

Republic of the Philippines
Department of Public Works and Highways
Manila

Pursuant to the authority vested in the Secretary of the Department of Public Works and Highways (DPWH) under Chapter 2 of the National Building Code of the Philippines (PD 1096), the following Rules and Regulations are hereby promulgated and issued:

Annotation: The 2004 Revised IRR text and graphics are as originally published by the DPWH on April 1, 8 and 15, 2005 in The Manila Standard Today, with supplied emphases, underscoring and annotations.

RULE I - GENERAL PROVISIONS

SECTION 101. Title

These Rules shall be known and cited as the “**Revised Implementing Rules and Regulations of the National Building Code of the Philippines (P.D. 1096)**” and shall be referred to as the “IRR”.

SECTION 102. Declaration of Policy

It is hereby declared to be the policy of the State to safeguard life, health, property, and public welfare, consistent with the principles of sound environmental management and control; and to this end, make it the purpose of the Code to provide for all buildings and structures, a framework of minimum standards and requirements to regulate and control their location, site, design, quality of materials, construction, use, occupancy, and maintenance.

SECTION 103. Scope and Application

1. The scope of this **IRR** shall cover the following disciplines: **architectural**, civil/structural, electrical, mechanical, sanitary, plumbing, and electronics. This shall also apply to the design, location, siting, construction, alteration, repair, conversion, use, occupancy, maintenance, moving, demolition of, and addition to public and private buildings and structures, **except** traditional indigenous family dwellings, and those covered by **Batas Pambansa Bilang 220** otherwise known as the “Economic and Socialized Housing Projects”.
2. Existing buildings or structures without appropriate building permits/certificates of occupancy may be legalized and issued the necessary permits and certificates, provided, they are made to conform to these rules and regulations. However, they shall be subject to the imposition of penalties, surcharges, fines and other appropriate measures.
3. The applicable and consistent provisions of the **allied professional codes and other government agency codes as approved by the DPWH Secretary** shall serve as the **referral codes of PD 1096 and this IRR**.

SECTION 104. General Building Requirements

1. **All buildings** or structures as well as accessory facilities thereto shall conform in all respects to the principles of safe construction and must be suited to the purpose for which they are designed.
2. **Buildings** or structures intended to be used for the manufacture and/or production of any kind of article or product shall observe adequate environmental safeguards.

3. **Buildings** or structures and all parts thereof as well as all facilities found therein shall be maintained in safe, sanitary and good working condition.

SECTION 105. Site Requirements

The land or site upon which will be constructed **any building** or structure, or any ancillary or auxiliary facility thereto, shall be sanitary, hygienic or safe. In case of sites or **buildings intended for use as human habitation** or abode, the same shall be at a safe distance, as determined by competent authorities, from streams or bodies of water and/or sources of air considered to be polluted; from a volcano or volcanic site and/or any other building considered to be a potential source of fire or explosion.

SECTION 106. Definitions

1. For purposes of this **IRR**, the following definitions shall apply:

ADDITION – Any new construction which increases the height and/or floor area of existing **buildings/structures**.

AGENCY OF THE GOVERNMENT – Refers to **any** of the various units of the government including a department, bureau, office, instrumentality, or government owned or controlled corporation.

ALTERATION – Works in **buildings/structures** involving changes in the materials used, partitioning, location/size of openings, structural parts, existing utilities and equipment but does **not** increase the building height and/or floor area.

APPLICATION FORMS – A preformatted prescribed application form duly accomplished and notarized by the **respective design professional** with validation matrices related to other **building** rules and regulations.

APPLICANT/ PERMITTEE – **Any** person, firm, partnership, corporation, head of government or private institution, organization of any character applying for the issuance of permits and certificates.

BUILDING OFFICIAL – the **Executive Officer** of the **OBO appointed** by the Secretary.

BUILDING PERMIT – A document issued by the **Building Official (BO)** to an owner/applicant to proceed with the construction, installation, addition, alteration, renovation, conversion, repair, moving, demolition or other work activity of a specific project/building/structure or portions thereof after the accompanying principal plans, specifications and other pertinent documents with the duly notarized application are found **satisfactory and substantially conforming** with the National Building Code of the Philippines (the **Code**) and its Implementing Rules and Regulations (**IRR**).

CODE – **PD 1096**, otherwise known as the **National Building Code of the Philippines**.

CONSTRUCTION – All on-site work done in the site preparation, excavation, foundation, assembly of all the components and installation of utilities, machineries and equipment of **buildings/structures**.

CONVERSION – A change in the use or occupancy of **buildings/structures** or any portion/s thereof, which has different requirements.

DEMOLITION – The systematic dismantling or destruction of a **building/structure**, in whole or in part.

DEPARTMENT – The **Department of Public Works and Highways (DPWH)**.

EXECUTIVE DIRECTOR – The **Executive Officer** or Head of the **NBCDO**.

MOVING – The transfer of **buildings**/structures or portion/s thereof from original location or position to another, either within the same lot or to a different one.

OFFICE OF THE BUILDING OFFICIAL (OBO) – The Office authorized to **enforce** the provisions of the **Code** and its **IRR** in the field as well as the enforcement of orders and decisions made pursuant thereto.

REFERRAL CODES – The applicable provisions of the various agency and **technical professional codes** that are supplementary to the **Code**.

RENOVATION – **Any** physical change made on **buildings**/structures to increase the value, quality, and/or to improve the aesthetic.

REPAIR – Remedial work done on any damaged or deteriorated portion/s of **building**/structure to restore to its original condition.

SECRETARY – Head or **Chief Executive Officer** of DPWH.

STAFF – The personnel of the **National Building Code Development Office (NBCDO)**.

2. As used in this **IRR**, other words, terms and phrases enumerated in the Glossary hereof shall have the meaning or definition correspondingly provided therein.

(emphases, underscoring and annotations supplied)

Rule II follows.

RULE II - ADMINISTRATION AND ENFORCEMENT

SECTION 201. Responsibility for Administration and Enforcement

The administration and enforcement of the provisions of the **Code** and this **IRR**, including the imposition of penalties for administrative violations thereof, is hereby vested in the Secretary.

SECTION 202. Technical Staff

The **National Building Code Development Office (NBCDO)** created through DPWH Department Order, shall serve as the **technical staff** of the Secretary. The functions thereof are as follows:

1. Assist the Secretary in the **administration and enforcement of the provisions of the Code and its IRR**.
2. Review, evaluate and **take final action** on various technical and legal problems forwarded to the Office of the Secretary.
3. **Conduct seminar/workshops** on the **Code**, its **IRR**, and **Batas Pambansa Blg. 344** (Accessibility Law).
4. Undertake such other duties and tasks as may be assigned by the Secretary from time to time.

SECTION 203. General Powers and Functions of the Secretary

1. Formulate **policies, plans, standards and guidelines** on building design, construction, use, occupancy and maintenance, in accordance with the **Code**.
2. Issue and promulgate **additional rules and regulations** in the form of **Memorandum Circulars** to implement the provisions of the **Code** and ensure compliance with policies, plans, standards and guidelines and issue office guidelines or Memorandum Circulars to **guide** the actions of the Building Official in the performance of his duties and responsibilities.
3. Exercise **appellate jurisdiction** over the decisions and orders of the Building Official. The order or decision of the Secretary shall be **final and executory** subject only to **review** by the **Office of the President** of the Republic.
4. Evaluate, review, approve and/or **take final action** on **changes and/or amendments to existing Referral Codes** as well as on the incorporation of other referral codes, which are not yet expressly made supplementary to the **Code** and its **IRR**.
5. Prescribe and impose the **amount of fees** and other charges as may be deemed necessary that the Building Official shall collect in connection with the performance of regulatory functions.
6. **Appoint a Building Official, separate and distinct** from the Office of the City/Municipal Engineers in all Cities and Municipalities.

Annotation: Many Building Officials appointed by the DPWH Secretary simultaneously hold the office of City/Municipal Engineer, a position created under R.A. No. 7160, The Local Government Code. This situation has resulted in only one (1) individual overseeing both the horizontal and vertical developments for local government units (LGUs). R.A. No. 9266, The Architecture Act of 2004 provides that positions in government requiring the expertise of architects shall only be filled by registered and licensed architects (RLAs). R.A. No. 9266 also expressly provides that all national and local government officials, such as Building Officials and Municipal/City Engineers shall implement the said law.

SECTION 204. Professional and Technical Assistance

The Secretary **may secure** professional, technical, scientific and other services including testing laboratories and facilities from other agencies of the National Government when deemed necessary. He may also engage and compensate within available appropriations, such number of **consultants**, experts and advisers on full or part-time basis, as may be necessary, coming from the **government or private** business, entities or associations to carry out the provisions of the **Code** and this **IRR**.

SECTION 205. Building Officials

Except as otherwise provided herein, the **Building Official** shall be responsible for carrying out the provisions of the **Code** in the field as well as the enforcement of orders and decisions made pursuant thereto.

All Building Officials appointed or designated other than by the Secretary, shall **continue** to act as the Building Official until such time that the Secretary appoints the Building Official. Offices of the Building Officials already established, separate and distinct from the office of the City/Municipal Engineers in cities and municipalities **may continue to exist** until such time that a regular office is created. (**Fig. II.1.**)

SECTION 206. Qualifications of Building Officials

No person shall be appointed as **Building Official** unless he possesses the following qualifications:

1. A Filipino citizen and of good moral character.
2. A **duly registered** architect or civil engineer.
3. A member of good standing of a duly accredited organization of his profession for not less than five (5) years endorsed or recommended by the accredited professional organization.
4. Has at least five (5) years of **diversified and professional** experience in building design and construction.
5. Has attended and successfully completed a **seminar workshop on PD 1096 and its IRR** conducted by the **DPWH**.

SECTION 207. Duties of the Building Official

The **Building Official** shall have the following duties:

1. Be **primarily responsible** for the **enforcement** of the provisions of the **Code** and its **IRR**, as well as **circulars, memoranda, opinions and decisions/orders** issued pursuant thereto. His actions shall **always be guided by appropriate orders/directives** from the Secretary.
2. Have overall administrative control and/or supervision over **all** works pertinent to **buildings/structures** in his area of responsibility and shall be charged with the processing of **all** permit applications and certificates as well as the issuance of the same.
3. Ensure that **all** changes, modifications, and alterations in the **design plans** during the construction phase shall **not** start until the modified design plan has been evaluated and the necessary **amendatory permit** issued.

4. Undertake annual inspections of all buildings/structures and keep an up-to-date record of their status.

OFFICE OF THE BUILDING OFFICIAL ORGANIZATION

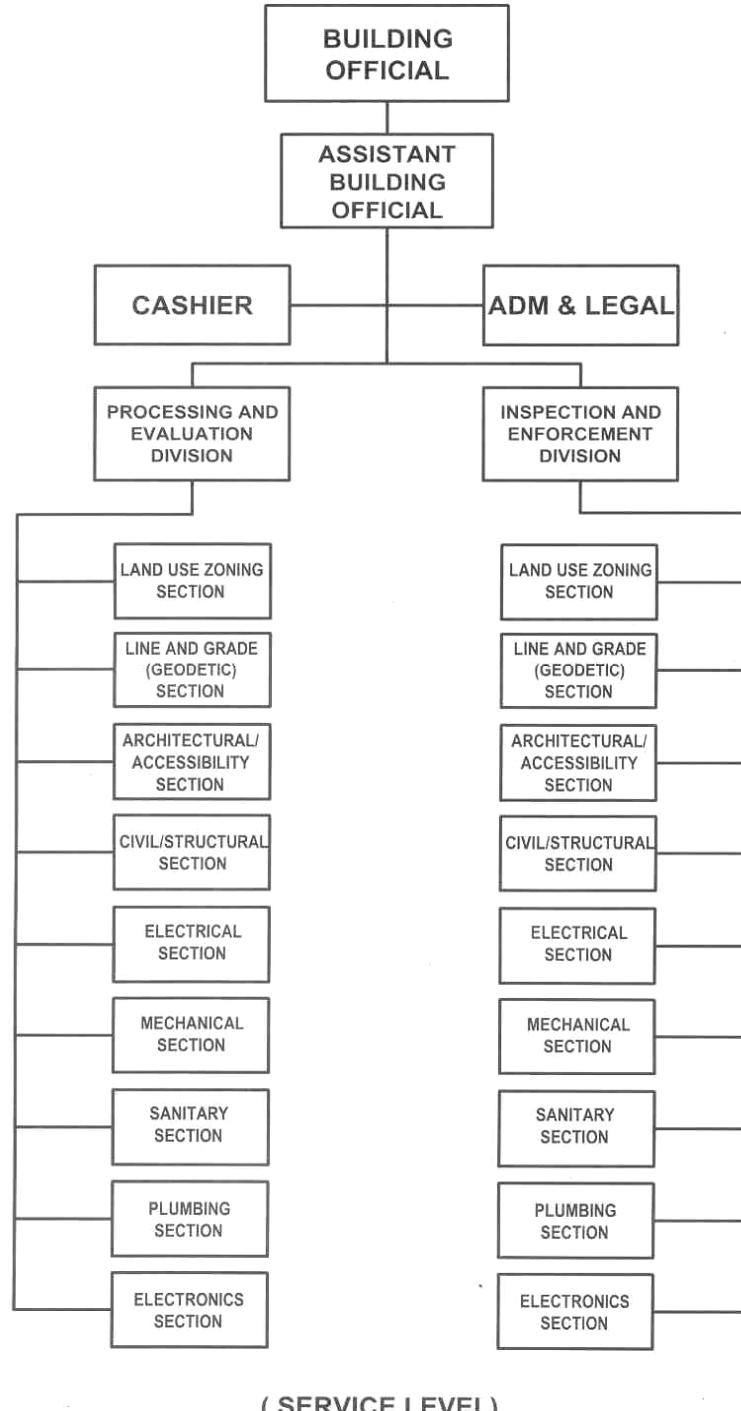


Figure II.1.

*Annotation: The Architectural/Accessibility Section for both workflows i.e. processing and evaluation and inspection and enforcement, is a requirement under these Revised IRR. The review of architectural plans, designs, drawings, specifications, estimates and contract documents submitted as part of a building permit application should only be undertaken by a **registered and licensed architect (RLA)** in full accordance with **R.A. No. 9266**.*

5. Upon complaint or *motu proprio* and after due notice/s and hearing, **initiate action** towards:
 - a. **Non-issuance**, suspension, revocation and/or invalidation of a building permit or certificate of occupancy;
 - b. Issuance of **work stoppage order**, or an **order for discontinuance** of the use or occupancy of the building/structure or portion thereof;
 - c. **Declaration** of a building/structure as ruinous or dangerous; and/or
 - d. The **imposition** of appropriate fines/penalties.
6. Submit a **quarterly situational report** to the Secretary through the **NBCDO**, on the **status** of all existing, on-going, and proposed public as well as private **building/structure** activities. (See Communication Flow Chart, **Fig. II.2.**)
7. Undertake such other duties and tasks as may be assigned by the Secretary from time to time.

SECTION 208. Fees

1. The Secretary, thru Memorandum Circulars, shall prescribe the **rates of fees** and formulate guidelines in the imposition and collection of fees.
2. Subject to existing budgetary, accounting and auditing rules and regulations, the **Building Official shall retain not more than 20% of the income**/collection derived from permit fees and other charges for the operating expenses of his office. The remainder of 100% shall accrue to the **general fund** of the respective city/municipality.
3. Every Building Official shall keep a **permanent record** and accurate account of all fees and other charges fixed and authorized to be collected and received.

SECTION 209. Exemption

Public buildings and traditional **indigenous** family dwellings shall be **exempt** from payment of building permit fees.

As used in the **Code**, the term "traditional **indigenous** family dwelling" means a dwelling intended for the use and occupancy by the family of the owner **only** and constructed of **native** materials such as bamboo, *nipa*, logs, or lumber, the total cost of which does not exceed **fifteen thousand** pesos (P 15,000.00).

SECTION 210. Use of Income from Fees

The procedure for the proper reporting and recording of collections and disbursements of the funds of the **General Fund Special Account 151** of the Office of the Secretary of the Department of Public Works and Highways (**DPWH**) is hereby prescribed.

1. Recording of Collections
 - a. Every **Building Official** shall keep a **permanent record** and accurate account of **all** fees and other charges fixed and authorized to be collected by him.
 - b. The **Order of Payment** issued by the **Building Official** shall show the breakdown of the total collections indicating the share of the **local** government concerned - **80%** and the share of the **national** government - **20%**.

COMMUNICATION FLOW OF QUARTERLY REPORT

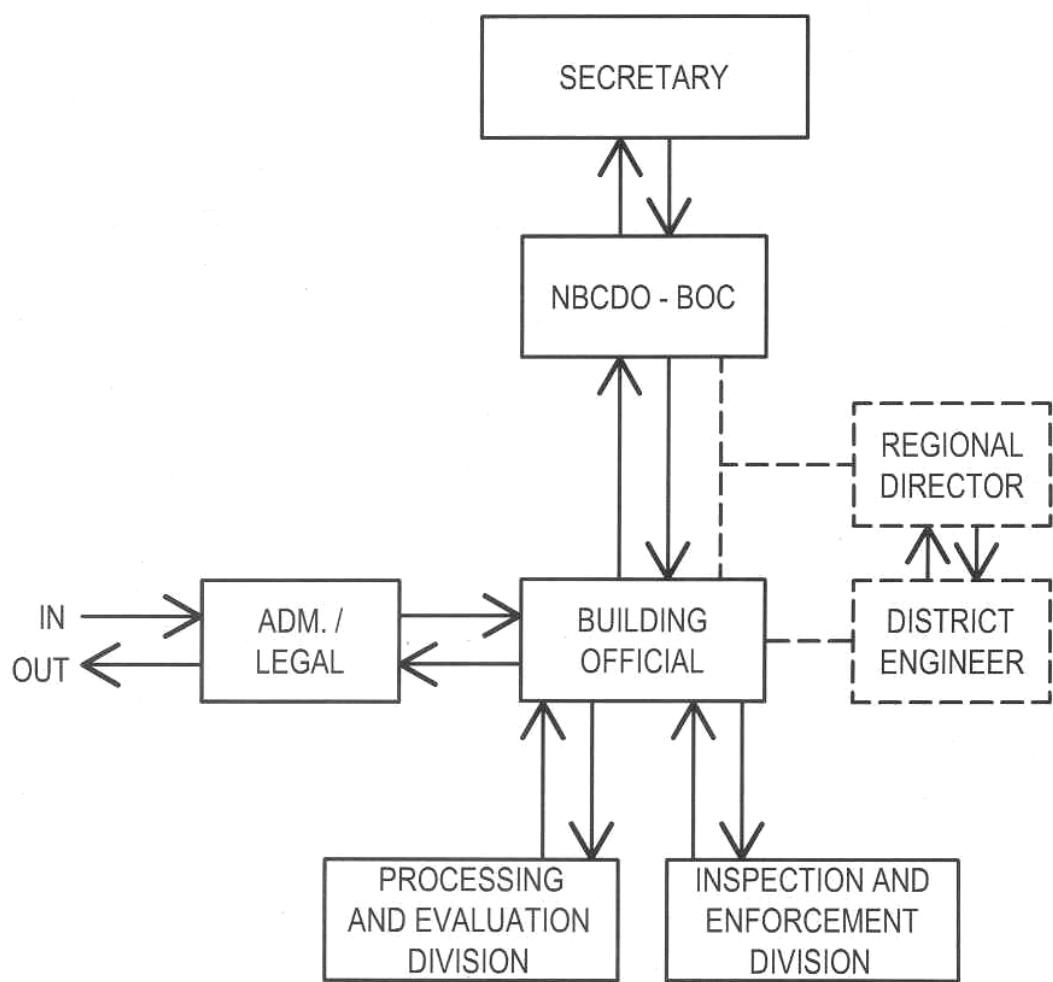


Figure II.2.

Annotation: As with **Figure II.1.**, the Architectural/Accessibility Section for both workflows i.e. processing and evaluation and inspection and enforcement, is a requirement under these Revised **IRR**. Again, the review of architectural plans, designs, drawings, specifications, estimates and contract documents submitted as part of a building permit application should only be undertaken by a **registered and licensed architect (RLA)** in full accordance with **R.A. No. 9266**.

- c. Every **Building Official** shall keep a **separate record** from the DPWH Central Office of all allotments [Special Allotment Release Order (**SARO**) and Notice of Cash Allocation (**NCA**), or Funding Checks], received by him out of budgeted amounts released by the Department of Budget and Management (**DBM**). The funds shall cover all the necessary **operating expenses** of the OBO, including the purchase of equipment, supplies and materials, traveling expenses, obligation expenses and sheriffs' fees and payment of other prior years' obligations not adequately funded, subject to existing budgetary and auditing rules and regulations.
- d. He shall render the reports required under the **Centralized Accounting System**.

2. Disposition of Collections

- a. The collection shall be made by the Local Treasurer, and the Official Receipt shall show the breakdown of the total collections indicating the share of the local government concerned - 80% and the share of the national government - 20%.
- b. Subject to existing budgetary, accounting and auditing rules and regulations, the Local Treasurer shall remit to the Bureau of the Treasury, the 20% of his collection. The remaining 80% shall be deposited with the Authorized Government Depository Bank (**AGDB**) for the account of the Local Government and shall accrue to the general funds of the City or Municipality concerned.
- c. Pursuant to Sec. 21, Volume I of the New Government Accounting System (**NGAS**) Manual as provided under COA Circular No. 2001-004 dated October 30, 2001, the Local Treasurer thru his collecting officer or cashier shall deposit the 80% share of collections to the **AGDB** for the account of the Local Government concerned. He shall remit the 20% of the collections to the Bureau of the Treasury thru any **AGDB** branch nearest the locality to the credit of the Department of Public Works and Highways (**DPWH**), Office of the Secretary with **Code No. B5702 and Special Account No. 151**.
- d. Distribution of validated remittance advices and deposit slips of the 20% collections thru any Authorized Government Depository Bank shall be in accordance with **COA Circular 2001-004**, to wit:
 - Original - to be retained by the bank branch.
 - Duplicate - to be submitted by the Local Treasurer to the OBO.
 - TriPLICATE - to be retained by the bank branch for submission to the Provincial Treasury Fiscal Examiner assigned to the province where the bank is located.
 - Quadruplicate - to be returned to the Local Treasurer for submission to the DPWH-Central Office (**CO**) Chief Accountant with his monthly report of collections.
 - Quintuplicate - to be returned to the Local Treasurer for submission to the Field/Local Auditor.
- e. The Local Treasurers and the Treasury Vault/Bank Auditor shall have the following responsibilities:
 - i. Local Treasurer. Since the distribution of copies of the validated remittance advices and deposit slips for the Agency/Field Auditor of the Local Treasurers shall be undertaken by the National/Treasury/Bank Branch thru its Treasury Vault Auditor/Bank Auditor, all Local Treasurers shall indicate on the face of the remittance advice, the name and office address of their respective Agency/Field Auditors to facilitate matters.
 - ii. Treasury Vault/Bank Auditor. Upon receipt of the validated remittance advices, the Treasury Vault Auditor/Bank Auditor shall confirm and transmit said remittance advices every end of the week to the corresponding agency/field auditor of the Local Treasurer concerned. In cases where there is no bank auditor assigned in a particular locality, confirmation shall be undertaken by the officer designated by the Head of the Bank branch.
- f. Reporting of Collections and Deposits

At the close of each business day, the collecting officers (Local Treasurers) shall accomplish the Report of Collections and Deposits (RCD) in accordance with the NGAS Manual. The reports shall be prepared by the Local Treasurer in five copies, distributed as follows after verification by the field auditor:

Original	- to the DPWH-CO Auditor (thru the DPWH-CO Accountant for recording).
Duplicate (with duplicate official receipts and validated quintuplicate remittance advices)	- to the Field/Local Auditor for final custody.
Triplicate (with validated quadruplicate remittance advices)	- to the DPWH-CO Accountant (for posting to the corresponding subsidiary ledgers).
Quadruplicate	- to be retained by the Local Treasurer.
Quintuplicate	- local office accounting file.

The Local Treasurer shall certify all the copies of the report and submit the first three (3) copies to his Field Auditor within three (3) days after the end of the month for audit. The **Field Auditor** shall verify the report, cross-check the remittances indicated therein against the quintuplicate copies of remittance advices he receives/received from the Bank Auditor and indicate his certification thereon and finally submits the original and triplicate copies thereof to the **DPWH-CO Auditor** thru the **DPWH-CO Chief Accountant** within five (5) days from date of receipt from the Local Treasurer.

g. Crediting of Accounts of Local Treasurer

In the monthly report of collections, specifically at the back thereof, is a statement of account current showing the accountability of the Local Treasurer. The **DPWH-CO Chief Accountant** shall cross-check the validated quadruplicate remittance advices attached to the duplicate copy of the monthly report of collections against the remittances made by the Local Treasurer with the National Treasury or any of its authorized depository banks as appearing in the statement of account current. After the crosschecking, and in the absence of any discrepancy, the **DPWH-CO Chief Accountant** shall credit the account of the Local Treasurer even without the monthly abstract of remittances from the National Treasury.

h. Safeguards

- i. Upon receipt of the monthly abstract of remittances from the National Treasury, the remittances appearing therein shall be counter checked by the **DPWH-CO Chief Accountant** against the credits already given the collecting officers concerned and any discrepancies discovered in the process shall be verified and adjusted immediately.
- ii. In case of retirement or resignation by the Local Treasurers, their clearances shall be held in abeyance until their remittances have been fully cleared by the National Treasury.

i. Centralized Accounting System

- i. A centralized accounting system shall be maintained in the Office of the DPWH Secretary. Said office shall set up and maintain a separate set of books of accounts to be used solely for transactions pertaining to the implementation of the provisions of the National Building Code and its Implementing Rules and Regulations.

- ii. Upon receipt of the **SARO** and the corresponding **NCA**, the Office of the DPWH Secretary shall in turn allocate the same together with the **NCA** or Funding Check to the Building Officials, and at the same time obligate the allotment for the amount of expenditures.
 - iii. All deputized disbursing officers shall render the following reports:
 - Report of Checks Issued together with duplicate copies of checks issued for submission to the Treasury Provincial Fiscal Examiner in the region.
 - Report of Checks Issued as required by the **NGAS** for entry in the Checks Disbursement Journal by **DPWH-CO Chief Accountant**.
 - iv. The Department Chief Accountant shall adjust obligations quarterly to actual liquidations as required.
 - v. Deputized disbursing officers shall keep a record to control NCA/Funding Check separate from other funds in his custody.
 - vi. Deputized disbursing officers shall prepare other statements or reports as may be required from time to time by the proper authorities.
 - vii. The Deputized Disbursing Officer (**DDO**) shall render a monthly report of accountability for checks issued during the month and the balance at the end of the month. Copies of said report shall be distributed as follows :
 - Original - to the Treasury Provincial Fiscal Examiner
(Cash Operation Service)
 - Duplicate - to the **DPWH-CO Chief Accountant**
 - Triplicate - to the **Auditor, DPWH-CO**
 - Quadruplicate - **Field Auditor**
 - Quintuplicate - File of Disbursing Officer
 - viii. The deputized disbursing officer authorized to requisition blank Modified Disbursement System (**MDS**) or Commercial checks shall prepare and submit requisition and issue voucher, and the Invoice and Receipt of **Accountable Forms** which shall be distributed as follows:
 - Original - Treasury Provincial Fiscal Examiner
 - Duplicate - Cash Operations Service, Bureau of the Treasury
 - Triplicate - COA Auditor of the DDO's Agency
 - Quadruplicate - Accounting Unit of DDO
 - Quintuplicate - **DDO** file
 - Sextuplicate - Office of the Provincial/City Auditor Concerned
- j. Turnover of Accountability
- i. In case of change, transfer, resignation or retirement from the service of the Building

Official, an inventory of all money and property accountabilities shall be taken jointly by the outgoing and incoming **Building Official** and a receipt passed on the basis of such inventory. Such inventory shall be certified as accurate by the said officers, witnessed by the local auditor thereat.

- ii. The preceding procedure shall also apply to a deputized disbursing officer other than the **Building Official** with respect to money and property accountabilities in his custody.
 - iii. Application for clearance of the **Building Official** and other deputized disbursing officers shall be cours ed to the Office of the **DPWH Secretary**, to check their unpaid obligations with the **OBO**.
- k. Other Provisions
- i. Compensation of consultants, experts and advisers whose services were secured shall be funded from the 20% income derived from the building permit fees and other charges.
 - ii. Any circular/s that may subsequently be issued by the proper authorities revoking or amending provisions or certain portions of circular/s incorporated in the above rules and regulations shall automatically revoke or amend such corresponding portions that are inconsistent therewith.

SECTION 211. Implementing Rules and Regulations

In the implementation of the provisions of the **Code** and its **IRR**, the Secretary shall formulate necessary rules and regulations and adopt design and construction standards and criteria for **buildings** and other structures. Such standards, rules and regulations shall take effect after their publication once a week for three consecutive weeks in a newspaper of general circulation.

SECTION 212. Administrative Fines

1. Imposition of Administrative Fines

- a. The Secretary or his duly authorized representative may prescribe and impose **fines** not exceeding **ten thousand** pesos (P10, 000.00) in the following cases, subject to the terms and procedures as hereunder provided:
 - i. Erecting, constructing, altering, repairing, moving, converting, installing or demolishing a private or public **building/structure** if **without** building/demolition permit.
 - ii. Making any alteration, addition, conversion or repair in **any building/structure/appurtenances thereto** constructed or installed before the adoption of the **Code**, whether public or private, **without** a permit.
 - iii. **Unauthorized** change, modification or alteration during the construction in the duly submitted plans and specifications on which the building permit is based.
 - iv. **Non-compliance** with the work stoppage order or notice and/or orders to effect necessary correction in plans and specifications found defective.
 - v. **Non-compliance** with order to demolish **building/structure** declared to be nuisance, ruinous or dangerous.
 - vi. **Use or occupancy of a building/structure without** Certificate of Occupancy/Use even if constructed under a valid building permit.

- vii. **Change** in the existing use or occupancy classification of a building/structure or portion thereof **without** the corresponding Certificate of Change of Use.
 - viii. Failure to post or display the certificate of occupancy/use/operation in a conspicuous place on the premises of the building/structure/appurtenances.
 - ix. Change in the type of construction of any building/structure without an amendatory permit.
- b. In addition to the imposed penalty, the owner shall **correct/remove** his violations of the provisions of the Code.
2. Determination of Amount of Fines
- a. In the determination of the amount of fines to be imposed, violations shall be classified as follows:
 - i. Light Violations
 - (a) Failure to post Certificate of Occupancy/Use/Operation.
 - (b) Failure to post Building Permit construction information sign.
 - (c) Failure to provide or install appropriate safety measures for the protection of workers, inspectors, visitors, immediate neighbors and pedestrians.
 - ii. Less Grave Violations
 - (a) **Non-compliance** with the work stoppage order for the alteration/addition/conversion/repair without permit.
 - (b) **Use or occupancy** of building/structure **without** appropriate Certificate of Occupancy/Use/Operation.
 - iii. Grave Violations
 - (a) **Unauthorized** change, modification or alteration during construction in the duly submitted plans and specifications on which the building permit is based.
 - (b) **Unauthorized** change in type of construction from more fire-resistive to less fire-resistive.
 - (c) **Non-compliance** with order to abate or demolish.
 - (d) **Non-compliance** with work stoppage order for construction/demolition without permit.
 - (e) **Change** in the existing use or occupancy without Certificate of Change of Occupancy/Use/Operation.
 - (f) **Excavations left open** without any work being done in the site for more than one hundred twenty (120) days.

b. Amount of Fines

The following amount of fines for violations of the Code and this IRR is hereby prescribed:

Light Violations	- P 5,000.00
Less Grave Violations	- P 8,000.00
Grave Violations	- P 10,000.00

c. Penalty

- i. Without prejudice to the provisions of the preceding Sections, the **Building Official** is hereby also **authorized** to impose a **penalty or surcharge** in the following cases in such amount and in the manner as hereunder fixed and determined:

For constructing, installing, repairing, altering or causing any change in the occupancy/use of **any building**/structure or part thereof or appurtenances thereto **without** any permit, there shall be imposed a surcharge of 100% of the building fees; Provided, that when the work in the building/structure is started pending issuance of the Building Permit by the Building Official, the amount of the surcharge shall be according to the following:

Excavation for foundation.....	- 10% of the building permit fees
Construction of foundation (including pile driving and laying of reinforcing bars).....	- 25% of the building permit fees
Construction of superstructure up to 2.00 meters above established grade.....	- 50% of the building permit fees
Construction of superstructure above 2.00 meters.....	- 100% of the building permit fees

3. For **failure** to pay the annual inspection fee within thirty (30) days from the prescribed date, a **surcharge** of 25% of the inspection fee shall be imposed.

SECTION 213. Penal Provisions

It shall be unlawful for **any** person, firm or corporation, to erect, construct, enlarge, alter, repair, move, improve, remove, convert, demolish, equip, use, occupy, or maintain **any building** or structure or cause the same to be done contrary to or in violation of any provision of the **Code**.

Any person, firm or corporation who shall violate **any** of the provisions of the **Code** and/or commit any act hereby declared to be unlawful shall upon conviction, be punished by a fine of not more than **twenty thousand** pesos or by imprisonment of not more than **two years** or by **both** such fine and imprisonment; Provided, that in the case of a corporation firm, partnership or association, the penalty shall be imposed upon its **officials responsible** for such violation and in case the guilty party is an alien, he shall immediately be deported **after** payment of the fine and/or service of his sentence.

SECTION 214. Dangerous and Ruinous Buildings or Structures

Dangerous **buildings** are those which are herein declared as such or are structurally unsafe or not provided with safe egress, or which constitute a fire hazard, or are otherwise dangerous to human life, or which in relation to existing use, constitute a hazard to safety or health or public welfare because

of inadequate maintenance, dilapidation, obsolescence, or abandonment; or which otherwise contribute to the pollution of the site or the community to an intolerable degree.

SECTION 215. Abatement of Dangerous Buildings

When **any building** or structure is found or declared to be dangerous or ruinous, the **Building Official** shall **order** its repair, vacation or demolition depending upon the degree of danger to life, health, or safety. This is without prejudice to further action that may be taken under the provisions of **Articles 482 and 694 to 707 of the Civil Code of the Philippines**. The condition or defects that render **any building/structure** dangerous or ruinous are as follows: (See *Procedure for Abatement/Demolition of Dangerous/Ruinous Buildings/Structures at the end of this Rule*)

1. Structural Hazards

- a. Whenever **any building/structure** or portion thereof has been damaged by fire, earthquake, wind, flood, or by any other cause to such an extent that the structural strength or stability thereof is materially less than it was **before** the catastrophe and is less than the minimum requirements of the National Structural Code of the Philippines (**NSCP**) for **new buildings** of similar structure, purpose or location.
- b. Whenever **any** portion or member or appurtenances thereof is likely to fall, or to become detached or dislodged or to collapse and thereby injure persons or damage property.
- c. Whenever **any** portion of a **building/structure** or any member, appurtenance or ornamentation on the exterior thereof is **not** of sufficient strength or stability, or is not anchored, attached or fastened in place so as to be capable of resisting a wind pressure of one-half of that specified in the **NSCP** for such type of buildings.
- d. Whenever **any** portion thereof has been wrecked, warped, buckled or settled to such an extent that the walls or other structural portions have materially less resistance to wind or earthquake than is required in the case of similar new construction.
- e. Whenever the **building/structure** or any portion thereof, because of: (1) dilapidation, deterioration or decay; (2) faulty construction; (3) the removal, movement or instability of any portion of the ground necessary for the purpose of supporting such **building**; (4) the deterioration, decay or inadequacy of its foundation; or (5) any other cause, is likely to partially or totally collapse.
- f. Whenever the exterior walls or other vertical structural member lean or buckle to such an extent that a plumb line passing through the center of gravity does not fall inside the middle one-third of the base.
- g. Whenever the **building/structure**, exclusive of the foundation, shows 33% or more damage or deterioration of its supporting member or members, or 50% damage or deterioration of its non-supporting members, enclosing or outside walls or coverings.
- h. Whenever the **building/structure** has been so damaged by fire, wind, earthquake or flood, or has become so dilapidated or deteriorated as to become: (1) an attractive nuisance to public; (2) a harbor for vagrants, criminals or immoral persons; or (3) a resort for purposes of committing unlawful or immoral acts.
- i. Whenever the **building/structure** which, whether or not erected in accordance with all applicable laws or ordinances, has in any non-supporting part, member or portion, less than 50% or in any supporting part, member or portion less than 66% of the: (1) strength; (2) fire-resisting qualities or characteristics; (3) weather-resisting qualities or characteristics required

- by law in the case of a newly constructed building of like area, height and occupancy in the same location.
- j. Whenever **any** portion of a **building**/structure remains on the site after its demolition or whenever any **building**/structure or portion thereof is abandoned for a period in excess of twelve (12) months so as to make it a nuisance or hazard to the public.

2. Fire Hazards

- a. Any **building**/structure or portion thereof, device, apparatus, equipment material, or vegetation which may cause fire or explosion, or provide a ready fuel or augment the speed and intensity of fire or explosion arising from any cause.
- b. All **buildings**/structures or portions thereof not provided with the required fire-resistive or fire-protective construction or fire-extinguishing system or equipment.
- c. Whenever **any** door, aisle, passageway, stairway, or other means of exit is **not** of sufficient width or size, or is **not** so arranged as to provide safe and adequate means of exit in case of fire and panic.
- d. Whenever **any** **building**/structure, because of obsolescence, dilapidated condition, deterioration, damaged, inadequate exits, **lack** of sufficient fire-resistive construction, hazardous electric wiring, gas connections or heating apparatus, or other cause, in violation of the **Fire Code of the Philippines (PD 1185)**.

3. Unsafe Electrical Wiring

- a. All wiring systems or installations which do **not** conform to the rules and regulations embodied in the latest **Philippine Electrical Code**.
- b. Inadequately maintained or improperly used electrical wirings, outlets, devices and/or equipment.

4. Unsafe Mechanical Installation

- a. Mechanical systems or installations which do **not** conform to the rules and regulations embodied in the **Philippine Mechanical Code**.
- b. Inadequately maintained or improperly used mechanical outlets, devices and/or equipment.
- c. Lack of or improper operation of required ventilating equipment or air-conditioning systems.
- d. Improperly installed or lack of protection and safety provisions on steam, gas and fuel supply lines.

5. Inadequate Sanitation/Plumbing and Health Facilities

- a. All sanitation and plumbing systems or installations which do not conform to the rules and regulations embodied in the **Code on Sanitation of the Philippines** and the **Revised National Plumbing Code**.
- b. Inadequately maintained or improperly used sanitation and plumbing facilities.
- c. Infestation of insects, vermin or rodents and lack of adequate control for the same.
- d. Lack of adequate garbage and rubbish storage and removal or disposal facilities.

- e. Source of pollution.
- 6. Architectural Deficiency
 - a. All buildings/structures or portion thereof used or occupied for purposes other than their intended uses.
 - b. Improper/Unauthorized Occupancy/Location.
 - c. Insufficient amount of natural light and ventilation due to inadequate open spaces such as courts and yards as required.
 - d. Inadequate sizes of rooms and space dimensions and window openings.
 - e. Dilapidated, blighted and other unrepresentable **buildings**/structures against generally accepted aesthetic standards.

SECTION 216. Other Remedies

The rights, actions and remedies provided in the **Code** and in the **IRR** shall be in addition to any and all other rights of action and remedies that may be available under existing laws.

PROCEDURE FOR ABATEMENT/ DEMOLITION OF DANGEROUS/ RUINOUS BUILDINGS/STRUCTURES

- 1. There must be a finding or declaration by the **Building Official** that the **building**/structure is a nuisance, ruinous or dangerous.
- 2. Written notice or advice shall be served upon the owner and occupant/s of such finding or declaration giving him at least **fifteen** (15) days within which to vacate or cause to be vacated, repaired, renovated, demolished and removed as the case may be, the nuisance, ruinous or dangerous **building**/structure or any part or portion thereof.
- 3. Within the **fifteen** (15) day period, the owner may, if he so desires, appeal to the Secretary the finding or declaration of the **Building Official** and ask that a re-inspection or re-investigation of the **building**/structure be made.
- 4. In case the owner should ask the **Building Official** for a reconsideration on his order, same shall be given not more than not more than **fifteen** (15) days within which to render his final decision appealable to the Office of the Secretary.
- 5. If the appeal is meritorious, the Secretary may designate a competent representative/s other than the **Building Official** to undertake the re-inspection or re-investigation of the **building**/structure. The representative/s so designated shall make or complete his/their report/s within the period of **thirty** (30) days from the date of termination of re-inspection or re-investigation.
- 6. If after re-inspection, the finding is the same as the original one, the Secretary through the **Building Official** shall notify the owner, giving him not more than **fifteen** (15) days from receipt of notice with affirmed finding to vacate or cause to be vacated and make necessary repair, renovation, demolition and removal of the subject **building**/structure or parts thereof, as the case may be.

7. If the **Building Official** has determined that the building/structure must be repaired or renovated, the **Order** to be issued shall require that all necessary permits therefor be secured and the work be commenced physically within such reasonable time as may be determined by the **Building Official**.
8. If the **Building Official** has determined that the building/structure must be demolished, the **Order** shall require that the building/structure be vacated within **fifteen** (15) days from the date of receipt of the **Order**; that all required permits be secured therefor within the same fifteen (15) days from the date of the **Order**, and that the demolition be completed within such reasonable time as may be determined by the **Building Official**.
9. The decision of the Secretary on the appeal shall be final.
10. Upon failure of the owner to comply with the **Order** of the **Building Official** or of the Secretary, in case of appeal, to repair, renovate, demolish and remove the **building**/structure or **any** part thereof after **fifteen** (15) days from the date of receipt of the **Order**, the **Building Official** shall cause the **building** or structure to be repaired, renovated, demolished and removed, partly or wholly, as the case may be, with all expenses therefor chargeable to the owner.
10. The **building**/structure as repaired or in case of demolition, the building materials gathered after the demolition thereof shall be held by the **OBO** until full reimbursement of the cost of repair, renovation, demolition and removal is made by the owner which, in no case, shall extend beyond **thirty** (30) days from the date of completion of the repair, renovation, demolition and removal. After such period, said building materials of the building thus repaired, renovated or removed shall be sold at public auction to satisfy the claim of the **OBO**. Any amount in excess of the claim of the government realized from the sale of the building and/or building materials shall be delivered to the owner.
11. The procedures, actions and remedies herein are without prejudice to further action that may be taken by the **Building Official** against the owner/occupants of the **building**/structure found or declared to be nuisance/s, dangerous, and/or ruinous under the provisions of **Articles 482 and 694 to 707 of the Civil Code of the Philippines**.

(emphases, underscoring and annotations supplied)

Rule III follows

RULE III - PERMITS AND INSPECTION

SECTION 301. Building Permits

1. No person, firm or corporation, including any agency or instrumentality of the government shall construct, alter, repair, convert, use, occupy, move, demolish and add **any building**/structure or any portion thereof or cause the same to be done, without first obtaining a building permit therefor from the **Building Official** assigned in the place where the subject building/structure is located or to be done. The prescribed application for building permit form (**NBC Form B-01**) shall be used by all applicants.
2. Permits supplementary to a **Building Permit** shall be applied for and issued by the **Building Official**. These include Ancillary and the Accessory Permits.

a. **Ancillary Permits**

The **Ancillary Permits** duly signed and sealed by the corresponding professionals and the plans and specifications shall be submitted together with the duly notarized application for **Building Permit**. The **Building Permit** is null and void if not accompanied by the **Ancillary Permits**. The prescribed **Ancillary and other Accessory Permits**/forms shall likewise be used whenever applicable. The **Ancillary Permits** are the following:

- i. **Architectural Permit**
- ii. Civil/Structural Permit
- iii. Electrical Permit
- iv. Mechanical Permit
- v. Sanitary Permit
- vi. Plumbing Permit
- vii. Electronics Permit

b. **Accessory Permits**

- i. **Accessory Permits** are issued by the **Building Official** for accessory parts of the project with very special functions or use which are indicated in the plans and specifications that accompany the building permit application. These may include, among others: bank and records vaults; swimming pools; firewalls separate from the building/structure; towers; silos; smokestacks; chimneys; commercial/industrial fixed ovens; industrial kilns/furnaces; water/waste treatment tanks, septic vaults; concrete and steel tanks; booths, kiosks and stages; and tombs, mausoleums and niches.
- ii. **Accessory Permits** are issued by the **Building Official** for activities being undertaken prior to or during the processing of the building permit. The coverage is spelled out in the accessory permit form including the expiry period. These shall be signed by the concerned owner/applicant and by the concerned professionals. These permits include, among others, ground preparation and excavation, encroachment of foundation to public area, fencing, for fence not exceeding 1.80 meters high, sidewalk construction, temporary sidewalk enclosure and occupancy, erection of scaffolding, erecting, repair, removal of sign; and demolition.

3. **Exemption** From Building Permits

A building permit shall **not** be required for the following **minor** constructions and repairs, provided these shall not violate any provision of the **Code and this IRR**.

a. **Minor** Constructions

- i. Sheds, outhouses, greenhouses, children's playhouses, aviaries, poultry houses and the like, not exceeding 6.00 sq. meters in total area, provided they are completely detached from any other building and are intended only for the private use of the owner.
- ii. Addition of open terraces or patios resting directly on the ground, not exceeding 20.00 sq. meters in total floor area, exclusively for the private use of the owner.
- iii. Installation of window grilles.
- iv. Garden pools for the habitation of water plants and/or aquarium fish not exceeding 500 millimeters in depth and exclusively for private use.
- v. Garden masonry walls other than party walls not exceeding 1.20 meters in height, footpaths, residential garden walks and/or driveways.

b. **Repair** Works

- i. Repair works not affecting or involving any structural member, such as replacement of deteriorated roofing sheets or tiles, gutters, downspouts, fascias, ceilings and/or sidings.
- ii. Repair and/or replacement of non load-bearing partition walls.
- iii. Repair and/or replacement of any interior portion or a house not involving addition or alteration.
- iv. Repair and/or replacement work of doors and windows.
- v. Repair and/or replacement work of flooring.
- vi. Repair of perimeter fence and walls.
- vii. Repair and/or replacement of plumbing fixtures, fittings or pipings, such as toilet bowls, sinks, lavatories, urinals, bidets, pipes, faucets, valves for single detached dwellings and duplexes.

SECTION 302. Application for Permits

1. Any person desiring to obtain a **building permit** and any ancillary/accessory permit/s together with a **Building Permit** shall file application/s therefor on the prescribed application forms.
2. Together with the accomplished prescribed application form/s, the following shall be submitted to the **OBO**:
 - a. In case the applicant is the registered owner of the lot:
 - i. Certified true copy of **OCT/TCT**, on file with the Registry of Deeds,
 - ii. Tax Declaration, and

- iii. Current Real Property Tax Receipt.
- b. In case the applicant is not the registered owner of the lot, in addition to the above; duly notarized copy of the **Contract of Lease, or Deed of Absolute Sale**.
- 3. **Five (5) sets** of survey plans, design plans, specifications and other documents prepared, signed and sealed over the printed names of the duly licensed and registered professionals (**Figs. III.1. and III.2.**):

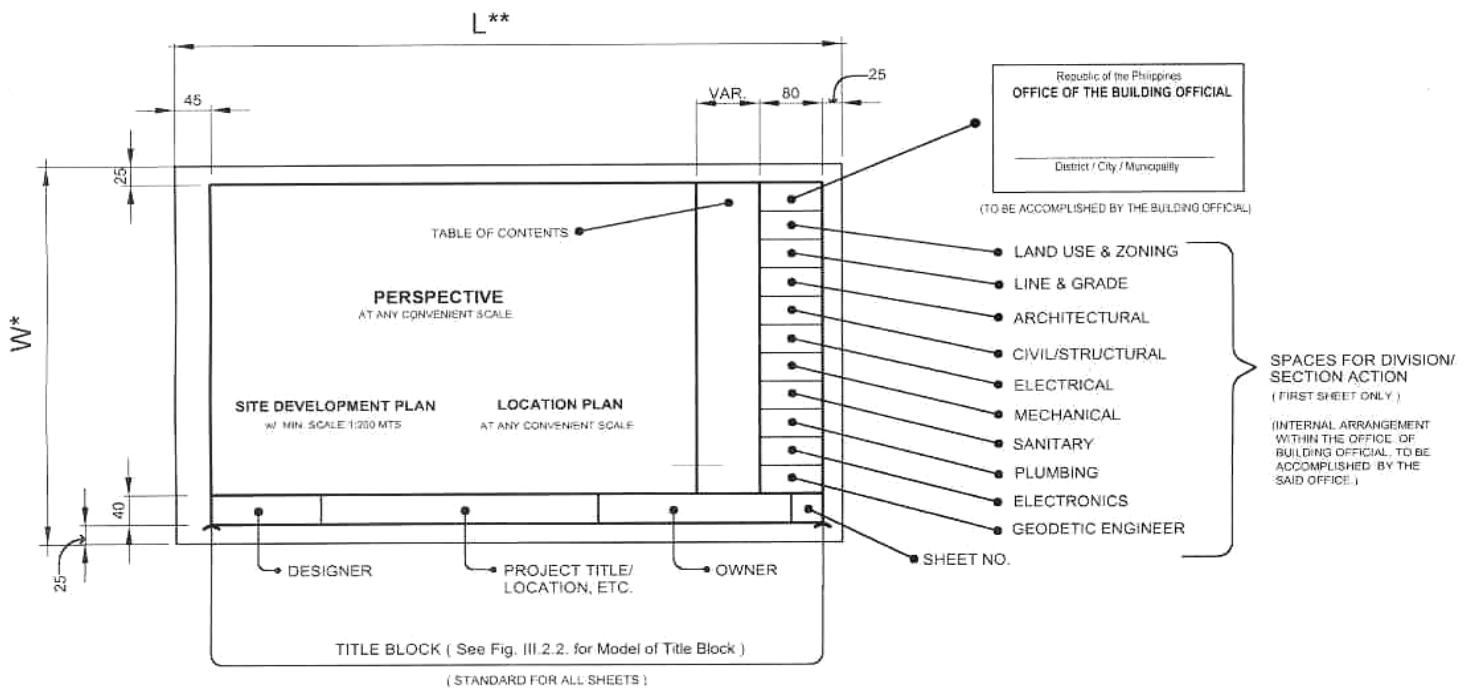
 - a. Geodetic Engineer, in case of lot survey plans;
 - b. **Architect, in case of architectural documents; in case of architectural interior/interior design documents**, either an architect or interior designer may sign;
 - Anotation: The preparation, signing and dry-sealing of ALL architectural documents (plans, designs, drawings, specifications, estimates and the like) and of architectural interiors form part of the exclusive scope of work of registered and licensed architects (RLAs) as defined under R.A. No. 9266, The Architecture Act of 2004 and its 2004 IRR. Interior design is the work of registered and licensed interior designers (RLIDs) under R.A. No. 8534, The Interior Design Act of 1987. Strictly speaking, the respective practices of RLAs and RLIDs should not overlap.*
 - c. Civil Engineer, in case of civil/structural documents;
 - Anotation: Before the approval of R.A. No. 9266, the limited preparation of civil/structural documents formed part of the scope of work of registered and licensed architects (RLAs) as defined under R.A. No. 1581, which amended R.A. No. 545, The Organic Architecture Act of 1950 and its 1979 IRR. Interior design is the work of registered and licensed interior designers (RLIDs) under R.A. No. 8534, The Interior Design Act of 1987. With the approval of R.A. No. 9266 that limited RLAs only to structural conceptualization, there is now no overlap between the respective practices of RLAs and civil engineers (CEs).*
 - d. Professional Electrical Engineer, in case of electrical documents;
 - e. Professional Mechanical Engineer, in case of mechanical documents;
 - f. Sanitary Engineer, in case of sanitary documents;
 - g. Master Plumber, in case of plumbing documents;
 - h. Electronics Engineer, in case of electronics documents.

4. Architectural Documents

a. Architectural Plans/Drawings

- i. **Vicinity Map/Location Plan** within a 2.00 kilometer radius for commercial, industrial, and institutional complex and within a half-kilometer radius for residential buildings, at any convenient scale showing prominent landmarks or major thoroughfares for easy reference.
- ii. **Site Development Plan** showing technical description, boundaries, orientation and position of proposed building/structure in relation to the lot, existing or proposed access road and driveways and existing public utilities/services. Existing buildings within and adjoining the lot shall be hatched and distances between the proposed and existing buildings shall be indicated.

- iii. **Perspective** drawn at a convenient scale and taken from a vantage point (bird's eye view or eye level).
- iv. **Floor Plans** drawn to scale of **not less than 1:100** showing: gridlines, **complete identification of rooms or functional spaces.**
- v. **Elevations**, at least four (4), same scale as floor plans showing: gridlines; natural ground to finish grade elevations; floor to floor heights; door and window marks, type of material and exterior finishes; adjoining existing structure/s, if any, shown in single hatched lines.
- vi. **Sections**, at least two (2), showing: gridlines; natural ground and finish levels; outline of cut and visible structural parts; doors and windows properly labeled reflecting the direction of opening; partitions; built-in cabinets, etc.; identification of rooms and functional spaces cut by section lines.
- vii. **Reflected ceiling plan** showing: design, location, finishes and specifications of materials, lighting fixtures, diffusers, decorations, air conditioning exhaust and return grills, sprinkler nozzles, if any, at scale of at least 1:100.



SIZES OF DRAWING SHEETS		
TYPE	W* (mm)	L** (mm)
A0	841	1189
A1	594	841
A2	420	594
A3	297	420

NOTE:
FOR EXTRAORDINARY
CASES SUCH AS PROJECTS OF
LARGE MAGNITUDE, EXEMPTION
IN THE USE OF STANDARD SHEET
MAY BE GRANTED BY THE
BUILDING OFFICIAL ON CASE TO
CASE BASIS.

STANDARD FORM (Type A0, A1, A2 and A3) FOR BUILDING PLANS / CONSTRUCTION DRAWINGS

Figure III.1.

Annotation: The box for the architectural section should be accomplished only by a duly registered and licensed architect (RLA) who is the only entity authorized by law (R.A. No. 9266 and its IRR) to review architectural plans, designs, drawings, specifications, estimates and the like.

JOHN DE LA CRUZ ARCHITECT 123 Rizal St. Diliman Quezon City Tel. 987594	(Signature & Seal) John de la Cruz, LIAA PRC No. 123456 TIN No. 1234567890 Date: 10/10/05	IMPORTANT: These drawings are intended for the architect, are the sole responsibility of the architect and it shall be unlawful for any person, without the written consent of the Architect or author of said document, to duplicate or copy said instrument.	Space block for the Design Architect (individual practitioner) / Architect in Charge (associates or collaborative consultants) and / or the Design Professional is only repair, renovation etc., and provided it does not involve the service of an Architect	Space block for the corresponding branch of the work (structural, electrical, mechanical, sanitary, etc.) Architect, engineer, designer, etc., incorporating design, etc. See Samples below	Space for Project Title / Location, Etc.	OWNER	SHEET NO.									
<table border="1"> <tr> <td>PRC No.</td> <td>Validity</td> </tr> <tr> <td>IAPOA No.</td> <td>O.R. No.</td> </tr> <tr> <td>PTR No.</td> <td>Date</td> </tr> <tr> <td>Place</td> <td>TIN</td> </tr> </table>		PRC No.	Validity	IAPOA No.	O.R. No.	PTR No.	Date	Place	TIN	(Signature & Seal) Jess Obx, CE Structural Engineer PRC No. 123456 TIN No. 1234567890 Date: 10/10/05	(Signature & Seal) Jerry Azarcon, PEE Electrical Engineer PRC No. 123456 TIN No. 1234567890 Date: 10/10/05	(Signature & Seal) Marjorie Doss Mechanical Engineer PRC No. 123456 TIN No. 1234567890 Date: 10/10/05	(Signature & Seal) Joanna Fiesta Sanitary Engineer PRC No. 123456 TIN No. 1234567890 Date: 10/10/05	(Signature & Seal) Mariano Tunigan Master Plumber PRC No. 123456 TIN No. 1234567890 Date: 10/10/05	(Signature & Seal) Sean Iustin Diagno Electronics Engineer PRC No. 123456 TIN No. 1234567890 Date: 10/10/05	(Signature & Seal) Philip Cruz Geodetic Engineer PRC No. 123456 TIN No. 1234567890 Date: 10/10/05
PRC No.	Validity															
IAPOA No.	O.R. No.															
PTR No.	Date															
Place	TIN															

NOTE:

1. The model title block shown shall be used for building plans / construction drawings. Space for the design architect / architect in charge may be omitted and in place the design professional / engineer for any branch of the work provided that the scope of the work does not involve the service of an architect.
2. Space for design professional / engineer, legally recognized and accredited by the Professional Regulation Commission (PRC), shall be provided for drawings of such branch of the work which a professional may be asked by the architect / architect in charge to actually perform, sign and seal.
3. The space for design professional / engineer shall be omitted in drawings for any branch of the work, provided that the architect in charge shall sign, seal and be fully responsible for plans and specifications of such branch of the work.
4. Width of title block is 40 mm but the length is variable.

MODEL TITLE BLOCK FOR BUILDING PLANS/CONSTRUCTION DRAWINGS

Figure III.2.

Anotation: The box for the signature and dry seal of an architect shall be filled only by a duly registered and licensed architect (RLA) who is the only entity authorized by law (R.A. No. 9266 and its IRR) to prepare, sign and dry-seal architectural plans, designs, drawings, specifications, estimates and the like. The signature of the RLA as Architect-of-record (Aor) signifies the RLA's assumption of professional responsibilities under R.A. No. 9266 and R.A. No. 8981, The PRC Modernization Act of 2000 and of the mandated civil liability under Art. 1723 of the New Civil Code.

viii. Details, in the form of plans, elevations/sections:

- (a) Accessible ramps
- (b) Accessible stairs
- (c) Accessible lifts/elevators
- (d) Accessible entrances, corridors and walkways
- (e) Accessible functional areas/comfort rooms
- (f) Accessible switches, controls
- (g) Accessible drinking fountains
- (h) Accessible public telephone booths
- (i) Accessible audio visual and automatic alarm system
- (j) Accessible access symbols and directional signs
- (k) Reserved parking for disabled persons
- (l) Typical wall/bay sections from ground to roof
- (m) Stairs, interior and exterior
- (n) Fire escapes/exits
- (o) Built-in cabinets, counters and fixed furniture
- (p) All types of partitions

- ix. **Schedule of Doors and Windows** showing their types, designations/marks, dimensions, materials, and number of sets.
 - x. **Schedule of Finishes**, showing in graphic form: surface finishes specified for floors, ceilings, walls and baseboard trims for all building spaces per floor level.
 - xi. **Details** of other major Architectural Elements.
- b. **Architectural Interiors/Interior Design**
- Anotation: The preparation, signing and dry-sealing of ALL architectural interior plans, designs, drawings, specifications, estimates and the like form part of the exclusive scope of work of registered and licensed architects (RLAs) as defined under R.A. No. 9266, The Architecture Act of 2004 and its 2004 IRR. Interior design is the work of registered and licensed interior designers (RLIDs) under R.A. No. 8534, The Interior Design Act of 1987. Strictly speaking, the respective practices of RLAs and RLIDs should not overlap.*
- i. **Space Plan/s or layout/s of architectural interior/s.**
 - ii. **Architectural interior perspective/s.**
 - iii. Furniture/furnishing/equipment/process **layout/s.**
 - iv. **Access plan/s, parking plan/s** and the like.
 - v. **Detail design** of major architectural interior elements.
 - vi. Plan and layout of interior, wall partitions, furnishing, furniture, equipment/appliances at a scale of at least 1:100.
 - vii. **Interior wall elevations** showing: finishes, switches, doors and convenience outlets, cross window sections with interior perspective as viewed from the main entrance at scale of at least 1:100.
 - viii. Floor/ceiling/wall **patterns and finishing details.**
 - ix. List of materials used.
 - x. Cost Estimates.
- c. Plans and specific locations of all accessibility facilities of scale of at least 1:100.
- d. **Detailed design** of all such accessibility facilities outside and around buildings/structures including parking areas, and their safety requirements all at scale of 1:50 or any convenient scale.

e. **Fire Safety Documents**

- i. Layout plan of each floor indicating the fire evacuation route to safe dispersal areas, standpipes with fire hose, fire extinguishers, first aid kits/cabinets, fire alarm, fire operations room, emergency lights, signs, etc.
- ii. Details of windows, fire exits with grilled windows and ladders.
- iii. Details of fire-resistive construction of enclosures for vertical openings.

