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KARACHI BUILDING & TOWN PLANNING REGULATIONS



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BUILDING REGULATIONS PART - I

FOREWARD

The Government of Sind vide their notification No. SO(vi)8 (27)/72 dated 30th October, 1978 constituted a committee of experts consisting of ten members from official and professional bodies under the convener-ship of Director, Master Plan and Environmental Control Department, KDA (Authority under Sind Building Control Ordinance, 1979 to frame uniform Building Bye-laws.

The above sub-Committee in its meeting held on 21st January 1978 after going through all the existing building byelaws/regulations of all the local agencies working in Karachi, decided to frame "Unified Building and Town Planning Regulations" for the whole Karachi Division which could be followed by all local agencies. As the framing of Unified Regulations was a colossal task, a sub-committee of experts consisting the following was constituted :-

- | | |
|---|-----------------|
| 1. Mohammad Rahimuddin,
Deputy Director,
Policies, Legal & Administration,
Master Plan & Environmental
Department, K.D.A. | Convener/Member |
| 2. Mr. Ansar-ul-Haq Qureshi,
Director, Engineering & Design,
and Incharge of Architect Control
Department, KMC. | Member |
| 3. Mr. A. Wahab,
Assistant Secretary,
Karachi Cantonment Board,
Karachi. | Member |
| 4. Mr. Mohd. Rashid,
Executive Engineer,
Karachi Cantonment Board,
Karachi. | Member |
| 5. Mr. Muhammed Yusuf Kureshy,
President,
Federation of Architects &
Engineers, Pakistan. | Member |
| 6. Mr. Arshad Abdullah,
Representative,
Institute of Architects,
Pakistan. | Member |
| 7. Mr. Iftikhar H. Zaidi,
Representative,
Federation of Engineers,
Pakistan. | Member |
| 8. Mr. Aftab Mohammad Khan,
President,
Pakistan Institute of City
and Regional Planning,
Karachi (Chapter). | Member |



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Pakistan Chowk, Karachi. Ph : 214705

9. Mr. Mohammad Shoaib, Member
Land Use Controller,
Lyari Project,
K. M. C.

10. Mr. Mohammad Ishtiaq, Member
Assistant Director,
Planning and Urban Design Deptt.
Karachi Development Authority,
Karachi.

During the course of deliberations, Mr. R. S. Rustomji, and Mr. Shahid Saleem, as representatives of Institute of Architects of Pakistan and Pakistan Institute of City and Regional Planning (Karachi Chapter) respectively attended various meetings. Mr. Ahmed Hussain, Architect (C), KMC also attended some meetings.

The Sub-Committee in its first meeting held on 29th January, 1978 decided to prepare the regulations into two parts viz —

Part-I, Building Regulations AND
Part-II, Town Planning Regulations.

The Sub-Committee held its meetings twice a week i.e. on Sunday & Thursday from 2.00 to 5.30 p.m. and finalized the First Part in its 68th meeting held on 22nd October, 1978 and the Second Part in its 105th meeting held on 22.3.1979. During the preparation of the regulations, an intensive research work in the field of Building and Town Planning was undertaken. Different models of various countries were consulted and a good number of local experts in the respective fields were interviewed, to whom the Sub-Committee is grateful for devoting their precious time and guidance.

Wherever in these regulations both Part I & Part II the reference is to advertisement in news paper the same shall be understood as 'Display Advertisement' and not Classified Advertisement and the same shall be published in at least two daily newspapers one in English Language and one in Vernacular.

The reference to this Committee was for framing uniform Building and Town Planning Regulations but it did not include the Control of Real Estate activity in Karachi or the work of Real Estate Developers for which a complete exercise was necessary. The Sind Building Control Ordinance, 1979, has however, partly dealt with the subject but still Real Estate Laws and Quality Control Regulations are required to be framed in detail.

Since these drafts were prepared Sind Building Control Ordinance, 1979, was promulgated by the Governor of Sind and as such the Draft Regulations are to be made in conformity with the Sind Building Control Ordinance 1979.

M. Rahimuddin
DEPUTY DIRECTOR
POLICIES, LEGAL & ADMINISTRATION
CONVENER OF THE SUB-COMMITTEE

NOTE :- These Regulations have been given legal effect vide section 29-A(3) of the Sind Building Control Ordinance (amendment) 1982.

KARACHI BUILDING AND TOWN PLANNING REGULATIONS, 1978

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LIST OF OFFICIALS, PROFESSIONS AND ORGANIZATIONS
CONSULTED.

1. Mr. Z. A. Nizami	Director, Master Plan & Environmental Control Department, KDA.
2. Mr. S. Naeem Ahmed	Additional Director, Master Plan & Environmental Control Department, KDA.
3. Mr. M. H. Siddiqi	Director, Planning & Urban Design, KDA.
4. Mr. D. A. Shariff	Dy. Chief Engineer, (Commercial Planning & Construction), K.E.S.C.
5. Mr. S. A. Chisti	Supdt. Engineer (P & D), K.E.S.C.
6. Mr. Z. H. Siddiqi	Deputy Director, Pakistan Standards Institute Karachi.
7. Mr. S. Alim Hussain	Port Fire Officer, Karachi Port Trust, Karachi.
8. Mr. Usman Khan Durrani	Instructor, Federal Civil Defence, Training School, Karachi.
9. Mr. A. J. Siddiqi	Chief Fire Officer, K.M.C.
10. Mr. Shakil M. Affendi	Consulting Engineer, Air-conditioning.
11. Pakistan Medical Association, Karachi.	

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GOVERNMENT OF SIND

HOUSING, TOWN PLANNING AND LOCAL

GOVERNMENT DEPARTMENT.

KARACHI DATED :

NOTIFICATION

No.....In exercise of the powers conferred by Article No. 142 (c) of the Constitution of the Islamic Republic of Pakistan, 1973 read with part I, item (37) of the Federal Legislative List, the Governor of Sind is pleased to make the following Regulations for the whole Karachi Division :-

CHAPTER 1— PRELIMINARY

- | | | | |
|----|-----|---|--------------|
| 1. | (1) | These regulations shall be called Karachi Building and Town Planning Regulations, 1979. | Short Title. |
| | (2) | These shall extend to the whole of Karachi Division including the areas of Karachi controlled by various Federal Government agencies. | |
| | (3) | These shall come into force with effect from the date of publication in the Sind Government Gazette. | |
| | (4) | a) Part-I, Building regulations shall be operated by the local bodies as defined under (32) of section 2 of the SPLGO, 1972 in the respective 'Local Areas' of the Local Body concerned.
b) All the "Local Bodies" created under any Federal Act, shall also operate these regulations in local areas under their jurisdiction | |

2. In these regulations unless there is anything repugnant in the subject or context :-

Interpretation.

"Air Changes" means the hourly replacement of volumetric content of air within an enclosure.

"Approved" means approved by any Concerned Authority.

"Approved Plans" means plans for a building or a layout plan approved by the Concerned Authority in accordance with these regulations.

"Arcade" means a covered walk-way or as a verandah along one way row of shops.

"Architect" means any person who has been granted a licence as an Architect under these regulations and who has been allowed to practice or carry on business as an 'Architect'.

"Assembly" (Place of public assembly) means a building used either ordinarily or occasionally as a place of worship, theatre, auditorium, public hall, public concert room, public lecture room, public exhibition, dharamshala or musafirkhana.

"Authority" means the local authority concerned of the area having the powers of enforcing these regulations.

"Automatic" means a device or system providing an emergency function without the necessity of human intervention.

"Aviary" means a structure for keeping or breeding birds.

"Balcony" means any platform or other similar structure projecting outwards from the wall of any building and supported by brackets or cantilevered and not used as a passage.

"Base" (Applied to a wall or column) means (a) the underside of the course immediately above the footings, if any, or in case of a wall carried by a beam above the beam and (b) in any other case bottom of such wall or column.

"Basement" means a storey which is below the ground storey or, if there is no ground storey, means a storey the floor of which is situated at such a level or levels that some point on its perimeter is below the level of the finished surface of the ground adjoining the building in the vicinity of the point.

"Bath Room" means a room containing a water tap or a shower or a bath tub or a bath tray.

"Block of Flats" means a structure having a number of flats.

"Building" includes any hut, shed or other enclosure.

"Building Line" means the line up to which the plinth of a building abutting on a street or on an extension of a street or on a future street which may lawfully extend.

"Building Technologist" means any person who has been granted a licence as 'Building Technologist' under these regulations and who has been allowed to practice or carry on business as a 'Building Technologist'.

"Building Works" means erection or re-erection of a building or part thereof or making additions and alterations to an existing building.

"Built up Area" is the total sum of all floor areas of a building.

"B.S." means the latest published addition of the British Standard specifications.

"B.S.C.P." means the latest published addition of British Standard Code of practice.

"Canopy" means a roof like projection from the face of a building.

"Cardinal Points" means a diagram North, South, East and West.

"Carport" for the purposes of these regulations means a shelter, refuge or a shed for a car, permanently open at least on two sides.

"Ceiling" means the under-side of a roof or a floor which may be covered with plaster, ceiling boards or other similar material.

"Cellar or Vault" means any storey or part of a storey wholly below ground.

"Cesspool" means a tank or a pit to receive waste water sewage.

"C.f.m." means cubic feet of air per minute.

"Chawl/Chali" see tenement.

"Chimney" means a structure, not being a flue pipe, enclosing one or more flues and includes any opening therein for the accommodation of a heat producing appliance.

"Civil Engineer" for the purposes of these regulations means and include any person who is a Civil Engineer and registered with Engineer Council of Pakistan and granted a licence to practice as an 'Architect' under these regulations.

"Clinical Buildings" means the buildings specified for the purposes of hospitals, maternity homes, nursing homes, clinics, laboratories etc. and institutions for treating out patients for medical advice and/or treatment.

"Column" In relation to structural steel, timber or reinforced concrete, means any part of construction which will by its resistance to compression in the direction of its length and to bending action induced by such compression, support and transit loading.

"Commercial Building" means a building constructed wholly for commercial use on a commercial plot.

"Compartment" means any part of a building which is separated from all other parts by one or more compartment walls or compartments floors or by both such walls and floors.

"Controller of Buildings" means the authorized officer of the concerned authority to effect control of these regulations.

"Covered Area" means horizontal area of a building covered under its roof/s as out lined by the outer surface of the exterior walls including verandahs, projections and passages excluding allowable projections under these regulations.

"Cross Wall" means an internal load bearing wall at right angles to external wall.

"Damp Proof Course" means a layer of material impervious to moisture

"Dangerous Buildings" means all buildings, walls or structures which are structurally un-safe or which constitute a fire hazard, or otherwise dangerous to human life and public welfare.

"Dead Load" means the actual weight of all walls, floors partitions and all other components forming part of a building.

"Depth" In respect to a building means the measured distance between the front line of the building and the back line of the rear main wall which separates the main building from the open space.

"Detached Building" means a building not joined to another building on any side.

"Dormitory" means a sleeping room with several beds or a hostel.

"Dwelling House" means a building used for human habitation.

"Educational Building" means any building where more than 20 students gather for purposes of learning.

"Enclosure" In relation to space, light and ventilation means room, ward, toilet, theatre, auditorium or any other enclosed space.

"External Wall" means any outer wall of a building abutting on an external or internal open space.

"Exit Door" means a door from a storey, flat or room which gives access to an exit route.

"Factory" means a building or part thereof used for manufacture production or repair of any article.

"Fam Light" means any aperture above the top level of a door or a window so constructed that the whole of it can permit air and light to pass through without obstruction.

"Footing" means the widening at the base of a wall, or a column to spread weight of the building or structure over the foundation.

"Form Work or Centering" means all form, moulds, sheeting, shuttering, scaffolding, planks, poles, posts, shores, struts, ties, up rights and all other temporary supports to the concrete during process of setting.

"Foul Air" means and includes exhaust air from lavatories, bathrooms urinals, toilets, kitchens, canteens, chemical stores, restaurants, ladies hair dresser shops, laboratories, dark rooms, battery room, car parks or similar areas and air discharged from smoke extract system associated with fire protection services of buildings.

"Foundation" means a structure entirely below the level of the ground, which carries and distributes the load from footing of column or walls on to the ground.

"Flat" means any separate dwelling used or constructed or adopted to be used wholly or principally for human habitation, for a single family, where the kitchen, lavatory, bath room or water closet are contained within the separate dwelling and that dwelling is contained in a building comprising three or more such dwelling joined vertically.

"Floor" means and includes any horizontal platform forming the surface of any storey and any joist, board, timber, stone, concrete, steel or other substances connected with or forming part of such platform.

"Floor Area" means the horizontal area of a floor of a building as total covered area of a building on various floors, outlined by the outer surface of the exterior wall.

"Flue" means a passage or channel through which the products of combustion of a boiler or other furnace are taken to the chimney.

"Frame Building" means a building constructed of timber, metal or R.C.C. load bearing frame work with non-load bearing panel walls.

"Garage" for purposes of these regulations means a building or part thereof designed, adopted or used for the housing of a motor-vehicle/s.

"Godown" means any building or part thereof designed as godown, adopted or used for storage purposes but does not include any garage ancillary to a residential building.

"Government" for the purposes of licencing of professionals, means the Government of Sind.

"Ground storey" means a storey, the floor of which is situated at such a level or levels, that any given point on its perimeter is at or above but not below the level of the finished surface of the ground adjoining the building in the vicinity of that point, or, if there are two or more such storeys means the higher or highest of these.

"Habitable room" means a room to be used primarily for human habitation.

"Head Room" means the clear vertical distance between the finished floor level and the soffit of the lowest projecting member of the surface.

"Height of a building" shall be taken to mean vertical measurement from the main level of the ground, adjoining the building to the highest part of the roof of that building less half of the vertical measurement between the levels of the lowest and highest part of roof.

"Height of a Room" means the vertical distance measured between the finished floor level and under side of the ceiling and where there is no ceiling the measurement shall be to the underside of the rafters.

"Hoarding" means a close boarded fence of temporary character erected around a building site on which erection, demolition or repair work is in hand.

"Hotel" means any building specifically designed and constructed or substantially adapted to be used to accommodate persons for the purpose of gain or profit, with or without arrangements for commercial feeding, and includes a boarding house, lodging house or guest house.

"Human Occupation" means a building used for human habitation.

"Impervious Material" means any material which prevents the passage of dampness.

"Imposed Load" means the load assumed to be produced by the intended occupancy or use including distributed, concentrated impact and inertia loads but excluding wind loads.

"Industrial Building" See factory.

"Inspection Chamber" means any chamber constructed so as to provide access thereto for inspection and cleaning.

"Karachi Division" means and includes the areas under the administrative control of the Commissioner, Karachi.

"Kitchen" means any room, balcony or verandah or intended to be used wholly or partly for preparing or cooking food for human consumption.

"Licence" means licence granted or deemed to have been granted under these regulations.

"Licensed Architect" See Architect.

"Lifting Gear" means and includes pulley block, winch, crane, chain, sling, ring, link, hook, shackle, swivel or eyebolt.

"Lintel" means a beam supporting walling over an opening or recess.

"Load Bearing" in relation to any part of building including its foundations, means that part of the building which bears a load other than that due to its own weight and to wind pressure on its own surface.

"Loft" means a projection inside a room or a shop with no access to it except from inside such room/shop.

"Lounge" for the purposes of these regulations means a habitable room.

"Masonry" means stone, bricks or cement concrete blocks laid in lime cement or mud mortar.

"Mezzanine floor" means any floor inter-posed between main floors of a building and having head room not less than 2 m.

"Minor Repairs" means repair work to services, painting, white washing, plastering, pointing, paving and minor renewals or alterations.

"Occupancy" in relation to mechanical ventilation means the number of persons occupying an enclosure, the average rate of which shall be the equivalent of one person occupying an enclosure for a continuous period of 20 minutes in any one hour.

"Occupier" means and includes an owner in actual occupation of his own land or building or liable to pay to the owner the rent or any portion of the rent of the land or building in respect of which the word is used.

"Open Staircase" in a single storey or two storey (ground and first floor) building means a stair case of which the roof must be fully open to the sky and of which at least two sides must be fully open and clear of any adjoining walls of the building.

"Owner" includes a person for the time being receiving the rent of the land or structure on his own account or as agent or trustee or who would so receive the same if the land or structure were let to a tenant.

"Panel Wall" means a wall which is built between posts or pillars and wholly supported by beams and which supports no load other than its own weight.

"Partition" means an internal vertical structure which sub-divide, a storey of a building into sections and which supports no load other than its own weight.

"Party Wall" means a wall separating adjoining properties and owned equally by two proprietors.

"Parapet" means a dwarf wall whether plain, perforated or pannelled along the edge of a roof, balcony, verandah or terrace.

"Pergola" means a structure of which the roof must be at least 75 per cent open to sky.

"Plans" means the building plans showing the proposed details of the arrangements of intended building works.

"Plinth" means the portion of the building between the crown at the highest point of the street and the level of the ground floor.

"Property line" for the purposes of these regulations means that part of plot boundary which separates private property from the public property or a private property from another private property.

"Rain water Pipe" means a pipe (not being a drain) which conveys or carries only rain water.

"Refuse Collection Point" means a point from which the refuse of a house will be collected by the concerned Authority.

"Regulations" means Karachi Building and Town Planning Regulations 1979.

"Residential Building" means a building or part thereof designed adopted or used for human habitation.

"Scaffold" means a temporary erection of timber or steel work used in the construction, alteration or demolition of hoisting and lowering of Workmen their tools and material.

"Semi-Detached Buildings" means two buildings constructed on adjacent sites without intervening open space.

"Septic Tank" means a system of chambers made of impervious material intended for reception and treatment of sewage.

"Soak Pit" means a pit filled with aggregate up to sub-soil water table and with boulders and brick bats above it and intended for the disposal of waste water.

"Soil Appliance" means and includes a water closet or urinal receptacle, bed-pan, washer, bed-pan-sink and slop sink.

"Soil Pipe" means a pipe for conveying foul water to a sewer.

"Soil Water" means water containing excreted matter.

"Shop" includes any room or part of a building used wholly or mainly for the purpose of retail trade or business.

"Special Areas" means those areas which have been notified as such by the concerned authority, for the specific purposes of relaxation of these regulations.

"Structural Calculations" means detailed calculations prepared by qualified person showing the sufficiency of the strength of every load bearing part of the proposed structure.

"Super Imposed Load" See imposed load.

"Tenement" means a dwelling or habitation or part of it used by one family.

"Terrace" means a level stretch along the side or top of a slope ground or a structure that rises step-wise.

"Terrace House" means any residential building designed as a single dwelling unit and forming part of a row or not less than three such residential buildings.

"Toilet" means a space for washing up and dressing purpose and may include urinal/s and water closet/s.

"Ventilating pipe" means a pipe open to the external air at its highest point, which ventilates a drainage or a sewerage system or part thereof and does not convey/carry any soil water, waste water or rain water.

"Ware house" means a building in which merchandise and other goods are stored.

"Waste Appliance" means a sanitary appliance for the collection and discharge of waste water.

"Waste Pipe" means a pipe conveying with waste water to a soil pipe or sewer.

"Waste Water" means used water not being soil water.

"Water Closet" (W.C.) means a fixture which is connected to a water supply system so that the excreta may be carried away by flushing and may also refer to an enclosure containing such a fixture.

"Wind Load" means all loads due to the effect of wind pressure of suction.

3. (1) Every person who intends to carry out building works within the boundaries of the Karachi Division shall comply with the requirements of these regulations.

Application of Karachi Building and Town Planning Regulations.

(2) The building plan shall be approved only for the specified land use unless the land use has been converted by the concerned authority.

4. Buildings erected by or on behalf of Government shall be exempted from these regulations provided such buildings serve the purposes of defence only.

Exemptions from building regulations.

5. (1) In order to meet emergency conditions and the requirements of persons in the sub-economic income group the concerned authority may declare special area where these regulations may be relaxed and where building shall become subject to special low cost housing codes.

(2) The concerned authority may waive the application of these regulations in special cases of research and new forms of construction at their discretion.

6. The K.D.A. Building Regulations (1961), Karachi Municipal Corporation, Building Control Bye-Laws, 1975 and relevant portions of Cantonment Act, 1924 relating to building control are hereby repealed.

Repeal.

CHAPTER — 2 SUBMISSION OF PLANS FOR APPROVAL

7. All applications for approval of building plans shall be submitted on the prescribed form.
- Submission on prescribed forms,
- Engagement of licenced persons
8. (1) Every person who intends to carry out building works or to demolish a building or carry out additions alterations or repairs in a building shall engage a Licenced Architect, Civil Engineer, Building Technologist to supervise the works.
- (2) Every person who intends to erect or re-erect a building shall submit to the concerned authority an application in writing on prescribed form for permission to execute the work and the name of the Licenced Architect/Civil Engineer whom the owner has engaged to supervise work costing Rs. 10 lakhs and above.
- (3) The Licenced Architect/Civil Engineer/Building Technologist so engaged, shall give notice to the concerned Authority in writing on prescribed form of his having under-taken to supervise such work. Where the Licenced Architect/Civil Engineer, Building Technologist so engaged ceases to be in charge of such building works before the same is completed, further execution of such work shall forth with be suspended until a fresh appointment is made. A certificate on prescribed Form duly signed by the previous Licenced Architect/Civil Engineer/Building Technologist shall be obtained by the owner and submitted to the concerned authority for that part of work executed under his supervision.
- (4) The previous Licenced Architect/Civil Engineer/Building Technologist should immediately inform the concerned authority in writing without fail of his so discontinuance from the building works on prescribed Form.
- (5) (a) Every Licensed Architect/Civil Engineer shall engage full time Licensed Building Supervisor/s to supervise the construction work costing Rs. 10 lakhs and above.
- (b) For every construction work costing Rs. 10 lakhs there shall be one Licenced Building Supervisor.
- Submission of plans for approval of new buildings.
9. The Architect/Civil Engineer/Building Technologist so engaged shall submit to the concerned Authority the following alongwith prescribed Form.
- (1) A block or concept plan of the site drawn to a scale of not less than 1:500 showing the position of the proposed building and existing building, if any; the width and levels if necessary of the streets on which the plot abuts and the survey number

- or numbers of the adjoining plot or plots, if any to together with the cardinal points.
- (2) Plans, sections and elevations of every floor including basement, cellar or vault, if any, of the building intended to be erected, which shall be drawn to a scale of not less than 1:100. If the building is so extensive as to make a smaller scale necessary it may be drawn to a smaller scale but not less than 1:200 such plans and sections shall show the purpose for which the building or parts thereof are intended to be used the access to and from the several parts of the building and its appurtenances: the position, form, dimensions, means of ventilation, the proposed height of the plinth and superstructure at the level of each floor together with the dimensions and descriptions of all the walls, floors, roofs, staircases and elevator, if any.
- (3) A plan showing the intended line of drainage of such building and the size, depth and slope of each drain and the detail of the arrangement proposed for the ventilation of the drains. A description of each item of work proposed to be executed and of materials to be used. Such description shall include details of the proposed method of the drainage of the building intend to be erected, of the sanitary fittings to be used and also of the means of water supply.
- (4) Detailed drawing and structural calculations duly signed by Licensed Structural Engineer for buildings having a height over 13m and any other special structure.
- (5) Complete soil investigation report for buildings having a height over 13M and above and for other special type of public assembly buildings/halls.
- (6) For buildings having less than 13M over all height, all necessary soil tests as required by the concerned Authority to be made to prove the nature of the ground.
- (7) Name/s of Licensed building supervisor/supervisors in case the building works costing 10 lakhs and above.
- (8) Any other information or document if required by the concern authority to deal satisfactory with the plan.
10. Every person who intends.
- (1) To make any addition or alteration to a building involving the removal or erection of any roof or any outer wall, or of any wall which supports the roof thereof or change the size of any existing room or passage thus affecting the light and ventilation of the building.

Applications for addition or alterations to existing building.

(2) To remove or renew columns and beams of a building;

(3) To make any Structural alteration;

(4) To make any alterations in building involving:

(a) the sub-division of any room or a shop or any other part of the building so as to convert the same into two or more separate rooms or shops or parts of the building; and

(b) the conversion of any passage or space or a garage in such building.

(5) to reconstruct any building or any portion thereof;

(6) to demolish a building.

Shall submit an application to the concerned authority in writing on the prescribed form for permitting to execute the works and in case where the engagement of a Licenced Architect, Civil Engineer/Structural Engineer/Building Technologist is necessary the name of Licenced Architect/Civil Engineer/Structural Engineer/Building Technologist whom he has engaged to supervise its execution. The Licenced Architect/Civil Engineer/Structural Engineer/Building Technologist shall submit to the concerned Authority an application on relevant form along with all the information and documents, as required under section No. 9 and 12.

Documents of Title.

11. Every person who intends to carry out building work under section No. 9 & 10 shall, produce all documents of the title relating to the plot showing his right to carry such works.

Plans and documents to be deposited.

12. (1) Every person who under section 8 and 9 is required to furnish to the concerned authority any plan or other documents, shall furnish four copies of every such plan and minimum two copies of the documents. One of such quadruplicate plan shall be mounted or drawn on linen and shall be retained by the concerned authority together with one more copy. Two copies shall be signed by the concerned authority signifying its approval and shall be returned to the person by whom the same were furnished. Authenticated copies of all documents relied upon by the applicant shall, when required, be produced for inspection.

(2) Every plan of any building submitted under section 9 & 10 shall bear the signature of the Licenced Architect/Civil Engineer/Structural Engineer/Building Technologist signifying its having been prepared under his supervision.

13. After the receipt of an application for permission to carry out building works, the Concerned Authority shall, within sixty days:

Period of Approval.

(1) Pass orders granting or refusing permission to carry out such building works, and in the case of refusal specifying the provisions of the regulations violated; or

(2) Require further details in the plans, documents, specifications and any other particulars to be submitted to it.

