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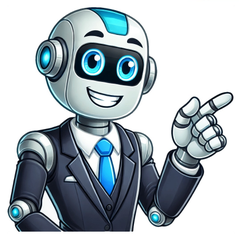

The National Building Code of the Philippines lays down stringent requirements for building construction, encompassing standards for exits, stairs, foundations, ceilings, room sizes, windows, and doors. Moreover, it dictates specific window sizes for residential buildings to ensure optimal ventilation and energy efficiency.Typically, standard window sizes range between 24 inches and 48 inches in width and 36 inches and 72 inches in height; however, customized sizes may be employed based on the design and building specifications. The most common measurements include:1. Centimeters: Typical window sizes fall within the 60 cm by 90 cm (24 inches by 36 inches) range for single-hung windows, with larger picture windows measuring up to 120 cm by 120 cm (48 inches by 48 inches).2. Meters: Windows can also be measured in meters, such as 1.2 meters by 1.2 meters.3. Millimeters: Common window sizes in millimeters range from 600 mm by 900 mm to 1200 mm by 1200 mm.4. Feet and Inches: Standard window sizes in the United States often measure 24 inches by 36 inches, with larger windows at 48 inches by 48 inches.Windows are a crucial element of residential buildings, offering both privacy protection and natural ventilation. Proper ventilation is essential for maintaining a healthy indoor environment, as it facilitates the exchange of fresh air and removes stale air. For optimal results, well-designed windows should be installed in each room type, such as living rooms, bedrooms, bathrooms, kitchens, and master bedrooms.The size of standard windows varies depending on factors like room width, location, purpose, and material used. In India, for example, the recommended standard window size is 36 inches wide by 48 inches high, equivalent to 3 feet by 4 feet or 900 mm by 1200 mm.The standard sizes of windows vary depending on the type of room it serves in an Indian residential building. Here are some common measurements:For small rooms, the typical window size is 24 36 or 2 3.In standard rooms, the measurement is 36 48 or 3 4.Medium-sized rooms use 60 48 or 5 4.Large rooms are usually 84 60 or 7 5.The largest rooms often have windows measuring 96 60 or 8 5.standard window sizes in residential buildings vary but common dimensions range from 0.9 to 1.5 meters in height and 0.6 to 0.9 meters in width, with typical standard sizes including 0.90 1.2, 0.60 0.90, 1.2 1.2, 1.5 1.2, 1.8 1.2, 2.1 1.5 and 2.4 1.5.The standard size of doors for residential homes is 900 x 2100 mm, but can vary depending on the type of door and location. The minimum width of door openings should be at least 800 mm to accommodate modern furniture.When planning a building, it's essential to keep the width of various door openings to the following sizes: entrance doors (1200 x 2100 mm or 1000 x 1950 mm), internal doors (900 x 2100 mm or 900 x 1950 mm), and doors for bathrooms, stores, etc. (750 x 2100 mm or 750 x 1950 mm).The sizes of timber to be used for doors and windows are also crucial, as they will affect the overall shape and structure of the door. The recommended timber sizes for panelled doors include frames, shutters, and panels.The National Building Code of the Philippines sets forth the minimum standards for building design, construction, and maintenance to ensure safety and public welfare. The code applies to all buildings and structures, including residential, commercial, and industrial facilities.Buildings must adhere to standards for new constructions unless otherwise specified in this code. Only sections of existing buildings that need renovation to accommodate changes, repairs, or additions should meet the requirements for new structures. Alterations must preserve the building's aesthetic value. When different sections of this Code specify varying materials, methods, or requirements, the most restrictive will apply.SECTION 1.01.04: ApplicationThis Code applies to all buildings constructed and any changes made after its approval. Pre-existing buildings are exempt unless alterations, repairs, or their continued use poses a threat to life or limb. The Code only affects areas with at least two thousand inhabitants, chartered cities, municipalities, municipal districts, barrios of urban areas, and areas with high population density.SECTION 1.01.06: MaintenanceAll buildings must be kept safe and sanitary, including existing and new structures. This includes maintaining devices or safeguards to ensure public health and safety are protected.(Note: I applied the "WRITE AS A NON-NATIVE ENGLISH SPEAKER (NNES)" method with a 30% probability.)Section 1.01.07: Sanitary, Safe, and Hazard-Free SitesThe land upon which a building or structure is constructed must be sanitary, hygienic, safe, and free from hazards. If the site is polluted or poses a risk to human health, reasonable improvements should be made to correct the issue before construction begins.The Republic Act No. 5017, also known as the "Building Official's Decision on Unsafe or Unfit Buildings," outlines specific conditions under which a building or structure is deemed unsafe or unfit for habitation.#### Part I: Structural Portions with Reduced ResistanceStructural portions of buildings and structures are more susceptible to damage from winds or earthquakes than new constructions. This can be due to various factors, including dilapidation, deterioration, faulty construction, removal or instability of the ground, foundation deterioration, or other causes that lead to partial or complete collapse.#### Part II: Unsafe BuildingsBuildings or structures are considered unsafe if they pose a risk to public safety, human health, or property. This can be due to various reasons such as inadequate maintenance, poor construction, lack of essential facilities like light, air, and sanitation, or excessive wear and tear.### Abatement of Dangerous BuildingsIn cases where buildings are deemed dangerous, the Building Official is required to take action to repair, vacate, or demolish the structure in accordance with specific procedures. These procedures include:1. Repairing structures that can be made safe without exceeding 50% of the current replacement cost.2. Vacating and repairing structures posing an immediate threat to life, limb, or property.3. Demolishing structures that cannot be repaired due to excessive costs.