- iv. Details of fire-resistive construction materials and interior decorative materials with fire-resistive/fire-retardant/fire-spread ratings
 - v. Other Related Documents
- f. Other related documents
5. Civil/Structural Documents
- a. Site Development Plan

Site Development Plan showing technical description, boundaries, orientation and position of proposed non-architectural horizontal structure such as: sewerage treatment plan (STP), silos, elevated tanks, towers, fences, etc. building/structure in relation to the lot, existing or proposed access road and driveways and existing public utilities/services. Existing buildings within and adjoining the lot shall be hatched and distances between the proposed and existing buildings shall be indicated.
 - b. Structural Plans
 - i. Foundation Plans and Details at scale of not less than 1:100.
 - ii. Floor/Roof Framing Plans and Details at scale of not less than 1:100.
 - iii. Details and Schedules of structural and civil works elements including those for deep wells, water reservoir, pipe lines and sewer system.
 - c. Structural Analysis and Design for all buildings/structures except for one storey and single detached building/structure with a total floor area of 20.00 sq. meters or less.
 - d. Boring and Load Tests

Buildings or structures of **three (3)** storeys and higher, boring tests and, if necessary, load tests shall be required in accordance with the applicable latest approved provisions of the National Structural Code of the Philippines (**NSCP**). However, adequate soil exploration (including boring and load tests) shall also be required for lower buildings/structures at areas with potential geological/geotechnical hazards. The written report of the civil/geotechnical engineer including but not limited to the design bearing capacity as well as the result of tests shall be submitted together with the other requirements in the application for a building permit. Boring test or load test shall also be done according to the applicable provisions of the **NSCP** which set forth requirements governing excavation, grading and earthwork construction, including fills and embankments for any building/structure and for foundation and retaining structures.
 - e. Seismic Analysis
 - f. Other related documents

6. Electrical Documents

Electrical plans and technical specifications containing the following:

- a. Location and Site Plans

- b. Legend or Symbols
- c. General Notes and/or Specifications
- d. Electrical Layout
- e. Schedule of Loads, Transformers, Generating/UPS Units (Total kVA for each of the preceding items shall be indicated in the schedule)
- f. Design Analysis
- g. One Line Diagram

7. Mechanical Documents

- a. Location Plan and Key Plan
- b. General Layout Plan for each floor, drawn to a scale of not less than 1:100, indicating the equipment in heavier lines than the building outline with names of machinery and corresponding brake horsepower shall be indicated.
- c. Longitudinal and Transverse Sections of building and equipment base on the section lines drawn to scale of at least 1:100 showing inter-floor relations and defining the manner of support of machines/equipment. Sections shall run longitudinally and transversely through the building length or width other than particularly detailed section for each machinery/equipment (fired and unfired pressure vessel, elevator, escalator, dumbwaiter, etc.).
- d. Isometric drawing of gas, fuel, oil system showing: Assembly of pipes on racks and supports, Legend and General Notes, Capacity per outlet and Complete individual piping system.
- e. Plans drawn to scale of 1:100 indicating location of store rooms, fuel tanks, fire extinguishing systems, fire doors, fire escape ladders and other protective facilities.
- f. Detailed drawings of all duct work installations, indicating dampers, controls, filters, fireproofing, acoustical and thermal insulation.
- g. Detailed Plans of machinery foundations and supports drawn to scale of at least 1:50.
- h. Detailed Plans of boilers and pressure vessels with a working pressure of above 70 kPa regardless of kilowatt rating.
- i. Design Computations and Detailed Plans of elevators, escalators, and the like drawn to scale of 1:50.
- j. For all installations, additions or alterations involving machinery of at most 14.9 kW, the signature of a duly licensed Mechanical Engineer shall be sufficient except fired and unfired pressure vessels, elevators, escalators, dumbwaiters, central/split/packaged type air conditioners and piping systems of steam, gas or fuels.
- k. Detailed plans of fire suppression systems, location of automatic and smoke detectors and alarm and initiating devices use to monitor the conditions that are essential for the proper operation including switches for the position of gate valves as well as alert and evacuation signals; the detailed layout of the entire safe area to be protected and the heat/smoke ventilation system.

8. Sanitary Documents

- a. For deepwell, water purification plants, water collection and distribution systems, reservoirs, drainage and sewer systems, sewage treatment plants, malaria control structures, and sewage disposal systems:
 - i. Location Plan and Site Plan
 - ii. Detailed Plan and layout drawings of minimum scale 1:100
 - iii. Design Analysis and Technical Specifications
 - iv. Cost Estimates
- b. For pest and vermin control, sanitation, and pollution control facilities:
 - i. Detailed plan, layout and drawing of abatement and control device of minimum scale 1:100
 - ii. Design analysis and technical specification
 - iii. Cost Estimates

9. Plumbing Documents

For all plumbing installations, additions and/or alterations involving hot and cold water supply, fixtures, sewage drainage and vent system, storm drainage and sewerage system within or adjacent to the building:

- a. Location Plan and Site Plan of minimum scale 1:2000
- b. Plumbing Plans, Layouts and Details, of minimum scale 1:50
- c. Legend and General Notes
- d. Isometric drawings of the systems
- e. Design analysis and technical specifications
- f. Cost Estimates

10. Electronics Documents

Electronic plans and technical specifications for wired or wireless telecommunications systems, broadcasting systems, including radio and TV broadcast equipment for commercial and training purposes, cable or wireless television systems, information technology (IT) systems, security and alarm systems, electronic fire alarm systems, sound-reinforcement systems, navigational aids and controls, indoor and outdoor signages, electronically-controlled conveyance systems, electronic/computerized process controls and automation systems, building automation, management and control systems, including, but not limited to the following:

- a. General layout plans with legends
- b. Single line diagram
- c. Riser diagram
- d. Isometry of the system
- e. Equipment specifications
- f. Design analysis, as applicable

g. Cost estimates

11. Geodetic documents

Lot Survey Plans, including but not limited to:

- a. Vicinity Map/Location Plan
- b. Lot Plan
- c. Relocation Survey Plan and Report
- d. Line and Grade
- e. Detailed Topographic Plan of the site and immediate vicinity

12. **Clearances** from Other Agencies

- a. A **locational clearance** shall be obtained by the owner/permittee from the City/Municipal Zoning Administration.
- b. Whenever necessary, written clearances shall be obtained from the various authorities exercising and enforcing regulatory functions affecting **buildings/structures**. Application for said clearances shall be requested by the owner/applicant and failure to receive reply within **seven (7) days** from receipt of the application for building permit shall be sufficient **not** to cause further delay in processing the **building permit** application by the Building Official. Such authorities who are expected to enforce their own regulations are:
 - i. Department of Public Works and Highways (**DPWH**)
 - ii. Air Transportation Office (**ATO**)
 - iii. Housing and Land Use Regulatory Board (**HLURB**)
 - iv. Local Government Unit (**LGU**)
 - v. Department of Tourism (DOT)
 - vi. Department of Environment and Natural Resources (**DENR**)
 - vii. Department of Transportation and Communication (DOTC)
 - viii. Department of Interior and Local Government (DILG)
 - ix. Philippine Ports Authority (PPA)
 - x. Department of Education (DepEd)
 - xi. Department of Health (DOH)
 - xii. Philippine Institute of Volcanology and Seismology (PHIVOLCS)
 - xiii. Laguna Lake Development Authority (LLDA)
 - xiv. Manila Waterworks and Sewerage System (MWSS)
 - xv. National Water Resources Board (NWRB)
 - xvi. Department of Agrarian Reform (DAR)
 - xvii. Department of Agriculture (DA)
 - xviii. Department of Labor and Employment (DOLE)
 - xix. National Housing Authority (NHA)
 - xx. National Council for the Welfare of Disabled Persons (NCWDP)

SECTION 303. Processing of Building Permits

The flow of processing of building permit shall follow the procedure shown in Figure III.3.

1. Building Permit Application

- a. When satisfied that **all** plans, specifications and other documents are in order, the **Building Official** gives due course to the application.

- b. The **OBO** verifies conformity of the **proposed buildings/structures** with the land use zoning ordinance of the city/municipality. If the project has been issued a development permit such as residential, commercial, industrial, institutional, memorial parks and other development by the **HLURB** or the **Sangguniang Bayan/Panglungsod**, an individual **locational clearance** shall not be required.
- c. The **Building Official** verifies whether applicants have secured the required section clearances from other agencies mentioned in the preceding section.
- d. The owner/permittee for **any existing building/structure** that shall undergo alterations, additions, conversions, renovations and/or repair not covered by **Section 301, Sub-Section 3 of this IRR** shall submit, in addition to other documents, the most recent Certificate of Occupancy when applying for a building permit. Under any of this case, the **Locational Clearance** shall **not** be required.

2. Line and Grade Verification

The Line and Grade Section/Unit of the **OBO**:

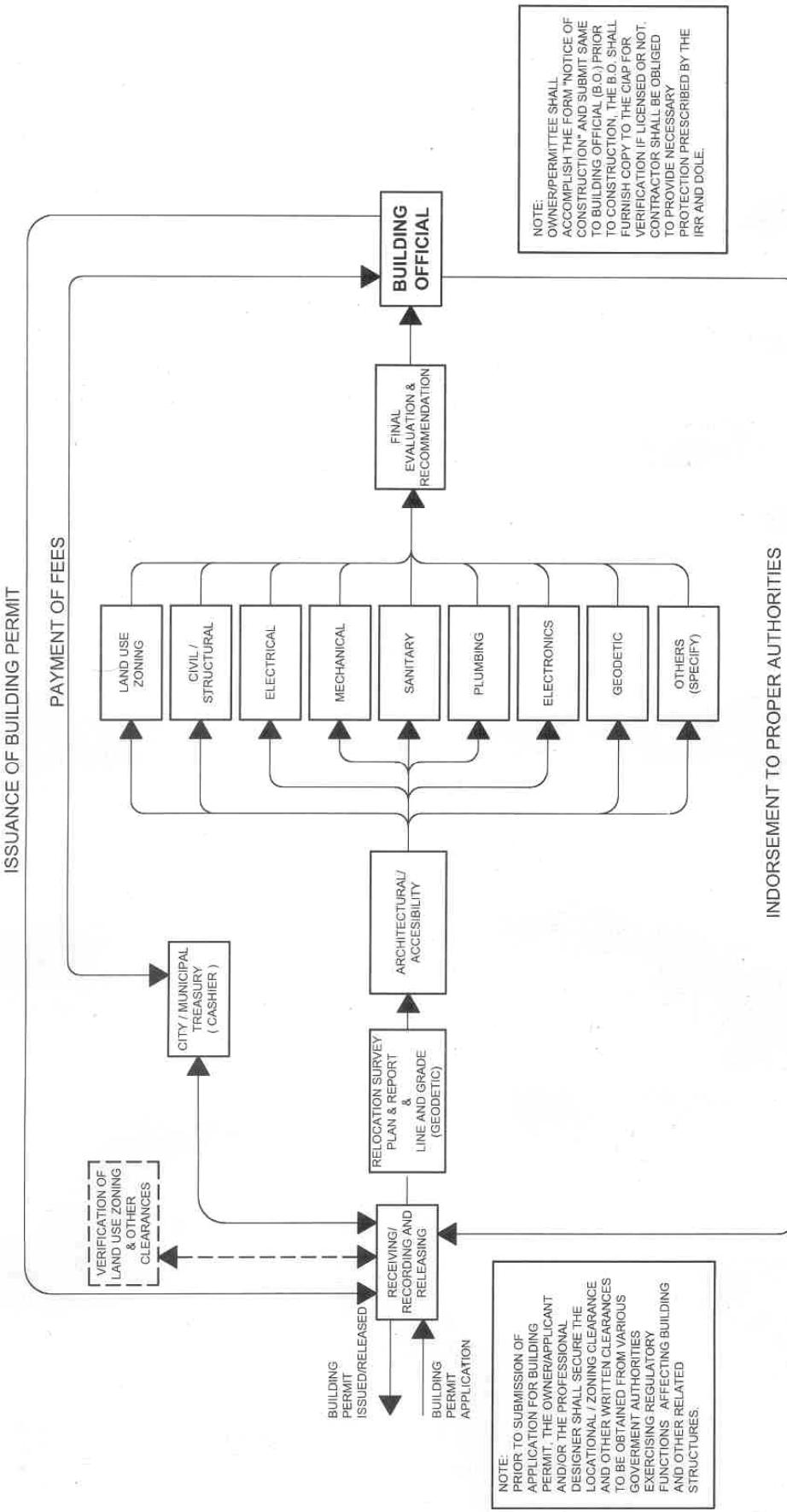
- a. Verifies the lot plan as reflected in the **Torrens Title, Original Certificate of Title (OCT)/Transfer Certificate of Title (TCT)** and its relation to the proposed buildings/structures.
- b. Checks compliance to establish easements/setbacks and determines grades in relation to road lots, property lines, streets or highways, whether existing or proposed as reflected in the land use zoning or development plan of the city/municipality including road widening, construction of various public utilities/services and other infrastructure projects along creeks, esteros, waterways, subject to a written **clearance** from the **DPWH**.
- c. Verifies that at least one (1) side of the lot has **direct** access to a street/alley and that grades in relation to road lots and streets or highways, whether existing or proposed conform to the requirements.

3. Architectural

The **Architectural Section/Unit** evaluates **building/structure** documents as to compliance to technical requirements for:

- a. **Types of Construction**
- b. **Requirements of Fire Zones** and Fire Resistive Regulation
- c. **Building projections** over public streets
- d. **Access Streets/Roads and Alleys**
- e. **Architectural Interior/Interior Design**
- f. **Classification and General Requirements of all Buildings** by Use or Occupancy
- g. **Maximum Height of Buildings/Structures**
- h. **Parking** and Loading/Unloading Space Requirement

PROCESSING OF APPLICATIONS FOR BUILDING PERMIT FLOW CHART



Anotation: With the exclusion of geodetic engineering plans and survey results, the preparation of **architectural** plans and designs precede all other engineering plans and designs i.e. which are **derivative** plans and designs. In practice, the **architectural** plans are prepared slightly ahead of the engineering plans since engineering inputs are actually required **before** the **architectural** plans and designs could be finalized. The ideal situation is for an **architectural** review process and **architectural** permit issuance to first occur. This would ensure that compliances with the Code, the Fire Code and

Accessibility laws are fully complied with and properly addressed by the subsequent engineering plan and design preparation.

- i. Corner Buildings with Chaflans
- j. Occupant Load
- k. Glazing of Opening
- l. **Architectural Accessibility Features**
- m. **Light and Ventilation**
- n. Construction of Buildings/Structures within the obstacle limitation surfaces of Aerodromes
- o. Buildings and other Ancillary Structures within Cemeteries and Memorial Parks

4. Civil/Structural

The Civil/Structural Section/Unit evaluates building/structure documents as to compliance to technical requirements for:

- a. General Design and Construction Requirements
- b. Structural Design Requirements
- c. Excavations, Foundations and Retaining Walls
- d. Prefabricated Construction
- e. Protection and Safety Requirements for Construction, Demolition and Excavation
- f. Abatement/Demolition of Buildings
- g. Plastics
- h. Signs

5. Electrical

The Electrical Section/Unit evaluates building/structure documents as to compliance to technical requirements for Electrical Regulations.

6. Mechanical

The Mechanical Section/Unit evaluates building/structure documents as to compliance to technical requirements for Mechanical Regulations.

7. Sanitary

The Sanitary Section/Unit evaluates building/structure documents as to compliance to technical requirements under the Sanitary Engineering Law (RA 1364).

8. Plumbing

The Plumbing Section/Unit evaluates building/structure documents as to compliance to technical requirements under the Plumbing Law (RA 1378).

9. Electronics

The Electronics Section/Unit evaluates building/structure documents as to compliance to technical requirements.

10. Fire Safety Requirements

The Building Official shall refer one (1) set of plans and specifications to the City/Municipal Fire Marshall (**C/MFM**), Bureau of Fire Protection (**BFP**), for his review and recommendations with respect to fire safety and control requirements. The **C/MFM** shall submit his report and recommendations to the **Building Official** within **five** (5) working days from date of referral. Failure of the **C/MFM** to act within said period shall mean that the plans and specifications **conform** to all the requirements of the Fire Code of the Philippines (**FCP**). In case of non-issuance, suspension or revocation of the said requirements by the **C/MFM**, he shall so state in writing the reasons or grounds therefor.

SECTION 304. Issuance of Building Permit

1. When the application for building permit and the plans and specifications submitted herewith conforms to the requirements of the **Code and its IRR**, the **Building Official** shall within **fifteen** (15) days from payment of the required fees by the applicant, issue the building permit applied for.
2. The **Building Official** may issue a permit for the construction of only a **part or portion** of a **building/structure** whenever the plans and specifications submitted together with the application do not cover the entire **building/structure**.
3. The **Building Official** may issue a **Ground Preparation and Excavation Permit** even while the building permit application is still being processed subject to payment of the corresponding fees.
4. For excavations more than 50.00 cu. meters and more than 2.00 meters in depth, the owner/permittee shall post a **cash bond of fifty thousand** pesos (P50,000.00) for the first 50.00 cu. meters and three hundred pesos (P300.00) for every cu. meters in excess of 50 cu. meters until the building permit is issued, said excavations shall **not exceed** 100.00 cu. meters or 3.00 meters in depth and shall not be left open without any work being done in the site for more than **one hundred twenty** (120) days, otherwise the **cash bond shall be forfeited** in favor of the government to cover the expense for the backfilling of the excavation should the owner/permittee fail to restore the same. If the bond is insufficient to effect the necessary restoration, additional cost to be incurred to complete the restoration shall be charged to the account of the owner/permittee or to whoever shall assume ownership of the property. If the owner/permittee refuses backfilling of the excavation, the **Building Official** shall initiate legal proceedings.

5. Terms and Conditions of Permits

The issued building permit shall be subject to the following terms and conditions:

- a. That under **Article 1723 of the Civil Code** of the Philippines, the engineer or **architect** who drew up the **plans and specifications for a building/structure** is liable for damages if within **fifteen** (15) years from the completion of the building/structure, the same should collapse due to defect in the plans or specifications or defects in the ground. The engineer or **architect** who supervises the construction shall be **solidarily** liable with the contractor should the edifice collapse due to defect in the construction or the use of **inferior** materials.
- b. This permit shall be accompanied by the various applicable ancillary and accessory permits, plans and specifications signed and sealed by the corresponding design professionals who shall be responsible for the comprehensiveness and correctness of the plans in compliance to the **Code and its IRR** and to all **applicable referral codes** and **professional regulatory laws**.

- c. That the proposed construction/erection/addition/alteration/renovation/conversion/repair/moving/demolition, etc. shall be in conformity with the provisions of the National Building Code, and its IRR.
 - i. That prior to commencement of the proposed projects and construction an actual relocation survey shall be conducted by a duly licensed Geodetic Engineer.
 - ii. That before commencing the excavation the person making or causing the excavation to be made shall notify in writing the owner of adjoining property not less than ten (10) days before such excavation is to be made and show how the adjoining property should be protected.
 - iii. That the **supervising Architect/Civil Engineer** shall keep at the jobsite at all times a **logbook** of daily construction activities wherein the actual daily progress of construction including tests conducted, weather condition and other pertinent data are to be recorded, same shall be made available for scrutiny and comments by the **OBO** representative during the conduct of inspection his/her inspection pursuant to **Section 207 of the Code**.
 - iv. That upon completion of the construction, the Owner shall submit the logbook duly signed and sealed to the **Building Official** including as-built plans and other documents and shall also prepare and submit a **Certificate of Completion** of the project stating that the construction of the building/structure conform to the provision of the **Code**, its **IRR** as well as the plans and specifications.
 - v. All such changes, modifications and alterations shall likewise be submitted to the **Building Official** and the subsequent **amendatory permit** therefor issued **before** any work on said changes, modifications and alterations shall be started.
- d. That no building/structure **shall be used until the Building Official has issued a Certificate of Occupancy** therefor as provided in the **Code**. However, a **partial Certificate of Occupancy** may be issued for the Use/Occupancy of a portion or portions of a building/structure prior to the completion of the entire building/structure.
- e. That this permit shall not serve as an exemption from securing written clearances from various government authorities exercising regulatory function affecting **buildings/structures**.
- f. When the construction is undertaken by contract, the work shall be done by a **duly licensed and registered contractor** pursuant to the provisions of the Contractor's License Law (**RA 4566**).
- g. The Owner/Permittee shall submit a duly accomplished prescribed "**Notice of Construction**" to the **Office of the Building Official** prior to any construction activity.
- h. The Owner/Permittee shall put a **Building Permit sign** which complies with the prescribed dimensions and information, which shall remain posted on the construction site for the duration of the construction. (**Figs. III.4. and III.5**).

SECTION 305. Validity of Building Permits

The issuance of a building permit shall not be construed as an approval or authorization to the permittee to disregard or violate any of the provisions of the Code.

Whenever the issuance of a permit is based on approved plans and specifications which are subsequently found defective, the Building official is not precluded from requiring permittee to effect the

necessary corrections in said plans and specifications or from preventing or ordering the stoppage of any or all building operations being carried on thereunder which are in violation of the Code.

A building permit issued under the provisions of the **Code** shall **expire** and become null and void if the building or work authorized therein is not commenced within a period of **one (1)** year after the issuance of the building permit, or is suspended or abandoned at any time after it has been commenced for a period of **one hundred twenty (120)** days.

SECTION 306. Non-issuance, Suspension or Revocation of Building Permits

The **Building Official** may order or cause the non-issuance, suspension or revocation of building permits on any or all of the following reasons or grounds:

1. Errors found in the plans and specifications;
2. Incorrect or inaccurate data or information supplied;
3. Non-compliance with the provisions of the Code or any rules or regulations.

Notice of non- issuance, suspension or revocation of building permits shall always be made in writing, stating the reason or grounds thereof.

STANDARD SIGNBOARD
(Residential Buildings for Exclusive use of Owners or Non-leasing Occupants)

Figure III.4.

*Annotation: The space for Architect should only be filled by the name of a duly **registered and licensed architect (RLA)** who shall act as the **architect-of-record (Aor)**, in full accordance with **R.A. No. 9266, The Architecture Act of 2004**. Otherwise, there may be a willful (and culpable) violation of the pertinent provisions of **R.A. No. 9266** by the concerned party/ parties.*

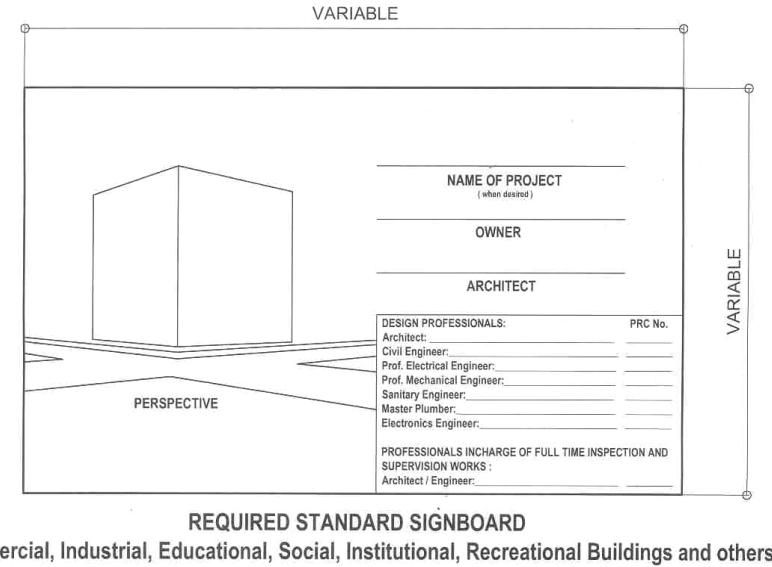


Figure III.5.

Annotation: The space for Architect should only be filled by the name of a duly **registered and licensed architect (RLA)** who shall act as the **architect-of-record (Aor)**, in full accordance with R.A. No. 9266, The Architecture Act of 2004. Otherwise, there may be a willful (and culpable) violation of the pertinent provisions of R.A. No. 9266 by the concerned party/ parties.

SECTION 307. Appeal

Within **fifteen** (15) days from the date of receipt of advice of the non- issuance, suspension or revocation of permits, the applicant/permittee may file an appeal with the Secretary who shall render his decision within **fifteen** days from date of receipt of notice of appeal. The decision of the Secretary shall be final subject only to review by the Office of the President.

SECTION 308. Inspection and Supervision of Work

1. The owner of the Building who is issued or granted a building permit under the **Code** shall engage the services of a **duly licensed architect** or civil engineer to undertake the **full time inspection and supervision of the construction work**.
2. Such **architect** or civil engineer may or **may not** be the same **architect** or civil engineer who is responsible for the design of the building.
3. It is understood however that in either case, the **designing architect** or civil engineer is not precluded from conducting inspection of the construction work to check and determine compliance with the plans and specifications of the building submitted.
4. There shall be kept at the jobsite at all times a logbook wherein the actual progress of construction including tests conducted, weather conditions and other pertinent data are to be recorded.
5. Upon completion of the construction, the said **licensed architect** or civil engineer shall submit the logbook, duly signed and sealed, to the Building Official. He shall also prepare and submit a Certificate of Completion of the project stating that the construction of building conforms to the provisions of the **Code** as well as with the approved plans and specifications.

SECTION 309. Certificate of Occupancy

1. The owner/permittee shall submit to the **OBO** an application of **Certificate of Occupancy** together with a duly notarized **Certificate of Completion** together with the construction logbook, **as-built plans** and specifications and the **Building Inspection Sheet** all signed by whoever is the contractor (if the construction is undertaken by contract) and signed and sealed by the Owner's **duly licensed Architect** or Civil Engineer who undertook the **full time inspection and supervision of the construction works**. Said Plans and Specifications shall reflect faithfully **all** changes, modifications and alterations made on the originally submitted Plans and Specifications on file with the **OBO** which are the basis of the issuance of the **original** building permit. The **as-built Plans** and Specifications may be just an orderly and comprehensive compilation of all the documents, which include the originally submitted plans and specifications and all amendments thereto as actually built or they may be an entirely new set of plans and specifications accurately describing and/or reflecting therein the building/structure as actually built.
2. A notification to conduct final inspection shall be endorsed by the **OBO** to the **C/MFM, BFP**, who shall issue a **Fire Safety Inspection Certificate** within **five (5)** workdays if the Fire Safety requirement shall have been complied. If, after the prescribed period no action is taken by the **C/MFM**, the **Building Official may issue the Certificate of Occupancy** with the condition that the Fire Safety requirements shall be complied with, within the prescribed period set forth in the Fire Code of the Philippines (**PD 1185**).
3. The **OBO** undertakes the final inspection, verification and/or review of the building/structure based on the **Certificate of Completion**, construction logbook, building inspection sheets, original and as-built plans and specifications, as the case may be and specifications on the prescribed standard form according to the requirements set forth under **Section 303**.
4. Prior to the issuance of the **Certificate of Occupancy**, the **OBO** shall prepare the corresponding fees and order of payment. The **Building Official** then issues the **Certificate of Occupancy** in the form prescribed therefor after all fees are paid.
 - a. A **partial Certificate of Occupancy** may be issued for the use or occupancy of a portion or portions of a building or structure prior to the completion of the entire building or structure, through the proper phasing of its major independent portions without posing hazards to its occupants, the adjacent building residents and general public.
 - c. A building for which a **Certificate of Occupancy** has been issued may further be issued other Certificates of Occupancy due to changes in use, whether partly or wholly, provided, that the new use/s or character/s of occupancy conforms with the requirement of the **Code and its IRR**.

(emphases, underscoring and annotations supplied)

Rule IV follows

RULE IV - TYPES OF CONSTRUCTION

SECTION 401. Types of Construction

For purposes of the **Code and its IRR**, all buildings proposed for construction shall be classified according to the following types:

1. **Type I** - shall be of **wood** construction. The structural elements may be any of the materials permitted by the Code.
2. **Type II** - shall be of **wood** construction with protective fire-resistant materials and one-hour fire-resistive throughout, except, that permanent non-bearing partitions may use fire-retardant treated wood within the framing assembly with one-hour resistivity.
3. **Type III** - shall be of **masonry and wood** construction. Structural elements may be any of the materials permitted by the Code provided, that the building shall be one-hour fire-resistive throughout. Exterior walls shall be of incombustible fire-resistive construction.
4. **Type IV** - shall be **steel, iron, concrete, or masonry** construction and walls, ceiling and permanent partitions shall be of incombustible fire-resistive construction, except, that permanent non-bearing partitions of one-hour fire-resistive construction may use fire-retardant treated wood within the framing assembly.
5. **Type V** - shall be four-hour fire-resistive throughout and the structural elements shall be of **steel, iron, concrete, or masonry** construction.

SECTION 402. Changes in Types

No change shall be made in the type of construction of **any building** which would place the building in a different sub-type or type of construction unless such building is made to comply with the requirements for such sub-type of construction: *Except*, when the changes is approved by the **Building Official** upon showing that the new or proposed construction is less hazardous, based on life and fire risk, than the existing construction.

SECTION 403. Requirements on Type of Construction

The following standards are prescribed:

1. **Fire Resistive Requirements**
 - a. Exterior bearing and non-bearing walls of Types II and III Constructions shall have one hour fire-resistive rating, while those of Types IV and V shall have four-hour fire-resistive rating.
 - b. Interior bearing walls, permanent partitions, floors, and roofs of Types II, III and IV Construction shall have one-hour fire-resistive rating while those of Type V shall have three-hour fire-resistive rating for bearing walls and one-hour fire-resistive rating for vertical openings, floors and roofs.
 - c. Structural frames of Types II and III Construction shall have one-hour fire-resistive rating, while those of Type IV shall have two-hour fire-resistive rating and those of Type V shall have three hour fire-resistive rating.
 - d. Exterior doors and windows shall have one hour fire-resistive rating for all Types.
2. **Interior Wall and Ceiling Finishes**

- a. Finishes for interior walls and ceilings of any building shall be classified according to their **flame-spread characteristic** using generally accepted engineering standards. The **smoke density** shall **not** be greater than that obtained from burning of untreated wood under similar conditions when tested in accordance with the "**Tunnel Test**" in the way intended for use. The products of combustion shall be **no** more toxic than the burning of untreated wood under similar conditions. These finishes include: interior wainscoting, paneling, or other finish applied structurally or for decoration, acoustical correction, frames and trims of doors and windows, surface insulation or similar purposes.
 - b. Requirements for flame-spread characteristics of finishes shall **not** apply to frames and trim of doors and windows and to materials which are less than 1.00 millimeter in thickness cemented to the surface of walls or ceilings.
 - c. Materials required to be flame-spread proofed shall be treated with a **flame-retardant** having a flame-spread of **fifty** (50) or less as determined by the "**Tunnel Test**".
3. Standards for materials use in structural framework, exterior walls and openings, floors, exits, stairs & roofs shall be governed by the pertinent provision of the **Fire Code of the Philippines**.

(emphases, underscoring and annotations supplied)

Rule V follows

RULE IX - SANITATION

SECTION 901. General Requirements

Subject to the provisions of Book II of the **Civil Code** of the Philippines on Property, Ownership, and its Modification, **all buildings** hereafter erected, altered, remodeled, relocated or repaired for human habitation shall be provided with **adequate and potable water supply**, plumbing installation, and suitable wastewater treatment or disposal system, storm water drainage, pest and vermin control, noise abatement device, and such other measures required for the protection and promotion of health of persons occupying the premises and others living nearby.

SECTION 902. Water Supply System

1. Whenever available, the potable water requirements for a building used for human habitation shall be supplied from existing municipal or city waterworks system.
2. The quality of drinking water from meteoric, surface or underground sources shall conform to the criteria set in the latest approved **National Standards for Drinking Water Standards**.
3. The design, construction and operation of deepwells for the abstraction of groundwater shall be subject to the provisions of the Water Code of the Philippines (**PD 1067**).
4. The design, construction and operation of independent waterwork systems of private housing subdivisions or industrial estates shall be governed by existing laws relating to local waterworks system.
5. The water piping installation for water supply and distribution to each fixture including the wastewater drainage with proper venting inside building and premises, shall conform to the provision of the Revised National Plumbing Code of the Philippines.

SECTION 903. Wastewater Disposal System

1. Sanitary sewage from buildings and neutralized or pre-treated industrial wastewater shall be discharged directly into the nearest street sanitary sewer main of existing municipal or city sanitary sewerage system in accordance with the criteria set by the Code on Sanitation of the Philippines and the Department of Environment and Natural Resources (**DENR**).
2. All buildings located in areas where there are no available sanitary sewerage system shall dispose their sewage to "Imhoff" or septic tank and subsurface absorption field or to a suitable waste water treatment plant or disposal system in accordance with the Code on Sanitation of the Philippines and the Revised National Plumbing Code of the Philippines.
3. Sanitary and industrial plumbing installations inside buildings and premises shall conform to the provisions of the Revised National Plumbing Code of the Philippines.

SECTION 904. Storm Drainage System

1. Rainwater drainage shall not discharge to the sanitary sewer system.
2. Adequate provisions shall be made to drain rainwater from low areas in buildings and their premises.
3. The drainage pipe installation and sewerage system of any premises and/or connection with any public disposal or any acceptable terminal shall conform to the Revised National Plumbing Code of the Philippines.

SECTION 905. Pest and Vermin Control

1. All buildings with hollow and/or wood construction shall be provided with rat-proofing.
2. Garbage bins and receptacles shall be provided with ready means for cleaning and with positive protection against entry of pests and vermins.
3. Dining rooms for public use without artificial ventilation shall be properly screened.

SECTION 906. Noise Pollution Control

1. Industrial establishments shall be provided with positive noise abatement devices to tone down the noise level of equipment and machineries to acceptable limits set down by the Department of Labor and Employment and the Department of Environment and Natural Resources.
2. Noise as an unwanted sound both in quality and intensity and excessive vibration whose sources in building/structure construction shall conform to acceptable limits the required **emission standards** of DENR.

SECTION 907. Pipes Materials

All pipe materials to be used in buildings/structures shall conform to the standard specifications of the Bureau of Product Standards (**BPS**) of the Department of Trade and Industry (**DTI**).

(emphases supplied)

Rule X follows

RULE V - REQUIREMENTS OF FIRE ZONES

SECTION 501. Fire Zones Defined

Fire zones are areas within which only certain types of **buildings**/structures are permitted to be constructed based on their use or occupancy, type of construction, and resistance to fire.

SECTION 502. Buildings Located in More Than One Fire Zone

A **building**/structure which is located partly in one (1) fire zone and partly in another shall be considered to be in the more highly restrictive fire zone, when more than one third (1/3) of its total floor area is located in such zone.

SECTION 503. Moved Buildings

1. Any **building**/structure moved within or into any fire zone shall be made to comply with all the requirements for buildings/structures in that fire zone.
2. This shall also apply to pre-engineered or pre-fabricated **buildings**/structures that may be dismantled and re-assembled.

SECTION 504. Temporary Buildings/Structures

1. Temporary buildings such as reviewing stands and other miscellaneous structures conforming to the requirements of the Code, and sheds, canopies and fences used for the protection of the public around and in conjunction with construction work, may be erected in the fire zones by special permit from the **Building Official** for a limited period of time, and such buildings or structures shall be completely removed upon the expiration of the time limit stated in such permits.
2. Erection of temporary buildings/structures to be located in restrictive and highly restrictive zones and which do not conform with the type of construction allowed or permitted within such zones may be allowed by the Building Official for a given period of time provided that, fire protective/preventive measures and fire suppression facilities are adequate.

SECTION 505. Center Lines of Streets

The center line of adjoining street or alley may be considered an adjacent property line. Distances shall be measured at right angles to the street or alley.

SECTION 506. Restrictions on Existing Buildings

1. Existing buildings or structures in fire zones that do not comply with the requirements for a new building erected therein shall not hereafter be enlarged, altered, remodeled, repaired or moved except as follows:
 - a. Such building is entirely demolished;
 - b. Such building is to be moved outside the limits of the more highly restrictive Fire Zone to a zone where the building meets the minimum standards;
 - c. Changes, alterations and repairs may be made provided that in any 12- month period, the value of the work does not exceed 20% of the value of the existing building, and provided that, such changes do not add additional combustible material, and do not, in the opinion of the **Building Official**, increase the fire hazard;

- d. Additions thereto are separated from the existing building by **fire walls**, as set forth in Section 506 (b);
- e. Damage from fire or earthquake, typhoons or any fortuitous event may be repaired, using the same kind of materials of which the building or structure was originally constructed, provided that, the cost of such repair shall **not** exceed 20% of the replacement cost of the building or structure.

SECTION 507. Designation of Fire Zones

The **legislative body of the LGU** may enact **ordinances** for the purpose of **designating fire zones** based on the parameters and guidelines set forth in this Section.

1. Designation of Fire Zones is purposely for management, prevention, control and suppression of conflagration that may occur in population centers. The designation of fire zones is as follows:
 - a. **Non-Fire Restricted** Zones: These are areas where siting of buildings/structures are permitted **without fire-resistivity** measures, often located in the country sides or rural areas where commercial and industrial and other buildings are sparsely constructed, or may be clustered in small groups like farm lands wherein dwellings are built of indigenous materials such as bamboo, *sawali*, *nipa*, cogon, palm leaves and wood up to **Types I and II** Construction as classified in **Section 401 of the Code**.
 - b. **Fire Restrictive** Zones: Areas wherein siting of buildings/structures are permitted within prescribed fire-resistivity measures for exterior walls of **at least two-hour fire resistivity**. Usual locations in suburban areas are permitted to be built with at least **one-hour fire-resistivity throughout as Types II, III to IV** Constructions as prescribed in **Section 401 of the Code**.
 - c. **Highly Fire Restrictive** Zones: Areas wherein highly fire- resistive or non-combustible buildings/structures and/or construction assemblies of **no less than three to four-hour fire-resistive** construction materials are used throughout, including exterior walls. Only **Types IV and V** Constructions are permitted in the areas.

(emphases supplied)

Rule VI follows

RULE VI - FIRE-RESISTIVE REQUIREMENTS IN CONSTRUCTION

SECTION 601. Fire- Resistive Rating Defined

Fire-resistive rating means the degree to which a material can withstand fire as determined by generally recognized and accepted testing methods.

SECTION 602. Fire- Resistive Time Period Rating

Fire-resistive time period rating is the length of time a material can withstand being burned which may be one- hour, two- hours, four- hours, etc.

SECTION 603. Fire-Resistive Standards

All materials of construction, and type of materials and assemblies or combinations thereof shall conform to the following fire-resistive ratings:

Type of Assembly and Material	Minimum thickness (in millimeter) for the given fire resistance			
	4 hrs.	3 hrs.	2 hrs.	1hr.
Floor Construction Solid R.C. slab - Average cover to reinforcement - Overall Depth	25 150	25 150	20 125	15 100
Solid pre-stressed Concrete slab - Average cover to tendons - Overall Depth	65 150	50 150	40 125	25 100
Partitions - Solid concrete - Solid masonry - Hollow unit masonry	175 200 300	175 175 250	150 150 200	125 125 150
Protection for metal structural members - Concrete - Masonry - Metal lath with vermiculite or perlite gypsum plaster	75 100 50	50 75 38	38 55 20	25 38 12
Exterior Wall - Solid concrete - Solid masonry - Hollow masonry	180 200 300	150 175 250	125 150 200	75 100 150
Column (all faces exposed) - Reinforced concrete	450	400	300	200

SECTION 604. Fire- Resistive Regulations

The Secretary shall prescribe standards and promulgate rules and regulations on the **testing** of construction materials for **flame-spread characteristics**, tests on fire damages, fire tests of building construction and materials, door assemblies and tinclad fire doors and window assemblies, the installation of fire doors and windows and smoke and fire detectors for fire protective signaling system,

application and use of controlled interior finish, **fire-resistive protection** for structural members, **fire-resistive** walls and partitions, **fire-resistive** floor or roof ceiling, **fire-resistive** assemblies for protection of openings and **fire-retardant** roof coverings.

(emphases, underscoring and annotations supplied)

Rule VII follows

RULE VII - CLASSIFICATION AND GENERAL REQUIREMENTS OF ALL BUILDINGS BY USE OR OCCUPANCY

SECTION 701. Occupancy Classified

1. There are **10 Groups of Occupancies** sub-divided into **25 Divisions**. The accompanying matrix shows the Groupings and Divisions and the corresponding uses. The final column indicates the Zoning Classification.
 - a. Buildings proposed for construction shall be identified according to their use or the character of its occupancy and shall be classified as follows:

- i. **Group A - Residential Dwellings**

Group A Occupancies shall include:

*Division 1 - Residential building/structure for exclusive use of **single family occupants** including school or company staff housing; single (nuclear) family dwellings; churches or similar places of worship; church rectories; community facilities and social centers; parks, playgrounds, pocket parks, parkways, promenades and play lots; clubhouses and recreational uses such as golf courses, tennis courts, basketball courts, swimming pools and similar uses operated by the government or private individuals as membership organizations for the benefit of their members, families, and guests and not operated primarily for gain.*

*Division 2 - Residential building for the exclusive use of **non-leasing occupants not exceeding 10 persons** including single-attached or duplex or townhouses, each privately-owned; school dormitories (on campus); convents and monasteries; military or police barracks/dormitories; pre-schools, elementary and high schools, provided that they do not exceed 16 classrooms; outpatient clinics, family planning clinics, lying-in clinics, diagnostics clinics, medical and clinical laboratories; branch library and museums; steam/dry cleaning outlets; party needs and accessories (leasing of tables and chairs, etc.).*

- ii. **Group B - Residential, Hotels and Apartments**

Group B Occupancies shall be **multiple dwelling units** including boarding or lodging houses, hotels, apartment buildings, row houses, convents, monasteries and other similar building each of which accommodates more than 10 persons.

- iii. **Group C - Education and Recreation**

Group C Occupancies shall be **buildings used for school or day-care purposes**, involving assemblage for instruction, education, or recreation, and not classified in Group I or in Division 1 and 2 or **Group H Occupancies**.

- iv. **Group D - Institutional**

Group D Occupancies shall include:

Division 1 - Mental hospitals, mental sanitaria, jails, prisons, reformatories, and buildings where personal liberties of inmates are similarly restrained.

Division 2 - Nurseries for full-time care of children under kindergarten age, hospitals, sanitaria, nursing homes with non-ambulatory patients, and similar buildings each accommodating more than five persons.

Division 3 - Nursing homes for ambulatory patients, homes for children of kindergarten age or over, each accommodating more than five persons: Provided, that **Group D Occupancies** shall **not** include buildings used only for private or family group dwelling purposes.

v. **Group E - Business and Mercantile**

Group E Occupancies shall include:

Division 1 - Gasoline filling and service stations, storage garages 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 of less than one hundred persons, printing plants, police and fire stations, factories and workshops using not highly flammable or combustible materials and paint stores without bulk handlings.

Division 3 - Aircraft hangars and open parking garages where no repair work is done except exchange of parts and maintenance requiring no open flame, welding or the use of highly flammable liquids.

vi. **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 for incombustible and non-explosive materials.

vii. **Group G - Storage and Hazardous**

Groups G Occupancies shall include:

Division 1 - Storage and handling of hazardous and highly flammable material.

Division 2 - Storage and handling of flammable materials, dry cleaning plants using flammable liquids; paint stores with bulk handling, paint shops and spray painting rooms.

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 materials is stored.

Division 4 - Repair garages.

Division 5 - Aircraft repair hangars.

viii. **Group H - Assembly Other Than Group I**

Group H Occupancies shall include:

Division 1 - Any assembly building with a stage and an occupant load of less than 1000 in the building.

Division 2 - Any assembly building without 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.

Division 4 - Stadia, reviewing stands, amusement park structures not included within Group I or in Division 1, 2, and 3 of this Group.

ix. **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.

x. **Group J - Accessory**

Group J Occupancies shall include:

Division 1 - Agricultural structures.

Division 2 - Private garages, carports, fences over 1.80 meters high, tanks, swimming pools and towers.

Division 3 - Stages, platforms, pelota, tennis, badminton or basketball courts, tombs, mausoleums, niches, aviaries, aquariums, zoo structures, banks and record vaults

Other subgroupings or divisions within **Groups A to J** may be determined by the Secretary. Any other occupancy **not** mentioned specifically in this Section, or about which there is any question, shall be included in the Group which it most nearly resembles based on the existing or proposed life and fire hazard.

(emphases supplied)

Rule VIIb follows

Table VII.1. Schedule of Principal, Accessory and Conditional Use/Occupancy of Building/Structure

General USE Character of Occupancy of Building/ Structure	U S E			Zoning Classification
	PRINCIPAL	ACCESSORY	CONDITIONAL	
Group A – Residential (Dwellings)				
Division A-1 (Residential building/ structure for exclusive use of single family occupants)	<ul style="list-style-type: none"> 1. Indigenous family dwelling units 2. Single-detached units 3. School or company staff housing 4. Single (nuclear) family dwellings 5. Churches or similar places of worship 6. Church rectories 7. Community facilities and social centers 8. Parks, playgrounds, pocket parks, parkways, promenades and playlots 9. Clubhouses and recreational uses such as golf courses, tennis courts, basketball courts, swimming pools and similar uses operated by the government or private individuals as membership organizations for the benefit of their members, families, and guests and not operated primarily for gain. 	<ul style="list-style-type: none"> 1. Customary accessory uses incidental to any of the principal uses housed in the same Division A-1 (or R-1 class) building/structure, provided that such accessory uses shall not include any activity conducted for monetary gain or commercial purposes such as servants quarter, private garage, guardhouse, home laundries, non-commercial garages, houses for pets such as dogs, birds, rabbits and the like of not more than 4.00 sq. meters in floor area, pump houses and generator houses. 2. Auxiliary uses customarily conducted in dwellings and homes for the practice of one's profession such as offices of physicians, surgeons, dentists, architects, 	<ul style="list-style-type: none"> 1. Preparatory schools, provided that they do not exceed three (3) classrooms and shall be located not less than 500 meters from nearest existing school offering similar course and are equipped with adequate parking or as provided in the local zoning ordinance. 2. Boarding houses with no more than eight (8) boarders. 3. Neighborhood convenience stores selling miscellaneous items, provided that such stores shall not exceed 10% of the gross floor area (GFA) of the dwelling unit and provided that no liquor shall be allowed for sale. 4. Audio-video and computer rental shops, provided that such shops 	Residential R-1 - a low-density residential zone, characterized mainly by single-family, single detached dwellings with the usual community ancillary uses on a neighborhood scale, such as executive subdivisions and relatively exclusive residential communities which are not subdivisions.

		<p>engineers, lawyers and other professionals provided that such professionals are members of the family residing in the premises; provided further, that not</p>	<p>shall not exceed 10% of the total floor area of the dwelling unit.</p> <p>5. Home occupation engaging in an in-house business such as dressmaking, tailoring, and baking, provided that the</p>	
		<p>more than three (3) semi-professional assistants are employed at any time, that in no case that more than 20% of the floor area of the building be used for said professional practice or home occupation for engaging an in-house business such as dressmaking, tailoring, baking and the like, provided that the number of persons engaged in such business/industry shall not exceed five (5), inclusive of the owner; there shall be no change in the outside appearance of the building or premises; no home occupation shall be conducted in any customary accessory uses cited above; no traffic shall be generated by such home occupation in greater volume than would normally be expected in a residential neighborhood and any need for parking generated by the conduct of such home occupation</p>	<p>area used shall not occupy more than 20% of the total floor area of the dwelling unit; the number of persons engaged in such business/industry shall not exceed three (3) inclusive of the owner; there shall be no change in the outside appearance of the building/structure or premises; no home occupation shall be conducted in any customary accessory use; no traffic shall be generated by such home occupation in greater volume than would normally be expected in a residential neighborhood and any need for parking generated by the conduct of such home occupation shall be met off the street and in place other than in a required front yard; no equipment or process shall be used in such home occupation which creates noise, vibration, glare, fumes, odors or electrical interference</p>	

		<p>shall be met off the street and in a place other than in a required front yard; no equipment or process shall be used in such home occupation which</p> <p>7. Home industry classified as cottage industry provided that such home industry shall not occupy more than</p>	<p>detectable to the normal senses and visual or audible interference in any radio or television receivers or causes fluctuation in line voltage of the premises.</p> <p>7. Home industry classified as cottage industry provided that such home industry shall not occupy more than</p>	
		<p>creates noise, vibration, glare, fumes, odors or electrical interference detectable to the normal senses and visual or audible interference in any radio or television receivers or causes fluctuation in line voltage of the premises.</p> <p>3. Home industry classified as cottage industry provided that such home industry shall not occupy more than 30% of the floor area of the dwelling unit; there shall be no change or alteration in the outside appearance of the dwelling unit and shall not be a hazard/nuisance; allotted capitalization shall not exceed the capitalization as set by the Department of Trade and Industry (DTI); shall consider same provisions as enumerated in</p>	<p>30% of the gross floor area (GFA) of the dwelling unit with employees not to exceed five (5) persons and shall have no change or alteration in the outside appearance of the dwelling unit and shall not be a hazard/nuisance; allotted capitalization shall not exceed the capitalization as set by the Department of Trade and Industry (DTI); no home industry shall be conducted in any customary accessory use; no traffic shall be generated by such home industry in greater volume than would normally be expected in a residential neighborhood and any need for parking generated by the conduct of such home occupation shall be met off the street and in a place other than in</p>	

		<p>number 2, Profession or Home Occupation, this Section.</p> <p>4. Recreational facilities for the exclusive use of the members of the family residing within the premises, such as swimming pool, pelota court, etc.</p> <p>5. Religious use</p> <p>6. Multi-purpose/<i>Barangay Hall</i></p>	<p>a required front yard; no equipment or process shall be used in such home industry which creates noise, vibration, glare, fumes, odors or electrical interference detectable to the normal senses and visual or audible interference in any radio or television receivers or causes fluctuation in line voltage of the premises.</p>	
		<p>7. Pre-School</p> <p>8. Sports club</p> <p>9. Clinic, nursing and convalescing home, health center</p> <p>10. Plant nursery</p>		
Division A-2 (residential building for the exclusive use of non-leasing occupants not exceeding 10 persons)	<p>1. Single-attached or duplex or town-houses, each privately owned</p> <p>2. School dormitories (on campus)</p> <p>3. Convents and monasteries</p> <p>4. Military or police barracks/ dormitories</p> <p>5. All uses allowed in Division A-1 (or for R-1 class) buildings/structures</p> <p>6. Pre-schools, elementary and high schools, provided that they do not exceed sixteen (16) classrooms</p> <p>7. Outpatient clinics, family planning clinics, lying-in clinics, diagnostic clinics, medical and clinical laboratories</p>	<p>1. Customary incidental home occupations such as barber and beauty shops, tailoring and dress shops, neighborhood convenience stores, retail drug stores</p>	<p>1. Ballet, dance and voice studios provided that the classes or instructions are held in soundproofed and airconditioned buildings</p> <p>2. Sanitaria, nursery or convalescent homes</p> <p>3. Philanthropic or charitable institutions upon approval of the Building Official and subject to such conditions and safeguards as deemed appropriate</p> <p>4. Offices with no actual display, sale, transfer, or lending of the office commodities in the</p>	<p>Residential R-2 - a medium density residential use or occupancy, characterized mainly as a low-rise single-attached, duplex or multi-level building/ structure for exclusive use as multiple family dwellings. This includes R-2 structures within semi-exclusive subdivisions and semi-exclusive residential communities which are not subdivisions.</p> <p>There shall be two (2) general</p>

	<p>8. Branch library and museum 9. Steam/ dry cleaning outlets 10. Party needs and accessories (leasing of tables and chairs, etc.)</p>		<p>premises and with subject gross floor area (GFA) not exceeding 30% of the building GFA 5. Apartment hotels/hometels 6. Processing, refilling and retailing of bottled drinking water provided that clearances from local health department and certification of adequate supply from the water supply concessionaire shall be secured.</p>	<p>types of R-2 use or occupancy, to wit:</p> <p>a. Basic R-2 : single-attached or duplex building/structure of from one (1) storey up to three (3) storeys in height and with each unit for separate</p>
			<p>7. Home occupation for the practice of one's profession or for engaging in an in-house business such as dressmaking, tailoring, baking, barber and beauty shops and the like, provided that the area in use shall not exceed 30% of the gross floor area (GFA) of the dwelling unit with the number of persons engaged in such business/industry not exceeding ten (10) inclusive of owner; there shall be no change in the outside appearance of the building or premises, no home occupation shall be conducted in any customary accessory use; no traffic shall be generated by such home occupation in greater</p>	<p>use as single-family dwellings and;</p> <p>b. Maximum R-2 : low-rise multi-level building/structure of from three (3) up to five (5) storeys in height and for use as multiple family dwellings</p>

			<p>volume than would normally be expected in a residential neighborhood and any need for parking generated by the conduct of such home occupation shall be met off the street and in a place other than in a required front yard; no equipment or process shall be used in such home occupation which creates noise, vibration, glare, fumes, odors or electrical interference detectable to the normal senses and</p>	
			<p>visual or audible interference in any radio or television receivers or causes fluctuation in line voltage of the premises.</p> <p>8. Car barns for not more than three (3) units.</p> <p>9. LPG retailing with a maximum of twenty (20) units of LPG tanks at any given time</p> <p>10. Recreational facilities such as resorts, swimming pools, clubhouses and similar uses except carnivals and fairs</p> <p>11. Bank branches, savings/loans/lending shops.</p> <p>12. Driving range</p>	

Group B – Residential (Buildings/ Structures, Hotels and Apartments)				
Division B-1	<ul style="list-style-type: none"> 1. All uses permitted in Divisions A-1 and A-2 (or for R-1 class and R-2 class) buildings/structures 2. Leased single-detached dwelling unit, cottage with more than one (1) independent unit and duplexes. 3. Boarding and lodging houses 	<ul style="list-style-type: none"> 1. All customary accessory uses allowed in Divisions A-1 and A-2 (or for R-1 class and R-2 class) buildings/ structures 2. Branch library and museum 3. Hometel 4. Vocational school 	<ul style="list-style-type: none"> 1. All conditional uses in R-1 and R-2 with appropriate regulations 	Residential R-3 - a high-density residential use or occupancy, characterized mainly as a low-rise or medium-rise building/ structure for exclusive use as multiple family dwellings with mixed housing types. R-3 structure may include low-rise or medium-rise residential
	<ul style="list-style-type: none"> 4. Multiple-housing units for lease or still for sale 5. Townhouses, each privately owned 6. Boarding houses 7. <i>Accessoriyas</i> (shop-houses), rowhouses, townhouses, tenements and apartments 8. Multiple privately-owned condominium units or tenement houses (residential building for the exclusive use of non-leasing occupants not exceeding ten (10) persons and of low-rise type (up to five (5) storeys maximum building height) 9. Hotels, motels, inns, pension houses and apartels 			condominium buildings that are already commercial in nature and scale. There shall be two (2) general types of R-3 use or occupancy, to wit: <ul style="list-style-type: none"> a. Basic R-3 : rowhouse building/structure of from one (1) storey up to three (3) storeys in height and with each unit for separate use as single-family dwellings; and b. Maximum R-3 : medium-rise multi-level building/ structure of from six (6) up to twelve (12) storeys in height and for use as

	10. Private or off-campus dormitories. 11. Elementary schools and high schools, provided that these will not exceed twenty (20) classrooms			multiple family dwellings. Residential R-4 - a medium to high-density residential use or occupancy, characterized mainly as a low-rise townhouse building/ structure for exclusive use as multiple family dwellings. The term R-4 specifically refers to the building/structure on an
				individual lot (a townhouse unit) and generally refers to the series or rows of R-4 buildings/structures within a subdivided lot or property (an R-4 development).
	1. Multi-family residential buildings such as condominium, high-rise residential buildings/structures, multi-level apartments, tenements, mass housing, etc. taller than five (5) storeys but not more than twelve (12) storeys			Residential R-5 - a very high-density residential use or occupancy, characterized mainly as a medium-rise or high-rise condominium building/structure for exclusive use as multiple family dwelling .
Group C – Education and Recreation				
Division C-1	1. Educational institutions like schools, colleges, universities, vocational, institutions, seminaries, convents,			

	<p>including school auditoriums, gymnasia, reviewing stands, little theaters, concert halls, opera houses.</p> <ol style="list-style-type: none"> 2. Seminar/workshop facilities 3. Training centers/facilities 4. Libraries, museums, exhibition halls and art galleries 			
	<ol style="list-style-type: none"> 5. Civic centers, clubhouses, lodges, community centers. 6. Churches, mosque, temples, shrines, chapels and similar places of worship 7. Civic or government centers 8. Other types of government buildings 			
Division C-2	<ol style="list-style-type: none"> 1. Amusement halls and parlors 2. Massage and sauna parlors 3. Health studios and reducing salons 4. Billiard halls, pool rooms, bowling alleys and golf clubhouses 5. Dancing schools, disco pads, dance and amusement halls 6. Gymnasias, pelota courts and sports complex 	<ol style="list-style-type: none"> 1. Government centers to house national, regional or local offices in the area 2. Colleges, universities, professional business schools, vocational and trade schools, technical schools and other institutions of higher learning 3. General hospitals, medical centers, multi-purpose clinics 4. Scientific, cultural and academic centers and research facilities except nuclear, radioactive, chemical and biological warfare facilities 5. Convention centers and related 		GI (General Institutional) - a community to national level of institutional use or occupancy, characterized mainly as a low-rise, medium-rise or high-rise building/structure for education-al, training and related activities, e.g., schools and related facilities and the like.

		<p>facilities</p> <ul style="list-style-type: none"> 6. Religious structures, e.g., church, seminary, novitiates 7. Museums 8. Embassies/ consulate 9. Student housing, e.g., dormitories, boarding house 		
Group D – Institutional (Government and Health Services)				
Division D-1 (Institutional, where personal liberties of in-mates are restrained, or quarters of those rendering public assistance and maintaining peace and order)	<ul style="list-style-type: none"> 1. Mental hospitals, mental sanitaria and mental asylums 2. Police and fire stations, guard houses 3. Jails, prisons, reformatories and correctional institutions 4. Rehabilitation centers 5. Leprosaria and quarantine station 	<ul style="list-style-type: none"> 1. Welfare homes, orphanages, boys and girls town, home for the aged and the like 2. Rehabilitation and vocational training center for ex-convicts, drug addicts, unwed mothers, physically, mentally and emotionally handicapped, ex-sanitaria inmates; and similar establishments 3. Military camps/reservations/bases and training grounds 4. Penitentiary and correctional institution 		GI (General Institutional) - a community to national level of institutional use or occupancy, characterized mainly as a low-rise, medium-rise or high-rise building/ structure for medical, government service administrative and related activities, e.g., hospitals and related health care facilities, government offices, military, police and correctional buildings and the like.
Division D-2 (Institutional, buildings for health care)	<ul style="list-style-type: none"> 1. Hospitals, sanitaria, and homes for the aged 2. Nurseries for children of kindergarten age or non-ambulatory patients accommodating more than five (5) persons 			

General Classification of Use/Character of Occupancy of Building/Structure	U S E			Zoning Classification
	PRINCIPAL	ACCESSORY	CONDITIONAL	
Division D-3 (Institutional, for ambulatory patients or children over kindergarten age)	1. Nursing homes for ambulatory patients 2. School and home, for children over kindergarten age 3. Orphanages			
Group E – Business and Mercantile (Commercial)				
Division E-1 (Business and Mercantile, where no work is done except change of parts and maintenance requiring no open flames, welding, or use of highly flammable liquids)	1. All uses allowed in Division B-1 (or for R-3 class) buildings/ structures 2. Gasoline filling and service stations. 3. Storage garage and boat storage. 4. Commercial garages and parking buildings, display for cars, tractors, etc. 5. Bus and railways depots and terminals and offices 6. Port facilities 7. Airports and heliport facilities 8. All other types of transportation complexes 9. All other types of large complexes	1. Office building 2. Office condominium 3. Department store/shopping center 4. Bookstore and office supply shop 5. Car shop 6. Home appliance store 7. Photo shop 8. Flower shop 9. Bakery and bake shop 10. Wine store 11. Grocery 12. Supermarket	1. Garage for jeepneys and taxis not greater than six (6) units in number 2. Garage for bus and trucks not greater than three (3) units in number 3. Retailing of CHBs, gravel and sand and other concrete products	C-1 (Commercial One or Light Commercial) - a neighborhood or community level of commercial use or occupancy, characterized mainly as a low-rise building/structure for low intensity commercial/trade, service and business activities, e.g., one to three (1 to 3) storey shopping centers, small offices or mixed-use/occupancy buildings and the like.