(3) If no order is passed on an application within sixty days of its receipt, it shall be deemed to have been sanctioned to the extent to which it does not contravene of the provisions of these regulations, or the Master Plan or site Development Scheme, if any, and after giving due notice on prescribed Form to the concerned Authority may proceed to carry out the said building works at any time within one year from the date of delivery of such notice.

14. Whenever under any of these regulations the doing or the omitting to do a thing or the validity of any thing depends upon the sanction, permission, approval, order, direction, requisition, notice or satisfaction of the concerned authority, a written document signed by the concerned authority or any officer duly authorised purporting to convey or set forth such sanction, permission approval, order, direction, requisition, notice or satisfaction shall be sufficient prima facie evidence thereof.

Evidence of Permission.

15. (1) If at any time after permission to carry out building works has been granted, the concerned authority is satisfied that such permission was granted in consequence of any defective title of the applicant, material misrepresentation or fraudulent statement contained in the application made under regulations 9 & 10 and 12 in the plans, elevations, sections or specifications and documents submitted therewith in respect of such building, such permission may be cancelled and any work done there-under shall be deemed to have been done without permission ab-initio;

Cancellation of permission and right of appeal.

Provided that the applicant shall have a right of appeal to the concerned authority within fifteen days of the order of cancellation.

(2) The controlling authority may dispose of the appeal preferably within a period of 90 days from the date of appeal.

16. (1) If the building works are commenced or carried out contrary to the provisions of these regulations the concerned authority shall,

Powers of the Concerned Authority.

- (a) by written notice require the person who is carrying out such building works forthwith to stop all work thereupon;
- (b) by written notice require the person who is carrying out or has carried out such building works on or before such day as shall be specified in such notice by a statement in writing subscribed by him or by an agent duly authorised by him and addressed to the concerned authority to show sufficient cause why such building works or such part thereof shall not be removed or altered to comply with these regulations;
- (c) require the said person on such day at such time and place as shall be specified in such notice to attend personally or through an agent duly authorised by him and show sufficient cause why such building works or part thereof shall not be removed or altered.
- (2) If such person fails to show sufficient cause to the satisfaction of the concerned authority why such building works or part thereof shall not be removed or altered. The concerned Authority may take the following actions:

- (a) require the person who has carried out the works against the provisions of these regulations or any other statute, to demolish the whole building or part thereof;

OR

- (b) to alter the works so as to bring it into conformity with these regulations;

OR

- (c) compound the offence after realization of composition fee on the merits of the case, provided that no offence shall be compounded if:
- (i) the building works or part thereof violate any requirements of the provisions of any sanctioned site development scheme;
- (ii) the building works obstruct any future road widening scheme of any concerned authority;
- (iii) the building work or part thereof exceeds the maximum permissible height and number of stories allowed under these regulations;
- (iv) the building work extends beyond the property limits except otherwise provided in section No. 34.
- (v) the building work or part thereof violates fire or any other safety requirements;

- (vi) for any other violation of the Master Plan not falling in the above category, N.O.C. from the Master Plan & Environmental Control Department (Authority under Sind Building Control Ordinance, 1979) shall be obtained before compounding of the offence.

17. Every person who carries out building works or demolition works shall comply with the directions and conditions accompanying the sanction.

Compliance of conditions of approval.

18. Every person who commences any building work under these regulations shall give notice through the licenced Architect/Civil Engineer/Building Technologist to the concerned authority in writing on completion of plinth or foundation of the basement in case of basement on prescribed form and shall not proceed further with the work for a period of 7 days, to enable the concerned authority to verify the building lines. The concerned authority shall intimate within the aforesaid period to the owner or his representative error which may be found in the building line. Failing such intimation from the concerned authority, the owner will be entitled to proceed with the building works provided the construction is in accordance with the approved building plan.

Notice of verification of building lines.

19. The concerned authority may inspect the premises without giving previous notice:-

Inspection of Buildings.

- (1) at any time, before the approval of an application received under these regulations;
- (2) at any time during the progress of the building works;
- (3) within 30 days from the receipt of the notice of completion or the certificate of completion with respect to any such building;
- (4) if no notice of completion or certificate has been received, at any time after the building has been erected, added to or altered.

20. (1) If on making any inspection under regulation 19, the concerned authority finds that the building works:-

Building works to confirm approved plans.

- (a) are otherwise than in accordance with the plans that have been approved; or
- (b) contravene any of the provisions of the existing regulations or any statute, it may, by written notice require the person and the licenced architect carrying out building works within a period to be specified in such notice, with the object of bringing the works into conformity with the said plan or provision of these regulations to get amended plans approved after complying with the requirements of these regulations or statute.

Rectification
of works
after inspection
and
appeal.

(2) In the event of non-compliance with the (regulation) made under sub-section (1) above, the concerned authority shall have power to order cessation of work or order demolition of that much of the construction as contravenes any of the provision of these regulations and the expenses thereof shall be realized from the owner.

21. (1) If there be reasonable ground for suspecting that in carrying out of building works anything has been done contrary to any provision of these regulations and relevant statute, or that anything required by any such provision of the regulations to be implemented has been omitted and if, on inspecting such building, it is found that the same has been completed or is too far advance to permit any such fact being ascertained, the concerned authority may, by written notice require the person who has carried out the building works to drill out, to cut into, lay open, expose or pull down so much of such building as prevents any such fact from being ascertained.

(2) If on appeal, the appellate authority finds that in the carrying out of such building works nothing had been done contrary to any provision of these regulations or relevant statute and that nothing required by any such provision of these regulations to be done had been omitted, compensation as determined by the appellate authority shall be paid by the concerned authority to the person aforesaid for the damage and loss incurred by drilling, cutting into, laying open, exposing or pulling down the building, the compensation so fixed shall be final.

Notice of
completion

22. (1) Every person who carries out and completes building works approved under these regulations shall within one month of the completion of the works deliver to the concerned authority at its office in writing on the prescribed form No. 6, as the case may be, of such completion together with a certificate or certificates on the prescribed form duly signed by the Licenced Architect etc., engaged under these regulations.

(2) After the receipt of the notice of completion under sub-section (1), the concerned authority shall depute an officer to inspect such work and after such inspection, either, approve or disapprove the building for occupancy or make such further order as it may decide.

(3) No person shall occupy or permit to occupy any such land, building or use or permit to use any part affected by the erection or re-erection, of such building until the permission referred to in sub-section (2) has been granted;

(4) Any action taken under these regulations shall in conformity with the provision of the relevant statute of the concerned authority.

23. Where a person erected or re-erected or commenced to erect or re-erect a building without submitting to the concerned authority building plan for sanction then not with-standing and in addition to, any other action that the concerned authority may take under the relevant statute and these regulations, the concerned authority may give notice in writing directing such persons to submit to the authority within such time as specified in the notice, building plans in accordance with these regulations showing the buildings so erected or re-erected or proposed to be re-erected.

Notice for
submission of
building
plans.

24. Where a person has erected or re-erected, a building which is not in conformity with the building plan sanctioned by the concerned authority in any manner whatsoever such person shall, together with the report of completion of the building, submit a completion plan showing the building exactly as completed and the deviations made in the building from the sanctioned building plan through a licenced Architect/Civil Engineer-Building/Technologist as case may be on prescribed form for consideration of the concerned authority provided it is in accordance with these regulations.

Submission of
completion
plan in
case of
deviation.

25. The concerned authority may refuse permission to erect or re-erect a building and sanction building plan or completion plan, if the proposed or completed building contravene or is in any manner inconsistent with any building or zoning regulations or restrictions, or order or direction whether made under the relevant statute or the regulations or terms and conditions or convenient of lease whether express, or implied, or any building custom or practice, by whatever name called, laid down or hereto for generally imposed or followed by the Government, or any local government body, co-operative housing society, generally or in respect of building operation in any particular area.

Refusal for
rejection of
plans.

26. (1) The concerned authority shall charge for the scrutiny of building plans required to be submitted under these regulations, a fee to be known as scrutiny fee at the rates prescribed.

scrutiny Fee.

- (2) The concerned authority may charge 50% of the scrutiny fee as prescribed in respect of plans for building used exclusively for places of religious worship, educational or for charitable purposes.
- (3) If the building plans previously approved are amended, fresh approval of concerned authority as per regulation 10 and 11 is required for which the concerned authority shall charge 75% of the fee for scrutiny at the prescribed rates.
- (4) If plans of an actual building submitted after completion of such building show substantial deviations from the plans previously approved, the concerned authority shall charge full fee for scrutiny of such plans in addition to other fee and charges prescribed under these regulations.
- (5) No scrutiny fee shall be charged for renewal of approval of any building plans.
- (6) No scrutiny fee shall be charged for granting permission to occupy a building, if the building has been completed, entirely in accordance with building plan approved or if the building has been completed with such deviations from the said building plan as are in the opinion of the concerned authority in significant or minor.
- (7) (a) For plans submitted for the approval of alterations to existing buildings one half of the fees as prescribed shall be payable.
- (b) If the alterations to an existing building are generally spread over the whole area of the building then the fee payable shall be computed on the whole area of the building but if a clear sub-division of the building is not affected by the alteration scheme such unaffected sub-division shall be excluded from the area on which the fee shall be computed.
- (c) If alterations to an existing building involve an alteration to the frontage line or elevation to a street (where such elevation abuts a street) the following fees shall be paid on submission of plans for such alteration in addition to the fees payable under (a) and (b) above.
- | | |
|--------------------------------------|-------------------|
| (i) Alterations to frontage line | Rs. 100 per floor |
| (ii) Alterations to street elevation | Rs. 100 per floor |

- (8) For a series or row of buildings of the same plan and materials when plans are submitted for approval at the same time the fees as prescribed shall be charged on the following basis:
- | | Full fee |
|-----------------------------------|------------|
| First building | |
| 2nd and every additional building | 85% of fee |
- (9) The fee for each additional attested copy of notice, approved plan certificate etc. issued to concerned person, shall be Rs. 20/- per copy.
- (10) In all cases where work has been commenced before plans have been approved a fee equal upto ten times as prescribed 'A' may be charged. The payment of this enhanced fee will not exempt any person from being prosecuted by the Concerned Authority, if so decided.

CHAPTER — 3 — SPACE REQUIREMENTS IN AND ABOUT BUILDINGS

Space for
Fire Precau-
tions and
KESC sub-
station.

27. (1) All space between buildings and plot boundaries and buildings shall comply with chapter 7 and 8 of these regulations namely Fire Resistance and Fire Precautions and Fire Restrictive Structural Requirements as well as part 2 of these regulations relating to Town Planning.

- (2) In all buildings where the quantum of load of electricity is more than 30 KW, a space measuring 5m x 6.5m abutting on road side/street with a clear passage of 6m wide shall be left for KESC sub-station.

Minimum space
between
building and
street.

28. (1) For all buildings abutting on road/street less than 10m, there shall be a minimum distance of 4.57m from centre of the road/street measured at right angles to the face of the building. If a plot abuts on road on more than one side then this rule shall apply on all such sides of the plot.

- (2) The requirement of minimum distance of 5 meter from centre of the street may be relaxed by the concerned authority in the case of building abutting on to a footpath (Pedestrian way) or fronting on a street of width less than 10 meters.

- (3) Where the back lane or street is less than 5 meters, the distance must be not less than the width of the back lane, together with one half of the difference between the width of the lane or street and 5 meters.

Minimum
space at
rear of
building.

29. Minimum space at the rear of building will be as follows:

- (1) There shall be space at the rear of every building minimum depth of 2.25 meters. This shall extend for the full width of the site, provided the rear does not abut on a public road or lane;

- (2) Plots with a depth of less than 8 meters shall be exempted from the above requirement;

- (3) Corner plots where the building is allowed to abut on the sides shall be required to leave minimum square space of 2.25 meters side at the rear corner.

30. The minimum clear space prescribed between a building and the boundaries of its plot shall be measured between the greatest projection of the covered building and the plot boundaries at right angles thereto.

Method of
measuring
minimum
clear
space.

31. (1) Every person who erects or re-erects a building other than a shop or a godown shall cause at least one side of every room included in such building and intended for human occupation and not being a verandah, kitchen, bath or a store room to abut:-

Interior
and exterior
open space.

- (a) On an interior or exterior open air space of the width or dimensions and fulfilling the conditions hereinafter prescribed for such open air spaces;

OR

- (b) On an open verandah opening on to such interior or exterior open spaces aforesaid.

- (2) Every such interior open space shall be of such dimension that no portion of any face of a building abutting on such space shall intercept any of a series of imaginary lines drawn across the open space from the remote end of the building at the level of the plinth at an angle of 62° degrees with the horizontal.

- (3) In determining the exterior open air space required, any neighbouring open air space which is assured, by any statute or by rules or by leases recognised by the concerned authority to be permanently or irrevocably appropriated as an open air space may be treated as a permanent air open space, required for purposes of these regulations.

32. Every building not abutting on a street shall have an access or a right of way for an approach from the street open to the sky and at least 2.5 meters wide if the length of such access or right of way does not exceed 15.25m from the street. If the length exceeds 15.25m the width shall be at least 5m in order to facilitate access by the Fire Brigade to the rear building. In case where conditions do not permit the application of this clause as the case may be considered for relaxation on merits by the concerned authority.

Separate
approach
for every
building.

Projections
over public
streets and
building line.

33. (1) Projections of steps, string courses, cornices, eaves, chajjas and similar projections over a public street are permissible free of any fee subject to the conditions that —

(a) String courses or steps shall not be projected more than 5 cm. beyond the street line of any public street.

(b) The projection of cornices, sun-shades, chajjas, eaves upto 5 M above street level shall be as follows :-

WIDTH OF STREET	MAXIMUM PROJECTION
7 m. and Less	30 cm.
More than 7 M	40 cm.

(c) The projection of top cornices, sun shades, chajjas, eaves and the like above 5 M shall be as follows :-

WIDTH OF STREET	MAXIMUM PROJECTION
7 m. and less	45 cm.
more than 7m to 14m	60 cm.
more than 14 M	1 M

(2) Sun shades, chajjas projection over a public street beyond what has been prescribed in sub-section (1) may be permitted by the concerned authority at its discretion on such condition as may be specified by the concerned authority and on payment of fee.

(3) Open balconies projecting on to public streets from buildings abutting such streets may be permitted by the concerned authority subject to the payment of prescribed fee and as per conditions stated here under :-

Width of Street	Maximum length of Balconies	Maximum Projection	Minimum height above street level from centre of street Balconies and Sun-shades.
9M & Less than 12 M	7 m	60 cm.	5 m
12M & Less than 15 M	7 m	90 cm.	5 m
15M and above	7 m	120 cm.	5 m

(4) In case of corner plots no balcony will be allowed at the corner of the plot.

34. (1) Maximum allowable projection of chajjas, and sunshades in compulsory open spaces shall be half of that space but shall not exceed 1 m.

Allowable projections.

(2) The approved planning schemes of the concerned Authority may require the formation of arcades (verandah) within the property limit. The minimum width of such arcades shall be 2.5 m measured between the street line and the front of the building at pavement level. Piers or columns along with street line shall not exceed 50 cm. leaving a minimum clear space of 2 M between the Piers or columns and the front of the building.

(3) (a) Pergolas upto 1 M shall be permitted within the minimum open spaces required under these regulations.

(b) Pergolas beyond 1 M may be permitted by the concerned authority at its discretion on such condition as may be specified by the concerned authority but in no case compulsory open space shall be covered by the pergola within 1 M from the compound wall.

35. (1) (a) On plots having an area of 50 sq. meters and above, the minimum total habitable floor area for (other than servants quarters) excluding corridors, lobbies, stair-cases, kitchens, bathrooms, W.Cs, and Laterines shall be as follows :-

Residential buildings.

One room dwellings	...	14m ²
Two room dwellings	...	20m ²

and an additional 10 sq. M for each additional room.

(b) No habitable room shall have a floor area of less than 10 Sq. M.

(2) The minimum width of a habitable room shall be 2.5M .

(3) The minimum floor area of a servant room shall be 10 Sq. M.

(4) The minimum floor area of kitchen shall be 5 Sq. M. The minimum width of kitchen shall be 1.5 M.

(5) The minimum areas and widths of W.Cs, and bath rooms shall be :

	Min. area	Min. Width
Latrine & W.C.	1.2 m ²	1 M
Bathroom	1.4 m ²	1 M
Combined W.C. and Bathroom	2.5 m ²	1 M

(6) The minimum clear height of rooms shall be—

Habitable rooms	2.8 M
Kitchens	2.3 M
Bath rooms, W.Cs, Latrine	2.3 M
Garages and Car porch	2.3 M
Passages, galleries, corridors	2.3 M

Commercial buildings.

36. (1) The minimum floor area of a shop shall be 9.5 m² and the minimum width of the shop shall be 2.5m.

(2) The minimum height of a shop shall be 3m.

(3) No mezzanine shall be permitted in shops having the height less than 5m from the floor to ceiling.

(4) The total mezzanine area in any shop shall not exceed 30% of the total floor area of the shop. In case the mezzanine extends above the arcade, the total mezzanine area shall not exceed 30% of the combined area of the shop and the arcade, or the full area of the arcade, whichever is more.

(5) The underside of every mezzanine shall not be less than 2.5m in height above the floor of the shop.

(6) In no case shall a mezzanine be permitted within 2m from the front wall of the shop except when the shop abuts on arcade.

(7) Every such mezzanine shall be opened except for a railing not exceeding 1m in height.

(8) Every such mezzanine shall be accessible by a ladder or a Stair-case of non-inflamable material and located inside the shop.

(9) The total left out area in any shop shall not exceed 20% of the total floor area of the shop.

(10) The minimum ceiling height of an arcade inside shall not be less than 2.5m.

(11) The minimum areas and widths of W.Cs and baths for commercial buildings shall comply with the requirement of section No. 35 of these regulations.

(12) Arcades, wherever provided shall be without any obstruction.

37. (1) Basement in building may be provided as per location and contours of the plot with a minimum clear height of 2.3m, provided it is not used as living area where height shall be as per section 35 (6) of these regulations.

Basement, cellars and vaults.

(2) The concerned authority may grant permission for the construction of basement, cellars and vaults on the feasibility of the site.

(3) The areas of basement floor wherever justified by contours of the plot except for car parking shall be included in the covered area of the building.

38. (1) The minimum area of the rooms for a hotel shall be :-

Single room	10m ²
Double room	16.5m ²

Hotels and Restaurants.

(2) The minimum area of bath rooms for hotels shall be 3.5m²

(3) (a) The minimum height of rooms for hotels with air conditioning shall be ... 2.5m

(b) The minimum height of rooms of hotels without air conditioning shall be ... 2.8m

(4) The minimum height of the restaurants shall be ... 3.7m

Industrial buildings.

39. (1) Approval of Chief Inspector of Factories shall be obtained by the applicant prior to submission of application to Concerned authority.

(2) In the case of explosive stores, permission has to be obtained, by the applicant, from Inspector of Explosives, in respect of the location of the store.

(3) Gate Post and Time-Office shall not be more than 3.0m x 2.4m and 3.7 x 6.0m respectively and in any case shall not be less than 1.2m x 1.2m and 2.4m x 3.0m respectively.

(4) Height of the compound wall shall not be less than 2.1m from the ground.

(5) Area of Kitchen shall not be less than 10m².

(6) Area of Bath shall not be less than 2m² with a minimum width of 1.5m.

(7) Area of W.C. shall not be less than 1.5m² with a minimum width of 1m.

(8) Disposal of industrial, waste, domestic sewage as well as supply of water shall be shown on the plans.

(9) The area of the following structures will not be treated as built up area :-

- (a) Overhead Tank,
- (b) Underground tank,
- (c) Open platform,
- (d) Above ground washing and water tank,
- (e) Underground hazardous chemical stores,
- (f) Gas Sub-Station,

(g) Oil Tank,

(h) Soak-Pit and Septic Tank,

(i) Drinking water tank,

(j) Well,

(k) Underground air raid shelter.

40. (1) The minimum teaching accommodation space in educational buildings shall be as follows :- Educational Buildings.

Number of pupils	Min. area (M SQ)
upto 25 pupils	3.7m ² per pupil
26 to 75 pupils	93 Sq.m + 2.1m ² in excess of 25 pupils
76 to 119 pupils	227m ² + 2.1m ² in excess of 75 pupils
120 or more	312m ² + 63m ² for every 40 pupils in excess of 120.

(2) The minimum height of rooms used for teaching shall be 3.7m

(3) The norms for individual spaces are as follows :-

- 1.2 sq. m. per pupil for class rooms,
- 2.5 sq. m. per pupil for general science laboratory,
- 3.5 sq. m. per pupil for workshop,
- 0.12 sq. m. per pupil for toilets.

41. (1) Hospitals, maternity and nursing homes etc. shall be planned in accordance with the standard and specifications laid down by Federal and Provincial governments. Hospitals and Clinics.

(2) The minimum height of rooms used to accommodate patients shall be 3 m.

(3) The entrance to any ward or room used for accommodation of patients shall be within 25m from the nearest staircase. From each such ward or room there shall be access to a Secondary staircase. The width of all staircases shall be not less than 1.4m and the width of corridors and passages leading to such stair cases shall not be less than 1.8m wide.

(4) For clinical buildings the minimum requirements shall be as under :-

(a) DOCTORS OFFICES:

1) Waiting Room	3.4m x 3.7m
2) Receptionist-Combination nurse etc.	1.8m x 3.0m
3) Doctor's Consultation Office	4.3m x 3.7m
4) Examination Room	3.0m x 2.4m
5) Corridors	1.5m
6) Toilet Room	1.5m x 1.8m
7) Laboratory	4.5m x 3.7m
8) X-Ray	4.5m x 3.0m
9) Dark Room	1.5m x 1.8m
10) Heating, General Storage	3.0m x 2.4m

(b) HOSPITALS (general) :

Optometry and Pharmacy :

1) General Waiting Room	2.7m x 6.0m
2) Pharmacy	2.4m x 6.0m
3) Refractory	3.0m x 3.7m
4) Secretary Office	2.4m x 3.0m

Physiotherapy :

5) Treatment Room	2.1m x 2.6m
6) Exercise and Desk space	1.8m x 6.0m

Laboratory :

7) Lab Technician to handle	3m x 12m
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EKG, BMR and possible X-Ray

Recovery, and EKG and BMR :

(Adjoining Lab)	2.9m x 4.3m
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(c) RECOVERY BLOOD LETTING AND INJECTIONS :

1) Adjoining Laboratory	2.9m x 4.3m
2) General Toilets	1.5m x 2.4m
3) X-Ray Room	3.7m x 4.5m
4) Dark Room	1.8m x 2.4m
5) Storage room, control and viewing	2.4m x 4.5m

6) Dressing Alcove	1.2m x 1.8m
7) Surgery	3.0m x 4.0m
8) Cast & Injection Room	3.0m x 4.0m

(d) CENTRAL SUPPLY — STORAGE :

1) For sterilized supplies, central sterilizers and autoclave, deep sink for scrubbing	2.4m x 4.5m
2) Kitchen	2.4m x 2.4m
3) Library	2.9m x 4.3m
4) Conference Room	2.9m x 4.3m

(e) UTILITY ROOMS :

1) Furnace Room	5.5m x 4.0m
2) Janitor Room and Tools	2.9m x 4.3m
3) General Storage	2.9m x 4.3m
4) Linen Storage	2.9m x 4.3m
5) Nurses Lounge with lockers, Couch & Table for lunches	3.7m x 4.9m

42. (1) The minimum height of place of assembly shall be 4m where mezzanine has been provided, the minimum height shall be 5.5m.

Minimum requirements of places of assembly.

(2) The area of the mezzanine shall not exceed 30% of the floor area of the place of assembly.

(3) Where the greater part of a ground floor is left open for use as a car parking area the minimum height shall be 2.5m.

43. (1) No godown shall be provided in a residential building.

Godowns and Ware houses.

(2) A godown shall be designed, adopted or used for storage purposes provided the loading per square meters of floor area shall not exceed 8500 kg.

(3) A warehouse shall be any building designed exclusively for the storage purposes and in no case the loading per square meter of floor area shall exceed 2000 kg.

- (4) In every warehouse and godown, there shall be exhibited by the owner at some appropriate place permanently and conspicuously a notice incised or embossed on metal plastic or similar permanent material in the following form, stating the load for which the floor, has been designed, letters to be at least 3 cm thick.

NOTICE

This floor has been designed to sustain an imposed load of kg per square meter

Staircase
(general) &
head room.

44. (1) For buildings not more than two storeys high and accommodating not more than 50 persons at first floor level, one staircase of a minimum width of not less than 1.1m shall be provided.
- (2) The normal requirements for stair cases and exit ways may be increased at the discretion of the concerned authority if the goods stored present a special fire hazard.
- (3) The distance from any one point to the nearest shall not exceed 30 m.
- (4) The minimum height of the head room under beams, lintal and stair landing shall be 2 M.

Any other
type building.

45. For any other type of building not covered by above sections, the minimum height shall be 3.0m.

CHAPTER — 4 — LIGHTING AND VENTILATION.

46. (1) Every room other than rooms used predominantly for the storage of goods shall be provided with natural light and natural ventilation by means of one or more openings excluding door openings in external walls having a combined area of not less than 10 per cent of the floor space of such room and the whole of such openings shall be capable of allowing free and uninterrupted passage of air.

Size of
external
openings.

- (2) Area for openings in case of ware house, godown, storage places etc shall not be less than 5% of the floor space.

47. Unless the light and ventilation requirements are made by an air well or ventilation duct, all internal habitable rooms must have openings in internal walls in addition to door openings not less than 7.5% of the floor area of such room.

Size of
internal
openings.

48. (1) Habitable rooms, kitchens, W.Cs and bath-rooms may receive day light and natural ventilation from internal air wells which shall conform with the following minimum sizes :-

Internal air
wells.

For buildings upto 2 storeys height ... 5 sq.m.