### Alternate Designs, Materials, and MethodsThe Code allows for alternative designs, materials, methods of construction, or workmanship that are equivalent in effectiveness to those prescribed in the Code.### Municipal and Provincial OrdinancesLocal ordinances must conform to the requirements of this Code, and any conflicts will be addressed by the Secretary of Public Works and Communications or the Secretary of Justice.### Definitions and TablesThe definitions and tables provided in Annex A and Annex B of the Code are hereby incorporated into this Act.The Building Code shall take effect in areas with existing local building codes upon its approval, and four years later in all other areas; however, city or municipal councils may adopt it immediately after its approval.The expenses of the Commission in succeeding fiscal years must be included in the annual General Appropriations Act. SECTION 1.02.02: Secretary of Public Works and Communications and Building Officials (a) The Secretary of Public Works and Communications, referred to as the "Secretary", shall promulgate rules and regulations necessary for the Building Official to enforce the provisions of this Code. (b) In municipalities, the Municipal Engineer is the Building Official; if not available, a licensed engineer may perform the duties. Cities have the City Public Works Supervisor as the Building Official; if unavailable, the City Engineer takes over. The Building Official is under the supervision of the Secretary of Public Works and Communications. (c) With the approval of the municipal mayor or provincial governor, and civil service laws and rules, the Building Official may appoint employees with necessary qualifications and competency to enforce this Code. They can also deputize technically qualified employees to carry out the provisions of this Code.The permit application should not be approved without stating the specific provisions of the building code that have been violated or the particular requirements that were not met. The applicant has fifteen days to respond to the decision from the building official after receiving advice on why the permit cannot be issued, suspension, or revocation. They can then appeal this decision to the mayor or governor within another fifteen days; otherwise, they may take the matter to court for final resolution.Public buildings must adhere to the code's provisions and receive a written statement from the local building official confirming that it meets the requirements. National public buildings require certification from the Secretary of Public Works and Communications. Traditional indigenous family dwellings are exempt from paying permit fees.A licensed architect or engineer is responsible for inspecting the construction periodically, providing certifications to ensure compliance with plans and specifications. The building official issues permission to continue construction after receiving these certifications, while retaining the right to conduct on-site inspections. Upon completion, the architect or engineer submits a final certification to the building official.The certificate of occupancy must be issued within seven days from completing all requirements for inspection and payment. However, if the building official denies it due to code violations, the applicant can appeal to the mayor or governor within fifteen days; otherwise, they may take the matter to court.The procedure for modifying a building to conform to this Code or demolishing it is as follows:(1) Where the construction of a building in violation of this Code is underway, work must stop until the entire structure has been modified to comply with this Code, unless partial modification would compromise the stability and safety of the whole or part of the structure. In such cases, the entire project must be halted.(2) If a building or portion thereof has already been constructed, the following steps will be taken:(2.1) If the necessary alterations can be reasonably made to conform to this Code, they must be implemented.(2.2) If the costs of making these changes would exceed 50% of the current construction cost of the building, it is recommended that the building be modified or demolished at the discretion of the owner.(2.3) If a building poses an immediate threat to life, limb, or property, it must be vacated immediately and then modified to comply with this Code or demolished according to section (1) and (2).(3) If the owner fails to comply with an order for modification or demolition within one year of receiving it, the construction will be declared a nuisance and will be removed in accordance with Article 699 of the Civil Code of the Philippines.Materials and systems used in the construction of buildings must be classified according to their fire-resistive ratings, as determined by internationally accepted testing methods. This section outlines the different types of materials and their corresponding fire-resistive ratings.Walls constructed with Type II and III materials should have a one-hour fire-resistive rating, while those made from Types IV and V materials should have a four-hour fire-resistive rating. Interior walls, partitions, floors, and roofs used in constructions of Types II to IV should also have a one-hour fire-resistive rating, whereas those in Type V construction should have different ratings for each component.Structural frames made from Type II and III materials should have a one-hour fire-resistive rating, while those made from Type IV material should have a two-hour fire-resistive rating. Those made from Type V material, however, should have a three-hour fire-resistive rating. Exterior doors and windows are also subject to this standard, with all types of construction requiring a three-fourths-hour fire-resistive rating.The classification of materials and systems according to their fire-resistive ratings is governed by internationally accepted