrial Building:-** Any building or part of a building or structure, in which products or materials or all kinds and properties are fabricated, assembled or processed like assembly plants, laboratories, power plants, smoke houses, refineries, gas plants, mills, dairies, factories, etc.
- 2.17. Institutional Building:-** Any building or part thereof which is used for purposes such as medical or other treatment or care of persons suffering from physical or mental illness, disease or infirmity; care of infants, convalescents for aged persons and for penal or correctional detention in which the liberty of the inmates is restricted. Institutional buildings ordinarily provide sleeping accommodation for the occupants. It includes hospitals, sanatoria, custodial institutions and penal institution like jails, prisons, mental hospitals, reformatories.
- 2.18. Laying out of New Street:-** Includes provision of road for formation, levelling, metalling or paving of a road and footpaths, etc. including laying of the services such as water supply, drainage, etc.
- 2.19. Loft:-** An intermediary floor between two floors or a residual space in a pitched roof, above normal floor level which is constructed or adopted for storage purposes.

- 2.20. Means of Access:** - These shall include the road/street/vehicular access way, pathway Up to the plots and to the buildings within a plot.
- 2.21. Mercantile (Commercial) Building:** - Any building or part of a building, which is used as shops, stores, market, for display and sale merchandise either wholesale or retail and office storage located in the same building shall be included under this group.
- 2.22 Non-Combustible:** - A material which does not burn nor add heat to a fire when tested for combustibility in accordance with good practice (see Bye-law No. 2.8).
- 2.23. Occupancy or use Group:** - The principal occupancy for which a building or a part of a building is used or intended to be used; for the purposes of classification of a building according to the occupancy, an occupancy shall be deemed to include subsidiary occupancies which are contingent upon it. Buildings with mixed occupancies are those. Buildings in which more than one occupancy are present in different portions of the building.
- 2.24. Open Space:** - An area forming an integral part of the plot, left open to the sky.
- 2.25. Owner:** - The person who has legal title for land or building. It also includes-
- (a) an agent or trustee who receives the rent on behalf of the owner;
 - (b) an agent or trustee who receives the rent of, or is entrusted with or is concerned With any building devoted to religious or charitable purpose;
 - (c) a receiver, executor or administrator or a manager appointed by any court of competent jurisdiction to have the charge of, or to exercise the rights of the owner; and
 - (d) a mortgage in possession.
- 2.26. Permit:** - A permit or authorization in writing by the Authority to carry out work regulated by the Byelaws.
- 2.27. Plinth:** - The portion or a structure between the surface of the surrounding ground and surface of the floor, immediately above the ground.
- 2.28. Plot or Site:** - A parcel (piece) of land enclosed by definite boundaries.
- 2.29. Residential Building:** - Any building in which sleeping accommodation is provided for normal residential purposes with or without cooking or dining or both facilities. It includes one or two multi-family dwellings, lodging or roaming houses, dormitories apartment houses and flats and hotels.
- 2.30. Room Height:** - The vertical distance measured from the finished floor surface to the finished ceiling surface. Where a finished ceiling is not provided, the under side of joists or beams shall determine the upper point of measurement and this distance would be the headroom.
- 2.31. Row Housing:** - A row houses with only front, rear and interior open spaces.
- 2.32. Semi Detached Buildings:** - A building detached on three sides open with open spaces as specified.
- 2.33. Storage Building:** - These shall include any building or part of a building used primarily for the storage or sheltering of goods, ware or merchandise, like ware houses, cold storages, freight depots, transit sheds, store houses, public garages, hangers, truck terminals, grain elevators, beams and stables.
- 2.34. Storey:** - The portion of a building included between the surface of any floor and the surface of the floor next above it, or if there be no floor above it, then the space between any floor and the ceiling next above it.
- 2.35. To erect means-**
- (a) to erect a new building on any site whether previously built upon or not;
 - (b) to re-erect any building of which portions above the plinth level have been pulled down, burnt or destroyed; and
 - (c) conversion from one occupancy to another.

2.36. Unsafe Buildings:- Those buildings which are structurally unsafe, in sanitary or not provided with adequate means of egress or which constitute a fire hazard or are otherwise dangerous to, human life or which in relation to, existing use constitute a hazard to safety or health or public welfare, by reason of inadequate maintenance, dilapidation or abandonment.

2.37. Water Closet (WC):- A privy with arrangement for flushing the pan with water. It does not include a bathroom.

3. Building permit required

3.1. No person shall carry out development work or erect, re-erect or make material alterations or demolish any building or cause the same to be done without first obtaining a separate building permit, for such each building/development work from the Authority.

3.2. However, no permission shall be necessary for the following works:-

- (i) The carrying out of works in compliance with any order or direction made by any authority under any law for the time being in force;
- (ii) The carrying out of works by any authority in exercise of its powers under any law for the time being in force;
- (iii) The following operational construction of the Government whether temporary or permanent which is necessary for the operation, maintenance, development or execution of any of the following services may be exempted from the purview of the bye-laws :-

- (a) Railways;
- (b) National Highways;
- (c) National Waterways;
- (d) Major Ports;
- (e) Airways and Aerodromes;
- (f) Posts and Telegraphs, telephones, wireless, broadcasting and other like forms of communication;
- (g) Regional grid for electricity; and
- (h) Any other service which the State Government may, if it is of opinion that the operation, maintenance, development or execution of such service is essential to the life of the community, by notification, declare to be a service for the purpose of this clause.

3.2.1. However, the following constructions of the Government departments do not come under the purview of operational construction for the purpose of exemption under Bye-law No. 3.2 (iii) :-

- i) New residential building (other than gate lodges, quarters for limited essential operational staff and the like), roads and drains in railway colonies, hospitals, clubs, institutes and schools, in the case of railways; and
- (ii) A new building new construction or new installation or any extension thereof, in the case of any other services.

4. Notice to be given

4.1. Every person who, intends to, carry out development work or erect, re-erect or make material alteration or demolish any building shall give notice as required in writing to the Authority of such intention in the Form given in Appendix A and the notice shall be accompanied by plans and statement in triplicate drawn or prepared in accordance with Bye-law 5 The plans may be on ordinary drawing paper or prints on Ferro paper, ammonia paper, blue print or on tracing cloth. One set of such plans shall be retained in the municipal local body office for record after issue of a permit or refusal.

4.1.1. No temporary construction shall be permitted, without obtaining prior approval of Planning Authority, which may be granted subject to, the Planning Authority may deem such condition as necessary.

4.1.2. For construction of ground floor tenements with non-combustible material on plots not exceeding 50 sq. m. in site and service schemes on plinth constructed according to building regulations, the building permission may be waived.

4.2. No such notice shall be deemed necessary for the following minor alterations, repairs in any existing building in accordance with these byelaws except which affect the exterior elevation of the buildings or violates any provisions regarding general building or safety requirements:

- (a) providing or closing of a window or door or ventilator not opening towards other's property;
- (b) providing intercommunication doors;
- (c) white washing/painting;
- (d) re-tiling and re-terracing;
- (e) plastering and patch work;
- (f) re-flooring; and
- (g) replacement of roofing.

5. Information Accompanying Notice

5.1. Every person given notice referred in Bye-law 4, shall submit there with the following:-

- (a) **Ownership Title.**-Two copies of the following shall be considered adequate for verifying the proof of ownership:-
 - (i) A copy of the latest 7/12 extracts from Revenue Department or the Property Register Card; OR
 - (ii) A copy of the original sale/lease deed of the' site on which the construction or reconstruction is proposed; and
 - (iii) Other documents acceptable to the Authority

In case of lease hold plots, the leas see will be responsible to prove that he is entitled to construct on the lease hold plot.
- (b) **Receipt for Fees.**-A challan or receipt for having paid the specified building permit fees to the Authority.
- (c) **Site Plan.**-A site plan in triplicate drawn to a scale of not less than 1 : 500 and shall show:-
 - (i) the direction of north point relative to the plan of the buildings;
 - (ii) the municipal number of the plot or premises, if any, and the name and number of the block and street or road in which the site is situated; and if the she is in any approved layout, the serial number of the site, and the reference number of such approval;
 - (iii) the boundaries, giving the dimensions of the site and of any contiguous land belonging to the owner thereof;
 - (iv) the position of the site in relation to neighbouring street(s);
 - (v) all existing building standing on, over or under the site;
 - (vi) the position of the building, and of all other buildings (if any) which the applicant intends to erect upon ~is contiguous land referred to in (iii) in relation to:-
 - (1) 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; and
 - (2) if there is no street within a distance 12 m of the site, the nearest existing street;
 - (vii) the means of access from the street to the building, and to all other buildings (if any) which the applicant intends to erect upon his contiguous land referred to in (iii);

- (viii) space to be left about the building to secure a free circulation of air, admission of light and access for scavenging purposes;
 - (ix) the width of the street (if any) in front and of the street (if any) at the side or rear of the buildings;
 - (x) any existing physical features, such as wells, drains, trees, etc.;
 - (xi) the ground area of the whole property and the built up area;
 - (xii) the position of overhead electric supply line and water supply lines, if any; and (xiii) such other particulars as may be prescribed by the Authority.
- (d) **Sub-division Layout Plan:-** In the case of development work, the notice shall be accompanied by the Sub-division Layout Plan which shall be drawn on a scale of not less than, 1,500 containing the following:-
- (i) Scale used and North Point;
 - (ii) The location of all proposed and existing roads with their existing/proposed widths within the land;
 - (iii) Dimensions of plot(s) along with building lines showing the dimensions of the setbacks within each plot;
 - (iv) The location of drains, sewers, public facilities and services, and electrical lines etc.;
 - (v) Table indicating size, area and use of all the plots in the sub-division layout plan;
 - (vi) A statement indicating the total area of the site, area utilized under roads, open spaces, for parks, playgrounds, recreation spaces and development plan reservations, schools, shopping and other public places along with their percentage with reference to the total area of the site proposed to be sub-divided; and
 - (vii) In case of plots which are sub-divided in built up areas in addition to the above, the means of access to the sub-division from existing streets.
- (e) **Building Plan.-**The plans of the buildings and elevations and sections accompanying the notice shall be drawn to a scale of not less than 1 : 100. The building plan shall-
- (i) include floor plans of all floors together with the covered area clearly indicating the sizes of rooms and the position and width of staircases, and other exit ways. It shall also include ground floor plan as well as basement plans and shall indicate the details of parking space provided around and within building as also the access ways and the appurtenant open spaces with projections *in* dotted lines, distance from any building existing on the plot in figured dimensions along with accessory building;
 - (ii) show the use or occupancy of all parts of the building;
 - (iii) show exact location of essential services, for example, we, sink, bath and the like;
 - (iv) include sectional drawings showing clearly the sizes of footings, thickness of roof slabs, wall construction, staircases, sizes and spacing of framing members, ceiling heights and parapet heights with their materials. The section should indicate the drainage and the slope of the roof;
 - (v) show all street elevations;
 - (vi) indicate details of service latrine. if any;
 - (vii) give dimensions of the projected portions beyond the permissible building line;
 - (viii) give indication of the north point relative to the plan;
 - (ix) include terrace plan indicating the slope of the roof and proposed methods of drainage from roof and on ground;
 - (x) give dimensions of all doors, windows and ventilators; and
 - (xi) give such other particulars as may be prescribed by the Authority.

- (f) **Specification:-** *Specifications* of proposed construction giving type of materials used, duly signed by qualified architect/engineer/supervisor shall accompany the notice; and
- (g) **Supervision:-** The notice shall be further accompanied by certificate of supervision by the qualified architect/engineer/supervisor who shall undertake supervision, in the prescribed form given in Appendix B.

6. Signing of Plans

- 6.1. The plans shall be signed by the owner and the qualified architect/engineer/supervisor and their qualification shall be as per Appendix C.
- 6.2. Where the proposed construction is for the addition of any subsequent floor of an existing structure, a certificate of soundness of the foundation and the existing structure by a qualified engineer shall be furnished along with the application, if so desired.

7. Colouring of Plans

7.1. The plans shall be drawn in the following colours:-

- (i) Plot lines. Thick Black.
- (ii) Proposed work Red.
- (iii) Existing work Black in tracing cloth or on drawing paper and white or grey or natural tint in blue on ferro print.
- (iv) Water Supply work. Black dotted.
- (v) Drainage and sewerage work.. Red dotted.

Note.-At the bottom on the plan it shall be clearly shown as to what each colour indicates, including the use of other colours for other items of work.

8. Fees

8.1. As one of the conditions under section 45(1)(ii) of Maharashtra Regional Town Planning Act and section 338 of Maharashtra Municipalities Act, no notice shall be deemed valid unless and until the person giving such notice or closes the challan on receipt for having paid the necessary license fee as prescribed below:-

(i) *Sub-division of Land or Development Work:*

Area to be developed-	Rupees
upto 1 Ha	50.00
above 1 Ha	100.00

(ii) *Residential Buildings:*

Total covered area on all floors-	Rupees
upto 150 sq.m.	10.00
upto 300 sq.m.	15.00
above 300 sq.m.	20.00

(iii) Mercantile (Commercial) and Business Buildings, Assembly Buildings, Hazardous Storage and Industrial Buildings:

(i.e. shops, showrooms, business offices, godown, warehouses, banks, cinema theatres, clubs etc.)

Total covered area on all floors-	Rupees
upto 150 sq.m.	50.00
upto 300 sq.m.	100.00
above 300 sq.m.	200.00

(iv) *Public Buildings for Educational, Religious and Charitable use:*

Total covered area on all floors-	Rupees
upto 150 sq.m.	15.00
more than 150_sq.m.	25.00

9. Grant or Refusal of Permit

9.1. The Authority may either sanction or refuse the proposals or may sanction them with such modifications, conditions or directions as it may deem necessary and thereupon shall communicate the decision to the owner in the prescribed form given in Appendix D and one set of the drawings and specifications duly endorsed shall be returned to him.

In the case of refusal, the Authority shall quote the reason and relevant provisions of the Byelaws, which the plans contravene. The Authority shall (as far as possible) advise all the objections to the plans and specifications in the first instance itself and ensure that no new objections are raised when they are resubmitted after compliance of earlier objections.

9.2. Where no orders are communicated within sixty (60) days, granting or refusing the permission, the Authority shall be deemed to have permitted the proposed work.

This shall not construe to authorise any person to do anything in contravention of these Bye-laws.

9.3. Once the plans have been scrutinized and objections have been pointed out, the owner giving application shall modify the plans statements to comply with the objections raised and resubmit them. The Authority shall scrutinize the resubmitted plan and if there be further objections, the plan shall be rejected.

9.4. Anyone aggrieved by an order passed under Bye-law No. 9.3 may within thirty (30) days of the date of communication of the order appeal to the Divisional Deputy Director of Town Planning for the zone and his decision shall be final. The appeal shall be cleared within sixty (60) days.

9.5. Duration of Sanction.-In line with section 48 of Maharashtra Regional and Town Planning Act, 1966, the sanction once accorded through building permit shall remain valid for 1 year from the date of issue. The building permit shall be got revalidated before the expiry of this period. The request for further revalidation shall be subject to the development plan provision as also the building bye-laws and the Development Control Rules amended up-to-date. Such revalidation could be done for 2 consecutive terms of 1 year each after which proposals will have to be submitted to obtain building permit/commencement certificate afresh.

10. Suspension of Permit

10.1. In addition to the provisions of section 51 of Maharashtra Regional and Town Planning Act, 1966 the Authority may revoke or suspend any permit issued under these provisions, wherever there has been any false statement or any mis-representation of any material fact in the application on which the permit was based.

11. Inspection

11.1. For the purpose of facilitating inspection, by the Authority the following shall be the recognised stages in the construction of any buildings:-

- (i) digging of the foundation; and
- (ii) construction of the superstructure above plinth level.

11.2. The Authority or its technical representative shall be competent to inspect the building at all reasonable hours during the day to satisfy that such construction is not inconsistent with the provisions of the Act or Rules or Bye-laws.

12. Completion Certificate

12.1. Every person erecting a building shall, within one month after completion of such building shall give written notice to the Authority through the qualified Architect/Engineer/ Supervisor, regarding completion of work prescribed in the permit in the prescribed form given in Appendix E.

12.1.1. The provision of completion certificate shall not apply to building construction work referred in Bye-law No. 4.1.2.

13. Occupancy Certificate

13.1. Within a period of thirty (30) days after receipt of the notice of completion, the Authority shall communicate in the prescribed form given in Appendix F the requisite permission to occupy any such building or to use any building or part thereof effected by any such work.

13.1.1. The provision of occupancy certificate shall not apply to building construction work referred in Bye-law No. 4.1.2.