Minimum width of well ... 1.5 sq.m.

For buildings 3 to 5 storeys ... 10 sq.m.

Minimum width of well ... 2.5 m.

For buildings higher than 5 storeys ... $10m^2 + 2m^2$
each additional floor.

Minimum width of well ... 3m.

- (2) Where only kitchens, W.Cs and bath rooms receive day light and ventilation from air-wells, there sizes shall conform with the following as minimum :-

For building upto 2 storeys in height ... 2.5 sq.m.

Minimum width of well ... 1m

For buildings higher than 5 storeys 5 sq.m. + 1 sq.m.
for each additional floor.

Minimum width of well ... 2m

49. Every kitchen shall have openings for permanent ventilation into the external air and not less than 10% of its covered area.

Permanent
openings in
kitchen.

50. Every water closet, urinal stall, and bath room and ablution shall be provided with natural lighting and ventilation by means of one or more openings in external walls having a combined area of not less than 2 sq. m. per water closet, urinal or bathroom and such openings shall be capable of allowing free and uninterrupted passage of air.

Water closet
bath room &
ablution
places.

- Garages. 51. Every garage shall be provided with opening for ventilation and lighting.
- Staircases. 52. All staircases shall be provided with adequate lighting and ventilation to the satisfaction of the concerned Authority.
- Mechanical ventilation and Air-Conditioning Waiver & minimum of requirement. 53. (1) Where permanent air-conditioning is intended, the relevant sections of these regulations dealing with natural ventilation, natural lighting and heights of rooms may be waived at the discretion of the concerned authority.
- (2) Any application for the waiver of the relevant conditions shall only be considered if in addition to the permanent air-conditioning system there has been provided alternative approved means of ventilating the air-conditioned enclosure, such that within half an hour of the air-conditioning system failure, no less than the volume of fresh air as specified hereafter shall be introduced into the enclosure during the period when the air-conditioning system is not functioning.
- (3) Where permanent mechanical ventilation in respect of lavatories, water closets, bath rooms or corridors has been provided for and maintained in accordance with the following sections, conditions relating to natural ventilation and natural lighting under these regulations shall not apply to such lavatories, water-closets, bathrooms or corridors.
- Minimum requirements. (4) Every building where mechanical ventilation has to be provided shall conform with the following minimum requirements:-
- (a) Hospital Wards, Rooms with no external walls and other enclosures shall be provided with mechanical ventilation or air conditioning have a minimum fresh air change at the rate of 10 to 15 cfm per person.
- (b) Isolation wards and other such areas for infections, contagious or other dangerous diseases shall be provided with mechanical ventilation of air conditioning having a minimum fresh air change at the rate of 10 to 15 cfm per person.
- (c) Filters for the removal of airborne bacteria shall be provided for all exhaust air discharge points to the requirements of the governing health authority. Exhaust air discharge points shall be at high or roof level and shall not in any case be lower than 4.5m to 6m from the external ground or pavement level.

- (d) (i) Operating theatres rooms and other similar enclosures used for carrying out medical operations and major surgery using anesthetics shall be provided with mechanical ventilation or air conditioning having a minimum fresh air change at the rate of 2 cfm per square meter of floor area and further having only 50% 100% fresh air introduced into such theatre room or similar enclosure.
- (ii) Air inlet points and exhaust openings shall be located at suitable height.
- (iii) Air shall not be recirculated nor combined with any other air conditioning or ventilation system and all air introduced into the enclosure shall be exhausted to the atmosphere without recirculation.
- (5) Where mechanical ventilation or air conditioning is provided.
- (a) Foul or vitiated air shall not be discharged into an airwell.
- (b) The underside of openings for the entry of air into any mechanical ventilation or air conditioning plant shall be not less than 1m from any external pavement, road way, ground level or similar external surface.
- (c) The underside of openings for the exhaust of air from any mechanical ventilation or air conditioning plant shall be not less than 2.4m from any external pavement road way, ground level or similar external surface.
- (d) Where mechanical ventilation or air conditioning is provided to any of the enclosures from which foul air will be exhausted, the ducts, trunking, service shafts or other such items containing or conveying the foul or vitiated air from such enclosure shall in no way be connected to any other air exhaust or extract, or air inlet system.
- (6) Unless otherwise specified, where air conditioning is mentioned herein, it shall be deemed to include air filtration down to a particle size of 10 microns with an efficiency of not less than 70%.
- (7) (a) Basement or other enclosures below ground level used for working areas or for occupancy of more than 2 hours duration shall be provided with mechanical ventilation or air conditioning, having a minimum of 2 fresh air changes per hour.

(b) Basement or underground car parks shall be provided with mechanical ventilation such that the air exhausted to the external atmosphere should constitute not less than 4 air changes per hour. Air extract openings shall be arranged such that not less than two-thirds of the extracted air volume shall be removed from within not more than one third the height of the room.

(8) Cinemas or other projection rooms where photographic film is being used, processed or stored, which are situated in the internal portion of the building, and in respect of which no such external walls (or those overlooking verandahs, pavements or walk ways) are present, shall be provided with mechanical ventilation or air conditioning, and all plant conveying extract or exhaust air shall not be combined in any way to other such plant serving the auditoria or any other parts of the premises.

(9) Where rooms or enclosures in any building not specified in this section are situated in the internal portions of the building and no such external walls (or those overlooking verandahs, pavement or walk ways) are present, mechanical ventilation or air conditioning having a minimum of 1 fresh air change per hour shall be provided.

(10) Water closets, toilets, lavatories, bathrooms, latrines, urinals or similar rooms or enclosures used for ablutions which are situated in the internal portions of the building and in respect of which no such external walls (or those overlooking verandahs, pavements or walk ways) are present, shall be provided with mechanical ventilation or air conditioning having a minimum of fresh air change at the rate of 2 cfm per square meter of floor area.

(11) Where room, window or wall air conditioning units are provided as means of air conditioning such units shall be capable of continuously introducing fresh air at the rate of not less than 15% of their total air delivery capacity.

(12) The minimum scale of ventilation in terms of fresh air changes in conjunction with recirculated and conditioned air, shall be as follows:-

Basement garages	Minimum 4 air changes per hour with fresh air at 1 cfm per square meter of floor area.
Residential buildings	10-15 cfm per occupant.
Toilets and lavatories	2 cfm per square meter of floor area.
Commercial premises	10-15 cfm per square meter of floor area.

Factories and workshops	7½ cfm per occupant.
Operating theatres	2 cfm per square meter of floor area.
Hospital wards (General)	15 cfm per occupant.
Hotel rooms	0.33 cfm per square meter of floor area.
School class rooms	7½ cfm per occupant.
Projection rooms	7½ cfm per occupant.
Theatres and auditoria	10-15 cfm per occupant.
Kitchens	4 cfm per square meter of floor area.
Canteens	10-15 cfm per occupant.
Buildings of public resort	7½ cfm per occupant.
Offices	10 cfm per occupant.

54. A minimum number of air changes per hour for any one type of accommodation shall be provided to the satisfaction of the concerned authority.

Air changes.

55. Where exhaust fans are used for ventilation purposes the size of the openings may be reduced to 75% to that provided in regulation 46, 47 & 48 of these regulations and the exhaust fans shall be so located that foul air does not affect the free and uninterrupted passage of fresh air.

Exhaust fans.

56. (1) All self contained or window type air conditioning units should be installed in the manner that the condensor air should not effect on the passing persons near by the units.

Fixing of air conditioning units.

(2) All self contained package air-condition units should be installed about 0.76m away from the wall.

57. Chilled water circulation in all central air conditioning units be well insulated with chilled water pumping going to air handling units of floor/floors and should be encased properly and ducted.

Circulation of chilled water.

Condensate from the air-conditioner shall not be drained on public passages.

CHAPTER — 5

BUILDING STRUCTURES — CONSTRUCTIONAL REQUIREMENTS

Erection on reclaimed site.

58. (1) No building shall be erected upon a site reclaimed by Town sweepings or other refuse, until the whole ground surface or site of such building has been rendered or become by covering it with a layer of clean earth, sand, hard core, clinder or ash, rammed solid at least 30 c.m. thick.

- (2) No building plans shall be approved on open nallahs, public sewers and the like.

Plinth Level.

59. (1) In the absence of an effective public storm water drainage system, the building plinth level of every building shall not be less than 60 cm above the level of the road at the centre.

- (2) In the case of shop/s, the ground floor abutting on a street shall not be less than 30 cm above the level of the road at the centre.

Boundary Wall.

60. (1) Boundary walls may be erected on the boundaries of plots upto a maximum height of 2m. This requirement may be relaxed by the Concerned Authority in special case.

- (2) Boundary walls which abut on a public street, pathway or place which the public are allowed to use, shall not consist of fencing in which barbed wire any material is used which is likely to cause injury to persons or animals.

- (3) The owner of every building and every open plot shall if so required by the concerned authority to erect a boundary wall or fencing and every such wall or fencing shall be maintained in good condition.

Protection against dampness & sub-soil water.

61. (1) Wherever the dampness or position of the site of a building renders it necessary, the sub soil of the site shall be effectively drained or such other steps shall be taken as will effectively protect the building against damage from moisture.

- (2) Where, during the making of an excavation in connection with a building, works or fittings, an existing sub soil drain is severed, adequate precautions shall be taken to secure the continued passage of sub soil water through such drain or otherwise causes dampness of the site of the building.

62. (1) For every building having a height of 13m and over, the owner shall submit complete investigations and soil test report at his own cost to concerned authority, to prove the nature of the ground.

Ground to be tested.

- (2) For buildings less than 13m and of other special type of public assembly buildings/halls, the owner shall cause tests at his own cost if required by the concerned Authority to prove the nature of the ground and submit the report to it.

63. Where a building is to be erected near a drain or an excavation at a distance less than the depth of the said drain or excavation, the owner shall satisfy the concerned Authority that the foundations of the building have been carried down to a level safeguarding its stability. Typical safe bearing capacity of different soils are shown in Schedule 'B'.

Foundation near drains.

64. Any materials used :-

Building Materials.

- (1) in the erection of a building;

- (2) in the alteration or extension of a building;

- (3) in the execution of works or the installation of fittings, being works or fittings to which any provision of these regulations applies; or

- (4) for the backfilling of any excavation on a site in connection with any building or works or fittings to which any provision of these regulations applies, shall be :-

- (a) of a suitable nature and quality in relation to the purpose for and conditions in which they are used;

- (b) adequately mixed or prepared; and

- (c) applied, used or fixed so as adequately to perform the functions for which they are designed.

65. The use of any material or any method of mixing or preparing materials or applying, using or fixing materials which conform, with a standard specification or code of practice prescribing the quality of material or standards of workmanship shall be deemed

Deemed to satisfy provisions regarding the fitness of materials.

to be a sufficient compliance with the requirements of regulation No. 64, if the use of that material or method is appropriate for the purpose and conditions in which it is used.

Loading
General
requirements.

66. In determining for the purposes of these Regulations, the loads to which any building will be subjected, the dead and imposed loads and wind loads shall be calculated in accordance with the requirements of this Chapter Provided that:-

- (1) in any case where an actual imposed load to which a building will be subjected will exceed the imposed load calculated in accordance with this Chapter, such actual load shall be substituted for the load so calculated; and
- (2) in any case where plant, machinery or equipment will produce exceptional dynamic effects, there shall be substituted for the imposed load calculated in accordance with this Section such greater amount or mould, as a static load, produce stresses of a magnitude and kind approximating to that induced dynamically.

Dead im-
posed loads.

67. (1) The provision of this Chapter relating to dead and imposed loads shall apply to —

- (a) new buildings and new structures;
- (b) alterations and additions to existing buildings and existing structures; and
- (c) existing construction on change of use, but shall not apply to the maintenance of, or the replacement of parts of existing buildings and structures where there is no change of use.

- (2) The dead and imposed loads provided hereinafter shall be in addition to and not in substitution of provision relating to —

- (a) loads on road and rail bridges;
- (b) wind loads;
- (c) seismic loads;
- (b) loads due to explosions;
- (e) loads on structures subject to internal pressure from their contents such as bunkers, soils and water tanks;
- (f) loads incidental to construction; and
- (g) test loads.

68. Dead load shall be calculated from the actual known weights of the materials used. Typical values for commonly used materials are shown in Schedule 'C'.

Dead loads
calculated
from weights
of materials
used.

69. Where partitions are shown in the plans, their actual weights shall be included in the dead load. To provide for partitions where their positions are not shown on the plans, the beams and the floor slabs where these are capable of effective lateral distribution of the load, shall be designed to carry, in addition to other loads, a uniformly distributed load per square metre of not less than one third of the weight per meter run of the finished partitions, but not less than 1 kN/m^2 (102 kgf/m^2) if the floor is used for office purposes.

Weights of
partitions

70. (1) The loads appropriate to the different uses to which the parts of a building or structure may be put are as specified in Schedule 'D'.

Imposed
floor
loads.

- (2) The distributed loads specified therein are equivalent to uniformly distributed static loads per square meter of plan area and provide for the normal effects of impact and acceleration, but not for any special concentrated loads.

- (3) (a) All floor slabs shall be designed to carry the appropriate distributed or concentrated imposed loads whichever produces the greater stresses in the part of the floor slab under consideration.

- (b) In the design of floor slabs, concentrated loads shall be considered to be applied in the positions which produce the maximum stresses and, where deflection is the design criterion, in the positions which produce maximum deflections.

- (c) The concentrated imposed load need not be considered where the floor slabs are capable of effective lateral distribution of this load.

- (4) (a) All beams shall be designed to carry the distributed load appropriate to the uses to which they are put.

- (b) Beams, ribs and joists spaced at not more than 1-M centres may be designed as floor slabs.

Imposed
roof
loads.

(5) Where there is the possibility of the use of mechanical stacking machines, such as fork lift trucks, special provision shall be made in the design of the floors.

(6) Where in schedule 'D' no values are given for concentrated load, it may be assumed that the tabulated distributed load is adequate for design purposes.

71. (1) On roofs without access except for maintenance, allowance shall be made for an imposed load of 0.25 kN/m^2 (25.5 kgf/m^2) measured on the plane of the roof, or a vertical load of 0.9 kN (91.8 kgf) concentrated on a square with 125 mm side, measured in the plane of roof, whichever produces the greater stresses in the part of the roof under consideration.

(2) On roofs with general access which may be used for recreational, sightseeing and similar purposes, allowance shall be made for an imposed load of 1.5 kN/m^2 (153 kgf/m^2) measured on plan, or a load of 1.8 kN (184 kgf) concentrated on a square with a 300 mm side, measured in the plan of the roof, whichever produces the greater stresses in the part of the roof under consideration.

(3) On flat roofs of multi-storey buildings which may be used by congregations of people, allowance shall be made for an imposed load of 3.0 kN/m^2 (306 kgf/m^2)

(4) On surface where accumulation of rain water is possible, the loads due to such accumulation of water and the imposed loads for the roofs as given above shall be considered separately and the more critical of the two shall be adopted in the design.

Imposed
loads of
ceilings,
sky lights
and similar
structures

72. The supports of ceilings, ribs of skylights and frames and coverings, other than glazing, of access hatches and similar structures, which under any circumstances may need to support the weight of a man, shall be designed for a concentrated load of 0.9 kN (91.9 kgf/m^2) over a square with a 125 mm side, measured in the plane of the roof, so places as to produce maximum stresses in the affected members.

Internal
suspended
loads on
primary
structural
members.

73. (1) Due allowance shall be made in the design of roof trusses or other primary structural members supporting roofs, for the weight of heating, lighting and ventilating equipment, service trunking, piping for liquids or gases, mechanical handling or production equipment and over head walkways for inspection and maintenance, as applicable.

(2) Any panel point of the lower chord of such roof trusses or any point of such other primary structural members supporting roofs over garages, manufacturing or storage floors shall be capable of carrying safely a suspended concentrated load of not less than 9.0 kN (918 kgf) in addition to the loads on the roof as provided in Section No. 71.

74. To provide for loads incidental to maintenance, all roof coverings, other than glazing, shall be capable of carrying a load of 0.9 kN (91.0 kgf) concentrated on any square with a 125 mm side, measured in the plane of the roof.

Roof
coverings.

75. Parapets and balustrades shall be designed for the minimum loads as provided in Schedule 'E'. The minimum loads are expressed as horizontal forces acting at handrail or coping level.

Parapets
and balus-
trades.

76. (1) The imposed loads to be used for the design of passenger lifts shall be taken as a uniformly distributed load of 4.0 kN/m^2 (108 kgf/m^2) applied over the full area of the floor of the lift carriage.

Lifts.

(2) The floors of goods lift or lifts used for other industrial purposes shall be designed to carry safely the heaviest loads likely to be placed in them, which loads shall be considered also as being moved, wheeled or rolled over the car floor nosing.

(3) For lifts carrying vehicles including fork lifts and trucks, and actual wheel loads shall be considered as placed on the floor of the lift carriage so as to produce maximum stresses.

(4) Where such vehicles travel over the nosing of the car entrance, actual wheel loads shall be doubled so as to reduce them to equivalent static loads.

- (5) In other positions the wheel loads may be considered as static.
- Escalators. 77. Each escalator tread shall be capable of carrying 1.1 kN/m (112 kgf/m) of the width of the escalator measured between hand-rails.
- Basement walls & floors. 78. (1) In the design of basement walls and similar underground structures, provision shall be made for the lateral pressure from fixed or moving loads.
- (2) When a portion or the whole, of the adjacent soil is below a free water surface, computations shall be used on the weight of the soil diminished by buoyancy, plus full hydrostatic pressure.
- (3) In the design of basement floors and similar structures underground, the upward pressure of water, if any, shall be taken as the full hydrostatic pressure applied over the entire area. The hydrostatic head shall be measured from the underside of the construction.
- Contents of tanks and other receptacles. 79. The contents of tanks and other receptacles shall be treated as imposed loads and account shall be taken of the load conditions when the tank or receptacle is full and when it is empty.
- Dynamic loading. 80. (1) Where loads arising from machinery, cranes and other plant producing dynamic effects are supported by or communicated to the framework, allowance shall be made for these dynamic including impact, effects, by increasing the dead weight values.
- (2) In order to ensure due economy in design, the appropriate dynamic increase for all members affected shall be ascertained as accurately as possible.
- (3) In the absence of sufficient data for such calculation, the increase in the imposed load shall be as follows:
- | Structure | Increase in imposed load (Per cent) |
|---|-------------------------------------|
| (a) For frames supporting lifts and hoists. | 100 |
| (b) For foundation, footways and piers supporting lifts and hoist | 40 |

- (c) For light machinery, shaft or motor units ... not less than 20
- (d) For reciprocating light machinery or power units ... not less than 50
- (4) Concentrated imposed loads including impact and vibration effects which may arise due to installed machinery shall be considered and provided for in the design. In any event the increase in imposed loads shall not be less than 20 per cent.
- (5) Provision shall also be made for carrying any concentrated equipment loads while the equipment is being installed or moved for servicing and repairing.
81. (1) In respect of cranes and gantry girders, the following allowances shall be deemed to cover all forces set up for by vibration, shock from slipping of slings, kinetic action of acceleration and retardation and impact of wheel loads; Crane and gantry girders.
- (a) For loads acting vertically, the maximum static loads shall be increased by 25% for an electric overhead crane, and 10% for a hand operated crane.
- (b) The horizontal force acting transverse to the rails shall be taken as the following percentage of the combined weight of the carb and the load lifted:-
- (i) 10% for an electric over head crane; and
- (ii) 5% for hand operated crane.
- (c) The horizontal force shall be taken into account when considering the lateral rigidity of the rails and their fastenings.
- (d) Horizontal forces acting along the rails shall be taken at the following percentages of the static wheel loads which can occur on the rails —
- (i) 10% for an electric overhead crane; and
- (ii) 5% for a hand-operated crane.
- (2) The forces specified sub section (1), shall be considered as acting at the rail level and being appropriately transmitted to the supporting system.

(3) Gantry girders and their vertical supports shall be designed on the assumption that either of the horizontal forces specified in section 104 may act at the same time as the vertical load.

(4) The provision of sub-section (1), (2) & (3) shall apply only to a single crane operating and to simple forms of crane gantry construction and separate provisions shall be provided for in the calculation in respect of heavy cranes of high speed operation or multiple cranes on a single gantry.

Reduction
in imposed

82. (1) No reduction shall be applied to imposed loads on roofs.

(2) In calculating the load on any column, wall or foundation the minimum imposed load for every floor, specified in Schedule 'D', may be reduced subject to the reductions specified in the table given below:

Table

Reduction of minimum imposed load

Number of floors supported	Percentage reduction minimum superimposed load
1	9
2	10
3	20
4	30
5 to 10	40
more than 10	50

(3) No reduction imposed load shall be made for any plant or machinery which is specially allowed for, or for public assembly and storage areas, garages and ware houses.

Wind
loads.

83. (1) Wind loads shall be calculated in accordance with the recommendations of BSCP 3; Chapter V. Part 2:1970:

(2) Advice on appropriate wind velocity applicable to a particular locality in which the building is to be located shall wherever possible, be obtained from the local Meteorological Office.

84. The foundations of a building shall:

(1) Safely sustain and transmit to the ground the combined dead load, imposed load and wind load in such a manner as not to cause any settlement beyond the limits designed for or other movement which would impair the stability of or cause damage to, the whole or any part of the building or any adjoining building or works;

(2) be taken down to such a depth, or be so constructed, as to safeguard the building against damage by swelling and shrinking of the sub-soil; and

(3) be capable of adequately resisting any attack by sulphates or any other deleterious matter present in the subsoil.

85. The requirements of the regulation No. 84, shall be deemed to be satisfied if the foundations of a building are constructed in accordance with the relevant recommendations of the Civil Engineering Code of Practice No. 4 Foundations.

Deemed to
satisfy provisions
for foundations.

86. If the foundations form part of a building other than a factory or storage building, having not more than four storeys, the requirements of regulation No. 84 shall be deemed to be satisfied if such foundations are constructed in accordance with BSCP 101 — Foundations and Sub-structures for Non-Industrial Buildings not more than Four Storeyed.

Deemed to
satisfy provisions
for foundations of
buildings not
exceeding
four
storeys.

87. The requirements of regulation No. 85, shall be deemed to be satisfied as to such part of any foundations as is constructed of reinforced concrete if the work complies with BSCP 114: Pt 2 — The Structural Use of Reinforced Concrete in Buildings.

Deemed to
satisfy provisions
for foundations.

88. If the foundation of a building are constructed as strip foundations of plain concrete situated centrally under the walls, the requirements of regulation No. 85 shall be deemed to be satisfied if —

Deemed to
satisfy provisions
for strip foundation.

(1) there is no made ground or wide variation in the type of sub-soil within the loaded area and no weaker type of soil exists below the soil on which the foundation rest within such a depth as may impair the stability of the structure;

- (2) The width of the foundations is not less than the width specified in Schedule 'F' in accordance with the related particulars specified in Appendix;
- (3) The concrete is composed of cement and fine and coarse aggregate conforming to BS 882 and is of a nominal mix not leaner than 50.8 kg cement: (0.28 m³) all in aggregated;
- (4) The thickness of the concrete is not less than its projection from the base of the wall or footing and is in no case less than 15 cm.
- (5) Where the foundations are laid at more than one level at each change of level, the higher foundations extend over and unite with the lower foundations for a distance not less than the thickness of the foundations and in no case less than 30 cm; and
- (6) Where there is a pier, buttress or chimney forming part of a wall, the foundations project beyond the pier, buttress or Chimney on all sides to at least the same extent as they project beyond the wall.

Brick footings.

89. (1) Where bricks footing are provided in the foundations of a wall they shall be in regular offsets of 6 cm wide and the height from the bottom of such footings to the base of the wall shall be equal to at least two third of the thickness of the walls at its base. Wherever possible, the bricks in the footings shall be laid as headers.
- (2) Brick footings in the foundations of a wall may be omitted if allowance is made for such omission in the thickness of the concrete foundations for all the wall.
- (3) Where in the opinion of the concerned Authority ground conditions are favourable, the foundations for nonload walls may be formed by increasing the depth of the concrete floor slabs under such internal walls.

Foundations under external party walls.

90. Where an external wall is built against another external or against a party wall, the width of concrete foundation specified in schedule 'F' shall be modified accordingly.

91. The structure of a building above the foundation shall be designed and constructed to safely sustain and transmit to the foundations the combined dead and imposed loads and wind loads without such deflection or deformation as will impair the stability of, or cause damage to, the whole or any part of, the building.

Structures loads. Foundations.

92. The requirements of section 91 shall be deemed to be satisfied if the design and construction of the structure or part of the structure complies with the following Codes of Practice or Standard specifications —

Deemed to satisfy provision of super structure.

- (1) BS 449 ... The Use of Structural Steel in Bldg.
- (2) BSCP 111 ... Structural Recommendations for load bearing walls;
- (3) BSCP 112 ... Structural Use of timber in buildings.
- (4) BSCP 114 ... Structural Use of Reinforced Concrete in Building;
- (5) BSCP 115 ... The Structural Use of Prestressed Concrete in Buildings.
- (6) BSCP 116 ... The Structural Use of Precast Concrete;
- (7) BSCP 117 ... Composite Construction in Structural Steel and Concrete;
- (8) BSCP 118 ... The Structural Use of Aluminium and
- (9) BSCP 2007 ... Design and Construction of Reinforced and Prestressed Concrete Structure for the Storage of Water and other Aqueous Liquids.

93. The owner shall submit structural calculation to the concerned authority to prove the stability of foundations and super structure as required under these regulations.

Structural calculations.

CHAPTER — 6

BUILDING STRUCTURE — CONSTRUCTIONAL REQUIREMENTS

Resistance to
Weather and
Dampness —
Roofs and
external
Walls.Damp
proof
courses.Walls —
Containing
Walls.Under-
pinning.

94. Every roof and external wall, including any parapet, of any building in which people live or work shall be constructed adequately to resist the penetration of rain.