	<p>for public services</p> <p>10. Pawnshops, money shops, photo and portrait studios, shoeshine/repair stands, retail drugstores, tailoring and dress shops</p>	<p>13. Beauty parlor 14. Barber shop 15. Sauna bath and massage clinic 16. Dressmaking and tailoring shops 17. Movie house/theater</p>		
	<p>11. Bakeshops and bakery goods stores</p> <p>12. Stores for construction supplies and building materials such as electrical and electronics, plumbing supplies, ceramic clay cement and other similar products except CHBs, gravel and sand and other concrete products</p>	<p>18. Playcourt, e.g., tennis, bowling, billiards 19. Swimming pool 20. Day/night club 21. Stadium, coliseum, gymnasium 22. Other sports and recreational establishments 23. Restaurants and other eateries 24. Short term special education like dancing schools, schools for self-defense, driving schools, speech clinics 25. Storeroom and warehouse but only as may be necessary for the efficient conduct of the business 26. Commercial housing like hotel, apartment, apartel, boarding house, dormitory, pension house, clubhouse, motel 27. Commercial condominium (with residential units in upper floors) 28. Embassy/ consulate 29. Library/museum 30. Filling station/service station</p>		<p>UTS (Utilities, Transportation and Services) – a range of utilitarian/functional uses or occupancies, characterized mainly as a low-rise or medium- rise building/structure for low to high intensity community support functions, e.g., terminals/inter-modals/multi-modals and depots</p>

		31. Clinic 32. Vocational/ technical school 33. Convention center and related facilities		
General Classification of Use/Character of Occupancy of Building/ Structure	U S E			Zoning Classification
	PRINCIPAL	ACCESSORY	CONDITIONAL	
		34. Messengerial service 35. Security agency 36. Janitorial service 37. Bank and other financial institution 38. Radio and television station 39. Building garage 40. Commercial job printing 41. Typing and photo engraving services 42. Repair of optical instruments and equipment and cameras 43. Repair of clocks and watches 44. Manufacture of insignia, badges and similar emblems except metal 45. Transportation terminal/garage 46. Plant nurseries 47. Scientific, cultural and academic centers and research facilities except nuclear, radioactive,		

		chemical and biological warfare facilities.		
Division E-2 (Business and Mercantile in nature)	<ul style="list-style-type: none"> 1. Wholesale and retail stores 2. Shopping centers, malls and supermarkets 3. Wet and dry markets 4. Restaurants, drinking and dining establishments with less than one hundred (100) occupancies. 5. Day/night clubs, bars, cocktails, 	<ul style="list-style-type: none"> 1. All uses in C-1 class buildings/structures may be allowed in C-2 class buildings/structures 2. Repair shops like house appliances, motor vehicles and accessory, home furnishing shops 	<ul style="list-style-type: none"> 1. Institutional uses as colleges and universities, vocational and technical schools, general hospitals and specialized general welfare, charitable and government institutions 2. Hauling services and garage terminals for trucks, tow trucks, and buses not 	C-2 (Commercial Two or Medium Commercial) - a municipal or city level of commercial use or occupancy, characterized mainly as a medium-rise building/structure for medium to high intensity commercial/trade, service and
	<ul style="list-style-type: none"> 6. Bakeries, pastry and bake shops. 7. Office buildings 8. Financial Institutions 9. Printing & publishing plants and offices 10. Engraving, photo developing and printing shops 11. Photographer and painter studios, tailoring and haberdashery shops 12. Factories and workshops, using less flammable or non-combustible materials 13. Battery shops and repair shops 14. Paint stores without bulk handling 15. Funeral parlors 16. Memorial and mortuary chapels, crematories 17. Columbarium 	<ul style="list-style-type: none"> 3. Transportation terminal/garage with repair shops 4. Publishing 5. Medium scale junk shop 6. Machinery display shop/center 7. Gravel and sand 8. Lumber/hardware 9. Manufacture of ice, ice blocks, cubes, tubes, crushed except dry ice 10. Manufacture of signs and advertising displays (except printed) 11. Chicharon factory 12. Welding shops 13. Machine shops service operations (repairing/rebuilding, or custom job orders) 14. Motorcycles/bicycles repair shops 	<ul style="list-style-type: none"> exceeding three (3) units and storage facilities in support of commercial establishments 4. Auto sales and rentals, automotive handicraft, accessory and spare parts shops, marine craft, aircraft and sales yards 5. Junk shops, scrap dealer shops 	<p>business activities, e.g., three to five (3 to 5) storey shopping centers, medium to large office or mixed use/occupancy buildings/structures and the like.</p> <p>SPE (Special) – other vertical facilities not mentioned under regular uses/occupancies of buildings/structures such as cemeteries, memorial parks and the like</p>

	<p>18. Telephone and telegraph exchanges</p> <p>19. Telecommunications, media and public information complexes including radio and TV broadcasting studios</p> <p>20. Cell (mobile) phone towers</p> <p>21. Battery shops and auto repair shops</p> <p>22. Bakeries, pastry and bake shops</p> <p>23. Police and fire stations</p>	<p>15. Lechon stores</p> <p>16. Biscuit factory - manufacture of biscuits, cookies, crackers and other similar dried bakery products</p> <p>17. Doughnut and <i>hopia</i> factory</p> <p>18. Factory for other bakery products not elsewhere classified (n.e.c.)</p> <p>19. Shops for repacking of food products e.g. fruits, vegetables, sugar and other related products</p>		
	<p>24. Glassware and metalware stores, household equipment and appliance shops</p> <p>25. Manufacture of insignia, badges and similar emblems except metal</p> <p>26. General retail establishments such as curio or antique shops, pet shops and aquarium stores, bookstores, art supplies and novelties, jewelry shops, liquor wine stores and flower shops</p> <p>27. Employment/recruitment agencies, news syndicate services and office equipment and repair shops and other offices</p> <p>28. Watch sales and services, locksmith and other related services</p> <p>29. Other stores and shops for conducting retail business and local</p>	<p>20. Funeral parlors, mortuaries and crematory services and memorial chapels</p> <p>21. Parking lots, garage facilities</p> <p>22. Buildings/structures for other commercial activities not elsewhere-classified (n.e.c.)</p>		

	shopping establishments 30. Radio, television and other electrical appliance repair shops 31. Furniture, repair and upholstering job 32. Computer stores and video shops, including repair 33. Internet cafes and cyber stations 34. Garment manufacturing with no more than twenty (20) machines 34. Signboard and streamer painting and silk screening			
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	35. Car barns for jeepneys and taxis not more than six (6) units 36. Lotto terminals, off-fronton, on-line bingo outlets and off-track betting stations 37. Gardens and landscaping supply/ contractors 38. Printing, typesetting, copiers and duplicating services 39. Photo supply and developing 40. Restaurants, canteens, eateries, delicatessen shops, confectionery shops and automats/fastfoods 41. Groceries 42. Laundries and laundromats 43. Recording and film laboratories 44. Auto repair, tire, vulcanizing shops and carwash with minimum 100 sq. meters service area 45. Physical fitness gyms/centers		
Division E-3 (Business and Mercantile, where no repair work is done except exchange of parts and maintenance requiring no open flames, welding or use of highly flammable liquid)	1. All permitted uses in Division E-1 (or for C-1 and C-2 class) buildings/ structures 2. Aircraft hangars 3. Commercial parking lots and garages 4. Department stores, shopping malls/ centers, commercial and sports complexes/ areas 5. Institutional uses as university complexes	1. All uses allowed in R-1, R-2 and R-3 Zones 2. All uses allowed in C-1, C-2 and C-3 Zones 3. Some uses allowed in I-1 Zones 4. All uses allowed in GI Zones and SI Zones 5. Parks and Recreation and Entertainment class buildings/ structures	C-3 (Commercial Three or Metropolitan Commercial) means a metropolitan level of commercial use/ occupancy, characterized mainly as a medium-rise to high-rise building/structure for high to very high intensity commercial/ trade, service and business activities, e.g., large to very large shopping malls,

	6. Other commercial/ business activities not elsewhere classified (n.e.c.)			very large office or mixed-use/occupancy buildings and the like.
Group F – Industrial (Non-Pollutive/ Non-Hazardous Industries and Non-Pollutive/ Hazardous Industries)				
Division F-1 (Light Industrial)	1. Ice plants and cold storage buildings 2. Power plants (thermal, hydro or geothermal) 3. Pumping plants (water supply, storm drainage, sewerage, irrigation and waste treatment plants) 4. Dairies and creameries 5. Rice mills and sugar centrals 6. Breweries, bottling plants, canneries, and tanneries 7. Factories and workshops using incombustible or non-explosive materials	Customary support facilities for industries such as housing, community, utilities and services	Building/structure with lesser negative environmental impact	I-1 (Industrial One) - a light industrial use or occupancy, characterized mainly as a low-rise but sprawling building/ structure for low intensity manufacturing or production activities.
Group G – Storage and Hazardous Industrial (Pollutive/ Non-Hazardous industries and				

Pollutive/ Hazardous Industries Only)				
Division G-1 (Medium Industrial, which shall include storage and handling of hazardous and highly flammable materials)	<ul style="list-style-type: none"> 1. Storage tanks, buildings for storing gasoline, acetylene, LPG, calcium, carbides, oxygen, hydrogen, and the like 2. Armories, arsenals and munitions factories 3. Match and fireworks factories 	Customary support facilities for industries such as housing, community, utilities and services	Building/structure with lesser negative environment impact	I-2 (Industrial Two) - a medium industrial use or occupancy, characterized mainly as a low-rise but sprawling building/ structure for medium intensity manufacturing or production activities.
	<ul style="list-style-type: none"> 4. Plastics resin plants (monomer and polymer) 5. Plastics compounding and processing plants 6. Acetylene and oxygen generating plants 7. Cooking oil and soap processing plants 8. Factories for highly flammable chemicals 9. Water and power generation/distribution complexes 10. Liquid and solid waste management facilities 11. All other types of large complexes for public utilities 			UTS (Utilities, Transportation and Services) – a range of utilitarian/functional uses/occupancies, characterized mainly by low-rise or medium-rise buildings/structures for low to high intensity community support functions, e.g., power and water generation/distribution facilities, telecommunication facilities, drainage/wastewater and sewerage facilities, solid waste handling facilities and the like excluding terminals/inter-modals/multi-modals and depot

Division G-2 (Medium Industrial buildings for storage and handling of flammable materials)	1. All uses permitted in I-1 class 2. Dry cleaning plants using flammable liquids 3. Paint stores with bulk handling 4. Paint shops and spray painting rooms 5. Sign and billboard painting shops	Customary support facilities for industries such as housing, community, utilities and services	Building/structure with lesser negative environment impact	
Division G-3 (Medium Industrial buildings for wood working activities, papers cardboard manufactures, textile and garment factories)	1. Wood working establishments, lumber and timber yards 2. Planing mills and sawmills, veneer plants 3. Wood drying kilns 4. Pulp, paper and paperboard factories 5. Wood and cardboard box factories 6. Textile and fiber spinning mills 7. Grains and cement silos 8. Warehouses where highly combustible materials are stored. 9. Factories where loose combustible fiber or dirt are manufactured, processed or generated. 10. Garment and undergarment factories	Customary support facilities for industries such as housing, community, utilities and services	Building/structure with lesser negative environment impact	
Division G-4 (Medium Industrial, for repair garages and engine manufacture)	1. Repair garages and shops 2. Factories for engines and turbines and attached testing facilities	Customary support facilities for industries such as housing, community, utilities and services	Building/structure with lesser negative environment impact	

Division G-5 (Medium Industrial, for aircraft facilities)	1. Hangars 2. Manufacture and assembly plants of aircraft engine 3. Repairs and testing shops for aircraft engines and parts	Customary support facilities for industries such as housing, community, utilities and services	Building/structure with lesser negative environment impact	
Group H – Assembly for less than 1,000 (Cultural and/ or Recreational)				
Division H-1 (Recreational, which are assembly buildings with stage and having an occupant load of less than 1,000)	1. Theaters and auditoriums 2. Concert halls and open houses 3. Convention halls 4. Little theaters, audio-visual rooms			PRE (Park Structures, Recreation and Entertainment) - a range of recreational uses or occupancies, characterized mainly as a low-rise or medium-rise building/structure for low to medium intensity recreational or entertainment functions related to educational uses, e.g., structures on campuses or its component parks/open spaces and all other kinds of recreational or assembly buildings/structures on campus such as auditoria, mess halls, seminar facilities, gymnasia, stadia, arenas and the like.

				CUL (Cultural) - a community to national level of cultural use or occupancy, characterized
				mainly as a low-rise or medium-rise building / structure for cultural activities, e.g., cultural centers, convention centers, very large office or mixed-use/occupancy buildings and the like.
Division H-2 (Recreational, which are assembly buildings with stage and having an occupant load of 300 or more)	1. Dance halls, cabarets, ballrooms 2. Skating rinks 3. Cockfighting arenas			
Division H-3 (Recreational, which are assembly buildings with stage and having an occupant load of less than 300)	1. Dance halls, ballrooms 2. Skating rinks			
Division H-4 (Recreational, tourism estate developments or tourism-oriented establishments,	1. Sports stands 2. Reviewing stands 3. Grandstand and bleachers 4. Covered amusement parks 5. Boxing arenas, jai-alai stadiums 6. Race tracks and hippodromes			

which are structures not included in Divisions H-1)	7. All types of resort complexes 8. All other types of amusement and entertainment complexes			
Group I – Assembly for More than 1,000 (Cultural and/or Recreational)				
Division I-1 (Recreational, Assembly Buildings with stage and an occupant load of 1,000 or more in the building)	1. Colisea and sports complexes 2. Theaters and convention centers 3. Concert halls and open houses 4. Convention centers	1. Parks/gardens 2. Resort areas, e.g., beaches, including accessory uses 3. Open air or outdoor sports activities and support facilities, including low rise stadia, gyms, amphitheaters and swimming pools 4. Golf courses, ball courts, race tracks and similar uses 5. Memorial/Shrines/monuments, kiosks and other park structures		CUL (Cultural) - a community to national level of cultural use or occupancy, characterized mainly as a low-rise or medium-rise building/structure for cultural activities PRE (Park Structures, Recreation and Entertainment) - a range of recreational uses or
		6. Sports Club 7. Underground parking structures/facilities		occupancies, characterized mainly as a low-rise or medium-rise building/ structure for low to medium intensity recreational or entertainment functions related to educational uses, e.g., structures on campuses or its component parks/open spaces and all other kinds of recreational or assembly

				buildings/structures on campus such as auditoria, mess halls, seminar facilities, gymnasiums, stadia, arenas and the like.
Group J – Accessory (Agricultural and Other Occupancies/ Uses not Specifically Mentioned Under Groups A through I)				
Division J-1	1. Agricultural structures: a. Sheds b. Barns c. Poultry houses d. Piggeries e. Hatcheries f. Stables g. Greenhouses h. Granaries i. Silos	1. Cultivation, raising and growing of staple crops such as rice, corn, camote, cassava and the like 2. Growing of diversified plants and trees, such as fruit and flower bearing trees, coffee, tobacco, etc. 3. Silviculture, mushroom culture, fishing and fish culture, snake culture, crocodile farm, monkey raising and the like 4. Customary support facilities such as <i>palay</i> dryers and rice threshers and storage barns and warehouses 5. Ancillary dwelling units/farmhouses for tillers and		A (Agricultural) - an agricultural or agriculture-related use or occupancy, characterized mainly as a low-rise or medium-rise building/structure for low to high intensity agricultural or related activities, e.g., poultry houses, hatcheries, piggeries, greenhouses, granaries and the like as well as offices, educational, training, research and related facilities for agriculture and the like. AI (Agro-Industrial) - an agro-industrial or related use or

		<p>laborers</p> <p>6. Agricultural research and experimentation facilities such as breeding stations, fish farms, nurseries, demonstration farms, etc.</p> <p>7. Pastoral activities such as goat-raising and cattle fattening</p> <p>8. Home occupation for the practice of one's profession or engaging home business such as dressmaking, tailoring, baking, running a <i>sari-sari</i> store and the like, provided that, the number of persons engaged in such</p>		occupancy, characterized mainly as a low-rise building/structure for low to high intensity agro-industrial or related activities to include offices, educational, training, research and related facilities for agro-industry.
		<p>business/industry shall not exceed five (5), inclusive of the owner; there shall be no change in the outside appearance of the building premises; no home occupation shall be conducted in any customary accessory uses cited above; no traffic shall be generated by such home occupation in greater volume than would normally be expected in a residential neighborhood and any need for parking generated by the conduct of such home occupation shall be met off the street in a place other than the required front</p>		

		<p>yard; no equipment or process shall be used in such occupation which creates noise, vibration, glare, fumes, odors and electrical interference detectable to the normal senses and visual or audible interference in any radio or television receiver or causes fluctuations in line voltage of the premises.</p> <p>9. Home industry classified as cottage industry, e.g., mat weaving, pottery making, food preservation, etc. provided that such home industry shall not occupy more than 30% of floor area of the dwelling unit;</p>		
		<p>there shall be no change or alteration in the outside appearance of the dwelling unit and shall not be a hazard or nuisance; allotted capitalization shall not exceed the capitalization as set by the Department of Trade and Industry (DTI); such shall consider same provisions as enumerated in Home Occupation, this Section.</p> <p>10. Backyard raising of livestock and fowl, provided that for livestock- a maximum of 10 heads; for fowl. a</p>		

		maximum of 500 birds 11. All uses allowed in agriculture 12. Rice/ corn mills (single pass) 13. Drying, cleaning, curing and preserving of meat and its by products and derivatives 14. Drying, smoking and airing of tobacco 15. Flour mill 16. Cassava flour mill 17. Manufacture of coffee 18. Manufacture of unprepared animal feeds, other grain milling, n.e.c. 19. Production of prepared feeds for animals 20. Cigar and Cigarette factory 21. Curing and redrying tobacco leaves		
		22. Miscellaneous processing of tobacco leaves, n.e.c. 23. Weaving hemp textile 24. Jute spinning and weaving 25. Manufacture of charcoal 26. Milk processing plants (Manufacturing filled, reconstituted or recombined milk, condensed or evaporated) 27. Butter and cheese processing plants 28. Natural fluid milk processing (pasteurizing, homogenizing,		

		vitaminizing, bottling of natural animal milk and cream related products) 29. Other dairy products, n.e.c. 30. Canning and preserving of fruits and fruit juices 31. Canning and preserving of vegetables and vegetable juices 32. Canning and preserving of vegetable sauces 33. Miscellaneous canning and preserving of fruit and vegetables, n.e.c. 34. Fish canning 35. <i>Patis</i> factory 36. <i>Bagoong</i> factory		
		37. Processing, preserving and canning of fish and other seafoods, n.e.c. 38. Manufacturing of desiccated coconut 39. Manufacture of starch and its products 40. Manufacture of wines from juices of local fruits 41. Vegetable oil mills, including coconut oil 42. Sugarcane milling (centrifugal and refines) 43. Sugar refining 44. <i>Muscovado</i> sugar mill		

		45. Cotton textile mill 46. Manufacture/processing of other plantation crops, e.g., pineapple, bananas, etc. 47. Other commercial handicrafts and industrial activities utilizing plant or animal parts and/or products as raw materials, n.e.c. 48. Other accessory uses incidental to agro-industrial activities		
Division J-2 (Accessory)	1. Private garages, carports 2. Towers, smokestacks and chimneys 3. Swimming pools including shower and locker room 4. Fence over 1.80 meters high, separate fire walls 5. Steel and/ or concrete tanks		1. All uses/occupancy permitted in all other Divisions (or classes of buildings/ structures) if such uses/occupancy are part of the Planned Unit Development (PUD)	PUD (Planned Unit Development) - refers to land development or redevelopment schemes for a new or built-up project site wherein said project site must have a Comprehensive Development Master Plan (CDMP) or its acceptable equivalent, i.e., a unitary development plan/site plan that permits flexibility in planning/ urban design, building/structure siting, complementarity of building types and land uses, usable open spaces for general public use services and

				Business activities and the preservation of significant natural land features if feasible, whereby said CDMP must be duly approved by the LGU concerned.
Division J-3	<ul style="list-style-type: none"> 1. Stages, platforms and similar structures 2. Pelota, tennis, badminton or basketball courts 3. Tombs, mausoleums and niches 4. Aviaries and aquariums and zoo structures 5. Banks and record vaults 			

(emphases, underscoring and annotations supplied)

Rule VIIc follows

SECTION 702. Change in Use

No change shall be made in the character of occupancy or use of **any building** which would place the building in a different division of the same group of occupancy or in a different group of occupancies, unless such building is made to comply with the requirements of the **Code** for such division or group of occupancy. The character of occupancy of existing buildings may be changed subject to the approval of the **Building Official** and the building may be occupied for purposes set forth in other Groups: Provided the new or proposed use is less hazardous, based on life and fire risk, than the existing use.

SECTION 703. Mixed Occupancy

1. General Requirements

When a building is of **mixed occupancy** or used for **more than one occupancy**, the whole building shall be subject to the **most restrictive requirement** pertaining to any of the type of occupancy found therein except in the following:

- a. When a **one-storey building** houses more than one occupancy, each portion of the building shall conform to the requirement of the particular occupancy housed therein and;
- b. Where minor accessory uses do **not** occupy more than 10% of the area of any floor or a building, nor more than 10% of the basic area permitted in the occupancy requirements, in which case, the **major use** of the building shall determine the occupancy classification.

2. Forms of Occupancy Separation

Occupancy separations shall be vertical or horizontal or both, or when necessary, of such other forms as may be required to afford a **complete separation** between the various occupancy divisions in the building.

3. Types of Occupancy Separation

Occupancy separation shall be classified as “**One-Hour Fire-Resistive**”, “**Two-Hour Fire-Resistive**”, “**Three-Hour Fire-Resistive**” and “**Four-Hour Fire-Resistive**.”

- a. A “**One-Hour Fire-Resistive** Occupancy Separation” shall be of **not less than one-hour fire-resistive construction**. All openings in such separation shall be protected by a fire-assembly having a one-hour fire-resistive rating.
- b. A “**Two-Hour Fire-Resistive** Occupancy Separation” shall be of **not less than two-hour fire-resistive construction**. All openings in such separation shall be protected by a fire assembly having a two-hour fire-resistive rating.
- c. A “**Three-Hour Fire-Resistive** Occupancy Separation” shall be of **not less than three-hour fire-resistive construction**. All openings in walls forming such separation shall be protected by a fire assembly having a three-hour fire-resistive rating. The total width of all openings in any three-hour fire-resistive occupancy separation wall in any one-storey shall not exceed 25% of the length of the wall in that storey and no single opening shall have an area greater than 10.00 sq. meters. All openings in floors forming a “**Three-Hour Fire-Resistive Occupancy Separation**” shall be protected by vertical enclosures extending above and below such openings. The walls of such vertical enclosures shall be of not less than two-hour fire-resistive construction, and all openings therein shall be protected by a fire assembly having a three-hour fire-resistive rating.

- d. A "Four-Hour Fire-Resistive Occupancy Separation" shall have no openings therein and shall be of **not less than four-hour fire-resistive construction**.
4. Fire Rating for Occupancy Separation

Occupancy Separations shall be provided between groups, subgroupings, or divisions of occupancies. The Secretary shall promulgate rules and regulations for appropriate occupancy separations in buildings of mixed occupancy; Provided, that, where any occupancy separation is required, the minimum shall be a "One-Hour Fire-Resistive Occupancy Separation"; and where the occupancy separation is horizontal, structural members supporting the separation shall be protected by an equivalent fire-resistive construction.

SECTION 704. Location on Property

1. General
 - a. **No building** shall be constructed unless it adjoins or has **direct access to a public space**, yard or street on at least one of its sides.
 - b. For the purpose of this Section, the centerline of an adjoining street or alley shall be considered an adjacent property line.
 - c. Eaves over required windows shall not be less than 750 millimeters from the side and rear property lines.

2. Fire Resistance of Walls

Exterior walls shall have fire resistance and opening protection in accordance with the requirements set forth by the Secretary. Projections beyond the exterior wall shall not exceed beyond a point one-third the distance from an assumed vertical plane located where the fire-resistant protection of openings is first required to the location on property whichever is the least restrictive. Distance shall be measured at right angles from the property line. When openings in exterior walls are required to be protected due to distance from property line, the sum of the areas of such openings in any storey shall not exceed 50% of the total area of the wall in that storey.

3. Buildings on Same Property and Buildings Containing Courts

For the purpose of determining the required wall and opening protection, buildings on the same property and court walls shall be assumed to have a property line between them. When a new building is to be erected on the same property with an existing building, the assumed property line from the existing building shall be the distance to the property line for each occupancy as set forth by the Secretary; Provided, that two or more buildings on the same property may be considered as one building if the aggregate area of such building is within the limits of allowable floor areas for a single building, and when the buildings so considered, house different occupancies or are of different types of construction, the area shall be that allowed for the most restrictive occupancy or construction.

4. Building Footprint and Firewall Requirements

- a. The following rules shall be observed in the determination of the Allowable Maximum Building Footprint (**AMBF**) for buildings and related **habitable** structures. If the stated rules are compared with (1) **Rule VIII Table VIII.1.**- Reference Table on Percentage of Site Occupancy and Maximum Allowable Construction Area (**MACA**); (2) **Rule VIII Tables VIII.2. and VIII.3.** (setbacks, yards and courts); or (3) with the applicable stipulations under this Rule and with the

applicable stipulations of the **Fire Code**, the more stringent but applicable regulation out of the aforementioned rules should be observed;

- b. If **without a firewall**, the footprint of a proposed building/structure shall be measured horizontally from the property line to the outermost faces of the exterior walls of the building/structure; Provided, that the distance measured from the property line shall conform with the applicable stipulations of **this Rule and Rule VIII**; The resultant area established at grade level upon which the proposed building/structure may stand shall be the **AMB**;
- c. Footprint Based on **Firewall** Provisions
 - i. If with a **firewall on one (1) side**, the footprint of a proposed building/structure shall be measured horizontally from the property line with a firewall to the outermost faces of the opposite exterior walls of the building/structure; Provided, that the applicable stipulations of the **Fire Code** are strictly followed;
 - ii. If with a **firewall on two (2) sides** or on one (1) side and the rear property line, the footprint of a proposed building/structure shall be measured horizontally from the opposing property lines in case of a firewall on two (2) sides or from the rear property line with a firewall to the outermost faces of the opposite exterior walls of the building/structure; provided, that the applicable stipulations of the Fire Code are strictly followed;
 - iii. **Absolutely no firewalls are allowed for a low density residential (R-1) uses or occupancies**; an **abutment of up to 3.20 meters** from established grade level may however be permitted but solely **for the purpose of supporting a carport roof**; provided further that such abutment shall be constructed of perforated or decorative concrete blocks above 1.50 meters measured vertically from the established grade level; such an abutment shall not be longer than 7.00 meters or 50% of the side property line in total length, whichever is shorter.
 - iv. For **medium density residential (R-2)** uses or occupancies, **a firewall can be erected on a maximum of 80% of the total length of a side property line**; provided that **only one (1) side property line is used for a firewall** in the case of a R-2 structure; and provided further that the applicable stipulations of the Fire Code are strictly followed;
 - v. For **high-density residential (R-3)** uses or occupancies, **two (2) types of firewall construction may be permitted**:
 - (a) For a **R-3 use or occupancy with a firewall on two (2) sides**, a firewall can be erected on a maximum of 85% of the total length of each side property line; provided that all firewall construction shall not exceed 65% of the total perimeter of the R-3 property, i.e., total length of all property lines; provided that firewalls in R-3 lots shall only be allowed for a maximum two (2) storey component structure; and provided further that all the applicable stipulations of the Fire Code are strictly followed; and
 - (b) For a **R-3 use or occupancy with a firewall on one (1) side property line and at the rear property line**, a firewall can be erected on a maximum of 90% of the total length of the side and rear property lines and up to 100% in case the rear property line is only 4.00 meters wide; provided that all firewall construction at the side property lines shall not exceed 50% of the total perimeter of the R-3 property, i.e., total length of all property lines; provided that firewalls in R-3 lots shall only be allowed for a maximum two (2) storey structure but not at the rear property line where the maximum allowed firewall height shall only be 3.20 meters measured

vertically from established grade; and provided further that all the applicable stipulations of the Fire Code are strictly followed.

- vi. For **townhouse residential (R-4)** uses or occupancies, **firewalls on the two (2) sides of each townhouse unit may be permitted**; the R-4 firewall can be erected on a maximum of 85% of the total length of each side property line; provided that all firewall construction shall not exceed 50% of the total perimeter of each R-4 property, i.e., total length of all property lines; provided that firewalls in each R-4 use or occupancy shall be allowed for a maximum three (3) storey structure; and provided further that all the applicable stipulations of the Fire Code are strictly followed;
- vii. For **residential condominium (R-5)** uses or occupancies, **two (2) types of firewall construction may be permitted**:
 - (a) For a **R-5 use or occupancy with a firewall on two (2) sides**, a firewall can be erected on a maximum of 75% of the total length of each side property line; provided that all firewall construction at the side property lines shall not exceed 50% of the total perimeter of the R-5 property, i.e., total length of all property lines; provided that side firewalls in R-5 uses or occupancies shall only be allowed for a maximum eight (8) storey component structure, i.e., the podium; and provided further that all the applicable stipulations of the Fire Code are strictly followed; and
 - (b) For a **R-5 use or occupancy with a firewall on one (1) side and at the rear property line**, a firewall can be erected on a maximum of 65% of the total length of the side property line and on a maximum of 50% of the total length of the rear property line; provided that all firewall construction shall not exceed 60% of the total perimeter of the R-5 property, i.e., total length of all property lines; provided that the side firewalls in R-5 uses or occupancies shall only be allowed for a maximum eight (8) storey component structure and that at the rear property line, the maximum allowed firewall height shall only be 14.00 meters measured vertically from established grade; and provided further that all the applicable stipulations of the Fire Code are strictly followed.
- viii. **All existing openings on all firewalls shall be sealed completely to maintain the fire integrity of adjoining buildings/structures.**
- ix. The provision of a fully functional sprinkler system and the installation of other fire-retardant or fire suppression devices in the case of commercial, institutional and industrial buildings/structures may allow firewall construction for up to 70% of the total perimeter of the property lines provided that the prescribed setbacks, yards and courts fronting the Road Right-Of-Way (RROW) are first fully complied with; and provided further that all the applicable stipulations of the **Fire Code**, particularly on the number, type and locations of fire exits are strictly followed.

SECTION 705. Allowable Floor Areas

1. General. The Allowable Maximum Total Gross Floor Area (TGFA) of any proposed building/structure shall only be as allowed under this Rule.
2. TGFA Limitation. In **Table VII.1.** hereafter, the percentages (%) indicated in the third (3rd) through eighth (8th) columns, but excluding the multiplier numbers 3, 5, 12, 18, and 30 (which represent the number of storeys/floors), are the percentages of the Total Lot Area (TLA) that may be used to initially determine the Allowable Maximum TGFA for a proposed building/structure.

3. Crosscheck of **TGFA** with Allowable Maximum Volume Building (**AMVB**). The Allowable Maximum **TGFA** once established must be thoroughly crosschecked with the **AMVB** to find out if the **AMVB** is not exceeded. If exceeded, the necessary adjustments on the Maximum Allowable **TGFA** must be made since the **AMVB must always prevail**.

**Table VII.1. Allowable Maximum Total Gross Floor Area (TGFA)
Based on the Allowed Percentage of Site Occupancy (PSO)
of the Total Lot Area (TLA)**

Character of Use/ Occupancy	Type of Building/ Structure	Allowable Maximum Total Gross Floor Area (TGFA)* by Type/ Location of Lot						
		*Note: Building Height Limit (BHL) multiplied by the Allowable Maximum Building Footprint (AMBF) expressed as a percentage (%) of the Total Lot Area or TLA (with or without firewall). Figure subject to reduction to comply with the floor area component of the Allowable Maximum Volume of Building (AMVB). Refer to Table VII.1. to arrive at the percentage (%) of TLA .						
		Interior (or Rear) Lot and End Lot (see Fig. VIII.8. and VIII.5.14. of Rule VIII)	Inside (or Regular) Lot (see Fig. VIII.9. of Rule VIII)	Corner Lot (see Fig. VIII.10. of Rule VIII)	Through Lot (see Fig. VIII.11. of Rule VIII)		Corner- Through Lot (see Fig. VIII.12. of Rule VIII)	Corner Lot Abutting 3 or More Streets, etc. Rivers, Etc. (see Fig. VIII.13. of Rule VIII)
Residential GROUP A-I firewalls)	Residential TLA	3 (floors/ storeys) (R-1) (without	3 x50% of TLA x 60% of	3 x70% of TLA	3 x70% of TLA	3 x70% of TLA	3 x70% of TLA	3 x70% of TLA
	Basic Residential 2 (R-2)	3 x 70%	3 x 60%	3 x 70%	3 x 70%	3 x 70%	3 x 70%	3 x 70%
	Maximum Residential 2 (R-2)	5 x 70%	5 x 60%	5 x 70%	5 x 70%	5 x 70%	5 x 70%	5 x 70%
	Basic Residential 3 (R-3)	3 x 70%	3 x 70%	3 x 70%	3 x 70%	3 x 70%	3 x 70%	3 x 70%
	Maximum Residential 3 (R-3)	12x80%	12x80%	12x80%	12x80%	12x80%	12x80%	12x80%
	Residential 4 (R-4)/ Individual Townhouse Lots/Units	3 x 80%	3 x 80%	3 x 80%	3 x 80%	3 x 80%	3 x 80%	3 x 80%

	Residential 4 (R-4)/ Individual Townhouse Lots/Units	3 x 80%	3 x 80%	3 x 80%	3 x 80%	3 x 80%	3 x 80%
	Residential 5 (R-5)/ Condominiums	18x80%	18x80%	18x80%	18x80%	18x80%	18x80%
Residential GROUP A-I (with firewalls)	Residential 1 (R-1)	Not applicable (NA)	NA	NA	NA	NA	NA
Character of Use/ Occupancy	Type of Building/ Structure	Allowable Maximum Total Gross Floor Area (TGFA)* by Type/ Location of Lot					
		*Note: Building Height Limit (BHL) multiplied by the Allowable Maximum Building Footprint (AMBF) expressed as a percentage (%) of the Total Lot Area or TLA (with or without firewall). Figure subject to reduction to comply with the floor area component of the Allowable Maximum Volume of Building (AMVB). Refer to Table VII.1. to arrive at the percentage (%) of TLA.					
	Basic Residential 2 (R-2)	3 x 75%	3 x 70%	3 x 75%	3 x 75%	3 x 75%	3 x 75%
	Maximum Residential 2 (R-2)	5 x 75%	5 x 70%	5 x 75%	5 x 75%	5 x 75%	5 x 75%
	Basic Residential 3 (R-3)	3 x 80%	3 x 80%	3 x 80%	3 x 80%	3 x 80%	3 x 80%
	Maximum Residential 3 (R-3)	12x80%	12x80%	12x80%	12x80%	12x80%	12x80%
	Residential 4 (R-4)/ Individual Townhouse Lots/Units	3 x 80%	3 x 80%	3 x 80%	3 x 80%	3 x 80%	3 x 80%
	Residential 5 (R-5)/ Condominiums	18x80%	18x80%	18x80%	18x80%	18x80%	18x80%
Commercial GROUPS B, C, E, H, I	Commercial 1 (Com-1)	5 x 80%	5 x 75%	5 x 80%	5 x 80%	5 x 90%	5 x 90%
	Commercial 2 (Com-2)	12x80%	12x75%	12x80%	12x80%	12x90%	12x90%

	Commercial 3 (Com-3)	30 x 80%	30x75%	30x80%	30x80%	30x90%	30x90%
	Commercial 1 (Com-1) with Sprinkler System & Firewalls	5 x 85%	5 x 85%	5 x 90%	5 x 90%	5 x 95%	5 x 95%
	Commercial 2 (Com-2) with Sprinkler System & Firewalls	12x85%	12x85%	12x90%	12x90%	12x95%	12x95%
	Commercial 3 (Com-3) with Sprinkler System & Firewalls	30x85%	30x85%	30x90%	30x90%	30x95%	30x95%

Character of Use/ Occupancy	Type of Building/ Structure	Allowable Maximum Total Gross Floor Area (TGFA) [*] by Type/ Location of Lot					
		<i>*Note: Building Height Limit (BHL) multiplied by the Allowable Maximum Building Footprint (AMB) expressed as a percentage (%) of the Total Lot Area or TLA (with or without firewall). Figure subject to reduction to comply with the floor area component of the Allowable Maximum Volume of Building (AMVB). Refer to Table VII.1. to arrive at the percentage (%) of TLA.</i>					
Industrial GROUPS F, G	Industrial 1 (Ind-1)	Duly-approved Building Height Limit (BHL) x 80% of TLA	BHL x 75% of TLA	BHL x 80% of TLA	BHL x 80% of TLA	BHL x 90% of TLA	BHL x 90% of TLA
	Industrial 2 (Ind-2)	BHL x 80%	BHL x 75%	BHL x 80%	BHL x 80%	BHL x 90%	BHL X 90%
	Industrial 3 (Ind-3)	BHL x 80%	BHL x 75%	BHL x 80%	BHL x 80%	BHL x 90%	BHL x 90%
	Industrial 1 (Ind-1) with Sprinkler System & Firewalls	BHL x 85%	BHL x 85%	BHL x 90%	BHL x 90%	BHL x 95%	BHL x 95%
	Industrial 2 (I-2) with Sprinkler System & Firewalls	BHL x 85%	BHL x 85%	BHL x 90%	BHL x 90%	BHL x 95%	BHL x 95%
	Industrial 3 (Ind-3) with Sprinkler System & Firewalls	BHL x 85%	BHL x 85%	BHL x 90%	BHL x 90%	BHL x 95%	BHL x 95%
Institutional GROUP D	Without Sprinkler System & Firewalls	BHL x 50% of TLA	BHL x 50%	BHL x 60% of TLA			
	With Sprinkler System & Firewalls	BHL x 60% of TLA	BHL x 60%	BHL x 70% of TLA			

Cultural	Without Sprinkler System & Firewalls	BHL x 60% of TLA	BHL x 60% of TLA	BHL x 65% of TLA			
	With Sprinkler System & Firewalls	BHL x 70%					
Transportation	Without Sprinkler System & Firewalls	BHL x 50% of TLA	BHL x 50% Of TLA	BHL x 60% of TLA			
	With Sprinkler System & Firewalls	BHL x 60%	BHL x 60%	BHL x 70%	BHL x 70%	BHL x 70%	BHL x 70%

Note:

Maximum of sixty (60) storeys (180.00 meters) **BHL** for inland areas not close to airports.

SECTION 706. Allowable Floor Area Increases

The floor areas hereinabove provided may be increased in certain specific instances and under appropriate conditions, based on the existence of public space, streets or yards extending along and adjoining two or more sides of the building or structure subject to the approval of the **Building Official**. (Refer to **Guidelines on Determining Gross Floor Area and Total Gross Floor Area of a Building/Structure at the end of this Rule**)

SECTION 707. Maximum Height of Buildings

1. The maximum height and number of storeys of **proposed building** shall be dependent upon the character of use or occupancy and the type of construction, considering end-user population density, light and ventilation, width of **RROW/streets** particularly of its roadway/carriageway component, building bulk, off-street cum off-site parking requirements, etc. and in relation to local land use plan and zoning regulations as well as other environmental considerations, e.g., geological, hydrological, meteorological, topographical, prevailing traffic conditions, the availability and capacity of public utility/service systems, etc. (Refer to **Guidelines on Building Bulk at the end of this Rule**)
2. Determination of **Building Height**:
 - a. **BUILDING HEIGHT LIMIT (BHL)** - the **maximum height** to be allowed for **buildings/structures** based on their proposed use or occupancy; the **BHL** is generally determined after the application of other **development controls (DC)** and certain other parameters, i.e., considerations of site conditions, view, etc. (**Table VII.2.** of this Rule). The **BHL** shall be generally measured from the established grade line to the topmost portion of the proposed building/structure. If applicable, the **BHL** may be subject to clearance requirements of the Air Transportation Office (**ATO**) or of the concerned military/security authorities. (Refer to **Guidelines on Development Controls at the end this Rule**)

BHL excludes the height of permitted/allowed projections above the roof of the **building/structure**, e.g., signage, mast, antenna, telecom tower, beacons and the like.

- b. The Building Height Limit (**BHL**) of any **proposed building**/structure shall only be as allowed under this Rule (as shown in table below) or under the duly approved city/municipal (local) zoning ordinance, whichever is more restrictive.

Table VII.2. Building Height Limit (BHL) by Type of Use or Occupancy

Character of Use or Occupancy	Type of Building/Structure	Building Height Limit (BHL)	
		Number of allowable storeys/floors above established grade	Meters above highest grade
1. Residential	Residential 1 (R-1)	3	10.00
	Residential 2 (R-2) <ul style="list-style-type: none"> a. Basic b. Maximum 	3 5	10.00 15.00
	Residential 3 (R-3) <ul style="list-style-type: none"> a. Basic b. Maximum 	3 12	10.00 36.00
	Residential 4 (R-4)/ Townhouses (Individual lots/ units)	3	10.00
	Residential 5 (R-5)/ Condominiums	12 - 18	36.00 - 54.00
2. Commercial	Commercial 1 (C-1)	3 - 5	10.00 - 15.00
	Commercial 2 (C-2)	6	18.00
	Commercial 3 (C-3)	16-60	48.00 - 180.00
Character of Use or Occupancy	Type of Building/Structure	Building Height Limit (BHL)	
		Number of allowable storeys/floors above established grade	Meters above highest grade
3. Industrial	Industrial 1 (I-1)	15.00 meters but not exceed the duly-approved BHL in the major zone it is part of	
	Industrial 2 (I-2)	21.00 meters but not exceed the duly-approved BHL in the major zone it is part of	
	Industrial 3 (I-3)	27.00 meters but not exceed the duly-approved BHL in the major zone it is part of)	
4. Institutional	-	15.00 meters (or must follow the duly-approved BHL in the major zone it is part of)	
5. Cultural	-	30.00 meters (or must follow the duly-approved BHL in the major zone it is part of)	
6. Utility/Transportation/RROW/ Services	-	15.00 meters (or must complement the duly-approved BHL in the major zone it is part of)	

7. Parks and Open Recreational and Entertainment Spaces	-	15.00 meters (or must complement the duly-approved BHL in the major zone it is part of)	
8. Agricultural/Agro-Industrial/Tourism	-	15.00 meters (or must complement the duly-approved BHL in the major zone it is part of)	
9. Planned Unit Development (PUD)	PUD at a reclamation area close to an operating airport	3 - 15	10.00-45.00 (with ATO-prescribed BHL as needed)
	PUD at a reclamation area	3 - 30	10.00 - 30.00
	PUD at a coastal area	16 - 45	48.00 - 135.00
	PUD at an inland area close to an operating airport	3 - 25	10.00 - 75.00 (with ATO-prescribed BHL as needed)
	PUD at an inland area	12 - 60	36.00 - 180.00

Notes:

a. *Establishing Grade*

- In case of sloping grade where the edges of the building footprint (**AMB**) running perpendicular to the **RROW** has a difference in elevation of less than 3.00 meters, the highest adjoining natural grade (ground surface) or finished grade (sidewalk surface) shall be considered the established grade elevation (**Figure VII.1.**);
- In case of sloping grade where the edges of the building footprint (**AMB**) running perpendicular to the **RROW** has a difference in elevation of more than 3.00 meters, the average grade level of the building footprint (**AMB**) shall be considered the established grade elevation (see **Figure VII.3.**); and
- The **building/structure height** shall be measured from the highest adjoining public sidewalk (finished grade) or ground surface (natural grade); Provided, that the height measured from the lowest adjoining surface shall not exceed such maximum height by more than 3.00 meters; Except, that towers, spires and steeples, erected as parts of the building and not used for habitation or storage are limited as to the height only by structural design, if completely of incombustible materials, or may extend but not exceed 6.00 meters above the prescribed building height limit (**BHL**) for each occupancy group, if of combustible materials (**Figures VII.2.**).

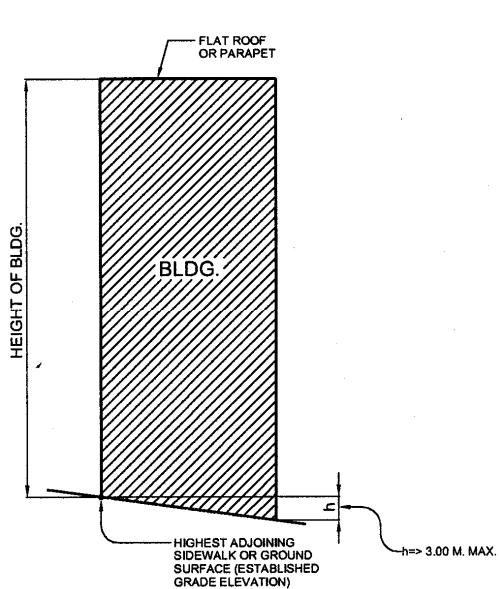


Figure VII.1.

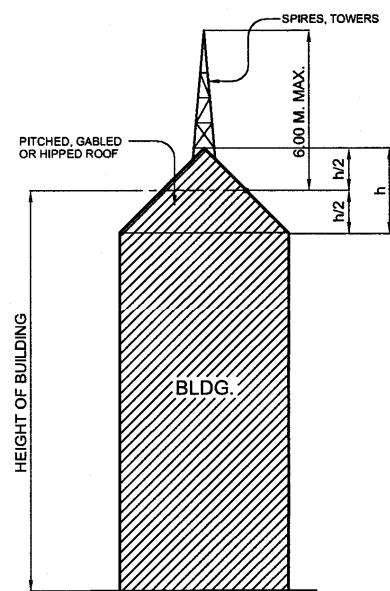


Figure VII.2.

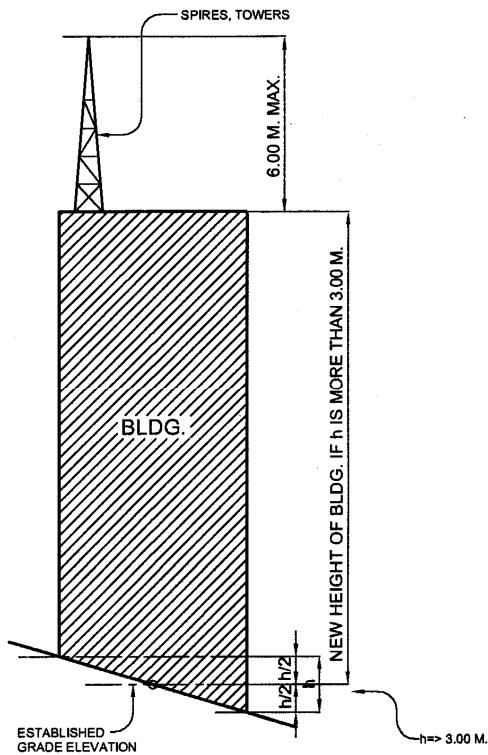


Figure VII.3.

HEIGHT OF BUILDING / STRUCTURE

Annotation. The height of buildings should also be generally proportional to its base/footprint. In practice, a smaller footprint cum taller profile for a building is resorted to in order to preserve as much of the open space within a lot (or surrounding the building) as much as possible.

3. Other Considerations in Height Determination

- a. In any given locality, the height of proposed **buildings**/structures shall be governed by the following factors:
 - i. The **designer/space planner** must consider both the present and projected population density within the project site and in the project's location/area at full completion/operation of the project;
 - ii. For a given **volume of building**/structure (the **building bulk**), that which has a lesser Percentage of Site Occupancy (**PSO**) or area of ground coverage Allowable Maximum Building Footprint (**AMBF**) or Maximum Allowable Construction Area (**MACA**) may be built higher than that with a greater **PSO, AMBF or MACA**;
 - iii. A proposed building/structure which has a greater **TGFA** requirement shall be built higher than that with a lower **TGFA** requirement;
 - iv. A proposed building/structure on a lot with a higher **FLAR designation/rights** may be built higher than that on a lot with a lower **FLAR designation/rights**; and
 - v. Lots that face a wider **RROW** and therefore with more **RROW** features/elements may become the site of a taller building/structure as compared to a lot facing a narrow RROW.
- b. The height of proposed buildings/structures shall also be governed by the following **RROW**-based limitations:
 - i. If only one (1) **RROW** services a lot and such is only 6.00 to 7.00 meters wide, a **BHL** of three (3) storeys (or 9.00 meters maximum) shall be observed regardless of use or occupancy, lot size, lot dimensions, lot frontage and like considerations.
 - ii. If only one (1) **RROW** services a lot and such is only 4.00 to 5.00 meters wide, a **BHL** equivalent to 2 ½ storeys (or 7.50 meters maximum) shall be observed regardless of use or occupancy, lot size, lot dimensions, lot frontage and like considerations. If only one (1) **RROW** services a lot and such is only 3.00 meters wide or less, a **BHL** equivalent to two (2) storeys (or 6.00 meters maximum) shall be observed regardless of use or occupancy, lot size, lot dimensions, lot frontage and like considerations.
 - iii. Taller buildings are allowed for duly approved high-density developments such as Planned Unit Development (**PUD**) areas. Taller and bulkier buildings are better suited in such areas due to higher end-user targets, more advanced and coordinated planning efforts and the application of more stringent **development controls (DC)** by the project proponents themselves.
- c. The following factors shall also be considered in the determination of the building height:
 - i. Soil characteristics, lot location in relation to fault lines and earthquake belts or proximity to volcanoes and other geological conditions.
 - ii. Hydrological conditions such as the water table at the site and distance to waterways and shorelines.
 - iii. Meteorological conditions such as the frequency and intensity of destructive typhoons/monsoon winds/rains, prevailing wind speed and direction, relative humidity, amount of precipitation and the prevailing ambient conditions.

- iv. Effect/s of environmental conditions on the building/structure and vice versa coupled with the effective control of air, noise and thermal pollution, radiant heat, lights and shadows, etc., and the optimization of natural light and ventilation.
 - v. Effect/s of traffic conditions on the building/structure and vice versa and the satisfaction of parking/loading requirements in accordance with this Rule.
 - vi. Availability and capacity of public utility/service system considering the availability and adequacy of electric power, potable and non-potable water supply, drainage and sewerage, transportation and communications facilities, solid waste management system, etc.
 - vii. Need for applicable building safety and maintenance systems, e.g., lightning arresters, beacons, protective railings and barriers, gondolas, window washing systems, etc.
- d. In accordance with the Standards and Recommended Practices (**SARP**) of the International Civil Aviation Organization (**ICAO**) where the Philippines is a member state and of **Administrative Order No. 5 (Civil Air Regulation)** of the Air Transportation Office (**ATO**), the following rules and regulations shall govern the construction of buildings/structures within the 24.00 kilometer radius of aerodromes where turbo-jet aircraft operate and within the 10.00 kilometer radius of aerodromes where no turbo-jet aircraft operate. (**Figs. VII.4.** through **VII.8.**)
- i. The height of buildings/structures within this area shall be limited by an imaginary line with slope of 2% or 1:50 for aerodromes where turbo-jet aircraft operate and 2.5% or 1:40 for aerodromes where no turbo-jet aircraft operate from the inner edge reckoned from the surface of the runway. The dimensions of the isosceles trapezoidal are as shown on **Table VII.3.** hereafter.

Table VII.3. Dimensions of Isosceles Trapezoid

Type of Aerodrome	Inner Edge (Start Base) (meters)	Long Base (meters)	Distance Between Bases (meters)
Aerodromes where turbo-jet aircraft operates	300	4,800	15,000
	150	4,650	15,000
Aerodromes where no turbo-jet aircraft operates	150	2,150	10,000
	100	2,100	10,000

- ii. No new buildings/structures shall be allowed within the runway strip.
- iii. A height clearance certificate shall be first secured from the Air Transportation Office (**ATO**) before a building permit may be issued for the construction of buildings/structures located:
 - (a) Within 4.00 kilometer radius of the runway ends of an aerodrome regardless of height;
 - (b) From 4.00 kilometer to 24.00 kilometer radius of the runway ends of an aerodrome where turbo-jet aircraft operate and exceeding 45.00 meters in height above the elevation of the runway; and
 - (c) From 4.00 kilometer to 10.00 kilometer radius of the runway ends of an aerodrome where no turbo-jet aircraft operate and exceeding 45.00 meters in height above the elevation of the runway.

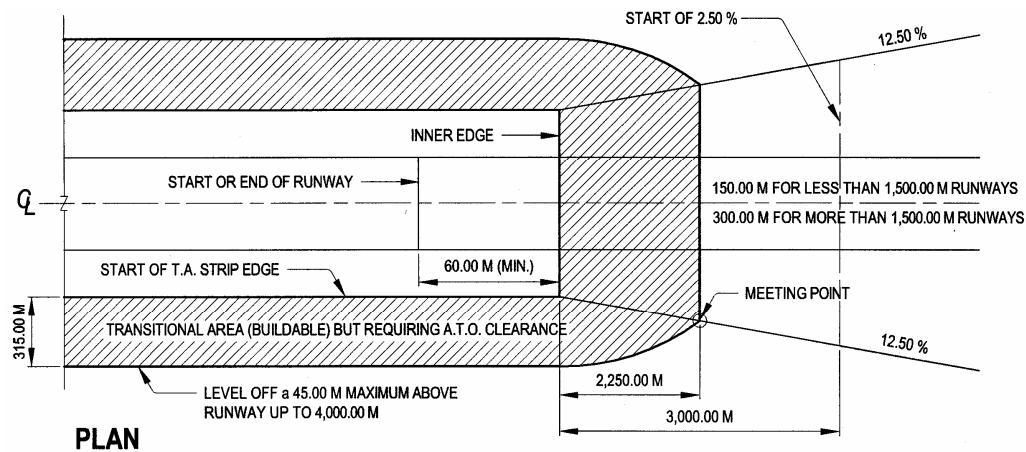


Figure VII.4.
APPROACH / DEPARTURE SURFACE

Annotation. Plan adjustments are necessary for airports with parallel runways and for runways with taxiways.

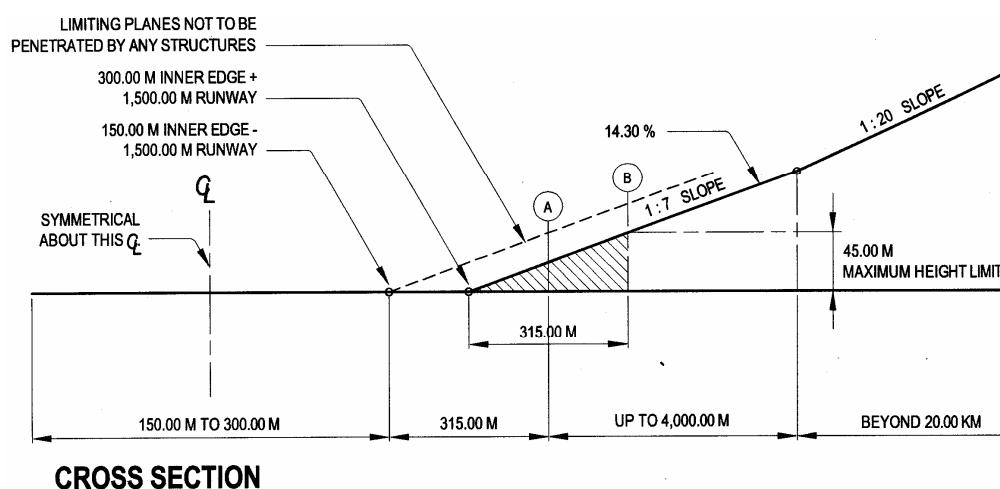


Figure VII.5.

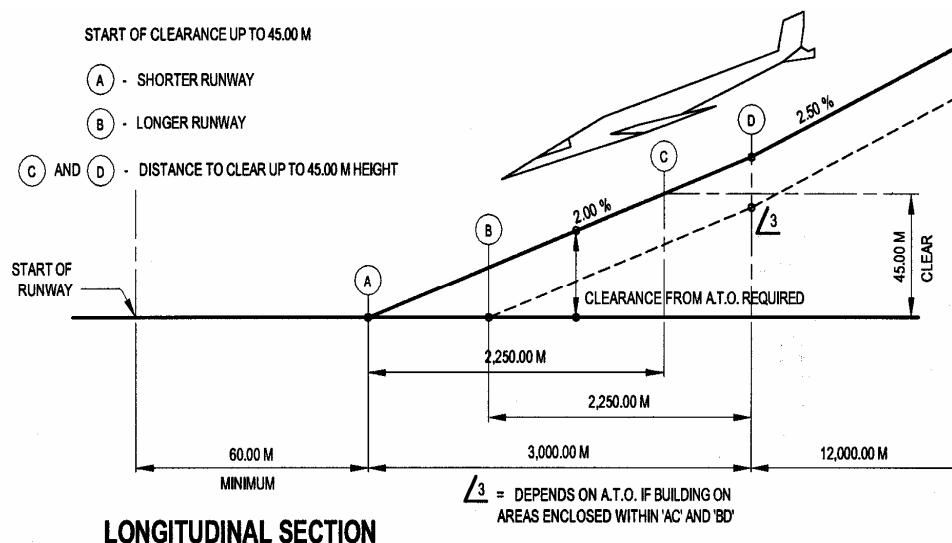
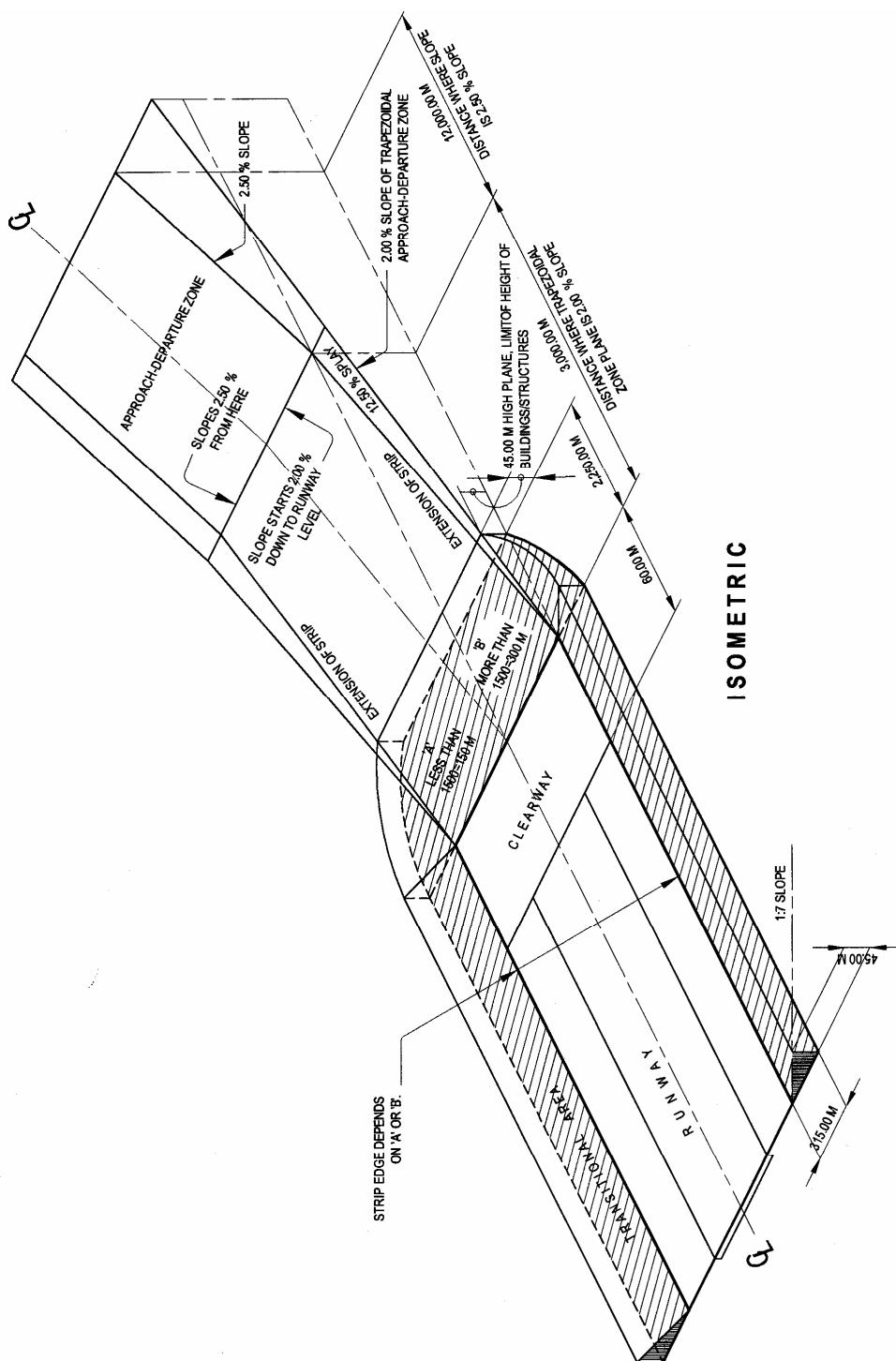


Figure VII.6.
APPROACH / DEPARTURE SURFACE

Annotation. Section adjustments may still be necessary for airports with parallel runways and for runways with taxiways.