14. Offences and Penalties

14.1. Any person who contravenes any of the provisions of these Bye-laws or any requirements or obligations imposed on him by virtue of these Bye-laws or who interferes with or obstructs any person in the discharge of his duties shall be guilty of an offence. Upon conviction the Authority shall:

- (i) punish the person by a fine as fixed by the Authority and as stipulated in the Act;
- (ii) take suitable actions including demolition of unauthorized work as decided by the Authority; and
- (iii) take suitable action against the licensed technical personnel, which may include cancellation of the permit and debarring him from further practice for a period upto 3 years.

15. Unsafe building

15.1. The provisions of section 195 of Maharashtra Municipalities Act, 1965 shall apply for all unsafe buildings, which shall be considered to constitute danger to public safety and for restoration by repairs or demolition or other sanctions as directed by the Authority.

16. Architectural Control

16.1. For the buildings coming up in important areas or fronting major roads or streets more than 12 m in width or in the case of important monumental buildings, the building schemes may be cleared by a special body separately set up from the architectural aesthetic points of view and the Authority shall have powers to frame suitable rules for ensuring the above.

PART II-GENERAL BUILDING REQUIREMENTS

17. Requirements of site

17.1. Building sites.-No permission to construct a building on a site shall be granted if-

- (i) the site is in sanitary or it is dangerous to construct a building on it;
- (ii) the site is within '9 (nine) meters of the highest watermark, and if there be major water course nearby the distance of the Plots from the same shall be 9 m from average high flood mark or 15 m from the defined boundary of water course whichever is more;
- (iii) the construction of the building thereon is for public worship, factory, work place which in the opinion of the Authority will wound the religious feelings or be a source of nuisance/annoyance to any class of persons in the vicinity thereof;
- (iv) the site is filled up tank or has been filled up with or used for depositing excrementitious matter, carcasses of dead animals rubbish or filthy and offensive matter, or sewage, unless the Authority has examined the site and granted a certificate to the effect that it is from a sanitary point of view, fit to be built upon;
- (v) the plot has not been approved as a building site by the improvement Trust/Planning Authority/Regional Development Authority;
- (vi) the building has to be constructed over/under a municipal drain, sewer line or water mains or overhead transmission line;
- (vii) if the site is not drained properly or is incapable of being well drained;
- (viii) if the proposed occupancy of the building on the site does not conform to the land use proposals in the Development Plan or Zoning regulations.

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

	Vertically	Horizontally
	m	m
(a) Low and medium voltage lines and service lines.	2.5	1.2
(b) High voltage lines upto and including 33,000 V	3.7	2.0
(c) Extra high voltage lines beyond 33,000 V	3.7	2.0
	(Plus 0.3 m for every every additional 33,000 V or part thereof).	(plus 0.3 m for additional 33,000 V or part thereof).

17.2.1. The minimum clearance specified in clause 17.2 above shall be measured from maximum sag for vertical clearance and from maximum deflection due to wind pressure for horizontal clearance.

18. Means of Access .

18.1. In case of building not fronting on public street/roads, the same shall front on a means of access of width not less than 4.5 m with a length not more than 50 m from a public road/street.

18.2. In the case of housing schemes for LIG and Economically Weaker-Section of Society developed upto two storeyed Row. Housing Scheme the pathway width shall be 3 m which shall not serve more than 50 m and 8 plots on each side of pathway.

19. Rules for land sub-division and Layout

19.1. Roads, Streets in Land Sub-division or Layout:

19.1.1. Residential Areas:

(i) Minimum width of layout roads or internal roads in sub-division proposal shall not be less than the following:-

Length of Road	Minimum Width
Up to 75 m	6.0 m
Above 75 m and upto 150 m	9.0 m
Above 150 m and upto 300 m	12.0 m or as may be required by the Authority but not exceeding 15 m.
Above 150 m	15.0 m or more as may be required by the Authority in view of the projected traffic or importance of road.

(ii) **Cul-de-sacs** giving access to plot and extending upto 150 m normally and 275 m maximum with an additional turning space at 150 m will be allowed only in residential areas, provided that cul-de-sac, would be permissible only on straight roads and further provided that cul-de-sacs end shall be higher in level than the level of starting point of such dead end road. The turning space in which road shall be not less than 81 sq.m. in area with a maximum width of 9 m.

19.1.2. Commercial and Industrial Areas.-The minimum width of layout road or internal road in sub-division proposals shall not be less than the followings :-

Length of Road	Minimum Width
Upto 75 m	12 m
75-150 m..	13.5 m
Above 150 m	15 m or more as may be required by Projected traffic.

19.1.3. Intersection of Roads.-At junctions of roads the rounding off of intersection shall be done with the tangent length from the point of intersection to the curve being $\frac{1}{2}$ the road width across the direction of tangent as given below :-

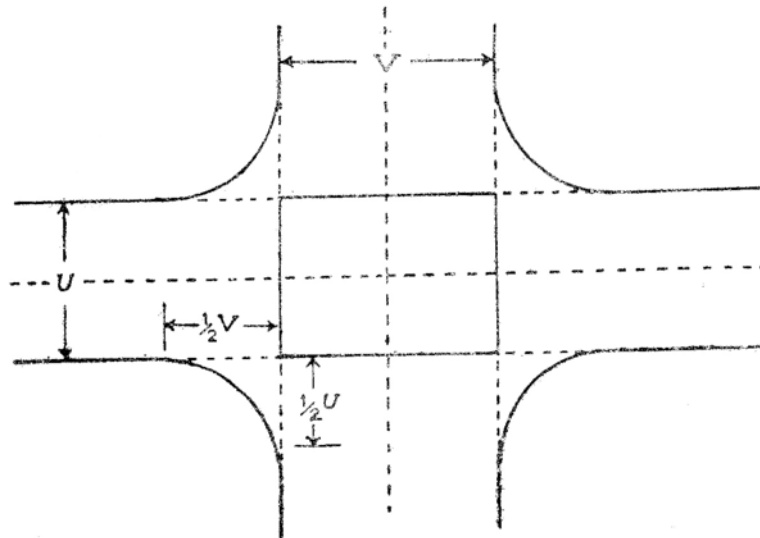


FIG. 1 FOUNDING OFF 'NTE~SECTIONS AT JUNCTIONS

19.2. Open Spaces.-In any layout or sub-division of land admeasuring 0.4 Ha or more for residential purpose of 0.8 Ha .or more for industrial purpose 10 per cent of the total area of land shall be reserved for open space which shall as far as practicable be located in one central place. Out of such open spaces, an area to the extent of 10 per cent may be allowed to be con-structed by a Ground Floor Structure for the purpose of allied public use, such as kindergarten, library, club hall, pavillion etc. Location of such structure shall be in one corner of the open space.

19.3. Whenever called upon by Planning Authority, under provisions of section 183 of M.M. Act areas under roads and open space in Byelaw No. 19.2 shall be handed over to the Planning Authority after development of the same for which nominal amount (of Re. 1) shall be paid by the Planning Authority. In case of the owners who undertake to develop the open spaces for bonafide reasons as recreational community open spaces, the Authority may permit the owner to develop the open space unless the Authority is convinced that there is misuse of development of open spaces in which case the Authority shall take over the land.

19.3.1. The Chief Officer shall permit the same plot, additional built up area on 100 per cent of the area required for road widening or for construction of new roads of the final Development Plan, if the owner (including the lessee of such land) is prepared to release such area of road widening or for construction of new roads without claiming any compensation thereof. Such 100 percent of the area going under road widening or new road. construction shall be limited to 40 per cent of the area of the plot remaining after release of the land required for road widening or road construction, provided further that this concession shall not be granted in respect of roads located in the areas of Town Planning Schemes.

19.4. Layout of Plots:

19.4.1. Residential Buildings. -Subject to the limitation of Urban Land (Ceiling and Regulations) Act, where applicable, the plot in residential area shall be laid out based on the following criteria;

Plot Size		Development Scheme	
50 to 100 sq. m.	Row Housing
101 to 150 sq. m.	Semi-detached Building
Above 150 sq. m.	Detached Building

Note. - Plots which are 4.5 m to 7 m width shall be developed as Row Housing Schemes.

19.4.1.1. For housing scheme for Low Income Group and Economically Weaker Section of Society undertaken by Public Agencies, the minimum plot size shall be 30 sq.m. with a minimum width of 3.5 m.

19.4.2. Other Buildings. -In addition to the provisions of Bye-law No. 19.4.2.1 to 19.4.2.3 the minimum size of plots for Buildings of other uses like business, educational, mercantile and industrial uses shall be as decided by the Authority in consultation with the Director of Town Planning.

19.4.2.1. Cinema Theaters/Assembly Halls. -Minimum size of plot for cinema theatres/ assembly buildings shall be on the basis of seating capacity of the building at the rate of 3.0 sq.m. per seat.

19.4.2.2. Public Entertainment Hall/Mangal Karyalaya. -The minimum size of plot shall be 500 sq .m.

19.4.2.3. Petrol Filling Station: - The minimum size of plot shall be;

- (a) 30.50 m X 16.75 m in the case of Petrol Filling Station with kiosk without service bay;
- (b) 36.5 x 30.5 m in the case of Petrol Filling Station with service bay.

20. Land use classification, open Spaces, Area and Height Limitations

20.1. The various land use classification shall be in the following zones: -

- | | |
|--|--|
| B-Class Municipal Council | C-Class Municipal Council |
| (a) Purely Residential Zone (R1) | |
| Residential with shop lines at Ground Floor (R2) | |
| (b) Agricultural Produce Marketing Committee Zone. | Agricultural Produce Marketing Committee Zone. |
| (c) Industrial Zone | |
| (d) No Development Zone | |
| (e) Special Reservations | |

The various occupancies and use to be permitted in the various land use zones in ' B ' and , C 'class Municipal Councils shall be as given in Appendix G. Any other land uses not identified in Appendix G or marginal changes may be permitted by the Authority in consultation with Director of Town Planning.

20.2. Regulation for Gathan and similar congested Areas as may be specified in the Development plan.

- - -

20.2.1. Front Open Spaces. -The minimum set-back from existing or proposed road shall be as under;-

- (a) For streets 7.5 m to less than 12.0 m in width 1.0 m
- (b) For streets 12.0 m and above in width 1.5 m

(c) For streets less than 7.5 m in width no set-back shall be prescribed subject to condition that no lane shall be less than 4.5 m in width clear of structural projections. For lanes less than 4.5 m wide a set-back of 2.25 m shall be prescribed from the *Centre* line of such lane, Streets less than 4.5 m wide shall be treated as lanes only when they serve as access to the properties fronting on them. Where such streets, despite their narrowness, form part of traffic circulation system, widening shall be proposed and normal set back mentioned above shall be applied.

(d) Structural projections such as balconies, cornices, weather sheds, roof projections etc., shall be allowed in the set-back distances prescribed above. Such projections will not be taken into consideration for calculation of built over area.

20.2.2. The built-up area in gaathan areas shall be not more than 75 per cent.

20.2.3. The maximum height of buildings shall be 2 storeys. In case, building with ground and two storeys is to be constructed the built over area shall not be more than 60 percent.

20.2.4. Open spaces to be provided for the full Consumption of Built-up Area.- Normally the open spaces to be left at the sides and rear shall be to consume the built-up area permissible for the occupancy in the zone, provided that higher coverage that is required under Bye-law No. 20.2.2 would be permissible in case of new construction on upper floor with ground floor already constructed. The Authority may permit smaller set-back and permit additional floor area to the limit of 10 sq.m. over the permissible built-up area to avoid structural difficulties or great hardship, but so as not to affect adversely the light and ventilation of adjoining buildings or part thereof. -

20.3. Regulation of Development outside Congested Area.

20.3.1. Residential Buildings.

20.3.1.1. The rules as given in Table 1 shall apply for residential buildings, residential-cum-office or shop buildings permissible in non-gaathan area and residential buildings permissible in industrial areas.

20.3.1.2. Minimum distance between main and subsidiary building.-A clear distance of at least 3.0 m shall be left between the main building and any subsidiary building such as an out-house, garage etc. constructed in one building plot:

Provided that the main and the subsidiary building may be permitted to be connected by a covered corridor. Provided further that such subsidiary building shall be allowed to be constructed on the common boundary of two adjoining plots and in the rear of the plot without leaving any marginal space from the boundaries. Such subsidiary structures shall be of ground floor construction only.

20.3.1.3. Number of main and subsidiary buildings in a plot.-Only one main building, either a tenement house or a block of flats or a dwelling house together with such outhouses, garages etc. as are reasonably required for the *bona fide* use and enjoyment of the occupants of such main building and their domestic servants and which shall not be separately let out, shall be permitted to be erected in any plot. These provisions are not applicable to Group Housing Schemes.

20.3.2. Mercantile or' Commercial Building:-The following shall govern the open spaces, area and height limitations Mercantile or Commercial Buildings :-

a) Open Spaces-	Front	Side	Rear
	4.5m	3m	3m

(b) Maximum height of building-4 Storeys.

*Note.-*For buildings above 10m the open space shall be increase by 1m for every 3m above 10m.

TABLE 1

Serial No.	Category and Road and description of Minimum		Minimum Size of Plot fronting on	Minimum set back from the road side	Minimum marginal distances		Maximum built up area fraction of Plot Area	No. of storeys
					Rear	Front		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
1.	National State Highways Major District Roads	Highways Highways	450 sq.m.	25m from the centre line of the road (existing or proposed) or 4.5 m. from the road boundary whichever is more.	4.5 m	3.0 m	1/3	3
2.	Other road above 18 m	above 300 sq.m.	4.5 sq.m.		3.0 m.	2.25 m	1/3	3
3.	Below 18m	above 150 sq.m.	3 sq.m.		1.5 m.	1.5 m	1/2	2
4.	Below 18m	above 100 sq.m.	3 sq.m.		1.5 m.	1.5 m (only one side)	1/2	2
5.	Below 18m	above 50 sq.m.	2.25 sq.m.		2.25 m.	Nil	1/2	2
6.	Row housing for low income group and Economically Weaker Section of Society	30 sq.m.	....		....	...	3/4	2
7.	Group housing Scheme	.....		5m from main road 3m from pathway	3.0 m. 3.0 m.	2.25m 3 m	1/3 (of the net plot area)	2 3

* Note 1 :- For the sake of calculation of net area in group housing scheme, area of plot less than 900 sq.m. shall be treated as net plot area. In other cases, the net area shall be 3/4th of the total plot area.

Note 2 :- The distance between any two main buildings shall be 4.50 m. minimum upto ground and two upper floor constructions.

Note 3 :- Where sub-standard plots have either been granted or approved by Government/Planning Authority prior to coming into operation of these Development Control Rules :-

(i) Plot admeasuring 50 sq.m. or less in area and forming a compact block shall be governed by Bye-law No.20.2.

(ii) If such sub-standard plots from pockets within area of large plots, the road side set-back shall be the same as in case of large plots and other provisions in Bye-law No. 20.2. shall apply.

(iii) In case of sub-standard plots above 50 sq.m. in area, whether authorised or unauthorised provisions of Sr. Nos. 1 to 5 of the above Table shall apply.

Note 4 :- In no case, the Ribbon Development Rules shall be relaxed without approval of the Highway Authority
20.3.3. *Public and Semi-public Buildings.-Buildings* for Assembly, Business, Educational, Hospital Groups shall be governed by the following rules for open spaces, coverage and maximum number of storeys:

Building	Open space in m.			Coverage per cent	Maximum No. of storeys (Height)
	Front	Rear	Side(s)		
Business, Hospital Buildings	6	3	3	50	3(12)
Educational Buildings	6	3	3	50	2(8)
Assembly Buildings including Cinema Theatres	12	6	6	40	2(16)

Note.-Further in cases of plots facing National Highway, State Highway and Major District Roads the building line shall be 37 m. from the centre line of existing or proposed road or 12m. from plot boundary whichever is more.

20.3.3.1. The access roads shall have a width of 12 m for B ' Class Municipal Councils and 9 m for ' C ' Class Municipal Councils.

20.3.4. *Storage, Industrial and Hazardous Buildings.*-Table 2 shall govern the open spaces, coverage and maximum No. of storeys for industrial buildings.

20.4. The height limitations specified in Bye-law Nos. 20.3.1 to 20.3.4 may be relaxed for different occupancy/use groups under special circumstances with the special approval of the Divisional Deputy Director of Town Planning.

20.5. *Interior Open Spaces.*-The whole 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 width shall be 3 m.