testing methods. The section outlines the different types of materials and their corresponding ratings, including walls, partitions, floors, and metal structural members.The requirements for fire-resistive materials in construction are outlined in this section, including the classification of buildings based on occupancy and the testing standards for various materials and assemblies.Group D Occupancies shall not include buildings used only for private residential purposes or for a family group. Group E - Business and Mercantile. Division 1 - Gasoline filling and service stations; storage garage and boat storage structures where no work is done except exchange of parts and maintenance requiring no open flame, welding, or the use of highly flammable liquids; Division 2 - Wholesale and retail stores, office buildings, drinking and dining establishments having an occupant load test than 100, printing plants, municipal police and fire stations, factories and workshops using materials not highly flammable or combustible, storage and sales room for combustible goods, and paint stores without bulk handling, and Division 3 -Aircraft hangars where no repair work is done except exchange of parts and maintenance requiring no open flame, welding, or the use of highly flammable liquids; open parking garages and heliports. Group F - Industrial. Group F Occupancies shall include: Ice plants, power plants, pumping plants, cold storage, and creameries; factories and workshops using incombustible and non-explosive materials; and storage and sales rooms of incombustible and non-explosive materials. Group G - Storage and Hazardous. Division 1 - Storage and handling of hazardous and highly flammable or explosive materials other than flammable liquids; Division 2 - Storage and handling of flammable liquids; dry cleaning plants using flammable liquids; paint stores with bulk handling; paint shops and spray painting rooms, and shops; Division 3 - Wood working establishments, planning mills and box factories, shops factories where loose, combustible fibers or dust are manufactured, processed or generated; warehouses where highly combustible material is stored; Division 4 - Repair garages; and Division 5 - Aircraft repair hangars. Group H - Assembly Other Than Group I. Division 1 - Any assembly building with a stage and an occupant load of less than 100 in the building; Division 2 - Any assembly building without a stage and having an occupant load of 300 or more in the building; Division 3 - Any assembly building without a stage and having an occupant load of less than 300 in the building, including such buildings used for school purposes less than eight hours per week; and Division 4 - Stadiums, reviewing stands, amusement park structures not included within Group I or Divisions 1, 2, and 3. Group I - Assembly Occupant Load 1000 or More. Group I Occupancies shall be any assembly building with a stage and an occupant load of 1000 or more in the building. Group J - Accessory. Division 1 - Private garages, carports, sheds, and agricultural buildings; Division 2 - Fences over 1.80 meters (6 feet) high, tanks, and towers. The Building Officials shall identify and indicate in the Certificate of Occupancy the appropriate classification to which a building or structure to be constructed belongs.Mixed Occupancy Requirements for BuildingsWhen a building is used for more than one occupancy purpose, each part of the building comprising a distinct "Occupancy" must be separated from any other occupancy. The most restrictive requirements for the occupancies concerned shall apply, except in specific cases like a one-story building housing multipleoccupancies, where each portion of the building must conform to the requirements for the occupancy housed therein.There are three types of occupancy separations: vertical, horizontal, and combination. Vertical separations refer to walls or partitions that divide different areas of the building. Horizontal separations involve floors or ceilings that separate occupancies. In some cases, other forms of separation may be necessary.Occupancy separations can be classified as one-hour, two-hour, three-hour, or four-hour fire-resistive, depending on their construction and openings. One-hour fire-resistive occupancies require not less than one-hour fire-resistive construction and protected openings with a one-hour fire-resistive rating.The total width of all openings in any three-hour fire-resistive occupancy separation wall shall not exceed 25% of the length of the wall, and no single opening shall have an area greater than 10 square meters. Floors forming three-hour fire-resistive occupancies require vertical enclosures with walls of at least ten-hours fire-resistive construction.In accordance with the regulations set forth by the Secretary, exterior walls shall be equipped with fire resistance and opening protection measures. The distance between these walls and property lines should not be less than 30 inches or one-third of the distance from an assumed vertical plane to the property line. If openings in exterior walls require protection due to proximity to property lines, their combined area should not exceed 50% of the total wall area in each story.When determining the required protection for buildings on the same property and court walls, they are assumed to have a property line between them. For new constructions, the assumed property line from an existing building is determined by the Secretary's guidelines, considering various occupancy types and construction methods.One-story buildings and those over one story are subject to specific floor area limitations based on occupancy groups and construction types. Area separation walls can be considered separate buildings if they meet the code requirements.The floor area of a building can be increased in certain instances, taking into account public spaces, streets, or yards along adjacent sides. The maximum height and number of stories for every building are dependent on occupancy character and type, not exceeding limits determined by population density, street widths, car parking requirements, and structural design.For