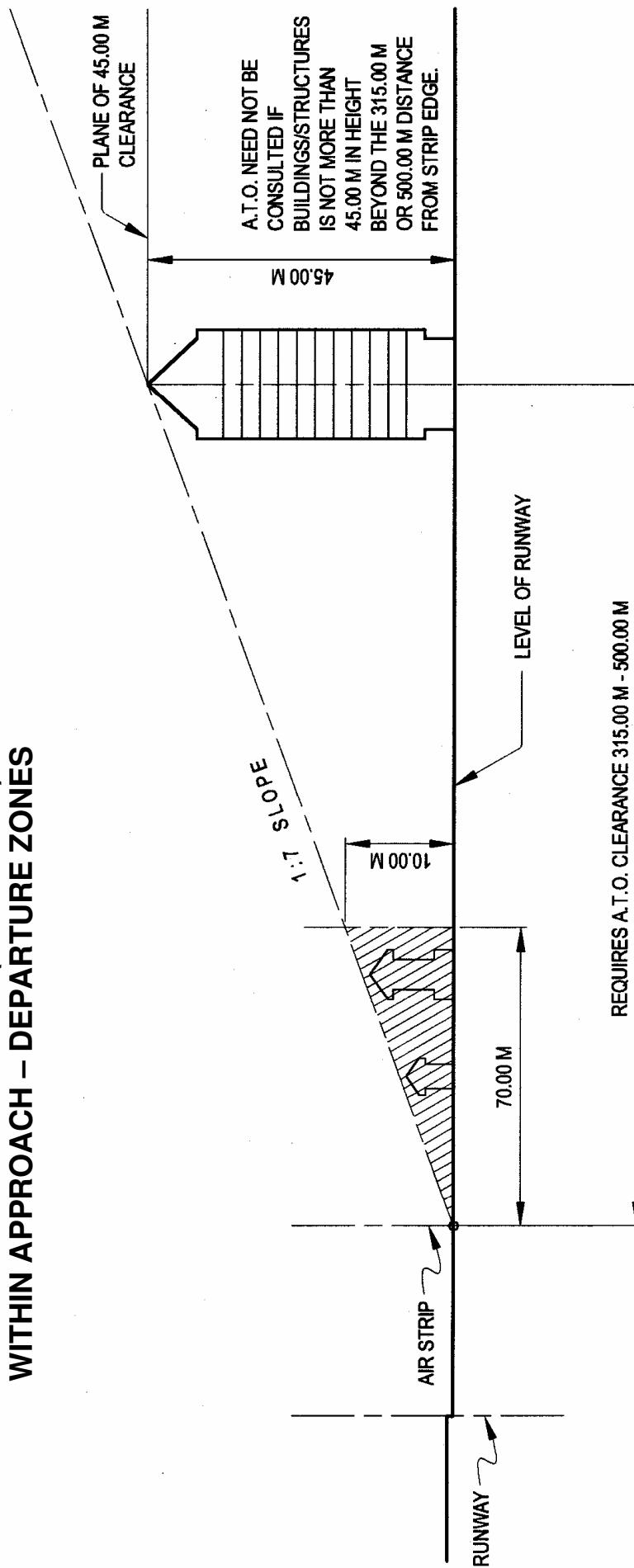
**ALLOWABLE CONDITIONS (BUILDABLE)
WITHIN APPROACH-DEPARTURE ZONES**

Figure VII.7.



Annotation. Isometric, plan and section adjustments may still be necessary for airports with parallel runways and for runways with taxiways.

**ALLOWABLE CONDITIONS (BUILDABLE)
WITHIN APPROACH – DEPARTURE ZONES**



CROSS SECTION

Figure VII.8.

Annotation. Adjustments may still be necessary for airports with parallel runways and for runways with taxiways.

4. Parking Slot, Parking Area and Loading/Unloading Space Requirements

- a. The parking slot, parking area and loading/unloading space requirements listed hereafter are generally the minimum off-street cum on-site requirements for specific uses/occupancies for buildings/structures, i.e., all to be located outside of the road right-of-way (**RROW**).
- b. The size of an **average** automobile (car) parking slot must be computed at 2.50 meters by 5.00 meters for perpendicular or diagonal parking and at 2.15 meters by 6.00 meters for parallel parking. A standard truck or bus parking/loading slot must be computed at a minimum of 3.60 meters by 12.00 meters. An articulated truck slot must be computed at a minimum of 3.60 meters by 18.00 meters which should be sufficient to accommodate a 12.00 meters container van or bulk carrier and a long/hooded prime mover. A jeepney or shuttle parking/loading/unloading slot must be computed at a minimum of 3.00 meters by 9.00 meters. The parking slots shall be drawn to scale and the total number of which shall be indicated on the plans and specified whether or not parking accommodations are attendant-managed.
- c. The parking space ratings listed below are minimum off-street/**off-RROW** cum on-site requirements for specific uses/occupancies for buildings/structures, i.e., all to be located outside of the road right-of-way (**RROW**):

Table VII.4. Minimum Required Off-Street (Off-RROW) cum On-Site Parking Slot, Parking Area and Loading/Unloading Space Requirements by Allowed Use or Occupancy

Specific Uses or of Occupancy (refer to Section 701 of this Rule)	Reference Uses or Character of Occupancies or Type of Buildings/Structures	Minimum Required Parking Slot, Parking Area and Loading Space Requirements
1. GROUP A		
1.1. Division A-1	<p>Single family and multi-family dwelling units [whether single-detached (R-1), single-attached or duplex (R-2) or rowhouse (R-3)], each privately owned or lots with dwelling units located in residential subdivisions/developments regardless of number of hectares/dwelling units</p>	<p>Units with a lot measuring 32.00 to 72.00 sq. meters and/or with a dwelling unit having a gross floor area of from 18.00 to 22.00 sq. meters - a minimum of one (1) pooled off-street cum on-site parking slot* for every six (6) lots or lots with dwelling units;</p> <p>Units with a lot measuring 50.00 to 96.00 sq. meters and/or with a dwelling unit having a gross floor area of from 30.00 to 42.00 sq. meters - a minimum of one (1) pooled off-street cum on-site parking slot* for every four (4) lots or lots with dwelling units;</p>
	<p><i>Note:</i></p> <p>* The parking slot requirements shall be an integral part of buildings/structures and any parking slot provided outside the building/structure will be quantified only as buffer parking.</p>	

Specific Uses or of Occupancy (refer to Section 701 of this Rule)	Reference Uses or Character of Occupancies or Type of Buildings/Structures	Minimum Required Parking Slot, Parking Area and Loading Space Requirements
		Unit with a lot measuring 100.00 to 120.00 sq. meters and/or with a dwelling unit having a minimum gross floor area of from 30.00 to 42.00 sq. meters - a minimum of one (1) off-street cum on-site parking slot* for each lot or lot with dwelling unit;
	Units located in townhouse (R-4) buildings/structures regardless of number of storeys	Unit with a lot measuring more than 120.00 sq. meters and/or with a dwelling unit having a minimum gross floor area of more than 42.00 sq. meters - minimum of one (1) off-street cum on site parking slot* for each lot or lot with dwelling unit;
		Units with a gross floor area of 50.00 sq. meters - provide one (1) pooled parking slot* for every two (2) units or fraction thereof, i.e., with more than two (2) but not less than four (4) units;
		Unit with a gross floor area above 50.00 up to 150.00 sq. meters - provide one (1) parking slot* for each unit;
	Indigenous family dwelling units; each privately owned	Unit with a gross floor area above 150.00 sq. meters - provide two (2) parking slots* for each unit.
	<p>Note:</p> <p>* The parking slot requirements shall be an integral part of buildings/structures and any parking slot provided outside the building/structure will be quantified only as buffer parking.</p> <p>**The following prohibitions on parking slots:</p> <ol style="list-style-type: none"> 1. Conversion/change of use/occupancy. 2. Reduction of parking spaces. 3. Encroachment on RROW. 4. Public utility and bulky vehicles. 	

Specific Uses or of Occupancy (refer to Section 701 of this Rule)	Reference Uses or Character of Occupancies or Type of Buildings/Structures	Minimum Required Parking Slot, Parking Area and Loading Space Requirements
1.2. Division A-2	Multi-family dwelling units located in residential condominium (R-5) buildings/structures regardless of number of storeys	Units with a gross floor area of from 18.00 to 22.00 sq. meters - provide one (1) pooled parking slot* for every eight (8) units or for a fraction thereof, e.g., another slot* shall be provided if there are more than eight (8) units but less than sixteen (16) units, etc.;
		Units with a gross floor area up to 50.00 sq. meters - provide one (1) pooled parking slot* for every six (6) medium cost units or for a fraction thereof, e.g., another slot* shall be provided if there are more than six (6) but less than twelve (12) medium cost units, etc., or provide one (1) parking slot* for each open market unit (as defined under the revised IRR of PD 957);
		Units with a gross floor area above 50.00 sq. meters up to 100.00 sq. meters - provide one (1) pooled parking slot* for every four (4) medium cost units, or provide one (1) parking slot* for each open market unit (as defined under the revised IRR of PD 957); and
		Units with a gross floor area of more than 100.00 sq. meters – one (1) parking slot* for each unit.
2. GROUP B		
2.1. Division B-1	Hotels	One (1) car parking slot for every three (3) rooms or a fraction thereof for highly urbanized areas and one (1) car parking slot for every seven (7) rooms or a fraction thereof for all other areas; and two (2) tourist bus parking slots for each hotel; provide at least one (1) loading slot for articulated truck or vehicle
	<p><i>Note:</i> <i>*The parking slot requirements shall be an integral part of buildings/structures and any parking slot provided outside the building/structure will be quantified only as buffer parking.</i></p>	

Specific Uses or of Occupancy (refer to Section 701 of this Rule)	Reference Uses or Character of Occupancies or Type of Buildings/Structures	Minimum Required Parking Slot, Parking Area and Loading Space Requirements
		A 12.00 meters long container van plus 4.00 meter length for the prime mover and one (1) loading slot for a standard truck for every 5,000.00 sq. meters of gross floor area (GFA); and provide truck maneuvering area outside of the RROW (within property or lot lines only)
	Residential hotels and apartels	One (1) car slot for every five (5) units or a fraction thereof; and one (1) bus parking slot for every sixty (60) rooms/units or a fraction thereof
	Motels	One (1) car slot for every unit
	Pension/boarding/lodging houses	One (1) car slot for every twenty (20) beds
3. GROUP C		
3.1. Division C-1	Bowling alleys	One (1) car slot for every four (4) alleys
3.2. Division C-2	Churches and similar places of worship	One (1) car slot and one (1) jeepney/shuttle slot for every 50.00 sq. meters of congregation area
	Public elementary, secondary, vocational and trade school (GI)	One (1) off-street cum on-site parking slot for every ten (10) classrooms; and one (1) off-RROW (or off-street) passenger loading space that can accommodate two (2) queued jeepney/shuttle slots
	Private elementary, secondary, vocational and trade school (GI)	One (1) car slot for every five (5) classrooms; one (1) off-RROW (or off-street) passenger loading space that can accommodate two (2) queued jeepney/shuttle slots; and one (1) school bus slot for every one hundred (100) students
	<p><i>Note:</i></p> <ul style="list-style-type: none"> * The parking slot requirements shall be an integral part of buildings/structures and any parking slot provided outside the building/structure will be quantified only as buffer parking. ** The following prohibitions on parking slots: <ol style="list-style-type: none"> 1. Conversion/change of use/occupancy. 2. Reduction of parking spaces. 3. Encroachment on RROW. 4. Public utility and bulky vehicles. 	

Specific Uses or of Occupancy (refer to Section 701 of this Rule)	Reference Uses or Character of Occupancies or Type of Buildings/Structures	Minimum Required Parking Slot, Parking Area and Loading Space Requirements
	Public colleges and universities (GI)	One (1) car slot for every five (5) classrooms; one (1) off-RROW (or off-street) passenger loading space that can accommodate two (2) queued jeepney/shuttle slots; and one (1) school bus slot for every two hundred (200) students
	Private colleges and universities (GI)	One (1) car slot for every three (3) classrooms; one (1) off-RROW (or off-street) passenger loading space that can accommodate two (2) queued jeepney/shuttle slots; and one (1) school bus slot for every one hundred (100) students
4. GROUP D		
4.1. Division D-1	Mental hospitals, sanitaria and mental asylums and like uses	One (1) off-street cum on-site car parking slot for every twenty five (25) beds; and one (1) off-RROW (or off-street) passenger loading space that can accommodate two (2) queued jeepney/shuttle slots
4.2. Division D-2	Public hospital	One (1) off-street cum on-site car parking slot for every twenty five (25) beds; and one (1) off-RROW (or off-street) passenger loading space that can accommodate two (2) queued jeepney/shuttle slots; provide at least one (1) loading slot for articulated truck or vehicle (a 12.00 meter long container van plus 6.00 meter length for a long/hooded prime mover) and one (1) loading slot for a standard truck for every 5,000.00 sq. meters of gross floor area (GFA); and provide truck maneuvering area outside of the RROW (within property or lot lines only)
	<p>Note:</p> <p>* The parking slot requirements shall be an integral part of buildings/structures and any parking slot provided outside the building/structure will be quantified only as buffer parking.</p> <p>**The following prohibitions on parking slots:</p> <ol style="list-style-type: none"> 1. Conversion/change of use/occupancy. 2. Reduction of parking spaces. 3. Encroachment on RROW. 4. Public utility and bulky vehicles. 	

Specific Uses or of Occupancy (refer to Section 1.3 of this Rule)	Reference Uses or Character of Occupancies or Type of Buildings/Structures	Minimum Required Parking Slot, Parking Area and Loading Space Requirements
	Private hospital	One (1) off-street cum on-site car parking slot for every twelve (12) beds; and one (1) off-RROW (or off-street) passenger loading space that can accommodate two (2) queued jeepney/shuttle slots; provide at least one (12) loading slot for articulated truck or vehicle (a 12.00 meters long container van plus 6.00 meters length for a long/hooded prime mover) and one (1) loading slot for a standard truck for every 5,000.00 sq. meters of GFA; and provide truck maneuvering area outside of the RROW (within property or lot lines only)
4.3. Division D-3	Nursing homes for ambulatory patients, school and home, for children over kindergarten age, orphanages and the like	One (1) off-street cum on-site car parking slot for every twelve (12) beds; and one (1) off-RROW (or off-street) passenger loading space that can accommodate two (2) queued jeepney/shuttle slots
5. GROUP E		
5.1. Division E-1	Terminals, Inter-modals or Multi-modals, Depots and the like (UTS)	One (1) car slot for every 500.00 sq. meters of gross floor area or for a fraction thereof; and one (1) off-RROW (or off-street) passenger loading space that can accommodate two (2) queued jeepney/shuttle slots or two (2) queued bus slots whichever is applicable; maneuvering area of buses, trucks and like vehicles shall be outside of the RROW (within property or lot lines only)
	<i>Note:</i> <i>* The parking slot requirements shall be an integral part of buildings/structures and any parking slot provided outside the building/structure will be quantified only as buffer parking.</i>	

Specific Uses or of Occupancy (refer to Section 1.3 of this Rule)	Reference Uses or Character of Occupancies or Type of Buildings/Structures	Minimum Required Parking Slot, Parking Area and Loading Space Requirements
	Transit Stations and the like (UTS)	Provide on each side of the RROW one (1) off-RROW (or off-street) passenger loading space that can accommodate four (4) queued jeepney/shuttle slots or three (3) queued bus slots whichever is applicable; in case of elevated mass transit stations, on-roadway terminals or on-RROW terminals on both sides of the RROW may be considered
		One (1) car slot for every 100.00 sq. meters of shopping floor area
5.2. Division E-2	Neighborhood shopping center/supermarket (C-1)	One (1) customer (buyer) jeepney/shuttle parking slot for every 150.00 sq. meters of wet and dry market floor area and one (1) vendor (seller) jeepney/shuttle parking slot or loading space for every 300.00 sq. meters of wet and dry market floor area; and one (1) off-RROW (off-street) terminal that can accommodate at least two (2) jeepneys and six (6) tricycles for every 1,000.00 sq. meters of wet and dry market floor area
	Public Markets (C)	One (1) car slot for every 30.00 sq. meters of customer area
	Restaurants, fast-food centers, bars and beerhouses (C)	One (1) car slot for every 20 sq. meters of customer area; and two (2) tourist parking slots for tourist bus parking slots for each theater-restaurant
	Nightclubs, super clubs and theater-restaurants (C)	One (1) car slot for every 30.00 sq. meters of customer area
	<p>Note: <i>* The parking slot requirements shall be an integral part of buildings/structures and any parking slot provided outside the building/structure will be quantified only as buffer parking.</i></p>	

Specific Uses or of Occupancy (refer to Section 1.3 of this Rule)	Reference Uses or Character of Occupancies or Type of Buildings/Structures	Minimum Required Parking Slot, Parking Area and Loading Space Requirements
	Nightclubs, super clubs and theater-restaurants (C)	Units with a gross floor area of from 18. 00 to 40. 00 sq. meters – provide one (1) pooled parking slot* for every two (2) units or for a fraction thereof.
	Units located in office, commercial or mixed-use condominium buildings/ structures regardless of number of storeys	Unit with a gross floor area of from 41. 00 to 70. 00 sq. meters –provide one (1) parking slot* for each unit; and
	Columbarium	Unit with a gross floor area of more than 70.00 sq. meters provide one (1) parking slot* for every 70.00 sq. meters and for a fraction thereof;
		One (1) car slot for every compartment niche
5.3. Division E-3	Aircraft hangars, open parking carports and garages, etc.	One (1) car slot for every 1,000.00 sq. meters of gross floor area and one (1) bus slot for every one hundred (100) workers; if number of workers exceed two hundred (200), provide one (1) off-RROW (or off-street) passenger loading space that can accommodate two (2) queued jeepney/shuttle slots
6. GROUP F		
6.1. Division F-1	Industrial buildings, mills, breweries, etc. (I)	One (1) car slot for every 1,000.00 sq. meters of gross floor area and one (1) bus slot for every one hundred (100) workers; if number of workers exceed two hundred (200), provide one (1) off-RROW (or off-street) passenger loading space that can accommodate two (2) queued jeepney/shuttle slots; provide at least one (1) loading slot for
	<i>Note:</i>	
	* The parking slot requirements shall be an integral part of buildings/structures and any parking slot provided outside the building/structure will be quantified only as buffer parking.	

Specific Uses or of Occupancy (refer to Section 1.3 of this Rule)	Reference Uses or Character of Occupancies or Type of Buildings/Structures	Minimum Required Parking Slot, Parking Area and Loading Space Requirements
		truck or vehicle (a 12.00 meter long container van plus 6.00 meters length for a long/hooded prime mover) and one (1) loading slot for a standard truck for every 5,000.00 sq. meters of GFA; and provide truck maneuvering area outside of the RROW (within property or lot lines only)
7. GROUP G		
7.1. Division G-1	Industrial buildings, factories, manufacturing establishments, mercantile buildings, warehouses, storage bins, power and water generation/distribution facilities	One (1) car slot for every 1,000.00 sq. meters of gross floor area and one (1) bus slot for every one hundred (100) workers; if number of workers exceed two hundred (200), provide one (1) off-RROW (or off-street) passenger loading space that can accommodate two (2) queued jeepney/shuttle slots; provide at least one (1) loading slot for articulated truck or vehicle (a 12.00 meter long container van plus 6.00 meters length for a long/ hooded prime mover) and one (1) loading slot for a standard truck for every 5,000.00 sq. meters of GFA; and provide truck maneuvering area outside of the RROW (within property or lot lines only)
7.2. Division G-2	-do-	-do-
7.3. Division G-3	-do-	-do-
7.4. Division G-4	-do-	-do-
7.5. Division G-5	-do-	-do-
	<p>Note:</p> <ul style="list-style-type: none"> * The parking slot requirements shall be an integral part of buildings/structures and any parking slot provided outside the building/structure will be quantified only as buffer parking. **The following prohibitions on parking slots: <ol style="list-style-type: none"> 1. Conversion/change of use/occupancy. 2. Reduction of parking spaces. 3. Encroachment on RROW. 4. Public utility and bulky vehicles. 	

Specific Uses or of Occupancy (refer to Section 1.3 of this Rule)	Reference Uses or Character of Occupancies or Type of Buildings/Structures	Minimum Required Parking Slot, Parking Area and Loading Space Requirements
8. GROUP H		
8.1. Division H-1	Public recreational assembly buildings such as theaters/cinemas, auditoria, etc.	One (1) car slot and one (1) jeepney/shuttle slot for every 50.00 sq. meters of spectator area; and one (1) bus parking slot for every two hundred (200) spectators
8.2 Division H-2	Dance halls, cabarets, ballrooms, skating rinks and cockfighting arenas, etc.	-do-
8.3 Division H-3	Dance halls, ballrooms, skating rinks, etc.	-do-
8.4 Division H-4	Covered amusement parks, amusement and entertainment complexes, etc. Clubhouses, beach houses and the like	one (1) car slot for every 50.00 sq. meters of gross floor area one (1) slot for every 100.00 sq. meters of gross floor area
9. GROUP I		
9.1. Division I-1	Recreational or similar public assembly buildings such as stadia, sports complexes, convention centers, etc.	One (1) car slot and one (1) jeepney/shuttle slot for every 50.00 sq. meters of spectator area; and one (1) bus parking slot for every two hundred (200) spectators.
10. GROUP J		
10.1. Division J-1	Agriculture-related uses or occupancies (A)	Not required if located outside urbanized area; if located within urbanized area, provide one (1) car slot for every 1,000.00 sq. meters of gross floor area and one (1) bus slot for every one hundred (100) workers; if number of workers exceed two hundred (200), provide one (1) off-RROW (or off-street) passenger loading space that can accommodate two (2) queued jeepney/shuttle slots; provide at least one (1) loading slot for articulated truck or vehicle
	<p>Note:</p> <p>* The parking slot requirements shall be an integral part of buildings/structures and any parking slot provided outside the building/structure will be quantified only as buffer parking.</p> <p>**The following prohibitions on parking slots:</p> <ol style="list-style-type: none"> 1. Conversion/change of use/occupancy. 2. Reduction of parking spaces. 3. Encroachment on RROW. 4. Public utility and bulky vehicles. 	

Specific Uses or of Occupancy (refer to Section 1.3 of this Rule)	Reference Uses or Character of Occupancies or Type of Buildings/Structures	Minimum Required Parking Slot, Parking Area and Loading Space Requirements
		(a 12.00 meter long container van plus 6.00 meters length for a long/hooded prime mover) and one (1) loading slot for a standard truck for every 5,000.00 sq. meters of GFA; and provide truck maneuvering area outside of the RROW (within property or lot lines only)
10.2. Division J-2	Other uses not classified in previous sections (PUD, etc.)	Provide parking requirements stipulated for most similar or most related uses/occupancies

Note:

* *The parking slot requirements shall be an integral part of buildings/structures and any parking slot provided outside the building/structure will be quantified only as buffer parking.*

- d. In computing for parking slots, a **fraction** of 50% and above shall be considered as one (1) car parking slot to be provided. In all cases however, a minimum of one (1) car parking slot shall be provided unless otherwise allowed under this Rule.
 - i. **Multi-floor parking garages may serve the 20% parking requirements of the building/structure within 200.00 meter radius**, provided at least 80% of the parking requirements are complied with and integrated in the building design.
 - ii. Special Provision on the Handicapped: For buildings/structures to be provided with features intended for the use or occupancy of the handicapped, the minimum provisions of *Batas Pambansa (BP) Bilang 344* and its Implementing Rules and Regulations (IRR) with respect to parking shall be strictly observed.
- e. Allowed **Off-RROW/Off-Street cum Off-Site Parking** Provision:
 - i. In addition to on-site cum **off-RROW** (off-street) parking provisions mandated under this Rule, off-site cum off-street parking facilities may be allowed and considered part of a project provided that such facilities specifically consist of reserved or leased parking slots within a **permanent parking building/structure** and not in a vacant parking lot or parking structure/space for a commercial development and provided further that such parking slots are located no more than 100.00 meters away from a residential building project or are located **no more than 200.00 meters away** from an office or commercial building project.
 - ii. Direct access of parking/loading/utility slots and terminals to the RROW shall be generally disallowed to prevent the usage of the RROW as a maneuvering area.
 - iii. **Traffic generating buildings** such as shopping malls or similar facilities that have very high volumes of pedestrian and vehicular traffic may be located at major intersections or **within 100.00 meters** of such intersections, provided that the distance between the street curb of the ingress/egress of such a commercial lot/property (nearest the

intersection) and the straight curb of the intersection shall not be less than 50.00 meters. (*Fig. VII.9.*)

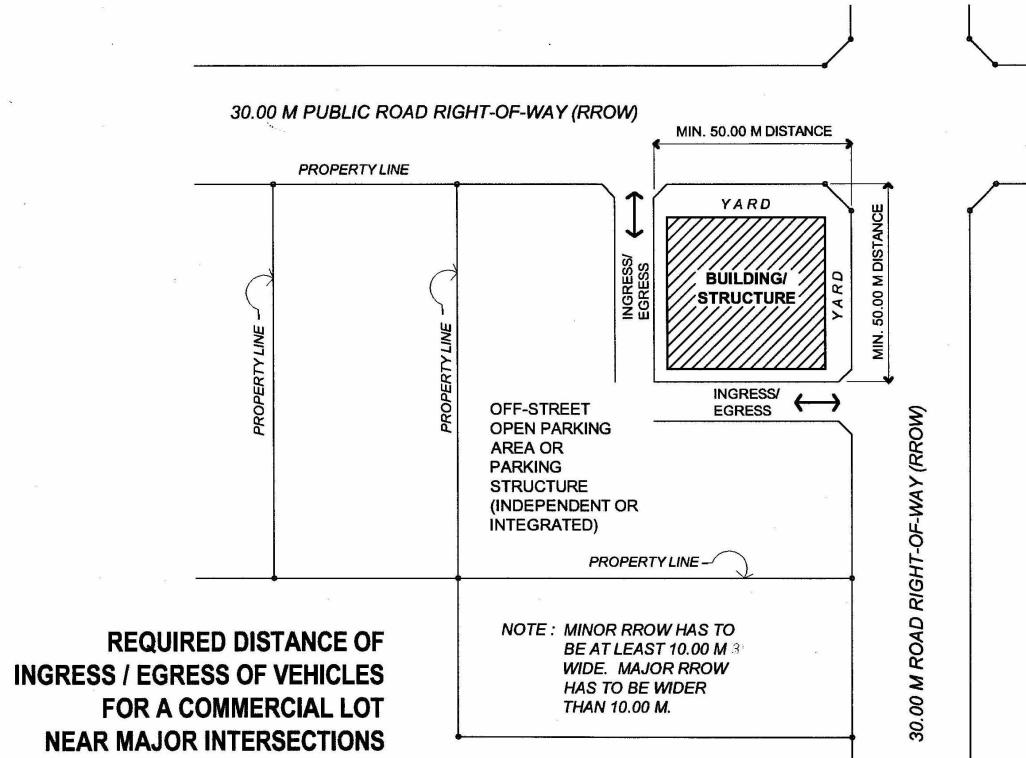


Fig.VII.9.

Annotation. For larger developments and traffic generating buildings as well as parking structures, a minimum 100.00 m distance should be the standard to be considered.

- iv. For **R-2, R-3, GI, C, C-2 and C-3** uses or occupancies, front yards abutting RROW are not to be used for long-term off-street parking. Due to the very public nature of these uses (high vehicular and pedestrian concentrations), the front yard (a transition space between the RROW and the building/structure) shall be used exclusively for driveways, off-RROW loading spaces, short-term off-RROW parking and landscaping (hardscape and softscape) treatment. Temporary or short-term off-street parking, particularly on driveways, shall preferably be only for visitors to these buildings/structures.
- v. For **Basic R-2 and Basic R-3** uses or occupancies (for single family dwelling units only), up to 50% of the front yard abutting the RROW may be paved/hardscaped, i.e., converted into a courtyard for carport use. Such use shall not be permitted in all other uses or occupancies.

SECTION 708. Minimum Requirements for Group A Dwellings

1. Dwelling Location and Lot Occupancy

The dwelling shall occupy not more than 90% of a corner lot and 80% of an inside lot, and subject to the provisions on Easements of Light and View of the **Civil Code** of Philippines, shall be **at least 2.00 meters** from the property line.

2. Light and Ventilation

Every dwelling shall be so constructed and arranged as to provide **adequate light and ventilation** as provided under **Section 805 to Section 811 of the Code**.

3. Sanitation

Every dwelling shall be provided with **at least one sanitary toilet** and adequate washing and drainage facilities.

4. Foundation

Footings shall be of sufficient size and strength to support the load of the dwelling and shall be **at least 250 millimeters thick and 600 millimeters below the surface of the ground**.

5. Post

The dimensions of wooden posts shall be those found in **Table VII.5.: Dimensions of Wooden Posts**. Each post shall be anchored to such footing by straps and bolts of adequate size.

Table VII.5.: Dimensions of Wooden Posts or *Suportales*

Type Building	Maximum Height of 1st Floor (meters)	Maximum Height Total (meters)	Maximum Spacing of Post (meters)	Required Maximum Finished Size of <i>Suportales</i> (millimeters)
1-Storey Shed	-	4.00	3.50	100 X 100
1-Storey Shed	-	3.00	4.00	100 X 100
1-Storey Shed	-	5.00	4.00	125 X 125
1-Storey House or Chalet	1.00 - 3.00	5.50	3.60	125 X 125
2-Storey House	3.00	6.00	3.00	125 X 125
2-Storey House	4.50	7.00	4.00	120 X 120
2-Storey House	5.00	8.00	4.50	175 X 175
2-Storey House	-	9.00	4.50	200 X 200

Logs or tree trunk *suportales* may be used as post in indigenous traditional type of construction, *provided that these are of such sizes and spacing as to sustain vertical loading equivalent at least to the loading capacities of the posts and spacing in this Table*.

6. Floor

The live load of the first floor shall be at least 200 kilograms per sq. meter and for the second floor, at least 150 kilograms per sq. meter.

7. Roof

The wind load for roofs shall be at least 120 kilograms per sq. meter for vertical projection.

8. Stairs

Stairs shall be at least 750 millimeters in clear width, with a rise of 200 millimeters and a minimum run of 200 millimeters.

9. Entrance and Exit

There shall be at least one entrance and another one for exit.

10. Electrical Requirements

All electrical installations shall conform to the requirements of the Philippine Electrical Code.

11. Mechanical Requirements

Mechanical systems and/or equipment installations shall be subject to the requirements of the Philippine Mechanical Engineering Code.

SECTION 709. Requirements for Other Group Occupancies

Subject to the provisions of the **Code**, the Secretary shall promulgate rules and regulations for each of the other Group Occupancies covering: allowable construction, height, and area; location on property, exit facilities, light and ventilation, sanitation; enclosures of vertical openings; fire extinguishing systems; and special hazards.

GUIDELINES ON BUILDING BULK, DEVELOPMENT CONTROLS, BUILDINGS AND OTHER ACCESSORY STRUCTURES WITHIN CEMETERIES AND MEMORIAL PARKS

A. DETERMINING BUILDING BULK

1. **General.** **Building bulk** (a volume quantity) shall be generally determined by the application of the **Floor-Lot Area Ratio (FLAR)**, vertically projecting the Allowable Maximum Building Footprint (**AMBF**), establishing the Outermost Faces of Building (**OFB**) and quantifying the Allowable Maximum Volume of Building (**AMVB**). The building bulk may be ultimately governed by the width of the RROW and other applicable provisions for light and ventilation (including incremental setbacks as a result of satisfying natural light and ventilation requirements for RROW and front yards as partly shown in **Table VII.G.1.** hereafter).
2. Application of the **FLAR**. The **FLAR** (**Table VII.G.1.**) shall be the primary or initial determinant of the building bulk.

Table VII.G.1. Reference Table of Floor to Lot Area Ratio (FLAR) Designations/Rights

Type of Use or Occupancy	Type of Building/Structure	FLAR Designation/Rights
Residential	Residential 1 (R-1)	1.50 (at a 3-storey or 10.00 m BHL)
	Residential 2 (R-2)	
	a. Basic R-2	1.30 up to 1.50 (at a 3-storey or 10.00 m BHL)
	b. Maximum R-2	2.10 up to 3.00 (at a 5-storey or 15.00 m BHL)
	Residential 3 (R-3)	
	a. Basic R-3	1.80 up to 2.10 (at a 3-storey or 10.00 m BHL)
	b. Maximum R-3	7.10 up to 8.10 (at a 12-storey or 36.00 m BHL)
	Individual Lot for Residential 4 (R-4)/Townhouses	1.60 up to 1.80 (at a 3-storey or 10.00 m BHL)
Commercial	Residential 5(R-5)/Condominiums	6.00 up to 9.00 (at an 18-storey or 54.00 m BHL)
	Commercial 1 (Com-1)	1.70 up to 3.00 (at a 5-storey or 15.00 m BHL)

	Commercial 2 (Com-2)	3.60 up to 9.00 (at a 15-storey or 45.00 m BHL)
	Commercial 3 (Com-3)	9.00 up to 34.00 (at a 60-storey or 180.00 m BHL)
Industrial	Industrial 1 (Ind-1)	1.50 up to 2.50
	Industrial 2 (Ind-2)	2.50 up to 3.00
	Industrial 3 (Ind-3)	3.00 up to 5.00
Institutional	-	2.50
Cultural	-	3.50
Utility/Transportation/Road Rights-of Way (RROW)/ Services	-	2.00 up to 3.00
Parks and Open Recreational Spaces	-	0.50 up to 1.00
Agricultural/Agro-Industrial/Tourism	-	1.80 up to 2.20
Planned Unit Development (PUD)	PUD at a reclamation area close to an operating airport	6.00
	PUD at a reclamation area	6.00 up to 12.00
	PUD at a coastal area	12.00 up to 18.00
	PUD at an inland area very close to an operating airport	6.00 up to 18.00
	PUD at an inland area	9.00 up to 34.00 (at a 60-storey or 180.00 m BHL)
Cemetery	-	0.80
Residential 1	33%	1.50
Residential 2 (Basic), Residential 3 (Basic) and Residential 4	20%	1.25
Residential 2 (Maximum), Residential 3 (Maximum) and Residential 5	16%	1.20
Commercial 1	20%	1.25
Commercial 2	25%	1.33
Commercial 3	33%	1.50
Industrial 1	25%	1.33
Industrial 2 and 3	33%	1.50
Transportation, Utility and Service Areas	33%	1.50
Agricultural and Agro-Industrial	2%-5%	1.03-1.06

3. Establishing the **OFB**. The **OFB** shall be primarily determined by the vertical projections of the outermost faces of the **AMBF** up to a height prescribed by the applicable **BHL**. **Figure VII.G.1.** shows the determination of the **angular planes** needed to establish the **outer limits for walls and projections** of the proposed building/structure facing RROW and for their corresponding roof configurations. **Table VII.G.3.** also shows the recommended angles or slopes for the angular planes originating from the centerline of the **RROW** for **R-1** and **C-3** properties only. Angles or slopes for other permitted uses/occupancies can be extrapolated from the two (2) examples. (**Figs. VIII.G.1.** and **VIII.G.2.**)

Table VII.G.3. Reference Table of Angles/Slopes* To Satisfy Natural Light and Ventilation Requirements Along RROW and Front Yards

Type of Use or Occupancy	Width of Road Right-of-Way (RROW)	Angle or Slope of Angular Plane for Buildings/Structures Without Projections**		Angle or Slope of Angular Plane for Buildings/Structures With Projections*	
		Angle from Centerline of RROW (Degrees)	Ratio (Slope)	Angle from Centerline of RROW (Degree)	Ratio (Slope)
Residential 1 (R-1)	8.00 meters	46.5	9 m:8.5m (1.06)	50.0	7.5 m:6.25m (1.20)
	10.00 meters	43.0	9 m:9.5m (0.95)	46.0	7.5 m:7.25m (1.03)
	12.00 meters	40.0	9 m:10.5m (0.86)	43.0	7.5 m:8.25m (0.91)
	14.00 meters	38.0	9 m:11.5m (0.78)	39.0	7.5 m:9.25m (0.81)
	16.00 meters	35.0	9 m:12.5m (0.72)	36.0	7.5m:10.25m (0.73)
	18.00 meters	33.5	9 m:13.5m (0.67)	33.0	7.5m:11.25m (0.67)
	20.00 meters	31.0	9 m:14.5m (0.62)	32.0	7.5m:12.25m (0.61)
Commercial 3 (C-3)	8.00 meters	71.0	48 m:16.5m	- (2.90)	-
	10.00 meters	69.5	48 m:17.5m (2.74)	-	-
Commercial 3 (C-3)	12.00 meters	68.0	48 m:18.5m (2.59)	-	-
	14.00 meters	65.5	48 m:19.5m (2.46)	-	-
	16.00 meters	63.6	48 m:20.5m (2.34)	-	-
	18.00 meters	61.7	48 m:21.5m (2.23)	-	-
	20.00 meters	60.0	48 m:22.5m (2.13)	-	-

NOTE:

- * To be used for plotting the angular plane from the grade level centerline of the RROW. The angular plane can also help determine the Allowable Maximum Volume of Building (AMVB) as well as the alternative incremental setback lines. Only the uses/occupancies with the least and heaviest developments (R-1 and C-3 respectively are shown). The angles/slopes of angular planes for all other uses/occupancies in between can be extrapolated.
- ** Considered projections from the outermost face of the building/structure are eaves, medias aguas (canopy for windows), cantilevers, heavy sign supports (only for applications permitted or consistent with the Code) and the like.

4. Quantifying the **AMVB**. The **AMVB** shall be primarily determined by the following:
 - a. Multiply the **AMBF** (in square meters) for the lot by the applicable **BHL** (in meters) for the lot to arrive at the initial **AMVB** (in cubic meters); the result of this step is the imaginary footprint prism;

- b. Superimpose the angular plane originating from the center of the RROW on the footprint prism; this shall result in the reduction of the initially computed building volume due to the application of incremental setbacks and of roof configuration dictated by the angular plane; the result of this step is the **AMVB**;
- c. To crosscheck the AMVB against the Allowable Maximum TGFA (separately determined), convert the AMVB into its approximate area equivalent (in sq. meters) by dividing it with the BHL. Before converting the AMVB to its area component, check for the effects of the incremental setbacks on the TGFA for each floor of the proposed building/structure.

B. Application of Development Controls (DC)

(To Determine the Maximum Development Potential of a Lot)

1. *Sizing the Building/Structure.* To determine the allowed/appropriate building bulk (volume), the following series of steps using the **DC** under this **Guideline** and other Rules in the **Code** shall be followed:
 - a. Refer to **Rule VIII** for prescribed setbacks, yards, courts (at grade level), etc. applicable to the lot/project site; determine the extent of firewall construction if required and/or if permitted; refer to **Rule VIII** for the Percentage of Site Occupancy (**PSO**); compute for the Allowable Maximum Building Footprint (**AMB**) under this Rule by using the formula:

$$\text{Allowable Maximum Building/ Footprint or } \mathbf{AMB} = \left[\begin{array}{l} \text{Total Lot Area (TLA)} \\ \hline \end{array} \right] - \left[\begin{array}{l} \text{Land area required for yards/ courts (prescribed under Rule VIII)} \\ \hline \end{array} \right] + \left[\begin{array}{l} \text{Additional buildable lot area due to Firewall construction (if permitted under this Rule)} \\ \hline \end{array} \right]$$

- b. Check resultant building footprint against applicable **PSO** under Reference **Table VIII.1.** of Rule VIII and consult existing/applicable and/or duly approved zoning ordinances; to check, use the formula:

$$\text{Percentage of Site Occupancy (PSO)} = \left[\begin{array}{l} \text{Allowable Maximum Building Footprint or } \mathbf{AMB} \\ \hline \text{(in square meters)} \end{array} \right] \div \left[\begin{array}{l} \text{Total Lot Area (TLA)} \\ \hline \end{array} \right]$$

- c. Compute for the resultant height of the building/structure by referring to Table VII.2. of this Rule and by using the formula:

$$\text{Resultant Height of the building/structure (in meters)} = \left[\begin{array}{l} \text{Building Height Limit or the BHL} \\ \hline \text{(as expressed in number of floors/storeys)} \end{array} \right] \times \left[\begin{array}{l} \text{Desired Floor to Floor Height (in meters)} \\ \hline \end{array} \right]$$

- d. Check the resultant height against the **BHL** (refer to **Table VII.2.** of this Rule); if a greater building/structure height is desired, consult existing zoning ordinances or other applicable laws for possible relief; if relief cannot be sought, explore sub-grade (basement level) solutions or reduce the desired floor to floor heights in case it is greater than 3.00 meters;
- e. Establish the Outermost Faces of Building (**OFB**) to help determine the Allowable Maximum Volume of Building (**AMVB**) and to satisfy natural light and ventilation requirements for RROW and front yards abutting RROW; an imaginary prism within which the proposed building/structure must fit shall result, unless specifically allowed under the **Code**; thereafter, establish the Outermost Limits of Building Projections (**OLBP**) to fully comply with other applicable light and ventilation provisions;
- f. Initially determine building bulk by computing for the maximum allowable Gross Floor Area (**GFA**) for the building/structure using the formula:

$$\text{Gross Floor Area (GFA) of the building/structure (in square meters)} = \left[\begin{array}{c} \text{Total Lot Area (TLA)} \end{array} \right] \times \left[\begin{array}{c} \text{Recommended Floor to Lot Area Ratio (FLAR)*} \end{array} \right]$$

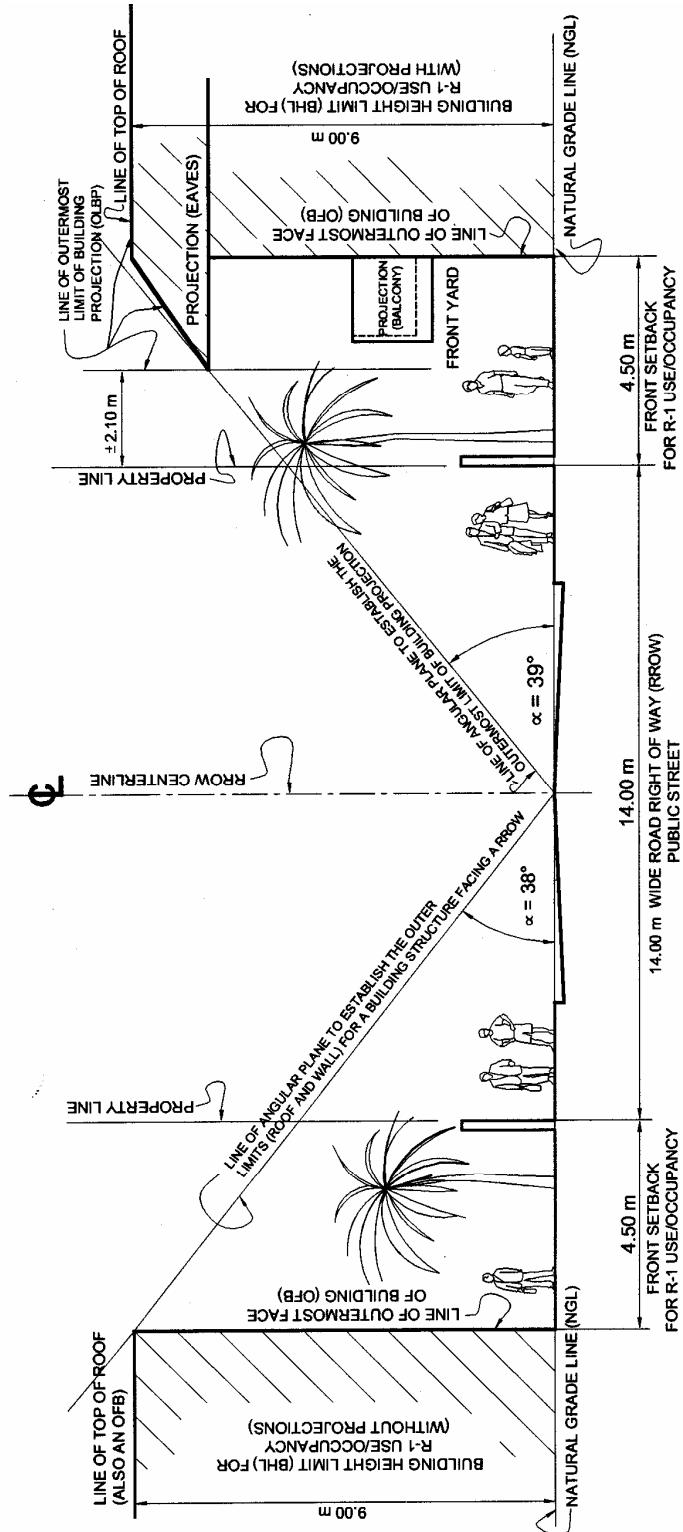
NOTE: * Refer to **Table VII.G.1.** of this **Guideline** (Recommended FLAR Designations/Rights) and/or consult existing/applicable and duly-approved zoning ordinances.

- i. GROSS FLOOR AREA (**GFA**) - the total floor space within the perimeter of the permanent external building walls (inclusive of main and auxiliary buildings) such as office areas, residential areas, corridors, lobbies and mezzanine level/s. The **GFA** shall also include building projections which may serve as floors or platforms that are directly connected to/integrated with areas within the building/structure, e.g., balconies (Refer to **Section 1004 of Rule X of this IRR**) and the **GFA** excludes the following:
 - (a) Covered areas used for parking and driveways, services and utilities;
 - (b) Vertical penetrations in parking floors where no residential or office units are present; and
 - (c) Uncovered areas for helipads, air-conditioning cooling towers or air-conditioning condensing unit (ACCU) balconies, overhead water tanks, roof decks, laundry areas and cages, wading or swimming pools, whirlpools or jacuzzis, terraces, gardens, courts or plazas, balconies exceeding 10.00 sq. meters, fire escape structures and the like.
- g. Determine the Allowable Maximum Total Gross Floor Area (**TGFA**) to approximate building volume using the formula hereafter. In particular, determine the minimum required off-street cum on-site parking provisions, driveways and related access systems, particularly for new developments and/or re-developments whereby provisions of this Guideline shall apply.

$$\text{Total Gross Floor Area (TGFA) of the building/structure (in sq. meters)} = \left[\begin{array}{c} \text{Gross Floor Area (GFA) of the building/structure (in square meters)} \\ + \\ \text{Non-GFA areas*} \end{array} \right] - \left[\begin{array}{c} \text{All requirements for courts at all floors (above grade) under Rule VIII} \\ (in square meters) \end{array} \right]$$

NOTE: * Compute for all other areas not covered by the **FLAR** or by the **GFA** using **Table VII.G.2.**

- i. TOTAL GROSS FLOOR AREA (**TGFA**) - the total floor space within the main and auxiliary buildings primarily consisting of the **GFA** and all other enclosed support areas together with all other usable horizontal areas/surfaces above and below established grade level that are all physically attached to the building/s which shall consists of the following:
 - (a) Covered areas used for parking and driveways, services and utilities. The **TGFA** specifically excludes provisions for courts above grade level;
 - (b) Vertical penetrations in parking floors where no residential or office units are present;
 - (c) Uncovered areas for helipads, air-conditioning cooling towers or ACCU balconies, overhead water tanks, roof decks, laundry areas and cages, wading or swimming pools, whirlpool or jacuzzis, terraces, gardens, courts or plazas, balconies exceeding 10.00 sq. meters, fire escape structures and the like; and
 - (d) Other building projections which may additionally function as floors or platforms if properly reinforced, e.g., the top surfaces of roof extensions/eaves, sun-breakers, large roofed or cantilevered areas such as *porte cochères*, canopies and the like.

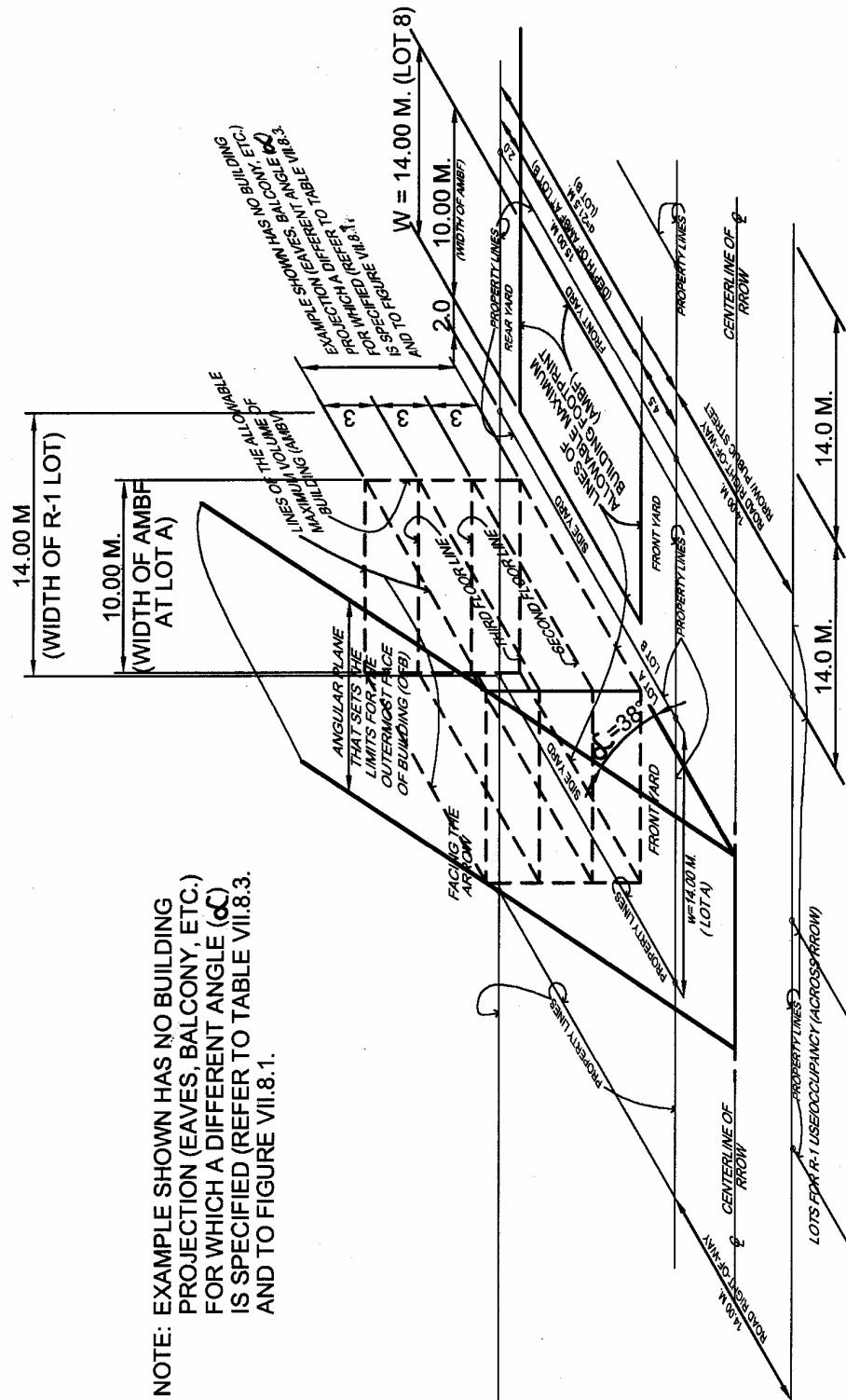


**ANGLES FROM CENTERLINE THAT DETERMINE
THE OFB AND OLBP OF R-1 BUILDINGS/STRUCTURES
(WITH AND WITHOUT PROJECTIONS)
ALONG A 14.00 M RROW**

Figure VII.G.1.

Annotation. Steeper angles shall result if the RROW is narrower, particularly for higher density and higher intensity building uses/occupancies..

Figure VII.G.2.



ESTABLISHING THE OUTMOST FACES OF BUILDING (OFB) FOR A TYPICAL R-1 USE / OCCUPANCY THROUGH THE USE OF THE AMBF, THE BHL, THE AMVB AND THE ANGULAR PLANE ALONG THE RROW (14.00 M WIDE RROW)

Annotation. Steeper angles shall result if the RROW is narrower, particularly for higher density and higher intensity building uses/occupancies..

C. BUILDINGS AND OTHER ACCESSORY STRUCTURES WITHIN CEMETERIES AND MEMORIAL PARKS

1. Location of Cemeteries/Memorial Parks

- a. Cemeteries and Memorial Parks shall be located in accordance with the approved land use plan of the city/municipality concerned. Prior clearance shall be obtained from the Department of Health, the National Water Resources Council, the Department of Environment and Natural Resources and the Housing and Land Use Regulatory Board.

2. Protective Enclosures

- a. The cemetery shall be totally enclosed by a perimeter fence/wall of strong material, and all gates shall be provided with a strong door and lock. Perimeter wall shall not exceed 3.00 meters in height.
- b. Where a cemetery is enclosed by a solid reinforced concrete wall at least 2.00 meters high, it is allowed to construct tombs, vaults, mausoleums or other types of sepulchres for the dead up to the walls. Otherwise, a clearance of 5.00 meters shall be maintained between the perimeter fence and the nearest interment plot.

3. Interments, Burials and Entombments

- a. For ground interments, there shall be a minimum depth of excavation of 1.50 meters from ground level to base of excavation. However, if concrete vaults are used, the minimum depth of excavation from base of vault to ground level shall be 1.00 meter, depending on the depth of ground water table.
- b. Ground interments shall be allowed only in designated graveyard areas of the cemetery and may be provided with suitable markers, headstones or memorials.
- c. Vaults for tombs and mausoleums for aboveground interments shall be of solid reinforced concrete. Concrete hollow blocks or any unit masonry construction of ceramics, adobe or the like shall not be allowed for the construction of above-ground vaults; tombs or mausoleums. Mausoleums may be provided with ossuaries and/or cineraria along the interior walls.
- d. Multi-level interment niches shall only be of solid reinforced concrete construction, of not less than 150 millimeters thickness in which case they may be allowed to abut walls of the cemetery, *provided*, the walls are of solid reinforced concrete construction. Concrete hollow blocks, or any unit masonry construction of ceramics, adobe or the like shall not be allowed.
- e. Before construction is started on any mausoleum, canopy over a tomb, or multi-level niches, a building permit shall be secured therefor from the **OBO**.
- f. Horizontal divisions of columbaria shall be of reinforced concrete of at least 50 millimeters thickness. Vertical divisions may be of concrete hollow blocks of at least 100 millimeters thickness, in which case, cement mortar shall be applied evenly to present a non-porous surface. Minimum dimensions of individual cinerarium shall be 300 millimeters by 300 millimeters by 460 millimeters. Cinerary remains shall be placed inside tightly sealed urns.

4. Accessory Structures

- a. A chapel with a floor area of at least 50.00 sq. meters shall be constructed at a convenient location within the cemetery where funeral ceremonies may be held, and incidentally serve as haven for funeral participants against sun and rain.
- b. Wake chaplets with a minimum area of 50.00 sq. meters for thirty (30) persons and at least 1.60 sq. meters for each additional person may be provided.
- c. Administrative Office - a 64.00 sq. meters lot shall be allocated for an administration building office for memorial parks with an area of above one (1) hectare.
- d. Electrical Power Supply - Distances of lampposts for street lighting shall be placed at a maximum of 100.00 meters or as prescribed by the power firm servicing the area. Utility poles shall be installed along sides of streets and pathways.
- e. Parking Area - Parking area equivalent to a minimum of five 5% of the gross area of memorial park/cemetery shall be provided over and above the required parking area/facility for any structures to be constructed within the premises of the memorial park/cemetery.
- f. Comfort Rooms - Adequate and clean comfort rooms with facilities for disabled persons shall be provided in properly located areas.

NOTE: Refer also to the latest applicable **HLURB Guidelines** regarding Cemeteries and Memorial Parks.

(emphases, underscoring and annotations supplied)

Rule VIII follows

RULE VIII - LIGHT AND VENTILATION

SECTION 801. General Requirements of Light and Ventilation

1. Subject to the provisions of the Civil Code of the Philippines on **Easements of Light and View**, and to the specific provisions of the Code, **every building** shall be designed, constructed, and equipped to provide adequate light and ventilation. (Refer to **Guidelines on Easements, View Corridors/Sight Lines and Basements at the end of this Rule**)
2. **All buildings** shall face a street or public alley or a private street which has been duly approved. (Refer to **Guidelines on Streets/RROW and Sidewalks at the end of this Rule**)
3. **No building** shall be altered nor arranged so as to reduce the size of any room or the relative area of windows to less than that provided for buildings under this Rule, or to create an additional room, unless such additional room conforms to the requirements of this Rule.
4. **No building** shall be enlarged so that the dimensions of the required court or yard would be less than what is prescribed for such building lot.

SECTION 802. Measurement of Site Occupancy

1. The measurement of **site occupancy** or **lot occupancy** shall be taken at the ground level and shall be **exclusive** of courts, yards, and light wells.
2. Courts, yards, and light wells shall be measured **clear of all projections** from the walls enclosing such wells or yards with the exception of roof leaders, wall copings, sills, or steel fire escapes not exceeding 1.20 meters in width.

SECTION 803. Percentage of Site Occupancy

1. The measurement of the percentage (%) of **site occupancy** (or lot occupancy) shall be taken at the ground level and shall be exclusive of courts, yards and light wells. Courts, yards, and light wells shall be measured **clear** of all projections from the walls enclosing such wells or yards with the exception of roof leaders, wall copings, sills, or steel fire escapes not exceeding 1.20 meters in width.
2. In case of proposed additional construction on a lot on which another building/structure already stands, the Percentage of Site Occupancy (**PSO**) arising out of such existing buildings/structures must be included in the computation of the **PSO** for the Total Lot Area (**TLA**). In case of discrepancy between the specified **Maximum Allowable PSO** and the other light and ventilation provisions under this Rule, the resulting **lesser building/structure footprint** or gross floor area at the ground floor (or at grade level) **must prevail**.
3. **Maximum site occupancy** shall be governed by use, type of construction, and height of the building and the use, area, nature and location of the site; and subject to the provisions of the local zoning requirements and in accordance with the following types of open spaces:
 - a. Public open spaces - streets, alleys, easements of sea/lakeshores, rivers, creeks, esteros, railroad tracks, parks/plazas, playgrounds, and the like.
 - b. Total Open Spaces within Lot (**TOSL**) - courts, yards, gardens, light wells, uncovered driveways, access roads and parking spaces consisting of two (2) types:
 - i. Paved or tiled (**hardscaped** areas); sub-classification of open space shall fall under Maximum Allowable Impervious Surface Areas (**ISA**) within the Total Lot Area (**TLA**); and

- ii. Unpaved areas within the lot that are with exposed soil and planted (**softscaped**), i.e., the Unpaved Surface Areas (**USA**); this sub-classification is the **true open space**.
4. The following Table illustrates the manner in determining the **Maximum Allowable Percentage of Site Occupancy (PSO)**, **Maximum Allowable Impervious Surface Area (ISA)**, **Maximum Allowable Construction Area (MACA)**, **Minimum Unpaved Surface Area (USA)**, and the **Total Open Space within Lot (TOSL)** with reference to Type of Land Use Zoning per Lot.