TABLE 2

Serial No.	Plot Size in sq.m.		Maximum built-up area per cent,	Minimum Marginal open spaces from all sides m	Minimum width of Plot m	Maximum no of storeys
(1)	(2)		(3)	(4)	(5)	(6)
1	200-500	.. ..	25/50	2	12	2/1
2	501/1000	.. ..	25/50 ..	3	20.	1/3
3	1001-2500	.. ..	25/50	4.5	25	2/1
4	2501-5000	.. ..	25/50	6	35	2/1
5	Above 5001	.. ..	25/50	9	50	2/1

Note 1.- The provisions of the Note under Bye-law No.20.3.3 shall apply for front open spaces given in column (4).

Note 2.- The maximum built-up area and the maximum number of storeys shall be so chosen to have a total built up area of 50 per cent either as a single storeyed or a two storeyed structure.

20.6. Height Limitations.-The absolute height of any building shall not be more than 1.5 times the width of road fronting *plus* front open space. -

The following appurtenant structures shall not be included in the height of the buildings:-

Roof tanks and their supports, ventilating, air-conditioning, lift rooms and similar service equipment, proof structures other than penthouses, chimneys and parapet walls not exceeding 1 m. in height;

Unless the aggregate area of such structures including penthouses, exceeds one-third of the roof of the building upon which they are erected.

20.7. Exemption to Open Spaces.

20.7.1. The following exemptions to open space shall be permitted :-

(a) *Projections into Open Spaces.*-Every open space provided either interior or exterior shall be kept free from any erection thereon and shall be open to the sky and no cornice, chajja roof or weather shade more than 0.75 m wide shall overhang or project over the said open space so as to reduce the width to less than the minimum required.

(b) A canopy or canopies each not exceeding 5 m. in length and 2.5 m. in width in the form of cantilever or supported and unenclosed, over the main entrance/entrances, providing a minimum clear height of 2.1 m below the canopy. There shall be a clear open space of 1.5 m from the plot boundary to the canopy.

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

(c) A balcony or balconies at roof level of a width of 0.9 m over hanging set-backs within one's own land and court yards and this shall be subject to a maximum of 1/3 length of perimeter of building, Balcony or balconies shall be permitted to project in marginal open space of not less than 3 m in width.

20.7.2. In addition to Bye-law No. 20.7.1(a), (b) and (c) the following shall not be included in covered area for built-up area calculations:-

- (a) Mamti (stair cover) over staircase on top floor.
- (b) Rockery, well and Well structures, plant, nursery, waterpool, swimming pool (if uncovered), platform round a tree, tank, fountain, bench, CHABUTRA with open top and unenclosed 'sides by walls, ramps, compound wall, gate, slide, steps outside building, domestic washing place, swing, fire escape staircase, overhead water tank on top of buildings.
- (c) Drainage culvert, conduit, catch-pit, gully-pit, chamber, gutter, culvert on Municipal drains.
- (d) Basement floors used as parking space, store room, air-conditioning plant room.
- (e) Electric sub-station or cabin, watchmen's booths with maximum area of 1.6 sq. m. and minimum width or diameter of 1.2 m pump-houses with maximum area of 10 sq. m. and minimum width or diameter of 3 m.

21. Parking spaces

21.1. In Institutional (hospital), buildings assembly buildings, business buildings, mercantile (commercial) buildings, provision shall be made for adequate parking spaces in accordance with Table 3.

TABLE 3

Serial No.	Occupancy	One Parking space of 20 sq. m. for every	
		B-Class Municipal Councils	C-Class Municipal Councils
1.	Institutional (Hospitals)	.. 30 beds .. Besides the above, one ambulance parking space admeasuring 10 m x 4 m shall be Provided for hospitals having Bed strength Of 100 or above	60 beds Besides the above, one ambulance parking space admeasuring 10 m x 4 m shall be provided for hospitals having bed strength of 100 or above
2	Assembly	.. 60 seats	.. 120 seats
3	Government or Semi-public or Private Business.	.. 150 sq.m.	.. 300 sq.m.
4	Mercantile	.. 150 sq.m.	.. 300 sq.m.

21.2. Off-street parking space shall be provided with adequate vehicular access to a street; and the area of drives, aisles and such other provisions required for adequate maneuvering of vehicles shall be exclusive of the parking space stipulated in these rules.

21.3. The spaces to be left out for parking as given in Bye-law No. 21.1 shall be in addition to the open spaces left out for lighting and ventilation purposes as given in Bye-laws No. 20.2 to 20.3 excepting that 50 per cent of the open spaces required under Bye-law No. 20.2 and 20.3 around buildings may be allowed to be utilised for parking or loading or unloading spaces, provided that a minimum distance of 3.6 m. around side and rear and 6 m of front shall be kept free from any parking, loading or unloading spaces.

22. Requirements of parts of Building

22.1. Plinth

22.1.1. **Main Buildings.**-The plinth or any part of a building or outhouse shall be so located with respect to surrounding ground level as well as average normal flood level/water mark that adequate drainage of the site is assured but not at height less than 45 cm. For housing for Economically Weaker Section of Society and Low Income Group undertaken by Public Agency* the plinth may be 30 cm.

22.1.2. **Interior Courtyards.**-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.

. *For planning, construction of layout in the case or colonies upto developed plots.

22.2. *Habitable Rooms*

22.2.1. Size.- No. habitable room shall have a floor area of less than 9.5 sq. m. except those in the hostels attached to recognized educational institutions the minimum size of a habitable room for the residence of a single person shall be 7.5 sq.m.; the minimum width of a habitable room shall be 2.5 m. Where there are two rooms, one shall be not less than 9.5 m. 2, and other 7.5 m.2,

22.2.1.1. However in the case of special housing schemes of Economically Weaker Section of Society, Low Income Group Housing, Slum Clearance Schemes undertaken by Public Agencies the norms for the size of rooms shall be as follows:-

In single room tenements, the room shall be not less than 12.5 sq.m. with a minimum width of 2.4 m.

22.2.2. 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). The minimum clear head room under beam shall be 2.4 m.

22.2.2.1. In the case of pitched roof, the average height shall not be less than 2.75 m. and the minimum height of eaves level shall not be less than 2.2 m.

22.3. *Kitchen.*

22.3.1. Size.-The area of the kitchen shall be not less than 5.5 sq.m. with a minimum width of 1.8 m. A kitchen which is also intended for use as a dining room shall have a floor area not less than 9.5 sq. m. with a minimum width of 2.4 m.

22.3.1.1. However in the case of Special Housing Scheme as given under Bye-law 22.2.1.1 the following relaxation is applicable:-

- (a) In the case of single room tenements no kitchen is necessary; and
- (b) In case of double room tenements, the kitchen shall not be less than 4 sq. m. in area with a minimum width of 1.5 m.

22.3.2. Height.-The room height of a kitchen measured from the surface of the floor to the lowest point in the ceiling (bottom of slab) shall not be less than 2.75 m.

22.3.2.1. The provisions of Bye-law No. 22.2.2.1 shall apply for pitched roofs.

22.3.3. 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 graded and trapped connection to the waste pipe; and
- (b) window of not less than 1 sq.m. in area, opening directly into an interior or exterior open space, but not into shaft.

22.4. *Bath Rooms and Water-closets.*

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

The minimum requirements of sanitary fittings in buildings shall be as given below:

Serial No.	Fitments	Dwellings with Individual Conveniences
1	Bath Room	1 Provided for water up
2	Water-closet	1
3	Sink (or NAHAN!) in the Floor 4 Water Tap ..	1
4	Water Tap	1

22.4.1.1. In the case of special housing as given under Bye-law No. 22.2.1.1 the following relaxation shall be provided:-

(i) Size of independent WC	..	..	1. 1 X 0.9 m.
(ii) Size of independent bath	..	..	1.3 x 1.1 m.
(iii) Size of combined bath and WC	..	..	2.0 sq. m. with minimum side of 1.1 m.

22.4.1.2. There shall be atleast 1 water-closet for every 3 dwelling units for housing under Bye-law No. 22.4.1.1.

Further there shall be atleast 1 bath-room for every 3 dwelling units. Where a *Nahani* is provided in each unit, the above requirements may not be necessary.

22.4.2. Height.-The height of a bath room 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 2.2 m.

22.4.3. Other Requirements.-Every bath room or water-closet shall-

(a) be so situated that at least one of its walls open to external air. The size of the opening of the wall shall not be less than 0.3 sq. m. with minimum side of 0.3 m. This could be in the form of ventilator, window or louvers (see Bye-law No. 22.11.1);

(b) not be directly over any rooms 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 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; and

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

22.4.4. 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.

22.5. Mezzanine Floor.

22.5.1. Size.-The aggregate area of the mezzanine floor shall not exceed 33 1/3 per cent of the built up area of that floor. The minimum size of a mezzanine floor if it is used as a living room shall not be less than 9.5 m.2

22.5.2.-Height.-The minimum height of a mezzanine floor shall be 2.2 m.

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

(a) it conforms to the standards of living rooms as regards lighting and ventilation in case the size of mezzanine floor is 9.5 m. or 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 of any part of it shall not be used as a kitchen; and

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

22.6. Loft.-The maximum height of a loft shall be 1.5 m. and the 10ft shall be provided over residential kitchens bath rooms, corridors and over shop floors, built up to an area 25 per cent over kitchens and full space of bath rooms, water-closets and corridors, In shop with a width up to 3 m.lofts upto 33 1/3 per cent of the covered area may be provided. In shops with widths above 3 m. lofts upto 50 per cent of the covered area may be provided.

The loft in commercial shops shall be located 2 m. away from the entrance.

*For planning, construction of layout in the case of colonies upto developed plots.

22.7. Ledge.

22.7.1. Size.-A ledge 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.

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

22.8. Parapet.-Parapet walls and handrails provided on the edges of roof terraces, balcony etc. shall not be less than 1.05 m. and not more than 1.20 m. in height.

22.9. Boundary Wall.-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 2.0 m. above the level of centre line of the front street.

(b) in case of a corner plot the 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 intersections and the remaining height of 2.0 m. may be made up of railings.

(c) however the provisions of (a) and (b) are not applicable to boundary walls of institutional buildings like jails, sanatoria, hospitals, industrial buildings like workshops, factories and educational buildings like schools, colleges, including the hostels.

22.10. Stables.-No cattle shall be kept in a residential building except as provided for in land use classification order. The stable or cattle sheds shall be constructed separately and they shall not be nearer to a residential building than 3 m. The floor of the stable shall be properly paved sloped and drained.

22.11. Lighting and Ventilation Requirements.

22.11.1. Lighting and Ventilation of Rooms.-All habitable rooms shall have, for the admission of light and air, one or more apertures, such as windows and fan lights, opening directly to the external air or into an open verandah, not more than 2.4 m. in width.

The minimum aggregate area of openings of habitable rooms and kitchens excluding doors shall be not less than 1/10 of the floor area for dry hot climate and 1/6 of floor area for wet hot climate and 1/8 of floor area for neither wet hot nor dry hot climate. The cities/towns with the representative climate and the percentage of openings required shall be as given in Appendix H.

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.

22.11.2. 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 to 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 sq. m.	Minimum size of Shaft in m.
6	12	16
1.2	2.8	4.0
0.9	1.2	1.5

22.12. Special Requirements of Educational Buildings.

22.12.1. No class room shall admeasure less than 38 sq. m. with a minimum dimension of 5.5 m.

22.12.2. The height of any class room shall not be less than 3.6 m.

22.13. Special Requirements of Institutional Buildings (Hospital, Maternity Homes and Health Centers)

22.13.1. Any special room in the hospital building shall not admeasure less than 9.5 sq. m. in area with no side less than 3 m.

22.13.2. Area of the general wards shall not admeasure less than 40 sq.m. with no side less than 5.5 m.

22.13.3. The height of any room shall not be less than 3.6 m.

22.14. Special Requirements of Cinema Theatres.

22.14.1. They shall conform to the provisions of the Maharashtra Cinema (Regulations) Rules, 1966, as amended from time to time and such other rules as may be prescribed from time to time.

22.15. Special Requirements of Industrial Buildings.

22.15.1. In addition to provisions of these Bye-laws, regulations prescribed under Factory Act shall be applicable.

22.15.2. In the case of industrial buildings with different operations/processes the different (gaseous, solid, liquid) effluents shall be so treated, subject to the approval of the Authority (or prevention of Pollution Board) before letting it out in on the air, ground or water course.

22.15.3. The minimum ceiling height shall not be less than 3.6 m.

23. Exit Requirements

23.1. Doorway:-No doorway shall be less than 75 cm. in width in the case of residential buildings and 100 cm. in the case of other buildings.

Doorways shall not be less than 200 cm. in height. No door, gate, ground floor window shall be placed so as to open outwards upon any street.

23.2. Staircase-

(a) The minimum width of an internal staircase shall be 75 cm. in the case of residential buildings, 100 cm. in the case of commercial (mercantile) buildings and 150 cm. in the case of public and semi-public. buildings.

(b) The minimum width of treads without nosing shall be 25 cm. for an internal staircase of 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.

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

(d) Handrails shall be provided with a minimum height of 90 cm.

(e) No windings should be provided in a public building except in the case of emergency exits.

(f) The headroom for staircase shall not be less than 2.2 m.

23.3. The minimum width of corridor shall be as follows:-

(a) Residential buildings. . 1.0 m.

(b) Assembly buildings like auditorium, theatres and cinemas. 1.5 m.

(c) Institutional buildings like hospitals 1.5 m. upto 10 beds.
2.0 m. more than 10 beds.

(d) Educational buildings like schools, colleges, etc. ... 2.0m.

(e) All other buildings 1.5 m.

23.4. Detailed Exit Requirements:-For all buildings above 5 storeys (15 m) in height and for special occupancies like cinema theatres, assembly halls, mercantile buildings, factory buildings, etc., the number and details of exits shall be as specified by the Authority in accordance with Building, Bye-laws and Development Control Rules for 'A' Class Municipal Councils of Maharashtra, 1978.

24. Fire Protection Requirements

- 24.1.** All buildings above 15 m. in height and other buildings for Assembly, Institutional, Industrial, Hazardous and Storage or mixed occupancies with 500 sq.m. or more in area with any of the above occupancies in residential occupancies shall be planned, designed and constructed to ensure fire safety and this shall be done in accordance with Part IV Fire Protection of National Building Code of India, unless otherwise specified in the Bye-laws. For these buildings the building schemes shall also be cleared by the competent Fire Authority as approved by the Fire Adviser to the Government of Maharashtra.
- 24.2.** The additional provisions related to Fire Protection of buildings specified in Bye-law No. 24.1 shall be as given in Appendix J.

PART-III-SERVICES, DESIGN AND OTHER REQUIREMENTS

25. Wells

- 25.1.** Wells, intended to supply of water for human consumption or domestic purposes, where provided, shall comply with the requirements of Bye-law No. 25.1.1. and 25.1.2.

25.1.1. Location-*The well shall be located:*

- (a) not less than 15 m. from any ash pit, refuse pit, earth closet or privy and shall be located on a site upwards from the earth closet or privy.
- (b) not less than 18 m. from any cess pit, soak way or borehole latrine and shall be located on a site upwards from the earth closet or privy;
- (c) that contamination by the movement of sub-soil or other water is unlikely; and
- (d) not under a tree or otherwise it should have a canopy over it so that leaves and twigs may not fall into the well and rot.