95. (1) Every wall of a building shall be provided with a damp proof course at a height of not less than 15cm above the surface of the ground adjoining the wall and not higher than the level of the upper surface of the concrete or other similar solid material forming the structure of the floor.

(2) Where any part of a floor of the lowest or any storey of a building is below the surface of the adjoining ground and the wall or part of a wall of the storey is in contact with the ground.

(a) the wall or part of a wall shall be constructed or be provided with a vertical damp-proof course so as to be impervious to moisture from its base to a height of not less than 15 cm above the surface of the ground; and

(b) an additional damp-proof course shall be inserted in the wall or part of a wall at its base.

(3) Where the floor of a building is in the opinion of the concerned authority is subject to alter pressure that portion of the building below ground level shall be suitable water to the satisfaction of the concerned authority.

96. Every building shall be contained within its own walls or party walls which together with all cross walls shall be constructed of bricks, stone, concrete (properly bonded and solidly built together with lime cement mortar or with cement mortar) or other hard and non-inflammable materials.

97. If under-pinning is required the owner or this agent shall give written notice to the concerned Authority stating the method of under-pinning proposed to be used and shall obtained the written permission of the concerned Authority, before proceeding with the work.

Wall thick-
ness for
residential
buildings.

98. (1) In the case of residential buildings with storey heights not exceeding 3.6m, the following wall thickness are deemed to be adequate, provided that the walls are constructed in concrete blocks of a mix (by volume) of one part of cement; 3 parts of sands; 6 parts of aggregate and a minimum crushing strength of 28 kg/cm².

(a) The thickness of external walls for single storey buildings, Building upto 9m in height (length of wall not exceeding 9m shall be for :-

Ground floor ... 22 cm

Upper floor ... 30 cm

(b) Buildings upto 13.5 m in height (Length of wall not exceeding 9m)

Ground floor ... 38 cm

Intermediate floor ... 30 cm

Top floors ... 22 cm

(2) The thickness of every internal cross wall shall be at least two-thirds of the thickness prescribed for an external wall of the same height and length, provided that if such cross supports a load, the whole of such cross wall shall be of the thickness prescribed for an external wall and all cross wall shall be bounded to the main walls to which they abut.

(3) The mortar shall be of a mix of one part cement and five parts of sand.

(4) The wall thickness specified shall be assumed to be sufficient to carry R.C. floors upto 4.3m span. Where walls carry floors of a span exceeding 4.3m the thickness shall be calculated in accordance with British Standard Code of practice C.P. III. Adequately designed bed plates shall be provided for beams in all cases.

External
Panel walls
in framed
buildings.

99. (1) If a building is fully framed and no part of the panel wall sustains or transmits any load other than that due to its own weight and to wind pressure on its own surface, such panel wall may be of:-

(a) 11.4 cm brick work reinforced with suitable expanded metal in every eight course, the panel not being greater than 4.9m in length and 3.4m in height and suitably fixed to the framework. For a greater length or height the panel wall shall be 22 cm thick.

(b) 15cm thick precast concrete blocks, the panel size being as for 11.4 cm brickwork. For a greater length or height the panel wall shall be 20cm thick.

Special
sanction of
the concerned
authority.

100. Any other form of panel filling or cladding to framed buildings not specified in these regulations shall be subject to special sanctions by the concerned authority.

Floors-
structural
strength.

101. Every floor shall be capable of sustaining adequately its own weight and any dead loads and live loads which it is likely to be subjected to.

Notice
about
imposed

102. (1) In every storey, except where the floor is one used for residential purposes, there shall be exhibited by the owner at each staircase or at some other appropriate place permanently and conspicuously a notice incised or embossed on metal; plastic or similar permanent material in the following form, stating the imposed load for which the floor has been designed, letters to be at least 3cm high.

NOTICE

*This floor has been designed to sustain
an imposed load of
lbs per square foot
kg per m²*

(2) Where floor of different rooms or different parts of floors have been designed for different imposed loads, a notice in the above form shall be suitably displayed in each room or on each part of the floor as the case may be indicating the variations.

103. Where steel, reinforced concrete for timber is used in floor construction the design shall be in accordance with regulation 66, 67 and 68 respectively.

Steel rein-
forced con-
crete and
timber.

104. Every floor shall be finished in a manner adequate for its intended use.

Floor
finishing.

105. (1) The floor or every factory and warehouse intended to be used for the manufacture or storage of articles for human consumption shall be constructed of impervious material.

Impervious
floors.

(2) The floor of every garage shall be constructed of impervious material.

106. (1) The rise shall normally not be more than 18 cm and the tread shall not be less than 23 cm.

Staircases
and Lifts-
Pitch of
Staircases.

(2) In houses occupied by not more than one household, 19 cm risers will be permitted.

107. (1) All staircases shall be provided with a handrails.

Handrails.

(2) In non-residential buildings a handrail shall be provided on each side of the stair case when the staircase is 1.5m wide clear or over. Where a staircase is 3.0m wide or more, there shall be provided in addition a handrail down the centre of the stair.

108. There shall not be more than 15 risers between each landing. A landing shall not be less than 1m in depth.

Maximum
flight.

109. Winders may be permitted in residential buildings other than blocks of flats.

Winders.

110. (1) Timber staircases are permissible for residential buildings occupied by not more than one household.

Timber
Staircase.

- Staircases. (2) All other staircases shall be of reinforced concrete or other non-inflammable material.
- Lifts. 111. Lifts shall be provided in buildings where the climbing from the ground floor level to the top floor level exceeds 13m.
- Roofs
Timber
Roofs. 112. (1) Timber for roof construction shall be of adequate sizes and properly framed in accordance with section No. 92 (3).
- (2) All built-in or hidden roof timbers shall be protected against damp and insect attack by treatment with a suitable preservative.
- (3) Where steel work or reinforced concrete is used in roof construction the design shall be in accordance with section No. 92 (4) and (7) respectively.
- Special type of construction. 113. Any other type of roof construction not specified in these regulations shall require special sanction of the concerned authority.
- Roof covering & Drainage. 114. (1) On pitched roofs the following materials only may be used:
- Burnt clay or concrete tiles.
 - Slates.
 - Metal or asbestos concrete sheets.
 - Glass.
 - Other materials approved by the concerned authority.
- (2) The roof of a building (whether flat or not) shall be so constructed as to effectually drain to suitable and adequate channels, gutters, chutes or troughs.
- Access to roof space. 115. Access shall be provided to the space within a pitched roof where such space is enclosed by a ceiling.
- Lightening conductors. 116. Lightening conductors, if provided, shall be of a type approved by the concerned authority and shall be earthed and fixed in a manner approved by the concerned authority.

117. Refuse Chutes shall be of a type approved by the Concerned Authority and shall conform with the following minimum requirement:

Refuse
Chutes
Minimum re-
quirements.

- (1) All buildings which are four storeyed and above shall be provided with refuse chutes.
- (2) The number of refuse chutes for rebuilding shall be determined by the Concerned Authority.
- (3) Refuse chutes shall —
 - (a) be vertical for the whole length and shall be constructed with a smooth finished impropious inner surface;
 - (b) have an internal diameter of not less than 38 mm.
 - (c) All chutes shall be adequately ventilated at the top and shall be provided with suitable arrangements for flushing with water for the full length of the chutes.
 - (d) All chutes shall discharge into a suitable moveable receptacle or receptacles of a size and pattern approved by the concerned authority.
 - (e) All chutes shall be 1.2m above the roof and shall be covered with a ventilating sky light.
 - (f) The opening into the chutes from each floor shall be fitted with a self-closing hopper. Tight fitting plank or hopper constructed of inflammable material.

Refuse chutes shall be enclosed with walls of masonry of not less than two hours fire resistance.

- (4) Refuse receptacles shall be housed in a chamber which shall:-
- (a) be provided with concrete curbs for the refuse acceptable to stand on;
 - (b) be adequately fly and vermin proofed;
 - (c) be connected to and drained by a foul water drain;

- (d) open to the external air; and
(e) be lined throughout with glazed tiles.

Flues and
Chimneys.

118. (1) Every chimney included in a building shall be built on stable foundations.
- (2) Construction of non-combustible materials of such a nature quality and thickness as not to be unduly affected by heat, condensate or the products of combustion.
- (3) The chimney of an industrial and factory plant shall not be built at a distance of 3m of the street line.
- (4) The inside of every flue included in a building shall be properly rendered or pargetted as such flue is carried up unless the whole flue shall be lined with fire-brick or fire-proof piping of fire-clay at least one inch thick, and unless the spandrel angles shall be filled in solid with brick work or other incombustible material.

The back or outside of such flue, which shall not be constructed so as to form part of the outer face of an external wall, shall be properly rendered in every case where the brick work of such back or outside is less than nine inches thick.

- (5) Every flue included in a building and intended for use in connection with any furnace of copper, steamboiler or close fire constructed for any purpose of trade, business or manufacture or in connection with any cooking range or cooking apparatus of such building when occupied as a hotel, tavern or eating house shall be surrounded with fire-brick at least four and a half inches thick for a distance of 3 meter at least in height from the floor on which such furnace of copper, steamboiler, close fire, cooking range or cooking apparatus may be constructed or placed.

Chimney
shafts.

- 118.A (1) This section shall apply to chimney shafts which are structurally independent and erected in connection with any factory or place in which steam, water or other mechanical power is to be employed.

- (2) A shaft and its foundations shall be designed and constructed in accordance with the following provisions:

- (a) 60kg/m² if the height of the shaft does not exceed 6.0m.
(b) 68kg/m² if the height of the shaft does not exceed 12m.
(c) 78kg/m² if the height of the shaft does not exceed 18m.
(d) 83kg/m² if the height of the shaft does not exceed 24m.
(e) 88kg/m² if the height of the shaft does not exceed 30m.
(f) 98kg/m² if the height of the shaft does not exceed 45m.
(g) 107kg/m² if the height of the shaft does not exceed 60m.
(h) 136kg/m² if the height of the shaft does not exceed 90m.
(i) 176kg/m² if the height of the shaft does not exceed 120m.
(j) 186kg/m² if the height of the shaft is 150m or greater.

and the shaft shall be capable of resisting, without overturning, a wind pressure of one-and-half times that specified in the following table:

RATIO OF HEIGHT (H) TO BASE (B) = $\frac{H}{B}$		Not Greater than 4	from 4 to 8	more than 8
Shape of	Circular	0.66	0.72	0.77
Structure on	Octagonal	0.68	.99	1.1
	Square (Wind Normal to diagonal)	0.88	.99	1.1
Plan	Face	1.10	1.77	1.43

Shafts constructed of brick masonry.

119. (1) A shaft constructed of brickwork shall be deemed to be designed and constructed in accordance with sub-regulation (2) c, d & e of regulation No. 119 if it complies with the following provisions :-
- (2) (a) The bricks shall be hard and well-burnt clay bricks, or sand lime bricks being bricks described as Class A in British Standard 187, and they shall be properly bounded and solidly put together with mortar.
 - (b) Where the horizontal section of the shaft is circular or in the form of a regular polygon, the external diameter or least width at its base shall be not less than one twelfth of the height of the shaft.
 - (c) Where the horizontal section of the shaft is rectangular the lesser width at its base shall not be less than one-tenth of the height of the shaft.
 - (d) The thickness of the brick work shall not be less than 22 cm at the top of the shaft and for not more than 6 m below the top and shall be increased by not less than 10 cm for each additional 6 m or part of 6 m of the height of the shaft measured downwards.
 - (e) The shaft shall have a batter of not less than 6.5 cm in every 3 m.
 - (f) Any footing provided at the base of the shaft shall —
 - (i) project in every direction from the base for not less than two thirds of the thickness of the brickwork of the shaft at the base;
 - (ii) be in height not less than one and one-third times their projection;
 - (iii) be either in regular offsets from the base or in one offset;
 - (iv) be built solid to the level of the base.

- (g) The footings or the base of the shaft shall rest upon a suitable and sufficient foundation.
 - (h) Where the footings or the base of the shaft rest upon cement concrete and the bearing capacity of the ground under the concrete is not inferior to that of firm clay, the requirements of the last preceding sub-by-law shall be deemed to be satisfied if:
 - (i) the projection of the concrete in every direction from the base of the shaft is not less than one and a half times the thickness of the brickwork at the base;
 - (ii) the thickness of the concrete is not less than one and one third times the projection of the concrete beyond the footings or beyond the base if footing are not provided; and
 - (iii) the concrete is composed of cement and wellgraded aggregate in the proportion of 50 kg of cement to not more than 35 cubic of well-graded aggregate.
 - (i) Where an opening is formed in the side of a shaft the sides of the opening shall be strengthened to offset any loss of strength due to the formation of the opening.
120. (1) A shaft constructed of cut stone masonry shall be deemed to be designed and constructed in accordance with sub regulation (2) c, d & e of regulation No. 119, if it complies with the provisions of this section.
- (2) Every such chimney shall be built of a diameter at the base of not less than one-twelfth of the height of at least 6.100m feet from its base every such chimney shall be lined in the following manner, that is to say, the shaft shall be provided with an independent lining of fire-bricks, separated from the masonry enclosing the shaft by a cavity at least 2.5 cm in width and every such cavity shall be covered at the top with corbelled brick work.

Shafts constructed of stone masonry.

- (3) The batter of every such chimney shall be not less than 3 cm to the Meter.
- (4) Where the inside diameter of the chimney at the top does not exceed 1.4m the thickness of the masonry shall be as follows:
- (a) From the top of the chimney to the level of 7.6m below the top, it shall be 30cm thick.
 - (b) From the level of 7.5m below the top of the chimney to the level of 15.0m below the top, it shall be 45cm thick.
 - (c) For each further space of 7.5m below the level of 15m from the top, the thickness shall be in like manner further increase to the extent of 15cm.
- (5) Where the inside diameter of the chimney to at the top exceeds 1.2m and 15cm, the thickness of the masonry shall be as follows;
- (a) From the top of the chimney to the level of 7.5m below the top, it shall be 45cm thick.
 - (b) From the level of 7.5m below the top, it shall be 60cm thick.
 - (c) For each further space of 7.5m below the level of 15.0m from the top, the thickness shall be in like manner further increased to the extent of 15cm.

Shells constructed of reinforced concrete.

121. Where reinforced concrete is used in chimney shaft construction the design shall be in accordance with regulation No. 119.

CHAPTER — 7

DRAINAGE AND SANITATION

122. All drainage and sanitary installations shall be carried out in accordance with the relevant regulations for drainage, plumbing and sanitary fittings. Drainage General.
123. Where there is a public sewer all sullage water shall be connected thereto. Connection to public sewer.
124. (1) Where no public sewer is in existence all sullage water shall be connected to septic tanks. Cesspools, septic tanks & soak Pits.
- (2) Where no public sewer is in existence all waste water shall be connected through septic tank soak pits.
- (3) Septic tanks shall.
- (a) be so constructed as to be impervious to liquid either from the outside or inside.
 - (b) be so sited as not to render liable to pollution any spring or stream of water or any well the water of it is used or likely to be used for drinking or domestic purposes subject to a minimum distance of 6m.
 - (c) septic tanks and drainage mains within boundaries of the plot be so cited as not to render liable to pollution any water line. There shall be a minimum distance of 1m between the two, and where this distance is to be reduced due to any unavoidable reason, then the water main be protected by encasing of concrete which should be completely impervious to liquid from outside.
 - (d) Any settlement tank or septic tank shall be —
 - i) of suitable depth; and
 - ii) of adequate size and in no case the capacity should be less than 2.7m³; and
 - iii) covered or fenced in; and
 - iv) if covered, adequately ventilated and constructed with means of access for the purposes of inspection (including inspection of the inlet and outlet), emptying and cleaning.
125. The roof of every building and the floor or balconies abutting on a street or constructed over a street shall be drained by means of gutters and down pipes to the satisfaction of the concerned authority. Draining of Roofs and balconies.

Pipe fittings.

126. Any reference to a pipe in the following sections shall, unless the context otherwise requires, include a reference to number of pipes and fittings jointed together to form a continuous line pipes.

Soil pipes, waste pipes and ventilating pipes.

127. (1) Provision shall be made in the drainage system of a building, whether above or below the ground, as may be necessary to prevent the destruction under working conditions of the water seal in any trap in the system or in any appliance which discharges into the system.
- (2) Subject to sub-section (1) and section 123 any soil pipe, waste pipe or ventilating pipe shall be of adequate size for its purpose but in no case shall be internal diameter of a soil pipe or waste pipe be less than the internal diameter of any pipe or of the outlet of any appliance which discharge into it.
- (3) Without prejudice to the generality of sub-section (1), the internal diameter of a soil pipe shall be not less than
- 50mm, if it exclusively serves one or more urinals; or
 - 75mm, in any other case; and
 - the internal diameter of a waste pipe shall be not less than 32mm, if it serves a lavatory basin.
- (4) Any soil pipe, waste pipe or ventilating pipe shall —
- be composed of suitable materials of adequate strength and durability; and
 - have all joints formed in a manner appropriate to the materials of which the pipe is composed and in such a way that the joints shall.
 - remain airtight; and
 - not cause electrolytic corrosion due to the association of dissimilar materials; and
 - not form any obstruction in the interior of the pipe; and
 - (if it is necessary to have a bend) be so constructed that the bend does not form an acute angle but has the largest practicable radius of curvature and that there is no change in the cross section of the pipe throughout the bend; and
 - be adequately supported throughout its length without restraining thermal movement, any fitting which gives such support being securely attached to the building; and
 - be so constructed as to be capable of withstanding a smoke or air test for minimum period of three minutes at a pressure equivalent to a head of not less than 30 mm of water; and

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- be so placed as to be reasonably accessible for maintenance and repair throughout its length; and

- have such means of access as are necessary to permit internal cleansing.

- (5) Any soil pipe from a soil appliance and any waste pipe from a waste appliance shall have fitted close to such appliance a suitable and readily accessible trap of adequate diameter, having an adequate water seal and means of access for internal cleansing.

Provided that this sub-section shall not apply to —

- any soil pipe serving only a soil appliance or any waste pipe serving only a waste appliance if the appliance has an integral trap;

- any waste pipe serving a bath or lavatory basin where two or more baths or lavatory basins are so fixed in a range that such waste pipe discharges into a semi-circular and accessible open channel of glazed stoneware, or other equally suitable material, formed or fixed in, on or above the floor immediately beneath such baths or lavatory basins and discharging over or into a suitable trap; or

- any waste pipe serving a lavatory basin or shower tray where a number of lavatory basins or shower trays or both are so fixed in a range that each such waste pipe discharges into a common waste pipe which.

i) does not exceed 5m in length;

ii) is fitted with a suitable trap; and

iii) has means of access suitable and adequate for the internal cleansing of the trap and of the whole length of the pipe.

- (6) No soil pipe or waste pipe shall be placed outside the external walls of a building not under former control so as not to cause dampness in that building.

128. Any overflow pipe connected to a waste appliance shall either —

Overflow Pipes.

- discharge into a waste pipe in such a way as to be disconnected from the drainage system by the trap installed in accordance with regulation No. 127 (5).

- otherwise so discharge as not to cause dampness in, or damage to, any part of any building.

Ventilating
pipes.

129. Any ventilating pipe shall be —

- (1) carried upwards to such a height and so positioned as not to transmit foul air in such a manner as to become prejudicial to health or a nuisance; and
- (2) fitted at its top most end with a durable cowl or other cover which does not unduly restrict the flow of air.

Rain water
pipes.

130. Any rain water pipe which is on a building and intended for collecting rain-water shall be —

- (1) of adequate size for its purpose;
- (2) composed of suitable materials of adequate strength and durability;
- (3) adequately supported throughout its length without restraining thermal movement, any fitting which gives such support being securely attached to the building;
- (4) so arranged as not to cause dampness in, or damage to, any part of a building;
- (5) jointed in a manner appropriate to the material or materials of which it is composed so as to remain water tight; and
- (6) fitted with an adequate outlet or outlets so placed as to drain the whole length of the pipe.

Inlets to
drains.

131. Any inlet to a drain, other than a junction between the drain and a soil pipe, a waste pipe or a ventilating pipe, shall be effectively trapped by means of a suitable trap having a seal not less than 50mm in depth.

Trenches for
drains and
private
sewers.

132. (1) Where any drain or private sewer is constructed adjacent to a load bearing part of a building, such precautions shall be taken as may be necessary to ensure that the trench in which the drain or private sewer is laid in no way impairs the stability of the building.
- (2) Except where the nature of the ground makes it unnecessary, where any drain or private sewer is adjacent to a wall and the bottom of the trench is lower than the foundation of the wall, the trench shall be filled in with concrete to a level which is not lower than the bottom of the foundation of the wall by more than the distance from that foundation to the near side of the trench less than 150mm.

Provided that, where the trench is within 1.0m of the foundation of the wall, the trench shall be filled in with concrete to the level of the underside of the foundation.

- (3) The concrete filling required by the foregoing paragraph shall have such expansion joints as are necessary.

Sanitary
Provisions.

133. (1) The minimum requirements/sanitary provisions as prescribed hereunder shall be followed:

- (a) Every residential dwelling shall have at least one Latrine or W.C. and one bathroom.
- (b) Single room tenements shall have one Latrine or W.C. and one bathroom per five tenements subject to a minimum provision of two W.C.'s or Latrines.
- (c) in the case of servant's quarters attached to dwelling houses one W.C.'s or Latrine and one bathroom shall be sufficient for every five quarters.

(2) For every ten bedrooms or less in a Hotel, Boarding House and Guest House there shall be provided at least two W.C.'s or Latrines and two bathrooms.

(3) For every 20 persons in a Dormitory there shall be provided at least two W.C.'s or Latrines and one bathroom.

(4) For every 25 person upto 100 persons in a Office, Departmental store or Factory there shall be provided one W.C. or Latrine and one Urinal and one additional W.C. or Latrine plus one Urinal for every 50 persons in excess of 100 persons.

(5) One wash basin or equivalent washing through space per 25 or less persons for ablution purposes.

The above figures refer to staff only. If provision is to be made for the public it shall be made according to the above specification.

(6) Communal sanitary facilities shall be provided at the discretion of the concerned authority for shops and stalls having a floor area less than 37 m². But for shops and stalls having a floor area more than 37 m² shall have a minimum of one W.C. or Latrine and one draw off tap at the premises.

(7) (a) One W.C. and two urinals for every 200 persons or part thereof in places of public assembly for males; and

(b) One W.C. for every 100 females or part thereof. In each room provided for sanitary purposes there shall be at least one wash basin.

(8) (a) Two W.C.'s and three urinals per 100 boys in each school.

(b) Two W.C.'s and three bidets per 100 girls in each school.

(c) One wash basin or equivalent washing through space per 25 pupils for ablution purposes.

(9) At least one W.C., one wash basin and one bath for every 10 persons (patients and staff) in a hospital.

Wall and
floor finishes.

134. (1) All walls of W.C's and bathrooms shall be finished in cement mortar or other impervious material to a minimum height of 1.2m. All floors to W.C's and bathrooms shall be paved in concrete with cement or other approved material rendering it impervious and laid in the case of bathrooms with proper falls to an approved outlet.
- (2) Every latrine shall be constructed of brick, concrete or other impervious approved material.
- (3) Where there is no water carriage system, latrines shall be separated from the main buildings by cross ventilated passages not less than 1.0m wide or be accommodated in separate buildings.

Requirements
for wells.

135. A well constructed in connection with a building and intended to supply water for human consumption shall comply with the following provisions.
- (1) The well shall be so situated as not to be liable to pollution, subject to a minimum distance of 6m from any cesspool, soak pit and septic tank.
- (2) The ground adjoining the well shall for a distance of not less than 1.2m in every direction be covered with a water tight paving constructed so as to slope away from the well.
- (3) The sides of the well shall be rendered impervious for such a depth as to prevent contamination through the adjoining ground. This will normally be a depth of 1.8m.
- (4) A dug well shall be so constructed as to be readily accessible for cleansing and the opening shall be guarded by a railing or parapet at least 8.0m high.
- (5) The top of a dug well shall be surrounded by a curb extending not less than 15cm above the level of the paving and so constructed as to prevent any surface water gaining access to the well.
- (6) The lining tubes to a bored well shall project not less than 15cm above the level of the paving and such projection shall be surrounded with concrete not less than 15cm thick or with other adequate means of protection for its full height.
- (7) A well from which water is drawn by a bucket shall be provided with an efficient hinged wooden or iron or other suitable cover which will close the well when not in use.
- (8) A well from which water is drawn by a pump shall be provided with a cover so fitted as to prevent surface water or other matter from gaining access to the well.

136. (1) This section shall apply to any water closet fitting installed for use in connection with a building.

Requirements
of water
closets.

- (2) The receptacle shall have a smooth and readily cleansed non-absorbent surface and shall be so constructed and fitted as to discharge through an effective trap of suitable dimensions and thence, without storage, to a soil pipe or a drain.
- (3) The flushing apparatus shall be capable of securing the effective cleansing of the receptacle.
- (4) No part of the receptacle shall be directly connected with any pipe other than a soil pipe, flush pipe, trap vent pipe or drain.

137. (1) This section shall apply to any urinal or urinal fitting constructed or installed for use in connection with a building.

Requirement
of urinals.

- (2) The urinal shall have one or more slabs, stalls, troughs, bowls or other suitable receptacles, which —
- (a) have a smooth and readily cleansed non-absorbent surface; and
- (b) have an outlet fitted with an effective grating and trap; and
- (c) are so constructed as to facilitate cleansing.
- (3) No urinal or urinal fitting shall be constructed or installed unless it is furnished with an automatic flushing apparatus which is capable of securing the effective cleansing of the receptacle.
- (4) No part of the receptacle shall be directly connected to any pipe other than a soil pipe, flush pipe, trap vent pipe or drain.

CHAPTER — 8

FIRE RESISTANCE AND FIRE PRECAUTIONS.