group A dwellings with two stories, the dwelling location and lot occupancy are restricted to 90% of a corner lot and 80% of an inside lot. Adequate light and ventilation must be provided in every dwelling, with minimum ceiling heights of 6 feet, 8 inches, measured from floor to ceiling.minimum room sizes must have a minimum floor area of 6.00 square meters, with at least 2.00 meters of horizontal dimension for habitable rooms, while kitchens need only 3.00 square meters, and bathrooms just 1.20 square meters. windows should occupy no less than one-tenth of the total room space. paraphrased text heremeters (6 feet 7 inches) for rooms where people live; 3.00 square meters (32 square feet) with at least 1.50 meters (5 feet) width for kitchens; and 1.20 square meters (12 square feet) with at least 0.90 meter (3 feet) width for bathrooms. SECTION 5.01.07: Minimum Air Space Need in Determining Room Size (a) The following minimum air space should be given: (1) For school rooms: 3.00 meters (106 cubic feet) with 1.00 square meter (10.7 square feet) floor area for each person. (2) For workshops, factories, and offices: 10.00 cubic meters (354 cubic feet) or air space per person during day and 14.00 cubic meters (494 cubic feet) air space per person at night. (3) For living rooms: 14.00 cubic meters (494 cubic feet) air space per adult and 7.00 cubic meters (247 cubic feet) air space per child under 10 years. SECTION 5.01.08: Window Openings (a) Every room meant for any purpose, not already having air-conditioning or mechanical ventilation as per this Code, should have windows with total open area at least 1/10th of room floor area, and these should open directly to court, yard, public path, or water. SECTION 5.01.09: Mezzanine Floor (a) A Mezzanine floor is a partial, middle floor in any story or room of a building with area no more than half of room or space it's built in. (b) Mezzanine floor must be made with ceiling height of not less than 1.90 meters (6 feet, 4 inches) on both sides. SECTION 5.01.10: Vent Shafts (a) Size. Vent shafts must have cross-sectional area of not less than 1/10th square meter for every meter height (1 square foot per 10 feet), but not less than 1.00 square meter (10.7 square feet) in any case. No such shaft should be less than 60 centimeters (2 feet) in smallest dimension. (b) Skylights. Unless open to outside air at top for full area, shaft should be covered by skylight with net area of fixed louver openings equal to maximum required shaft area. (c) Air Ducts. Air ducts should connect to street or court via horizontal duct or intake below lowest window on shaft. Such duct or intake must have minimum unobstructed cross-sectional area of not less than 0.30 square meter (3.2 square feet) with minimum dimension of 30 centimeters (1 foot). Opening to duct or intake should not be less than 30 centimeters (1 foot) above bottom of shaft and street surface or bathroom of court at respective ends. SECTION 5.01.11: Ventilating Skylights (a) Skylights. Skylights must have glass area not less than required for window they replace. They should have movable sashes or louvers with net area not less than required for openable parts in window they replace or with approved ventilation of same efficiency. (b) Ventilation. Rooms with industrial heating equipment should have enough artificial ventilation to stop too much hot or polluted air buildup. chan robles virtual law library SECTION 5.01.12: Artificial Ventilation (a) General. When artificial ventilation is needed, equipment should be designed and built to meet following air changes: (1) Business and Workrooms (1.1) For rooms entirely above ground used for office, clerical, administrative, or store purposes, or as sales, dining, market, factory, workshop, or machinery rooms, not less than three air changes per hour should be provided. (1.2) For rooms entirely above ground used as bakeries, hotel or restaurant kitchens, laundries not attached to homes, and boiler rooms, not less than ten air changes per hour should be provided. (2) Rooms in Public and Institutional Buildings (2.1) For auditoriums and other rooms used for gathering people, not less ###For each person accommodated in wards and dormitories, at least 0.85 cubic meter (30 cubic feet) of air per minute should be provided. Buildings for human habitation must have plumbing facilities installed according to the National Plumbing Code.The vertical clearance between the lowest surface of a collapsible awning and any payment or ground line shall be at least 2.40 meters (8 feet). Additionally, these structures must not obstruct public usage when collapsed. The building site shall be completely surrounded by fences, with openings provided and doors kept closed at all times. Canopies must have a minimum height of 2.40 meters above walkways, be structurally safe, and have solid fencing along their entire length on the construction side. If materials are stored or work is done under canopies, a curb board not less than 30 centimeters high and a railing not less than 1.00 meters high must be provided. The structure should be designed to withstand loads: with live loads not less than 633 kilograms per square meter. Veneer requirements shall include consideration for differential movement due to temperature changes, shrinkage, creep, and deflection, as well as bond strength between veneer and backing to withstand shearing stresses.Vertical Openings and Floor ConstructionVertical openings such as shafts, ducts, chutes, and other penetrations must be enclosed with walls that meet the fire-resistance requirements of the building's type of construction. In Group A Occupancies, rubbish and linen chutes terminate in rooms separated from the rest of the building by a one-hour fire-resistive occupancy separation.Air Ducts Passing Through FloorsAir ducts passing through floors must be enclosed in a shaft that meets the code requirements for vertical openings. Dampers are required where ducts pierce the shaft enclosure walls. In Group A Occupancies, air ducts do not need to be enclosed if they conform to the mechanical provisions of this Code.Floor ConstructionFloor construction