25.1.2. Requirements.- The well shall:

- (a) *have a minimum internal diameter of not less than 1 m;*
- (b) *be constructed to a height not less than 1 m. above the surrounding ground level to form a parapet or kerb and to prevent surface water from flowing into a well, and shall be surrounded with a paving constructed of impervious material which shall extend for a distance of not less than 1.8 m. in every direction from the parapet from the kerb forming the well head and the upper surface of such a paving shall be sloped away from the well;*
- (c) *be of sound and permanent construction (Pucca) throughout. Temporary or exposed (KUTCHA) wells shall only be permitted in fields or gardens for purposes of irrigation; and*
- (d) *the interior surface of the lining of walls of the well shall be rendered impervious for a depth of not less than 1.8 m. measured from the level of the ground immediately adjoining the well-head.*

26.. Drainage

- 26.1.** In localities where facilities for drainage and daily conservancy have not been provided, no dwelling house shall be constructed unless sufficient facilities for drainage and daily conservancy are provided by the owner to the satisfaction of the Authority.
- 26.2. Septic Tanks:-***Where septic tanks are used for sewage disposal provision of Bye-law No. 26.2.1. to 26.2.2. shall apply.*

26.2.1. Location of Septic Tanks and Subsurface Absorption System:-*A subsoil dispersion shall not be closer than 18 m. from any source of drinking water, such as well, to mitigate * possibility of bacterial pollution of water supply. It shall also be as for removed from the most habitable building as economically feasible but not closer than 6 m. to avoid damage the structures.*

26.2.2. Requirements

- (a) **Dimensions of Septic Tanks.-***Septic tanks shall have minimum width of 75 cm. minimum depth of one meter below water level and a minimum liquid capacity of one cubic meter. Length of tanks shall be 2 to 4 times the width;*

- (b) *Septic tanks may be constructed of brickwork, stone masonry, concrete or other suitable materials as approved by the Authority;*
- (c) *Under no circumstances should effluent from a septic tank be allowed into an open channel, drain or body of water without adequate anaerobic treatment through soak pit.*
- (d) *Minimum nominal diameter of pipe shall be 100 mm. Further, at junctions of pipes in manholes, direction of floor from a branch connection should not make an angle exceeding 45° with tile direction of flow in the main pipe;*
- (e) *The gradients of land drains, under-drainage as well as the bottom of dispersion trenches and soak ways should be between 1 :300 and 1 :400;*
- (f) *Every septic tank shall be provided with ventilating pipe of at least 50 mm. diameter. The top of the pipe shall be provided with a suitable cage of mosquito-proof wire mesh. The ventilating pipe shall extend to a height which would cause no smell nuisance to any building in the area. Generally, the ventilating pipe may extend to a height of about 2 m. when the septic tank is at least 15 m. away from the nearest building and to a height of 2 m. above the top of the building when it is located closer than 15 m.;*
- (g) *When the disposal of septic tank effluent is to seepage pit, the seepage pit may be of any suitable shape with the least cross-sectional dimension of 90 cm. and not less than 100 cm. in depth below the invert level of the inlet pipe. The pit may be lined with stone, brick or concrete blocks with dry open joints which should be backed with at least 7.5 cm. of clean coarse aggregate. The lining above the inlet level should be finished with mortar. In the case of pits of large dimensions, the top portion may be narrowed to reduce the size of the RCC cover slabs. Where no lining is used, especially near trees, the entire pit should be filled with loose stones. A masonry ring may be constructed at the top of the pit to prevent damage by flooding of the pit by surface run off. The inlet pipe may be taken down a depth of 90 cm. from the top as an anti-mosquito measure; and*
- (h) *When the disposal of septic tank effluent is to a dispersion trench, the dispersion trench shall be 50 to 100 cm. deep and 30 to 100 cm. wide excavated to a slight gradient and shall be provided with 15 to 25 cm. of washed gravel or crushed stones. Open jointed pipes placed inside the trench shall be made of unglazed earthenware clay or concrete and shall have minimum internal diameter of 75 to 100 mm. Each dispersion trench should not be longer than 30 m. and trenches should not be placed closer than 1 .8 m.*

27. Structural Design

- 27.1.** The structural design of buildings and safety of structure shall be to the satisfaction of the Authority. All buildings more than 2 storeys and non-masonry and non-timber buildings shall be designed in accordance with Part VI Structural Design of National Building Code of India 1970.
- 27.2.** The thickness of masonry walls for residential, educational, business and other buildings with loading from 200 to 400 kg/m for various combinations of masonry units and mortar used, storey heights, spans, percentage of opening and as applicable to internal and external walls shall be as given in Appendix K.

28. Conformity to National Building Code

- 28.1.** Any aspects not covered in the bye-laws or in particular the planning, design and construction of the buildings and its appurtenant services shall be done to the satisfaction of the Authority. The National Building Code of India 1970 shall be the reference document for conformity regarding the various aspects. The latest version to the National Building Code shall be referred at the time of enforcement of the Bye-laws.
- 28.2.** The Director of Town Planning may permit special relaxation to any of the Bye-laws, provided the relaxation sought does not violate the health safety, fire safety and structural safety, public safety of the inhabitants and the building and neighborhood.
- 28.3.** Alternative Materials and Methods of Design and Construction.
 - 28.3.1.** *The provisions of the Bye-laws are not intended to prevent the use of any material or method of design on construction not specifically prescribed by the Bye-laws provided any such alternative has been approved.*

28.3.2. The Authority may approve any such alternative provided it is found that the proposed alternative is satisfactory and conforms to the provisions of relevant parts regarding material, design and construction and that material, method or work offered is, for the purpose intended at least equivalent to that prescribed in the Bye-laws in quality, strength compatibility, effectiveness, fire and water resistance durability and safety.

28.3.3. The provisions of the Bye-laws are also not intended to prevent the adoption of schemes for architectural planning and layout conceived as an integrated development scheme.

APPENDIX A (Bye-law No. 4.1)

Form for Application for Development Work, to erect, re-erect or to make alteration in any place in a building (on Rs. 0.20 Stamp)

To
The Authority,
-----*----- Municipal Council,
Maharashtra

Sir,
I hereby give notice that I intend to carry out development/to erect, re-erect or to make alteration in the building No. _____ or to _____ on/in Plot No. _____ Revenue No./CTS/No. _____ situated in Road/ Street. Town No. _____ and in accordance with the building Bye-laws of Municipal Council, Bye-law No. 4.1 and I forward herewith the following plans and specifications in triplicate duly signed by me and. the qualified _____ (Name in block letters)

Architect/Engineer/Supervisor who will supervise its erection.

- 1. Ownership Title
- 2. Building Permit Fee Challan.
- 3. Site Plan.
- ** 4. Sub-division Layout Plan.
- ** 5. Building Plan.
- 6. Specifications, General and Detailed.

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

Date _____ Signature of Owner
Name of Owner _____
(in block letters)
Address of Owner _____

* Name of Town.
** Depending on development work for land sub-division or building work.
*** Permission shall not be accorded for non-payment of municipal dues.

APPENDIX B

[Bye-law No. 5.1 (g)] Form for Supervision

To
The Authority,
-----*----- Municipal Council,
Maharashtra

Sir,

I hereby certify that the development work/erection, re-erection, re-erection or material alteration in/or building No. on/in Plot No. C. T. S. No. situated in Colony. Road/Street. Town No. shall be carried out under my supervision and I certify that all the materials (type and grade) and the workmanship of the work shall be generally in accordance with the general and detailed specifications submitted along with, and that the work shall be carried out according to the sanctioned plans.

Signature of Architect/Engineer/Supervisor
Name of Architect/Engineer/Supervisor
(in block letters)

License No.
Address of Architect/Engineer/Supervisor

Date

APPENDIX C

(Bye-law No. 6.1)

Qualification of Technical Personnel for Preparation of Schemes for Building Permit and Supervision

C-I. GENERAL

C-1.1. The qualifications of the technical personnel and their competence to carry out. different jobs for building permit and supervision shall be as given in C-2 to C:4.

C-2. ARCHITECT

C-2.1. Qualifications.-The qualifications of Architect will be the Associate Membership of the Indian Institute of Architects or such Degree or Diploma which makes him eligible for such membership or for registration under the Council of Architecture as Architect under Schedule XIV of the Architects Act, 1972 and shall be registered with the Council of Architecture as per Architect Act, 1972.

C-3. ENGINEER.

C-3.1. Qualifications.-The qualifications of Engineer will be the Corporate Membership (Civil) of the Institution of Engineers or such Degree or Diploma in Civil or Structural Engineering which makes him eligible for such membership.

C-4. SUPERVISOR

C-4.1. Qualifications:-The qualification of Supervisor will be Diploma in Civil Engineering Architectural Assistantship or Draftsmanship with an experience of not less than 3 years in preparation of plans, designs and construction of building.

C-5. COMPETENCE OF WORK FOR MAJOR BUILDINGS

C-5.1. In buildings above 3 storeys in height and on plots above 500 sq. m. an architect or engineer shall only be competent to sign the plans, carry out supervision and give the completion certificate. For Building of smaller sizes, architects, engineers and supervisors shall be competent to carry out the different work identified above.

C-6. LICENSING

C-6.1. *Technical Personnel to be license d.-* The qualified technical personnel shall be licensed with the Authority and the license shall be valid for one calendar year ending on the 31st day of December after which it shall be renewed annually;

Provided that a registered architect shall not be required to pay the licensing fee as above.

C-6.2. Licensing Fees:-The fees for licensing shall be as follows:-

Serial No.	Category of technical Personnel	Annual Licensing Fees (Rs.)
(i) Licensed Architect/Engineer	25
(ii) Licensed Supervisor	15

“Provided that a registered Architect shall not be required to pay the licensing fee as above “.

Provided that an Architect duly registered with the Council of Architecture constituted under the Architect’s Act 1972 (20 of 1972) shall not be required to pay any licensing fee.

APPENDIX D
(Bye-law No. 10.1)
Form for sanction or refusal of permit

From
 The Authority,
 -----*----- Municipal Council,
 Maharashtra

To,

Sir,
 With reference to your application..... dated for of license for the development work/erection, re-erection making alteration in any place in a co on/in Plot No. C.T.S. No. situated in Road/Street..... No. I have to inform you that the sanction has been refused by the authority on the following conditions/ground

- 1) Minimum two trees in plots 200 sq. m. and such number of trees at the rate of one per 100 sq.m. for plots more than 200 sq. m. in area shall be planted and protected.
- (2) In case of group housing, minimum two trees per tenement shall be planted and protected.
- (3)
- (4)

Office (Communication) No. Signature of the Authority.....
 Office Stamp Name, Designation and
 Address of the Authority.....

* Name of the Town.

APPENDIX E
(Bye-law No. 13.1)
Form for completion certificate

To
The Authority,
-----*----- Municipal Council,
Maharashtra

Sir,
I hereby certify that the development work/erection, re-erection or material alteration in/of building/part building No. on/in Plot No. C.T.S. No. situated in Colony.. . . . Road/Street Town No. has been supervised by me and has been completed on according to the plans sanctioned, *vide* No. dated. The work has been completed to my best satisfaction, the workmanship and all the materials (type and grade) have been used strictly in accordance with general and detailed specifications. No provisions of the Building Bye-laws, no requisitions made, conditions prescribed or orders issued there under have been transgressed in the course of the work. The building is fit for use for which it has been erected, re-erected or altered, constructed and enlarged. I request that the occupancy certificate for the premises may be issued.

Signature of Architect/Engineer/Supervisor
Name of Architect/Engineer/Supervisor
License No.
Address of Architect/Engineer/Supervisor
Date

APPENDIX F
(Bye-law No. 14.1)
Form for occupancy certificate

From
The Authority,
-----*----- Municipal Council,
Maharashtra

To,
.....
.....
.....

Sir,
This is to certify that the development work/erection/re-erection or alteration in/or building/ part of building..... or the..... C.T.S. No. in Colony/ Road/Street .Town No. completed Name of the Town. under the supervision of Supervisor is permitted to be occupied / is not permitted to be occupied on the following grounds.

- (1)
- (2)
- (3)
- (4)

Office (Communication) No. Signature of the Authority.....
Office Stamp Name, Designation and
Date Address of the Authority.....

APPENDIX G
(Bye-law No. 20.1)

Land use classification and various building occupancies/uses permitted

G-1 RESIDENTIAL ZONE RI *(Purely Residential)

Sr. No	Permissible
1	Any residences.
2	Customary Home Occupation i.e. Occupation conducted only by persons residing in the dwelling, the area for such use not exceeding 25 per cent of the total floor area of the dwelling of 20 sq. m. whichever is less and without any public display of goods.
3	Primary and Nursery Schools.
4	Religious Buildings.
5	Parks, Playgrounds, Nurseries, Green houses.
6	Swimming Pools and Gymnasiums.
7	Medical and Dental Practitioners Clinics and Dispensaries.
8	Camping Grounds organised by recognised agencies.
9	Petty convenience shops for domestic needs of upto 60 sq. m. in area and facing road width not less than 6 m.
10	Ration shops, not exceeding 15 sq. m. area.
11	Police Chowki, Civil Defence Office, Home Guards Office and other offices serving the local area not exceeding 15 sq. m. area.
12	Stables for domestic cattle upto 2 animal per plot.
13	Public Conveyances.

G-2. RESIDENTIAL ZONE R2 * (all plots in residential zone on roads more than 9 m. in and 12 m. or more in outside area).

Sr. No.	Permissible
1.	Educational buildings including hostel, provided that workshops and laboratories and such users attached to such institutions if they are likely to cause any nuisance shall be set back at least 12 meters from the plot boundary. Institution classes provided they are in accordance with regulations for educational buildings.
2.	Social and sports clubs and Cultural Buildings, marriage halls, subject to regulations for Assembly buildings (Cinema Theatre).
3.	Libraries, Art Galleries, Museums, Aquaria.

.C. Class Municipality RI and ~ uses could be permitted in the Common Residential Zone R. C~
Oass Municipality, RI and R2 uses would be permitted in the Common Residential Zone R~.

Sr. No.	Permissible
4.	Group Medical Centers (Polyclinics) other Medical and Public Health users, provided they are located on roads having a width of 12 m. or more but only on Ground Floor of a building and on a first floor level where building is on stilts.
5.	Professional offices and studies of residents of the premises and incidental to such residential use, not occupying a floor area exceeding 20 sq. m.
6.	Research, experimental and testing laboratories not involving any danger of fire or explosion not of any obnoxious nature.
7.	Bus Stations in sites selected with the approval of the Divisional Deputy Director of Town Planning.
8.	Cinema theatres in accordance with prevailing regulations.
9.	Holiday homes and Dharmashalas.
10.	Police station, Telephone exchanges, Post Offices, Government and municipal offices, branch offices of banks, electric sub-stations, pumping stations and fire stations.
11.	Poultry keeping for domestic use subject to a limit of 20 birds. Poultry farms if the plot size is more than 0.8 Ha. minimum, the number of birds is restricted at the rate of 0.25 sq. m. per bird and a minimum marginal distance of 9 m. is maintained. Domestic cattle not more than 2 in number in a separate stable structure.
12.	Broadcasting studios.
13.	Service Industries Class "A" commercial uses as per lists, which are located on 'commercial streets'. For the purpose of these users a commercial street shall be deemed to be a road with a width of more than 12 m. in the case.
14.	Banks.
15.	Restaurants and their Accessory uses.
16.	Hair dressing saloons and beauty parlors.
17.	Photo and picture framing.
18.	Apparel (cap making, hat and turban making etc.)
19.	Residential hotels.
20.	All uses in R1, without restriction of area.
21.	Retail shops including Departmental stores.
22.	Taxi and Scooter Stands.
23.	Wholesale shops including storage upto 50 sq. m. in area.
24.	Grain godowns.
25.	Auto supply stores and Showrooms for motor vehicles and machinery.
26.	Sales of used or second hand goods or merchandise.
27.	Club houses or other recreational activities conducted as business.
28.	Storage of furniture, household goods and coal fire wood subject to safety considerations.
29.	Retailing of building material open or enclosed with not more than 50 sq. m. per establishment and photographic studio and laboratory.
30.	Repair, cleaning, painting of motor vehicles with no floor above and repairing area segregated.
31.	Storage and sale of kerosene not exceeding 1,000 litres in grossery and approved ration shops.
31.A	Storage and sale of kerosene not exceeding 1,000 litres in grocery and approved ration shop on retail basis.
31.B	Bulk Storage and sale of kerosene not exceeding 13,600 litres in a separate godown in an independent plot conforming to the existing regulations of Chief Controller of explosives, Government of India, provided further that the applicant shall make adequate fire fighting arrangements at his cost in his plot to the entire satisfaction of the planning authority.
32.	Storage and sale of liquefied petroleum gas in cylinders not exceeding 100 kg. in show rooms/distribution centre

Sr. No.	Permissible
33	Storage and sale of liquefied petroleum gas in cylinders not exceeding 6,300 kg. in a separate godown conforming to the existing regulations of Chief Controller of Explosives, Government of India, provided further that the applicant shall make adequate fire fighting arrangements at his cost in his plot to the entire satisfaction of the Planning Authority.
34.	Electronic industry of assembly type (and not manufacturing type) with special permission of the Chief Officer with following restrictions:- (1) Restricted on ground floor only with area not exceeding 50 sq. m. (2) Total electric power inclusive of motive power and heating load not exceeding 5 H.P. (3) Number of persons employed not exceeding nine.

Note 1.-Uses under the following Serial Nos. shall be developed on part of residential building with shopping line on ground floor facing road width of 12 m. In the case of gaothan areas the width of road could be 9 m. The area of the shop shall be restricted to 50 sq. m. with maximum width of 7.5 m.:-

Note 2.-Uses under the following Serial Nos. shall be developed in independent building with no limitation on upper floor development for the same areas:-

Note 3.-The uses from Item Nos. xxiii and xxv to xxxiv shall be permitted on plots facing widths of road more than 15 m.

G-3. AGRICULTURAL PRODUCE MARKETING COMMITTEE ZONE*

Sr. No.	Permissible
(i)	Whole-sale Commercial Trading.
(ii)	Storage, Sale, Distribution of Commodities Regulated by AP Marketing Committee.
(iii)	Warehouses, Godowns.
(iv)	Municipal Markets for vegetables and other edible items.
(v)	Timber Depots.
(vi)	Saw Mills.