General.

138. Every building shall comply with the provisions laid down in chapter 8 & 9 in respect of fire resistance and fire precautions.

Compartmentalization.

139. Every floor of a building shall be divided into compartments by means of fire walls located as follows :-
- (1) Separating one occupancy from another within same building.
 - (2) Separating part of a building from any other part of the same building which is used or intended to be used for a different function such as residential, institutional, assembly, storage, commercial use etc.
 - (3) dividing an institutional building into smaller compartments of an area not exceeding 2000 sq. meters.
 - (4) Separating occupancy areas from common circulation areas.

Construction of Fire Walls.

140. Fire walls shall be constructed as follows :-

- (1) Concrete Block: When constructed of solid or hollow concrete blocks, the fire wall shall be of minimum 150mm thickness furnished with minimum 12mm thick cement sand plaster on each face.
- (2) Brick Masonry: Fire walls of solid brick masonry shall have minimum thickness of 200mm.
- (3) Reinforced Concrete: Fire walls of R.C.C. construction shall have minimum thickness of 180mm with minimum concrete cover to minimum reinforcement of 75mm.
- (4) Fire walls may also be constructed in any other manner or with any other non-combustible material approved by the concerned authority with a minimum fire resistance of 2 hours.

141. (1). Openings in fire walls may be fitted with a single or double leaf door with a minimum fire resistance for the following periods :-

Openings in fire walls.

- (a) Door giving access to a flat from a common area 1/2 hour;

- (b) Any other case — 1 1/2 hour.

- (2) (a) Except in case of fire doors giving access to occupancy areas from common circulation areas, all fire doors must open in the direction of escape.

- (b) Except in case of fire doors giving access to occupancy areas from common circulation areas, all fire doors must have an opening not exceeding 0.1 sq. meter fitted with wired glass at 1.5 meters height.

- (c) All fire doors used to compartmentalize an institutional building shall be fitted with automatic self closing device.

142. (1) Requirements for Fire Prevention and Fire Extinguishing shall be the following :-

Stand pipes system of Automatic Equipment.

- (a) All buildings which are ground plus three storeys or above or more than 13 m high shall be provided a set stand pipe/pipes as given below :-

- (i) Buildings from (4) storeys upto 8 storeys in height shall be equipped with not less than 6 cm dia stand pipes.

and

- (ii) Buildings over 8 storeys in height shall be equipped with not less than 10 cm dia stand pipes.

- (2) The number of stand pipes shall be such that all parts of every floor area are at a maximum distance of 36 m from the stand point.

- (3) Insofar as practicable, stand pipes shall be located with outlets within stairway enclosures; but if these are not available,

the stand pipes shall be located in a common corridor. In any case, one shall be located in the main.

(4) (a) The construction of stand pipes shall be of galvanized iron.

(b) Stand pipe risers shall extend from the lowest to the top most storey of the building or part of building which they serve.

(c) When more than one stand pipe is required, they shall be interconnected at their bases by pipes equal in size to that of the largest riser.

(d) Every stand pipe or stand pipe system in case of interconnected stand pipes, shall be equipped with a fire department approved inlet connection of corrosion resistive metal (e.g. gunmetal) located on an outer building face nearest to street approximately 6m to 9m above finished ground and suitably marked "Fire Department Connection — Stand Pipe".

(e) Stand pipes shall be provided in every storey with a 4 cm diameter flexible base not less than 30 m long, with a 1.25 cm nozzle, bring in an approved rack or cabinet.

(f) The stand pipes shall be fed by an over load water tank reserved solely for this purpose. The minimum capacity of this tank shall be 5000 gallons, with a minimum of 2.1m load above the highest discharge point.

143. Automatic sprinkler system shall be provided in the following:

(1) In every institutional building which serves restrained or handicapped persons.

(2) In covered car parking areas in buildings of which upper storeys are designed for other uses when such parking area exceeds 465m².

Automatic
Sprinkler
system.

(3) Bus garages or terminals for passengers serving more than 4 buses at a time.

(4) Each floor of mercantile and industrial building which is more than one storey high and which exceeds 1860m² covered area.

(5) All building compartments used for manufacture, display or sale of combustible materials and products which are more than 700m² in covered area.

(6) All areas of theatres except auditorium, music hall, and lobbies.

(7) All building areas used primarily for storage of goods, and material including areas clearly specified for storage of combustible materials and goods, which are more than 93m in areas.

(8) No sprinkler provision, should be made in the immediate vicinity of generators or any electrical equipment.

144. Sprinkler — System Construction shall be in the following manner:

Sprinkler
System con-
struction.

(1) Sprinkler pipes, hangers and sprinkler heads shall be protected from corrosion.

(2) Every sprinkler system shall be equipped with a fire department approved inlet connection located on an outer building face nearest to street approximately 6 to 9m above finished ground and suitable marked "Fire Department Connection — Automatic Sprinklers".

(3) Automatic Sprinkler System shall be fed by a overhead water tank reserved solely for this purpose. The tanks shall be capable of supplying 25% of the Sprinkler heads for 20 minutes but the minimum capacity of any tank shall be 5000 gallons. There shall be a minimum head of 1.05 kg/cm² above the highest discharge point.

(4) Automatic Sprinkler System shall be arranged to set off automatic fire alarm system simultaneously.

(5) Every Sprinkler System shall be provided with a readily accessible outside valve to control all sources of water supply.

Manual fire-extinguishing equipment.

145. Manual fire extinguishers shall be provided as follows:

(1) Two extinguishers in stage area, one in each dressing room, one immediately outside each entry in theatres.

(2) One extinguisher in each 230 m² of area of public assembly buildings, but not less than one on each occupied floor, and not less than 1 in each lab, workshop or vocational room.

(3) At least one extinguisher on each floor at stairway landing and in corridor at each lift or group of lifts in residential and commercial buildings.

Installation of interior fire alarm system.

146. Installation of interior fire alarm system shall be installed in the following:

(1) All hotels, motels, dormitories, more than one storey high and with a capacity of fifty (50) or more occupants.

(2) All hospitals, asylums, nursing homes, and similar institutional buildings accommodating more than (20) twenty occupants above the ground floor.

(3) All School buildings with provision of more than Thirty (30) students above the ground floor.

(4) All mercantile buildings with more than 186m² above the first floor.

(5) All factory buildings exceeding two (2) storey in height and with more than 372m² above the first floor.

(6) All office buildings more than five (5) storeys in height and with occupancy area of more than 9300 m² above the ground floor.

(7) All Cinemas, theatres and similar places of public assembly.

147. Signal Stations shall be provided as follows:

Signal Stations.

(1) At least one (1) station shall be located in each storey in an accessible location in the natural depth of exitway or escape

(2) All stations shall be so located that no point on any floor or the building is more than 50 m distant from a station.

Types of building to be covered	Minimum number of stations
1. Residential buildings	1
2. Commercial buildings	2
3. Industrial buildings	3
4. Public buildings	4
5. Other buildings	5

CHAPTER — 9 FIRE RESISTIVE STRUCTURAL REQUIREMENTS.

Fire
Resistance.

148. (1) For purposes of this chapter, every building or compartment shall be regarded according to its use or intended use, and where a building is divided into compartments intended to be used for different purposes; the requirements of each compartment shall be determined separately. In the event that a building or a compartment is used or intended to be used for more than one purpose, only the main use of that building shall be taken into account.

(2) Every element of structure shall be required to have fire resistance for not less than the relevant period specified in table 'A' with regard to the building of which it forms part of.

TABLE 'A'
(Minimum periods of fire resistance)

Types of building or compartment.	Minimum period of fire resistance in hours for elements of structure	
	Ground or upper storey	Basement storey
i) Private dwelling house	$\frac{1}{2}$	1
ii) Institutional :		
— upto 28 meters high	1	$1\frac{1}{2}$
— over 28 meters high	$1\frac{1}{2}$	2
iii) Residential buildings other than private dwelling house		
— upto 2 storeys high	$\frac{1}{2}$	1
— upto 3 storeys high	1	1
— upto 28 meters high	1	$1\frac{1}{2}$
— over 28 meters high	$1\frac{1}{2}$	2
iv) Office Buildings		
— upto 7.5 meters high	$\frac{1}{2}$	1
— upto 15 meters high	1	1
— upto 28 meters high	1	$1\frac{1}{2}$
— over 28 meters high	$1\frac{1}{2}$	2
v) Mercantile Buildings		
— upto 7.5 meters high	$\frac{1}{2}$	1
— upto 15 meters high	1	1

— upto 28 meters high	1	2
— over 28 meters high	2	4

vi) Factory Buildings

— upto 7.5 meters high	$\frac{1}{2}$	1
— upto 15 meters high	1	1
— upto 28 meters high	1	2
— over 28 meters high	2	4

vii) Public Assembly Buildings

— upto 7.5 meters high	$\frac{1}{2}$	1
— upto 15 meters high	1	1
— upto 28 meters high	1	$1\frac{1}{2}$
— 28 meters high	$1\frac{1}{2}$	2

viii) Storage & Public Car parks

— upto 7.5 meters high	$\frac{1}{2}$	1
— upto 15 meters high	1	2
— upto 28 meters high	2	4
— over 28 meters high	4	4

(b) If any part of a building is completely separated throughout its height both above and below the ground from all other parts by compartment walls in the same vertical plane, the fire resistance requirement of that part shall be determined by height solely of that part.

(c) If any element of structure forms part of more than one building or compartment and the requirements of fire resistance in respect of one building or compartment differ from those specified for any other building or compartment of which the element forms part, such element shall be so constructed as to comply with the greater or greatest of the requirements specified.

(d) Any element of structure shall have fire resistance of not less than the minimum period required for any element which it carries.

(e) No fire resistance is required if the elements form part of a basement storey which has an area not exceeding 50m².

149. (1) Every element of structure shall be capable of resisting the action of fire for the specified period under the conditions of test appropriate to such an element in accordance with BS — 476: Part 1: 1953 and subject to modifications if any.

Test of fire
resistance.

(2) Any floor shall, if the underside of such floor is exposed to a test by fire, have fire resistance for not less than the minimum period required for elements of structure forming part of the building/compartment immediately below such floor.

(3) (a) Any structure enclosing a protected shaft shall, if each side of the wall is separately exposed to a test by fire, have fire resistance for not less than the minimum period required.

(b) Any part of an external wall which is situated less than 1m from the relevant boundary shall, if each side of the wall is separately exposed to test by fire, have fire resistance for not less than the minimum period required.

(c) Any part of an external wall which is situated 1m or more from the relevant boundary wall, if the inside of the wall is exposed to a test by fire, have resistance for not less than the minimum period required.

(d) Any element of structure shall be deemed to have the requisite fire resistance if.

i) it is constructed in accordance with one of the specifications given in Schedule 'G'.

ii) the element or a similar part to that element made to same specification is proved to have the requisite fire resistance.

External Walls.

150. (1) Any external wall which is situated within a distance of 1 meter from the relevant boundary, or is a well of a building which exceeds 15 meters in height shall be constructed wholly of non-combustible material apart from any external cladding.

(2) Any beam or column wherever forming part of or carrying an external wall constructed of non-combustible material shall also be constructed wholly of non-combustible material.

(3) Any part of a roof shall be deemed to be part of an external wall if it is pitched at an angle of 70° or more to the horizontal and covers a habitable space within the buildings.

Separating Walls and Fire Walls.

151. (1) Separating walls between two adjoining buildings shall form complete vertical separation between any buildings separated and shall not have any opening except for the following.

(a) Passage of a pipe through a separating wall if the pipe is not a flue pipe and has a diameter not exceeding 25mm if it is made of combustible material, and 150mm if it is made of non-combustible material.

(b) An opening which is necessary as a means of escape from fire if the opening is fitted with a fire door which has fire resistance not less than the period required for the separating wall.

(2) Any separating wall or fire wall which forms a junction with a roof shall be carried above the upper surface of the roof covering to a distance not less than 375 mm. A separating wall or fire wall shall not be required to comply with this requirement if:-

(a) the roofs being separated by the wall are of non-combustible construction;

(b) the buildings separated by the wall are residential, office or assembly buildings and do not exceed 12.5 meter in height.

(3) If any external wall is carried across the end of a separating or fire wall, such external wall and separating wall/fire wall shall be bounded together.

152. (1) Protected shafts shall be constructed only for stairway lift, escalator, chute, duct, or any other purposes which enable persons, things or air to pass between different compartments.

Protected Shafts.

(2) There shall be no opening in shaft enclosures except the following:-

(a) an opening for a pipe;

(b) an opening fitted with a door which has fire resistance of half an hour or not less than half the period required in table 'A' of Chapter 9 whichever is more.

(c) Any protected shaft containing a lift or lifts:

i) Shall be ventilated to external air by means of one or more permanent opening situated at the top of the shaft and having a total unobstructed area of not less than 0.1m² for each lift;

ii) shall not contain any pipe conveying oil or gas or any ventilating duct;

iii) may have an opening in its protective structure for passage of cables for the lift into the machine room provided that if the opening is at the bottom of the shaft the opening should be as small as practicable.

(d) If a protected shaft serves as or contains a ventilating duct, the duct shall not be constructed of, or lined with any material which increases the risk of spread of fire,

Fire
Resistant
Doors.

- (e) If a protected shaft consists of a stairway, it shall not contain any pipe conveying oil, gas or a ventilation duct.
- (f) A shaft that does not extend to the roof of a building shall be enclosed with top construction of the same strength and fire resistance as that of the shaft enclosure. Such shafts shall be provided with non-combustible vents for the relief of smoke and gases in the event of fire, with an area not less than 10% of the shaft area.
- (g) All shafts that extend to the roof of a building shall be ventilated by a window in the side of the shaft of not less than 75% of the area of the shaft. Such window shall not be located within three (3) meters of an interior property line, and its still level shall not be less than 0.8 meters above the finished roof level.

153. (1) Any fire resistant door shall, if exposed to a test by fire when fitted in its frame, satisfy the requirements as to freedom from collapse and resistance to passage of flame for not less than the relevant period required.

(2) The clearance between the leaf of the door and the frame, or between two leaves shall be as small as practicable.

(3) If two separate doors (whether single or double leaf door) are installed on opposite sides of an opening, the required fire resistance may be achieved by the two doors together or by either of them separately.

(4) Wired glass, if used in fire resistant doors, shall be of a maximum area of 0.1m^2 and shall not be less than 6mm thick.

Miscellaneous
Provisions.

154. (1) If any part of an opening in an external wall of building other than a private dwelling house, is directly above an opening in an adjoining storey, either:-

(a) The bottom of the upper opening shall be not less than 1 meter above the top of the lower opening and not less than half meter above the upper surface of the floor separating the storeys; or

(b) A horizontal projection of inflammable material is constructed between the two openings to project half meter from the wall.

(2) (a) Every garage in a private dwelling house shall be constructed of inflammable material having a fire resistance of not less than half an hour;

(b) An opening in wall separating the garage from the house shall at its lowest point be at least 10cm. above the level of the floor of the garage and shall be protected by a self-closing doors having a fire resistance not less than half an hour.

(3) (a) In premises with more than 400 persons seating capacity, the stage area shall be separated from the auditorium on either side of the proscenium opening by a fire resisting wall not less than 150mm thick of block masonry or its equivalent, carried down to a solid foundation and up to at least one meter above the roof level unless the roof is of fire resistance construction;

(b) Not more than two (2) openings shall be provided in the proscenium wall in addition to the proscenium opening such additional openings shall not exceed 2.0m^2 area each, and should be fitted with a door of minimum half an hour fire resistance;

(c) A fire resistant curtain shall be provided to the proscenium opening.

(4) (a) Cinematograph equipment shall be operated only within fire resistant enclosures located outside the auditorium;

(b) The enclosure shall be constructed to have minimum two (2) hours fire resistance;

(c) Two exits shall be provided to each enclosure. These shall be located outside the auditorium and fitted with self closing doors with minimum fire resistance of half an hour. The doors shall open outwards from the enclosure;

(d) There shall be a minimum number of openings between the projection enclosure and the auditorium and these shall be as small as practicable. Each such opening shall be fitted with a gravity shut of minimum half an hour fire resistance overlapping all edges of the openings, not less than 2.5 cm when closed. There shall be provided a suitable device to close all shutters simultaneously from any projector head or from a point outside each exit door;

(e) All enclosures shall be provided with adequate ventilation by suitable openings or shafts of inflammable construction which shall lead to open air.

- (5) (a) All steel and other metal structural members shall be protected with non-combustible materials to provide the required fire resistance;
- (b) Concrete fire protection on steel columns shall be reinforced and enclosed by wire mesh, metal clips or spirally wound wire of not less than 12 gauge size with a pitch not more than 10 cm;
- (c) Where the fire resistant covering on columns is subject to damage by moving vehicles or handling of merchandise, the fire proofing shall be enclosed upto a height of not less than one and half (1½) meters from the finished flooring with a suitable metal covering of adequate strength;
- (6) (a) All airconditioning and ventilation ducts including supports shall be constructed entirely of inflammable materials;
- (b) No airconditioning or ventilation duct shall pass through a fire wall or a separating wall;
- (c) Where ducts pass through floors or walls other than fire walls, or separating walls, the space around the duct shall be sealed with roped asbestos, mineral wool or other inflammable material to prevent the passage of flames and smoke.

CHAPTER — 10

DANGEROUS BUILDINGS.

155. For the purposes of this chapter all buildings, walls or structures which are structurally unsafe or which constitute a fire hazard, or 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, obsolescence or abandonment or improper design or poor construction as specified in the statute and in these regulations are for the purpose of this section, dangerous/ruinous or unsafe buildings.
156. All dangerous/ruinous/unsafe buildings shall be declared as hazardous to public safety and shall be repaired or demolished as per procedure specified in these regulations.
157. (1) The Controller of Buildings of the concerned Authority shall examine or cause to examine every building or structure or portion thereof reported as dangerous, will refer the matter to the Technical Committee specially constituted by the concerned Authority, comprising of two senior professional engineers of the Authority and the Controller or Buildings as members/Secretary of the committee.
- (2) The Controller of Buildings may give not less than twenty four hours notice to the owner/owners or occupiers (who need not be named) for inspection of such buildings.
- (3) If the above Technical committee finds such building dangerous/ruinous/unsafe after proper inspection and investigation, the Controller of Buildings shall give to the owner of such building or structure, a written notice stating the defects thereof on the prescribed form alongwith the notice and shall require the owner or person incharge of the building or premises to commence either the required repairs or improvements or demolition and removal of the building or structure or portion thereof as the case may be, and all such work shall be completed within the specified periods as stipulated by the Controller of Buildings upto a maximum limit of 90 days.
158. (1) If for any reason it shall appear to the concerned Authority that any building or part thereof intended or used for human habitation or human occupation for any purposes whatsoever is unfit for such uses, it shall signify its intention to prohibit the further use of such building or part of a building and call upon the owner or occupier to state in writing his objections (if any) to such prohibition within seven days after the receipt of such notice. If no objection is raised by such owner or occupier within the prescribed period or if any objection which

Definition of dangerous building.

Hazardous to public safety.

Technical committee.

Buildings unfit for human habitation and notice of prohibition.

is raised appears to the concerned Authority to be invalid or insufficient, the concerned Authority may prohibit by an order in writing the further use of such building or part thereof. The owner or occupier of the building shall be given an opportunity of appearing before the concerned Authority in person or by an agent in support of his objection.

(2) Notice of such prohibition shall be served in person or by Registered/AD mail or by posting at site in presence of two witnesses upon the owner of any building or part of a building affected thereby and also upon every occupier or user thereof (who need not be named) stating the fact of such prohibition and appointing a day (not being less than fourteen days after the date of such notice) before which every such person shall remove himself and his property from the said building or part thereof; and if on the day so appointed and such person has failed to remove himself and his property as aforesaid, the Concerned Authority may cause him and his property to be removed at his risk and cost or if the danger so imminent, 24 hour notice on prescribed Form may be issued by the Concerned Authority.

(3) When a building or part of a building has been vacated under sub-regulation (2) the concerned Authority shall cause to be displayed at each entrance to such building a notice to read "DO NOT ENTER, UNSAFE TO OCCUPY" and no person except with the permission in writing of the concerned Authority and in accordance with the terms and conditions of such permission, shall enter into or remain in such building or part of a building. Such notice shall remain displayed until the required repairs, demolition, or removal are completed, such notice shall not be removed without written permission of the concerned authority.

Alteration and repairs of dangerous building.

159. (1) At any time after a building or part of a building has been vacated under sub-section (2), if the concerned Authority considers that it can be rendered fit for human habitation by the structural alterations or repairs, the concerned Authority may by notice in writing call upon the owner to commence within such time as may be specified but not more than 30 days and to complete within the period as specified in the notice but not more than 90 days from the date of receipt of such notice,

such structural alterations or repairs, as it deems necessary and if at the expiration of the aforesaid period such alterations or repairs have not been commenced or completed to its satisfaction, the concerned Authority shall issue to the said owner a notice in writing ordering the demolition of thirty days from the date of receipt of such notice, or the concerned Authority may at its option repair such building at the owner's risk and cost.

(2) If the concerned Authority considers it impracticable to render such building or part thereof fit for human habitation, it may by notice in writing call upon the owner to demolish it within a period of thirty days or earlier as specified in the notice, from the date of issue of such notice.

160. If at the expiration of the period specified in the notice and order to demolish a building or part of a building, issued under regulation 159 has not been complied with, the concerned Authority may direct, by an order in writing, the demolition thereof by any officer or servant or approved contractor through proper notice inviting tenders of the concerned Authority. The credit if any, of the cost of such destruction and sale after appropriation, shall be paid to the owner after deducting the charges accrued to the concerned Authority for such destruction. In case the sale proceeds are insufficient to meet total charges of the concerned Authority for such destruction the same shall be recovered from the owner as land revenue.

Demolition of dangerous building on expiration of notice period.

Provided that, before such order is given, the owner of the building shall have an opportunity of appearing before the concerned authority in person or by agent, and of showing cause why such order should not be given.

161. (1) For sufficient cause, the concerned authority may extend the time allowed under, or prescribed by, regulation 159.

Extension of period.

(2) If any building or part of a building in respect of which an order under this section has been made is the subject of a lease, such lease shall be voidable at the option of the lessee with effect from the date on which the said order comes into force.

162. (1) If in the opinion of the concerned authority, any building wall, structure of anything affixed thereto is in a ruinous or dangerous state, the concerned Authority may, by notice in writing, require the owner or occupier thereof forthwith either to remove the same or to cause such repairs to be made thereto

Removal of building in ruinous or dangerous state.

as the concerned authority considers necessary for the public safety; and if the danger appears to be imminent, the concerned authority may forthwith take such steps as may be required to avert such danger, including the forcible removal without notice from such building of all the occupiers thereof and their property.

(2) Any expenses incurred by the concerned Authority under sub-regulation (1) shall be paid by the owner concerned.

(3) When the owner of any building, wall, structure or any thing affixed thereto fails to execute the repairs required of him by the concerned authority under sub regulation (1), the occupier of such building, wall, structure or anything affixed thereto may, with the previous approval of the concerned authority carry out such repairs, and without prejudice to any other right of recovery deduct the cost thereof from the rent which may become due and payable by him to the owner from time to time.

(4) Except with the permission in writing of the concerned authority no person shall enter into or remain in any building from which the occupier has been removed under sub regulation (1).

CHAPTER — 11

TEMPORARY WORKS IN CONNECTION WITH BUILDING OPERATIONS.

163. No person shall start building works on a site abutting on a street without having first provided hoarding or barriers to the satisfaction of the Concerned Authority along the whole length of such site so as to prevent danger or injury to the public or to the persons employed in the work; provided however that this regulation does not apply in the case of building works in connection with structures situated at least 4.5m away from a public street and being not more than 7.5m high.

Site
Hoardings.

164. No part of any street shall be used in connection with the construction, repair or demolition of any building except with the written permission of the Concerned Authority. Any person holding such permission shall put up and maintain to the satisfaction of the Concerned Authority, fences or barriers in order to separate the building work from such street.

Use of public
Streets

165. No materials or other things such as are used in buildings or otherwise shall be deposited in any street, without the written permission of the Concerned Authority.

Written permission for
use of street.

166. No excavation shall be made in any street, without written permission of the Concerned Authority and shall inform the T & T Department and electricity, gas, water, sewerage or other utility undertakings whose installations are likely to be affected. The person to whom it is issued shall inform them of the date of which he proposes to start the excavation. After excavation has been started the work shall be carried on expeditiously in accordance with good engineering practice. Any such excavation is to be sufficiently fenced to a height of at least 0.9m until it be filled up or otherwise made secure to the satisfaction of the Concerned Authority. At the expiration of the period of the permission the surface shall be made good to the satisfaction of and to the specification laid down by the Concerned Authority.

Utility Dep't.
to be informed
for excavation
of public
streets.

Utility services not to be obstructed.

167. All materials, hoardings, fences or other obstructions in any street shall be kept clear of hydrants and other utility service installations or alternative arrangements to the satisfaction of the Concerned Authority and precautions shall be taken to divert or keep clear of obstruction any roadside or other drain during the period of temporary obstruction.

Obstructions to be lit and marked.

168. Any person causing any building material or other things to be deposited any excavation to be made or any hoarding to be erected in any street shall at his own expense cause sufficient and adequate red lights to be fixed upon or near the same and shall continue such lights every night from sunset to sunrise while such materials, hoardings things or excavation remain. In addition red flags shall be provided during day time.

Dangerous obstructions.

169. If any material, hoarding, excavation or any other thing, in or near any street, be in the opinion of the Concerned Authority dangerous to the passengers along such street, the Concerned Authority shall cause the same to be removed, protected or enclosed so as to prevent danger there from and shall be entitled to recover the expense thereof from the owner of such materials or from the person who made such hoarding, excavation or other thing to become dangerous.

Cancellation of permission.