Table VIII.1. Reference Table of Maximum Allowable PSO, Maximum Allowable ISA, the MACA, the Minimum USA and the TOSL by Type of Land Use Zoning per Lot

Building/ Structure Use or Occupancy (or Land Use) ^a	Duly-Approved Zoning ^b	% of Total Lot Area (TLA)			
		Maximum Allowable PSO ^{c,d}	Maximum Allowable ISA ^c (Paved Open Spaces)	Minimum USA (Unpaved Open Spaces)	TOSL ^d (ISA + USA)
Residential	Basic Residential 2 (R-2)/ Medium Density Housing [single family dwelling unit with a Building Height Limit (BHL) of 10.00 meters]	55 ^e	30	15	45
		60 ^f	30%	10	40
	Maximum R-2 / Medium Density Housing (multiple family dwelling units within one building/ structure with a BHL of 15.00 meters)	60 ^e	30	10	40
		70 ^f	20	10	30
	Basic Residential 3 (R-3)/ High Density Housing (single family dwelling unit with a BHL of 10.00 meters)	65 ^e	20	15	35
		70 ^f	20	10	30
	Maximum R-3 / High Density Housing (multiple family dwelling units within one building/ structure with a BHL of 36.00 meters)	70 ^e	20	10	30
		80 ^f	10	10	20
	Residential 4 (R-4)/ Individual Townhouse Units	70 ^e	20	10	30
		80 ^f	10	10	20
	Residential 5 (R-5)/ Condominiums	70 ^e	20	10	30
		80 ^f	10	10	20
Commercial	Commercial 1 (Com-1)	70 ^e	20	10	30
		80 ^f	10	10	20

Building/ Structure Use or Occupancy (or Land Use) ^a	% of Total Lot Area (TLA)				
	Duly-Approved Zoning ^b	Maximum Allowable PSO ^{c,d}	Maximum Allowable ISA ^c (Paved Open Spaces)	Minimum USA (Unpaved Open Spaces)	TOSL ^d (ISA + USA)
	Commercial 2 (Com-2)	75 ^e	20	5	25
		85 ^f	10	5	15
	Commercial 3 (Com-3)	80 ^e	15	5	20
		90 ^f	5	5	10
Industrial	Industrial 1 (Ind-1)	70 ^e	20	10	30
		80 ^f	10	10	20
	Industrial 2 (Ind-2)	70 ^e	15	15	30
		80 ^f	5	15	20
	Industrial 3 (Ind-3)	70 ^e	15	15	30
		80 ^f	5	15	20
Institutional	-	50 ^e	20	30	50
		60 ^f	20	20	40
Cultural	-	60 ^e	20	20	40
		70 ^f	20	10	30
Utility/Trans- portation/ Services	-	50 ^e	40	10	50
		60 ^f	30	10	40
Sidewalks/ Arcades at RROW	-	-	22.22 (of total width of RROW as Paved portion of sidewalk)	11.11 (of total width of RROW as Unpaved portion of sidewalk)	33.33 (of total width of RROW)
Parks and Open Recreational Spaces	-	20	30	50	80
Planned Unit Development (PUD)	PUD at a reclamation area close to an operating airport	70	15	15	30
	PUD at a reclamation area	70	15	15	30
	PUD at a coastal area	70	15	15	30
	PUD at an inland area close to an operating airport	70	10	20	30
	PUD at an inland area	70	10	20	30
Cemetery	-	85	10	5	15

Notes:

- a) per duly-approved City/ Municipal Comprehensive Land Use Plan (CLUP)
- b) per duly-approved City/Municipal Zoning Ordinance (ZO) and its IRR
- c) PSO + ISA = MACA (Maximum Allowable Construction Area)
- d) PSO + TOSL = TLA (Total Lot Area).
- e) without firewall
- f) with firewall

4. Minimum Requirements for Total Open Spaces within Lot (TOSL)

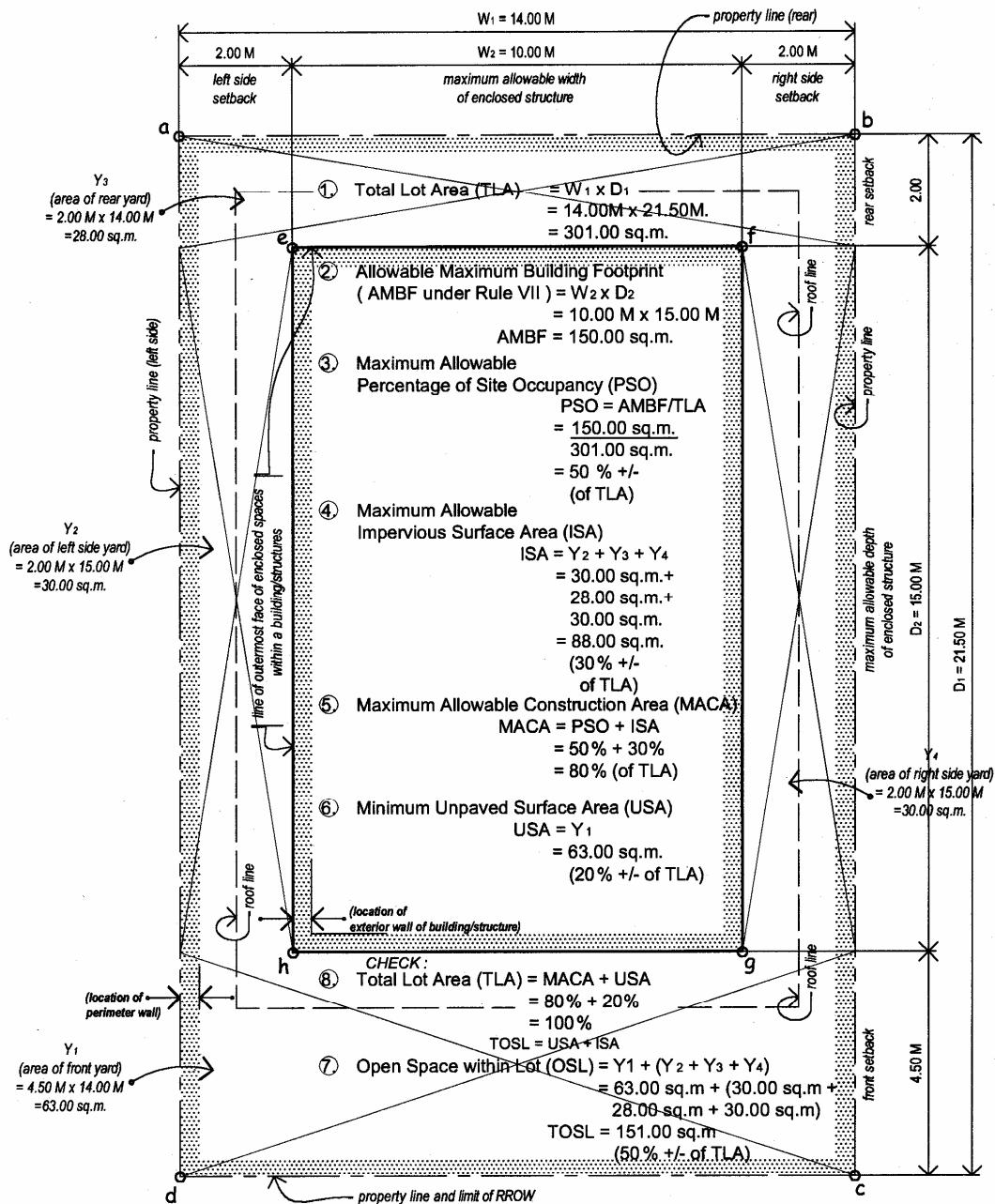
- a. Total Open Spaces within Lot (**TOSL**) are portions of the Total Lot Area (**TLA**) not occupied by the **Maximum Allowable PSO**. The **TOSL** may consist of either the **Maximum Allowable ISA (hardscaped areas)** or the **USA (exposed and planted/softscaped soil)** or may also be the combination of both types of open spaces. (*Figure VIII.1.*)
- b. Group A buildings or Residential 1 (**R-1**) uses/occupancies shall follow the minimum yard standards in **Table VIII.2.** to comply with the **TOSL** requirement.
- c. Abutments for Basic Uses/Occupancies forming part of new developments shall be basically similar to the restrictions prescribed for firewalls under **Rule VII**, to wit:
 - i. Absolutely no abutments are allowed at any property line for any **R-1** lot type/location.
 - ii. Abutments shall be allowed on only one (1) side for any **R-2** lot type/location. There shall be no firewalls/abutments on the front and rear property lines for any **R-2** lot type/location.
 - iii. Abutments shall be allowed on two (2) sides only or on one (1) side and the rear property line/ boundary for any **R-3** lot type/location. There shall be no abutments on the front property line for any **R-3** lot type/location.
 - iv. Abutments shall be allowed on two (2) sides only for any **R-4** lot type/location. There shall be no firewalls/abutments on the front and rear property line for any **R-4** lot type/location.
 - v. Abutments shall be allowed on two (2) sides only or on one (1) side and the rear property line/boundary for any **R-5** lot type/location. There shall be no abutments on the front property line for any **R-5** lot type/location.
 - vi. Abutments shall be allowed on two (2) sides only or on one (1) side and the rear property line/boundary for any **C-3** lot type/location. There shall be no abutments on the front property line for any **C-3** lot type/location.

d. Lot Type/Location

Only seven (7) types of lots and their respective locations are described under this Rule. (*Figures VIII.2.* through *VIII.8.*)

e. Variance

When the lots as described in *Figures VIII.2.* through *VIII.8.* are too narrow or too shallow such that the public open space, e.g., RROW, alley or the like on which they abut can adequately supply light and ventilation to every room therein subject to the requirements on window opening, the requirements on the minimum Total Open Space within Lot (**TOSL**) above may be waived (*Figures VIII.9.* through *VIII.11.*), provided however, that for lots abutting on only one (1) public open space, the depth of the open space to be provided shall not be more than 8.00 meters; and for those lots abutting two (2) or more public open spaces, the depth of the open space to be provided shall not be more than 12.00 meters.



PUBLIC ROW OR ACCESS STREET (ROAD RIGHT - OF - WAY)

Maximum Allowable PSO/ISA, MACA, Minimum USA, OSL and AMBF for a Residential 1 (R-1) Lot (Single-Detached Dwelling Unit)

Figure VIII.1.

Annotation. Spaces for carports have to be introduced **within** the building footprint. If no roof is introduced over the proposed carport (that may be partly situated at the front yard or any of the 2 side yards), the space may then serve as open car parking. To maintain the **single-detached** quality of the building, only a low fence or low wall (**not a all wall or a firewall**) should be allowed along the entire property perimeter. **Firewalls are absolutely prohibited for R-1 lots.**

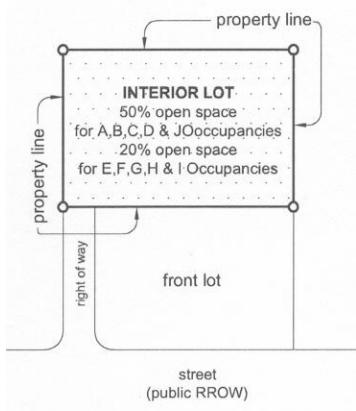


Figure VIII.2.

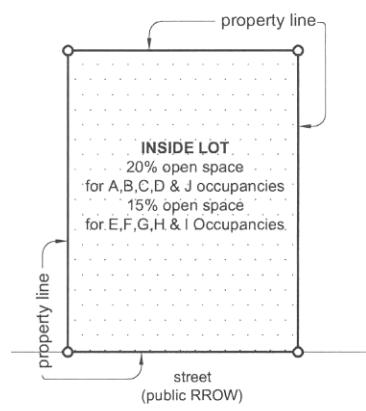


Figure VIII.3.

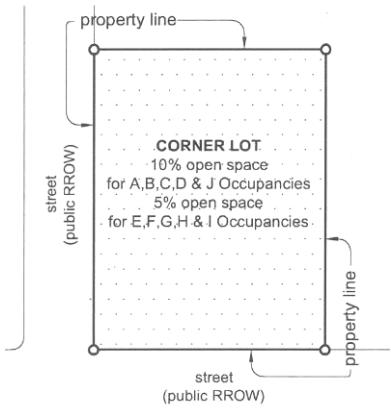


Figure VIII.4.

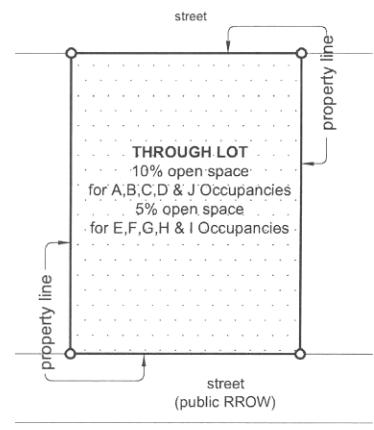


Figure VIII.5.

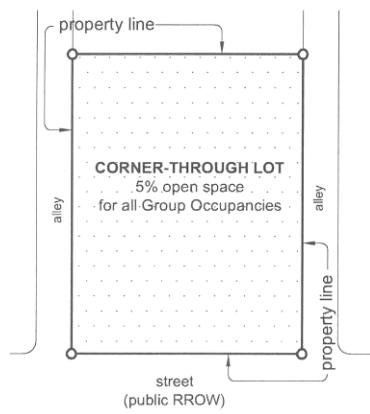


Figure VIII.6.

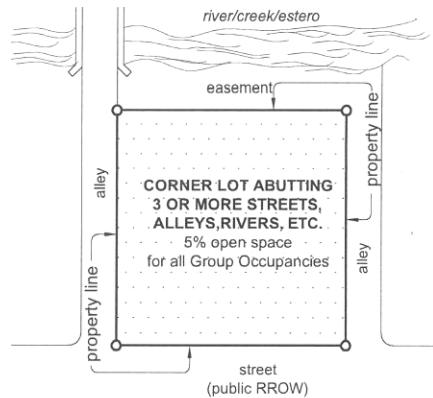
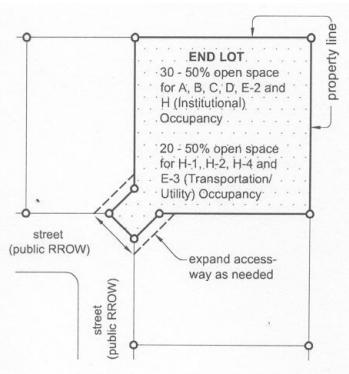
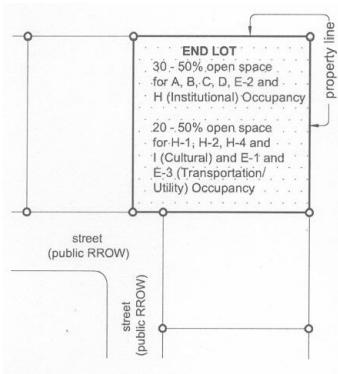


Figure VIII.7.



**Figure VIII.8.
LOT TYPES**

Annotation: The last 2 lot types are recommended for low density residential (R-1) developments.

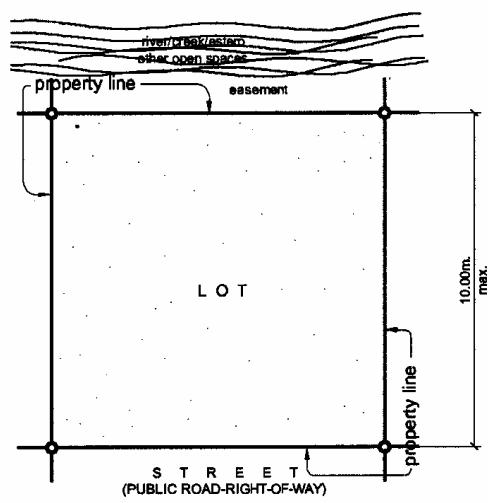


Figure VIII.9.

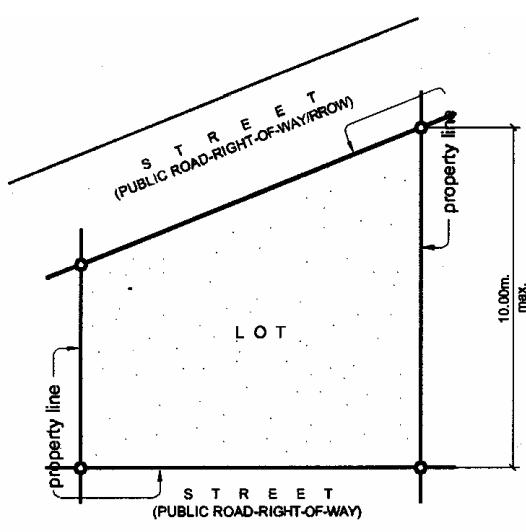


Figure VIII.10.

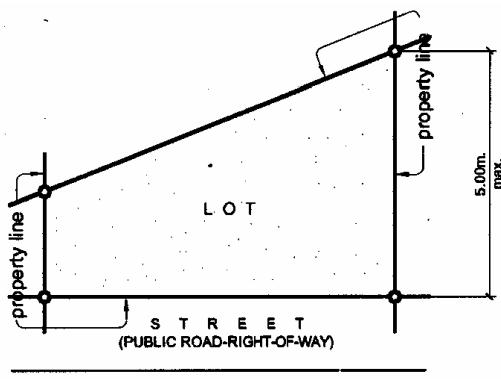


Figure VIII.11.

LOT TYPES

Annotation: The last 2 lot configurations may be better suited for non-residential developments.

SECTION 804. Sizes and Dimensions of Courts

1. **Minimum** sizes of courts and yards and their least dimensions shall be governed by the use, type of construction, and height of the building as provided hereunder, provided that the minimum horizontal dimension of said courts and yards shall be not less than 2.00 meters. All inner courts shall be connected to a street or yard, either by a passageway with a minimum width of 1.20 meters or by a door through a room or rooms.
2. The required open space shall be located totally or distributed anywhere within the lot in such a manner as to provide maximum light and ventilation into the building. (**Figures VIII.12.** through **VIII.15.**)
3. **YARD** - the required open space left between the **outermost face of the building/structure** and the property lines, e.g., front, rear, right and left side yards. **The width of the yard is the setback.** Yards prescribed for Commercial, Industrial, Institutional and Recreational Buildings are shown in **Table VIII.3.** hereafter.

Table VIII.2. Minimum Setbacks for Residential Buildings/Structures

YARD	Type of Residential Use/ Occupancy						
	R – 1 (meters)	R - 2		R-3		R - 4 (individual lot/unit) (meters)	R - 5**** (meters)
		Basic (meters)	Maximum (meters)	Basic (meters)	Maximum (meters)		
Front	4.50	3.00	8.00 *	3.00	8.00 *	4.50	6.00
Side	2.00	2.00 **	2.00 **	***	2.00 (optional)	2.00 (optional)	3.00
Rear	2.00	2.00	2.00	***	2.00	2.00	3.00

Notes:

- a) The setback requirements in **Table VIII.2.** above are for newly-developed subdivisions.
- b) * Total setback only at grade (or natural ground) level, i.e., 3.00 meters + 5.00 meters = 8.00 meters (to accommodate part of the minimum parking requirement outside the designated area for the front yard). The second and upper floors and mezzanine level shall thereafter comply with the minimum 3.00 meters setback unless otherwise provided under the Code.
- c) ** Setback required for only one (1) side. Setbacks on two sides shall be optional.
- d) *** Abutments on two sides and rear property lines may be allowed with conditions as enumerated under Section 804, Subsection 10 of this Rule.
- e) **** Mixed-Use Buildings/Structures in R-5 lots shall be considered a commercial use or occupancy if a substantial percentage, i.e., 55% of the Gross Floor Area (GFA) is commercial.
- f) In cases where yards/setbacks are impossible to attain or where frontage and depth of lots are similar to that of Open Market or Medium Cost Housing Projects, abutments on the sides and rear property lines may be allowed and 1.50 meters front yard is left open as transition area.

Table VIII.3. Setbacks for Commercial*, Industrial, Institutional and Recreational Buildings

Road Right-of-Way (RROW) Width (meters)	Front (meters)	Side (meters)	Rear (meters)
30.00 & above	8.00	5.00	5.00
25.00 to 29.00	6.00	3.00	3.00
20.00 to 24.00	5.00	3.00	3.00
10.00 to 19.00	5.00	2.00	2.00
Below 10.00	5.00	2.00	2.00

Note:

- * Mixed-Use Buildings/Structures in R-5 lots may be considered a commercial development if a substantial percentage of the GFA is commercial.

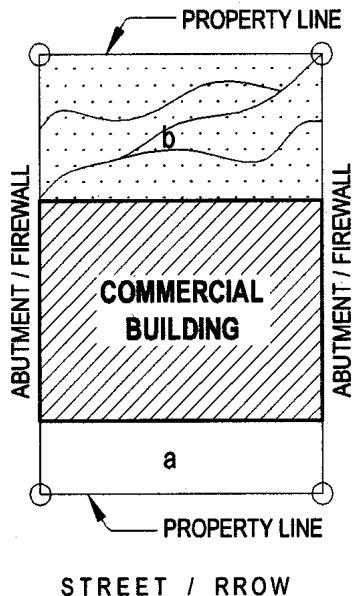


Figure VIII.12.

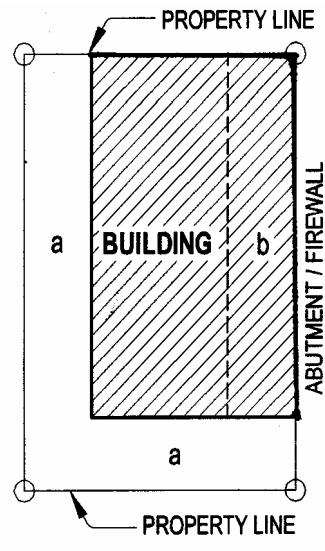


Figure VIII.13.

- a - OPEN SPACE
- b - ALTERNATE LOCATIONS

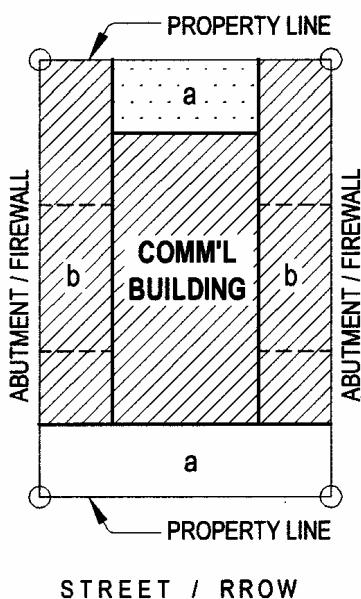


Figure VIII.14.

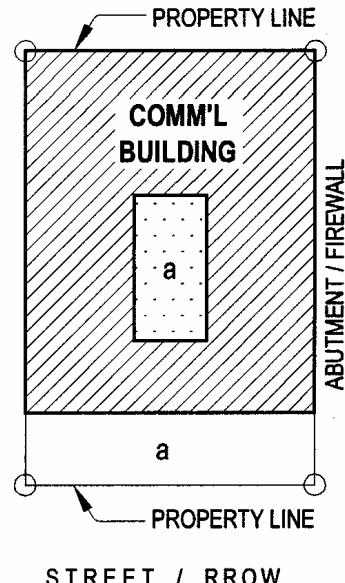


Figure VIII.15.

REQUIRED OPEN SPACE LOCATIONS

Annotation: For all firewalls (particularly those above 3.0 m in height), great care should be taken **when** such firewalls face the south or southwest i.e. facing the southwest monsoon ("habagat") winds which are wet and destructive i.e. the firewalls may also be generally subjected to rain for up to six to eight (6-8) months annually. In such a situation, **firewall gutters** are strongly suggested to prevent the firewall water from flooding the adjoining properties. A better option is to set back the firewall by up to 0.60 m to create a drainage channel as well as a firewall maintenance space i.e. for painting and general repair work. When the latter solution is adopted, an **endwall** is created instead.

4. The **setback** requirements in **Table VIII.3.** above are for newly-developed thoroughfares. For highly built-up urban areas with duly established lines and grades reflecting therein proposed road widening and elevation, the requirements in **Table VIII.3.** above may **not** be imposed and the face of the building may abut on the side and/or rear property lines provided that all the requirements on open space, window opening, artificial ventilation, if any, and firewalls (**Rule VII**) are first fully complied with.
5. Every court shall have a width of not less than 2.00 meters for one (1) or two (2) storey buildings. However, if the court is treated as a yard or vice versa, this may be reduced to not less than 1.50 meters in cluster living units such as quadruplexes, rowhouses and the like, with adjacent courts with an area of not less than 3.00 sq. meters. Provided further, that the separation walls or fences, if any, shall not be higher than 2.00 meters. Irregularly-shaped lots such as triangular lots and the like, whose courts may be also triangular in shape may be exempted from having a minimum width of not less than what is required in **Table VIII.3.** and as shown in **Figures VIII.16., VIII.17., VIII.18. and VIII.19.**
6. For buildings of more than two (2) storeys in height, the minimum width of the rear or side court shall be increased at the rate of 300 millimeters for each additional storey up to the fourteenth (14th) storey (**Figure VIII.20.** showing incremental setbacks). For buildings exceeding fourteen (14) storeys in height, the required width of the court shall be computed on the basis of fourteen (14) storeys.
7. Uncovered Driveways, Access Roads and Parking Spaces may be considered part of the open space provided that they are open and unobstructed from the ground upward as in courts and yards.
8. A carport shall not be considered part of the Total Open Space within Lot (**TOSL**) particularly if it is entirely roofed or roofed with overhangs. In such a case, it must be counted as an integral component of the Allowable Maximum Building Footprint (**AMBF**).
9. A front yard may be partly paved/hardscaped (converted into a courtyard) to serve as a carport but only for a basic **R-2 or basic R-3 or R-4** (individual lot) use or occupancy, i.e., all for single-family dwelling units only. All other uses/occupancies shall not be allowed to use the front yard for a carport nor for parking.
10. For **Basic R-3**, abutments on two sides and rear property lines may be allowed provided the following requirements are first complied with:
 - a. Open space as prescribed in Reference Table for **Maximum PSO, TOSL**, and **Table VIII.2.** of this Rule are satisfied.
 - b. Window opening as prescribed in **Section 808 of this Rule** are satisfied.
 - c. Firewall with a minimum of two-hour fire-resistive rating constructed with a minimum height clearance of 400 millimeters above the roof. (**Figure VIII.21**)
11. In case of conflict in the provisions on lighting and ventilation under this Rule or under the **Code, the more stringent restrictions must prevail.**

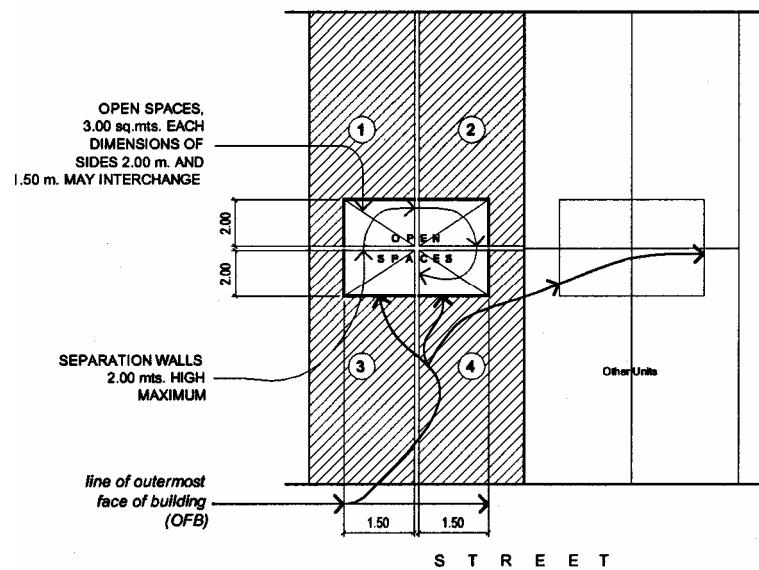


Figure VIII.16.

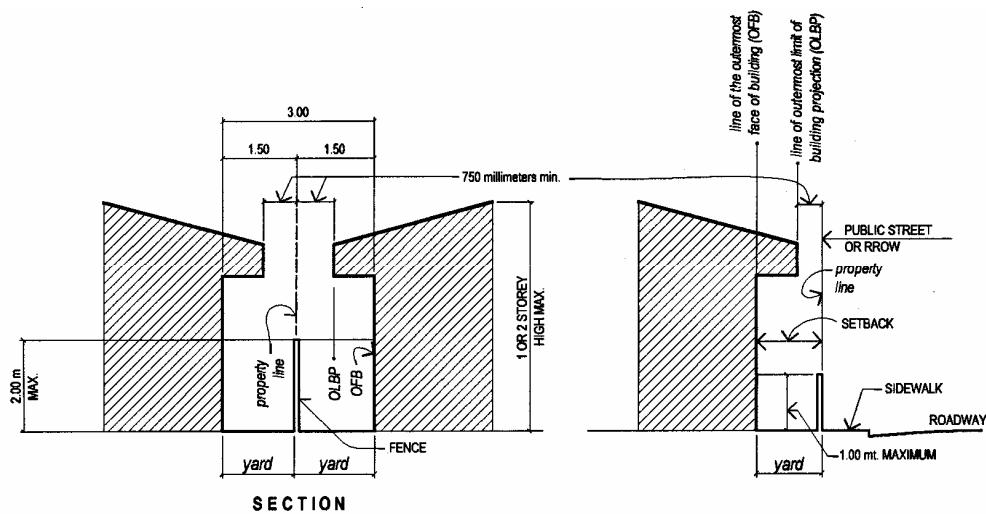
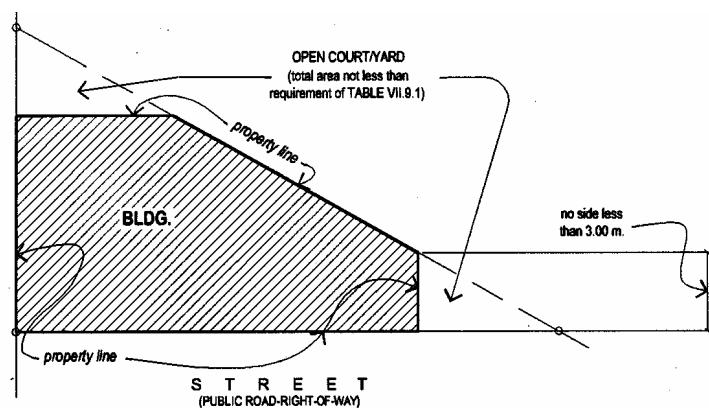


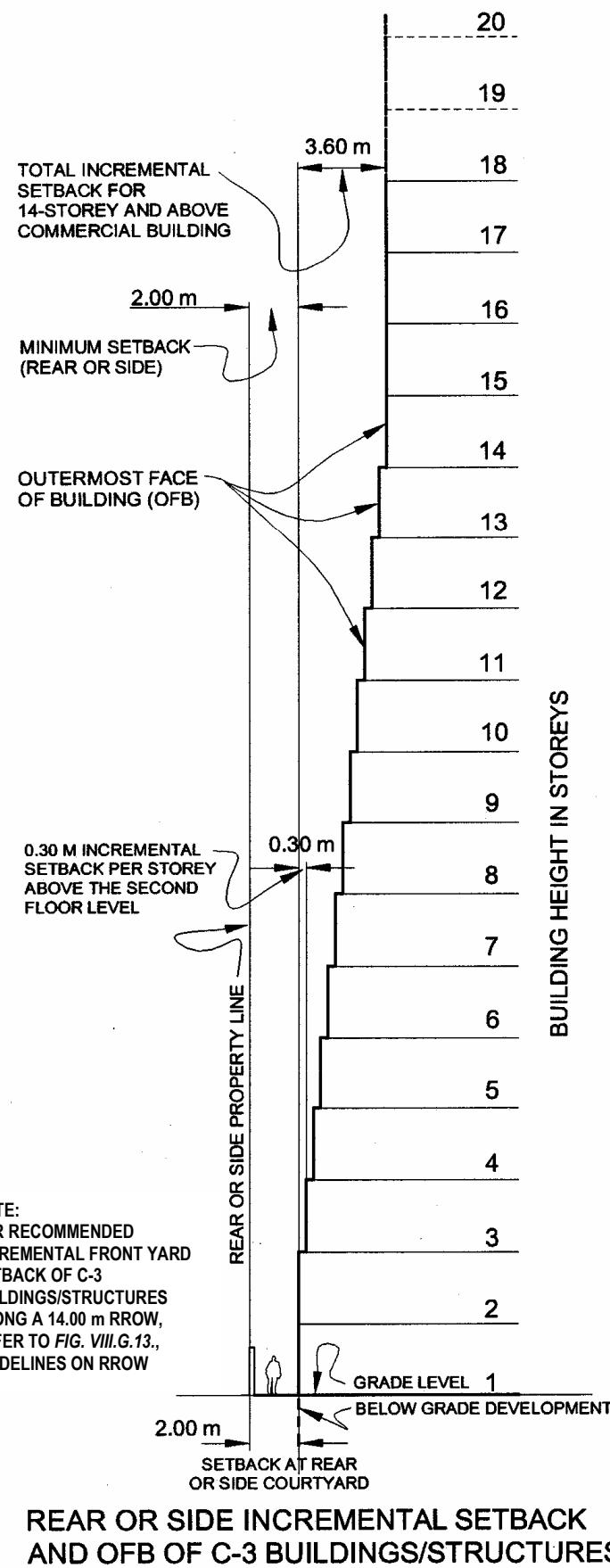
Figure VIII.17.

Figure VIII.18.



**Figure VIII.19.
OPEN COURT / YARD**

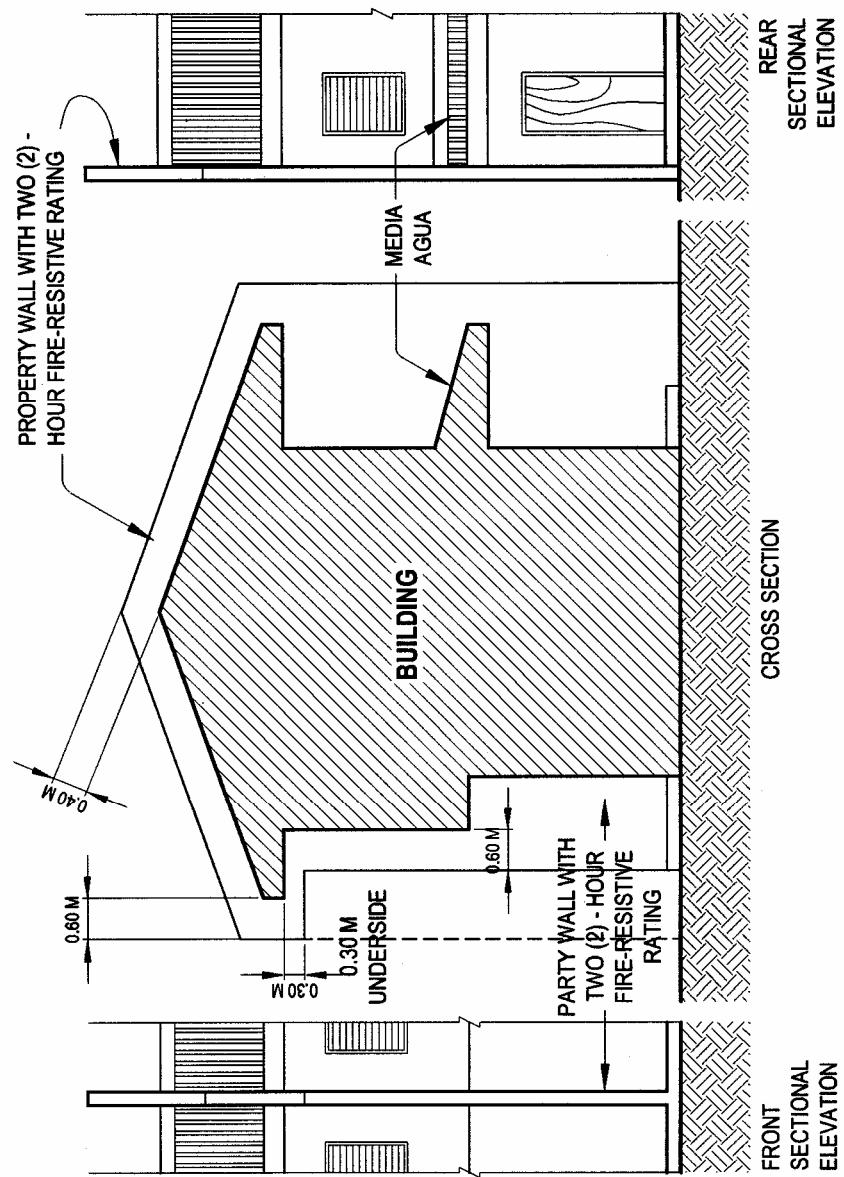
Annotation: The separation walls are actually **firewalls** (particularly if these are above 3.0 m in height or above the roof lines of the buildings). A better option is to set back the firewall by up to 0.60 m to create a drainage channel as well as a firewall maintenance space i.e. for painting and general repair work. When the said solution is adopted, **endwalls** are created instead.



REAR OR SIDE INCREMENTAL SETBACK AND OFB OF C-3 BUILDINGS/STRUCTURES

Figure VIII.20.

Annotation: The **incremental setbacks** are not intended for adoption as architectural design standards. These are only tools to **limit** floor area generation using climatic conditions as bases. The actual design solution may actually have a different configuration that must however match the **limit** prescribed by the **incremental setbacks**.



ABUTMENTS (FIREWALLS) ON THE SIDE & REAR PROPERTY LINES
Figure VIII.21.

*Annotation: The 0.40 m height of the **firewall** above the roof lines of the buildings is an absolute minimum. Only the flashing may be allowed to cross over to the other side of the **firewall** for anchorage purposes.*

SECTION 805. Ceiling Heights

1. **Habitable rooms provided with artificial ventilation shall have ceiling heights not less than 2.40 meters measured from the floor to the ceiling; provided that for buildings of more than one (1) storey, the minimum ceiling height of the first storey shall be 2.70 meters and that for the second story 2.40 meters and the succeeding stories shall have an unobstructed typical head-room clearance of not less than 2.10 meters above the finished floor. Above-stated rooms with natural ventilation shall have ceiling heights of not less than 2.70 meters.**
2. **Mezzanine floors shall have a clear ceiling height not less than 1.80 meters above and below it.**

SECTION 806. Sizes and Dimensions of Rooms

1. Minimum sizes of rooms and their least horizontal dimensions shall be as follows:
 - a. Rooms for Human Habitations - 6.00 sq. meters with a least dimension of 2.00 meters;
 - b. Kitchen - 3.00 sq. meters with a least dimension of 1.50 meters; and
 - c. Bath and toilet - 1.20 sq. meters with a least dimension of 900 millimeters.

SECTION 807. Air Space Requirements in Determining the Size of Rooms

1. Minimum air space shall be provided as follows:
 - a. School Rooms - 3.00 cu. meters with 1.00 sq. meter of floor area per person;
 - b. Workshop, Factories, and Offices - 12.00 cu. meters of air space per person; and
 - c. Habitable Rooms - 14.00 cu. meters of air space per person.

SECTION 808. Window Openings

1. **Rooms intended for any use, not provided with artificial ventilation system, shall be provided with a window or windows with a total free area of openings equal to at least 10% of the floor area of the room, provided that such opening shall be not less than 1.00 sq. meter. However, toilet and bath rooms, laundry rooms and similar rooms shall be provided with window or windows with an area not less than 1/20 of the floor area of such rooms, provided that such opening shall not be less than 240 sq. millimeters.** Such window or windows shall open directly to a court, yard, public street or alley, or open watercourse.
2. Required windows may open into a roofed porch where the porch:
 - a. Abuts a court, yard, public street or alley, or open watercourse and other public open spaces;
 - b. Has a ceiling height of not less than 2.70 meters;
 - c. Has one of the longer sides at least 65% open and unobstructed.
3. Eaves, canopies, awnings (or *media agua*) over required windows shall not be less than 750 millimeters from the side and rear property lines.

4. **There shall absolutely be no openings on/at/within/through all types of abutments (such as firewalls) erected along property lines except for permitted vent wells. This Rule strictly applies to all new and existing developments.**
5. In locating window openings it should be borne in mind that in cases of extreme emergencies windows must serve as emergency egress to vacate the premises or access for rescue operations. Such windows shall meet the following requirements:
 - a. They can be opened from the inside without the use of any tools;
 - b. The minimum clear opening shall have a width not less than 820 millimeters and a height of 1 meter;
 - c. The bottom of the opening should not be more than 820 millimeters from the floor;
 - d. Where storm shutters, screens or iron grilles are used, these shall be provided with quick opening mechanism so that they can be readily opened from the inside for emergency egress and shall be so designed that when opened they will not drop to the ground;
 - e. All areas immediately outside a fire exit window/grille must be free of obstacles and must lead to a direct access down into the ground or street level.

SECTION 809. Vent Shafts

1. Ventilation or vent shafts shall have a horizontal cross-sectional area of not less than 1.00 sq. meter for every meter of height of shaft but in no case shall the area be less than 1.00 sq. meter. No vent shaft shall have its least dimension less than 600 millimeters.
2. Unless open to the outer air at the top for its full area, vent shafts shall be covered by a skylight having a net free area or fixed louver openings equal to the maximum required shaft area.
3. Air ducts shall open to a street or court by a horizontal duct or intake. Such duct or intake shall have a minimum unobstructed cross-sectional area of not less than 0.30 sq. meter with a minimum dimension of 300 millimeters. The openings to the duct or intake shall be not less than 300 millimeters above the street surface or level of court.

SECTION 810. Ventilation Skylights

1. Ventilation skylights shall have a glass area not less than that required for the windows that are replaced. They shall be equipped with movable sashes or louvers with an aggregate net free area not less than the parts in the replaced window that can be opened, or else provide artificial ventilation of equivalent effectiveness.

SECTION 811. Artificial Ventilation

1. Rooms or spaces housing industrial or heating equipment shall be provided with artificial means of ventilation to prevent excessive accumulation of hot and/or polluted air.
2. Whenever artificial ventilation is required, the equipment shall be designed to meet the following minimum requirements in air changes as shown in **Table VIII.4.** hereafter.

Table VIII.4. Minimum Requirements for Air Changes

	Cubic Meter Per Minute Per Person		Air Changes Per Hour				
			Ceiling Height (meters)				
	Min.	Max.	2.40	3.00	3.70	4.90	6.10
Apartment	0.29	0.43	3	2	1-½	1	¾
Banking Space	0.22	0.29	3	2	1-½	1	¾
Barber Shop	0.22	0.29	3	2	1-½	1	¾
Beauty Parlor	0.22	0.29	3	2	1-½	1	¾
Broker's Board Room	0.57	0.85	8	6	4-½	3	2-½
Cafeteria	0.43	0.57	6	4-½	3-½	2-½	1-¾
Cocktail Bar	0.57	0.85	8	6	4-½	3	2-¼
Churches	0.14	0.22	3	2	1-½	1	¾
Department Stores	0.22	0.43	3	2	1-½	1	¾
Director's Room	0.85	0.14	8	6	4-½	3	2-¼
Drugstore (no counter)	0.22	0.29	3	2	1-½	1	¾
Drugstore (w/counter)	0.29	0.43	5	3-¾	3	2	1-½
Funeral Parlor	0.14	0.22	3	2	1-½	1	¾
Gambling Rooms	0.57	0.85	6	6	4-½	3	2-¼
Hospital Room	0.29	0.43	3	2	1-½	1	¾
Hotel Room	0.29	0.43	3	2	1-½	1	¾
Laboratories	0.43	0.57	6	4-½	3-½	2-½	1-¾
Office	0.29	0.43	4	3	2-¼	1-½	1
Restaurant Kitchen	0.34	0.43	5	3-¾	3	2	1-½
Shop, Retail	0.22	0.29	3	2	1-½	1	¾
Theaters	0.14	0.22	-	-	-	-	-

3. For other rooms or spaces not specifically covered under this Section, see applicable provisions of the pertinent referral code/s.

EXCEPTION:

1. Variances, exception or deviations from the provision of light and ventilation **may be allowed** only when the following term and conditions are fully complied with:

- a. In case of variances

When the property is unique and different from other properties and because of its uniqueness such the owner cannot comply with the open space requirements, variances shall be applied to relax the application of the following provisions:

- i. setback;
- ii. ventilation and window opening requirements;
- iii. percentage of site occupancy;
- iv. floor area ratio; and
- v. building height limit (**BHL**).

At least two (2) conditions must be satisfied for exception to be granted.

- b. In case of exceptions

- i. The exception must not adversely affect public health, safety and welfare and must be in keeping with the general pattern of development in the community.
- ii. The exception must not alter the essential character of the district where the exception sought is located, and will be in harmony with the general purpose of this **IRR**.

GUIDELINES ON EASEMENTS, VIEW CORRIDORS/SIGHT LINES, STREETS/ROAD RIGHT-OF-WAY (RROW), SIDEWALKS, ARCADES, BASEMENTS, LOTS, AND PUBLIC BUILDINGS/STRUCTURES

A. EASEMENTS

1. As it is situated outside of private property limits, the **easement is public land**, i.e., **public domain, that should be equally enjoyed by all members of the community**. The easement is **not to be used for any form of building**/structure that may go against its **public recreational character** and as such, the following uses and others similar thereto are absolutely prohibited:
 - a. **Residential** and like uses whether temporary or permanent;
 - b. Long-term or **overnight vehicle parking**, i.e., unless duly designated as day and/or night pay-parking zones;
 - c. As a depository of stalled, wrecked or **abandoned vehicles**, mechanical devices and the like;
 - d. The conduct of specific commercial, institutional and/or industrial activities **not** compatible with its stated character;
 - e. Unauthorized recreational or entertainment usage and the like which will only benefit certain entities and which will ultimately result in **inconvenience/ nuisance/safety problems** to the general public; nor
 - f. Any other form of **private use, gain, enjoyment or profit** at the expense of the motoring or walking public.

2. Allowed or Encouraged Structures/Developments Within Easements

- a. If wider than 9.00 meters, the easement may include a roadway/carriageway component on which vehicles can pass or on which the same may temporarily park, e.g., an **esplanade** and the like. (**Fig. VIII.G.1.**)
- b. Pedestrian access-ways and the like and to be located at/ above/below the easement may also be developed for public use, e.g., a **promenade** and the like. (**Fig. VIII.G.2.**)

Table VIII.G.1. Easement* Along Water Bodies/Way by Location

Location of Water Body/Way	Easement
Urban Areas	3.00 meters per side of waterway (Fig.VIII.G.3.)
Agricultural Areas	20.00 meters per side of waterway
Forest Areas	40.00 meters per side of waterway

* Source: **Water Code of the Philippines**

- c. The allowed structures/developments include:
 - i. **Hardscaped (paved)** pedestrian access-ways such as walks, footpaths or arcades (covered or roofed sidewalks without any habitable structures above or below it); temporary or movable **hardscape elements** such as gazebos, sheds, fountains and like structures with large footprints must **not** encroach on the easement;
 - ii. **Softscaped (paved)** developments such as park strips, linear parks and the like as well as small tree farms are encouraged for recreational, livelihood and soil stabilization/protection purposes;

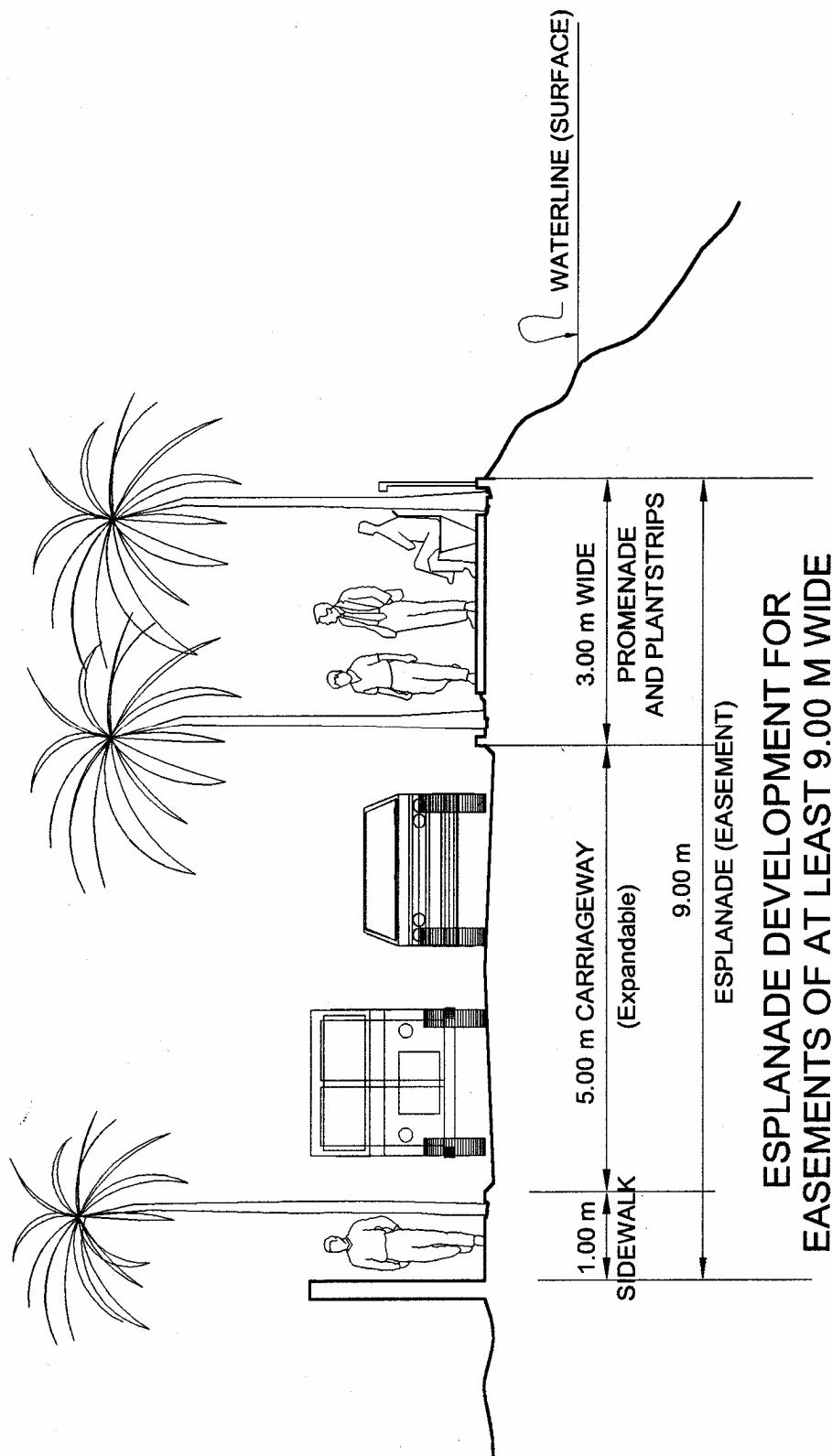
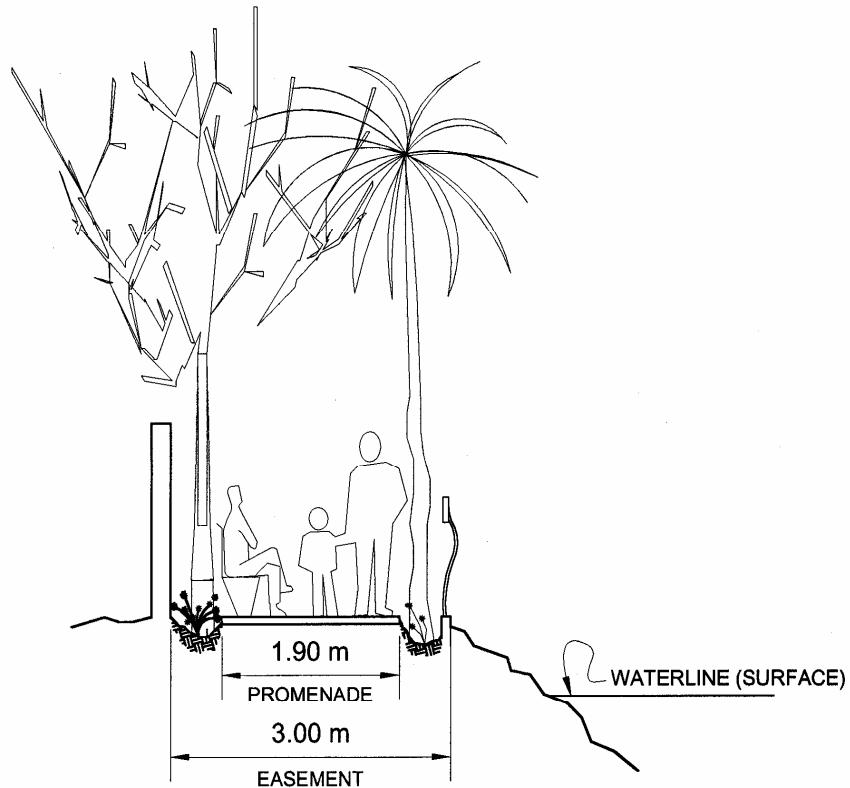


Figure VIII.G.1.

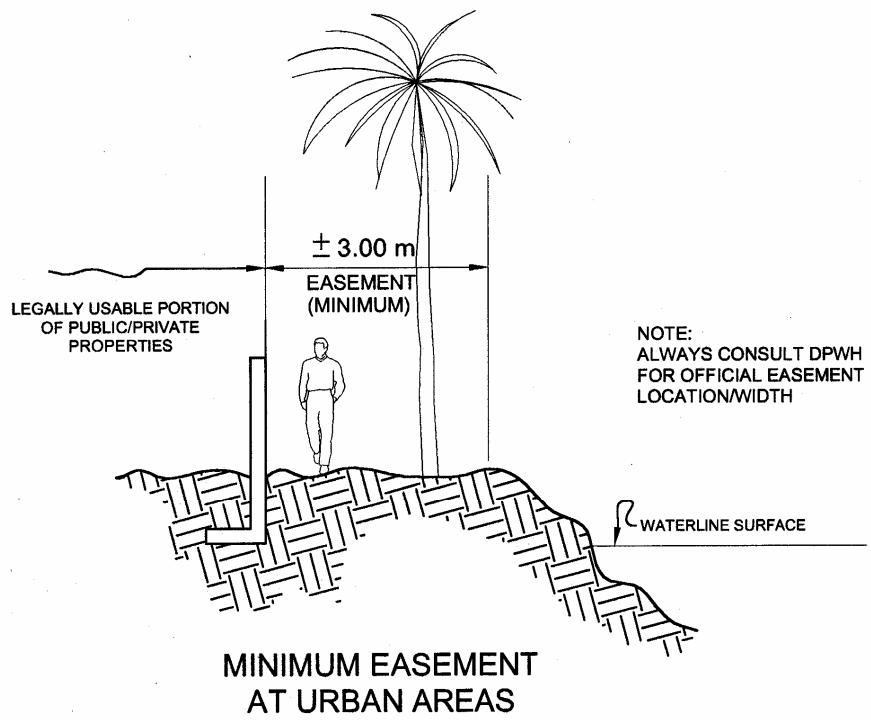
**ESPLANADE DEVELOPMENT FOR
EASEMENTS OF AT LEAST 9.00 M WIDE**

*Annotation: The level of the waterline surface must be established by the DPWH Regional or District Office, **not** by the Office of the Municipal/ City Engineer nor by the Office of the Building Official (OBO). Note also that the trees along the promenade are staggered i.e. the trees do **not** face each other but are suggested to be positioned in a zigzag pattern. In case the width for the esplanade is insufficient, the left sidewalk could also be dispensed with.*



PROMENADE DEVELOPMENT
WITHIN A MINIMUM EASEMENT
FOR URBAN AREAS

Figure VIII.G.2.



MINIMUM EASEMENT
AT URBAN AREAS

Figure VIII.G.3.

Annotation: The level of the waterline surface must be established by the DPWH Regional or District Office, **not** by the Office of the Municipal/ City Engineer nor by the Office of the Building Official (OBO). Note also that the trees along the promenade are staggered i.e. the trees do **not** face each other but are suggested to be positioned in a zigzag pattern.

- iii. Concrete steps leading down to the water or wooden boardwalks are allowed, provided that all necessary safety precautions are taken, e.g., non-slip finishing for surfaces, handrails and railings;
- iv. Other forms of soil stabilization/protection including anti-erosion/scouring measures/structures within the easement are allowed, e.g., rip-rapping, embankment protection, etc., provided that no enclosed/semi-enclosed habitable structures are built on, above or below such structures; and
- v. Permanent utility/service lines (power, water, telecommunications, gas, etc.) are allowed within the easement provided that these are either below grade (underground) or above grade (overhead).

3. Disallowed and Prohibited Structures/Developments Within Easements

- a. **No portion** of the easement whether at grade (on the ground), below grade or above grade may be leased or developed by the government or by private entities for purposes inconsistent with its character and intended function. In particular, any form of semi-permanent/permanent or semi-enclosed/enclosed residential, commercial, industrial, institutional or government structure/use and like, structures/uses at any portion of the public easement is prohibited;
- b. **All** semi-enclosed or enclosed, semi-permanent or permanent habitable building **projections** (particularly **arcade** structures) or any other building projection or structural element (eaves, roof, cantilevered beams, foundations and the like) located above or below the easement are absolutely prohibited; and
- c. **All forms of enclosures** such as fences, perimeter walls and the like, intended to limit the use of the easement for private enjoyment/benefit or to restrict full access to the public easement are absolutely prohibited unless the same are erected for reason of public safety.

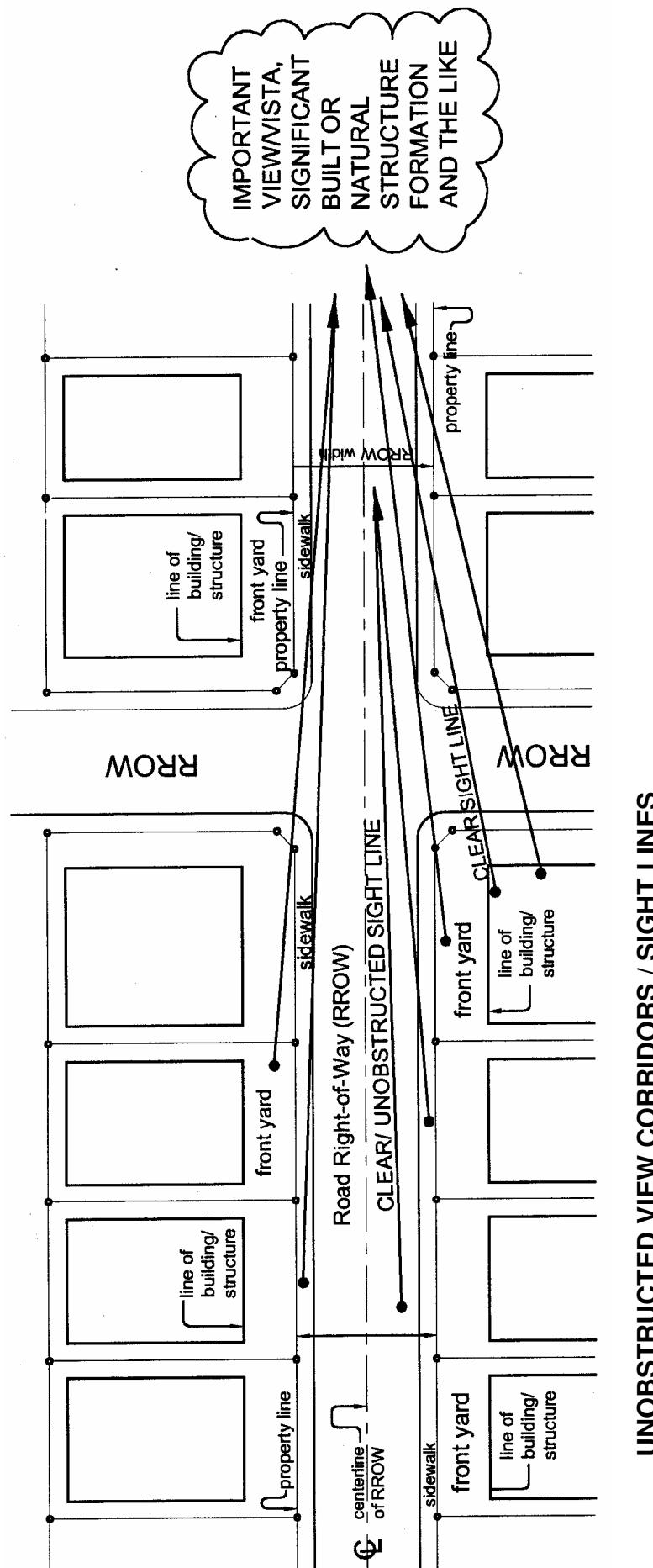
B. VIEW CORRIDORS AND/OR SIGHT LINES

1. Preservation of View Corridors and/or Sight Lines

- a. The carriageway/roadway portion of the RROW shall be free of structures, particularly commercial signs that will impede the view corridor and sight lines within the RROW. (See **Fig. VIII.G.4**)
- b. To dignify very important public or historical/culture buildings/structures, all forms of commercial signs intruding into RROW leading to or away from such buildings/structures shall not be allowed. Specifically disallowed from such RROW are commercial signs supported from any building projection (such as arcades).
- c. View corridors or sight lines from buildings/structures on a higher or lower lot shall not be entirely blocked by the intervening property to allow some sight lines to exist.
- d. In case of allowed structures within the RROW for transportation, e.g., elevated ramps, flyovers, tracks, stations, terminals and the like, the appropriate designs shall be adopted to maximize light, ventilation and view.

C. STREETS/ROAD RIGHT-OF-WAY (RROW)

- 1. **General.** No building shall be constructed unless it adjoins or has direct access to public space, yard or street/road on at least one (1) of its sides. All buildings shall face a public street, alley or a road, which has been duly approved by the proper authorities for residential, institutional, commercial and industrial groups.



UNOBSTRUCTED VIEW CORRIDORS / SIGHT LINES

Figure VIII.G.4.

Annotation: Billboard structures that block the view are particularly **prohibited** under this guideline.

a. Allowed or Encouraged Structures/Developments Within the RROW

- i. The RROW at all its physical levels may only be used for the following types of structures/uses or others similar to them, to wit:
 - (a) Transportation structures and like uses whether temporary or permanent, e.g., mass transit alignments (particularly light and heavy rail) at grade, mass transit stations and terminal facilities above grade (RROW air rights utilization) or below grade and the like; these also include waiting sheds, traffic outposts and the like;
 - (b) Limited commercial structures/uses above grade (RROW air rights utilization) or below grade provided that these are ancillary or supplementary/complementary to the transportation structures/uses allowed in the previous paragraph, and the like; commercial signages on the exterior of the commercial structure are disallowed and prohibited;
 - (c) Improvements on the RROW and on all its components/elements found at all its physical levels, e.g., sidewalks, arcades, roadway/carriageway, medians, planting strips, street furniture, elevated or underground crossings or access-ways, non-commercial traffic and directional signages and the like; and
 - (d) Public utility/service structures/uses (power, water, drainage, sewerage, telecommunications, gas, etc.) at all physical levels of the RROW provided that these do not restrict nor impede the movement of people and vehicles and provided further that the rights to utilize the RROW are properly secured and permitted.

b. Disallowed and Prohibited Structures/Developments at RROW

- i. If situated outside of private property limits, the RROW is public land, i.e., public domain, which should be equally enjoyed by all members of the community. The RROW is not to be used for the following types of buildings/structures/ occupancies or others similar to them:
 - (a) Any form of semi-permanent/permanent or semi-enclosed/enclosed commercial structure/use and like structures/uses;
 - (b) Any form of temporary, semi-permanent/permanent or semi-enclosed/ enclosed residential structure/use and like structures/uses;
 - (c) Government structures/use unless the same are located below or above grade; in such cases, the proposed structure must be properly planneddesigned and constructed;
 - (d) Long-term or overnight vehicle parking, i.e., unless duly designated as day and/or night pay-parking zones;
 - (e) As a depository of stalled, wrecked or abandoned vehicles, mechanical devices and the like;
 - (f) The conduct of other commercial/business/industrial activities incompatible with the character of the RROW;

- (g) Unauthorized recreational or entertainment usage and the like which will only benefit certain entities and which will ultimately result in inconvenience/nuisance/safety problems to the general public; nor
- (h) Any other form of private use, gain, enjoyment or profit at the expense of the motoring or walking public.