G-4. SERVICE INDUSTRIES I₁ **

G-4.1. Service Industries Class 'A' is permitted under R Zone and Service Industries, Class 'B' is permitted in Industries Zone I. The limitation to area permitted, maximum number of persons to be employed, maximum permissible power requirement and special conditions for Class 'A' Service Industries are given in the schedule. The corresponding limitations for 'B' service industries shall be decided by the Authority in consultation with the Director of Town Planning based on the Building Bye-laws and Development Control Rules for 'A' Class Municipal Councils.

-
- Application to 'B' and 'C' Class Municipalities.
 - **Applicable to 'B' Class Municipalities.

Schedule for Service Industries

Serial No.	Category of Industry	Service Industry Class-A (Permitted in R-2)			
		Criteria for Classification and Special Conditions			
		Max. permissible power requirement (in H.P.)	Max. permissible employment (in persons)	Max. permissible floor area (in sq. m.)	Special conditions, if any
(1)	(2)	(3)	(4)	(5)	(6)
I. FOOD PRODUCTS					
1	Preservation of meat; canning preserving and processing of fish, crustaceans and similar foods.			NOT INCLUDED	
2	Manufacture of milk and dairy products such as butter, ghee, etc.	10	9	50	
3	Canning and preservation of fruits and vegetable including production of jam, jelly, sauce, etc.			NOT INCLUDED	
4	(a) Rice huller,	10	9	50	
	(b) Groundnut decortications	10	9	50	
	(c) Grain mill for production of flour	10	9	50	
	(d) Manufacture of supari and masala grinding (in separate building).	10	9	50	
	(e) Baby oil expellers	10	9	50	
5	Manufacture of bakery products with no floor above.	10	9	50	(i) shall not be permitted under or adjoining a dwelling unit. (ii) operation shall be permitted only between 800h and 2000 h. (iii) Fuel used shall be electricity, gas or smokeless coal.
6	Manufacture of cocoa, chocolate, sugar, confectionary.			NOT INCLUDED	
7	Coffee curing, roasting and grinding	2	9	50	
8	Cashewnut processing like drying, shelling, roasting, salting, etc.			NOT INCLUDED	
9	Manufacture of ice			NOT INCLUDED	
10	Sugarcane and fruit juice crushers	2	9	25	
II. BEVERAGES AND TOBACCO					
11	Manufacture of soft drinks and carbonated water.			NOT INCLUDED	
12	Manufacture of bidi			NOT INCLUDED	
III. TEXTILE AND TEXTILE PRODUCTS					
13	Handloom/ power loom subject to a maximum of 4 looms.	5	9	50	
14	Printing, dyeing and bleaching of cotton, woolen and silk textiles.			NOT INCLUDED	
15	Embroidery and making of crape laces and fringes. -	5	9	50	
16	Manufacture of all types of textiles, garments including wearing apparel.			NOT INCLUDED	
17	Manufacture of made up textile goods such as curtains, mosquito nets, mattresses, bedding material, pillow cases, textile bags, etc.			NOT INCLUDED	

Schedule for Service industries continued.

Serial No.	Category of Industry	Service Industry Class-A (Permitted in R-2)			Special conditions, if any
		Criteria for Classification and Special Conditions			
		Max. permissible power requirement (in H.P.)	Max. permissible employment (in persons)	Max. permissible floor area (in sq. m.)	
IV. WOOD PRODUCTS AND FURNITURE					
18	Manufacture of wooden and cane boxes and packing cases.			NOT INCLUDED	
19	Manufacture of structural wooden goods such as beams, posts, doors and windows.			NOT INCLUDED	
20	Manufacture of wooden furniture and fixtures	No power to be used.	9	50	(i) shall not be permitted under or adjoining a dwelling unit. (ii) operation shall be permitted only between 800h and 2000h.
21	Manufacture of bamboo and cane furniture and fixtures.	No power to be used.			
22	Manufacture of wooden produce such as utensils, toys, artwares, etc.			NOT INCLUDED	
V. PAPER PRODUCTS AND PRINTING PUBLISHING					
23	Manufacture of containers and boxes of paper, paper board, paper pulp.			NOT INCLUDED	
24	Printing and publishing of newspaper			NOT INCLUDED	
25	Printing and publishing of periodicals, books, journals, atlases, maps, envelope, printing picture, postcard, embossing.	5	9	50	(i) shall not be permitted under or adjoining a dwelling unit. (ii) operation shall be permitted only between 800h. And 2000 h. (iii) no restrictions of power, number of employees, area or hours of operation shall apply if located in a building in separate plot not less than 500 sq. m. and if special permission of the Council is obtained.
26	Engraving, etching, block making etc.	5	9	50	Operation shall be Permitted only between 800h. and 2000h.
27	Book binding	5	9	50	
VI. LEATHER PRODUCTS					
28	Manufacture of leather footwear			NOT INCLUDED	
29	Manufacture of wearing apparel like coats, gloves, etc.			NOT INCLUDED	
30	Manufacture of leather consumer goods such as upholstery, suitcases, pocket books, cigarette and key cases, purses, etc			NOT INCLUDED	
31	Repair of footwear and other leather goods	No power to be used.	9	50	

Schedule for Service industries continued.

Serial No.	Category of Industry	Service Industry Class-A (Permitted in R-2 Criteria for Classification and Special Conditions			
		Max. permissible power requirement (in H.P.)	Max. permissible employment (in persons)	Max. permissible floor area (in sq. m.)	Special conditions, if any
(1)	(2)	(3)	(4)	(5)	(6)
	VII. RUBBER AND PLASTIC PRODUCTS				
32	Rethreading and vulcanizing works			NOT INCLUDED	
33	Manufacture of balloons rubber and plastic toys.			NOT INCLUDED	
	VIII. NON-METALIC MINERAL PRODUCTS				
34	Manufacture of structural stone goods, stone dressing, stone crushing and polishing.			NOT INCLUDED	
35	Manufacture of earthen and plaster slates and images, toys and artwares.			NOT INCLUDED	
36	Manufacture of cement concrete building components, concrete jallies, septic tank, plaster of paris work, lime mortar etc.				
	IX. METAL PRODUCTS				
37	Manufacture of furniture and fixtures, primarily of metal.			NOT INCLUDED	
38	Bating and polishing of metal products. .			NOT INCLUDED	
39	Manufacture of metal building components such as grills, gates, doors and window frames, water tanks, wire nets, etc.			NOT INCLUDED	
40	Manufacture and repair of sundry ferrous engineering products done by jobbing concerns such as mechanical workshops with lathes, drills, grinders, welding equipment etc.			NOT INCLUDED	
41	Tools sharpening and razer sharpening works.	No power to be used.	6	NOT INCLUDED	
	X. ELECTRICAL GOODS				
42	(a) Repair of refrigerators, air conditioners, washing machines, electric cooking ranges, motor rewinding works etc.			NOT INCLUDED	
	(b) Repair of other household electrical appliances such as radio set, television set, tape recorders, heaters.			NOT INCLUDED	
	XI. TRANSPORT EQUIPMENT				
43	Manufacturing of push cart, hand cart etc.			NOT INCLUDED	
44	(a) Servicing of motor vehicles and motor cycles with no floor above.	10	9	50	
	(b) Repair of motor vehicles for motor cycles with no floor above.	10	9	50	
	(c) Battery charging and repair	5	6	25	
45	Repair of bicycles and cycles rickshaws..	5	6	50	

Schedule for Service industries continued.

Serial No.	Category of Industry	Service Industry Class-A (Permitted in R-2)			
		Criteria for Classification and Special Conditions			
		Max. permissible power requirement (in H.P.)	Max. permissible employment (in persons)	Max. permissible floor area (in sq. m.)	Special conditions, if any
(1)	(2)	(3)	(4)	(5)	(6)
	XII. OTHER MANUFACTURING AND REPAIR INDUSTRIES AND SERVICES				
46	Manufacture of jewellery and related articles.	No power to be used.	9	50	Operation shall be permitted only between 800h. and 2000 h.
47	Repair of watch, clock and jewellery	No power to be used.	6	50	Operation shall be permitted only between 800h. and 2000 h.
48	Manufacture of sports and athletic goods			NOT INCLUDED	
49	Manufacture of musical instruments and its repair.	No power to be used.	6	50	Operation shall be permitted only between 800h. and 2000 h.
50	Manufacture of miscellaneous products such as costume jewellery, costume novelties, feather, plumes, artificial flowers, brooms, brushes, lamp shades, tobacco pipes, cigarette holders, ivory goods, badges, wigs and similar articles.			NOT INCLUDED	
51	(a) Repairs of locks, stoves, umbrellas, sewing machines, gas burners, buckets and other sundry house-hold equipment. (b) Optical glass grinding and repairs	No power to be used. No power to be used.	6 6	50 50	Operation shall be permitted only between 800h and 2000h. Operation shall be permitted only between 800h and 2000h.
52	Manufacture of gas work and distribution	10	9		
53	Petrol filling stations	10	9	(i) 30.5 m x 16.75 m (ii) 36.5 m x 30.5 m	Plot size to be in line with IRC recommendations on service bay or not.
54	Laundries, laundry services and cleaning, dyeing, bleaching and dry cleaning.	5	9	50	(i) Cleaning and dyeing fluid used shall not have flash point lower than 138° F. (ii) Operation shall be permitted only between 800h. to 2000h. (iii) Machinery having dry load capacity of 20 kg. and above.
55	Photo processing laboratories	5	9	50	Operation shall be permitted only between 800h. to 2000h.
56	Electronic industry of assembly type (and not of manufacturing type).	10 (including heating load)	20	250	In independent structure on independent plot with special permission Chief Officer.

Note.-The Municipality may from time to time add to alter or amend the above list in consultation with Director of Town Planning.

G-5. INDUSTRIAL ZONE, J*

G-5.1. The permissible service (Class B), light extensive, heavy, large, hazardous and obnoxious industries in Industrial Zone I, shall be as decided by the Authority in consultation with the Director of Town Planning based on the provisions of Building Bye-laws and Development Control Rules for 'A' Class Municipal Councils.

G-6. No DEVELOPMENT ZONE

G-6.1. The following work shall be permitted in the No Development Zone:-

- (1) Any use or development of land connected with the carrying out of agricultural and allied operations including horticulture poultry keeping dairy farms cattle raising piggeries agricultural research and agricultural education.
- (2) Nurseries
- (3) Forestry
- (4) Golf links race tracks and allied buildings
- (5) Public parks private parks playgrounds, summer camp~, and camping ground organised by recognised agencies.
- (6) Storage and drying of fertilisers (outside municipal limits)
- (7) Construction of buildings including quarters of essential staff for public utility concerns such as electric sub-stations, receiving stations, chilling plants, water works, sewage disposal works.
- (8) Poultry and Cattle farm.

G-7. RESERVATIONS*,

G-7.1. Special reservations shall be made for the following uses given below as these do not fall under G-1 to G-6.

- (1) Airports
- (2) Radio stations
- (3) Television stations
- (4) Micro-wave stations
- (5) Cemeteries, crematoria
- (6) Quarrying works except for the development of area itself
- (7) Hospitals for contagious diseases, T.B. clinics
- (8) Lunatic asylum
- (9) Sewage disposal works
- (10) Bus terminals and depots
- (11) Slaughter houses.

*(12) Sites for such other purposes which are considered necessary as an amenity to facility for the residents of the town or as required by any State or Central Government Department or a public authority or statutory authority for more efficiently carrying out its duties and purposes.

APPENDIX H
(Bye-law No. 22.11.1)

Cities/Towns in the districts' of Maharashtra with representative climates and standards
for lighting and ventilation

Area of openings to be provided for light and ventilation *in* different Cities and Towns of
the following District of Maharashtra:-

Dry Hot Climate 1/10th of floor area of room	Neither Dry Hot Nor Wet Hot Climate 1/8th of floor area of room	Wet Hot Climate 1/6th of floor area of room
Dhule	Nashik	Thane
Ahmadnagar	Pune	Raigad
Jalgaon	Satara	Ratnagiri
Solapur	Kolhapur	
Sangli		
Aurangabad		
Jalna		
Nanded		
Parbhani		
Osmanabad		
Latur		
Beed		
Akola		
Buldana		
Amravati		
Yavatmal		
Nagpur		
Wardha		
Chandrapur		
Gadchiroli		
Bhandara		

APPENDIX J
{Bye-law No. 24.2}

Additional Five protection requirements for Special Occupancy Buildings

J-1. GENERAL

J-1.1. In addition to the provisions of Part-IV Fire Protection of National Building Code of India, the competent fire authority as approved by the Fire Adviser to the Government of Maharashtra may insist on suitable provisions *in* buildings from fire safety and fire fighting point of view depending on the occupancy as specified in Bye-law No. J-2.1.

For these buildings additional information regarding fire protection provisions shall be indicated on Building Plan [See Bye-law No. 5.1](e) as desired by the Authority.

J-1.2. It is presumed that 'B' and 'C' Municipal Councils will not normally have build-ing of 15 m and above. In case there be any such buildings constructed or any occupancy for which fire protection measures are not mentioned in this Appendix the provisions made under Appendix 'P' of the Building Bye-laws for 'A' Class Municipal Councils shall apply.

J-2. OCCUPANCY

J-2.1. The provisions made under this Appendix shall apply to the occupancies mentioned below:-

- (1) Residential buildings of 15 m and above in height;
- (2) Institutional buildings;
- (3) Assembly buildings;

- (4) Industrial buildings;
- (5) Storage buildings;
- (6) Hazardous buildings; and
- (7) Mixed occupancies using 500 sq. m. or more area for any of the above occupancies at Serial Nos. 2, 3 and 4 in residential buildings.

1-3. MEANS OF ACCESS

- J-3.1. In the case of special buildings identified on Bye-law No. 20.4 the following additional conditions for means of access to the plot and around buildings shall be ensured;
- (i) 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 10.0 m radius.
 - (ii) The approach to the building and open spaces on its all side8 upto 6 m width and the layout for the same shall be done in consultation with competent Fire Authority as approved by Fire Advisor to Government of Maharashtra and the same shall be of hard surface capable of taking the weight of fire engine, weighing upto 18 tones. The said open space shall be kept free of obstructions and shall be motorable.
 - (iii) Main entrances to the plot shall be of adequate width to allow easy access to the fire engine and in no case it shall measure less than 4.5 metres. The entrance gate shall fold back against the compound wall of the 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 4.5 m.
 - (iv) For multistoreyed group housing schemes on one plot, the approach road shall be minimum 9 m in width and between individual buildings, there shall be a minimum space of 6 m width.

J-4 CONSTRUCTION

J-4.1. Building Materials

J-4.1.1. Load bearing elements of construction and elements of construction for which the required fire resistance *is* one hour or more shall be of non-combustible material. Interior finish materials (wall-paneling, floors coverings etc.) may be permitted of materials having their rating for flame spread and smoke developed not exceeding a very low flame spread limit in accordance with IS: 1642-1960 (Class I). Ceiling linings shall be of non-combustible or of plasterboard.

J-4.1.2. Stairs and corridors shall not be constructed of ordinarily combustible materials, throughout.

J-4.2. Structural members such as supports and load bearing walls shall have fire resistance rating of 2 hours, transoms and ceilings 2 hours to 4 hours.

J-4.3. Internal walls and partitions (Fire Sections) walls separating corridors from areas of floor that are used for any purpose other than circulation shall have a fire resistance of not less than two hours. There shall be no openings in such walls other than for doors or delivery hatches *with* fire resistance not less than half an hour to one hour.

J-4.4. Facades shall consist of non-combustible building material. The vertical clearance between sill level and the lintel level below shall be not less than 0.9 m.

J-5 STAIR CASE ENCLOSURES

- J-5.1.** The internal enclosing walls of staircase shall be of bricks or R.C.C. construction having fire resistance of not less than two hours. All enclosed staircases shall have access through self-closing doors of at least half hour fire resistances. These shall be single swing doors opening in the direction of the e8cape. The door shall be fitted with check action door closers.
- J-5.2.** The staircase enclosure on external wall of the building shall be ventilated to atmosphere at each landing.
- J-5.3.** Permanent vent at the top equal to 5 % of the cross sectional area of the enclosure I and openable meshes at each floor level with area equal to .15 % of the cross sectional area of the enclosure of the external wall shall be provided. The roof of the shaft shall be at least 1 m. above the surrounding roof. There shall be no glazing or glass bricks in any internal enclosing wall of a staircase.

J-5.4. Lifts shall not normally communicate with the basement. However, one of the lifts may be permitted to reach the basement levels provided the lift lobby at each basement level is separated from the rest of the basement areas.