170. The Concerned Authority may give notice cancelling any permission issued by them for breach of any of the imposed conditions or for any other reason they may think fit and the person holding the permission shall within 7 days of the receipt of such notice have the hoarding, fence or materials removed and any excavation re-filled or otherwise made good.

Removal of obstructions after completion of works.

171. All obstructions and erections in any street shall be removed within 7 days of the completion of the work and the street and all drains and public utility installations shall be left in a clean, tidy and serviceable conditions.

172. An adequate timbering shall where necessary be provided and used to protect any person employed from a fall from a height exceeding 1.2m of earth, rock or other material forming the side of or adjacent to, any excavation or earth works.

Timbering.

173. No excavation or earthwork or demolition of a building which is likely to effect the stability of any building shall be started or continued unless adequate steps are taken before or during the work to prevent the collapse of any adjacent building or the fall of any part of it.

Stability of Adjacent buildings.

174. A site once excavated, shall not be kept open beyond period stipulated for completion of the work below ground level with the consent of the Concerned Authority falling which the Concerned Authority may cancel the approval or building plans and impose such fines as it may deem fit.

Filling of excavated site.

175. (1) Material shall not be placed or stocked near the edge of any excavation so as to endanger persons working below.

Loading edges of excavations.

- (2) No load shall be placed or moved near the edge of any excavation, where it is likely to cause a collapse of the side of the excavation and thereby endanger any person.

- (3) Where vehicles or machines are used close to any excavation there shall be provided measures to prevent the vehicles or machines from over running and falling into the excavation.

176. Every excavation which is more than 1.2m deep shall be inspected by an officer of the concerned Authority at least once every seven days, when it is open. There shall be a further inspection whenever a change in weather or other conditions is likely to have affected the stability of the sides.

Inspections of excavations.

177. (1) No building may be demolished without a written permission from the concerned Authority. No permit to demolish will be issued unless the concerned Authority is satisfied that the

Permit to demolish buildings.

electricity, gas, water, sewerage or other utility services connections to the plot have been effectively cut off and such connections shall remain cut off during the period of the work.

- (2) All applications for a permit to demolish a building shall be made on appropriate form and permission to demolish by the concerned Authority shall be issued on appropriate Form.

Supervision
of demolition
work.

178. The demolition of a building and the operations incidental thereto shall only be carried out under the direct supervision of a licensed Architect/Civil Engineer/Structural Engineer/Building Technologist/Building Supervisor.

Safe
loading.

179. No roof, floor or other part of the building shall be so overloaded during the process of demolition with debris or materials as to render it unsafe.

Scaffolds.

180. (1) Suitable and sufficient scaffolds shall be provided for all work that cannot safely be done from the ground or from part of the building or from a ladder or other available means of support and sufficient safe means of access shall be provided to every place at which any person has at any time to work.

- (2) Every scaffold and means of access and every part thereof shall be of good construction of suitable and sound material and of adequate strength for the purpose for which it is used, shall be properly supported and shall where necessary be sufficiently and properly strutted or braced to ensure stability. Unless designed as independent structures they shall be rigidly connected to a part of the building which is of sufficient strength to afford safe support.

- (3) Scaffoldings for heights more than 6 m shall be of steel pipes and damps etc and in no case wooden scaffolding shall be used for such heights.

- (4) All scaffolds, working platforms, gangways, runs and stairs shall —

- (a) be properly maintained;

- (b) be inspected by a competent person at least once in every seven working days after erection, alteration or extension, also after exposure to weather likely to have affected their strength or stability or to have displaced any part;

- (c) not be overloaded;

- (d) be kept free from unnecessary obstruction and from projecting nails.

- (5) Where a scaffold or part of a scaffold is to be used by or on behalf of any employer other than the employer of whose workmen it was erected, the first mentioned employer shall, before such use, and without prejudice to any other obligations imposed upon him by these regulations, take express steps, either personally or by a competent agent, to satisfy himself that the scaffold or part thereof is stable, that the materials used in its construction are sound and that the safeguards required by these regulations are in position.

181. Every working platform from which a person is liable to fall more than 2 m shall be —

Working
platforms.

- (1) at least 60 cm wide if the platform is used as a working platform only and not for the deposit of any material;

- (2) a clear passage-way at least 45 cm wide shall be left between one side of any working platform and any fixed obstruction or deposited materials.

182. Every side of a working platform, gangway and stair shall be provided with a suitable guard-rail or guard-rail of adequate strength, to a height of at least 1 m above the platform, gangway or steps.

Guard
rails.

Ladders.

183. (1) Every ladder shall be of good construction, sound material and adequate strength for the purpose for which it is used;

(2) Every ladder shall be securely fixed so that it can move neither from its top nor from its bottom points or rest;

(3) No ladder shall be used which has omission or defective rung.

Work on sloping roofs.

184. (1) Where work is done in the sloping surface of a roof suitable precautions shall be taken to prevent persons employed from falling off.

(2) Suitable and sufficient ladders or boards, which shall be securely supported, shall be provided and used:-

(a) where work is being done or on near roofs or ceiling covered with fragile materials through which a person is liable to fall;

(b) Where work-men have to pass over or work above such fragile materials.

(3) Where persons are employed in a position below the edge of a sloping roof and where they are in position of being endangered by work done on the roof, suitable precautions shall be taken to prevent tools or materials falling from such roofs so as to endanger such persons.

Precautions for raising or lowering loads.

185. For raising or lowering loads or for suspending them by either hand or power operation the following precautions shall be observed —

(1) No chain, rope or lifting gear shall be used unless it is of good construction, sound material, adequate strength, suitable quality and free from any defect.

(2) No wire rope shall be used if in any length of ten diameters the total number of visible broken wires exceed five per cent of the total number of wires in the rope.

(3) No chain shall be used which has been shortened or jointed to another chain by means of bolts and nuts.

(4) No chain or wire rope shall be used which has a knot tied in any part which is under direct tension.

(5) No hook shall be used unless it is either:-

— provided with an efficient device to prevent the displacement of the sling or load from the hook; or

— of such shape as to reduce as far as possible the risk of such displacement.

(6) No chain, ring, link, hook, shackle, swivel or eye-bolt which has been lengthened, altered or repaired by welding shall be used unless since such lengthening, alteration or repair has been examined, tested in a tensile testing machine and approved by a competent person, approved by the concerned authority.

(7) The area where a vertical hoist is used shall be enclosed by proper barrier.

186. (1) Every pulley block, winch and crane shall be inspected weekly by a competent person approved by the concerned authority.

Inspection of pulley block, winch and crane.

(2) Every rope or chain used for raising, lowering or suspending a load, and every item of lifting gear other than a pulley block, winch or crane shall be inspected once in 6 months by a competent person approved by the concerned authority.

187. (1) Every part of a load shall be securely fixed or supported while being raised, lowered or suspended and shall be adequately secured to prevent danger from sloping or displacement.

Secureness of loads.

(2) Every receptacle used for raising, lowering and suspending blocks, bricks, tiles or other objects shall be so designed and constructed as to prevent the accidental fall of such objects.

CHAPTER — 12:

LICENSING OF PROFESSIONALS (ARCHITECTS/CIVIL ENGINEERS/STRUCTURAL ENGINEERS/TOWN PLANNERS AND BUILDING SUPERVISORS).

Licensing
Committee
Meetings.

188. (1) Licensing shall be done by a Committee consisting of:

- | | |
|---|----------|
| (a) Director, MP & EC. | Chairman |
| (b) Controller of Buildings KDA. | Member |
| (c) Controller of Buildings KMC. | Member |
| (d) Controller of Buildings,
Karachi Cantonment Board. | Member |
| (e) One representative each from: | |
| i) Federation of Architects & Engineers, Pakistan. | |
| ii) Institute of Architects, Pakistan. | |
| iii) Institute of Engineers, Pakistan. | |
| iv) Institute of City & Regional Planning. | |

(2) The Committee shall preferably held its meetings once a month.

NOTE: This Licensing Policy for Architects, Engineers, Planners and others has been unanimously accepted by the Professional Bodies but this shall, however, come into force only after the Sind Building Control Ordinance, 1979, has been duly amended by the Government of Sind, for which recommendation is being made herewith.

Powers of the
Committee.

189. (1) The Committee shall scrutinize all applications and decide the cases in the light of these regulations.

(2) The Committee, before issuing a licence shall also see besides prescribed qualifications and experience, the capability of supervision of construction work by the applicant.

(3) The Committee shall interview the applicants before issuing the licence.

(4) (a) The Committee after receiving the applications for licence shall scrutinize and inspect the documents submitted and may:

- (i) sanction the grant of a licence, or
- (ii) reject the application, specifying the reasons therefore.

(b) The Committee shall hear the appeals against the suspension of licence orders issued by Controller of Buildings, of any authority.

190. No person shall practice as an Architect or Civil Engineer/Structural Engineer/Building Technologist/Building Supervisor and Town Planner for the purposes of these regulations except under a licence granted or deemed to have granted under these regulations.

Bar to practice without a licence.

191. (1) For purposes of this regulation, there shall be the following categories:-

Categorization of Architects and Engineers.

CATEGORY 'A'

An Architect/Civil Engineer of this category shall be entitled to undertake Architectural design and supervision of buildings and projects of all categories and types in accordance with the provisions of these regulations and rules framed thereunder.

CATEGORY 'B'

An Architect/Civil Engineer of this category shall be entitled to undertake Architectural designing and supervision of buildings and projects having maximum plot area of 334 m² and a climbing height upto 13 m and banglows upto 836 m² plot area in accordance with the provisions of these regulations and rules framed thereunder.

CATEGORY 'C'

An Architect/Civil Engineer of this category shall be entitled to undertake Architectural designing and supervision of buildings and projects on a maximum plot area of 200 m² and upto three storeys including ground floor, in accordance with the provisions of these regulations and rules framed thereunder.

Eligibility.

192. Any person desirous of applying for registration must hold the following qualifications/experience for the categories laid down as under :-

S. No.	Qualification and Experience	Category 'A'	Category 'B'	Category 'C'
i)	Fellow or Associate member of any Institute recognized by the International Union of Architects.	Eligible after 3 years practical experience in Planning design and building Construction including 6 months Practical exp. in Pakistan	Eligible after one years experience in Building Design and Planning	Eligible
ii)	Degree or 5 years diploma in Architecture from any recognized institution of Pakistan.	Eligible with 7 years total registration and practical experience as Category 'B' Architect.	Eligible 3 years total registration or and experience as Category 'C' Architect.	Eligible with 1 year practical experience in Planning Building and design and construction.
iii)	4 years diploma in Architecture from any recognized institution of Pakistan.	Eligible with 10 years total registration and practical experience as Category 'B' Architect.	Eligible with 4 years total registration and practical experience as Category 'C' Architect.	Eligible with 2 years practical experience in Planning and designing and construction of buildings after graduation.

S. No.	Qualifications and Experience	Category 'A'	Category 'B'	Category 'C'
B. Licensed Civil Engineer :				
i)	B.E/B.Sc. Civil Engineering from any recognized institution of Pakistan as registered with Pakistan Engineering Council.	Eligible with 7 years total registration and practical experience as Category 'B' Civil Engineer.	Eligible with 3 years total registration and practical experience as Category 'C' Civil Engineer.	Eligible with 1 year practical experience in Planning Design and building construction after graduation.
C. Established practitioners				
	who do not possess prescribed qualifications but have 20 years continued registration and licence as an Architect from any local authority in Karachi and practical experience in Planning Design and Building Construction.	Eligible	Eligible	Eligible
D. Building Technologist :				
i)	Established practitioners who do not possess prescribed qualifications but have more than 12 years and less than 20 years continued registration and licence as an Architect from any local authority in Karachi and practical experience in Planning, design and building construction.	Eligible	Eligible	Eligible
ii)	Established practitioners who do not possess prescribed qualifications but have more than 5 years and less than 12 years continued registration and licence as an Architect from any local authority in Karachi and practical experience in Planning design and Building construction.	Not Eligible	Not Eligible	Eligible

S. No.	Qualification and Experience	Category 'A'	Category 'B'	Category 'C'
E. Licensed Structural Engineer				
i)	M.Sc. Struct. E/D.I.C (Struct. E) or any other recognized post graduate equivalent qualifications in Structural Engineering and registered with Pakistan Engineering Council.	Eligible with 3 Years practical structural design experience in Category 'B'.	—	—
ii)	Degree in Civil Engineering of buildings and registered with Pakistan Engineering Council.	Eligible with 7 years total practical structural design experience as Category 'B' Structural Engineer.	Eligible with 3 years practical experience of sign of building.	Eligible
F. Building Supervisor:				
i)	Three years diploma course in Architecture/Draftsmanship/Overseer/ or diploma in Civil Engineering from any recognized institution of Pakistan.	Eligible to supervise Building and Construction work.		
ii)	Draftsman with 3 years practical experience in Building and Construction with a licensed architect.	—do—	—do—	—do—
iii)	Established practitioners who do not possess prescribed qualifications but have more than five years continued license as an Architect/licensed Engineer issued by any local authority, and having practical experience in Building and Construction.	—do—	—do—	—do—

OR

iv) Persons who have passed Matriculation and having an experience of Ten years in Building and Construction with a licensed Architect.

—do—

v) Persons studied upto Matriculation and having an experience of 15 years as Work Mistri in Building and construction with a licensed Architect.

—do—

193. For the purposes of these regulations, there shall be the following categories of Town planners:

Categorization of Town Planners.

CATEGORY 'A'

A Town Planner of this category shall be entitled to undertake Planning, designing and supervision of Town Planning projects of all categories and types in accordance with the provisions of these regulations and rules framed thereunder.

CATEGORY 'B'

A Town Planner of this category shall be entitled to undertake planning, designing, and supervision of town planning projects upto 20 Hectares within the area for which an outline has been set out by any concerned authority and in accordance with the provisions of these regulations and rules framed thereunder.

CATEGORY 'C'

A Town Planner of this category shall be entitled to undertake planning, designing and supervision of town planning project upto 4 Hectares within the area for which an outline has been set out by any concerned authority and in accordance with the provisions of these regulations and rules framed thereunder.

194. Any person desirous for the grant of Town Planner's licence must hold the following qualifications and experience for the categories, laid down as under :-

S. No.	Qualifications and Experience	Category 'A'	Category 'B'	Category 'C'
i)	Fellow of any institute recognized by the International Federation Housing and Planning (Den Hague, Holland).	Eligible	Eligible	Eligible
ii)	Post graduate degree or diploma at least 2 years duration in City and regional planning from a foreign institution recognized by the Government of Pakistan and an associate member of any institute recognized by International Federation for Housing and Planning, Den Hague, Holland).	Eligible after 5 years total practical exp. in Town Planning as Category 'B' licence holder.	Eligible after 2 years total practical exp. in Town Planning as Category 'C' licence holder.	Eligible
iii)	Degree in City and Regional Planning from any recognized institution of Pakistan.	Eligible after 7 years total practical exp. in Town Planning as Category 'B' licence holder.	Eligible after 3 years total practical exp. in Town Planning as Category 'C' licence holder.	Eligible
iv)	Diploma in Ekistics from the Centre of Ekistics, Athens.	Not Eligible	Eligible after 5 years total practical exp. as category 'C' licence holder.	Eligible after 2 years practical exp. in City and Regional Planning.
v)	Post graduate degree in Social Sciences with diploma or certificate in City and Regional Planning.	Not Eligible	Not Eligible	Eligible after 5 years practical exp. in City and Regional Planning.
vi)	Persons who do not possess prescribed qualifications but have more than 20 years practical experience in the field of City and Regional Planning.	Not Eligible	Not Eligible	Eligible after 20 years practical exp. in City and Regional Planning.

195. (1) Any person who fulfils the qualifications laid down in these regulations, may apply on appropriate form to the Director, Master Plan and Environmental Control Department, for the purposes of the grant of licence.

Application
for licence.

- (2) Every such application for licence shall be accompanied by a non-refundable fresh licence fee, payable in cash Rs. 100/- for all categories.

- (3) When an application for the grant of licence has been approved by the Committee, the applicant will be informed accordingly and he will be required to pay in cash licence fee of Rs. 500/- for 'A' category, Rs. 300/- for 'B' category, Rs. 200/- for 'C' category and Rs. 100/- for Building Supervisor or as may be prescribed from time to time.

196. (1) When an application for a licence has been approved by the Committee, a licence on prescribed form shall be issued to the applicant.

Issue of
Licence.

- (2) When an application for a licence has been rejected by the Committee, the Director MP & EC shall inform the applicant with reasons therefore on the prescribed form.

197. No application for licence in respect of serial C, D, F, III, IV, V applicable to non qualified persons to be registered on experience basis) under regulation No. 193 will be entertained after expiry of six months from the date of notification of these regulations, under any circumstances.

Issue of
Licence to
non-qualified
persons.

198. (1) The licence granted under these regulations, shall be valid till the 30th June of each calendar year.

Period of
Licence.

- (2) Architect's/Engineer/Town Planner's Licences granted by any local authority under the respective licencing regulations in force immediately before the commencement of these regulations, shall remain valid until the date of expiry thereof. After expiry, the application for licence shall be considered under these regulations.

Renewal of Licence.

199. (1) The application for renewal of licence granted or deemed to have been granted under these regulations shall accompany a fee payable in cash shall be Rs. 500/- for 'A' Category, Rs. 300/- for 'B' Category and Rs. 200/- for Category 'C' or as prescribed from time to time.

(2) The application for renewal of licence granted or deemed to have been granted under these regulations accompanied by such fee as may be prescribed shall be made to the Director, MP & EC on appropriate Form not latest than thirty days after the date on which the current licence is due to expire.

Promotion to higher category.

200. Any licensed Architect/Civil Engineer/Town Planner/Building Technologist/Structural Engineer who possess or attains the qualifications laid down in these regulations for promotion to a higher category may apply for promotion to the category.

Revocation of Licence.

201. Without prejudice to any other action that may be authorised under these regulations or any other statute, the licensing committee on the recommendations of the controller of Buildings of any local authority or on its discretion, own may revoke or suspend the licence if the licensee:-

(1) executes or supervises carelessly or negligently any work for which he has been engaged;

(2) executes or supervises any unauthorised work which is not in accordance with the provisions of these regulations.

(3) wilfully misrepresents or conceals any fact or make false statement to any local authority or suppresses the information of any material fact in obtaining the licence or in having plans approved by the concerned authority.

(4) disturbs, defies or breaks the discipline of any office of the local authority;

(5) proves to be incompetent or frequently prepares plans which are liable to refraction by the local authority or prepares plans in disregard to the provisions of these regulations or any other statute and the rules and schemes framed thereunder.

(6) contravenes any condition of licence, provided that a reasonable opportunity of showing cause shall be given to the licensee before any adverse order is passed against him under these regulations.

202. (1) Appeals against the decision of the licensing committee shall lie with the Government, whose decision shall be final.

Appeals against the decision of the licensing committee.

(2) The period of limitation for filing an appeal under these regulations shall be 30 days, from the date of receipt of orders.

SCHEDULE 'A'

Rates of Scrutiny Fees

(See Regulation No. 26)

- (i) The Scrutiny Fee shall be charged at 0.3% of the cost of construction for the plans to be scrutinized in accordance with the following schedule:
- (ii) Proposed built up area (in sq. meters) Cost of construction per sq. meters
- | | |
|-----------------------|-------------|
| Less than 1500 sq. m. | Rs. 600.00 |
| 1501 to 3000 sq. m. | Rs. 800.00 |
| Above 3000 sq. m. | Rs. 1200.00 |
- (iii) The cost of construction for all types of flats shall be estimated at Rs. 70 per sq. meter.
- (iv) The cost of industrial buildings shall be estimated at Rs. 60.00 per sq. meter.
- (v) The cost of compound wall shall be included at Rs. 100.00 per meter.
- (vi) The cost of peripheral retaining wall shall be estimated at Rs. 250.00 per square meter.

SCHEDULE 'B'

Safe bearing Capacity of different soils

(See Regulation No. 63)

S. No.	Description of soil	Bearing pressure	
		M/m ²	tons/ft ²
1.	Silt, alluvial earth etc.	0 to 0.8	0 to 2
2.	Clay		
	(a) soft or very soft	0.08	2
	(b) sandy firm	0.08 to 0.16	2 to 1½
	(c) stiff	0.16 to 0.3	1½ to 3
	(d) firm	0.08 to 0.16	2 to 1½
	(e) stiff	0.16 to 0.32	1½ to 3
	(f) hard shaley	0.32 to 0.65	3 to 6
	(g) very stiff (boulder)	0.32 to 0.53	3 to 6
	(i) sound yellow	0.32 to 0.53	3 to 5
	(j) blue	0.43 to 0.65	4 to 6
3.	Sand		
	(a) uniform: loose	0.10 to 0.21	1 to 2
	(b) compact	0.21 to 0.43	2 to 4
	(c) well graded loose	0.21 to 0.43	2 to 4
	(d) compact	0.43 to 0.65	4 to 6
4.	Gravel		
	(a) Sandy: loose	0.21 to 0.43	2 to 4
	compact	0.43 to 0.65	4 to 6
	(b) clean: loose	0.32	3
	compact	0.43 to 0.75	4 to 7
5.	Rock: chalk soft	0.16	1½
	hard	0.32 to 0.65	3 to 6
	(a) soft	0.21	2
	(b) moderately hard	0.53 to 1.07	5 to 10
	(c) hard	1.29	12

SCHEDULE C.P.1

WEIGHT OF MATERIALS

(See R. 68)

(i) LIQUID AND SEMI-LIQUIDS		KN/m ³	lb/ft ³
Acid:		10.4	66
Nitric		15.1	96
Sulphuric		18.1	115
Alcohol		7.9	50
Ammonia		8.8	56
Benzine, benzol		8.6	55
Bitumen (prepared)		13.7	87
Methylated spirit		8.2	52
Linseed oil		8.8	56
Milk		10.2	65
Mineral oils neptha		7.4	47
Paraffin (kerosene)		7.9	50
Petrol (gasolene)		6.9	44
Petroleum oil		8.6	55
Pulp (wood)		7.1	45
Slurry: Cement		14.1	90
Clay		11.9	76
Clay chalk		15.7	100
Sewage		9.7 to 11.8	62 to 75
Tar: pitch		11.8	75
Turpentine		8.5	54
Water fresh		9.81	62.4
Sea Water		10.05	64
(ii) SOLID AND PACKED MATERIALS			
Aluminium and alloy		27	170
Brick work		19	120
Concrete		23	144
(a) Unreinforced		24	150
(b) Reinforced		24 to 5.5	15 to 35
Cotton (in bales)		7.1	45
Flour in bulk		6.3	40
in sacks		26	168
Granite and marble		19	12
Gravel		9.5	57
Ice			

N = Newton
KN = Kilo-Newton

SCHEDULE 'C' P.2

	KN/m ³	lb/ft ³
Limestone	25	156
Sandstone	23	144
Sand (West)	20	127
Salt dry	9.4	60
loose	14.1	90
Saw dust	2.4	15
Sugar	7.9	50
Steel	77	490
Tea	4.4	28
Timber	8-11	50-70

(iii) FINISH MATERIALS

	N/m ²	lb/ft ²
Plaster	480	10
(25.4 mm) thickness		
Asbestos cement:		
(a) 1/4" (6.35 mm) plain	160	3 1/2
(b) Corrugated	100-170	2-3 1/2
Cement mortar per inch		
(25.4 mm) thickness	580	12
Doors (ordinary industrial type: Wooden)	380	8
Windows (Industrial type metal or wooden frame)	240	5 (av)
Galvanised Iron 24 gauge 3 inch (76.2 mm)	84	13
Corrugation		
Glass per 1/4" (6.35 mm) thickness	170	3 1/2
Roof Tiles		
(a) Terra W11a (french pattern)	580	12
(b) Concrete	530	11
Suspended metal and lath plaster	380	8

SCHEDULE 'D' P. 1

Uses and minimum imposed loads on floors
(See Regulation 70(1))

Use to which buildings or structure is to be put	Intensity of distributed load		Concentrated load to be applied unless other- wise stated over any square with a 300 mm (1-ft) side	
	KN/m ²	lb/ft ²	KN	lb
ART GALLERY				
ASSEMBLY BUILDINGS: such as public halls and theaters, but excluding drill halls, places of worship, schools and toilet rooms with fixed seating	4.0	83.5	—	—
without fixed seating	5.0	104	3.6	809
BALCONIES	Same as the rooms to which they give access	Same as the rooms to which they give access	1.5 per meter run concentrated at the edge	103 per foot run concentrated at the edge
BANKING HALLS	3.0	62.7	—	—
BEDROOMS:				
Domestic buildings	1.5	31.3	1.4	315
Hotels and motels	2.0	41.8	1.8	405
Institutional buildings	1.5	31.3	1.8	405
	2.0	41.8	2.7	603
BILLIARD ROOM:	7.5	157	to be de- termined	To be de- termined
BOILER ROOMS				
BOOK STORES	2.4 for each meter of storage height	15.3 for each foot of storage height	To be de- termined	To be de- termined
BROADCASTING STUDIO:				
Corridors	2.0	41.8	1.8	405
Dressing rooms	4.5 KN	308 lb	—	—
Fly galleries	per meter run uniform- ly distribut- ed over the width	per foot run uniform- ly distribut- ed over the width		

SCHEDULE 'D' P. 2

	5.0 for each meter of storage height with a minimum of 15.0	31.8 for each foot of storage height with a minimum of 31.3	To be de- termined	To be de- termined
COLD STORAGE				
Broadcasting Studios				
Grids	2.5	52.2	—	—
Stages	7.5	157	4.5	1,012
Studios	4.0	83.5	—	—
Toilet rooms	2.0	41.8	—	—
Bungalows	1.5	31.3	1.4	315
Cinemas	3.0	62.7	2.7	603
CLUBS				
Assembly areas with fixed seating	4.0	83.5	—	—
Assembly areas without fixed seating	5.0	104	3.6	809
Bedrooms	1.5	31.3	1.8	405
Billiard Rooms	2.0	41.8	2.7	603
Corridors	4.0	83.5	—	—
Dining rooms and Kitchens	To be de- termined but not less than	To be de- termined but not less than	To be de- termined but not less than	To be de- termined but not less than
	3.0	62.7	4.5	1,012
Laundries	3.0	62.7	4.5	1,012
Toilet Rooms	2.0	41.8	—	—
COLLEGES				
Assembly area with fixed seating	4.0	83.5	—	—
Assembly areas without fixed seating	5.0	104	3.6	809
Bedrooms	1.5	31.3	1.8	475
Classrooms	3.0	62.7	2.7	603

SCHEDULE 'D' P.3

COLLEGES				
Dining rooms corridors	4.0	83.5	—	—
Dormitories	1.5	31.3	1.8	405
Gymnasias	5.0	104	3.6	809
Kitchen	To be determined but not less than 3.0	To be determined but not less than 62.7	4.5	1,012
Laboratories including equipment	To be determined but not less than 3.0	To be determined but not less than 62.7	4.5	1,012
Stages	5.0	104	3.6	809
Toilet rooms	2.0	41.8	—	—
CORRIDORS				
HALL WAYS, PASSAGEWAYS, AISLES, PUBLIC SPACES AND FOOTBRIDGE BETWEEN BUILDINGS				
Buildings subject to crowd loading, except grandstands	4.0	83.5	4.5	1,012
Building subject to loads greater than from crowds, including wheeled vehicles, trolleys, and the like	To be determined but not less than 5.0	To be determined but not less than 104	To be determined but not less than 5.5	To be determined but not less than 1,012

SCHEDULE 'D' P.4

All other buildings.	Same as the rooms to which they give access	Same as the rooms to which they give access	Same as the rooms to which they give access	Same as the rooms to which they give access
DANCE HALLS	5.0	104	3.6	809
DEPARTMENTAL STORES				
Shops floors for the display and sale of merchandise	4.0	83.5	3.6	809
DORMITORIES	1.5	31.3	1.8	405
DRILL ROOMS AND DRILL HALLS				
	5.0	104	To be determined but not less than 9.0	To be determined but not less than 2,023
DRIVEWAYS AND VEHICLE RAMPS:				
Other than in garages for the parking only of passenger vehicles and light vans not exceeding 2,500 kg (2½ tons) gross weight	To be determined but not less than 5.0	To be determined but not less than 104	To be determined but not less than 9.0	To be determined but not less than 2,023
DWELLINGS	1.5	31.3	1.4	315
FACTORIES AND SIMILAR BUILDINGS				
	5.0	104	To be determined	To be determined
	7.5	157		
	Or	Or		
	10.0	209		
	as appropriate	as appropriate		
FILE ROOMS IN OFFICES				
	5.0	104	To be determined	To be determined
FLATS				
	1.5	31.3	1.4	315
FOOTPATHS, TERRACES AND PLAZAS leading from ground level				
	To be determined but not less than	To be determined but not less than	To be determined but not less than	To be determined but not less than

SCHEDULE 'D' P.5

GARAGES

Car parking only, for passenger vehicles and light vans not exceeding 2,500 kg. (2½ tons) gross weight including drive-ways and ramps.