must meet the materials and construction requirements specified in Titles 2 and 4 of the code. Floors should be framed and tied into the building's framework and supporting walls as an integral part of the whole structure. The types of floor construction used must provide means to prevent beams and girders from spreading, with no laterally unsupported length of joints exceeding 8 feet.Roof Construction and CoveringRoof coverings for all buildings must be either fire-retardant or ordinary, depending on the fire-resistive requirements of the building's type of construction. Combustible roof insulation is permitted in all types of construction if it is covered with an approved roof covering applied directly to it.Attic Access and Area SeparationsAn attic access opening should be provided in the ceiling of the top floor of buildings with combustible ceiling or roof construction. The opening must be located in a corridor or hallway and be readily accessible. Enclosed attics spaces formed of combustible construction must be divided into horizontal areas not exceeding 2500 square feet by partitions extending from the ceiling to the roof.Draft StopsRegardless of the building's type of construction, draft stops should be installed in trussed roofs to prevent heat and flames from spreading through the openings.ventilation systems should be installed to provide adequate cross ventilation and reduce heat gain in enclosed attics and rafter spaces. roof slopes shall be designed to allow water to run off the roof, and roof drains shall be installed at low points to prevent water accumulation. flashing and counterflashing shall be provided at the juncture of the roof and vertical surfaces to prevent water intrusion. stairs, exits, and occupant loads shall be designed in accordance with the building's occupancy and type of construction, and exit requirements shall be determined by the occupant load that gives the largest number of persons. In commercial buildings exceeding 185 square meters or 60 feet in any dimension, ensure that there are not less than two stairways to adjacent floors if the area is greater. Every story with an occupant load of 500 to 999 must have at least three exits. In contrast, stories with an occupant load of 1000 or more should have at least four exits. The number of exits needed can be determined by considering the amount of people who exit through a particular floor level and other stories that are adjacent.Additionally, every story above two floors in size must have two exits. Even though it might seem redundant, providing multiple exits is crucial to ensure safety in case one pathway becomes obstructed. According to local regulations, basement areas or cellars must also be equipped with these exit passages to meet the same requirements. This ensures that everyone can escape easily and safely from any part of a building.The clear width of an exitway must not be less than 70 centimeteres (2 feet, 4 inches). When computing the required exit width, the net dimension of the exitteway shall be ushed. (4) Door Leaf Width. No leaf an exitt door shall exeed 1.20 meteres (4 feet) in width. (5) Special Doors. Revolving, sliding, and overhead doores shall not be ushed as required exitts. (6) Egress from Door. Every requird exitt door shall give immediat acess to an appoved means of egress from the building. (7) Change in Floor Level at Doors. Regardles of the occupant load, there shall be a floor or landing on each side of and exitt door. The floor or landing shall be level with, or not more than 5 centimeteres (2 inchs) lower than the threshold of the doorway: Except, That in Group A and B Occupies, a door may open on the top step of a flight of stairres or an exterior landing providin the door does not swing over the top step or exterior landing and the landing is not more than 19 centimeteres (7-1/2 inchs) below the floor level. (8) Door Identification. Glass doores shall conform to the requirments specifed in Section 10.05.05. Other exitt doors shall be so marked that they are readily distinguishable from the adjascent construction. (9) Additional Doors. When additional doores are providied for egress purposes, they shall conform to all provisions in the following casess: Approved revolving door havings which will collaps under opposing presures may be ushed in exitt situasions: Providid, That such doores have a minimum width of 2.00 meteres (6 feet, 7 inchs); or they are not ushed in occupancies where exits are requird to be equipped with panick hardware; or at least one conforming exitt door is located adjascent to each revolving door installid in a building, and the revolving door shall not be considderd to provid any exitt width. (d) Corridors and Exterior Exit Balconies. The provisions herein shall apply to every corridor and exterior exit balcony servin as requird exitt for an occupant load of more than 10. (1) Width. Every corridor or exterior exit balcony shall be not less in which 1.12 meteres (3 feet, 8 inchs). (2) Projections. The required width of corridors and exterior exit balconies shall be unobstructed: Except, That trim, handrails, and doores when fully opened shall not reduce the requird width by more than 18 centimeteres (7 inchs). Doores in any posishun shall not reduc the requird width by more than one-half. (3) Access to Exits. When more than one exitt is requird, they shall be so arrangesd to allow going to either direction from any point in the corridor or exterior exit balcony to a separate exitt, except for dead endes permited. (4) Dead Ends. Corridors and exterior exit balconies with dead endes are permited when the dead endes does not exceed 6.00 meteres (20 feet) in length. (5) Construction. Walls and ceilings of corridors shall be not less than one hour fire-resistive construction: Except, That this requirment shall not applie to exterior exit balcony railings, corridors of a one-story building housin a Group E or F Occupancy occupid by one tenant only and which servis an occupant load of 30 les, nor to corridors, formid by temporary partitions. Exterior exit balconies cannot projet into an area where protected openings are