J-6 BASEMENT

J-6.1. Basement shall be separately ventilated. Vents with cross sectional area (aggregate) not less than 2.5 % of the floor area spread evenly round the perimeter of the basement shall be provided in the form of grills or breakable stall boards lights or pavement light or by way of shafts.

J-6.2. *The basement shall have the following requirements:-*

- (i) every basement shall be in every part at least 2.4 m. in height from the floor to the underside of the roof slab or ceiling.
- (ii) adequate ventilation shall be provided for the basement with a ventilation area not less than 2.5 per cent of the area of the basement.
- (iii) only one basement shall be permitted.
- (iv) 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.
- (v) adequate arrangements shall be made such that surface drainage does not enter the basement.
- (vi) 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; and
- (vii) 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 (v).
- (viii) Basement, shall be permitted only for business buildings (banks) strong room bank cellars.

J.7 COMPARTMENTATION

J-7.1. If the un-compartmented floor space on a floor exceeds 750 sq. m., it shall be separated with each compartment not exceeding 750 sq. m. by means of fire walls of not less than two hours fire resistance.

J-8 SERVICE DUCTS

J-8.1. Service ducts for electrical conduits, cables, etc., shall be enclosed by walls having a fire resistance of not less than two hours. Doors for inspection or access shall also have fire resistance of not less than two hours.

J-8.2. If the cross sectional area exceeds 1 sq. m. it shall be sealed where it passes a floor by carrying the floor through the duct. The floor within the duct shall be pierced for any service pipe or ventilation trunk and shall fit as closely as possible around any such pipe or trunk.

J-8.3. A permanent vent shall be provided at the top of the service shaft of cross sectional area not less than 460 sq. cm. or 6.25 sq. m. for each 900 sq. cm. of the area of the shaft which-ever is more.

J-9. BUILDINGS SERVICES

J-9.1. Electrical Services-

- (a) Water mains, telephone lines, inter-com- lines, gas pipes or any other service line shall not be laid in the duct for electric cables.
- (b) The inspection panel doors and any other opening in the shaft shall be provided with air tight fire doors having the fire resistance not less than two hours.
- (c) Medium and low voltage wiring running in shafts, and within false ceiling shall run in metal conduit.

J-9.2 Town Gas L.P. Gas Supply Pipes.- Where gas pipes are in the building the same shall be run in separate shafts exclusively for the purpose and this shall be on external walls, away from the staircases. There shall be no inter-connection of these shafts with the rest of the building.

J-9.3. Staircase and Corridor Lightings :

- a) The staircase and corridor lighting shall be on separate circuits,
- b) Emergency light shall be provided in the staircase/ corridor, in case of Assembly and Institutional Buildings only.

J-9.4. Transformers :

- a) When housed at ground floor level it / they shall be cut off from the other portion of building by fire resisting walls of 4 hours fire resistance.
- b) They shall not be housed on upper floors.
- c) A tank of RCC construction of capacity capable of accommodating entire oil of the transformers shall be provided at lower level to collect the oil from the catch - pit in case of emergency. The pipe connecting the catch - pit to the tank shall be non-consultable construction and shall be provided with a flame - arrester.

J-9.5. Air Conditioning :

- a) Escape routes like staircases, common corridors, lift lobbies etc., shall not be used as return air passage.
- b) The ducting shall be constructed for substantial gauge metal in accordance with IS: 655-1968(Revised).
- c) Where ever the ducts pass through fire walls or floors, the opening around the ducts shall be sealed with fire resisting material such as asbestos rope, vermiculite concretes, glass wool etc.
- d) As far as possible metallic ducts shall be used even for the return air instead of space above the false ceiling.
- e) The materials used for insulating the ducts system (inside or outside) shall be non - consultable material such as glass wool.etc.
- f) Area more than 750sq.m. on individual floor shall be segregated by a fire wall and automatic fire dampers for isolation shall be provided where the ducts pass through fire walls. The fire dampers shall be capable of operating manual
- g) Air ducts serving main floor areas, corridors etc. shall not through the stair well.
- h) The air handling units shall as far as possible be separate for each floor and air ducts for every floor shall be separate and in no way interconnected with the duct in of any other floor.
- i) If the air-handling units serve more than one floor, the recommendations given above shall be complied with in addition to the conditions given below.
- j) Proper arrangements by way of automatic fire dampers working or smoke detectors for isolating all ducting at every floor from the main riser shall be made.
- k) Automatic fire dampers shall be provided at the inlet or the fresh air duct and the return air duct of each compartment / shop on every floor.
- l) Automatic fire dampers shall be so arranged so as to close by gravity in the direction of the air movement and to remain tightly closed upon operation of a smoke detector.
- m) The air filters of the air-handling units shall be of non - consultable materials.
- n) The air handling unit room shall not be used for storage of any consultable materials.

J-10. PROVISION OF FIRST AID FIRE FIGHTING APPLIANCES

J-10.1. The first aid fire fighting equipments shall be provided on all floors including basements, occupied terraces, lift rooms in accordance with IS: 2217-1963 Recommendation for providing first-aid fire fighting arrangements in public building consultation with competent fire authority as approved by the fire advisor to the government of Maharashtra.

J.10.2 The fire fighting appliance shall be distributed over the building in accordance with IS:2190-1971 Code of practice for selection, installation and maintenance of portable first - aid fire appliances.

J-11. WATER SUPPLY FOR FIRE FIGHTING PURPOSE

J.11.1 Static Water Storage Tank

J.11.1.1 A satisfactory supplier of water for the purpose of fire fighting shall always be available in the form of underground static storage tank of 25000 liters capacity for all accompanies except Industrial, Storage and Hazardous accompanies , with shall have 50000 liters capacity. The static storage water supplier required for the above mentioned purpose should entirely be accessible to the fire engines of the local fire service. Provision of suitable number of man holes shall be made available for inspection, repairs and inspection of section, house etc. The covering slab shall be able to with stand the vehicular load of 12 tons.

J-11.1.2. To prevent stagnation of water in the static waters storage tank, the suction tank of the domestic water supply shall be fed only through an overflow arrangement to maintain the level there in at the minimum specified capacity and a baffle wall (as per figure given below) shall also be provided to the static water storage tank.

J.11.1.3 Any other source of static water supply of sufficient contity in the from of well, pond etc., in the close proximity not more than 100 m.away from the building may also permitted in lieu of the static stand in consultation with the competent fire authority.

J-11.2 Carban-di-oxied fire extinguishing system.-Fix CO fire extinguishing installation shall be provided as per IS: 6382-1971 code of practice for design and installation or fixed CO fire extinguishing system on premises where water or foam can not be used for fire extinguishments because of the special nature of the contents of the building/areas to be protected.

J-12. HOUSE KEEPING

J-12.1. To eliminate fire hazards a good house keeping inside the buildings and outside the building shall be strictly maintained by the occupants and / or the owner of the building.

J-13. FIRE DRILLS AND FIRE ORDERS.

J-13.1 Fire notice / orders shall be prepared to fulfill the requirements of the fire fighting and evacuation from the building in the event of fire and other insidance. The occupants shall be made thoroughly conversant with their action in the event of the emergency, by displaying fire notice at vantage points. Such notice should be displayed prominently in board lettering.

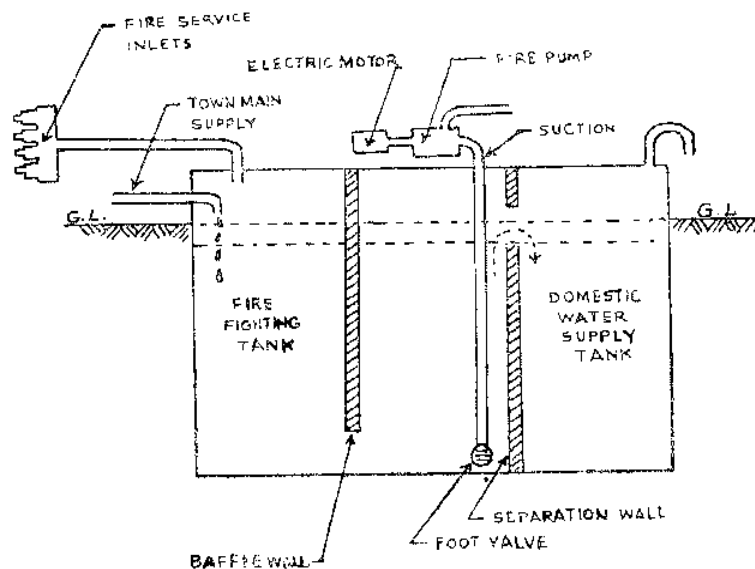


Fig ARRANGEMENT FOR PROVIDING COMBINED
FIRE FIGHTING & DOMESTIC WATER
STORAGE TANK AS PER BY-LAW
NO P-12.1.3

APPENDIX K.

(BY-LAW NO.21.2) NOMOGRAMS FOR Masonry walls

K-1. GENERAL

K-1.1. The thickness of masonry wall for residential building with Class 200 (200kg./m loading) Business (Office) buildings with Class 300 (300kg./m) and Class 400 (400 kg./m) percentage of openings and as applicable to internal and external walls shall be as given in the monograms given in Fig. 1A to Fig.1H.

K-2. PROCEDURE FOR MAKING USE OF NOMOGRAMS

K-2.1. Permissible Stresses.- The permissible compressive stresses recommended in Table apply to masonry walls consisting of squared units uilt to horizontal courses with broken vertical joints. The permissible compressive stress for masonry is given for any combination of the masonry unit of known crushing strength and mortars of known mix.

K-2.2. General.- Minimum Calculated Thickness of Walls

K-2.2.1 General.- The thickness of masonry walls for the following spans, store heights and opening, given by monograms (see Fig. 1), are worked out for three occupancies:-

Occupancy	Live Loading	Refer to Figure No.	Height of Rooms in M	Span of Rooms in m	Parentage of Opening
a) Residential buildings:	200kg. /m	1A and 1B	2.8 and 3.2	3.0,3.6and 4.2	0 to 50
b) Business (Office) building:	300kg. /m	1C, 1D and 1E	3.0,3.4 and		
c) Business (Office) Building:	400kg./m	1F, 1Gand 1H	3.8		

Table Basic Compressive for Masonry (at and after the stated times)

Sr. No.	Description of Mortar	Mix (parts by volume)					Basic stress in kg/cm corresponding to masonry unit with crushing strength kg/cm										
		Cement	Lime (see Note 5)	Lime puzzling Mixture(see note 6)	Pozz- lana	Hardenin sand time after completion of work(see note 7)	35	70	105	140	175	210	280	350	440		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	
(i) Cement	1	0-1/4C*	..	..	3	7	3.5	7.0	10.5	12.5	14.5	16.5	21.0	25.0	30.0	
(ii) Cement	1	1/2C*	..	..	4-1/2	14	3.5	7.0	10.0	11.5	13.0	14.5	17.5	21.0	25.0	
(iii) Cement-lime	1	1C	..	..	6	14	3.5	7.0	10.0	11.0	12.0	13.0	16.0	19	22.0	
(iv) Cement-lime	1	2B	..	..	9											
(v) Cement	1	..	..	..	6	14	3.5	5.5	8.5	10.0	11.0	12.0	14.5	16.5	19.0	
(vi) Lime-pozzolana mixture			1		1-1/2												
(vii) Cement-lime	1	3B or C	..	..	12	14	2.5	5.0	7.0	8.0	9.0	10.0	12.0	14.0	16.0	
(viii) Hydraulic lime		1A			2	14	2.5	5.0	7.0	8.0	9.0	10.0	12.0	14.0	16.0		
(ix) Lime pozzolana		1C		1	2												
(x) Lime		1B			3	28	2.5	4.0	5.5.	6.0	6.5	7.0	7.5	8.5	9.5		

*The inclusion of lime in cement mortars is optional.

Note 1.-This table is valid for slenderness ratio 6 and the loading with zero eccentricity.

Note 2.-Linear interpolation is permissible for units whose crushing strengths are intermediate between those given in the table.

Note 3.-It is advisable to use politicizes for cement mortars in order to improve properties of the mortar, such as flow and water retentively. Plasterers should be used according to manufacturer's instructions.

Note 4.-Masonry cement mortars are also advisable and shall be used according to manufacturer's instructions. The mix proportions of masonry cement, sand shall be such as to give comparable mortar crushing strengths with the cement: lime: sand mortar and cement: sand mortar of the particular grade.

Note 5.-Lime classification (classes A, B and C) and building lime shall conform to IS: 712-1973 specification for buildings lime (second Revision).

Note 6.-For mortar Serial No. (vi) lime-puzzling mixture shall be grade LP 40 conforming to IS: 4098-1967 specifications for lime-puzzling mixture.

Note 7.-These periods should be increased by full amount of any time during which the air temperature remains below 4.5 c plus half the amount of any lime during which the temperature is between 4.5 c and 10 c.

K-2.2.2.The thickness is calculated for the different strengths of masonry (brick and mortar) available in the country [see IS 1077-1976 specification for common burnt clay building bricks (third revision)].

K-2.2.3.Masonry thickness are calculated for building up to six stores in height both or interior and exterior walls.

K-2.3. Structure of the Monograms. - The monograms for thickness of brick wall consist of nine vertical lines. From left to right, the vertical lines represent the basic stress, stores, reference line 1, span point, reference line 2, percentage of opening on the thickness of walls for spans of 3.0, 3.6 and 4.2 m; details of which are given below:

(a) **Basic stress:-** The basic stress of masonry, depending on the crushing strength of masonry unit (brick) and mortar used is indicated on the first vertical line. Table gives the basic stress for known values of crushing strength of the masonry unit and the mortar used. Linear interpolation between the limits is permitted.

(b) **Stores:-** The second line lists the number of stores of the masonry building for which the thickness of brick wall are available. Masonry thickness are arrived at for buildings up to six stores in height. For use of monograms in the case of multistoried buildings, the wall thickness at each floor is found by passing the line through the number of stores above that section. For example, in a four-stored building the thickness of wall at the ground floor (floor 1) is found by passing the line through '4' on the stores line. Similarly, for floor 2, the line shall be passed through '3' on the stores line; for floor 3, the line shall pass through '2'.

(c) **Reference line 1:-** This reference line fixes a point on the line for any combination of values for basic stress and stores.

(d) **Span point:-** The fourth line has a span point, through which shall pass through for arriving at the thickness.

(e) **Reference line 2:-** This reference line also fixes a point on the line for any combination of values for basic stress and stores.

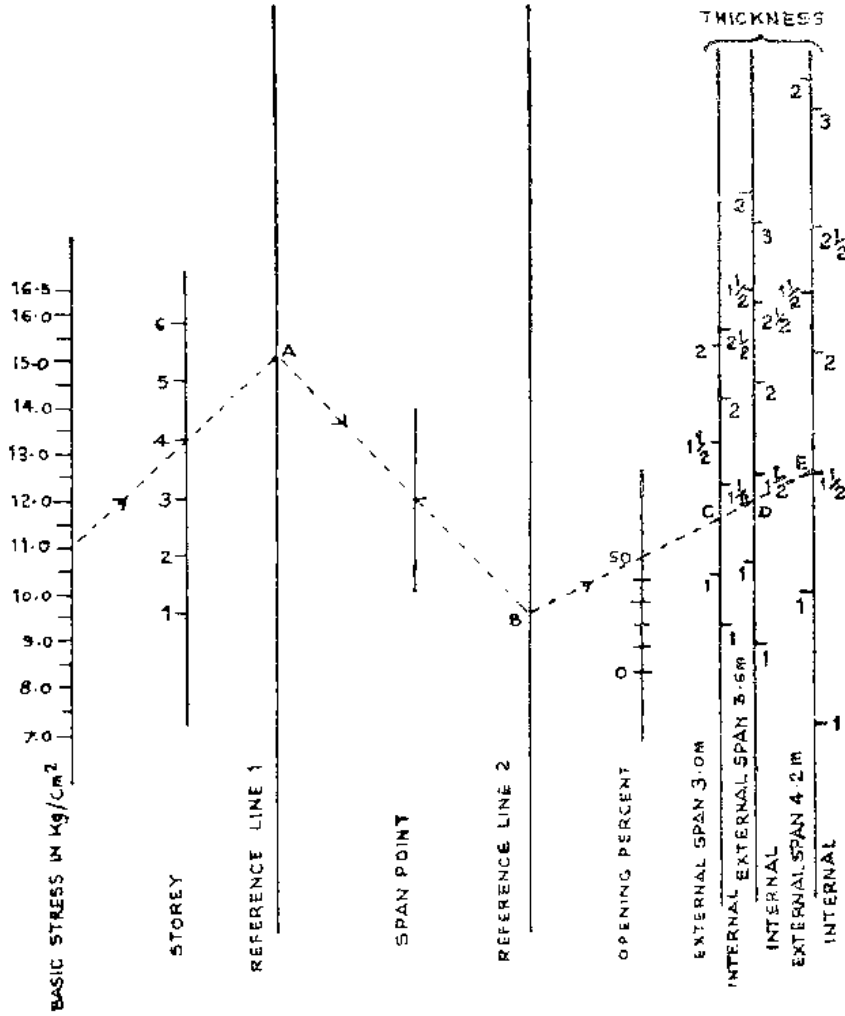
(f) **Percentage of openings:-** The openings provided on the walls for windows, ventilators, doors, shelves, etc., are taken care of in the monograms by this line. Window height is taken as 1.5 m. for calculations. Openings, which occupy up to 50 per cent of the area of wall under consideration, come under the purview of the monograms.