All repair workshops for all types of vehicles and parking for vehicles exceeding 2,500 kg. (2½ tons) gross weight including driveways and ramps.

GRANDSTANDS

Assembly areas with fixed seating

Assembly areas without fixed seating

Corridors and passageways

Toilet rooms

GYMNASIA

Corridors, hallways and passageways

Dressing rooms

Fly galleries

Grids

Projection rooms

Stages

Toilet rooms

HOSPITALS

Bedrooms and wards
Corridors, hallways
and passageway (See
Corridors)

2.5	52.2	9.0	2,023
To be determined but not less than 500	To be determined but not less than 104	Worst possible combination of wheel loads	Worst possible combination of wheel loads
4.0	83.5	—	—
5.0	104	3.6	809
5.0	104	4.5	1,012
2.0	41.8	—	—
5.0	104	3.6	809
2.0	41.8	1.8	405
4.5 KN/m	308	—	—
per meter run uniformly distributed over the width	1bf per foot run uniformly run over the width	—	—
2.5	52.2	—	—
5.0	104	—	—
5.0	104	3.6	809
2.0	41.8	—	—
2.0	41.8	1.8	405

SCHEDULE 'D' P.6

Dining rooms

Kitchens

Laundries

Toilet rooms

Utility rooms

X-ray rooms and operating theatres

HOTELS AND MOTELS

Bar/ and vestibules

Bedrooms

Corridors, hallways and passageways

Dining rooms

Kitchens

Laundries

Lounges (See Public Lounges)

Toilet rooms

HOUSES

INDOOR SPORTING FACILITIES

Areas for equipment

Assembly areas with fixed seating

Assembly areas without fixed seating

4.0	83.5	—	—
To be determined but not less than 3.0	To be determined but not less than 62.7	4.5	1,012
3.0	62.7	4.5	1,012
2.0	41.8	—	—
2.0	41.8	4.5	1,012
2.0	41.8	4.5	1,012
5.0	104	—	—
2.0	41.8	1.8	405
4.0	83.5	—	—
To be determined but not less than 3.0	To be determined but not less than 62.7	4.5	1,012
3.0	62.7	4.5	1,012
2.0	41.8	—	—
1.5	31.3	1.4	315
To be determined but not less than 2.0	To be determined but not less than 41.8	To be determined	To be determined
4.0	83.5	—	—
5.0	104	3.6	809

SCHEDULE 'D' P.7

Corridors	2.0	41.8	1.8	405
Dressing Rooms	5.0	104	3.6	809
Gymnasia	2.0	41.8	—	—
Toilet rooms				
INSTITUTIONAL BUILDINGS				
Bedrooms	1.5	31.3	1.8	405
Kitchens Communal	To be determined but not less than 3.0	To be determined but not less than 62.7	4.5	1,012
LABORATORIES including equipment				
	To be determined but not less than 3.0	To be determined but not less than 62.7	To be determined but not less than 4.5	To be determined but not less than 1,012
LANDINGS				
	Same as the floors to which they give access	Same as the floors to which they give access	Same as the floors to which they give access	Same as the floors to which they give access
LAUNDRIES other than in domestic buildings excluding equipment	To be determined but not less than 3.0	To be determined but not less than 62.7	4.5	1,012
LIBRARIES:				
Reading rooms without book storage	2.5	52.2	4.5	1,012
Rooms with book storage (e.g. public lending libraries)	4.0	83.5	4.5	1,012
Stack rooms	2.4 for each metre stack height with a minimum of 6.5	15.3 for each foot of stack height with a minimum of 136	To be determined	To be determined

SCHEDULE 'D' P.8

Dense mobile stacking on mobile trucks	To manufacturer recommendations	To manufacturer recommendations	To manufacturer recommendations	To manufacturer recommendations
Corridors	4.0	83.5	4.5	1,012
Toilet rooms	2.0	41.8	—	—
MACHINERY HALLS				
circulation spaces therein	4.0	83.5	To be determined	To be determined
MAISONNETTES				
	1.5	31.3	1.4	315
MOTOR ROOMS, FAN ROOMS:				
and the like, including weight of machinery	To be determined but not less than 7.5	To be determined but not less than 157	To be determined	To be determined
MUSEUM FLOORS AND ART GALLERIES for exhibition purposes				
	To be determined but not less than 4.0	To be determined but not less than 83.5	To be determined	To be determined
OFFICES:				
Corridors and public spaces	5.0	104	To be determined	To be determined
Filing and storages spaces				
Offices for general use	2.5	52.2	2.7	603
Offices with computing data processing and similar equipment	3.5	73.1	To be determined	To be determined
Toilet rooms	2.0	41.8	—	—
PLACES OF WORSHIP				
	3.0	62.7	2.7	603

SCHEDULE 'D' P. 9

PUBLIC LOUNGES	5.0	104	—	—
RESIDENTIAL BUILDINGS				
such as apartment houses, boarding houses, guest houses, hostels, lodging houses and residential clubs, but excluding hotels and motels	1.5	31.3	1.8	405
Bedrooms	To be determined but not less than 3.0	To be determined but not less than 62.7	4.5	1,012
Communal kitchens				
Roof with access (flat or slope 10°)	1.5	31.3	1.8	405
Roof without access	75	15.7	0.9	202
Corridors, hallways and passageways				
Dining rooms and public rooms	4.0	83.5	—	—
Dormitories	1.5	31.3	1.8	405
Laundries	3.0	62.7	4.5	1,012
Toilet rooms	2.0	41.8	—	—
SHOP FLOORS for the display and sale of merchandise	4.0	83.5	3.6	809
STAIRS:				
Dwellings not over 3 storeys	1.5	31.3	1.8	405
All other buildings:	Same as the floors to which they give access but not less than 3.0 and not more than 5.0	Same as the floors to which they give access but not less than 62.7 and not more than 104	Same as the floors to which they give access	Same as the floors to which they give access

SCHEDULE 'D' P. 10

STATIONERY STORES	4.0 for each metre of storage height	25.5 for each foot of storage height	To be determined	To be determined
STORAGE other than types listed separately	To be determined but not less than 2.5 for each metre of storage height	To be determined but not less than 15.3 for each foot of storage height	To be determined	To be determined
WORKROOMS LIGHT without storage	2.5	52.2	1.8	405

SCHEDULE 'E'

HORIZONTAL LOADS ON PARAPETS AND BALUSTRADES

(See Regulation No. 75)

USE	Intensity of Horizontal Loads acting at level of hand rail or coping		
	N/m run	Kgf Rs. m/ run	lbf/ft. run
Light access stairs, gangways and the like, not more than 600 mm (2 ft.) wide	220	22.4	15.0
Light access stairs, gangway & the like more than 600 mm (2 ft.) wide, stairways, landings and balconies, private and domestic	360	36.7	24.6
All other stairways, landings and balconies and all parapets and handrails to roof	740	75.5	50.7
Panic barriers	3,000	306	206
Guard parapets on floors of multistoreyed car parks	1,470 N/m (150 kgf/m; 100 lbf/ft) or point load of 9,964 N (1,016 kgf; 1 ton f) whichever is greater applied at 0.9 m (3ft.) height minimum.		

SCHEDULE 'F'

MINIMUM WIDTH OF STRIP FOUNDATIONS
(See Regulation 88)

(1) Type of Subsoil	(2) Condition of subsoil	(3) Field Test Applicable	(4) Minimum width in cm for total load in tons per linear meter of load-bearing walling of not more than						
			$\frac{1}{2}$ Ton	$\frac{1}{2}$ ton	1 ton	$1\frac{1}{2}$ tons	$1\frac{1}{2}$ tons	2 tons	
I-Rock	Not inferior to sandstone limestone or firm chalk	Requires at least a pneumatic or other mechanically operated pick for excavation	In each case equal to width of wall						
II-Gravel Sand	Compact	Requires pick for excavation 2 inch wooden peg hard to drive more than a few inches	9	9	12	15	18	21	24
III-Clay Sandy Clay	Stiff	Cannot be moulded with the fingers and requires a pick or pneumatic or other mechanically-operated spade for its removal	9	9	12	15	18	21	24
IV-Clay Sandy Clay	Firm	Can be moulded by substantial pressure with the fingers and can be excavated with spade	10½	13	15	18	22½	27	30
V-Sand Silty Sand Clayey Sand	Loose	Can be excavated with a spade 2 inch wooden peg can be easily driven	12	18	24				
VI-Silt Clay Sandy Clay Silty Clay	Soft	Fairly easily moulded in the fingers and readily excavated	14½	21	27				
VII-Silt Clay Sandy Clay Silty Clay	very Soft	Natural sample exudes between fingers when squeezed in fist	To be determined						

Requires at least a pneumatic or other mechanically operated pick for excavation

Requires pick for excavation 2 inch wooden peg hard to drive more than a few inches

Cannot be moulded with the fingers and requires a pick or pneumatic or other mechanically-operated spade for its removal

Can be moulded by substantial pressure with the fingers and can be excavated with spade

Can be excavated with a spade 2 inch wooden peg can be easily driven

Fairly easily moulded in the fingers and readily excavated

Natural sample exudes between fingers when squeezed in fist

SCHEDULE 'G' P. 1

PERIODS OF FIRE RESISTANCE
(See Regulation — 150)

In this Table:

- (a) "Class 1 aggregate" means crushed lime stone, crushed brick and burnt clay products.
"Class 2 aggregate" means gravel, granite, and all crushed natural stones other than limestone.

(b) Any reference to plaster means:

- (i) in the case of an external wall 1m or more from the relevant boundary, plaster applied on the internal face only;
(ii) in the case of any other wall, plaster applied on both faces;
(iii) if to plaster of a given thickness on the external face of a wall, except in the case of a reference to vermiculite-gypsum or perlite-gypsum plaster, rendering on the external face of the same thickness;

(c) Load assumed to be on inner leaf only except for fire resistance period of four hours.

A. R.C.C. and Masonry Construction

PART 1: WALLS

Construction and materials	Minimum thickness excluding plaster (in mm) for period of fire resistance of									
	Loadbearing					Non loadbearing				
	4 hrs.	2 hrs.	1½ hrs.	1 hrs.	1½ hrs.	4 hrs.	2 hrs.	1½ hrs.	1 hrs.	1½ hrs.
1. Reinforced concrete, minimum concrete cover to main reinforcement of 25 mm;										
(a) unplastered	180	100	100	75	75					
(b) 12.5 mm cement-sand plaster	180	100	100	75	75					
(c) 12.5 mm gypsum sand plaster	180	100	100	75	75					

SCHEDULE 'G' P. 2

PART 1: WALLS - continued

A. R. C. C. and Masonry Construction

Construction and materials	Minimum thickness excluding plaster (in mm) for period of fire resistance of									
	Loadbearing									
	4 hrs.	2 hrs.	1½ hrs.	1 hrs.	1½ hrs.	4 hrs.	2 hrs.	1½ hrs.	1 hrs.	1½ hrs.
3. Bricks of clay, concrete or sand lime										
(a) unplastered	200	100	100	100	100	170	100	100	75	75
(b) 12.5 mm cement-sand plaster	200	100	100	100	100	170	100	100	75	75
(c) 12.5 mm gypsum sand plaster	200	100	100	100	100	170	100	100	75	75
4. Concrete blocks of Class 1 aggregate:										
(a) unplastered	150	100	100	100	100	100	75	75	75	50
(b) 12.5 mm cement-sand plaster	150	100	100	100	100	100	75	75	75	50
(c) 12.5 mm gypsum sand	150	100	100	100	100	100	75	75	75	50
5. Concrete blocks of Class 2 aggregate:										
(a) unplastered	100	100	100	100	150	100	100	100	75	50
(b) 12.5 mm cement-sand plaster	100	100	100	100	150	100	100	100	75	50
(c) 12.5 mm gypsum sand plaster	100	100	100	100	150	100	100	100	75	50
6. Hollow concrete blocks one cell in wall thickness of Class 1 aggregate:										
(a) unplastered	100	100	100	100	150	100	100	100	75	
(b) 12.5 mm cement sand plaster	100	100	100	100	150	100	75	75	75	
(c) 12.5 mm gypsum sand plaster	100	100	100	100	150	100	75	75	75	

SCHEDULE 'G' P.3

PART 1: WALLS - Continued

A. R. C. C. and Masonry Construction

Construction and materials	Minimum thickness excluding plaster (in mm) for period of fire resistance of							
	Loadbearing							
	4	2	1½	1	4	2	1½	1
	hrs.	hrs.	hrs.	hrs.	hrs.	hrs.	hrs.	hrs.
7. Hollow concrete blocks, one cell in wall thickness, of Class 2 aggregate:								
(a) Unplastered					150	150	125	125
(b) 12.5 mm cement-sand plaster					150	150	125	125
(c) 12.5 mm gypsum sand plaster					150	150	125	100
8. Cellular clay block not less than 50% solid:								
(a) 12.5 mm cement sand plaster							100	75
(b) 12.5 mm gypsum sand plaster							100	75
9. Cavity wall with outer leaf of bricks or blocks of clay, composition, concrete or sand-lime, not less than 100 mm thick and:								
(a) inner leaf of bricks or blocks of clay, composition concrete or sand lime	100	100	100	100	100	75	75	75
(b) inner leaf of solid or hollow concrete bricks per blocks of Class 1 aggregate:	100	100	100	100	100	75	75	75

Perlite gypsum plaster to clay bricks only.

SCHEDULE 'G' P.4

PART 1: WALLS - continued

B. (Composite Construction (non-Load Bearing) Construction and materials	Period of fire resistance in hours
1. Steel frame with external cladding of 100 mm concrete blocks and internal lining of 16 mm gypsum plaster on metal lathing	4
2. Steel frame with external cladding of bricks of clay, concrete or sand-lime 100 mm thick and internal lining of asbestos insulating board of thickness of 9 mm	3
3. Steel frame with external cladding of 16 mm rendering on metal lathing and internal lining of —	
9 mm asbestos insulating board	½
16 mm gypsum plaster on metal lathing	1
4. Steel or timber frame with facing on each side of —	
(a) metal lathing with cement-sand or gypsum plaster of thickness of —	
19 mm	1
12.5 mm	½
(b) metal lathing with vermiculite-gypsum or perlite — gypsum plaster or thickness of —	
25 mm	2
19 mm	1½
12.5 mm	1
(c) 9.5 mm plasterboard with gypsum plaster of thickness of 5 mm	½
(d) 9.5 mm plasterboard with vermiculite-gypsum plaster of thickness of —	
25 mm	2
16 mm	1½
10 mm	1
5 mm	½
(e) 12.5 mm plasterboard —	
Unplastered	½
with gypsum plaster of thickness of 12.5 mm	1

SCHEDULE 'G' P.5

PART I: WALLS - continued

B. Framed and composite construction (non-loadbearing) — continued

Construction and materials	Period of fire resistance in hours
(f) 19 mm plasterboard (or two layers of 9.5 mm fixed to break joint) without finish	1
(g) 12.5 mm fibre insulating board with gypsum plaster of thickness of 12.5 mm	1
(h) asbestos insulating board not less than 9 mm thick with 9 mm fillets to face of studs	1
(i) asbestos insulating board not less than 12 mm thick	1
(j) 25 mm wood wool slabs with gypsum plaster of thickness of 12.5	1
5. Compressed straw slabs in timber frames finished on both faces with gypsum plaster of thickness of 5 mm	1
6. Plasterboard 12.5 mm cellular core partition —	
(a) unplastered	1
(b) 12.5 mm gypsum plaster	1
(c) 16 mm vermiculite-gypsum plaster	2
7. Plasterboard 19 mm finished on both faces with 16 mm gypsum plaster	1
8. Compressed straw slabs, with 75 mm by 12.5 mm wood cover strips to joints, of thickness of 50 mm	1
C. External walls more than 1 m from the relevant boundary (non-load-bearing)	
1. Steel frame with external cladding of non-combustible sheets and internal lining of —	
(a) 9 mm asbestos insulating board	4
(b) 12.5 mm cement-sand or gypsum plaster on metal lathing	4
(c) sprayed asbestos of thickness of 12.5 mm	4
(d) two layers of 9.5 mm plasterboard	1
(e) 9.5 mm plasterboard finished with gypsum plaster of thickness of 12.5 mm	1
(f) 12.5 mm plasterboard finished with 5 mm gypsum plaster	1
(g) 50 mm compressed straw slabs	1
(h) 50 mm compressed straw slabs finished with 5 mm gypsum plaster	1

SCHEDULE 'G' P.6

PART II: REINFORCED CONCRETE COLUMNS

Construction and materials	Minimum dimension of concrete column* without finish (in mm) for a fire resistance of —				
	4 hrs.	2 hrs.	1½ hrs.	1 hrs.	½ hrs.
1. (a) without plaster	450	300	250	200	150
(b) with 12.5 mm cement-sand or gypsum-sand plaster on mesh reinforcement fixed around column	300	225	150	150	150
(c) with limestone or light-weight aggregate as coarse aggregate	300	225	200	200	150
2. Built into any separating wall, fire wall or external wall					
(a) without plaster	180	100	100	75	75
(b) finished with 12.5 mm of cement or gypsum sand plaster	150	100	75	70	70

* The minimum dimension of a circular column is the diameter.

+ No part of column projecting beyond either face of wall.

+ Having not less fire resistance than that of the column and extending to the full height of, and not less than 600 mm on each side of, the column.

PART III: REINFORCED CONCRETE BEAMS

Construction and material	Minimum concrete cover without finish to main reinforcement (in mm) for a fire resistance of —				
	4 hrs.	2 hrs.	1½ hrs.	1 hrs.	½ hrs.
(a) without plaster					
(b) with 12.5 mm cement-sand or gypsum-sand plaster on mesh reinforcement fixed around beam	63	45	35	25	12.5
	50	30	20	12.5	12.5

SCHEDULE 'G' P.7

PART IV: PRESTRESSED CONCRETE BEAMS WITH POST-TENSIONED STEEL — continued

Cover reinforcement	Additional protection	Minimum concrete cover to tendons (in mm) for a fire resistance of —			
		4 hrs.	2 hrs.	1½ hrs.	1 hrs.
None	(a) none				38
	(b) plaster 12.5 mm thick on mesh reinforcement fixed around beam		50	38	25
	(c) sprayed asbestos 10 mm thick		38	25	25
Light mesh reinforcement (having a minimum concrete cover of 25 mm) to retain the concrete in position around the tendons	(a) none	100	63	63	
	(b) plaster 12.5 mm thick on mesh reinforcement	90			
	(c) sprayed asbestos 10 mm thick	75			
	(d) sprayed asbestos 19 mm thick	50			

SCHEDULE 'G' P.8

PART V: STRUCTURAL STEEL TRAYS

A. Encased steel stanchions (Mass per meter not less than 45 kg) —

Construction and materials	Minimum thickness (in mm) of protection for a fire resistance of —				
	4 hrs.	2 hrs.	1½ hrs.	1 hrs.	½ hrs.
(A) Solid Protection* (unplastered)					
1 Concrete not leaner than 1:2:4 mix with natural aggregates —					
(a) concrete not assumed to be loadbearing reinforced	50	25	25	25	25
(b) concrete assumed to be loadbearing, reinforced in accordance with BS 449: Part 2: 1960	75	50	50	50	50
2 Solid bricks of clay, composition or sand lime	75	50	50	50	50
3 Solid blocks of foamed slag or pumice concrete reinforced in every horizontal joint.	62	50	50	50	50
(B) Hollow Protection†					
1 Solid bricks of clay, composition or sand lime reinforced in every horizontal joint, unplastered	115	50	50	50	50
2 Solid blocks of foamed slag or pumice concrete reinforced in every horizontal joint unplastered	75	50	50	50	50
3 Gypsum plasterboard with 1.6 mm wire binding at 100 mm pitch —					
(a) 9.5 mm plasterboard with gypsum plaster of thickness of			12.5	12.5	
(b) 10 mm plasterboard with gypsum plaster of thickness of		12.5	10	7	7

* Solid protection means a casing which is bedded close to the steel without intervening cavities and with all joints in that casing made full and solid.

† Reinforcement shall consist of steel binding wire not less than 2.3 mm in thickness, or a steel mesh weighing not less than 0.48 kg/m². In concrete protection, the spacing of that reinforcement shall not exceed 150 mm in any direction.

+ Hollow protection means that there is a void between the protective material and the steel. All hollow protection to columns shall be effectively sealed at each floor level.

+ Light mesh reinforcement required 12.5 mm to 19 mm below surface unless special corner beads are used.

SCHEDULE 'G' P. 9.

PART V: STRUCTURAL STEEL — continued

A. Encased steel stanchions (Mass per meter not less than 45 kg) — continued

Construction and materials	Minimum thickness (in mm) of protection for a fire resistance of —				
	4 hrs.	2 hrs.	1½ hrs.	1 hrs.	½ hrs.
A. Asbestos insulating boards of density 510-880 kg/m ³ (screwed to 25 mm thick asbestos battens for ½ hour and 1 hour periods)		25	19	12	9

B. Encased steel beams (Mass per meter not less than 30 kg) —

Construction and materials	4 hrs.	2 hrs.	1½ hrs.	1 hrs.	½ hrs.
(A) Solid Protection + (unplastered)					
1. Concrete not leaner than 1:2:4 mix with natural aggregate —					
(a) concrete not assumed to be loadbearing, reinforced +	63	25	25	25	25
(b) concrete assumed to be loadbearing, reinforced in accordance with BS 449: Part 2: 1969	75	50	50	50	50
Hollow Protection					
1. Metal lathing —					
(a) with cement-lime plaster of thickness of		38	25	19	12.5
(b) with gypsum plaster of thickness of		22	19	16	12.5*

* Hollow Protection means that there is a void between the protective material and the steel. All hollow protection to columns shall be effectively sealed at each floor level.

+ Solid protection means a casing which is bedded close to the steel without intervening cavities and with all joints in that casing made full and solid.

+ Reinforcement shall consist of steel binding wire not less than 2.3 mm in thickness, or a steel mesh weighing not less than 0.48 kg/m² in concrete protection, the spacing of that reinforcement shall not exceed 150 mm in any direction.