Table VIII.G.2. Suggested Median and Lane Widths Within Alleys/Roadways/Carriageways by Minimum RROW Width and by Suggested Vehicle Speeds

Range of Total Alley or RROW Width (meters)	Suggested Minimum Required Width of Alley or Roadway/Carriageway (meters)	Range of Suggested Minimum to Maximum Vehicle Speeds Along Alley or Roadway (kilometers/hour)	Suggested Minimum to Maximum Median Widths (meters)	Suggested Minimum to Maximum Lane Widths (meters)
3.00 to 6.00	2.00 (for 3.00 meters Alley ROW)	1.00 to 15.00	None	2.00 one way car passage
	4.00 (for 6.00 meters RROW)		None	2.10 each way
6.10 to 20.00	4.81 (for 6.01 meters RROW)	16.00 to 30.00	None	2.40 Each way
	13.40 (for 20.00 meters RROW)		1.20 to 2.00	2.80 to 3.00
20.10 to 40.00	13.50 (for 20.10 meters RROW)	31.00 to 60.00	1.20 to 4.50	1.20 to 4.80
	26.80 (for 40.00 meters RROW)		3.00 to 3.30	3.3 to 3.50
40.10 to 60.00 and above	26.90 (for 40.10 meters RROW)	61.00 and above	1.50 to 5.00	1.50 to 5.50
	40.00 (for 60.00 meters RROW)		3.50 to 3.80	3.80 to 4.00

c. Minimum Access Requirements

i. RROW/access streets or alleys shall have the following widths:

- (a) Interior or rear lots shall have a RROW/access street with a minimum width depending upon the number of buildings or units which it serves provided, however, that said RROW/access street shall not be less than 3.00 meters in width and provided further that such RROW shall be provided with a minimum 4.00 meters wide chaflan at its intersect with the main RROW and provided, finally, that such **RROW shall not be used for any form of parking.**

- (b) Multiple living units on same lot on which apartments, rowhouses or accessories or a group of single-detached buildings are built be provided with a RROW/access street directly connecting said buildings or units to a public street/road or alley following the schedule as shown in **Table VIII.G.3.**
- (c) For commercial or industrial areas, sufficient lane widths, shoulders and maneuvering spaces for long-bodied/articulated vehicles should be considered within the RROW.
- (d) Privately-owned RROW/access streets shall be duly registered and annotated in the lot title as such for as long as the apartments, rowhouses, etc., using said RROW/access streets, still exist.
- (e) Alignment of RROW/access streets shall be integrated into the existing street/road network, particularly with the provision of chicanes of the appropriate width.
- (f) No obstruction should exist within the RROW/access streets servicing multiple housing of more than 75 units.
- (g) All kinds of subdivisions and residential condominiums may generally refer to this Guideline concerning access streets/roadways. (**Figs. VIII.G.5. through VIII.G.10.**)

Table VIII.G.3. Minimum Road Right-of-Way (RROW) Provisions for Developments with Multiple Dwelling Units

Number of Dwelling Units	Minimum Width of Carriageway/ Roadway (meters)	Minimum Width of Sidewalk on each side (meters)	Minimum Total Width of the RROW (meters)
Up to six (6) units	3.00	0.60	4.20
Seven (7) up to fifteen (15) units	4.00	1.00	6.00
Sixteen (16) up to Twenty-five (25) units	5.00	1.00	7.00
Twenty-six (26) up to Thirty-five (35) units	6.00	1.00	8.00
More than thirty-five (35) units	6.70	1.00	8.70

d. The RROW consists of three (3) different physical levels as follows:

- i. RROW ABOVE GRADE - refers to the portion of the RROW reckoned from the finished surface of the roadway/carriageway and/or the sidewalk/arcade all the way up to the air. If this level of the RROW is utilized for whatever purpose, the **Air Rights or the right to develop, benefit and profit from the use of the RROW above grade is given up by the government/general public and should therefore be compensated**, i.e., leased and paid for by the proponent/end-user/beneficiary of the proposed building/structure (**Figs. VIII.G.11. and VIII.G.12.**). The minimum clear height for the utilization of air rights above RROW shall be 4.27 meters from the finished crown elevation of the roadway/carriageway.
- ii. RROW AT GRADE - refers to the portion of the RROW reckoned from the natural grade line up to the finished surface of the roadway/carriageway and/ or the sidewalk/arcade. This portion of the RROW is generally utilized for the movement of the general public (motorists and pedestrians). If this level of the RROW is utilized for whatever purpose, the right to develop, benefit and profit from the use of the RROW at grade is given up by the government/general public and should therefore be compensated, i.e., leased and paid for by the development proponent/end-user/beneficiary. (**Figs. VIII.G.11. and VIII.G.12.**)

- iii. RROW BELOW GRADE - refers to the portion of the RROW reckoned from the finished surface of the roadway and/or the sidewalk all the way down into the ground. If this level of the RROW is utilized for whatever purpose, the right to develop, benefit and profit from the use of the RROW below grade is given up by the government/general public and should therefore be compensated, i.e., leased and paid for by the development proponent/end-user/beneficiary. (**Figs. VIII.G.11. and VIII.G.12.**)

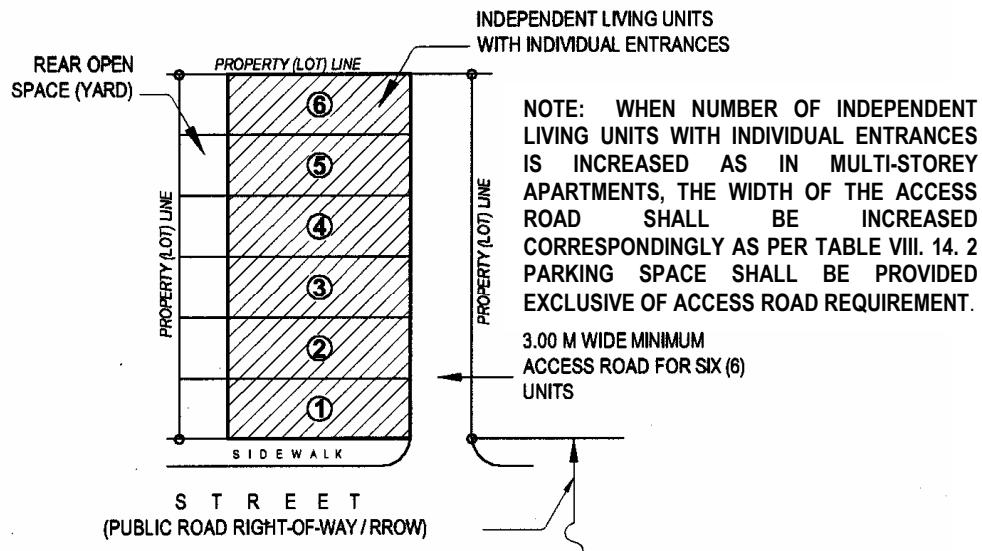


Figure VIII.G.5.

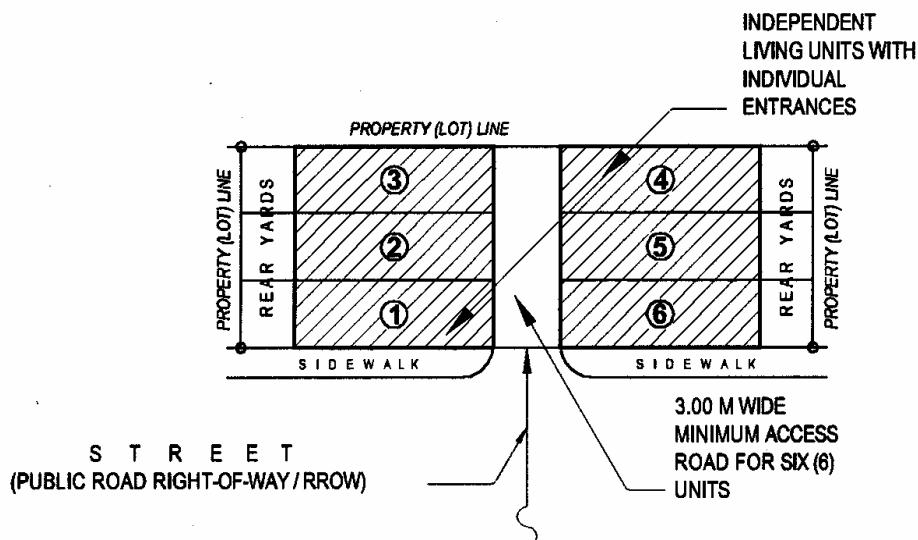
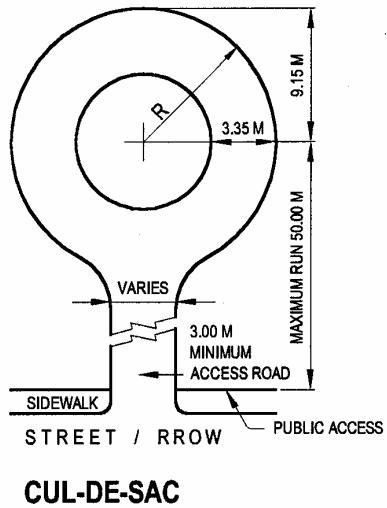


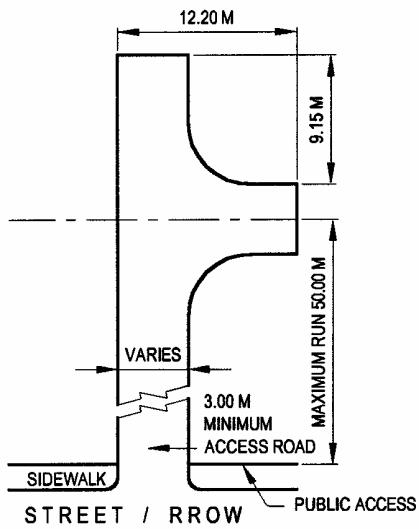
Figure VIII.G.6.

*Annotation: The **minimum** 3.0 m wide access road necessarily includes all provisions for drainage and for utility lines. It must be maintained free of all forms of obstructions at all times, particularly parked or abandoned vehicles that may impede rescue/emergency response. Trees or plants should **not** be sited within any part of the **minimum** 3.0m wide access road i.e. suggested for planting within the property limits instead.*



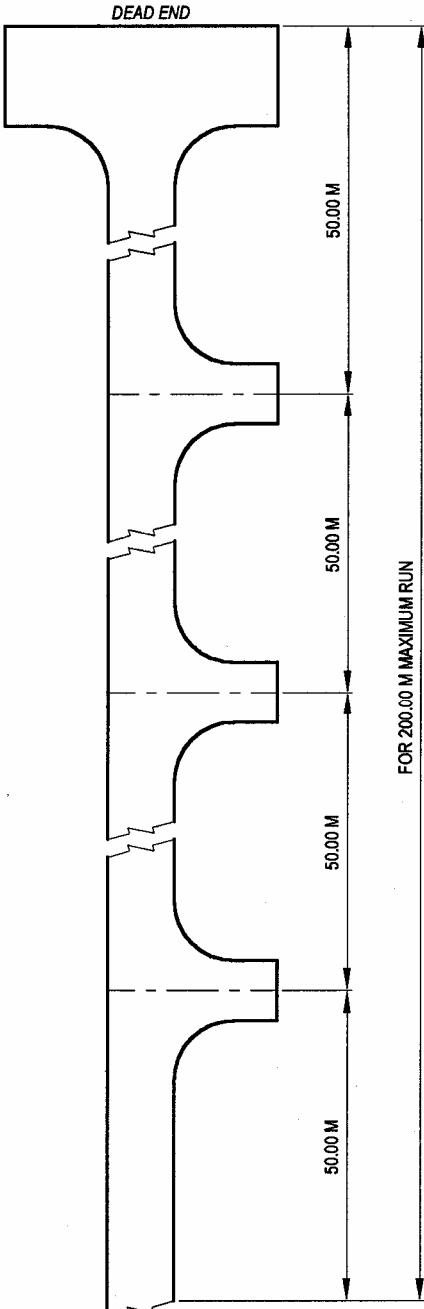
CUL-DE-SAC

Figure VIII.G.7.

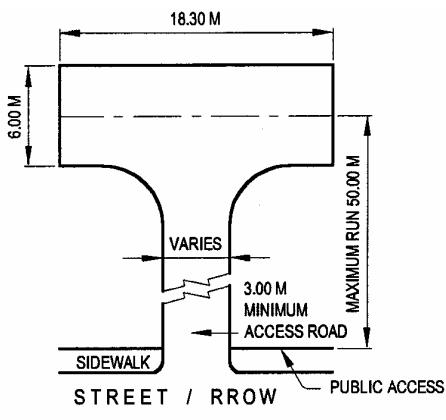


TURN COURT

Figure VIII.G.8.



NOTE: WHERE LENGTH OF RUN IS 200.00 M, A CUL-DE-SAC OR TURN COURT SHALL BE PROVIDED FOR EACH MAXIMUM RUN.



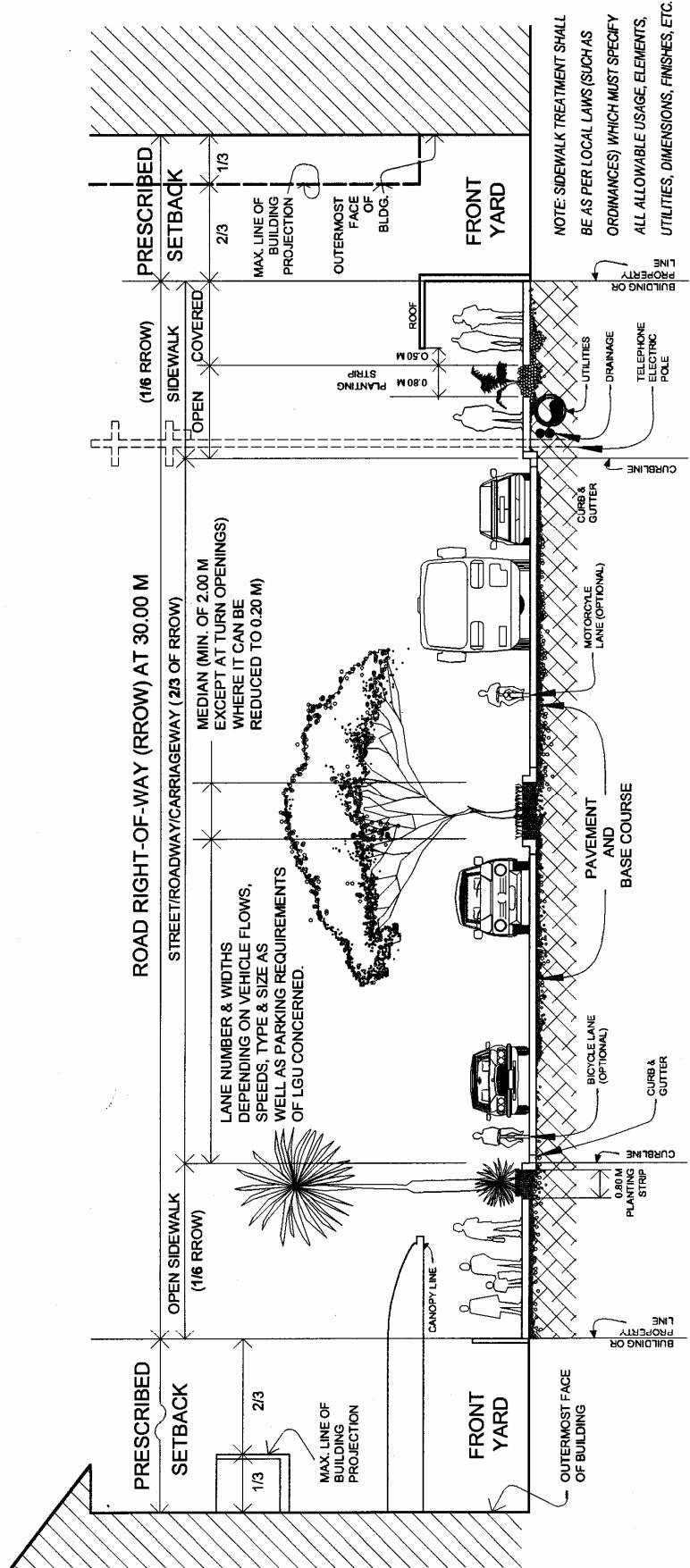
TURN COURT

Figure VIII.G.9.

Annotation: The **minimum** 3.0 m wide access road necessarily includes all provisions for drainage and for utility lines. It must be maintained free of all forms of obstructions at all times, particularly parked or abandoned vehicles that may impede rescue/emergency response. Trees or plants should **not** be sited within any part of the **minimum** 3.0m wide access road i.e. suggested for planting within the property limits instead.

ALL PRIVATE ROADS OR ACCESS TO INTERIOR LOTS SHALL BE ACCESSIBLE TO STREET OR PUBLIC SPACE OR YARD AND SUCH SHALL CONFORM TO SUCH PROVISIONS AS TO YARDS AND TABLE VIII.G.3.

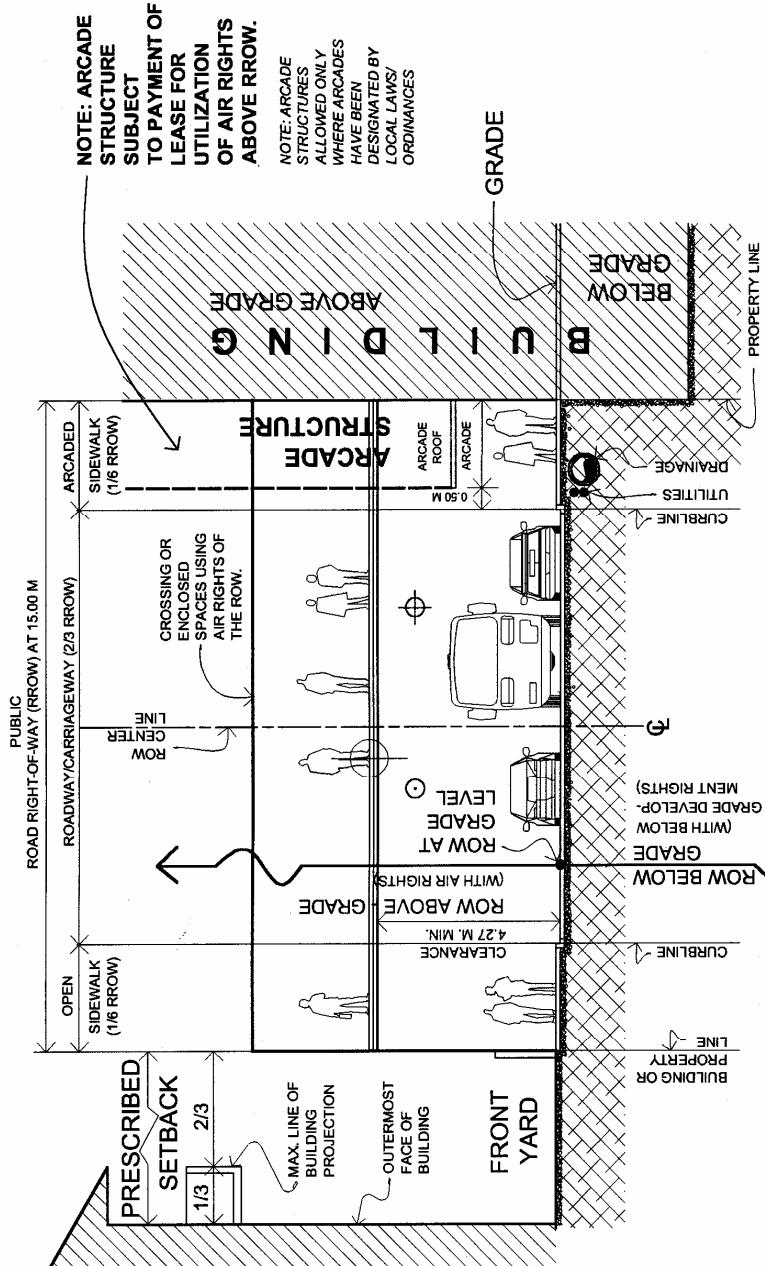
Figure VIII.G.10.



POSSIBLE ROAD RIGHT-OF-WAY (RROW) SECTION (30.00 M)

Figure VIII.G.11.

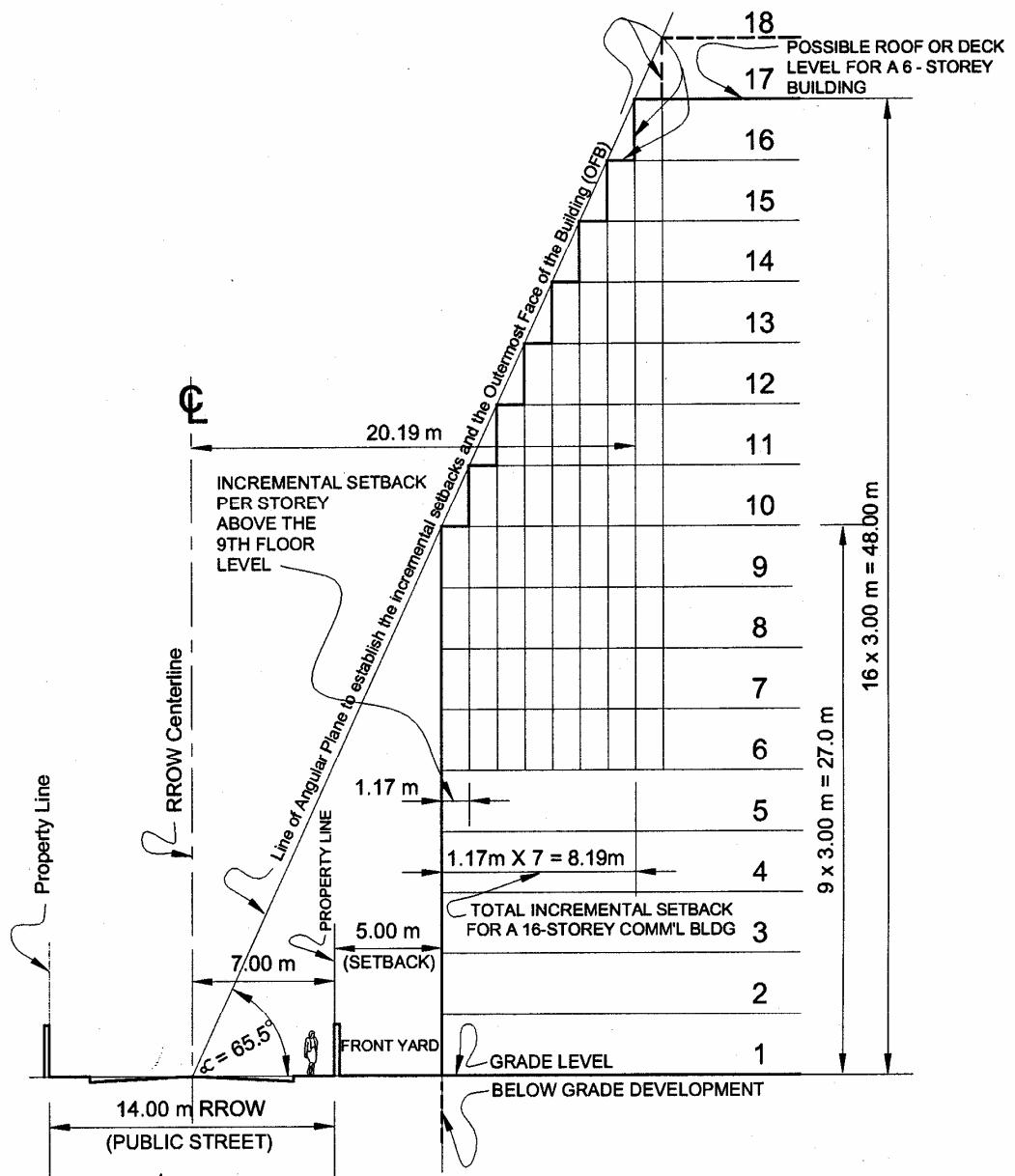
Annotation: Carriageway widths must also be measured in terms of standard-width lanes based on legal/allowed vehicle speeds on the thoroughfare.



**LEVELS OF THE ROAD RIGHT-OF-WAY (RROW)
(AT A RROW OF 15.00 M ONLY)**

Figure VIII.G.12.

Annotation: Assuming the necessary permits and/or required leasing arrangements for the use of air rights and below-grade rights are perfected, all three levels of RROW development could be introduced/integrated.



ANGLE FROM RROW CENTERLINE THAT DETERMINE THE INCREMENTAL SETBACK AND OFB OF C-3 BUILDINGS/STRUCTURES ALONG A 14.00 M RROW

NOTE: SEE **FIGURE VIII.20.** RULE VIII FOR RELATED REAR AND SIDE INCREMENTAL SETBACK AND OFB OF C-3 BUILDINGS/STRUCTURES.

Figure VIII.G.13.

Annotation: The **incremental setbacks** are not intended for adoption as architectural design standards. These are only tools to **limit** floor area generation using climatic conditions as bases. The actual design solution may actually have a different configuration that must however match the **limit** prescribed by the **incremental setbacks**.

D. SIDEWALKS

1. Subject to existing laws and regulations, the **local planning authority** shall determine which street shall have an **open sidewalk or an arcaded (covered) sidewalk**, or a **combination** of both.
2. The **minimum width** of the sidewalk for a **RROW width of 9.00 meters or more shall be 1.20 meters on each side of the RROW** or a total of 2.40 meters on both sides of the RROW (**Fig. VIII.G.14.**). For the minimum width of sidewalk for RROW of less than 9.00 meters wide, refer to **Table VIII.G.3**.
3. Sidewalk widths shall be based on the following considerations:
 - a. Volume of pedestrians (end-users, visitors and the like) who will use the sidewalk on a regular basis;
 - b. Type, intensity or level of operation and size/expanses of the allowed uses/occupancies along the RROW;
 - c. The types and volume of street furniture, e.g., street lighting and traffic signs/signal supports, pedestrian barriers/aids, etc., and other urban design elements that will be allowed as permanent developments design elements that will be allowed as permanent developments within the width of the sidewalk;
 - d. The width of the planting strips;
 - e. The spatial needs for servicing utility/service lines underneath the sidewalk and for utility/service poles;
 - f. Compliance with accessibility requirements as stipulated under *Batas Pambansa Blg. 344 (Accessibility Law)*;
 - g. Provisions for commuters, e.g., waiting sheds, loading/unloading areas and the like;
 - h. Provisions for vehicle crossings/driveways between the roadway/carriageway and the front yards of lots or buildings/structures or provisions for loading/unloading platforms if allowed;
 - i. Need for introduction of allowed uses/elements within the sidewalk area only if there is sufficient sidewalk width, e.g., bicycle lanes, jogging lanes and the like; and
 - j. Climate, light, ventilation, safety, security and overall maintenance of the sidewalk and all its surface areas.
4. Sidewalks shall be of **uniform width** throughout the entire length of the street. The sidewalk width grade and finish of the **dominant use/occupancy** along the RROW shall be generally observed.
5. The width of the sidewalk shall be as follows:

Table VIII.G.4. Range of Required Sidewalk and Planting Strip Widths (total at both sides of RROW) by RROW Width

Road Right-Of-Way (RROW) Width	Range of Required Sidewalk Widths (Total at both sides of RROW)
30.00 meters & above	From 1/6 up to 1/4 of RROW Width
25.00 - 29.00 meters	From 1/6 up to 1/3 of RROW Width
20.00 - 24.00 meters	From 1/6 up to 1/3 of RROW Width
10.00 - 19.00 meters	From 1/4 up to 1/3 of RROW Width
Below 10.00 meters	From 1/4 up to 1/3 of RROW Width

- The width of the sidewalk shall include both the paved and unpaved (planted) portions. (see Table VIII.G.5.)

Table VIII.G.5. Minimum Planting Strip Widths by RROW Width

Road Right-Of-Way (RROW) Width	Total Minimum Widths of Planting Strip within RROW* (width per sides of RROW) (meters)
30.00 meters & above	1.20 (0.60)
25.00 - 29.00 meters	0.60 (0.30)
20.00 - 24.00 meters	0.60 (0.30)
10.00 - 19.00 meters	0.40 (0.20)
Below 10.00 meters	Optional

Note:

* *Minimum width of planting strip (for grass and shrubs) is 200 millimeters for each side of the RROW. The minimum width of planting strip (for trees) is 300 millimeters for each side of the RROW.*

- For allowed, disallowed and prohibited structures/developments at RROW, refer to **Sections C.1. (a) and C.1. (b) of this Guideline.**
- The sidewalk pavement shall have a non-slip surface and shall slope down from the building line towards the curb line at not more than 1/50 and shall level off with the curb. (**Fig. VIII.G.14.**)
- Sidewalks of 2.00 meters or more in width shall include on its outer side a planting strip of not less than 800 millimeters in width up to a maximum of 1/3 of the allowed sidewalk width, separating the curb from the sidewalk pavement. The planting strip must always be near the curbline. (**Fig. VIII.G.15.**)
- Combined open and arcaded sidewalks shall be provided with a planting strip of not less than 800 millimeters in width up to a maximum of 1/3 of the allowed sidewalk width, as a separating strip between the arcaded portion and the open portion of the sidewalk. (**Fig. VIII.G.16.**)
- Grade of Sidewalks
 - Sidewalks shall, as much as possible, be level and of uniform grade throughout the entire length of the street.
 - Whenever the slope of the street does not exceed 1/12 the sidewalk grade shall follow the level or slope of the street. (**Fig. VIII.G.17.**)
 - Whenever the slope of the street is 1/10, the sidewalk shall be maintained level for every 20.00 to 40.00 meters of run (**Fig. VIII.G.18.**). Sidewalks of different levels shall be joined by means of a ramp having any convenient slope not exceeding 1/6. (**Fig. VIII.G.18.**)
 - When the grade of two (2) connecting sidewalks are between 1/10 and 1/8, the two sidewalks shall be joined by means of a ramp having any convenient slope not exceeding 1/10.

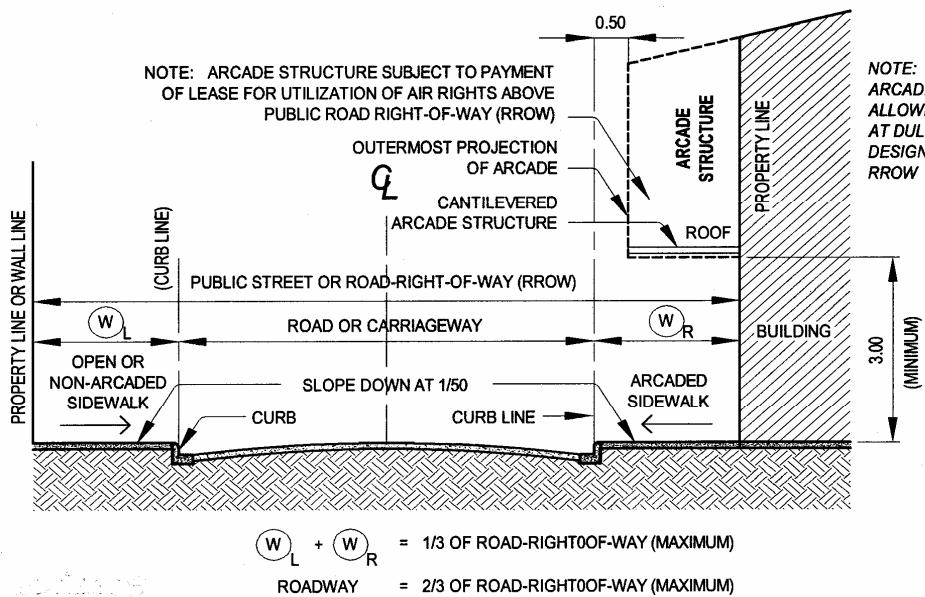


Figure VIII.G.14.

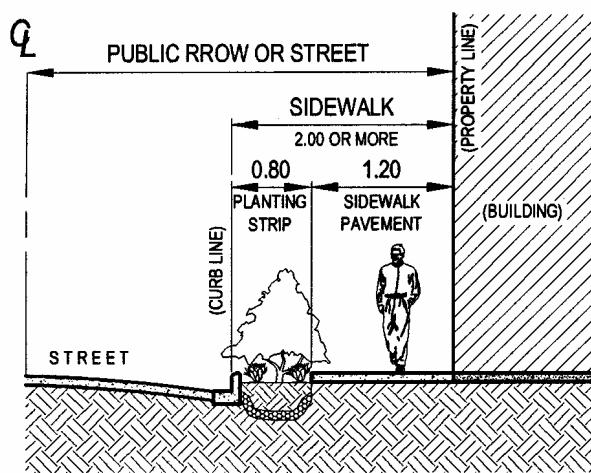


Figure VIII.G.15.
SIDEWALKS & PLANTING STRIPS

Figure VIII.G.16.
SIDEWALKS & PLANTING STRIPS

Annotation: The arcades shown above were originally for widened RROWS where **property recovery** was necessary through **air rights utilization**. If no road widening occurs, **arcade structures** above sidewalks represent the **use of public domain**, for which leases need to be paid to the LGU or the DPWH as the case may be. Arcades and arcade structures are best sited **within the property limits**.

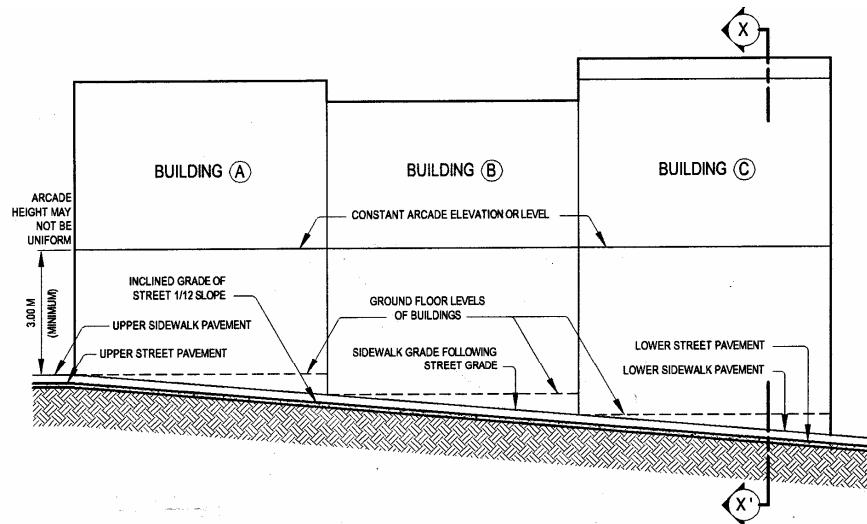


Figure VIII.G.17.

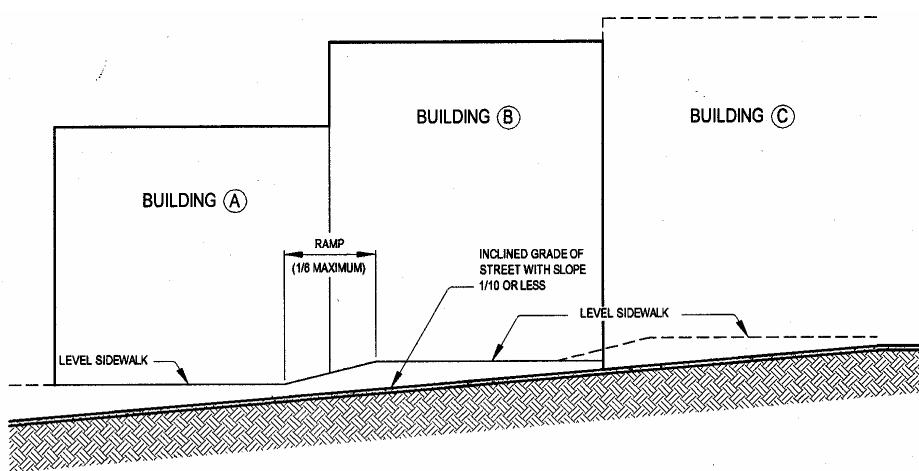


Figure VIII.G.18.

GRADE OF SIDEWALKS

Annotation: Ramped or inclined sections of the sidewalk should have heavily textured surfaces for traction and better surface drainage. Sever inclines for sidewalks should be accompanied by railings or guides for additional safety of the end-users.

12. Driveways, Entrances and Exits

a. Driveways Across Sidewalks

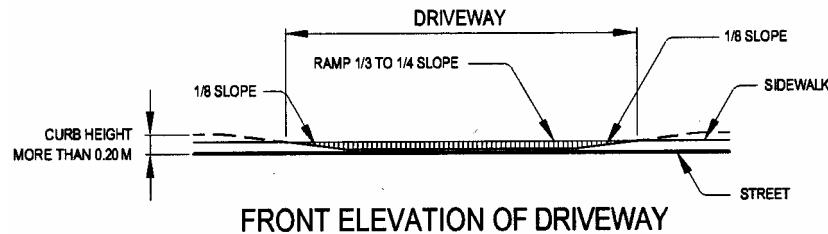
- i. To maximize the use of the sidewalk area, the surface of the sidewalk and the driveway shall as much as possible, be at the same plane. The entry ramp of the driveway connecting the roadway surface to the sidewalk surface shall have a slope ranging from 1/3 to 1/4. (*Figs. VIII.G.19. and VIII.G.20.*)
- ii. Whenever the height of the curb is more than 200 millimeters, driveways may be constructed across the entire width of the sidewalk, provided that the driveway shall be joined to the sidewalk by means of a ramp of rough finish have a slope of not more than 1/8. The driveway and the ramp shall be made of the same materials as that of the sidewalk. (*Figs. VIII.G.19., VIII.G.20., and VIII.G.21.*)
- iii. Entrances and exits of buildings abutting sidewalks shall be made of either ramps or steps.
- iv. Entrance and exits ramps shall have a slope not exceeding 1/10. (*Fig. VIII.G.22.*)
- v. Entrance or exit steps shall have treads of not less than 300 millimeters. The minimum number of steps shall be two (2) with risers not exceeding 100 millimeters.
- vi. **No portion of either entrance or exit ramps or steps shall intrude into the sidewalk pavement.**

13. Obstruction on Sidewalks

- a. Under no circumstances shall obstruction of any kind be allowed on sidewalks, whether open or arcaded. This specifically refers to all forms of commercial signs and commercial structures that impede sight lines or pedestrian traffic along the sidewalk.
- b. Planted areas forming part of the sidewalk or arcade shall not be fenced in to allow passage of pedestrians and disabled in transit.

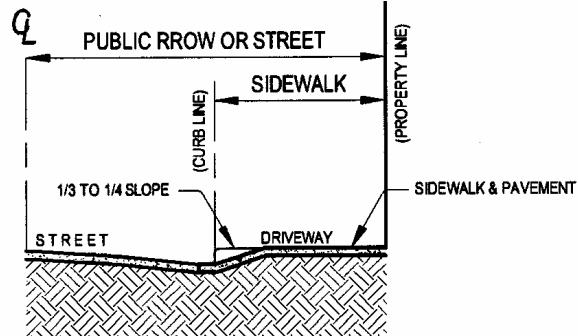
14. Curb Configurations

- a. **Mountable** curbs shall only be allowed if the sidewalk width on each side of the RROW is at a minimum of 5.00 meters wide.
- b. For greater protection of pedestrians and the disabled, **raised** curbs are encouraged for use along sidewalks that are less than 5.00 meters in width.



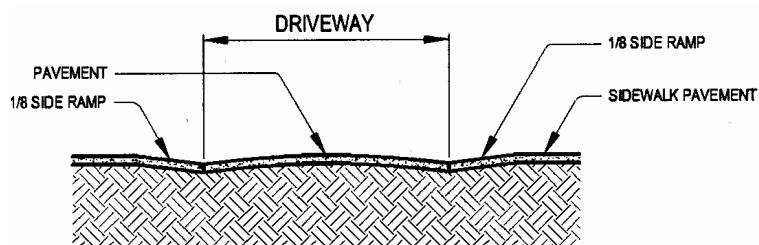
FRONT ELEVATION OF DRIVEWAY

Figure VIII.G.19.



SIDE ELEVATION OF DRIVEWAY

Figure VIII.G.20.



CROSS SECTION OF DRIVEWAY

Figure VIII.G.21.

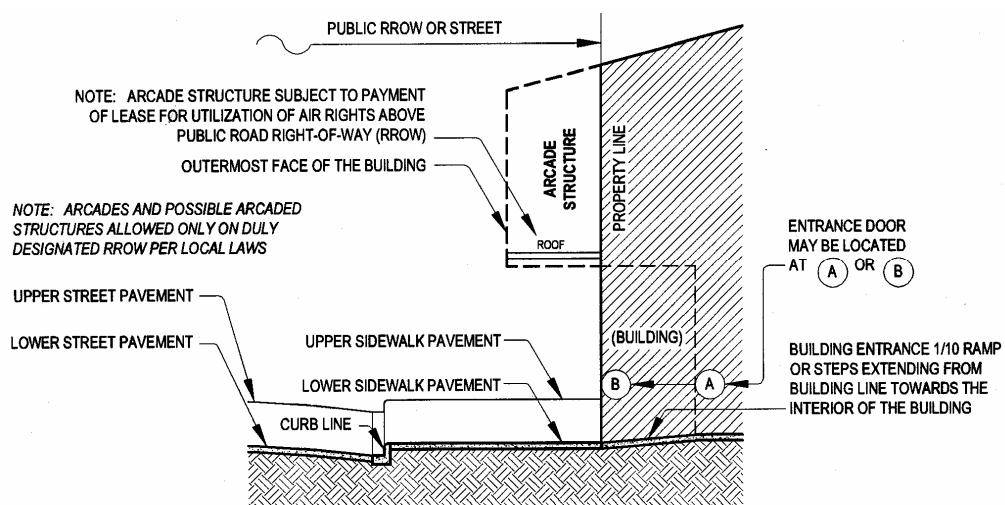


Figure VIII.G.22.

DRIVEWAYS ACROSS SIDEWALKS

Annotation: The foregoing examples are particularly important for basement/below grade and above grade entrances/exits to covered parking areas

E. TOTAL OPEN SPACE REQUIREMENTS ON LOTS BY USE/OCCUPANCY, TYPE/LOCATION AND SUGGESTED MINIMUM LOT SIZES, LOT DIMENSIONS & TYPES BY USE/OCCUPANCY

Table VIII.G.6. Minimum TOSL Requirements by Lot Type/Location

Note: Higher Percentages (%) may apply for lots with **Minimum Total Lot Area (TLA)**.

LOT TYPE/ LOCATION*	MINIMUM PERCENTAGE OF OPEN SPACE BY OCCUPANCY TYPE** (for Proposed Developments without Firewalls or Abutments)			MINIMUM PERCENTAGE OF OPEN SPACE BY OCCUPANCY TYPE** (for Proposed Developments with Permitted Firewalls or Allowed Abutments)		
	A & B (Residential or Institution-al) & C, D, E-2 and H (Institutional)	H-1, H-2, H-4 and I (Cultural) and E-1 and E-3 (Transporta- tion/Utility)	All Other Uses/ Occu- pancy	A & B (Residential or Institutional) & C, D,E-2 and H (Institutional)	H-1, H-2, H-4 and I (Cultural) and E-1 and E-3 (Transporta- tion/Utility)	All Other Uses/ Occu- pancy
Interior or Rear Lot (Lot located in the interior of a block made accessible from a public street or alley by means of a private access road); see Figure VIII.2.	40% (for R-1 use or occupancy only), 30% (for R-2 use or occupancy only) and 30% (for other residential uses or occupancy); and 50% (for all classes of institutional uses or occupancy)	40% (for all classes of cultural use or occupancy) and 50% (for all classes of transporta- tion/ utility use or occupancy)	20%	*	30% # (for all cultural) 25%** (for R-2) 20%*** (for other residential) 40%**** (for all institutional)	15%

Inside Lot otherwise referred to as a Regular Lot (Non - corner or single frontage lot); see Figure VIII.3.	50% (for R-1 use or occupancy only), 40% (for R-2 use or occupancy only) and 30% (for other residential uses or occupancy); and 50% (for all classes of institutional uses or occupancy)	40% (for all classes of cultural use or occupancy) and 50% (for all classes of transportation/utility use or occupancy)	25%	* 30%** (for R-2) 20%*** (for other residential) 40%**** (for all institutional)	30% # (for all cultural) 40% ## (for all transportation / utility/ services)	15%
Corner Lot+ or Through Lot; see Figures VIII.4. and VIII.5. +Note: For corner lots, the largest setback requirement shall apply to the two (2) sides serviced by the RROW.	30% (for R-1 and all other residential uses or occupancy); and 40% (for all classes of institutional uses or occupancy)	35% (for all classes of cultural use or occupancy) and 40% (for all classes of transportation/ utility use or occupancy)	20%	* 25%** (for R-2) 20%*** (for other residential) 30%**** (for all institutional)	30% # (for all cultural) 30% ## (for all transportation / utility/ services)	10%

End Lots bounded on two (2) or more sides by the property line of the subdivision or by public open spaces such as easements of lake/ sea-shores, rivers, esteros, etc. and accessible only through one (1) side of the lot; see Figure VIII.8.	40% (for R-1 use or occupancy only), 30% (for R-2 use or occupancy only) and 30% (for other residential uses or occupancy) and 50% (for all classes of institutional uses or occupancy)	40% (for all classes of cultural use or occupancy) and 50% (for all classes of transporta- tion/utility use or occupancy)	20%	*	30% # (for all cultural) 25%** (for R-2) 20%*** (for other residential) 40%**** (for all institutional)	40% ## (for all transportation /utility /services) 15%
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Corner-Through Lots or Corner Lots+ abutting three (3) or more public open spaces such as streets, alleys, easement of lake/seashores, rivers, esteros, etc.; see Figures VIII.6 . and VIII.7.	30% (for R-1 and all other residential and commercial uses or occupancy) and 40% (for all classes of institutional uses or occupancy)	35% (for all classes of cultural use or occupancy) and 40% (for all classes of transportation/utility use or occupancy)	10%	* 25%** (for R-2) 20%*** (for other residential and commercial) 30%**** (for all institutional)	30% # (for all cultural) 30% ## (for all transportation/utility/services)	5%
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Notes:

- * *with absolutely no firewalls/abutments allowed for R-1 use.*
- ** *with firewall/abutment allowed on only one (1) side property line and absolutely no firewall/abutment at front and rear property lines for R-2 use.*
- *** *with firewalls/ abutments allowed on two (2) side property lines only or on one (1) side property line and the rear property line and absolutely no firewall/abutment at front property lines for R-3 and R-5 uses; and with firewalls/ abutments allowed on two (2) side property lines only and absolutely no firewall/abutment at the front and rear property lines for R-4 use.*
- **** *with firewalls/abutments for all classes of institutional uses.*
- # *with firewall/abutment allowed on only one (1) side for all classes of cultural uses.*
- ## *with firewalls/abutments allowed on two (2) sides only or on one (1) side and rear boundary for all classes of transportation/utility uses.*
- + *Refer to Rule VIII - Figures VIII.2. through VIII.8. for lot type/location.*
- ++ *Refer to Rule VII for occupancy grouping.*

Table VIII.G.7. Suggested Minimum Lot Sizes, Lot Dimensions and Types by Use or Occupancy

Use or Occupancy (preferably based on Duly-Approved Local Zoning Ordinance)	Lot Location/Type				
	Interior (or Rear) Lot (See Rule VIII- <i>Figure VIII.2.</i>)	Inside (or Regular) Lot (See Rule VIII- <i>Figure VIII.3.</i>)	Corner Lot or Through Lot (See Rule VIII- <i>Figures VIII.4.& VIII.5.</i>)	End Lot (See Rule VIII- <i>Figure VIII.8.</i>)	Corner-Through Lot or Corner Lot Abutting 3 or More Streets, etc. Rivers, etc. (See Rule VIII- <i>Figs. VIII.6. & VIII.7.</i>)
Residential 1 (R-1)	301.00 sq. meters 21.50 meters wide (w) x 14.00 meters deep (d)	301.00 sq. meters 14.00 meters (w) x 21.50 meters (d)	365.00 sq. meters 17.00 meters (w) x 21.50 meters (d)	548.00 sq. meters 25.50 meters (w) x 21.50 meters (d)	365.00 sq. meters 17.00 meters (w) x 21.50 meters(d)
Basic Residential 2 (R-2) Medium Density Housing (single family dwelling unit with a BHL of 10.00 meters)	Not Allowed	80.00 sq. meters 8.00 meters (w) x 10.00 meters (d)	96.00 sq. meters 9.60 meters (w) x 10.00 meters (d)	140.00 sq. meters 14.00 meters (w) x 10.00 meters (d)	96.00 sq. meters 9.60 meters (w) x 10.00 meters (d)
Maximum R-2 Medium Density Housing (multiple family dwelling units within one building/ structure with a BHL of 15.00 meters)	Not Allowed	192.00 sq. meters 12.00 meters (w) x 16.00 meters (d)	261.00 sq. meters 14.50 meters (w) x 18.00 meters (d)	378.00 sq. meters 21.00 meters (w) x 18.00 meters (d)	261.00 sq. meters 14.50 meters (w) x 18.00 meters (d)

Basic Residential 3 (R-3) High Density Housing (single family dwelling unit with a BHL of 10.00 meters)	Not Allowed	50.00 sq. meters 4.00 meters (w) x 12.50 meters (d)	75.00 sq. meters 6.00 meters (w) x 12.50 meters (d)	200.00 sq. meters 16.00 meters (w) x 12.50 meters (d)	75.00 sq. meters 6.00 meters (w) x 12.50 meters (d)
Maximum R-3 High Density Housing (multiple Family dwelling units within one building/ structure with a BHL of 36.00 m)	Not Allowed	400.00 sq. meters 16.00 meters (w) x 25.00 meters (d)	475.00 sq. meters 19.00 meters (w) x 25.00 meters (d)	700.00 sq. meters 28.00 meters (w) x 25.00 meters (d)	475.00 sq. meters 19.00 meters (w) x 25.00 meters (d)
Residential 4 (R-4) Individual Townhouse Lots	Not Allowed	96.00 sq. meters 8.00 meters (w) x 12.00 meters (d)	120.00 sq. meters 10.00 meters (w) x 12.00 meters (d)	180.00 sq. meters 15.00 meters (w) x 12.00 meters (d)	120.00 sq. meters 10.00 meters (w) x 12.00 meters (d)
Residential 5 (R-5)	Not Allowed	500.00 sq. meters 18.50 meters (w) x 27.00 meters (d)	540.00 sq. meters 20.00 meters (w) x 27.00 meters (d)	945.00 sq. meters 35.00 meters (w) x 27.00 meters (d)	540.00 sq. meters 20.00 meters (w) x 27.00 meters (d)
Commercial 1 (Com-1)	Not Allowed	204.00 sq. meters 12.00 meters (w) x 17.00 meters (d)	238.00 sq. meters 14.00 meters (w) x 17.00 meters (d)	Not Allowed	238.00 sq. meters 14.00 meters (w) x 17.00 meters (d)
Commercial 2 (Com-2)	Not Allowed	301.00 sq. meters 14.00 meters (w) x 21.50 meters (d)	365.00 sq. meters 17.00 meters (w) x 21.50 meters (d)	Not Allowed	365.00 sq. meters 17.00 meters (w) x 21.50 meters (d)
Commercial 3* (Com-3)	Not Allowed	600.00 sq. meters 20.00 meters (w) x 30.00 meters (d)	813.00 sq. meters 25.00 meters (w) x 32.50 meters (d)	Not Allowed	813.00 sq. meters 25.00 meters (w) x 32.50 meters (d)

Note:

* Suggested minimum lot sizes, lot dimensions, types and restrictions for Commercial 3 (C-3) lots may also apply to Industrial (I), General Institutional (GI) and Cultural (C) Uses or Occupancies.

F. BASEMENTS

1. Maximum Configuration of Basement Levels

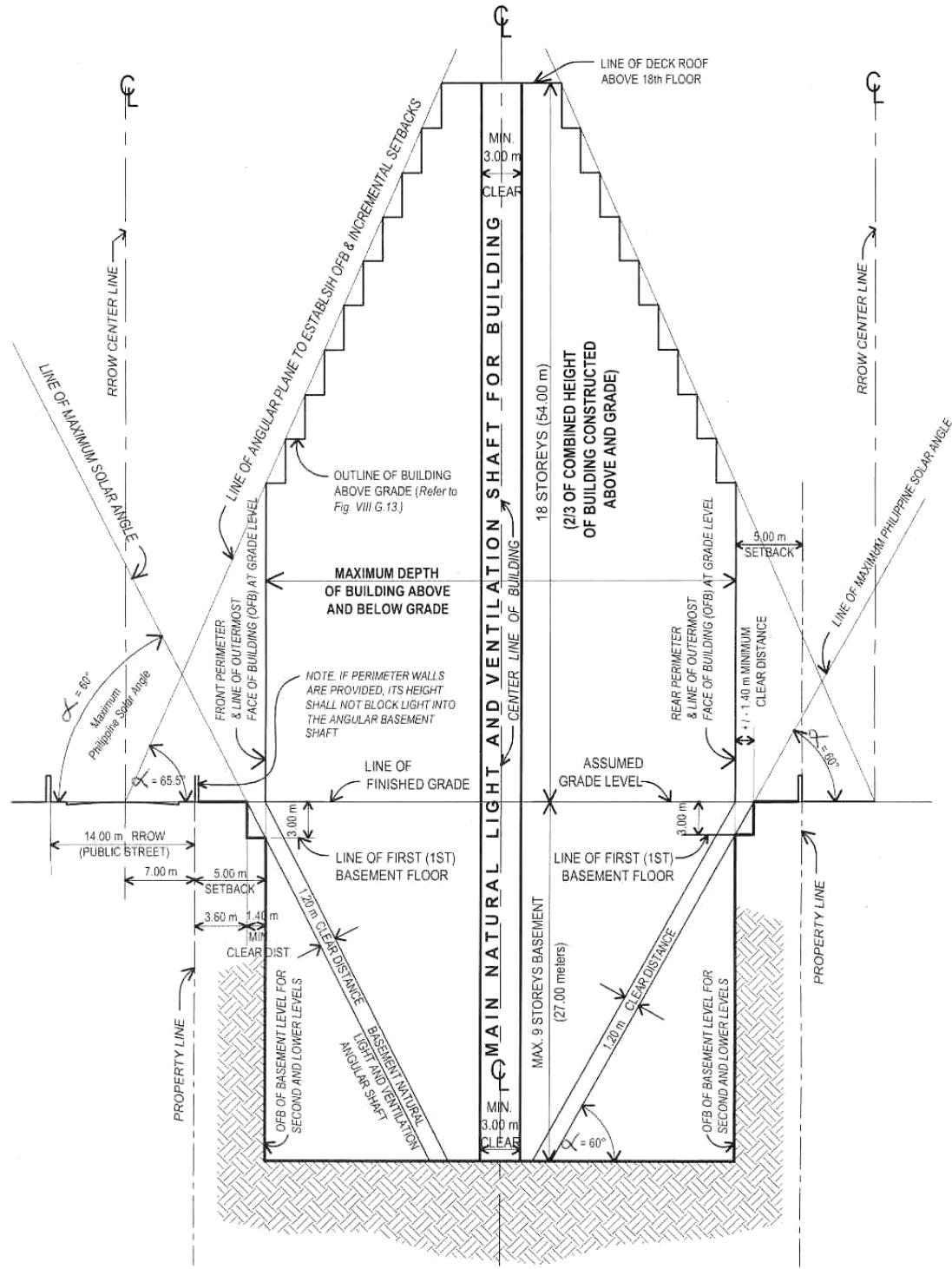
While basements may be developed for medium to very high density residential, commercial, institutional and mixed-use developments, its planning, design and construction shall observe the following limitations:

- a. The **minimum** road right-of-way (RROW) width that services the lot on which the basement can be constructed should be at least 10.00 meters wide;
- b. For basements to be allowed, the prescribed setbacks and yards must be satisfied for the building/structure above grade inasmuch as the very same setbacks shall apply below grade to determine the maximum depth or width of the basement level;
- c. If the Code prescriptions for introducing natural light and ventilation into all basement levels are first satisfied (refer to **Fig. VIII.G.23.**), the maximum depth of the basement can then be made equal to one-half of the height of the building above grade; if the prescriptions for natural lighting and ventilation are satisfied, the basement depth can therefore be as much as one-third of the combined height of the building to be constructed above grade and below grade;
- d. The center portion of all basement levels shall be reserved for the satisfaction of the basement level may extend by a minimum clear distance of 1.40 meters from the outermost face of the building (**OFB**) at grade level;
- e. The **OFB** at the second and lower basement levels shall follow the line of the **OFB** at grade level; and
- f. All drainage structures below grade shall not exceed the **OFB** below grade.

2. Minimum Provisions for Natural Lighting and Ventilation at Basement Levels

If basements are to be developed, the following minimum provisions for natural light and ventilation shall be satisfied:

- a. A primary or main natural light and ventilation shaft (vertical) with a clear distance of at least 3.00 meters shall be located at the center of the building and shall traverse the entire combined height of the building above and below grade; (refer to **Fig. VIII.G.23**)
- b. Secondary or support natural light and ventilation shaft/s (angular) with a clear distance of at least 1.20 meters shall emanate from the front and rear perimeters of the building and shall traverse the entire depth of the basement; the angular shaft/s shall be at an angle of 60° from the horizontal, consistent with the **maximum** Philippine solar angle; separate angular shafts emanating from the side perimeters of the building are encouraged; and
- c. Both the vertical and angular shafts shall only be used for natural air and light intake and shall not be used for any form of exhaust or air exchange to keep the temperature inside the shafts at a minimum.



MAXIMUM BASEMENT CONFIGURATION AND MINIMUM NATURAL VENTILATION PROVISIONS FOR BASEMENT CONSTRUCTION

FOR A C-3 BUILDING ALONG 14.00 m RROW

Figure VIII.G.23.

Annotation: The diagonal light shafts through the basement levels consist of imaginary lines of available natural light i.e. not an actual diagonal light shaft. The diagonal lines partly represent natural light-connected grated openings on the basement floors.

G. DESIGN OF PUBLIC BUILDINGS/STRUCTURES

1. General

- a. Public buildings/structures are permanent edifices owned by the government, whether national or local, its agencies, including government-owned and/or controlled corporations.
- b. Design of public buildings/structures shall conform to the applicable provisions of the preceding rules and regulations. Aside from being logically functional and structurally sound, should promote, enhance and express the aesthetic presentability, customs and traditions, socio-economic values environmental quality and cultural heritage of the region concerned towards evolving a distinct Filipino Architecture.
- c. The architectural character of public buildings/structures must fully express the nature of their function, use or occupancy and should reflect their identity as public buildings/structures compatible with their total macro and microenvironment.
- d. Public buildings/structures should be designed for permanence but with maximized flexibility to allow for future adjustments in their uses/occupancies.
- e. Use of indigenous and/or locally manufactured-produced materials such as marble, stone, adobe, clay tiles, wood, coco wood, *kapis* shells, should be maximized unless their production or usage are banned or regulated by the government to promote the efforts to conserve natural resources.
- f. Use of natural light and ventilation by means of proper orientation, cross ventilation, convection, sun control devices and the like should be maximized.
- g. Choice of finishes should aim to minimize maintenance costs.
- h. The architectural plan and design must basically reflect the functional manner or spatial utilization and/or the evolving Filipino, Asian or International usage of spaces that need to be projected if required or used, more than just attention to pure forms/images.
- i. Only the use of good to high quality materials, labor, technologies and construction methods within the approved budget, must be specified by its planners and designers to ensure permanence, long continued use and low maintenance cost of public buildings or structures.
- j. Plans and designs of all public buildings must fully comply with all of the planning and design requirements under the **Code** and this **IRR** including the Fire Code of the Philippines (**PD No. 1185**) and the Accessibility Law (**BP Blg. 344**).
- k. Strictly consider proper landscaping analysis and design not only for aesthetics but more so for the prevention of erosion of its site and immediate vicinity, and for ecological balance.
- l. These requirements are not intended to limit the creativity of the designer nor preclude the use of advanced or innovative technology particularly in instances wherein mandated compliance under this Guideline shall present a major difficulty in or hamper the proper execution of the plan, design or architectural concept.