(g) **Thickness:-** The last three lines in any monograms give the thickness of brick wall for a particular loading and a store height. The three sets of thickness are for three spans of the rooms, namely, 3.0, 3.6 and 4.2 m. Thickness are indicated on both sides of the lines. The bold marking on the left side of the lines give the thickness for external walls and the dotted marking on the right side of the lines give the thickness for internal walls. Internal walls are analyzed as walls having spans on either side. The numbers 1, 1-1/2, 2 etc. on these lines indicate the (number of) brick thickness; for example, 1 indicates 1 brick thick. The calculations are valid for the common burnt clay building bricks conforming to IS: 1077-1976.

K-2.4. Procedure for Use. - The representative dotted lines given in fig. 1-A give the method of arriving at the wall at ground floor (floor 1) in a four-stored building for known parameters. The following procedure shall be followed for interpreting the monograms: -

In the example given in Fig. 1-A the dotted line starts from 11.0 on the 'Basic stress line' and connects with 4 on the 'Stores line', the extension of which cuts 'Reference line 1' at A. Point A is connected through 'Span Point' to cut 'Reference line 2' at B. Point B is joined with '50' on 'Opening-Percent line' which when extended intersects the 'Thickness lines' at C, D and E. The thickness of the wall shall be the value of the diving line, which appears immediately above the point of intersection on the 'Thickness line'. For example, in Fig. 1-A, for the points of intersection C, D and E the following thickness are obtained :-

Point	Span m.	Thickness (in Brick Thickness)	
		External	Internal
C	3.0	1-1/2	1-1/2
D	3.6	1-1/2	1-1/2
E	4.2	1-1/2	1-1/2