SCHEDULE 'G' P. 10

PART V: STRUCTURAL STEEL

B. Encased steel beams (Mass per meter not less than 30 kg) continued

Construction and materials	Minimum thickness (in mm) of protection for a fire resistance of —				
	4 hrs.	2 hrs.	1½ hrs.	1 hrs.	½ hrs.
(B) Hollow Protection* — continued					
2. Gypsum plasterboard with 1.6 mm wire binding at 100 mm pitch —					
(a) 9.5 mm plasterboard with gypsum plaster of thickness of				12.5	12.5
(b) 19 mm plasterboard with gypsum plaster of thickness of		12.5	19	7	7
3. Plasterboard with 1.6 mm wire binding at 100 mm pitch —					
(a) 9.5 mm plasterboard nailed to wooden cradles finished with gypsum plaster of thickness of					
(b) 19 mm plasterboard with gypsum plaster of thickness of		12.5			12.5
4. Asbestos insulating boards of density 510-880 kg/m ³ (screwed to 25 mm thick asbestos battens for ½ hour and 1 hour periods)		25	19	12	9
5. Gypsum-sand plaster 12.5 mm thick applied to heavy duty (Type B as designated in BS 1105: (1963) wood wool slabs of thickness of	50	38	38	38	38

* Hollow protection means that there is a void between the protective material and the steel. All hollow protection to columns shall be effectively sealed at each floor level.

+ Light mesh reinforcement required 12.5 to 19 mm below surface unless special corner beads are used.

SCHEDULE 'G' P. 11

PART VIII: CONCRETE FLOORS

Construction and materials	Minimum thickness of solid substance including screed	Ceiling finish for a fire resistance of				
		4 hrs.	2 hrs.	1 1/2 hrs.	1 hrs.	1/2 hrs.
Solid flat slab or filler joist floor. Units of channel or T Section	90	25 mm	10 mm	10 mm	7 mm	nil
		25 mm A	12.5 mm A	12.5 mm A	7 mm A	nil
		19 mm A	7 mm	7 mm	nil	nil
	100	10 mm A				
	125	10 mm	nil	nil	nil	nil
Solid flat slab or filler joist floor with 25 mm wood wool slab ceiling base		12.5 mm A				
	150	nil	nil	nil	nil	nil
	90			12.5 mm G	nil	nil
	100	nil	nil	nil	nil	nil
Hollow block construction or units of box or I section				nil	nil	nil
	75			nil	nil	nil
	90	nil	nil	nil	nil	nil
	125	nil	nil	nil	nil	nil

"A" — Sprayed asbestos in accordance with BS 3590:

1970. "G" — gypsum plaster

Note: Where a column relating to ceiling finish contains no entry opposite a specification, the notational period of fire resistance specified in that column is not applicable.

SCHEDULE 'H' P. 1

CONVERSION TABLES

Inches	Centimeters
1.	2.54
2.	4.08
3.	7.62
4.	10.16
5.	12.70
6.	15.24
7.	17.78
8.	20.32
9.	22.86
Feet	Meters
1.	0.304
2.	0.609
3.	0.914
4.	1.219
5.	1.524
6.	1.828
7.	2.133
8.	2.438
9.	2.743
Yards	Meters
1.	0.914
2.	1.828
3.	2.743
4.	3.657
5.	4.572
6.	5.486
7.	6.400
8.	7.135
9.	8.229
Pounds	Kilograms
1.	0.453
2.	0.907
3.	1.360
4.	1.814
5.	2.267
6.	2.721
7.	3.175
8.	3.628
9.	4.082

SCHEDULE 'H' P 2

CONVERSION FACTORS

Acre = 0.4047 hectare
Centimeter = 0.393 inch
Cubic centimeter = 0.61 cubic inch
Cubic foot = 0.0283 cubic meter
Cubic meter = 35.314 cubic feet
Foot = 0.3048 meter
Gallon = 0.00378 cubic meter; 3.785 liters
Hectare = 2.471 acres
Inch = 2.54 centimeter
Kilogram = 2.204 pounds
Kilometer = 0.621 mile
Kilo Newton (KN) = 224.8 lbf
Liter = 0.264 gallon
Meter = 1.093 yards
Mile = 1.609 kilometer
Newton (N) = 0.225 lbf
Pounds = 0.453 kilogram
Radian = 57.29 degree
Square Centimeter = 0.155 square inch
Square feet = 0.093 square meter
Square inch = 645.16 square millimeter
Square meter = 10.764 square feet
quare Yard = 0.836 square meter
Ton (Short) = 907.18 kilograms
Ton (Long) = 1014.72 kilograms
Yard = 0.914 meter.

NAME OF THE CONTROLLING AGENCY

KARACHI

DATE OF DELIVERY:

APPLICATION FOR APPROVAL OF PLANS
(See Section No. 7)

The Controller of Buildings

1. I/We hereby apply for permission to erect/re-erect/make additions to and/or alterations in a building on plot No. Karachi in accordance with the Building Plans submitted herewith for approval. Necessary particulars are given below and certified to be true:

1. Plot held from
2. Reference of title deed
3. Intended use of proposed building
4. Description of the proposed building works

2. Mr. Licensed Architect/Engineer holding licence No. category is hereby authorized by me/us to do all things required to be done under the Karachi Building and Town Planning Regulations, 197 on my/our behalf.

3. I/We undertake that I/We shall be personally held responsible for any violation of the Karachi Building and Town Planning Regulations, 197 /conditions if any, accompanying the approval of the Plan/Plans.

KARACHI

Sig. Owner/Attorney

Dated:

Address:

Particulars/Enclosures

1. Five copies of proposed plan (in case of plot held from any society please get the plans forwarded and stamped by the Society).
2. Receipt of payment of Scrutiny fee.
3. Copies of allotment order/transfer letter.
4. Receipt of payment of last instalment.
5. Copy of lease deed/sale deed/Sanad, if any.
6. Copy of site plan.
7. F.T.O. and sub-division plan from Settlement Deptt. if any.
8. Copy of Power of Attorney in case the owner is not submitting the plans himself.
9. Acknowledgement of Possession Order.
10. Certified copies of extract and sketches from KMC/CDC in duplicate, in case of city's plots.
11. Copy of previous approved plan, if any with No. and date.

FORM NO. 2

LICENSED ARCHITECT/CIVIL ENGINEER'S CERTIFICATE

(See Section No. 8 (2))

(To be accompanied with Form No. 1)

This is to certify that the building plans submitted by _____
 _____ for plot No. _____ have been
 prepared by me/us and that I/We undertake to supervise the proposed
 construction as per specifications submitted herewith in triplicate as re-
 quired under regulation No. 10 & 11 of Karachi Building and Town Plan-
 ning Regulations 197 . I/We further undertake that if I/We discontinue
 supervision of the work, I/We shall give immediate intimation thereof, as
 required under the above regulations.

LICENCED ARCHITECT/CIVIL ENGINEER/
 KARACHI; STRUCTURAL ENGINEER/BUILDING TECHNOLOGIST.

DATED: LICENCE NO. _____
 WITH CATEGORY _____

SPECIFICATIONS:

1. Nature of soil below foundation.
2. Specification of foundation.
3. Specification of plinth.
4. Specification of super structure.
5. Specification of floor.
6. Specification of roof.
7. Method of drainage and sewerage.
8. Kind of slab.

FORM NO. 3

CERTIFICATE

(See Section 8 (2))

The Controller of Buildings,

Karachi

It is certified that the following building work on Plot No. _____
 _____ situated at _____ has been car-
 ried out under my supervision and to my entire satisfaction.

Description of the work

Name and Signature

Licence No.

- 1.
- 2.
- 3.

Copy to:-

Owner

FORM NO. 4

NOTICE OF DISCONTINUANCE

(See Section No. 8 (3))

To,

The Controller of Buildings,

Karachi.

I hereby give notice of my discontinuance from the building works
 as the Licensed Architect/Civil Engineer/Town Planner/Building Technolo-
 gist from the date mentioned above from Plot No. _____
 situated at _____.

Name and Signature

Licence No.

NAME OF THE CONCERNED AUTHORITY

KARACHI BUILDING AND TOWN PLANNING REGULATIONS, 1979

VERIFICATION OF BUILDING LINES
(See Section No. 18)

To,

The Controller of Buildings,

Karachi.

I/We hereby inform that the first course of plinth foundation of the basement for building.

On Plot No. _____

Survey Sheet _____

Quarter _____

has been laid. You are, therefore, requested to depute a representative to verify the building line so as to enable me/us to carry out the building work.

OWNER/S

Address _____

Karachi _____

(dated)

ARCHITECT'S CERTIFICATE

I/We hereby certify that the setting out of building/s for Plot No. _____ has been carried out in accordance with the approved plan/s.

Licensed Architects/
Civil Engineer/
Building Technologist

Licence No. _____

NAME OF CONTROLLING AGENCY

NOTICE OF COMPLETION

(See Section No. 22).

KARACHI BUILDING AND TOWN PLANNING REGULATIONS, 1979

To,

Karachi.

The Controller of Buildings,

(Date of delivery at _____)

I/We hereby give notice of completion of Building/Additions and alterations in the building on Plot No. _____

and of drainage and water arrangement therein, and apply for permission for occupation of the said building.

*The said work has been carried out in accordance with the Building Plans approved vide No. _____

Dated _____

*Strike if not applicable.

OWNER/S

Address _____

Karachi the _____ 197.

ARCHITECT'S CERTIFICATE

I hereby certify that the Building/Additions & Alterations in the building on Plot No. _____

completed/partly completed under my supervision and to my satisfaction in accordance with the building plans approved vide No. _____

Dated _____

Licensed Architect/Civil Engineer/
Structural Engineer/Building Technologist.

Licence No. _____
with category.

Address _____

NAME OF CONTROLLING AGENCY

KARACHI BUILDING AND TOWN PLANNING REGULATIONS 1979
REGULARIZATION OF WORKS CARRIED OUT WITHOUT PERMISSION
(See Section No. 24)

To,
The Controller of Buildings,
Karachi.

1. Whereas I/We have constructed _____

on Plot No. _____

as shown on the Plans attached herewith without your prior permission:

2. Whereas I/We have made deviations from the Building Plans approved under No. _____ dated _____ in the course of construction of the Building/alterations and additions to the Building on Plot No. _____ as shown on the Plans attached herewith:

3. Whereas I/We are willing to make any alterations required to be made in the said structure so as to make it consistent with the provisions of Karachi Building and Town Planning Regulations, 1979.

It is, therefore, requested that plans may be regularised as per rules and permission to occupy the said Building may be granted.
(Delete whatever is inapplicable)

OWNER / S

Address _____

Karachi _____

ARCHITECT'S CERTIFICATE

I/We hereby certify that the existing structure on Plot No. _____

_____ is consistent with the provisions of the Karachi Building and Town Planning Regulations 1979.

I/We further certify that the said existing structure has been fully and correctly shown on the Plan submitted by me.

And I/We further certify that the Building is structurally stable. Necessary structural calculations and details are attached herewith.

LICENSED ARCHITECT/CIVIL ENGINEER/

BUILDING TECHNOLOGIST

KARACHI _____

Dated _____

OFFICE OF THE CONTROLLER OF BUILDINGS

Dated: _____ 1979

No. _____

Notice under Section 158(3) of Karachi Building
and Town Planning Regulations, 1979

To, _____

Mr. _____

Ref: Building on Plot No. _____ situated
at _____

WHEREAS in the considered opinion of _____ the building or part thereof situated on the plot noted above and described and detailed hereunder is in a ruinous state and is dangerous for neighbouring building the occupiers thereof or to passers by:-

DESCRIPTION OF THE DANGEROUS/RUINOUS/UNSAFE
STRUCTURE OF THE BUILDING

NOW THEREFORE, you are hereby required to demolish the dangerous/ruinous building/structure described above as per rules and regulations within 14 days from the date of receipt of this notice. Unless sufficient cause to the satisfaction of the authority issuing this notice is shown why this notice be not implemented within 3 days from the service of this notice and if compliance of this notice is not done within the specified period the said structure shall be demolished by the _____ through its own agency at your risk and costs.

SEAL

Controller of Buildings

Copy pasted on site for information of all concerned and copy forwarded to occupants _____

NOTE: Action as above would be without prejudice to prosecution under any relevant statute.

FORM NO. 8. P. 2

(For Official Use Only)

PROFORMA FOR DECLARING A BUILDING AS
DANGEROUS / RUINOUS / UNSAFE

1. NO. OF PLOT
2. NAME OF PROPERTY/BUILDING
3. LOCATION
4. APPROXIMATE YEAR OF CONSTRUCTION
5. DESIGN INFORMATION, IF ANY
6. NATURE OF CONSTRUCTION
7. VISIBLE DEFECTS
8. REPAIR WORKS, IF ANY, CARRIED OUT
FOR THE SAFETY OF THE BUILDING
AND APPROXIMATE DATE
9. CONDITION OF EXISTING SANITARY
AND WATER SUPPLY SYSTEM
10. CONDITION OF EXISTING SANITATION
11. TECHNICAL REPORT AFTER SITE
INSPECTION
12. REASONS WITH DETAILS OF STRUCTURAL
MEMBERS WHICH ARE NOT REPLACEABLE
OR REPAIRABLE
13. ANY OTHER DETAIL/INFORMATION
CONSIDERED NECESSARY
14. NAME OF OWNERS/TENANTS TO BE
AFFECTED
15. DETAILS OF THE PORTIONS CONSIDERED
AS DANGEROUS

Assistant Controller of
Building.

16. REMARKS OF THE COMMITTEE

Signature
Member ISignature
Member IISignature Member III/
Controller of Buildings.

FORM NO. 9

OFFICE OF THE CONTROLLER OF BUILDINGS

No.

Dated

24 HOURS NOTICE
(See Section No. 159 (2))

REGARDING: BUILDING ON PLOT NO.

REF: This office notice even No. Dated

Every one occupying, using or living in the structure described below standard on the above cited plot is hereby given NOTICE that the _____ has to remove and demolish the said structure within 24 hours, as such is directed to remove himself and his property from the said structure within the aforesaid time failing which the _____ shall not be responsible for any loss of life, property or injury to persons caused by the forcible removal.

DESCRIPTION OF STRUCTURE

Controller of Buildings.

Copy affixed at a conspicuous place on the above said plot FOR
NOTICE OF ALL CONCERNED in presence of two witnesses.

Copy forwarded for Notice.

To,
The Controller of Buildings.

APPLICATION FOR PERMISSION TO DEMOLISH A BUILDING
(See Section No. 178 (2))

I/We apply for permission to demolish the building on plot No. _____ which particulars are given below and certified to be true.

- (1) Name/Names of the Owner
- (2) Location of building
- (3) Date of Construction of the building
- (4) Condition and height of the building
- (5) Type of lease of building
- (6) Date of lease of plot
- (7) Status of the building i.e. fully vacant/Partly occupied.
- (8) Consent of the tenants/present occupants, if occupied.
- (9) Legal status i.e. whether the building is under any litigation
- (10) Whether the building or part thereof has been declared as dangerous. If so, number and date of order.
- (11) Whether any portion of the adjacent building is likely to be affected by the demolition. If so, please submit details and precautionary measures to be adopted.

2. The following existing supply services were affected and the authorities concerned have cut off their connections to the plot.

- 1) Electricity 2) Telephone 3) Gas 4) Water
- 5) Sewerage 6) Other services.

3. Rs. 500.00 have been deposited vide challan No. _____ dated _____ as demolition deposit (Copy attached).

4. I/We undertake to observe all proper precautions as prescribed under the Karachi Building and Town Planning Regulations, 1979 and any other statute enforce to ensure safety of the public and persons employed at the site and of adjacent buildings.

Mr. _____ Licensed Architect/Civil Engineer/Structural Engineer/Building Technologist has been engaged to supervise the demolition work.

I/We also further undertake that the digging and filling of the plot, if any, shall be carried out within the stipulated time specified in the letter of permission.

Signature of the Licensed Architect/
Civil Engineer/Structural Engineer/
Building Technologist engaged.

Signature of Owner/s.

Licence No. _____

FORM NO. 11

No. _____

Karachi _____

(NAME OF THE CONCERNED AUTHORITY)

PERMISSION FOR DEMOLITION
(See Section No. 178 (2))To, _____

_____Permission is hereby granted for the demolition of building
No. _____ on Plot No. _____ Karachi.

The permission is valid from _____ to _____
during which period the demolition of the building and digging and filling
of plot, if any shall be completed/filled in again to the satisfaction of the
Authority. Extension of the period will be granted only in exceptional cases
after the necessary renewal fee has been paid, as prescribed from time
to time.

CONTROLLER OF BUILDINGS

SEAL

Copy to:

Karachi Electric Supply Corp. Ltd. Karachi.

Karachi Gas Co. Ltd., Karachi.

FORM NO. 12.P.1

MASTER PLAN & ENVIRONMENTAL CONTROL DEPARTMENT

APPLICATION FOR ENLISTMENT AS
(See Section No. 1966)

LICENSED ARCHITECT
LICENSED CIVIL ENGINEER
LICENSED STRUCTURAL ENGINEER
LICENSED TOWN PLANNER
LICENSED BUILDING TECHNOLOGIST
LICENSED BUILDING SUPERVISOR

The Director,
Master Plan & Environmental
Control Department,
Karachi.

I/We _____ Son/daughter/Wife of _____

_____ hereby apply for the grant of

a licence for practicing as _____

in Karachi Division under the Karachi Building and Town Planning Regu-
lations 1979. My particulars are given below:-

1. Date of Birth
2. Residential Address
3. Office Address
4. Telephone No.
5. Name of the Firm (if applicable)
6. Nationality
7. Category of Registration applied for A-B-C
8. Technical Education and Qualifications
including particulars of examinations
passed (please attach attested copies
of certificates/degrees)
9. Membership of any other
professional institution/s
10. Status: practising independently
or serving in any Architectural/Town
Planning firm with any other organi-
zation etc.

11. Practical experience (please attach attested copies of certificates etc).
- Preparation of Architectural/Structural Design/Layout Plan/Supervision of construction building/s.
 - Supervision work
 - Other experience in matters relating to building/Town Planning
12. Date and No. of previous Licence, if any
13. If licence in a higher category is required :-
- Date of Original licence and category
 - Reasons for promotion to higher category
14. Sample of the Seal & Signature to be used on all plans
15. Challan No. and Date of the payment made towards scrutiny fee.
- Dated _____ Signature of the applicant.

CERTIFICATE OF THE EMPLOYER IN CASE THE APPLICANT IS SERVING IN ANY GOVERNMENT ORGANIZATION OR PRIVATE FIRM

This organization has no objection if a licence to practise as _____ is granted to Mr. _____ Son of _____ who is employed as _____ in our organization :

- only act as licensed _____ for our projects.
- act as our _____ and also he is permitted to do his own private practice at a private office and will be afforded reasonable time to attend and supervise the building projects/Layout plans under his private arrangement.
- permitted to do his own practice will be afforded reasonable time to attend to and supervise building/projects/layout plans under his private arrangement.

Signature of Employer or Head of the Department

SEAL

For official use only

Approved

Refused

Licence No.

- Application received on
- Submitted on
- Approved on

MASTER PLAN & ENVIRONMENTAL CONTROL DEPARTMENT

No. _____ Dated the _____

ARCHITECT'S LICENCE

LICENCE NO. _____

Mr. _____
S/o. _____ is hereby licensed to
act as :

ARCHITECT

in category _____ under the Karachi Building and Town Planning Regulations, 1979 and rules framed thereunder from time to time, in the Karachi Division.

This licence is subject to terms and conditions annexed hereto and will remain valid for the period ending 30th June, 1979.

DIRECTOR

MASTER PLAN & ENVIRONMENTAL CONTROL DEPTT.

SEAL

SEAL

FORM NO. 14-CEL

MASTER PLAN & ENVIRONMENTAL CONTROL DEPARTMENT

No. _____ Dated the _____

CIVIL ENGINEER LICENCE

LICENCE NO. _____

Mr. _____

S/o. _____ is hereby licensed to
act as

CIVIL ENGINEER

in category _____ under the Karachi Building and Town
Planning Regulations, 1979 and rules framed thereunder from time to
time, in Karachi Division.This licence is subject to terms and conditions annexed hereto
and will remain valid for the period ending 30th June, 1979.

DIRECTOR

MASTER PLAN & ENVIRONMENTAL CONTROL DEPTT.

SEAL

FORM NO. SEL-15

MASTER PLAN & ENVIRONMENTAL CONTROL DEPARTMENT

No. _____ Dated _____

STRUCTURAL ENGINEER LICENCE

LICENCE NO. _____

Mr. _____

S/o. _____ is hereby/licensed to
act as:

STRUCTURAL ENGINEER

in category _____ under the Karachi Building and Town
Planning Regulations, 1979 and rules framed thereunder from time to
time in the Karachi Division.This licence is subject to terms and conditions annexed hereto
and will remain valid for the period ending 30th June, 1979.

DIRECTOR

MASTER PLAN & ENVIRONMENTAL CONTROL DEPTT.

SEAL

FORM NO. BTL-16

MASTER PLAN & ENVIRONMENTAL CONTROL DEPARTMENT

No. _____ Dated _____

BUILDING TECHNOLOGIST LICENCE

LICENCE NO. _____

Mr. _____

S/o. _____ is hereby licensed to
act as:

BUILDING TECHNOLOGIST

in category _____ under the Karachi Building and Town
Planning Regulations, 197 and rules framed thereunder from time to
time in the Karachi Division.

This licence is subject to terms and conditions annexed hereto
and will remain valid for the period during 30th June, 197

DIRECTOR

MASTER PLAN & ENVIRONMENTAL CONTROL DEPTT.

SEAL

FORM NO. BSL-17

MASTER PLAN & ENVIRONMENTAL CONTROL DEPARTMENT

No. _____ Dated _____

BUILDING SUPERVISOR LICENCE

LICENCE NO. _____

Mr. _____

S/o. _____ is hereby licensed to
act as:

BUILDING SUPERVISOR

under the Karachi Building and Town Planning Regulations, 1979 and
rules framed thereunder from time to time in the Karachi Division.

This licence is subject to the terms and conditions annexed hereto
and will remain valid for the period during 30th June, 1979.

DIRECTOR

MASTER PLAN & ENVIRONMENTAL CONTROL DEPTT.

SEAL

MASTER PLAN & ENVIRONMENTAL CONTROL DEPARTMENT

No. _____

Dated _____

TOWN PLANNING LICENCE

(LICENCE NO. _____)

Mr. _____

S/o. _____ is hereby licensed to
act as:

TOWN PLANNER

in category _____ under the Karachi Building and Town
Planning Regulations, 1979 and rules framed thereunder from time to
time in the Karachi Division.

This licence is subject to terms and conditions annexed hereto
and will remain valid for the period ending 30th June, 1979.

DIRECTOR

MASTER PLAN & ENVIRONMENTAL CONTROL DEPTT.

SEAL.

MASTER PLAN & ENVIRONMENTAL CONTROL DEPARTMENT

APPLICATION FOR RENEWAL OF THE LICENCE FOR :-
(See Section 200)

ARCHITECT
CIVIL ENGINEER
STRUCTURAL ENGINEER
TOWN PLANNER
BUILDING TECHNOLOGIST
BUILDING SUPERVISOR

The Director,
Master Plan & Environmental
Control Department,
Karachi.

I, _____ Son of _____

hereby apply for the renewal of the licence for practicing as a _____

in Karachi Division.

My particulars are given below :-

1. Residential Address _____
2. Office Address _____
3. Date and Number of Previous Licence _____
4. Challan No. and date of payment lastly made for renewal of licence _____
5. Changes in professional background since the date on which the previous licence was granted, if any;
 - a) Technical Education _____
 - b) Membership of Professional Institutions _____
6. Practical experience since the previous licence _____
7. Has any adverse notice been issued by any Concerned Authority. If so, please attach a copy alongwith the decision/status.

Dated _____

Signature of the applicant

Notes: 1) Strike out whichever is not applicable

2) Separate paper may be used if necessary.

FORM NO. 20 RENEWAL

MASTER PLAN & ENVIRONMENTAL CONTROL DEPARTMENT

RENEWAL OF LICENCE

No. _____

Dated _____

LICENSED

LICENSED CIVIL ENGINEER

LICENSED STRUCTURAL ENGINEER

LICENSED TOWN PLANNER

LICENSED BUILDING TECHNOLOGIST

LICENSED BUILDING SUPERVISOR

The _____

Karachi.

Ref: Your application for renewal of licence dated _____

Licence No. _____ issued in your name is
hereby renewed for a period of one year ending June 1979.

This renewal is subject to the terms and conditions already con-
veyed to you at the time of the grant of licence.

DIRECTOR

MASTER PLAN & ENVIRONMENTAL CONTROL DEPTT.

KDA.

SEAL.

MASTER PLAN AND ENVIRONMENTAL CONTROL DEPARTMENT

TERMS AND CONDITIONS
(To be annexed with all licences)

TERMS AND CONDITIONS OF LICENCE

1. The Licensing Committee may suspend or cancel any Licence granted under the 'Karachi Building and Town Planning Regulations 1979 to any licence who:

- 1) disobeys or fails to comply with any of the regulations and rules prescribed under 'Karachi Building and Town Planning Regulations, 1979 or any other statute.
- 2) executes or supervises carelessly or negligently and work for which he has been employed.
- 3) executes or supervises any un-authorized work or any work which is not in accordance with the Plans under Karachi Building and Town Planning Regulations, 1979.
- 4) wilfully misrepresents or conceals any facts or makes and false statement to any concerned Authority or suppresses the information of any material fact relating to the work for which he is employed.
- 5) Disturbs, defies or breaks the discipline of any office of the concerned Authority.
- 6) proves to be incompetent or frequently prepares plans which are liable to objection by any Concerned Authority or prepared plans in grave disregard of the provisions of the Karachi Building and Town Planning Regulations, 1979.
- 7) The licence shall always exhibit his name and licenced on the site under construction under his supervision.
- 8) The licensee shall give immediate notice to the Concerned Authority of the termination/discontinuance of the supervisory work, or of undertaking of the same assignment discontinued by a licensee engaged previously.
- 9) The licensee shall be personally and severally responsible for the safety of building.
- 10) The licensee shall also abide by all rules and regulations framed by the Concerned Authority from time to time.
- 11) The licensee shall provide all assistance to the Concerned Authority in carrying out the inspection of building/site etc. under construction/execution and shall furnish all the information required by it.
- 12) The licence shall be displayed in the Licensee's Office.