2. Site Selection

- a. Where a project site is yet to be selected, the potential site must be compatible with the project usage. The site should be accessible, and near power, water, sewerage, drainage as well as transportation, communication and solid waste management system for practical and economic considerations.
- b. Site analysis should show an accurate and thorough understanding of the site. It should include, but not limited to, consideration of topography, point of access, existing buildings/structures/utilities/services, trees, soil characteristics, existing and approved land uses, views and vulnerabilities to flooding, erosion, seismic activity or other threats.
- c. The site must be properly and completely described, clearly defining its technical boundaries, showing access thereto such as highway, road or alley and indicating easements, encroachments, approved building lines, proposed road widening, existing buildings/structures, utilities/services and trees. For site on rolling grounds or steep slope, its contour lines must be shown at convenient intervals.

3. Site Development

- a. *Location and Orientation* - Locate and orient the buildings to maximize the use of natural ventilation and lighting and minimize energy consumption within the constraints of the functional requirements, the topography and site configuration. North-south exposure of buildings has the advantage of maximizing the cooling effect of prevailing winds coming from the southeasterly and southwesterly directions. Such exposures minimize the effect of afternoon solar heat at the same time.
- b. *Site Drainage* - Drainage is a basic site design consideration and must be done in conjunction with siting and orientation of buildings, location of parking lots and roads, consideration of topography and compliance with functional site requirements. Parking lots, roads and walks must be graded to assure positive drainage for each major site element and must be coordinated into a total drainage system. Existing drainage ways, if any, should be utilized to retain the original character of the site and to avoid unnecessary earthwork.
- c. *Grading Design* - Balance the cut and fill for the entire site as closely as possible to eliminate the need for hauling earth on or off the site. If topography for areas required for parking, roadways and other site features require cut and fill, selection of finished elevations for backfilling of the entire site should be well studied and appropriate.
- d. *Vehicular and Pedestrian Access and Circulation* - Access and circulation patterns to and within the site must be studied in the process of site planning. Easy and direct access and smooth circulation should be provided for vehicles and pedestrians including for disabled persons.
- e. *Site Utilities and Services* - Provide adequate underground utilities and services such as concrete or masonry trench with retractable covers for maintenance and avoid diggings of new roads. The trench alignments shall be coordinated with paving of roads and landscape, including future extensions, to avoid conflicts with these site elements. Provide most economical run, and minimize the possibility of utility relocation. Coordinate the location of underground site utilities and services such as power, water supply, sewerage communications and drainage systems to reduce the possibility of utility/service crossing and contamination.

(emphases, underscoring and annotations supplied)
Rule IX follows

RULE X - BUILDING PROJECTION OVER PUBLIC STREETS

SECTION 1001. General Requirements

1. No part of **any building** or structure or any of its appendages, shall project beyond the building line except as provided herein.
2. The projection of any structure or appendage over a public property shall be the distance measured horizontally from the property line to the outermost point of the projection.

SECTION 1002. Projection into Alleys or Streets

1. No part of any structure or its appendage shall project into any alley or street, national road or public highway except as provided in the **Code**.
2. Footings located at least 2.40 meters below grade along national roads or public highway may project not more than 300 millimeters beyond the property line provided that said projection shall not obstruct any existing utilities/services such as power, water, sewer, gas, communication, and drainage lines, etc, unless the owner concerned shall pay the corresponding entities for the rerouting of the parts of the affected utilities.
3. Foundations may be permitted to encroach into public sidewalk areas to a width not exceeding 500 millimeters; provided that the top of the said foundation is not less than 600 millimeters below the established grade; and provided further, that said projection shall not obstruct any existing utilities/services such as power, water, sewer, gas, communication and drainage lines, etc., unless the owner concerned shall pay the corresponding entities for the rerouting of the parts of the affected utilities.

SECTION 1003. Projection of Balconies and Appendages Over Streets

1. The extent of any projection over an alley or street shall be uniform within a block and shall conform to the limitations set forth in Table X.1. as shown below:

TABLE X.1. Projection of Balconies and Appendages

Width of Streets	Total Projections
Over 3.00 meters but less than 6.00 meters	.60 meter
6.00 meters to less than 10.00 meters	.90 meter
10.00 meters to less than 11.00 meters	1.00 meter
11.00 meters to less than 12.00 meters	1.10 meters
12.00 meters to less than 13.00 meters	1.30 meters
13.00 meters to less than 14.00 meters	1.40 meters
14.00 meters or over	1.50 meters

2. The clearance between the established grade of the street and/ or sidewalk and the lowest under surface of any part of the balcony shall not be less than 3.00 meters.
3. In case the projection is a neon sign and the like, the same shall be in accordance with Rule XX - Signs.

SECTION 1004. Arcades

1. Whenever required by existing building and zoning regulations, arcades shall be constructed on sidewalks of streets. The width of the arcade and its height shall be uniform throughout the street provided that in no case, shall an arcade be less than 3.00 meters above the established sidewalk grade. (*Fig. X.1.*)
2. Arcaded pedestrian walkways shall have a clear height of 3.00 meters. (*Fig. X.1.*)
3. Driveways crossing arcaded pedestrian walkways shall be at the same level with that of the arcades for the safety of the pedestrians. (*Fig. X.2.*)

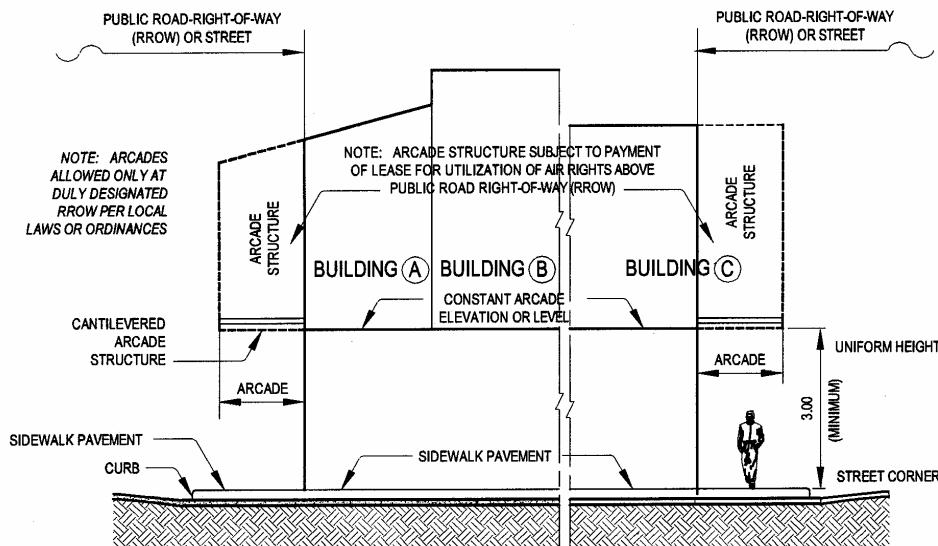


Figure X.1.

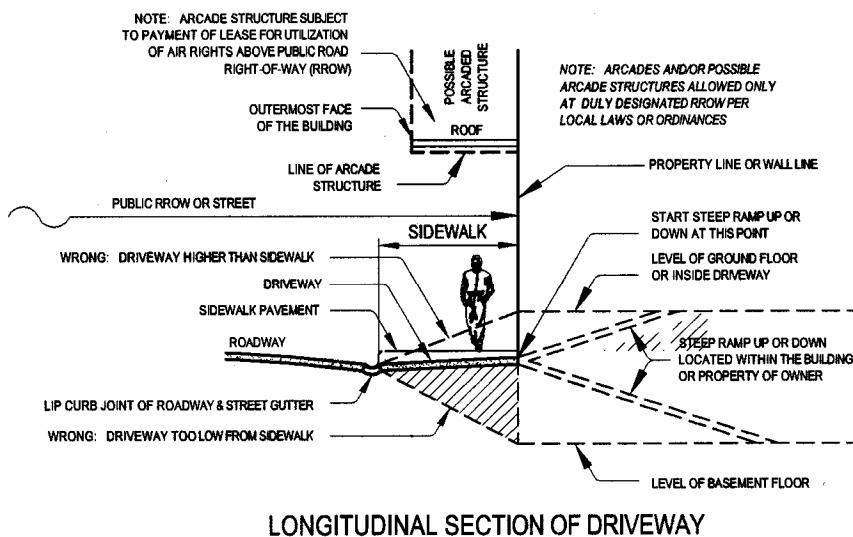


Figure X.2.

ARCADES

Annotation. There should be no hanging signs, projecting signs nor ground signs within the entire length of the arcade area. Signs should be above, part of or above the storefront windows. All doors must swing inward to prevent accidents.

SECTION 1005. Canopies (Marquees)

1. *Canopy or Marquee* is a **permanent** roofed structure above a door attached to and supported by the building and projecting over a wall or sidewalk. This includes any object or decoration attached thereto.
2. *Projection and Clearances.* The horizontal clearance between the outermost edge of the marquee and the curb line shall be not less than 300 millimeters. The vertical clearance between the pavement or ground line and the undersurface of any part the marquee shall not be less than 3.00 meters.
3. *Construction.* A marquee shall be constructed of incombustible material or materials of not less than two- hours fire- resistive construction. It shall be provided with necessary drainage facility.
4. *Location.* Every marquee shall be so located as not to interfere with the operation of any exterior standpipe connection or to obstruct the clear passage from stairway exits from the building or the installation or maintenance of electroliers.

SECTION 1006. Movable Awnings or Hoods

1. *Awning* is a movable shelter supported entirely from an exterior wall of a building and of a type which can be retracted, folded, or collapsed against the face of a supporting building.
2. *Clearance.* The horizontal clearance between the awning and the curb line shall not be less than 300 millimeters. The vertical clearance between the undermost surface of the awning and the pavement or ground line shall be not less than 2.40 meters. Collapsible awnings shall be so designated that they shall not block a required exit when collapsed or folded.

SECTION 1007. Doors, Windows, and the Like

Doors, windows, and the like less than 2.40 meters above the pavement or groundline shall not, when fully opened or upon opening, project beyond the property line except fire exit doors.

SECTION 1008. Corner Buildings with Chaflans

1. **Every corner building** or solid fence on a public street or alley less than 3.60 meters in width shall be **truncated** at the corner. The face of the triangle so formed shall be at right angle to the bisector of the angle of the intersection of the street lines, provided, that in **no** case shall the length of the chaflan be less than 4.00 meters. (*Fig. X.3.*)
2. Corner buildings or solid wall fences to be built abutting property lines on corners of public alley or street intersections shall be provided with chaflans to afford a clear view.
3. If the building is arcaded, **no** chaflan is required notwithstanding that the width of the public street or alley is less than 3.60 meters. (*Fig. X.4.*)

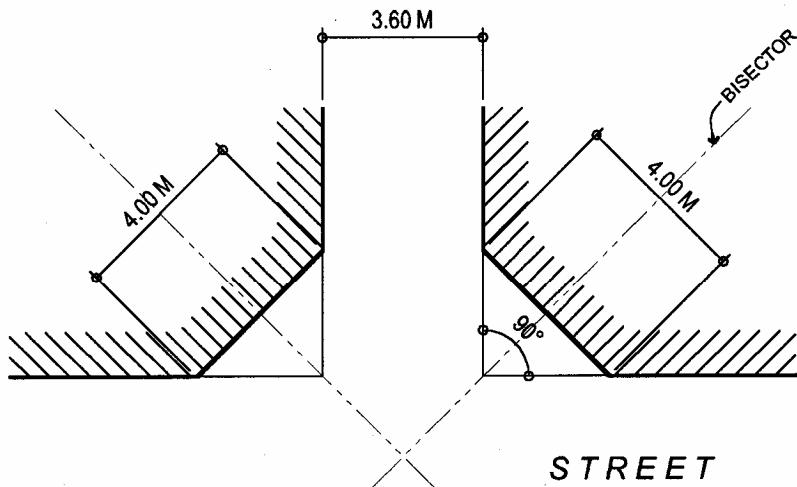


Figure X.3.

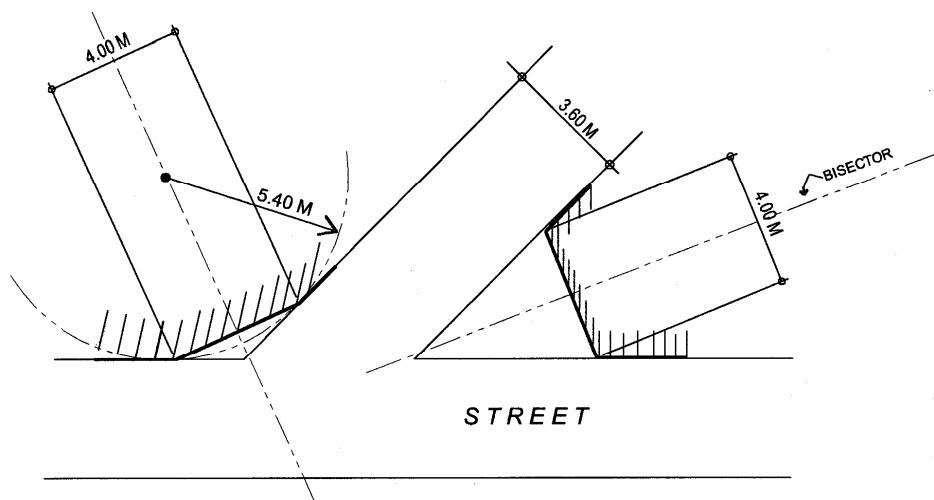


Figure X.4.

CHAFLANS

Annotation. The foregoing examples assume that the building faces are flush with the property lines i.e. no setbacks provided. These examples are thus only possible if the arcades to be introduced are either within the property line or are within the RROW i.e. leases of the air rights for the arcade structure (or the spaces directly above the arcade) shall be absolutely necessary.

(emphases, underscoring and annotations supplied)

Rule XI follows

RULE XI - PROTECTION OF PEDESTRIANS DURING CONSTRUCTION OR DEMOLITION

SECTION 1101. General Requirements

1. **No person** shall use or occupy a street, alley or public sidewalk for the performance or work covered by a building permit except in accordance with the provisions of this Rule.
2. **No person** shall perform any work or any building/structure adjacent to a public way in general use for pedestrian travel, unless the pedestrians are protected as specified in this Rule.
3. Any material, building/structure temporarily occupying public property, including fence, canopies and walkways, shall be adequately lighted between sunset and sunrise.

SECTION 1102. Storage in Public Property

1. Materials and equipment necessary for work to be done under a permit when placed or stored on public property shall not obstruct free and convenient approach to and use of any fire hydrant, fire or police alarm box, utility box, catch basin, or manhole and shall not interfere with any drainage of any street or alley, gutter, and with the safe and smooth flow of vehicular and pedestrian traffic.
2. Materials to be stored at or near construction sites shall be piled or stacked in an orderly manner to avoid toppling over or being otherwise displaced. No materials shall be piled or stacked higher than 1.80 meters, except in yards or sheds intended especially for storage. When piles exceed 1.20 meters in height, the material shall be so arranged that the sides and ends of the piles taper back.

SECTION 1103. Mixing Mortar on Public Property

The mixing of mortar, concrete, or similar materials on public streets shall not be allowed.

SECTION 1104. Protection of Utilities

1. All public or private utilities and services above or below the ground shall be protected from any damage by any work being done under the permit.
2. The protection shall be maintained while such work is being done and shall not obstruct the normal functioning of any such utility.
3. Temporary Light and Power
 - a. Temporary wiring for light, heat and/or power shall be adequately protected against mechanical or over-current failures. All conductive materials enclosing fixed or portable electric equipment, or forming a part of such equipment, shall be properly grounded.
 - b. Temporary electric service poles shall be self-supporting or adequately braced or guyed at all times.

SECTION 1105. Walkway

1. When the **Building Official** authorizes a sidewalk to be fenced or closed, or in case there is no sidewalk in front of the building/structure site during construction or demolition, a temporary walkway of not less than 1.20 meters shall be provided.
2. Such walkway shall be capable of supporting a uniform live load of 650.00 kilogram per sq. meters.

3. Durable wearing surface shall be provided and must remain safe throughout the construction period.
4. Where the sidewalk is permitted by the **Building Official** to be fully occupied and fenced-off or enclosed, a temporary walkway adjacent to the curb line shall be required. Where the street has no sidewalk, a temporary walkway adjacent to the street line not less than 600 millimeters wide shall be provided. Where the RROW is 5.00 meters or less, no temporary walkway shall be allowed.
5. Where only partial occupancy and fencing-off of the sidewalk is necessary, a temporary walkway will not be required provided that a width of at least 600 millimeters of the sidewalk with protective railing on road side shall be left open for the use of pedestrians.

SECTION 1106. Pedestrian Protection

1. Where the walkway occupies part of the roadway or is adjacent to an excavation, protective railings on the street side or on the side of the excavation shall be required.
2. Railings where required, shall be built substantially strong and sturdy and shall not be less than 1.00 meters in height.
3. Fences

Fences shall entirely enclose the construction/demolition site and shall be erected on the building side of sidewalks or walkways and shall be made of approved materials (e.g. G.I. sheet, wooden boards and/or planks, plywood or *Lawanit, sawali*), **not** less than 2.40 meters in height above the curb line. Fences shall be built solid for its full length except for such openings as may be necessary for proper execution of the work. Such openings shall be provided with doors, which shall be kept closed at all times except when in actual use.

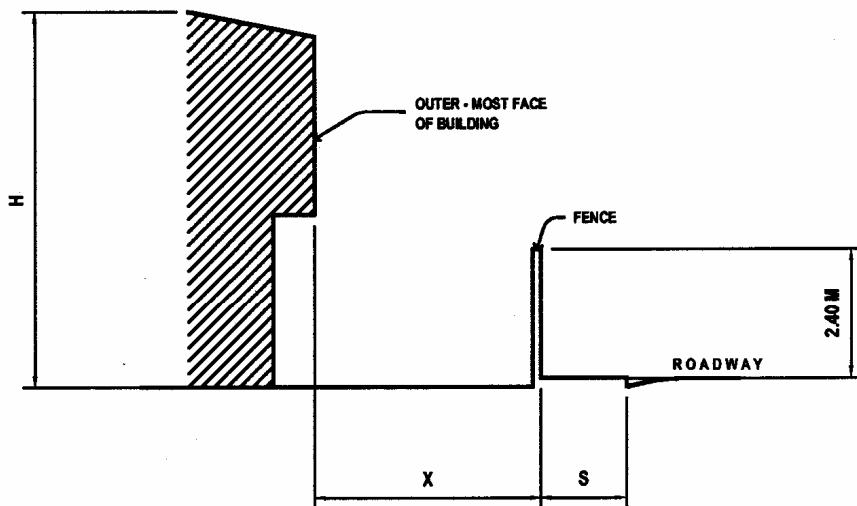
- a. When the horizontal distance between the outermost face of the **building**/structure area and the inner edge of the sidewalk is more than one-half (1/2) the height of the building, a 2.40 meters fence is required. (**Figure XI.1.**)
- b. When the horizontal distance between the outermost face of the building and the inner edge of the sidewalk is equal to or less than one-half (1/2) the height of the building, a canopy shall be required in addition to a fence. (**Fig. XI.2.**)

4. Canopies
 - a. The protective canopy shall have a clear unobstructed height of 2.40 meters above the walkway and shall be made of sufficient strength and stability to sustain safely the weight of materials that may be placed thereon, and to withstand shocks incident to the handling of such materials or their preparation for use, and accidental jars from trucks passing or delivering materials.
 - b. When the canopy is used for the storage of materials or for the performance of work of any kind, substantial railings not less than 1.00 meters high and solid toe boards **not** less than 300 millimeters high shall be placed along the street side and ends of the canopy. The canopy shall be capable of safely sustaining a load of 4800 Pascal or the intended load to be placed thereon, whichever is bigger.
 - c. The deck flooring of a canopy shall consist of planking not less than 50 millimeters in thickness, closely laid. All members of the canopy shall be adequately braced and connected to resist displacement of members or distortion of the framework.

- d. Canopies shall be constructed solid for its entire length except for such openings as may be necessary for loading purposes. Such openings shall be kept closed at all times except during actual loading operation.
- e. Unless the top deck of the canopy is built solidly against the face of the building/structure to be constructed/demolished, the vertical face of the canopy supports next to the building shall be solidly fenced throughout, except for such openings as may be necessary for the execution of work. Such openings shall be provided with sliding or swinging gates which shall be kept closed at all times except when in actual use. (**Figs. XI.3., XI.4., XI.5., XI.6.**).
- f. The street side of the canopy shall be kept open for a height of not less than 2.40 meters above the curb. The underside of the canopy shall be properly lighted at night with not less than 100-Watts bulb every 6.00 meters of its length and at each change of grade or elevation of the sidewalk surface.
- g. When a wall of the building abuts or fronts a street, fans or catch platforms shall be erected along that wall at the level of the first floor of the building above the street level. Fans or catch platforms shall be erected at the level of other floors of the building as may be necessary to prevent nuisance from dust or danger from falling debris or materials.
- h. When the horizontal distance between the outermost face of the building and the outer edge of the sidewalk is less than one-half (1/2) the height of the building, a protective device such as a net or screen extending from the uppermost part of the construction/demolition to ground level shall be required in addition to a fence and canopy. (**Fig. XI.7.**)
- i. Wherever required, protective netting/covering shall be of approved and substantially strong material such as 2 millimeters diameter G.I. wire, 38 millimeters mesh nylon net, or canvas.
- j. Where a wall of the building abuts or fronts a street, dust screens shall be erected to cover the entire wall so as to prevent nuisance from dust.
- k. For medium and high-rise buildings six (6) storeys and higher, all protective and safety devices/facilities shall be completely installed including safety belts, safety nets and canopies for the safety of workers, pedestrians, nearby residents and motorists.

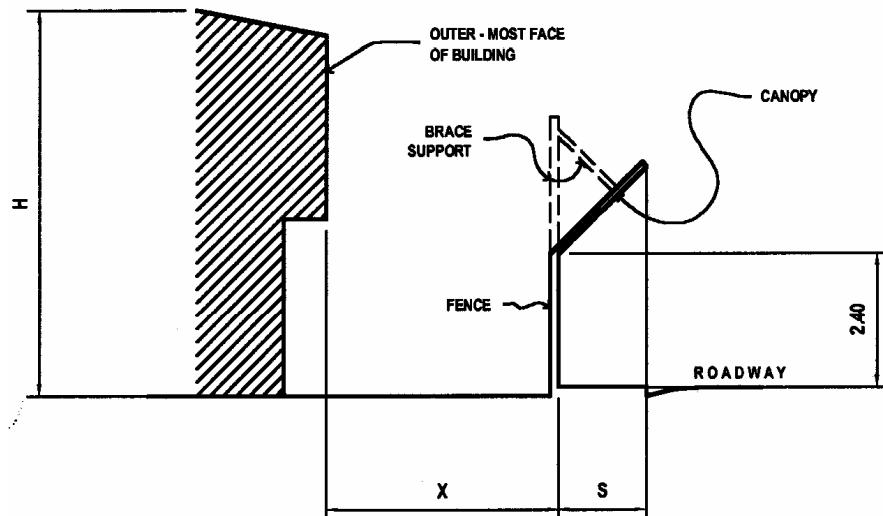
5. Warning Signs and Lights

- a. At every construction/demolition site, warning signs shall be conspicuously posted around the property. Warning signs shall be adequately illuminated at night for the protection of unwary pedestrians.
- b. All entrances/exits to and from the construction/demolition site shall be kept closed at all times except during actual passage of men, materials or equipment.
- c. All warning signs and lights shall be properly maintained even when operations are not in progress.



WHEN: $X > H/2$ ONLY A FENCE IS REQUIRED

Figure XI.1.



WHEN: $X \leq H/2$ FENCE AND CANOPY IS REQUIRED

Figure XI.2.

**PROTECTION OF PEDESTRIANS,
NEARBY RESIDENTS AND THE PUBLIC
DURING CONSTRUCTION AND DEMOLITION**

Annotation. The necessary lights, warning devices and safety barriers should be properly installed, operated and maintained in the areas to be used by the general public during construction.

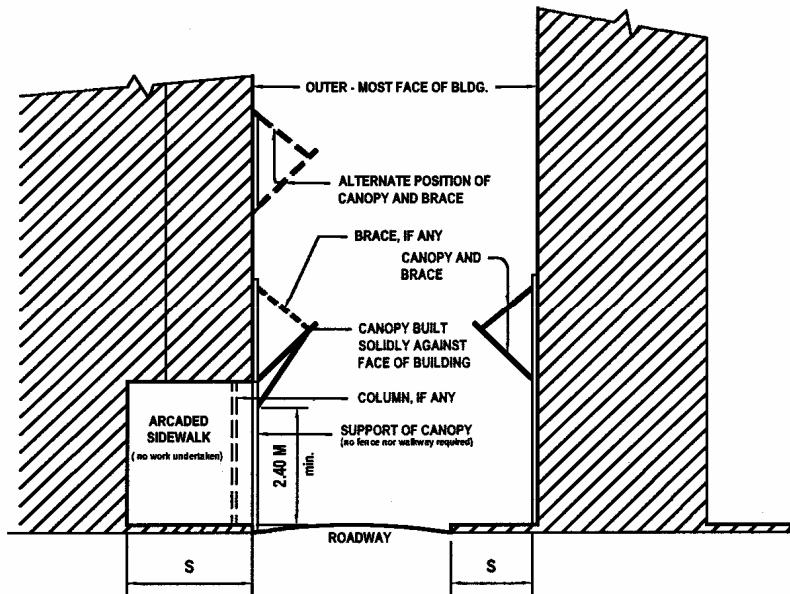
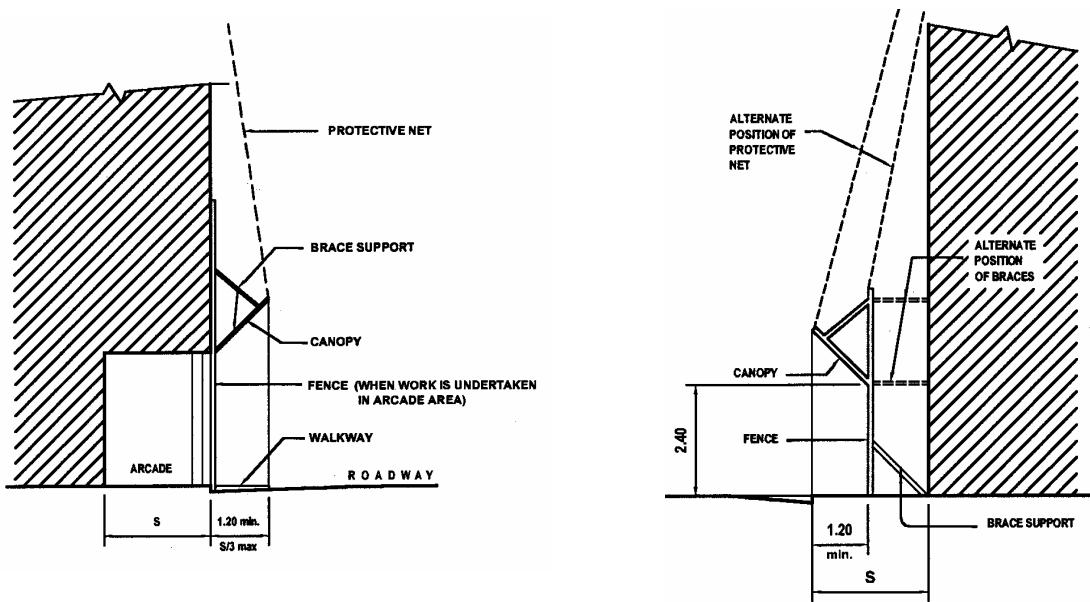


Figure XI.3.



**FULL OCCUPANCY
OF SIDEWALK**

Figure XI.4.

**PARTIAL OCCUPANCY
OF SIDEWALK**

Figure XI.5.

PROTECTION OF PEDESTRIANS, NEARBY RESIDENTS AND THE PUBLIC DURING CONSTRUCTION AND DEMOLITION

Annotation. For narrow roadways (along which tall buildings shall be constructed), it may be best to provide a steel mesh (with protective net) to catch falling debris. Also, the necessary lights, warning devices and safety barriers should be properly installed, operated and maintained in the areas to be used by the general public during construction.

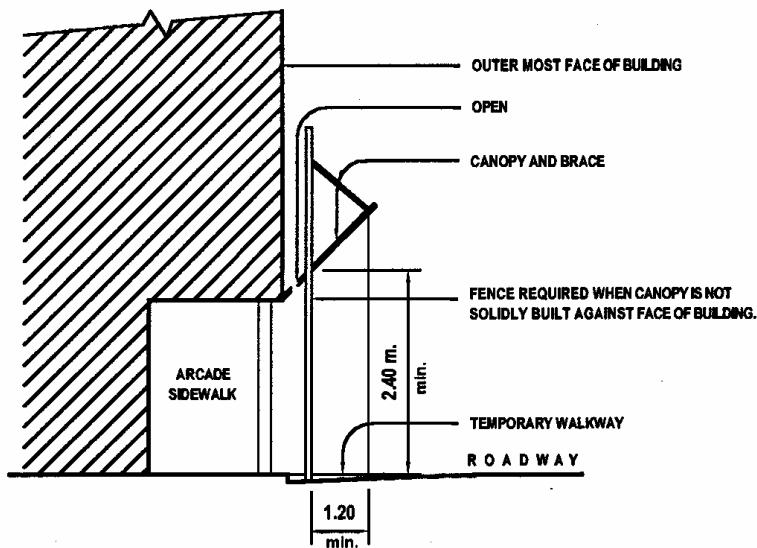


Figure XI.6.

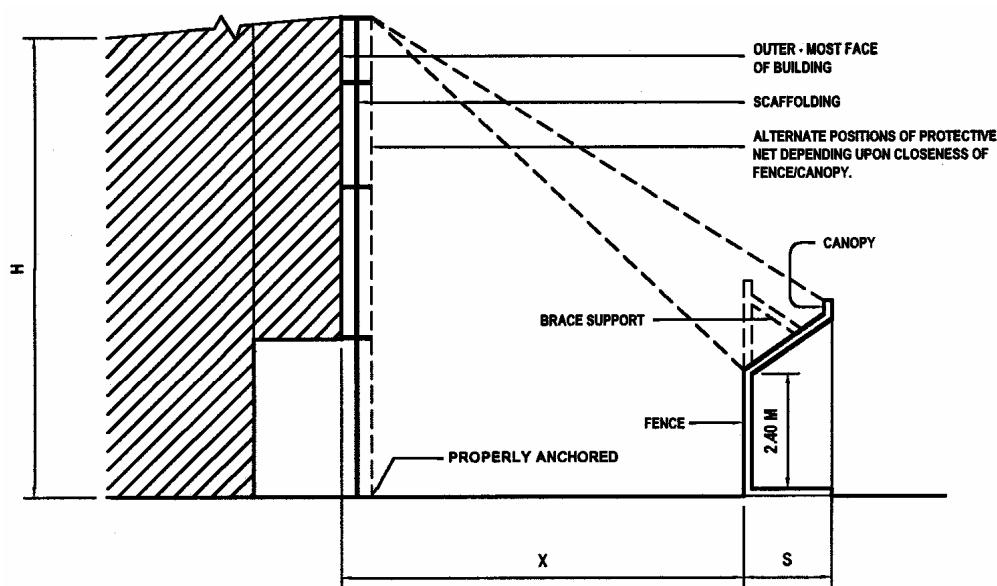


Figure XI.7.

PROTECTION OF PEDESTRIANS, NEARBY RESIDENTS AND THE PUBLIC DURING CONSTRUCTION AND DEMOLITION

Annotation. The necessary lights, warning devices and safety barriers should be properly installed, operated and maintained in the areas to be used by the general public during construction.

- d. All areas of danger in demolition operations shall be properly enclosed and danger signs posted. Watchmen shall be provided to warn workers of impending dangers and all unauthorized persons shall be excluded from places where demolition is in progress.

SECTION 1107. Maintenance and Removal of Protective Devices

1. Maintenance. All protective devices shall be properly maintained in place kept in good order for the entire length of time pedestrians may be endangered.
 - a. Average Light Intensity and Illumination
 - i. All parts of buildings/structures under construction/demolition, and all sheds, scaffolds, canopied walkways, work or storage areas, and equipment used in connection with such operations shall have sufficient light to insure safety and protection of life and property. In passageways, stairways and corridors, the average light intensity measured at floor level shall be not less than 200 LUX.
 - ii. At locations where tools and/or machinery are used, the average light intensity measured at floor level shall be not less than 500 LUX. Natural or artificial illumination shall be provided in such a manner that glare and shadows will not adversely affect the safety and protection of the public, workers and property.
 - b. Welding and Cutting
 - i. Gas welding and cutting and arc welding in construction/ demolition operations shall be restricted to experienced workers accredited by the Technical Education Skills Development Authority (**TESDA**). Suitable goggles, helmets and gloves shall be provided for and worn by workers engaged in gas welding or cutting or arc welding. Incombustible shields shall be provided to protect the workers when exposed to falling hot metal oxide.
 - ii. Gas welding or cutting or arc welding shall not be done above pedestrians and workers. When unavoidable, an incombustible shield shall be provided between the work and workers below. A watchman shall be stationed to give warning at places where pedestrians and workers, in the course of their activity, are likely to pass under a gas welding or cutting or an arc welding operation.
 - iii. Gas welding or cutting shall not be carried out in any place where ample ventilation is not provided or from which quick escape is difficult. When unavoidable, workers engaged in such work in confined spaces shall be allowed frequent access to fresh air. A relief worker shall be stationed close at hand to assist the worker in case of accident and to shut off the gases.
 - iv. Tanks of fuel gas shall not be moved or allowed to stand for any extended period when not in use unless the caps of such tanks are in place.
 - v. Suitable cradles shall be used for lifting or lowering oxygen or fuel tanks, to reduce to a minimum the possibility of dropping tanks. Ordinary rope slings shall not be used.
 - vi. Tanks supplying gases for welding or cutting shall be located at no greater distance from the work than is necessary for safety.
 - vii. Such tanks shall be securely fastened in place and in upright position. They shall be stored or set in place for use so that they are not exposed to the direct rays of the sun or to high temperature.
 - viii. Before steel beams or other structural shapes or elements of construction are cut by means of a gas flame, they shall be secured by cables or chains to prevent them from dropping or swinging.

- ix. Where, in the course of demolition work, steel work or ironwork is being cut, released or dismantled, all necessary precautions shall be taken to prevent danger from sudden twist, spring or collapse.
- c. Special Typhoon Precautions
- i. Whenever a typhoon is expected to pass at or near the construction site, all construction materials and equipment shall be secured against displacement by wind forces.
 - ii. Construction sheds, construction materials and equipment shall be secured by guying, shoring, or by tying down.
 - iii. Where a full complement of personnel is employed or engaged for such protection purposes, normal construction activity or uses of materials or equipment may continue, allowing such reasonable time as may be necessary to secure such materials and equipment before winds of gale force are anticipated, in accordance with warnings or advisories issued by the Philippine Atmospheric Geophysical Astronomical Services Administration (**PAGASA**).
- d. Hoisting Machinery
- i. Every hoisting engine shall be provided with adequate brakes capable of holding the maximum load at any point of travel.
 - ii. Hoisting machinery shall be enclosed to exclude unauthorized persons. If placed outside the building, further protection against falling objects shall be provided.
 - iv. Guards shall be provided with exposed gears and other moving parts and around hoisting cables at all points to prevent workers from tripping or getting their clothing caught.
 - v. Ample room shall be provided around hoisting engines, motors or machineries or apparatus to allow the free and safe movement of the operators.
 - vi. When hoisting machinery is set on an elevated platform, such platform shall be of substantial and sturdy construction. Guardrails and toe boards shall be provided along all open sides of such platform.
 - vii. Electrical machinery and equipment to be used for construction work shall be installed and operated in accordance with the Philippine Electrical Code.
 - viii. Steam boilers used in construction work shall be installed, equipped and maintained in accordance with the Philippine Mechanical Code.
 - ix. A tag line or guide rope shall be used on all loads being hoisted or lowered.
- e. Platform Hoists
- i. Platform hoists for the handling of materials in buildings under construction shall have the car substantially constructed and provided with covers, either solid or wire mesh.
 - ii. If suitable overhead protection is provided, the covers may be omitted.
 - iii. Hoists shall be equipped with a broken-rope safety device.

- iv. Where wheelbarrows or buggies are used for handling material on platform hoists, cleats shall be nailed to the platform to fix the proper position so that handles shall not project beyond platform edges.
 - v. Supports for the overhead sheave of the hoist shall be designed to carry two (2) times the weight of the hoist and its maximum load.
- f. Hoist Towers
- i. Hoist towers erected in connection with construction work shall be substantially constructed. All members shall be so proportioned that the stresses shall not exceed those specified for the material when carrying the dead load of the tower plus two times the weight of the platform or bucket or its maximum load.
 - ii. Every hoist tower shall rest on a sufficiently solid foundation to prevent injurious settlement or distortion of its framework.
 - iii. The base of every hoist tower shall be screened or otherwise protected on all sides to a height of not less than 1.80 meters.
 - iv. Every hoist tower shall be secured in not less than four (4) directions against swaying or tipping at intervals of not more than 10.00 meters in its height, by steel cable guys adequately anchored or by other satisfactory means.
 - v. Such towers which are constructed adjacent to buildings shall be secured to the building frame at each floor as the construction progresses.
 - vi. Hoist towers erected within the building, but not occupying the entire opening through which they pass, shall be completely enclosed on all sides and shall be provided with doors at the unloading points unless the platform hoist is solidly enclosed on all sides to the height to which material is to be loaded or unloaded.
 - vii. Landing platforms in hoist towers or platforms connecting a hoist tower to a building or other structure shall be provided with guardrails and toe boards.
- g. Derricks and Cranes
- i. Derricks shall be so designed and assembled that no part shall be stressed beyond the safe working stress for the material under its maximum rated load in any possible position. Such maximum load shall be conspicuously posted on each derrick.
 - ii. The foot-block of every derrick shall be firmly secured against motion in any direction.
 - iii. Guy derricks shall have the top of the mast held by not less than six (6) steel guy cables secured by firm anchorages and so placed that the angle of the guy with the mast shall be as large as possible.
 - iv. The moving parts of derricks and cranes shall be kept well lubricated. All parts shall be inspected at least every other day.
 - v. Use and operation of cranes shall be in accordance with Rule XIII.
 - vi. In the operation of cranes and similar devices, a standard signal system shall be used and all men assigned to the operation of such equipment shall be fully instructed on the signals.

h. Cables, Ropes, Chains and Blocks

- i. All ropes and cables used in connection with scaffolds, derricks and hoisting apparatus shall be tested before being put to use and at least once every thirty (30) days while in use, to insure their safety and suitability for the purpose.
 - ii. Cables, ropes, chains and blocks shall be of such size that the maximum load supported by them will not exceed one-sixth (1/6) of their breaking strength.
 - iii. Blocks designed for use with abaca ropes shall not be used for steel cables.
 - iv. Blocks used at or near floors or in other exposed places to change the direction of cables shall be enclosed or otherwise effectively guarded.
 - v. Chains shall not be used for slings, bridles or other similar purposes, but shall be restricted to only a straight pull.
 - vi. Hooks shall not be used for hoisting buckets, cages or skips.
- i. Ladders and Temporary Stairways
- i. Except where either permanent or temporary stairways or runways are required, ladders shall be provided to give access to all floors, stagings or platforms where work is being done more than five (5) storeys above ground or above a permanent or temporary floor.
 - ii. Ladders shall not be extended by joining two (2) or more together. No single ladder shall exceed 6.00 meters in length. When greater heights are to be reached, intermediate platforms shall be erected.
 - iii. Ladder landings shall be at least 1.20 meters square and equipped with handrails and toe boards.
 - iv. Ladder rungs shall be spaced uniformly and as near to 300 millimeters as practicable.
 - v. Ladders leading to floors, stagings or platforms shall extend at least 900 millimeters above the level of such floors, stagings or platforms.
 - vi. When used temporarily in place of stairways or runways, ladders serving traffic in both directions simultaneously shall be at least 1.00 meters wide. If separate ladders are provided for going up and coming down, they shall be marked "UP" and "DOWN" respectively at each floor and platform level.
 - vii. All ladders, when in use, shall be set up in a manner to be secured and to prevent slipping. Ladders, except stepladders or other self-supporting ladders, shall be securely fastened to a permanent support at the top, and if necessary, at the bottom, and braced to prevent swaying, bending or shaking.
 - viii. Ladders shall not be placed or used in shafts of operative elevators or hoists except by workers engaged in the erection, construction, alteration or repair of any such shafts, hoistways or equipment.
 - ix. Ladders shall not be painted, but may be oiled or treated with preservatives so as to permit the detection of faults.

- x. Every ladder shall be inspected by the superintendent or foreman in charge before being put to use on a construction operation and thereafter at least once every thirty (30) days while in continued use.
- xi. Permanent stairways shall be installed in all buildings under construction as soon as conditions will permit.
- xii. When the work on a building has progressed to a height in excess of 18.00 meters and it has not been practicable to install the permanent stairways, at least one temporary stairway shall be provided for the full height and continued upward as rapidly as the work progresses.
- xiii. Stairs and stairways shall be of sufficient strength to support a load of at least 4800 Pascal. All stairways shall be guarded on all open sides with handrails and toe boards.
- xiv. Temporary stairs shall be constructed so that treads and risers are uniform in width and height in any one (1) flight.
- xv. The sum of the height of the two (2) risers and the width of one (1) tread shall be not less than 460 millimeters nor more than 700 millimeters.
- xvi. Temporary stairways shall be not less than 900.00 millimeters wide.
- xvii. Landings shall be not less than 750 millimeters long. No flight of stairs of temporary stairways shall have a vertical rise in excess of 3.60 meters. Whenever necessary, intermediate landings shall be provided.
- xviii. Temporary and permanent stairways shall be adequately lighted.
- xix. Permanent stairs that are to be used during construction and on which treads are to be filled in later shall have wooden treads firmly fitted in place for the full area of the tread.
- xx. The top surfaces of the temporary treads shall be maintained above the tops of the risers or nosings.
- xxi. No door shall open directly onto a flight of stairs, but a landing equal at least the width of the door shall be provided between the door and the stairs.

j. Runways and Ramps

- i. Runways and ramps used in connection with scaffolds or extending from storey to storey or otherwise located and maintained for an extended period of time or for the transfer of bulky material shall be constructed of at least three (3) 25 x 250 millimeters planks laid closely side by side and substantially supported and braced to prevent unequal deflection and springing action.
- ii. Runways and ramps shall have a slope not greater than one is to three (1:3). The total rise of a runway or ramp between landings shall not exceed 1.80 meters.
- iii. When the rise is steeper than 1:3, runways or ramps shall be provided with cleats spaced not more than 20 millimeters apart.
- iv. Runways and ramps having a total rise of more than 1.80 meters, or passing over or near floor openings, high tension wires or other dangerous places, shall be provided with guardrails and toe boards.

h. Scaffolds

- i. Properly constructed scaffolds shall be provided for all works which cannot be done safely by workmen standing on permanent or solid construction, except when such work can be done safely from ladders. All such scaffolds shall be substantially constructed to support at least four (4) times the maximum load, and shall be secured to prevent swaying.
- ii. Planks used in the construction of stationary scaffolds shall be not less than 50 millimeters nominal thickness. Where such planks overlap at the ends, the overlap shall be not less than 150 millimeters. Planks shall be so placed that they cannot tip under the weight of the worker at any point. All nails shall be driven full strength. No nails shall be subject to direct pull.
- iii. Ropes, cables and blocks shall sustain at least six (6) times the maximum loads to which they will be subjected. Where acids are likely to come in contact with them, ropes shall not be used but steel cables properly protected by grease or oil or other effective methods shall be used instead.
- iv. Every scaffold, the platform level of which is more than 1.80 meters above the ground, or above a permanent or temporary floor, other than iron workers' scaffolds and carpenters' bracket scaffolds, shall be provided with guard rails and toe boards extending the full length of the scaffold and along the ends except where ramps or runways connect with them, unless otherwise enclosed or guarded. On suspended, swinging and pole scaffolds, the space between guardrails and toe boards shall be fitted with wire mesh screens securely attached.
- v. Where objects are likely to fall on a scaffold from above, a substantial overhead protection shall be provided not more than 3.00 meters above the scaffold platform, and at doorways, passageways or other points. Where workers must pass under scaffolds, a substantial overhead protection shall be provided.
- vi. No materials or equipment other than required by the workers shall be placed on scaffold platforms.
- vii. Roof brackets, roof scantling, crawling boards and similar forms of supports shall be substantial in construction and securely fastened in place when in use.
- viii. Barrels, boxes or other similar unstable objects shall not be used as supports.
- ix. When used over public sidewalks or other places of public use, scaffolds used for minor building repairs, alterations, or painting, shall be equipped with drop cloths to effectively prevent the falling of paint or debris.
- x. Scaffolds used for sandblasting and guniting operations shall be entirely and effectively enclosed, and the determination of effective enclosure shall be the completed absence of particles of materials of operation in the air at a horizontal distance of 15.0 meters from the point of operation.

k. Temporary Flooring

- i. In buildings of skeleton construction, the permanent floor, except for necessary hoistway openings, shall, when possible, be constructed as the building progresses. There shall be not more than three (3) unfilled floors below the highest permanent floor.

- ii. In buildings of skeleton construction, the entire working floor shall be planked over, except spaces required for raising or lowering materials, and for stairways or ladders. Planks shall not tip under the weight of a worker at any point and secured, so that they cannot slip out of place.
 - iii. In buildings of wood joist construction, the immediate underfloor shall be laid for each floor as the building progresses.
- I. Floor Openings
- i. All floor openings used as hoistways or elevator shaftways shall be protected on all sides, except the side being used for loading or unloading. Protection shall be in the form of barricades or guardrails not less than 900 millimeters high placed not less than 600 millimeters distant at all points from the edges of such openings. If guardrails are used, toe boards shall be provided along the edges of the openings. Sides left open for loading or unloading shall be guarded by similar solid doors or gates.
 - ii. All floor openings used as stairways or for the accommodation of ladders or runways shall be guarded by railings and toe boards.
 - iii. All floor openings shall be protected on all sides by solid barriers or railings with toe boards not less than 900 millimeters high or shall be planked over by temporary construction capable of sustaining safely such loads as are likely to come thereon.
 - iv. Barriers for the protection of openings used as hoistways or for elevators shall be constructed so that workers cannot thrust head, arms or legs through them, and loose materials cannot fall or be pushed into the shaftway.
 - v. Barriers and guardrails around floor openings shall remain in place until permanent enclosures or protection are otherwise provided.
- m. Guardrails and Toe Boards
- i. Guardrails, when required under this Rule, shall have the top rail not less than 900 millimeters with an intermediate rail provided between the top rail and the platform.
 - ii. All guardrails shall have supports not more than 2.40 meters apart, constructed to withstand a horizontal force of 30 kilograms per sq. meters.
 - iii. Toe boards, whenever required under this Rule, shall extend not less than 150 millimeters above the platform level and shall be placed to fit close to the edges of the platform. They shall be adequately secured along the entire length to resist the impact of workers' feet and the shifting of materials.
 - iv. Toe boards of metal shall be not less than 25 millimeters nominal thickness, with supports not more than 1.20 meters apart.
 - v. Toe boards of metal shall be not less than 30 millimeters thick, with supports not more than 1.20 meters apart.
2. Removal. Every protective fence or canopy shall be removed within 30 days after such protection is no longer required as determined by the Building Official.

SECTION 1108. Demolition

1. If the work is of a difficult or dangerous nature, it should be done by a contractor experienced in such work.
2. Before demolition is commenced, notice of intention to proceed should be given to the adjoining owners of the buildings.
3. Before commencing to demolish a building or repair a badly damaged building, shoring, tying, and strutting are necessary to prevent movement.
4. For the purposes of arranging shores, ties, and other security measures, a survey of the existing building and the adjoining owner's building should be made prior to demolition and, where possible, particulars of existing wall foundations and of the subsoil should be obtained.
5. Demolition should be done as much as possible, floor-by-floor.
6. Care should be taken to dispose of debris as it arises. If this is not done, there is a great risk of overloading the floors, which may result in a collapse. All debris arising from demolition should be kept damp by means of spraying water from a hose with a fine spray to prevent dust arising and causing inconvenience to adjoining owners and pedestrians.
7. Fans or catch platforms should be provided over public footways, etc., to protect workmen and occupants of adjoining building and the general public from falling debris during demolition. One fan at the first (1st) floor level should be sufficient for buildings of three (3) storeys. Building of more than three (3) storeys should have additional fans at higher levels, generally at alternate floor levels.
8. Precautions Before Demolition
 - a. Before commencing the work of demolition of a building/structure, all gas, electric, water and other utility meters shall be removed and the supply and service lines disconnected by the corresponding utility/service companies, who should be notified in advance.
 - b. **All** fittings attached to the building/structure and connected to any street lighting system, electrical supply or other utilities shall be removed.
 - c. **All** electric power shall be shut off and all electric service lines shall be cut and disconnected by the power company at or outside the property line.
 - d. No electric cable or other apparatus, other than those especially required for use in connection with the demolition work, shall remain electrically charged during demolition operations. When it is necessary to maintain any power, water, gas, or other utility/service lines during the process of demolition, such lines shall be temporarily relocated and protected with substantial covering to the satisfaction of the utility/service company concerned.
 - e. All necessary steps shall be taken to prevent danger to persons arising from fire or explosion from leakage or accumulation of gas or vapor, and from flooding from uncapped water mains, sewers and/or culverts.
 - f. All entrances/exits to and from the building shall be properly protected so as to prevent any danger to persons engaged in the demolition work using such entrances/exits in the performance of their works.
 - g. Glazed sashes and glazed doors shall be removed before the start of demolition operations.

9. Chutes

- a. Chutes for the removal of materials and debris shall be provided in all parts of demolition operations, which are more than 6.00 meters above the point from which material is to be removed. Chutes shall be so situated and constructed so as not to pose any danger to the public or to workmen.
- b. Chutes shall be completely enclosed and shall be equipped, at intervals of 6.00 meters or less, with substantial stops to prevent descending materials from attaining dangerous speeds. Proper tools shall be provided and kept available to loosen materials or debris jammed in the chute. No materials or debris shall be dropped from any part of a building under demolition to any point outside the walls of the building except through properly enclosed wooden or metal chutes.
- c. Chutes which are at an angle of more than 45° from the horizontal shall be completely enclosed on all four (4) sides, except for openings at or about floor level at each floor, for the receiving of materials or debris.
- d. Chutes at an angle of less than 45° with the horizontal may be left open on the upper side. However, where such a chute discharges into another chute steeper than 45° with the horizontal, the top of the steeper chute shall be covered at the junction point of the two (2) chutes to prevent the spillage of materials or debris.
- e. Openings into which materials or debris are dumped at the top of a chute shall be protected by a substantial guardrail extending at least 1.80 meters above the level of the floor.
- f. At chute openings where materials or debris are dumped from wheelbarrows, a toe board or bumper not less than 150 millimeters high and 50 millimeters nominal thickness shall be provided.
- g. Any space between the chute and edges of floor openings through which the chute passes shall be solidly planked over.
- h. Chutes, as well as floors, stairways and other places, shall be effectively wet down at frequent intervals, whenever the dust from demolition operations would cause a menace or hardship to residents of adjoining buildings or premises.
- i. The bottom of each chute shall be equipped with an adjustable gate or stop for regulating the flow of materials.
- j. Except when in actual use in the discharge of materials, the gate or stop shall be kept closed. A reliable person shall be designated to control the gate and the backing up and loading of trucks. He shall see to it that no person is allowed to stand or pass under the discharge end of the chute at any time.
- k. The area at the discharge end of each chute shall be completely enclosed with a substantial fence at all times or otherwise made inaccessible. A danger sign shall be placed at the discharge end of every chute.

10. Demolition of Walls and Chimneys

- a. No wall, chimney or other construction shall be allowed to fall in mass, except under competent supervision.

- b. Scaffolds or stagings shall be erected for workers if walls or other elements of the structure are too thin or too weak to work on. Heavy structural members, such as beams or columns, shall be carefully lowered and not allowed to fall freely.
- c. Masonry walls or sections of masonry walls shall not be permitted to fall upon the floors of the building in such masses as to exceed the safe carrying capacity of the floors.
- d. No walls or section of walls whose height is more than twenty-two (22) times its thickness shall be permitted to stand without lateral bracing unless such wall is in good condition and was originally designed to stand to a greater height without such lateral support.
- e. Workmen shall **not** be permitted to work on top of a wall when weather conditions constitute a hazard.
- f. Before demolishing any interior or exterior wall which is within 3.00 meters of any opening in the floor immediately below, such opening shall be substantially planked over unless all workmen are removed from all floors below and access to such floors is positively prevented.
- g. At the completion of each day's work, all walls undemolished shall be left stable and in no danger of overturning or falling.
- h. Foundation walls which serve as retaining walls to support earth and adjoining structures shall not be demolished until such adjoining structures have been underpinned or braced, and earth either removed or supported by sheet piling or other suitable materials.
- i. In the demolition of brick and/or masonry chimneys which cannot safely be toppled or dropped, all materials shall be dropped down through the inside of such chimneys.
- j. The loading point at the discharge end chute, at or near the bottom of a chimney, shall be completely protected by means of any overhead timber canopy.
- k. To enable workmen to reach or leave their work on any wall or scaffold, walkways shall be provided. Such walkways shall not be less than three (3) planks, properly tied or nailed to bearers of not less than 560 millimeters in width, such that the planks do not deflect more than 50 millimeters under normal loading.
- l. In buildings of skeleton construction, the steel framing may be left in place during the demolition of masonry work. When this is done, all steel beams, girders and the like shall be cleared of all loose materials as the demolition progresses.

11. Demolition of Floors

- a. Before the demolition of floors and floor beams, the floors and beams shall be completely supported by temporary planking and supports.
- b. When the load is transferred to lower floors, these floors shall be carefully propped.
- c. Demolition of floors shall not be started until the surrounding floor area to a distance of 6.00 meters have been entirely cleared of debris and other unnecessary materials.
- d. No floor, roof or other part of a building that is being demolished shall be so overloaded with debris or materials as to render it unsafe.
- e. Where workmen are engaged in the removal of floors, planks of ample strength which are supported independently of the flooring shall be provided for the workmen to step on. The

planks shall be so placed as to give the workmen a firm support in case the floor gives way or collapses unexpectedly. Where it is necessary for a workman to straddle a space between two planks, such space shall not exceed 400 millimeters. To enable workmen to reach any workplace without the necessity of walking on exposed beams, planks shall be provided to serve as catwalks.

- f. Planks used for temporary protection shall be sound, and at least 25 millimeters thick. They shall be laid close together, with the ends overlapping by at least 100 millimeters over solid bearings to prevent tipping under a load.
- g. Where floors are being removed, no workmen shall be allowed to work in the area directly underneath. Such areas shall be barricaded to prevent access to it.
- h. Structural or load-supporting members at any floors shall not be cut or removed until all stories above that floor have been demolished and removed.
- i. Where any floor has been removed, the entire tier of beams on which any device is supported shall be completely planked over, except for such openings as are required for the handling of materials or equipment.
- j. Stairs and stair railings shall be kept in place and in usable condition as long as it is practicable.
- k. Steps and landings shall be kept free from debris and obstructions.

12. Other Safeguards

- a. Where applicable, the **Building Official** shall require strict compliance with the minimum safety standards as prescribed under Administrative Order of **DOLE**. The construction, alteration and removal of scaffolds and the application, installation and setting up of safeguard devices shall be done by skilled workmen under the supervision of a person, qualified by experience or training for such work.
- b. A device or piece of equipment, which is unsafe, shall be reported to the superintendent or foreman, who shall take immediate steps to remedy such condition or remove such device or equipment.
- c. Scaffolds, ladders, stairs, fuel gas tanks and other devices or equipment falling within the scope of this Rule shall be maintained in a good, safe and usable conditions as long as in use.
- d. Scaffolds, temporary floors, ramps, stairway landings, stair treads, and all other walkway surfaces shall be kept free from protruding nails/splinters.
- e. Protruding nails and tie wire ends shall be removed, hammered in or bent in a safe condition.
- f. Electric lines, moving ropes and cable gears, or similar hazards with which a person might come in contact with shall be encased or protected.
- g. No person, firm or corporation, either personally or through an employee or agent of another, shall operate or move any machinery, equipment, materials, scaffolds, closer than 5.00 meters to any energized high voltage overhead electrical facilities unless authorized by the Electrical Inspector.
- h. All workmen on any demolition job shall be required to wear industrial safety helmets and body protective gears.

- i. Construction sheds and toolboxes shall be so located as to protect persons from dangerous falling walls and objects.
- j. The **Building Official** may permit the use of alternative methods and/or devices depending on local conditions provided that the minimum standard of safety sought to be achieved under this Rule is not jeopardized.
- k. In Fire Zones of **Types I, II and III** Construction, only heaters with enclosed flames shall be used for the heating of any roofing or other similar materials.
- l. Wherever any enclosed flame heaters or open fires are used, there shall be a workman in constant attendance, whose duty shall be to have such heater or fire under proper control at all times.
- m. In all buildings in which standpipes are required, such standpipes shall be installed as the construction progresses in such a manner that they are always ready for Fire Department use, to the topmost constructed floor. Such standpipes shall be provided with a Siamese twin dry standpipe outside the building and with one (1) outlet at each floor connected to a fire hose cabinet.
- n. In every construction operation, wherever a tool house, storeroom or other shanty is built or a room or space is used for storage, dressing room or workshop, at least one (1) approved hand pump, tank or portable chemical or dry powder fire extinguisher shall be provided and maintained in an accessible location.
- o. During construction operations, free access from the street to fire hydrants and to outside connections for standpipes, sprinklers or other fire extinguishing equipment, whether permanent or temporary shall be provided and maintained at all times. No material or construction equipment shall be placed within 3.00 meters of such hydrant or connection, nor between it and the centerline of the street.
- p. Toilet facilities at the construction/demolition site, as an ancillary to the bunkhouse and operation, shall be maintained in a clean/sanitary condition for the use of the workers.
- q. Supply of potable water and sanitary washing facilities shall be provided for workers' and other uses during workdays.
- r. At every construction/demolition operation, arrangements shall be made for prompt medical attention in case of an accident. An ample supply of first aid medicine shall be provided and maintained in a clean/sanitary cabinet, which shall be available at all times under the direction of the superintendent or a person designated by him.
- s. Unless competent medical attention is quickly available, where more than two hundred (200) workers are employed, a properly equipped first-aid room shall be provided, and a physician or competent nurse shall be in constant attendance.

(emphases, underscoring and annotations supplied)

Rule XII follows

RULE XII - GENERAL DESIGN AND CONSTRUCTION REQUIREMENTS

SECTION 1201. General Requirements

1. Buildings proposed for construction shall comply with all the regulations and specifications including safety standards embodied in the Administrative Order of **DOLE** herein set forth governing quality, characteristics and properties of materials, methods of design and construction, type of occupancy and classification.
2. The various applicable referral codes shall supplementally guide the planning, design, layout, content, construction, location/siting, installation and maintenance of all buildings/structures.
3. For the guidance of the general public, the Secretary shall periodically issue generic lists of approved, strictly regulated or banned items, procedures, usages and the like relative to the design, construction and use/occupancy of buildings/structures:
 - a. Materials for construction;
 - b. Processes for the production of materials, their installation or construction;
 - c. Procedures/methodologies/systems for both design and construction;
 - d. Organizational structures/hierarchies for construction;
 - e. Types of occupancy; and
 - f. Classifications relative to design, construction and occupancy.
4. All buildings/structures shall be placed in or upon private property or duly designated public land and shall be securely constructed in conformance with the requirements of the **Code**.

SECTION 1202. Excavation, Foundation, and Retaining Walls

1. Subject to the provisions of **Articles 684 to 686** of the **Civil Code** of the Philippines on lateral and subjacent support, the design and quality of materials used structurally in excavation, footings, and in foundations shall conform to accepted engineering practice.
2. Excavation and Fills
 - a. Excavation and fills for buildings or structures shall be so constructed or protected that they do not endanger life or property.
 - b. Whenever the depth of excavation for any construction is such that the lateral and subjacent support of the adjoining property or existing structure thereon would be affected in a manner that the stability or safety of the same is endangered, the person undertaking or causing the excavation to be undertaken shall be responsible for the expense of underpinning or extending the foundation or footings of the aforementioned property or structure.
 - c. Excavation and other similar disturbances made on public property shall, unless otherwise excluded by the **Building Official**, be restored immediately to its former condition within 48 hours from the start of such excavation and disturbances by whosoever caused such excavation or disturbance.