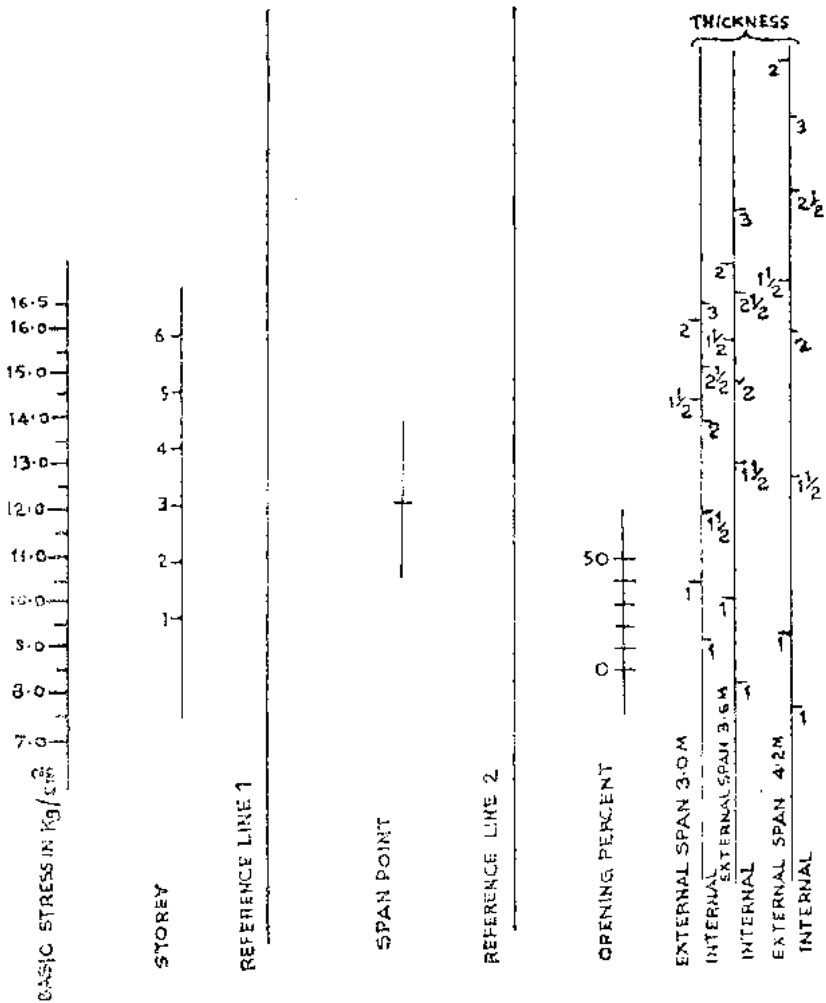


THIS NOMOGRAM IS VALID FOR THE FOLLOWING CONDITIONS

- i) BUILDINGS (RESIDENTIAL)
 - LIVE LOADING 200 Kg/m²
 - DEAD LOADING (ASSUMED) 415 Kg/m²
- ii) STOREY 2.8M

1A FOR RESIDENTIAL BUILDING (CLASS 200 LOADING) WITH 2.8M STOREY HEIGHT

FIG.1 NOMOGRAMS FOR THICKNESS OF BRICK WALLS

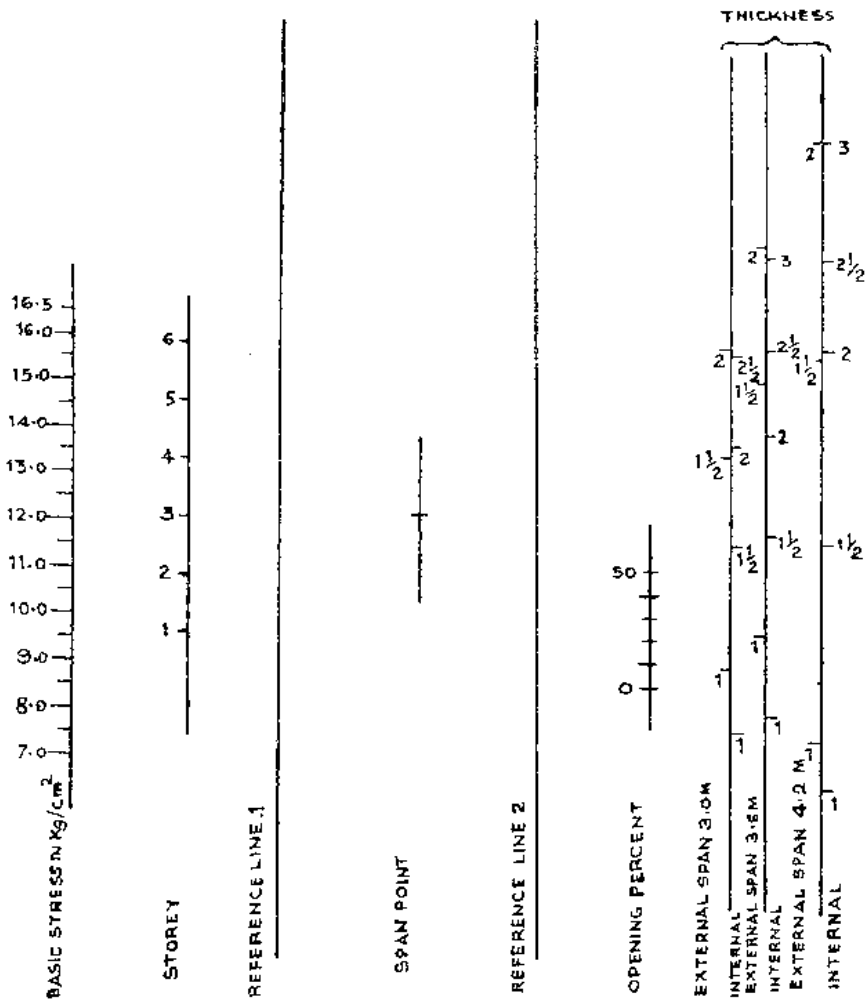


THIS NOMOGRAM IS VALID FOR THE FOLLOWING CONDITIONS

- i) BUILDING (RESIDENTIAL)
 - LIVE LOADING 200 Kg/M²
 - DEAD LOADING (ASSUMED) 415 Kg/M²
- ii) STOREY HEIGHT 3.2 M

1 IS FOR RESIDENTIAL BUILDING (CLASS 200 LOADING) WITH 3-2 STOREY HEIGHT

FIG. 1 NOMOGRAMS FOR THICKNESS OF BRICK WALLS

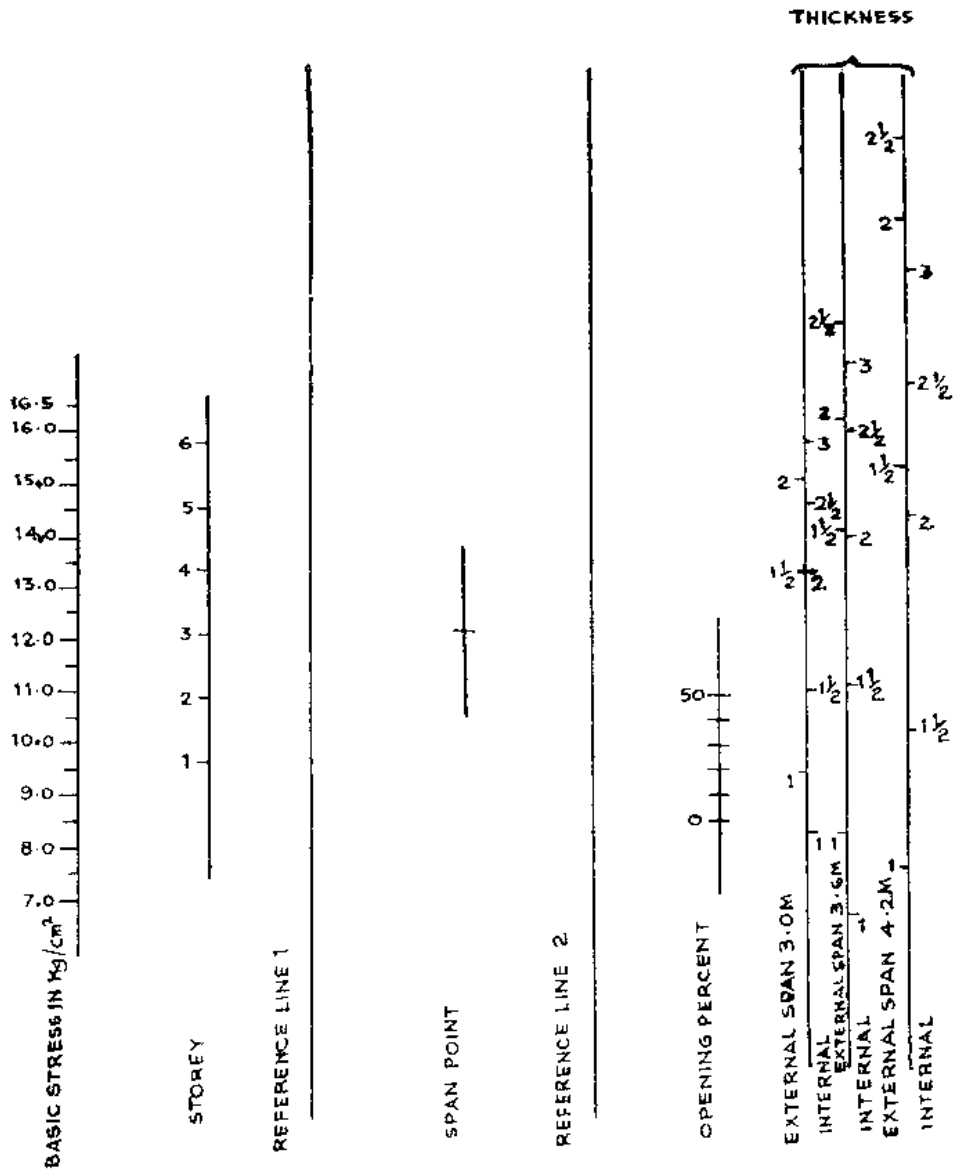


THIS NOMOGRAM IS VALID FOR THE FOLLOWING CONDITIONS

- i) BUILDING (OFFICE)
 - LIVE LOADING 300 Kg/m²
 - DEAD LOADING (ASSUMED) 440 Kg/m²
- ii) STOREY HEIGHT 3.0 M

1 C FOR OFFICE BUILDINGS (CLASS 300 LOADING) WITH 3.0M STOREY HEIGHT

FIG. 1 NOMOGRAMS FOR THICKNESS OF BRICK WALLS

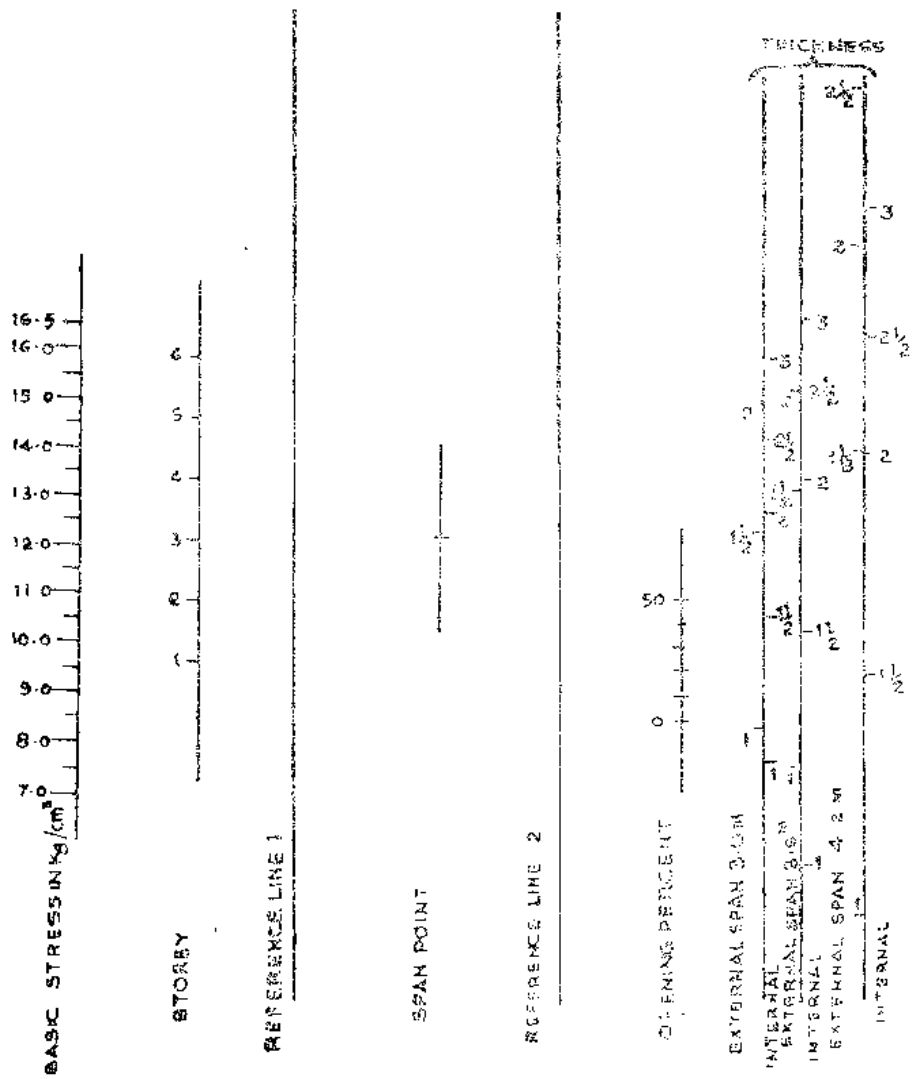


THIS NOMOGRAM IS VALID FOR THE FOLLOWING CONDITIONS

- i) BUILDINGS (OFFICE)
 - LIVE LOADING 300 Kg/m²
 - DEAD LOADING (ASSUMED) 4.40 Kg/m²
- ii) STOREY HEIGHT 3.4 m

1D FOR OFFICE BUILDINGS (CLASS 300 LOADING) WITH 3.4 M STOREY HEIGHT

FIG 1 NOMOGRAMS FOR THICKNESS OF BRICK WALLS

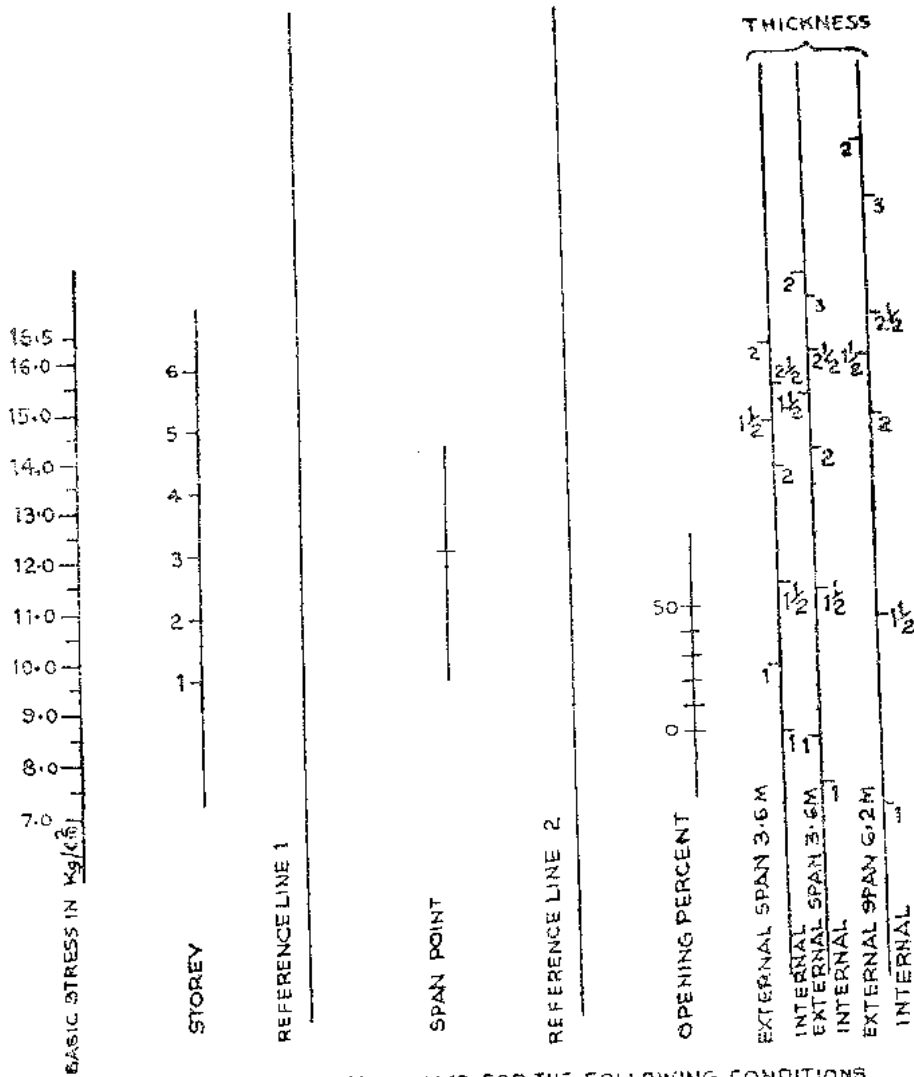


THIS NOMOGRAM IS VALID FOR THE FOLLOWING CONDITIONS

- (1) BUILDINGS (OFFICE)
 - LIVE LOADING 300 KG/M²
 - DEAD LOADING (ASSUMED) 440 KG/M²
- (2) STOREY HEIGHT 3.8 M

FOR OFFICE BUILDING (CLASS 300 LOADINGS) WITH 3.8M STOREY HEIGHT

FIG. 1 NOMOGRAM FOR THICKNESS OF BRICK WALLS

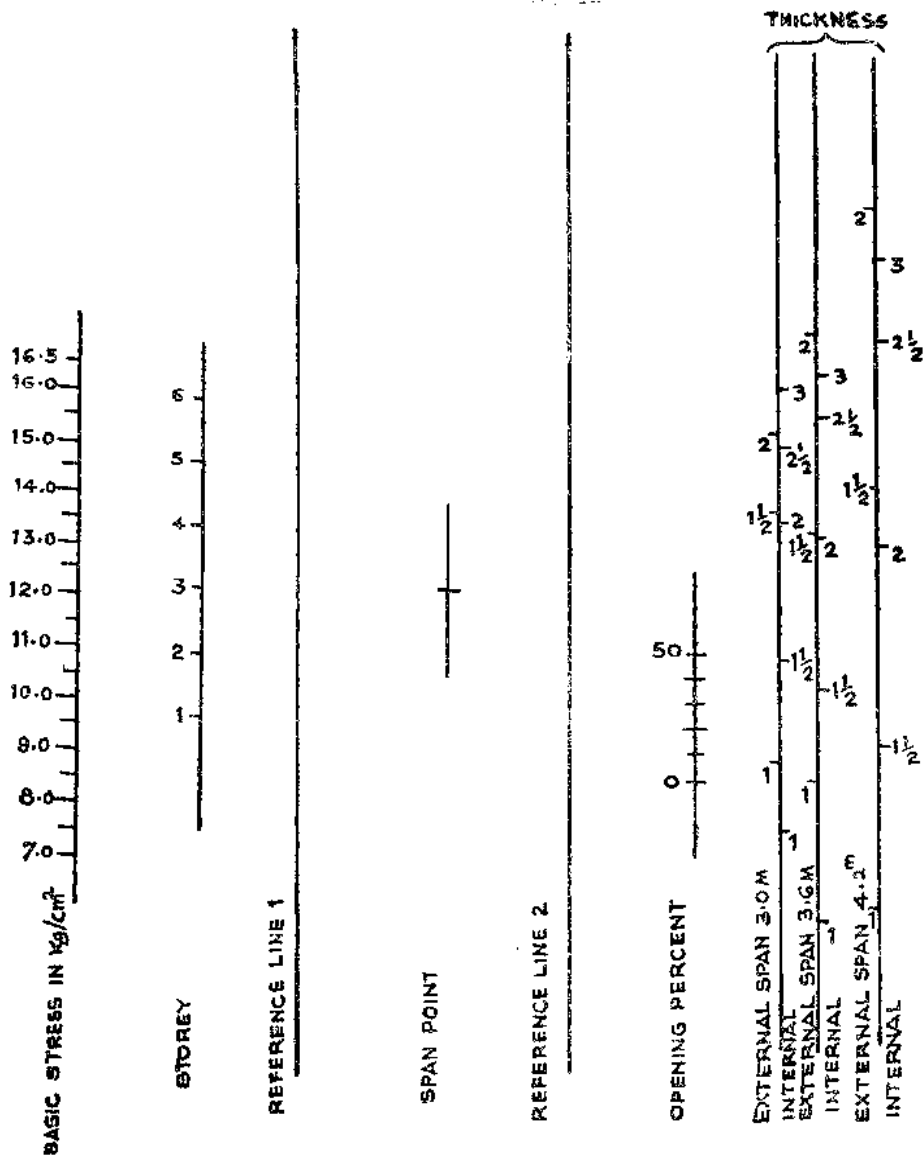


THIS NOMOGRAM IS VALID FOR THE FOLLOWING CONDITIONS

- i) BUILDINGS (OFFICE)
 - LIVE LOADING 400 Kg/m²
 - DEAD LOADING (ASSUMED) 490 Kg/m²
- ii) STOREY HEIGHT 3.0 M

1 F FOR OFFICE BUILDING (CLASS 400 LOADING) WITH 3.0M STOREY HEIGHT

FIG. 1 NOMOGRAM FOR THICKNESS OF BRICKWALL

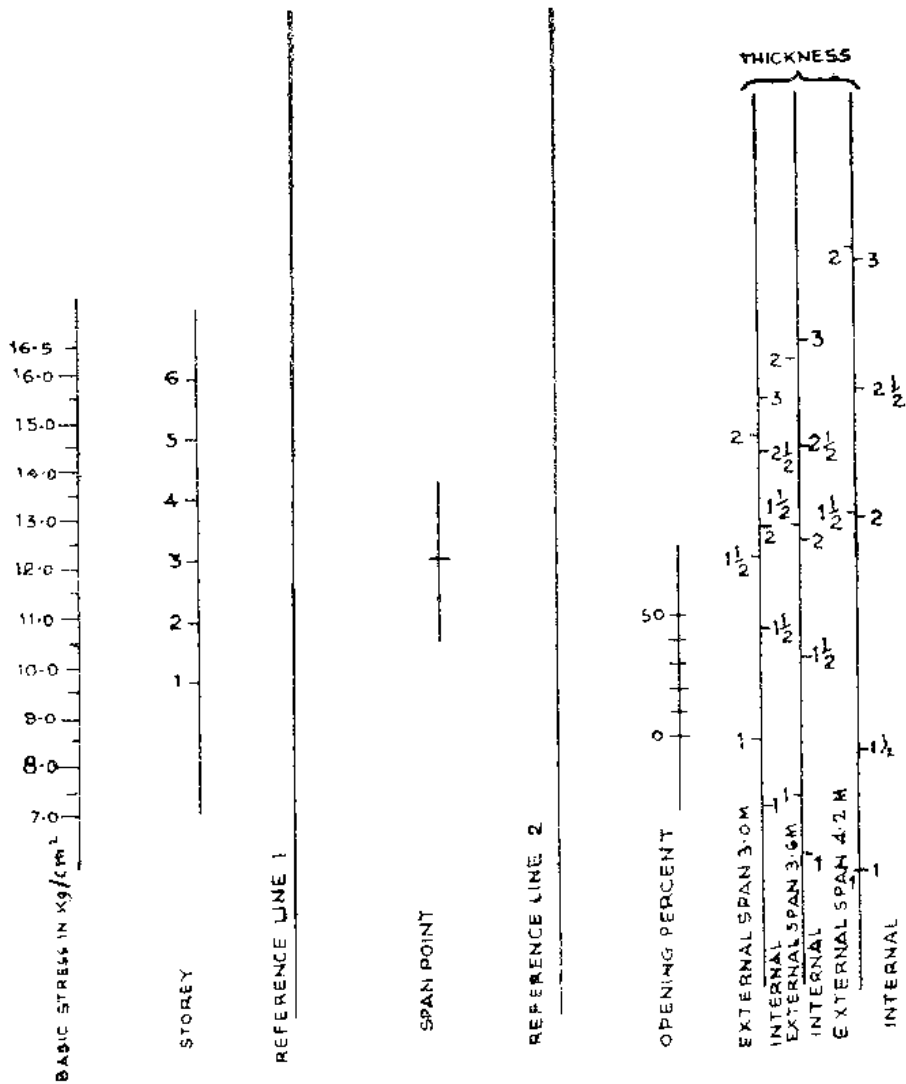


THIS NOMOGRAM IS VALID FOR THE FOLLOWING CONDITIONS

- i) BUILDING (OFFICE)
 - LIVE LOADING 400 Kg/m²
 - DEAD LOADING (ASSUMED) 490 Kg/m²
- ii) STOREY HEIGHT 3.4 M

1G FOR OFFICE BUILDINGS (CLASS 400 LOADING) WITH 3.4 M STOREY HEIGHT

FIG. 1 NOMOGRAMS FOR THICKNESS OF BRICK WALLS



THIS NOMOGRAM IS VALID FOR THE FOLLOWING CONDITIONS

- i) BUILDING (OFFICE)
 - LIVE LOADING 400 Kg/m²
 - DEAD LOADING (ASSUMED) 490 Kg/m²
- ii) STOREY HEIGHT 3.8 M

14 FOR OFFICE BUILDINGS (CLASS 400 LOADING) WITH 3.8^M STOREY HEIGHT

FIG.1 NOMOGRAMS FOR THICKNESS OF BRICK WALLS

APPENDIX 'L'
of G.R.,U.D. & P.H.D. No. DCR-1081/437/A-IfUD-5,
dated 18th January 1982.

The following Special Regulations are approved, as a special case, and shall be applicable only for Low Cost Housing Schemes i.e. Economically Weaker Sections and Low Income Group Housing Scheme only undertaken by Maharashtra Housing and Area Development Authority in the areas within the jurisdiction of Municipal Corporations (other than the Municipal Corporation of Greater Bombay), the Nagpur Improvement Trust and Municipal Councils in the State of Maharashtra and shall prevail over their corresponding provisions of Development Control Rules in force, as amended from time to time:-

1. Minimum Plot Size:

- (a) In case of a growing house for B.W.S. and L.I.G. category on a plot of 25 sq.m., a room of minimum size of 5.57 sq.m. (60 sq.ft.) with toilet arrangement in the first phase shall be permitted. In the second phase, one room of 9.30 sq.m. (100 sq. ft.) may be allowed to be added. However, commencement and occupation certificates shall be granted initially to the first phase only, and subsequent certificates for second phase issued as required.
- (b) **Multi-purpose rooms:-**The minimum size of multi-purpose room shall be allowed with size upto 12.5 sq.m. with a minimum width of 2.4 metres.
- (c) **Cooking space (alcove):-**In B.W.S. and L.I.G. Housing Schemes as provision of separate kitchen shall be necessary. However, cooking space shall be allowed with a minimum size of 2.4 sq.m. with minimum width of 1.2 metre.
- (d) **Combined toilet:-**Combined toilet shall be permitted for more than one tenement with a minimum area of 1.85 sq.m. with minimum width of one metre.
- (e) **Height.-**The average height for a habitable room with sloping roof shall be minimum 2.5 metres and minimum height of two metres at caves. In the case of a flat roof minimum clear height shall be 2.6 metres for habitable rooms. Kitchen areas shall have minimum clear height/average height of 2.4 metres and both and water closet (without loft) shall have a clear minimum height of 2.2 metres.
- (f) **Plinth:-**The minimum plinth height shall be 30 cms. but in any case above high flood level.

2. External wall:

For housing Schemes of B.W.S. and L.I.G. categories, 115 mm. thick external brick wall without plaster shall be permitted.

3. Staircases:

Single flight staircases without landing between the two floors shall be permitted for Economically Weaker Section and Lower Income Group Housing Schemes.

4. Front open space:

In the case of B.W.S. and L.I.G. Housing Schemes the front open space from Roads having width of 9.14 metres and below shall be of a minimum of 1.5 metres for buildings with heights of upto 10 metres.

Open space (side and rear)

In the case of B.W.S. and L.I.G. Housing Schemes the distance between two ground floor structures shall be of a minimum of 4.5 metres for purposes of light and ventilation of habitable rooms. In the case of toilets, deriving light and ventilation, the distance between the two ground floor structures shall be of a minimum of 1.5 metres

5. Pathways:

The widths of pathways for E.W.S. and L.I.G. Housing Schemes shall be as follows :-

- (i) 1.5 metres width for pathways upto 20 metres in length.
- (ii) 2.0 metres width for pathways upto 30 metres in length.
- (iii) 2.5 metres width for pathways upto 40 metres in length.
- (iv) 3.00 metres width for pathways upto 50 metres in length.

6. Water Closet Pan Size:

The water closet seat in E.W.S. and L.I.G. Housing Schemes shall be of a minimum of 0.46 m (18 inches) in length.

7. Flushing Cistern:

Flushing Cistern in the water closets of B.W.S. and L.T.G. Housing Schemes shall not be essential and toilets without this provision may be permitted.

8. Septic tank and Leaching pits (Soak pits):

A septic tank shall be provided in E.W.S. and L.T.G. Housing Schemes with capacity of 141.6 litres (five cubic feet) per capite. Where the municipal services are likely to be available within the four to five years or so. Pour Flush Water seal latrines (NEERI Type) shall be permitted where the municipal sewerage system is not available and the water table in the area is not high.

9. Convenience Shopping:

Convenience Shopping as defined in the existing Development Control Rules shall be permitted along layout roads within E.W.S. and L.I.G. Scheme area with width of 12.2 to 18.49 meters provided that a minimum of set back of 1.5 meters and minimum plot area of 25.2 square meters is available and is provided.

10. Recreation Ground:

Ancillary structures such as underground tank, overhead tank, sub-stations' etc. shall be permissible on the compulsory recreation space subject to the condition that not more than 10 per cent of such recreation shall be allowed to be utilised for such purposes.

11. Other provision of the existing Development Control Rules Municipal Corporations Nagpur Improvement Trust, Municipal Councils shall continue to have application for such E.W.S. and L.T.G. Schemes.

12. The definitions of the terms used in this Annexure shall be the same as those in the Maharashtra Regional and Town Planning Act, 1966 Development Control Rules and the Bombay Provincial Corporation Act 1949 of Maharashtra Municipalities Act, 1965 and other relevant Acts pertaining to the Municipal Corporations, Nagpur Improvement Trust and Municipal Councils.