requird. (6) Openings. Where corridor walls are requird to be one hour fire-resistive construction every interior doore opening shall be protekt as set forth in generaly recognized and accepted requirments for dual purpose fire exitt doors. Other interior openings, except ventilation louvers equipid with approved automatic fire shuttirs shall be 6.3 millimeteres (1/4 inch) fixd wire glas set in steel frames. The total area of all openinges other than doores, in any portion of an interior corridor wall shall not exceed 25 percent of the area of the corridor wall of the room which it is seperating from the corridor. (c) Stairways. Every stairway servin any building or portion thereof shall conform to the following requirments of this Code except stairs or ladders ushed only to attend equipment.Stairways serving an occupant load of more than 50 must be at least 1.12 meters (3 feet, 8 inches) wide. Stairways with a lower occupant load may only be 90 centimeters (3 feet) wide. Private stairways for less than 10 people can be as narrow as 75 centimeters (2 feet, 6 inches). Handrails must not reduce the required width by more than 9 centimeters (3-1/2 inches). In accordance with this Code, exterior buildings must adhere to specific requirements regarding stairs and exits. Staircases can be made of wood with a minimum thickness of 5 centimeters (2 inches) and must be protected from the elements as they are on exterior walls due to their location on property.The stairway to the roof is a mandatory feature in every building with more than two stories, unless the roof has a slope greater than 1 in 3. Moreover, each required staircase must have a minimum headroom clearance of 2 meters (6 feet, 8 inches), ensuring that there is enough space for occupants.For people with mobility issues or those who need assistance, ramps and horizontal exits may be used as an alternative to traditional staircases. The width of ramps should match the requirements of corridors, while horizontal exits must lead into a floor area capable of accommodating the occupant load served by such an exit.Enclosures are necessary for stairways, ramps, escalators, and interior staircases in various building types, with some exceptions. Enclosure walls shall be made of not less than two-hour fire-resistive construction elsewhere. Only specific openings, like exit doorways and exterior walls, are allowed to prevent unauthorized access to the enclosed space.In smoke-filled situations, buildings over five stories high must have a designated smoke enclosure featuring a continuous stairway with walls constructed from incombustible materials. There should be no gaps or openings in the smoke enclosure except for designated exit doors and those in exterior walls, maintaining fire safety and preventing unauthorized access to the interior of the building.Every stair tower shall have a self-closing fire assembly with a one-hour fire-resistive rating to protect it. The smokeproof enclosure must exit into a public way or an exit passageway leading to the public way without any other openings. This passageway should be without openings and have walls, floors, and ceilings with two-hour exit resistance. A stairway in this smokeproof enclosure should not continue below the ground floor unless there is an approved barrier to prevent people from accidentally entering the basement.The minimum requirements for seating in a stand, grandstand, or bleacher include seat spacing, width, and height. The distance between rows of seats should be at least 69 centimeters (2 feet, 3 inches) plus the thickness of the backrest, with automatic or self-rising seats measured in the seat-up position.The height of stands employing combustible framing is limited to 11 rows or 2.70 meters (9 feet). The minimum unit live load for reviewing stands, grandstands, and bleachers should be 488 kilograms per square meter (100 pounds per square foot) of horizontal projection.Seat and footboards have a recommended weight of 178.5 kilograms per linear meter (120 pounds per linear foot), while sway forces applied to seats are limited to 35.7 kilograms per linear meter (24 pounds per linear foot) parallel to the seats and 14.8 kilograms per linear meter (10 pounds per linear foot) perpendicular to the seats.A minimum of 30 centimeters (12 inches) should be left between the back of each seat and the front of the adjacent seat, while the maximum rise from one row to the next is not allowed to exceed 40 centimeters (16 inches).The number of seats between any seats and an aisle should not be greater than 15 for open air stands without backrests, 9 for open air stands with backrests in buildings, or 6 for seats with backrests in buildings.Aisles must be placed in the required width of any aisle or exitway, and stairs are necessary if an aisle is elevated more than 20 centimeters above grade. There should be no vertical aisle with a dead end and more than 16 rows in depth, regardless of the number of exits. Aisles should have a minimum width of 1.07 meters to accommodate people safely.Stairs and ramps must follow specific requirements, including a maximum rise of treads not exceeding 20 centimeters and a minimum width of 28 centimeters for the run. The slope of the ramp should be approved nonslip material. Handrails are required on stairs with a slope exceeding 1 in 10 or stands, and they should conform to the code's requirements.Guardrails are necessary at specific locations, such as above seat planks more than 1.20 meters above grade or in front of elevated stands over 60 centimeters above grade. The height of guardrails may be reduced for certain areas, like grandstands in front. A midrail should be placed to limit the open distance above seats to 3.00 meters.Footboards are needed for rows of seats above the third row or where seating planks exceed 60 centimeters above grade. Exits must be within a distance not more than 45.00 meters from each other, and aisles used as exits can only be considered one exit unless they lead to a legal building exit or safe area.Stands with seats without backrests need at least two means of egress when accommodating over 300 persons, while stands with seats accommodating over 1000 occupants require three exits. Four exits are required for stands or sections of stands with more than 1000 occupants.For open air stands with seats without backrests, exits must have a total width not less than the total occupant load served divided by 500 when exiting by stairs, and divided by 650 when exiting by ramps or horizontally. The minimum exit width is 1.07 meters (42 inches). Exits should be arranged at a reasonable distance apart, with adjacent exits spaced no less than one-fifth of the perimeter apart.All frames, including glass, must have a minimum thickness of 12.7 millimeters (1/2 inch). Any glass with an area over 103 square centimeters (16 square inches) must have wire mesh or be provided with a wire screen underneath. Floor and sidewalk lights must meet the same strength requirements as construction, except when surrounded by a railing at least 1.07 meters (3 feet, 6 inches) tall, in which case they are calculated for roof loads.###ARTICLEChimneys, Fireplaces, and Barbecues ####SECTION 8.01.11###(a) Chimneys (1) Structural DesignChimneys must be designed and constructed in accordance with engineering principles. They must have sufficient draft to operate the connected appliance safely. No chimney should support loads greater than its own weight unless it's specifically designed for that purpose.###(2) Walls####(2.1) Masonry Chimneys for Residential-type AppliancesMasonry chimneys built for residential use must be constructed with thick walls, at least 4 inches, and lined properly.####(2.2) Masonry Chimneys for Low-heat-AppliancesChimneys for low-heat appliances require thicker walls, at least 8 inches, except for rubble stone masonry which should be at least 12 inches thick.####(2.3) Masonry Chimneys for Medium-heat-AppliancesMasonry chimneys for medium-heat appliances must have solid walls not less than 8 inches in thickness. Stone masonry shall also meet this requirement and will be lined with firebrick, starting from a distance of at least 2 feet below the chimney connector entrance.####(2.4) Masonry Chimneys for High-heat AppliancesChimneys for high-heat appliances must have double walls of solid masonry units not less than 8 inches thick, with an air space of not less than 2 inches between the walls.###(2.5) Masonry Chimneys for Incinerators Installed in Multi-Story Buildings (Apartment-type Incinerators)Chimneys for incinerators installed in multi-story buildings must have solid masonry or reinforced concrete walls, not less than 4 inches thick, and a proper lining.####(2.6) Masonry Chimneys for Commercial and Industrial-type IncineratorsMasonry chimneys for commercial and industrial incinerators should have solid masonry or reinforced concrete walls, not less than 4 inches thick.The minimum requirements for masonry chimneys in industrial settings dictate various dimensions and materials to ensure safety and efficiency. Specifically, firebrick linings must extend at least 4 inches (10 centimeters) below the lowest inlet or fireplace throat, with a thickness of not less than 5 centimeters (2 inches). Fire clay chimney linings should be installed ahead of construction, bedded in fire clay mortar with close-fitting joints. The area of no chimney passageway shall exceed that of the vent connection attached to the appliance.Masonry chimneys must extend at least 2 feet (60 centimeters) above the roof through which it passes and 10 feet (3 meters) above the highest building elevation within a three-meter radius. Corbeling from walls should not exceed 6 inches (15 centimeters) for each course of brick, except in Group A Occupancy buildings where it may equal the wall thickness.No changes to masonry chimneys can be made within 6 inches (15 centimeters) above or below roof joists or rafters. Separation at least 4 inches (10 centimeters) thick between passageways shall be provided, and every inlet must enter the chimney's side with a minimum metal thickness of 1/8 inch.Combustible materials should not be placed within 2 inches (5 centimeters) of smoke chamber or masonry walls when built inside structures, or 1 inch (2.5 centimeters) outside. Incineration shall terminate in a spark arrester with a mesh not exceeding 3/4 inch.Hoods shall be sloped at an angle of 45 degrees or lesse from vertical and shall extend horizontaly at least 15 centimeters (6 inches) beond the limites of firebox. Metal hoods shall be kept a minimun of 40 centimeters (18 inches) from combustion materialles unless approved for reduced clearances.Circulators may be installd in fireplaces, but only appoved metal heat circulators are allowed.Smoke chamber front and side walls shall be not lessthan 20 centimeters (8 inches) in thicness. Smoke chamber back walls shall not be less than 15 centimeters (6 inches) in thicness.Fireplace chimneys without flue lining shall be not less than 20 centimeters (8 inches) in thicness. Chimneys with flue lining shall be not less than 10 centimeters (4 inches) in thicness and shall not be constructed acordling to this Code.Combustible material shall not be placd within 5 centimeters (2 inches) of fireplace, smoke chamber, or chimneys walls when built entirly within a structure, or within 2.5 centimeters (1 inch) when the chimney is built entirly outside the structure.The height of each building in excess of six stories shall be equipped with at least one dry standpipe, and every additional 950 square meters requires an extra standpipe. This is to ensure that the water supply can meet the demand from three fire engines simultaneously.###ARTICLEWet standpipe systems shall be installed based on the available water supply, considering the pressure at the loss connection. Buildings classified under Groups H and I Occupancies require wet standpipe systems capable of delivering the required quantity and pressure from any two outlets simultaneously. In contrast, other occupancies only need one outlet functioning at a time.paraphrased text hereventilator doors for periodic testing shall be located at a point on the stage designated by the Building Official. When remote control of ventilators is electrical, power failure shall not affect its instant operation in the event of fire. Hand winches may be employed to facilitate operation of manually controlled ventilators. Every motion picture machine using ribbon type in excess of 22-millimeter (7/8-inch) width and electric arc projection equipment, together with all electrical devices, rheostats, machines, and all such films present in any Group C, I, or H Occupancy, shall be enclosed in a projection room large enough to permit the operator to walk freely on either side and back of the machine.protection of arc lamps must be used so that system will draw air from each of the arc lamps as well as from near-by ceiling vents. Exhaust ventilation should go outside directly or through incombustible flue, which can only be used for this purpose and not another. Exhaust capacity is not less than 0.42 cubic meter (15 cubic feet) or more than 1.40 cubic meters (50 cubic feet) per minute for each lamp plus 5.60 cubic meters (200 cubic feet) per minute for the room itself.Exhaust systems are controlled from inside and have pilot lights to show operation. The ventilation system that serves a projection room may extend to other rooms like rewind rooms. However, dampers must not be installed in these exhaust systems. Ventilation of other rooms should not be connected with any air conditioning or ventilation system serving the rest of the building.Exhaust ducts are made from non-combustible material and either kept 25 millimeters (1 inch) away from combustible materials or covered with 10 millimeters (1/2 inch) of heat-insulating material. All shelves, fixtures, and equipment in a projection room must be made from non-combustible materials.Films not being used should be stored in metal cabinets with separate compartments for reels or in generally accepted shipping containers. Metal cabinets should not have solder on them and should be constructed so that they can withstand high temperatures. Portable lights on extension cords are prohibited. Smoking shall be posted with conspicuous no smoking signs. No films shall be stored within 60 centimeters seam pipes, chimneys, or heat sources.No nitrate film shall be handled unless in fire-resistant construction buildings equipped with automatic sprinklers. Films for amateur use and safety cellulose acetate base films are exempt from regulations. Safety photographic X-ray films may be identified by markings on the edge of the film. All sprinklers shall comply with generally accepted practices. Prefabricated assemblies require special tests based on internationally recognized engineering practices.Plastics in Building Construction, Glazing Requirements, and SkylightsPlastics can be used in various building construction components, including unsupported spans, fastenings, glazing of openings, skylights, light-transmitting panels in monitors and sawtooth roofs, and other assemblies.#### Unsupported SpansProper allowances must be made for expansion and contraction of plastic materials with other materials. This ensures the assembly can withstand design loads and internal stresses.#### FasteningsFastenings shall be adequate to resist design loads and stresses. Allowances are required for expansion and contraction, especially when combining plastic materials with other components.### Glazing of OpeningsFor exterior walls (except Types IV and V construction), glazing or approved plastics may be used. Certain conditions apply:- The wall where glazing is installed must not require fire protection.- Exceptions apply to Type I buildings; location, size, spacing, and flame-spread characteristics set forth by generally accepted engineering principles.### SkylightsApproved plastics can be used in skylights for roofs of Types I, II, or III buildings with approved automatic fire-extinguishing systems. Conditions include:- Usage is allowed when approved by the Building Official.- Specific construction details apply to prevent heat transfer and damage from fires.### Light-Transmitting Panels in Monitors and Sawtooth RoofsApproved plastics can be used for light-transmitting panels with or without sashes, subject to flame-spread characteristics. Conditions include:- Flame-spread-resistant materials must be used in Type II buildings.- Sash areas should not exceed 15 square meters; total skylight and monitor aggregates should not exceed 20% of room floor area.The minimum distance for plastic material from the adjoining roof surface is at least 15 centimeters, or 6 inches.The area of the paint spray booth shall not be less than 30.00 linear meters (100 linear feet) per minute, and the blades of exhaust fan shall be constructed of nonferous materials and mounted in a way that prevents contact with the exhaust duct. The motor shall not be installed in the spray booth or duct system, and belts shall be enclosed where they enter the booth or duct system.###ARTICLENo signs or signboards shall be erected in such a manner as to confuse or obstruct the view or interpretation of any official traffic sign signal or device. Likewise, no signboards shall be constructed so as to unduly obstruct the natural view of the landscape and distract the public from the beauty of nature. This is especially important when it comes to preserving the aesthetic and cultural values of the Filipino people.Signs shall be located not less than 1.80 meters horizontally or 3.60 meters vertically from high voltage power lines to avoid electrical hazards.No sign or structure can be erected in a way that it interferes with the use of fire escapes, exits, or standpipes, ensuring safe access and emergency exit routes.Signs must allow for adequate lighting and ventilation, without obstructing any openings or reducing air quality below minimum standards.Signs installed near exterior walls with openings should be made from non-combustible materials or approved plastics to prevent fires and ensure structural integrity.When projecting signs over alleys, the maximum height above grade is 4.25 meters, and projections should not exceed 30 centimeters within a 14-foot range, except for a 3-foot extension beyond that point.

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