- d. Before undertaking excavation works, drilling or otherwise disturbing the ground, the persons doing the work, or causing such work to be done, shall contact all public utilities/services to determine the possible location of underground facilities, to avoid hazard to public safety, health and welfare caused by the inadvertent disruption of such facilities.
- e. Protection of Adjoining Property. Any person making or causing an excavation to be made below existing grade shall protect the excavation so that the soil of adjoining property will not cave-in or settle and shall defray the cost of underpinning or extending the foundation of buildings on adjoining properties. Before commencing the excavation, the person making or causing the excavation to be made shall notify in writing the owners of adjoining buildings not less than **ten** (10) days before such excavation is to be made and that the adjoining buildings will be protected by him. The owners of the adjoining properties shall be given access to the excavation for the purpose of verifying if their properties are sufficiently protected by the person making the excavation. Likewise, the person causing such excavation shall be given access to enter the adjoining property for the purpose of physical examination of such property, prior to the commencement and at reasonable periods during the progress of excavation. If the necessary consent is **not** accorded to the person making the excavation, then it shall be the duty of the person refusing such permission to protect his buildings or structure. The person causing the excavation shall **not** be responsible for damages on account of such refusal by the adjoining property owner to permit access for inspection. In case there is a party wall along a lot line of the premises where an excavation is being made, the person causing the excavation to be made shall at his own expense, preserve such party wall in as safe a condition as it was before the excavation was commenced and shall, when necessary, underpin and support the same by adequate methods.
- f. At an early stage, and before work is commenced, a careful and accurate survey of any cracks in the existing adjoining owner's premises should be made, and, where possible, photographs should be taken, recorded, and agreed between the parties concerned. Where necessary, tell-tales should be fixed to cracks with the object of showing any further movements during demolition and excavation. Tell-tales should preferably be in the form of fixed points built in on each side of the crack and should be capable of being measured by a micrometer or vernier caliper. They should be of such a nature that both horizontal and vertical movements could be recorded.
- g. Cut slopes for permanent excavations shall not be steeper than two (2) horizontal to one (1) vertical and slopes for permanent fills shall not be steeper than two (2) horizontal to one (1) vertical. Deviation from the foregoing limitations for slopes shall be permitted only upon the presentation of a geotechnical/geological investigation report acceptable to the Building Official.
- h. On a large site that is at a considerable distance from the surrounding properties and public highways, deep excavation may be carried out in the open in bulk, leaving slopes around the perimeter. It is important to ensure that no serious failures of the banks will occur to endanger those working on the site or the public. The safe angle of the cut slope shall be determined by an appropriate geotechnical/geological site investigation acceptable to the Building Official.
- i. In cases where the excavation passes through a permeable water-bearing stratum overlying an impervious bed, a bench should be formed at the junction of the strata to carry an intermediate intercepting drain.
- j. If groundwater is standing at a considerable head around the excavation, measures shall be undertaken to reduce this head by a system of weepholes at the lowest 1/3 section of the excavation wall or by enclosing the site with suitable sheet piling or if a water-sealing stratum can be reached within a reasonable distance at the bottom of the excavation.

- k. In fine sands or silts where sheet piling alone is relied upon, it will be necessary to watch the pumping very carefully because, in fine-grained materials, the removal of even a small volume of water may cause "blows" in the bottom of the excavation or may result in disturbance to adjoining structures.
- l. Except in excavation inside sloping banks, rock, or within caissons, all excavations should be lined with shotcrete, boards, runners or sheet piles supported laterally, if necessary, by framings of wallings and struts, which may be of timber, steel, or reinforced concrete, to a sufficient extent to prevent the excavation from becoming dangerous to life or limb by movement or caving in of the adjoining soil.
- m. All linings and framings should be inserted as the excavation proceeds, and should be tightened up against the adjoining soil by wedging or jacking and secured by cleats or other suitable means.
- n. Every trench, 1.50 meters or deeper, shall be provided with suitable means of exit or escape at least every 7.50 meters of its length.
- o. Where workers are employed adjacent to an excavation on work other than that directly connected with the excavation, sufficient railings or fences shall be provided to prevent such workers from falling into the excavation.
- p. Excavations that may be left open for any length of time, periodic inspections of timbering or strutting should be made and wedges tightened as found necessary.
- q. In long excavation for walls, it may be found expedient and safe to arrange the excavation in a series of alternate sections in order to avoid a long, continuous excavation supported only on temporary strutting. Such sections should be arranged in convenient lengths (depending on the total length to be done) and of a width sufficient to construct a unit of the retaining wall that will be adequate to afford permanent support to that portion of the ground; the wall unit should be completed before proceeding with the adjacent section of the excavation.
- r. Where water is encountered in excavation, a sump should be maintained below the level of the excavation in order that surface and groundwater can be led into it and pumped out; provided that the inflow of water does not carry much soil in suspension and does not require continuous pumping to keep the risk of settlement of the surrounding ground.
- s. **No fill** or other surcharge loads shall be placed adjacent to **any building**/structure unless such **building**/structure is capable of withstanding the additional loads caused by the fill or surcharge.
- t. Existing footings or foundations which may be affected by any excavation shall be underpinned adequately, or otherwise protected against settlement, and shall be protected against lateral movement.
- u. Fills to be used to support the foundations of **any building**/structure shall be placed in accordance with accepted engineering practice. A soil investigation report and a report of satisfactory placement of fill, shall be both acceptable to the **Building Official**.

3. Footings, Foundations, and Retaining Walls

- a. Footings and foundations shall be of the appropriate type, of adequate size, and capacity in order to safely sustain the superimposed loads under seismic or any condition of external forces that may affect the safety or stability of the structure. It shall be the responsibility of the architect and/or engineer to adopt the type and design of the same in accordance with the standards set forth by the Secretary.

- b. Whenever or wherever there exist in the site of the construction an abrupt change in the ground levels or level of the foundation such that instability of the soil could result, retaining walls shall be provided and such shall be of adequate design and type of construction as prescribed by the Secretary.

SECTION 1203. Veneer

1. Veneer is a nonstructural facing of brick, concrete, tile, metal, plastic, glass, or other similar approved materials attached to a backing or structural components of the building for the purpose of ornamentation, protection, or enclosure that may be adhered, integrated, or anchored either on the interior or exterior of the building or structure.
2. *Design Requirements.* The design of all veneer shall comply with the following:
 - a. Veneer shall support no load other than its own weight and the vertical dead load of veneer immediately above.
 - b. Surfaces to which veneer is attached shall be designed to support the additional vertical and lateral loads imposed by the veneer.
 - c. Consideration shall be given to differential movements of the supports including those caused by temperature changes, shrinkage, creep, and deflection.
 - d. Adhered veneer and its backing shall be designed to have a bond to the supporting elements sufficient to withstand shearing stresses due to their weights including seismic effects on the total assemblage.
 - e. Anchored veneer and its attachment shall be designed to resist horizontal forces equal to twice the weight of the veneer.
 - f. Anchors supports and ties shall be non-combustible and corrosion-resistant.

SECTION 1204. Enclosure of Vertical Openings

1. *General.* Vertical openings shall be enclosed depending upon the fire resistive requirements of a particular type of construction as set forth in the Code.
2. *Elevator Enclosures.* Walls and partitions enclosing elevators and escalators shall be of not less than the fire-resistive construction required under the Types of Construction. Enclosing walls of elevator shafts may consist of wire glass set in metal frames on the entrance side only. Elevator shafts extending through more than two storeys shall be equipped with an approved means of adequate ventilation to and through the main roof of the building; *Provided*, that in those buildings housing Groups F and G Occupancies equipped with automatic fire-extinguishing systems throughout, enclosures shall not be required for escalators; *Provided*, further that the top of the escalator opening at each storey shall be provided with a draft curtain. Such draft curtain shall enclose the perimeter of the unenclosed opening and shall extend from the ceiling downward at least 300 millimeters on all sides. Automatic sprinklers shall be provided around the perimeter of the opening and within a 600 millimeters of the draft curtain. The distance between the sprinkles shall not exceed 1.80 meters center-to-center.
3. *Other Vertical Openings.* All shafts, ducts, chutes, and other vertical openings not covered in paragraph above shall have enclosing walls conforming to the requirements specified under the type of construction of the building in which they are located. In other than Group A Occupancies, rubbish and linen chutes shall terminate in rooms separated from the remainder of the building by a

One-Hour Fire-Resistive Occupancy Separation. Openings into the chutes shall not be located in required exit corridors or stairways.

4. *Air Ducts.* Air ducts passing through a floor shall be enclosed in a shaft. The shaft shall be as required in this Code for vertical openings. Dampers shall be installed where ducts pierce the shaft enclosure walls. Air ducts in Group A Occupancies need not be enclosed in a shaft if conforming to the mechanical provisions of the Code.

SECTION 1205. Floor Construction

1. Floors shall be of such materials and construction as specified under Rule V - Fire Zones and Fire-Resistive Standards and under Rule IV - Types of Construction.
2. All floors shall be so framed and secured into the framework and supporting walls as to form an integral part of the whole building.
3. The types of floor construction used shall provide means to keep the beam and girders from lateral buckling.

SECTION 1206. Roof Construction and Covering

1. *Roof Covering.* Roof covering for all buildings shall be either fire-retardant or ordinary depending upon the fire-resistive requirements of the particular type of construction. The use of combustible roof insulation shall be permitted in all types of construction provided it is covered with approved roof covering applied directly thereto.
2. *Roof Trusses.* All roofs shall be so framed and tied into the framework and supporting walls so as to form an integral part of the whole building. Roof trusses shall have all joints well fitted and shall have all tension members well tightened before any load is placed in the truss. Diagonal and sway bracing shall be used to brace all roof trusses. The allowable working stresses of materials in trusses shall conform to the Code. Camber shall be provided to prevent sagging.
3. *Attics.*
 - a. *Access.* An attic access opening shall be provided in the ceiling of the top floor of buildings with a combustible ceiling or roof construction. The opening shall be located in a corridor or hallway of buildings of three (3) or more storeys in height and readily accessible in buildings of any height. An opening shall not be less than 600 millimeters square or 600 millimeters in diameter. The minimum clear headroom of 800 millimeters shall be provided above the access opening. For ladder requirements, refer to the Philippine Mechanical Engineering Code.
 - b. *Area Separation.* Enclosed attic spaces of combustible construction shall be divided into horizontal areas not exceeding 250 sq. meters by fire-resistive partitions extending from the ceiling to the roof. *Except*, that where the entire attic is equipped with approved automatic fire-extinguishing system, the attic space may be divided into areas not to exceed 750 sq. meters. Openings in the partitions shall be protected by self-closing doors.
 - c. *Draft Stops.* Regardless of the type of construction, draft stops shall be installed in trusses roofs, between roof and bottom chords or trusses, in all buildings exceeding 2000 sq. meters. Draft stops shall be constructed as for attic area separations.
 - d. *Ventilation.* Enclosed attics including rafter spaces formed where ceilings are applied direct to the underside or roof rafters shall be provided with adequate ventilation protected against the entrance of rain.

4. *Roof Drainage System*

- a. *Roof Drains.* Roof drains shall be installed at low points of the roof and shall be adequate in size to discharge all tributary waters.
 - b. *Overflow Drains and Scuppers.* Where roof drains are required, adequate overflow drains shall be provided.
 - c. *Concealed Piping.* Roof drains and overflows drains, when concealed within the construction of the building, shall be installed in accordance with the provisions of the National Plumbing Code.
 - d. *Over Public Property.* Roof drainage water from a building shall not be permitted to flow over public property, except for Group A and J Occupancies.
5. *Flashing.* Flashing and counterflashing shall be provided at the juncture of the roof and vertical surfaces.

SECTION 1207. Stairs, Exits, and Occupant Loads

1. *General.* The construction of stairs and exits shall conform to the occupant load requirements of buildings, reviewing stands, bleachers, and grandstands.
 - a. *Determination of Occupant Loads.* The occupant load permitted in any building or portion thereof shall be determined by dividing the floor area assigned to that use by the unit area allowed per occupant as shown on **Table XII.1.** and as determined by the Secretary.
 - i. When the unit area per occupant for any particular occupancy is not provided for in **Table XII.1.**, the **Building Official** shall determine the same based on the unit area for occupancy, which it most nearly resembles.
 - ii. The occupant load of any area having fixed seats shall be determined by the number of fixed seats installed. Aisles serving the fixed seats in said area shall be included in determining the occupant load.
 - iii. The occupant load permitted in a building or portion thereof may be increased above that specified in **Table XIII.1.** if the necessary exits are provided.
 - iv. In determining the occupant load, all portions of a building shall be presumed to be occupied at the same time.

EXCEPTION: Accessory areas, which ordinarily are only used by persons who occupy the main areas of occupancy, shall be provided with exits as though they were completely occupied. However, in computing the maximum allowable occupant load for the floor/building, the occupant load of the accessory area/s shall be disregarded.

- b. *Exit Requirements.* Exit requirements of a building or portion thereof used for different purposes shall be determined by the occupant load which gives the largest number of persons. No obstruction shall be placed in the required width of an exit except projections permitted by the Code.
 - c. *Posting of Room Capacity.* Any room having an occupant load of more than fifty (50) where fixed seats are not installed, and which is used for classroom, assembly, or similar purpose shall have the capacity of the room posted in a conspicuous place near the main exit from the room.

d. *Changes in Elevation.* Except in Group A Occupancies, changes in floor elevations of less than 300 millimeters along any exit serving a tributary occupant load of ten (10) or more shall be by means of ramp.

Table XII.1. General Requirements for Occupant Loads and Exits*

(*In all occupancies, floors above the first (1st) storey having an occupant load of more than ten (10) shall have at least two (2) exits)

Use or Occupancy	Unit Area per Occupant (sq. meters)	Minimum of Two (2) Exits Other than Elevators are Required Where Number of Occupants is Over
Dwellings	28.00	10
Hotels	18.60	10
Apartments	18.60	10
Dormitories	18.60	10
Classrooms	1.80	50
Conference Rooms	1.40	50
Exhibit Rooms	1.40	50
Gymnasia	1.40	50
School Shops	4.60	50
Vocational Institutions	4.60	50
Laboratories	4.60	50
Hospitals**, Sanitaria** Nursing Homes** Children's Homes** Homes for the Aged** (**Institutional Sleeping Departments shall be based on one (1) occupant per 11.00 sq. meters of the gross floor area; In- patient Institutional Treatment Departments shall be based on one (1) occupant per 22.00 sq. meters of gross floor area)	8.40 7.40 7.40 7.40	5 5 5 5
Nurseries for Children	3.25	6
Dwellings	28.00	10
Stores-Retail Sales Rooms		
Basement	2.80	50
Ground Floor	2.80	50
Upper Floors	5.60-	10
Offices	9.30	30
Aircraft Hangars (no repair)	46.50	10
Parking Garages	18.60	30
Drinking Establishments	1.40	30
Kitchens (commercial)	18.60	50
Warehouses	28.00	30
Mechanical Equipment Rooms	28.00	30
Garages	9.30	10
Auditoriums	0.65	50
Theaters	0.65	50
Churches and chapels	0.65	50
Dance Floors	0.65	50
Reviewing Stands	0.65	50
Stadia	0.65	50

2. Exits

- a. *Number of Exits.* Every building or usable portion thereof shall have **at least one (1) exit**. In **all** occupancies, floors above the first storey having an occupant load of more than **ten (10)** shall not have less than **two (2)** exits. Each mezzanine floor used for other than storage purposes, if greater in area than 185 sq. meters or more than 18.00 meters in any dimension, shall have at least two (2) stairways to an adjacent floor. Every storey or portion thereof, having an occupant load of 500 to 999 shall have at least **three (3)** exits. Every storey or portion thereof having an occupant load of **one thousand (1000)** or more shall have at least **four (4)** exits. The number of exits required from any storey of a building shall be determined by using the occupant loads of floors which exit through the level under consideration as follows: 50% of the occupant load in the first adjacent storey above (and the first adjacent storey below, when a storey below exits through the level under consideration) and 25% of the occupant load in the storey immediately beyond the first adjacent storey. The **maximum** number of exits required for any storey shall be maintained until egress is provided from the structures. For purposes of this Section basement or cellars and occupied roofs shall be provided with exits as required for storeys. Floors above the second storey, basements and cellars used for other than service of the building shall have not less than **two (2)** exits.
 - b. *Width.* The total width of exits in meters shall **not** be less than the total occupant load served divided by **one hundred sixty five (165)**. Such width of exits shall be divided approximately equally among the **separate** exits. The total exit width required from any storey of a building shall be determined by using the occupant load of that storey plus the percentage of the occupant loads of floors which exits through the level under consideration as follows: 50% of the occupant load in the first adjacent storey above (and the first adjacent storey below when a storey below exits through the level under consideration) and 25% of the occupant load in the storey immediately beyond the first adjacent storey. The **maximum** exit width from any storey of a building shall be maintained.
 - c. *Arrangement of Exits.* If only **two (2)** exits are required, they shall be placed a distance apart to not less than one-fifth (1/5) of the perimeter of the area served measured in a straight line between exits. Where **three (3)** or more exits are required, they shall be arranged a reasonable distance apart so that if one becomes blocked, the others will be available.
 - d. *Distance to Exits.* **No** point in a building **without** a sprinkler system shall be more than 45.00 meters from an exterior exit door, a horizontal exit, exit passageway, or an enclosed stairway, measured along the line of travel. In a building equipped with a complete automatic fire extinguishing system, the distance from exits may be increased to 60.00 meters.
3. *Doors.* The provisions herein shall apply to every exit door serving an area having an occupant load of more than **ten (10)**, or serving hazardous rooms or areas.
- a. *Swing.* Exit door shall swing in the direction of exit travel when serving any hazardous areas or when serving an occupant load of fifty (50) or more. Double acting doors shall **not** be used as exits serving a tributary occupant load of more than one hundred (100); nor shall they be used as a part of fire assembly, nor equipped with panic hardware. A double acting door shall be provided with a view panel of **not** less than 1,300 sq. centimeters.
 - b. *Type of Lock or Latch.* Exit door shall be openable from the inside without the use of a key or any special knowledge or effort: *Except*, that this requirement shall **not** apply to exterior exit doors in a Group E or F Occupancy if there is a conspicuous, readily visible and durable sign on or adjacent to the door, stating that the door is to remain unlocked during business hours. The locking device must be of a type that will readily be distinguishable as locked. **Flush bolts or surface bolts are prohibited.**

- c. *Width and Height.* Every required exit doorway shall be of a size as to permit the installation of a door not less than 900 millimeters in width and not less than 2.00 meters in height. When installed in exit doorways, exit doors shall be capable of opening at least 90 degrees and shall be so mounted that the clear width of the exitway is not less than 700 millimeters. In computing the required exit width the net dimension of the exitway shall be used.
 - d. *Door Leaf Width.* No leaf of an exit door shall exceed 1.20 meters in width.
 - e. *Special Doors.* Revolving, sliding, and overhead doors shall not be used as required exits.
 - f. *Egress from Door.* Every required exit door shall give immediate access to an approved means of egress from the building.
 - g. *Change in Floor Level at Doors.* Regardless of the occupant load, there shall be a floor or landing on each side of an exit door. The floor or landing shall be leveled with, or not more than 50 millimeters lower than the threshold of the doorway: *Except*, that in Group A and B Occupancies, a door may open on the top step of a flight of stairs or an exterior landing provided the door does not swing over the top step or exterior landing and the landing is not more than 200 millimeters below the floor level.
 - h. *Door Identification.* Glass doors shall conform to the requirements in **Section 1802**. Other exit doors shall be so marked that they are readily distinguishable from the adjacent construction.
 - i. *Additional Doors.* When additional doors are provided for egress purposes, they shall conform to all provisions in the following cases: Approved revolving doors having leaves which will collapse under opposing pressures may be used in exit situations; *provided*; that such doors have a minimum width of 2.00 meters or they are not used in occupancies where exits are required to be equipped with panic hardware or at least **one** conforming exit door is located adjacent to each revolving doors installed in a building and the revolving door shall **not** be considered to provide any exit width.
4. *Corridors and Exterior Exit Balconies.* The provisions herein shall apply to every corridor and exterior exit balcony serving as a required exit for an occupant load of more than **ten** (10).
- a. *Width.* Every corridor or exit balcony shall not be less than 1.10 meters in width.
 - b. *Projections.* The required width of corridors and exterior exit balconies shall be unobstructed. *Except*, that trim handrails, and doors when fully opened shall not reduce the required width by more than 200 millimeters. Doors in any position shall not reduce the required width of the corridor by more than one-half (1/2).
 - c. *Access to Exits.* When more than **one** (1) exit is required, they shall be so arranged to allow going to either direction from any point in the corridor or exterior exit balcony to a separate exit, except for dead ends permitted by the Code.
 - d. *Dead Ends.* Corridors and exterior exit balconies with dead ends are permitted when the dead end does not exceed 6.00 meters in length.
 - e. *Construction.* Walls and ceilings of corridors shall **not** be less than one-hour fire-resistive construction. Provided, that this requirement shall not apply to exterior exit balconies, railings, and corridors of one-storey building housing a Group E and F Occupancy occupied by **one** (1) tenant only and which serves an occupant load of thirty (30) or less, nor to corridors, formed by temporary partitions. Exterior exit balconies shall not project into an area where protected openings are required.

- f. *Openings.* Where corridor wall are required to be **one-hour fire-resistive** construction, every interior door opening shall be protected as set forth in generally recognized and accepted requirements for dual-purpose fire exit doors. Other interior openings except ventilation louvers equipped with approved automatic fire shutters shall be 7 millimeters thick fixed wire glass set in steel frames. The total area of **all** openings other than doors, in any portion of an interior corridor wall shall not exceed 25% of the area of the corridor wall of the room being separated from the corridor.
5. *Stairways.* Except stairs or ladders used only to access equipment, every stairway serving any building or portion thereof shall conform to the following requirements:
- a. *Width.* Stairways serving an occupant load of more than fifty (50) shall **not** be less than 1.10 meters. Stairways serving an occupant load of fifty (50) or less may be 900 millimeters wide. Private stairways serving an occupant load of less than ten (10) may be 750 millimeters. Trim and handrails shall not reduce the required width by more than 100 millimeters.
 - b. *Rise and Run.* The rise of every step in a stairway shall not exceed 200 millimeters and the run shall not be less than 250 millimeters. The maximum variations in the height of risers and the width of treads in any one flight shall be 5 millimeters: *Except*, in case of private stairways serving an occupant load of less than ten (10), the rise may be 200 millimeters and the run may be 250 millimeters, except as provided in sub-paragraph (c) below.
 - c. *Winding Stairways.* In Group A Occupancy and in private stairways in Group B Occupancies, winders may be used if the required width of run is provided at a point not more than 300 millimeters from the side of the stairway where the treads are narrower but in no case shall any width of run be less than 150 millimeters at any point.
 - d. *Circular Stairways.* Circular stairs may be used as an exit provided the minimum width of run is not less than 250 millimeters. All treads in any one flight between landings shall have identical dimensions within a 5 millimeters tolerance.
 - e. *Landings.* Every landing shall have a dimension measured in the direction of travel equal to the width of the stairway. Such dimension need not exceed 1.20 meters when the stairs has a straight run. Landings when provided shall not be reduced in width by more than 100 millimeters by a door when fully open.
 - f. *Basement Stairways.* Where a basement stairway and a stairway to an upper storey terminate in the same exit enclosure, an approved barrier shall be provided to prevent persons from continuing on to the basements. Directional exit signs shall be provided as specified in the **Code**.
 - g. *Distance Between Landings.* There shall be not more than 3.60 meters vertical distance between landings.
 - h. *Handrails.* Stairways shall have handrails on each side and every stairway required to be more than 3.00 meters in width shall be provided with not less than one intermediate handrail for each 3.00 meters of required width. Intermediate handrails shall be spaced approximately equal within the entire width of the stairway. Handrails shall be placed not less than 800 millimeters nor more than 900 millimeters above the nosing of treads, and ends of handrails shall be returned or shall terminate in newel posts or safety terminals: *Except*, in the following cases: Stairways 1.10 meters or less in width and stairways serving one (1) individual dwelling unit in Group A or B Occupancies may have one handrail, except that such stairway, open on one or both, sides shall have handrails provided on the open side or sides: or stairways having less than four (4) risers need not have handrails.

- i. *Exterior Stairway Protection.* All openings in the exterior wall below or within 3.00 meters, measured horizontally, of an exterior exit stairway serving a building over two storeys in height shall be protected by a self-closing fire assembly having a **three-fourth - hour fire-resistive rating**; *Except*, that openings may be unprotected when two separated exterior stairways serve an exterior exit balcony.
 - j. *Stairway Construction*
 - i. *Stairway Construction - Interior.* Interior stairways shall be constructed as specified in this Code. Where there is enclosed usable space under the stairs the walls and soffits of the enclosed space shall be protected on the enclosed side as required for one-hour fire resistive construction.
 - ii. *Stairway Construction - Exterior.* Exterior stairways shall be of incombustible material; *Except*, that on Type III buildings which do **not** exceed two storeys in height, which are located in **less fire-restrictive** Fire Zones, as well as on **Type I** buildings which may be of wood not less than 50 millimeters in nominal thickness. Exterior stairs shall be protected as required for exterior walls due to location on property as specified in the **Code**. Exterior stairways shall **not** project into an area where openings are required to be protected. Where there is enclosed usable space under stairs, the walls and soffits of the enclosed space shall be protected on the enclosed side as required for **one-hour fire-resistive** construction.
 - k. *Stairway to Roof.* In every building four (4) or more storeys in height, one (1) stairway shall extend to the roof unless the roof has a slope greater than 1 in 3.
 - l. *Headroom.* Every required stairway shall have a headroom clearance of **not** less than 2.00 meters. Such clearance shall be established by measuring vertically from a plane parallel and tangent to the stairway tread nosing to the soffit above all points.
6. *Ramps.* A ramp conforming to the provisions of the **Code** may be used as an exit. The width of ramps shall be as required for corridors.
 7. *Horizontal Exit.* If conforming to the provisions of the **Code**, a horizontal exit may be considered as the required exit. **All** openings in a separation wall shall be protected by a fire assembly having a fire-resistive rating of **not** less than one hour. A horizontal exit shall not lead into a floor area having a capacity for an occupant load **not** less than the occupant load served by such exit. The capacity shall be determined by allowing 0.30 sq. meter of net floor area per ambulatory occupant and 1.90 sq. meters per non-ambulatory occupant. The dispersal area into which the horizontal exit leads shall be provided with exits as required by the **Code**.
 8. *Exit Enclosure.* Every interior stairway, ramp, or escalator shall be enclosed as specified in the **Code**; *Except*, that in other than Group D Occupancies, an enclosure will **not** be required for stairway, ramp, or escalator serving only one adjacent floor and not connected with corridors or stairways serving other floors. Stairs in Group A Occupancies need **not** be enclosed.
 - a. Enclosure walls shall **not** be less than **two-hour fire-resistive** construction. There shall be **no** openings into exit enclosures except exit doorways and openings in exterior walls. **All** exit doors in an exit enclosure shall be appropriately protected.
 - b. Stairway and ramp enclosures shall include landings and parts of floors connecting stairway flights and shall include a corridor on the ground floor leading from the stairway to the exterior of the building. Enclosed corridors or passageways are **not** required for unenclosed stairways.

- c. A stairway in an exit enclosure shall **not** continue below the grade level exit unless an approved barrier is provided at the ground floor level to prevent persons from accidentally continuing into the basement.
- d. There shall be **no** enclosed usable space under stairways in an exit enclosure, nor shall the open space under such stairways be used for any purpose.

9. *Smokeproof Enclosures*

A smokeproof enclosure shall consist of a vestibule and a continuous stairway enclosed from the highest point to the lowest point by walls of **two-hour fire-resistive** construction. In buildings five (5) storeys or more in height, one of the required exits shall be a smokeproof enclosure.

- a. Stairs in smokeproof enclosures shall be of incombustible construction.
- b. There shall be **no** openings in smokeproof enclosures, except exit doorways and openings in exterior walls. There shall be **no** openings directly into the interior of the building. Access shall be through a vestibule with one (1) wall at least 50% open to the exterior and having an exit door from the interior of the building and an exit door leading to the smokeproof enclosure. In lieu of a vestibule, access may be by way of an open exterior balcony of incombustible materials.
- c. The opening from the building to the vestibule or balcony shall be protected with a self-closing fire assembly having one-hour fire-resistive rating. The opening from the vestibule or balcony to the stair tower shall be protected by a self-closing fire assembly having a **one-hour fire-resistive** rating.
- d. A smokeproof enclosure shall exit into a public way or into an exit passageway leading to a public way. The exit passageway shall be without other openings and shall have walls, floors, and ceilings of **two-hour fire-resistance**.
- e. A stairway in a smokeproof enclosure shall **not** continue below the grade level exit unless an approved barrier is provided at a ground floor level to prevent persons from accidentally walking into the basement.

10. *Exit Outlets, Courts, and Passageways*

Every exit shall discharge into a public way, exit court, or exit passageway. Every exit court shall discharge into a public way or an exit passageway. Passageways shall be without openings other than required exits and shall have walls, floors, and ceilings of the same period of fire-resistance as the walls, floors and ceilings of the building but shall **not** be less than one-hour fire-resistive construction.

a. *Width*

Every exit court and exit passageways shall be at least as wide as the required total width of the tributary exits, such required width being based on the occupant load served. The required width of exit courts or exit passageways shall be unobstructed except as permitted in corridors. At any point where the width of an exit court is reduced from any cause, the reduction in width shall be affected gradually by a guardrail at least 900 millimeters in height. The guardrail shall make an angle of not more than 30° with the axis of the exit court.

b. *Slope*

The slope of exit courts shall not exceed 1 in 10. The slope of exit passageway shall **not** exceed 1 in 8.

c. *Number of Exits*

Every exit court shall be provided with exits as required in the **Code**.

d. *Openings*

All openings into an exit court less than 3.00 meters wide shall be protected by fire assemblies having **not** less than three-fourth - hour fire-resistive rating. *Except*, that openings more than 3.00 meters above the floor of the exit court may be unprotected.

11. *Exit Signs and Illuminations*

Exits shall be illuminated at any time the building is occupied with lights having an intensity of not less than 10.7 LUX at floor level; *Except*, that for Group A Occupancies, the exit illumination shall be provided with separate circuits or separated sources of power (but **not** necessarily separate from exit signs when these are required for exit sign illumination).

12. *Aisles*

Every portion of every building in which are installed seats, tables, merchandise, equipment, or similar materials shall be provided with aisles leading to an exit.

a. *Width*

Every aisle shall be not less than 800 millimeters wide if serving only one side, and not less than 1.00 meter wide if serving both sides. Such minimum width shall be measured at the point farthest from an exit, cross aisle, or foyer and shall be increased by 30 millimeters for every meter in length towards the exit, cross aisle or foyer.

Side aisles shall not be less than 1.10 meters in width.

b. *Exit Distance*

In areas occupied by seats and in Groups H and I Occupancies without seats, the line of travel to an exit door by an aisle shall be not more than 45.00 meters. With standard spacing, as specified in the **Code**, aisles shall be so located that there will be **not** more than seven (7) seats between the wall and an aisle and **not** more than fourteen (14) seats between aisles. The number of seats between aisles may be increased to thirty (30) where exits doors are provided along each side aisle of the row of seats at the rate of one (1) pair of exit doors for every five (5) rows of seats, provided further that the distance between seats back to back is at least 1.00 meter. Such exit doors shall provide a minimum clear width of 1.70 meters.

c. *Cross Aisles*

Aisles shall terminate in a cross aisle, foyer, or exit. The width of the cross aisle shall be **not** less than the sum of the required width of the widest aisle plus 50% of the total required width of the remaining aisle leading thereto. In Groups C, H and E Occupancies, aisles shall **not** be provided a dead end greater than 6.00 meters in length.

d. *Vomitories*

Vomitories connecting the foyer or main exit with the cross aisles shall have a total width not less than the sum of the required width of the widest aisles leading thereto plus 50% of the total required width of the remaining aisles leading thereto.

e. *Slope*

The slope portion of aisles shall not exceed a fall of 1 in 8.

13. Seats

a. *Seat Spacing*

With standard seating, the spacing of rows of seats from back-to-back shall be **not** less than 840 millimeters. With continental seating, the spacing of rows of unoccupied seats shall provide a clear width measured horizontally, as follows: 450 millimeters clear for rows of eighteen (18) seats or less; 500 millimeters clear for rows of thirty five (35) seats or less; 525 millimeters clear for rows of forty five (45) seats or less; and 550 millimeters clear for rows of forty six (46) seats or more.

b. *Width*

The width of any seat shall be **not** less than 450 millimeters.

14. *Reviewing Stands, Grandstands, and Bleachers*

a. *Height of Stands*

Stands made of combustible framing shall be limited to eleven (11) rows or 2.70 meters in height.

b. *Design Requirements*

The minimum unit live load for reviewing stands, grandstands, and bleachers shall be 500 kilograms per square meter of horizontal projection for the structure as a whole. Seat and footboards shall be 180 kilograms per linear meter. The sway force, applied to seats, shall be 35 kilograms per linear meter parallel to the seats and 15 kilograms per linear meter perpendicular to the seats. Sway forces need not be applied simultaneously with other lateral forces.

c. *Spacing of Seats*

i. *Row Spacing*

The minimum spacing of rows of seats measured from back-to-back shall be: 600 millimeters for seats without backrests in open air stands; 750 millimeters for seats with backrests; and 850 millimeters for chair seating. There shall be a space of **not** less than 300 millimeters between the back of each seat and the front of the seat immediately behind it.

ii. *Rise Between Rows*

The maximum rise from one row of seats to the next shall not exceed 400 millimeters.

iii. *Seating Capacity*

For determining the seating capacity of a stand, the width of any seat shall **not** be less than 450 millimeters nor more than 480 millimeters.

iv. *Number of Seats Between Aisles*

The number of seats between any seat and an aisle shall **not** be greater than fifteen (15) for open air stands with seats without backrests, a far open air stands with seats having backrests and seats without backrests within buildings and **six** (6) for seats with backrests in buildings.

d. *Aisles*

i. *Aisles Required*

Aisles shall be provided in **all** stands; *Except*, that aisles may be omitted when all the following conditions exist: Seats are without backrests; the rise from row to row does not exceed 300 millimeters per row; the number of rows does not exceed **eleven** (11) in height; the top seating board is **not** over 3.00 meters above grade; and the first seating board is not more than 500 millimeters above grade.

ii. *Obstructions*

No obstruction shall be placed in the required width of any aisle or exitway.

iii. *Stairs Required*

When an aisle is elevated more than 200 millimeters above grade, the aisle shall be provided with a stairway or ramp whose width is not less than the width of the aisle.

iv. *Dead End*

No vertical aisle shall have a dead end more than sixteen (16) rows in depth regardless of the number of exits required.

v. *Width*

Aisles shall have a minimum width of 1.10 meters.

e. *Stairs and Ramps*

The requirements in the **Code** shall apply to all stairs and ramps except for portions that pass through the seating area.

i. *Stair Rise and Run*

The maximum rise of treads shall **not** exceed 200 millimeters and the minimum width of the run shall be 280 millimeters. The maximum variation in the width of treads in any one (1) flight shall **not** be more than 5 millimeters and the maximum variation in one (1) height of two (2) adjacent rises shall not exceed 5 millimeters.

ii. *Ramp Slope*

The slope of a ramp shall **not** exceed 1 in 8. Ramps shall be roughened or shall be of approved non-slip material.

iii. *Handrails*

A ramp with a slope exceeding 1 in 10 shall have handrails. Stairs for stands shall have handrails. Handrails shall conform to the requirements of the **Code**.

f. *Guardrails*

- i. Guardrails shall be required in all locations where the top of a seat plank is more than 1.20 meters above the grade and at the front of stands elevated more than 600 millimeters above grade. Where only sections of stands are used, guardrails shall be provided as required in the **Code**.
- ii. Railings shall be 1.10 meters above the rear of a seat plank or 1.10 meters above the rear of the steps in an aisle when the guardrail is parallel and adjacent to the aisle; *Except*, that the height may be reduced to 900 millimeters for guardrails located in front of the grandstand.
- iii. A midrail shall be placed adjacent to any seat to limit the open distance above the top of any part of a seat to 250 millimeters where the seat is at the extreme end or at the extreme rear of the bleachers or grandstand. The intervening space shall have one additional rail midway in the opening; *Except*, that railings may be omitted when stands are placed directly against a wall or fence giving equivalent protection; stairs and ramps shall be provided with guardrails. Handrails at the front of stands and adjacent to an aisle shall be designed to resist a load of 75 kilograms per linear meter applied at the top rail. Other handrails shall be designed to resist a load of 40 kilograms per linear meter.

g. *Foot Boards*

Footboards shall be provided for all rows of seats above the third (3rd) row or beginning at such point where the seating plank is more than 600 millimeters above grade.

h. *Exits*

i. *Distance to Exit*

The line of travel to an exit shall **not** be more than 45.00 meters. For stands with seats without backseats, this distance may be measured by direct line from a seat to the exit from the stand.

ii. *Aisle Used as Exit*

An aisle may be considered as only one (1) exit unless it is continuous at both ends to a legal building exit or to a safe dispersal area.

iii. *Two (2) Exits Required*

A stand with the first (1st) seating board **not** more than 500 millimeters above grade of floor may be considered to have two (2) exits when the bottom of the stand is open at both ends. Every stand or section of a stand within a building shall have at least two means of egress when the stand accommodates more than fifty (50) persons. Every open air stand having seats without backrests shall have at least two (2) means of egress when the stand accommodates more than three hundred (300) persons.

iv. *Three (3) Exits Required*

Three (3) exits shall be required for stands within a building when there are more than 300 occupants within a stand and for open air stands with seats without backrests where a stand or section of a stand accommodates more than one thousand (1000) occupants.

v. *Four (4) Exits Required*

Four (4) exits shall be required when a stand or section of a stand accommodates more than 1000 occupants; *Except*, that for an open air stand with seats without backrest four (4) exits need **not** be provided unless there are accommodations for more than three thousand (3000) occupants.

vi. *Width*

The total width of exits in meters shall not be less than the total occupant load served divided by one hundred sixty five (165); *Except*, that for open air stands with seats without backrest the total width of exits in meters shall be not less than the total occupant load served divided by five hundred (500) when exiting by stairs, and divided by six hundred fifty (650) when exiting by ramps or horizontally. When both horizontal and stair exits are used, the total width of exits shall be determined by using both figures as applicable. No exit shall be less than 1.10 meters in width. Exits shall be located at a reasonable distance apart. When only two (2) exits are provided, they shall be spaced not less than one-fifth (1/5) of the perimeter apart.

i. *Securing of Chairs*

Chairs and benches used on raised stands shall be secured to the platforms upon which they are placed; *Except*, that when less than twenty five (25) chairs are used upon a single raised platform the fastening of seats to the platform may be omitted. When more than five hundred (500) loose chairs are used in connection with athletic events, chairs shall be fastened together in groups of **not** less than three (3), and shall be tied or staked to the ground.

j. *Safe Dispersal Area*

Each safe dispersal area shall have at least two (2) exits. If more than six thousand (6000) persons are to be accommodated within such an area, there shall be a minimum of three (3) exits, and for more than nine thousand (9000) persons there shall be a minimum of four (4) exits. The aggregate clear width of exits from a safe dispersal area shall be determined on the basis of not less than one (1) exit unit of 600 millimeters for each five hundred (500) persons to be accommodated and no exit shall be less than 1.10 meters in width, a reasonable distance apart that shall be spaced not less than one-fifth (1/5) of the perimeter of the area apart from each other.

15. Special Hazards

a. *Boiler Rooms*

Except in Group A Occupancies, every boiler room and every room containing an incinerator or liquefied petroleum gas or liquid fuel-fired equipment shall be provided with at least two (2) means of egress, one of which may be a ladder. All interior openings shall be protected as provided for in the **Code**.

b. *Cellulose Nitrate Handling*

Film laboratories, projection rooms, and nitro-cellulose processing rooms shall have not less than two exits.

SECTION 1208. Skylights

1. All skylights shall be constructed with metal frames except those for Groups A and J Occupancies. Frames of skylights shall be designed to carry loads required for roofs. All skylights, the glass of which is set at an angle of less than 45° from the horizontal, if located above the first storey, shall

be set at least 100 millimeters above the roof. Curbs on which the skylights rest shall be constructed of incombustible materials except for Types I or II Construction.

2. Spacing between supports in one direction for flat wired glass in skylights shall not exceed 625 millimeters. Corrugated wired glass may have supports 1.50 meters apart in the direction of the corrugation. All glass in skylights shall be wired glass; *Except*, that skylights over vertical shafts extending through two (2) or more storeys shall be glazed with plain glass as specified in the Code; *Provided*, that wired glass may be used in ventilation equal to not less than one-eighth (1/8) the cross-sectional area of the shaft but never less than 1.20 meters provided at the top of such shaft. Any glass not wired glass shall be protected above and below with a screen constructed of wire not smaller than 2.5 millimeters in diameter with a mesh not larger than 25 millimeters. The screen shall be substantially supported below the glass.
3. Skylights installed for the use of photographers may be constructed of metal frames and plate glass without wire netting.
4. Ordinary glass may be used in the roof and skylights for greenhouses, *Provided*, that height of the greenhouses at the ridge does not exceed 6.00 meters above the grade. The use of wood in the frames of skylights will be permitted in greenhouses outside of highly restrictive Fire Zones if the height of the skylight does not exceed 6.00 meters above the grade, but in other cases metal frames and metal sash bars shall be used.
5. Glass used for the transmission of light, if placed in floors or sidewalks, shall be supported by metal or reinforced concrete frames, and such glass shall not be less than 12.5 millimeters in thickness. Any such glass over 100 sq. centimeters in area shall have wire mesh embedded in the same or shall be provided with a wire screen underneath as specified for skylights in the Code. All portions of the floor lights or sidewalk lights shall be of the same strength as required for floor or sidewalk construction, except in cases where the floor is surrounded by a railing not less 1.10 meters in height, in which case the construction shall be calculated for not less than roof loads.

SECTION 1209. Bays, Porches, and Balconies

Walls and floors in bay and oriel windows shall conform to the construction allowed for exterior walls and floors of the type of construction of the building to which they are attached. The roof covering of a bay or oriel window shall conform to the requirements of the roofing of the main roof. Exterior balconies attached to or supported by wall required to be of masonry, shall have brackets or beams constructed of incombustible materials. Railings shall be provided for balconies, landings, or porches which are more than 750 millimeters above grade.

SECTION 1210. Penthouses and Roof Structures

1. Height

No penthouse or other projection above the roof in structures of other than Type V construction shall exceed 8.40 meters above the roof when used as an enclosure for tanks or for elevators which run to the roof and in all other cases shall not extend more than 3.60 meters in height with the roof.

2. Area

The aggregate area of all penthouses and other roof structures shall **not** exceed one third (1/3) of the area of the supporting roof.

3. Prohibited Uses

No penthouse, bulkhead, or any other similar projection above the roof shall be used for purposes other than shelter of mechanical equipment or shelter of vertical shaft openings in the roof. A penthouse or bulkhead used for purposes other than that allowed by this Section shall conform to the requirements of the **Code** for an additional storey.

4. Construction

Roof structures shall be constructed with walls, floors, and roof as required for the main portion of the building except in the following cases:

- a. On Types III and IV constructions, the exterior walls and roofs of penthouses which are 1.50 meters or more from an adjacent property line may be of one-hour fire-resistive incombustible construction.
- b. Walls not less than 1.50 meters from an exterior wall of a Type IV construction may be of one-hour fire-resistive incombustible construction.

The above restrictions shall not prohibit the placing of wood flagpoles or similar structures on the roof of any building.

5. Towers and Spires

Towers and spires when enclosed shall have exterior walls as required for the building to which they are attached. Towers **not** enclosed and which extend more than 20.00 meters above the grade shall have their framework constructed of iron, steel, or reinforced concrete. No tower or spire shall occupy more than one-fourth (1/4) of the street frontage of any building to which it is attached and in no case shall the base area exceed 150.00 sq. meters unless it conforms entirely to the type of construction requirements of the building to which it is attached and is limited in height as a main part of the building. If the area of the tower and spire exceeds 10.00 sq. meters on any horizontal cross section, its supporting frames shall extend directly to the ground. The roof covering of the spires shall be as required for the main room of the rest of the structure. Skeleton towers used as radio masts, neon signs, or advertisement frames and placed on the roof of any building shall be constructed entirely of incombustible materials when more than 7.50 meters in height, and shall be directly supported on an incombustible framework to the ground. No such skeleton towers shall be supported on roofs of combustible framings. They shall be designed to withstand a wind load from any direction in addition to any other loads.

SECTION 1211. Chimneys, Fireplaces, and Barbecues

1. Chimneys

a. Structural Design

Chimneys shall be designed, anchored, supported, reinforced, constructed, and installed in accordance with generally accepted principles of engineering. Every chimney shall be capable of producing a draft at the appliance not less than that required for the safe operation of the appliance connected thereto. No chimney shall support any structural load other than its own weight unless it is designed to act as a supporting member. Chimneys in a wood-framed building shall be anchored laterally at the ceiling line and at each floor line which is more than 1.80 meters above grade, except when entirely within the framework or when designed to be free standing.

b. *Walls*

Every masonry chimney shall have walls of masonry units, bricks, stones, listed masonry chimney units, reinforced concrete or equivalent solid thickness of hollow masonry and lined with suitable liners in accordance with the following requirements:

i. *Masonry Chimneys for Residential Type Appliances*

Masonry chimneys shall be constructed of masonry units or reinforced concrete with walls not less than 100 millimeters thick; or of rubble stone masonry not less than 300 millimeters thick. The chimney liner shall be in accordance with the Code.

ii. *Masonry Chimneys for Low Heat Appliances*

Masonry chimneys shall be constructed of masonry units or reinforced concrete with walls not less than 200 millimeters thick; *Except*, that rubble stone masonry shall be not less than 300 millimeters thick. The chimney liner shall be in accordance with the Code.

iii. *Masonry Chimneys for Medium-Heat Appliances*

Masonry chimneys for medium-heat appliances shall be constructed of solid masonry units or reinforced concrete not less than 200 millimeters thick, *Except*, that stone masonry shall be not less than 300 millimeters thick and, in addition shall be lined with not less than 100 millimeters of firebrick laid in a solid bed of fire clay mortar with solidly filled head, bed, and wall joints, starting not less than 600 millimeters below the chimney connector entrance. Chimneys extending 7.50 meters or less above the chimney connector shall be lined to the top.

iv. *Masonry Chimneys for High-Heat Appliances*

Masonry chimneys for high-heat appliances shall be constructed with double walls of solid masonry units or reinforced concrete not less than 200 millimeters in thickness, with an air space of not less than 50 millimeters between walls. The inside of the interior walls shall be of firebrick not less than 100 millimeters in thickness laid in a solid bed of fire clay mortar with solidly filled head, bed, and wall joints.

v. *Masonry Chimneys for incinerators installed in Multi-Storey Buildings (Apartment-Type Incinerators)*

Chimneys for incinerators installed in multi-storey buildings using the chimney passageway as a refuse chute where the horizontal grate area of combustion chamber does not exceed 0.80 sq. meter shall have walls of solid masonry or reinforced concrete, not less than 100 millimeters thick with a chimney lining as specified in the Code. If the grate area of such an incinerator exceeds 0.80 sq. meter, the walls shall not be less than 100 millimeters of firebrick except that higher than 9.00 meters above the roof of the combustion chamber, common brick alone 200 millimeters in thickness may be used.

vi. *Masonry Chimneys for Commercial and Industrial Type Incinerators*

Masonry chimneys for commercial and industrial type incinerators of a size designed for not more than 110 kilograms of refuse per hour and having a horizontal grate area not exceeding 0.50 sq. meter shall have walls of solid masonry or reinforced concrete not less than 100 millimeters thick with lining of not less than 100 millimeters of firebrick, which lining shall extend for **not** less than 12.00 meters above the roof of the combustion chamber. If the design capacity of grate area of such an incinerator exceeds 110 kilograms per hour and 0.80 sq. meter respectively, walls shall not be less than 200

millimeters thick, lined with not less than 100 millimeters of firebrick extending the full height of the chimney.

c. *Linings*

Fire clay chimney lining shall **not** be less than 15 millimeters thick. The lining shall extend from 200 millimeters below the lowest inlet or, in the case of fireplace, from the throat of the fireplace to a point above enclosing masonry walls. Fire clay chimney linings shall be installed ahead of the construction of the chimney as it is carried up, carefully bedded one on the other in fire clay mortar, with close-fitting joints left smooth on the inside. Firebrick not less than 500 millimeters thick may be used in place of fire clay chimney.

d. *Area*

No chimney passageway shall be smaller in area than the vent connection of the appliance attached thereto.

e. *Height*

Every masonry chimney shall extend at least 600 millimeters above the part of the roof through which it passes and at least 600 millimeters above the highest elevation of any part of a building within 3.00 meters to the chimney.

f. *Corbeling*

No masonry chimney shall be corbeled from a wall more than 150 millimeters nor shall a masonry chimney be corbeled from a wall which is less than 300 millimeters in thickness unless it projects equally on each side of the wall. In the second (2nd) storey of a two-storey building of Group A Occupancy, corbeling of masonry chimneys on the exterior of the enclosing walls may equal the wall thickness. In every case the corbeling shall **not** exceed 25 millimeters projection for each course of brick.

g. *Change in Size or Shape*

No change in the size or shape of a masonry chimney shall be made within a distance of 150 millimeters above or below the roof joints or rafters where the chimney passes through the roof.

h. *Separation*

When more than one passageway is contained in the same chimney, masonry separation at least 100 millimeters thick bonded into the masonry wall of the chimney shall be provided to separate passageways.

i. *Inlets*

Every inlet to any masonry chimney shall enter the side thereof and shall be of not less than 3 millimeters thick metal or 16 millimeters refractory material.

j. *Clearance*

Combustible materials shall not be placed within 50 millimeters of smoke chamber or masonry chimney walls when built within a structure, or within 25 millimeters when the chimney is built entirely outside the structure.

k. *Termination*

All incinerator chimneys shall terminate in a substantially constructed spark arrester having a mesh **not** exceeding 20 millimeters.

l. *Cleanouts*

Cleanout openings shall be provided at the base of every masonry chimney.

2. *Fireplaces and Barbecues*

Fireplaces, barbecues, smoke chambers, and fireplace chimneys shall be of solid masonry or reinforced concrete and shall conform to the minimum requirements specified in the **Code**.

a. *Fireplace Walls*

Walls of fireplaces shall **not** be less than 200 millimeters in thickness. Walls of fireboxes shall not be less than 250 millimeters in thickness; *Except*, that where a lining of firebrick is used, such walls shall not be less than 200 millimeters in thickness. The firebox shall **not** be less than 500 millimeters in depth. The maximum thickness of joints in firebrick shall be 10 millimeters.

b. *Hoods*

Metal hoods used as part of a fireplace or barbecue shall be not less than No. 18 gauge copper, galvanized iron, or other equivalent corrosion-resistant ferrous metal with all seams and connections of smokeproof unsoldered construction. The hoods shall be sloped at an angle of 45° or less from the vertical and shall extend horizontally at least 150 millimeters beyond the limits of the firebox. Metal hoods shall be kept a minimum of 400 millimeters from combustible materials.

c. *Circulators*

Approved metal heat circulators may be installed in fireplaces.

d. *Smoke Chamber*

Front and side walls shall not be less than 200 millimeters in thickness. Smoke chamber back walls shall **not** be less than 150 millimeters in thickness.

e. *Fireplace Chimneys*

Walls of chimneys without flue lining shall **not** be less than 200 millimeters in thickness. Walls of chimneys with flue lining shall **not** be less than 100 millimeters in thickness and shall be constructed in accordance with the requirements of the **Code**.

f. *Clearance to Combustible Materials*

Combustible materials shall **not** be placed within 50 millimeters of fireplace, smoke chamber, or chimney walls when built entirely within a structure, or within 25 millimeters when the chimney is built entirely outside the structure. Combustible materials shall not be placed within 150 millimeters of the fireplace opening. No such combustible material within 300 millimeters of the fireplace opening shall project more than 3 millimeters for each 25 millimeters clearance from such opening. No part of metal hoods used as part of a fireplace, barbecue or heating stoves shall be less than 400 millimeters from combustible material. This clearance may be reduced to the minimum requirements set forth in the **Code**.

g. *Area of Flues, Throats, and Dampers*

The net cross-sectional area of the flue and of the throat between the firebox and the smoke chamber of a fireplace shall **not** be less than the requirements to be set forth by the Secretary. Where dampers are used, they shall be of not less than No. 12 gauge metal. When fully opened, damper opening shall be **not** less than 90% of the required flue area. When fully open, damper blades shall not extend beyond the line of the inner face of the flue.

h. *Lintel*

Masonry over the fireplace opening shall be supported by a non-combustible lintel.

i. *Hearth*

Every fireplace shall be provided with a brick, concrete, stone, or other approved non-combustible hearth slab at least 300 millimeters wider on each side than the fireplace opening and projecting at least 450 millimeters therefrom. This slab shall **not** be less than 100 millimeters thick and shall be supported by a noncombustible material or reinforced to carry its own weight and all imposed loads.

SECTION 1212. Fire-Extinguishing Systems

1. *Fire-Extinguishing Systems* - Where required, standard automatic fire-extinguishing systems shall be installed in the following places, and in the manner provided in the Code.
 - a. In every storey, basement or cellar with an area of 200.00 sq. meters or more which is used for habitation, recreation, dining, study, or work, and which has an occupant load of more than twenty (20).
 - b. In all dressing rooms, rehearsal rooms, workshops or factories, and other rooms with an occupant load of more than ten (10) or assembly halls under Group H and I Occupancies with occupant load of more than five hundred (500), and if the next doors of said rooms are more than 30.00 meters from the nearest safe fire dispersal area of the building or opening to an exit court or street.
 - c. In **all** rooms used for storage or handling of photographic x-ray nitrocellulose films and other inflammable articles.
2. *Dry Standpipes* - Every building **four** (4) or more storeys in height shall be equipped with one or more dry standpipes.
 - a. *Construction and Tests* - Dry standpipes shall be of wrought iron or galvanized steel and together with fittings and connections shall be of sufficient strength to withstand 20 kilograms per square centimeter of water pressure when ready for service, without leaking at the joints, valves, or fittings. Tests shall be conducted by the owner or the building contractor in the presence of a representative of the **Building Official** whenever deemed necessary for the purpose of certification of its proper function.
 - b. *Size* - Dry standpipes shall be of such size as to be capable of delivering 900 liters of water per minute from each of any three (3) outlets simultaneously under the pressure created by one (1) fire engine or pumper based on the standard equipment available.
 - c. *Number Required* - Every building four (4) or more storeys in height where the area of any floor above the third (3rd) floor is 950 sq. meters or less, shall be equipped with at least one (1) dry standpipe and an additional standpipe shall be installed for each additional 950 sq. meters or fraction thereof.

- d. *Location* - Standpipes shall be located within enclosed stairway landings or near such stairways as possible or immediately inside of an exterior wall and within 300 millimeters of an opening in a stairway enclosure of the balcony or vestibule of a smokeproof tower or an outside exit stairway.
 - e. *Siamese Connections* - Subject to the provisions of subparagraph (b) all 100 millimeters dry standpipes shall be equipped with a two-way Siamese fire department connection. All 125 millimeters dry standpipes shall be equipped with a three-way Siamese fire department connection, and 150 millimeters dry standpipes shall be equipped with four-way Siamese fire department connections. All Siamese inlet connections shall be located on a street-front of the building and not less than 300 millimeters nor more than 1.20 meters above the grade and shall be equipped with a clapper-checks and substantial plugs. All Siamese inlet connections shall be recessed in the wall or otherwise substantially protected.
 - f. *Outlets* - All dry standpipes shall extend from the ground floor to and over the roof and shall be equipped with a 63 millimeters outlet nor more than 1.20 meters above the floor level at each storey. All dry standpipes shall be equipped with a two-way 63 millimeters outlet above the roof. All outlets shall be equipped with gate valves.
 - g. *Signs* - An iron or bronze sign with raised letters at least 25 millimeters high shall be rigidly attached to the building adjacent to all Siamese connections and such signs shall read: "CONNECTION TO DRY STANDPIPE".
3. *Wet Standpipes* - Every Group H and I Occupancy of any height, and every Group C Occupancy of two (2) more storeys in height, and every Group B, D, E, F and G Occupancy of three (3) or more storeys in height and every Group G and E Occupancy over 1800 sq. meters in area shall be equipped with one or more interior wet standpipes extending from the cellar or basement into the topmost storey; *Provided*, that Group H buildings having no stage and having a seating capacity of less than five hundred (500) need **not** be equipped with interior wet standpipes.
- a. *Construction* - Interior wet standpipes shall be constructed of the same materials as those required for dry standpipes.
 - b. *Size*
 - i. Interior wet standpipes shall have an internal diameter sufficient to deliver 190 liters of water per minute under 2.00 kilograms per square centimeter pressure at the hose connections. Buildings of Group H and I Occupancy shall have wet standpipes systems capable of delivering the required quantity and pressure from any two (2) outlets simultaneously; for all other Occupancies only one (1) outlet need be figured to be opened at one time. In no case shall the internal diameter of a wet standpipe be less than 50 millimeters, except when the standpipe is attached to an automatic fire-extinguishing system.
 - ii. Any approved formula which determines pipe sizes on a pressure drop basis may be used to determine pipe size for wet standpipe systems. The **Building Official** may require discharge capacity and pressure tests on completed wet standpipe systems.
 - c. *Number required* - The number of wet standpipes when required in the Code shall be so determined that all portions of the building are within 6.00 meters of a nozzle attached to a hose 23.00 meters in length.
 - d. *Location* - In Group H and I Occupancies, outlets shall be located as follows: one (1) on each side of the stage, one (1) at the rear of the auditorium, and one (1) at the rear of the balcony. Where occupant loads are less than five hundred (500) the above requirements may be

waived; *Provided*, that portable fire extinguishers of appropriate capacity and type are installed within easy access from the said locations. In Group B, C, D, E, F and G Occupancies, the location of all interior wet standpipes shall be in accordance with the requirement for dry standpipes; *Provided*, that at least one (1) standpipe is installed to cover not more than 650 sq. meters.

- e. *Outlets.* All interior wet standpipes shall be equipped with a 38 millimeter valve in each storey, including the basement or cellar of the building, and located not less than 300 millimeters nor more than 1.20 meters above the floor.
 - f. *Threads.* All those threads used in connection with the installation of such standpipes, including valves and reducing fittings shall be uniform with that prescribed by the Secretary.
 - g. *Water Supply.* All interior wet standpipes shall be connected to a street main not less than 100 millimeters in diameter, or when the water pressure is insufficient, to a water tank of sufficient size as provided in subparagraph (h). When more than one (1) interior wet standpipe is required in the building, such standpipe shall be connected at their bases or at their tops by pipes of equal size.
 - h. *Pressure and Gravity Tanks* – Tanks shall have a capacity sufficient to furnish at least 1,500 liters per minute for a period of not less than 10 minutes. Such tanks shall be located so as to provide not less than 2 kilograms per square centimeter pressure at the topmost base outlet for its entire supply. Discharge pipes from pressure tanks shall extend 50 millimeters into and above the bottom of such tanks. All tanks shall be tested in place after installation and proved tight at a hydrostatic pressure 50% in excess of the working pressure required. Where such tanks are used for domestic purposes the supply pipe for such purposes shall be located at or above the center line of such tanks. Incombustible supports shall be provided for all such supply tanks and not less than a 900 millimeters clearance shall be maintained over the top and under the bottom of all pressure tanks.
 - i. *Fire pumps.* Fire pumps shall have a capacity of not less than 1,000 liters per minute with a pressure not less than 2 kilograms per square centimeter at the topmost hose outlet. The source of supply for such pump shall be a street water main of not less than 100 millimeters diameter or a well or cistern containing a one-hour supply. Such pumps shall be supplied with an adequate source of power and shall be automatic in operation.
 - j. *Hose and Hose Reels* - Each hose outlet of all interior wet standpipes shall be supplied with a hose not less than 38 millimeters in diameter. Such hose shall be equipped with a suitable brass or bronze nozzle and shall be not over 23.00 meters in length. An approved standard form of wall hose reel or rack shall be provided for the hose and shall be located so as to make the hose readily accessible at all times and shall be recessed in the walls or protected by suitable cabinets.
4. *Basement Pipe Inlets* - Basement pipe inlets shall be installed in the first (1st) floor of every store, warehouse, or factory where there are cellars or basements under same; *Except*, where in such cellars or basements there is installed a fire-extinguishing system as specified in the **Code** or where such cellars or basements are used for banking purposes, safe deposit vaults, or similar uses.
 - a. *Material* - All basement pipe inlets shall be of cast iron, steel, brass, or bronze with lids of cast brass or bronze and shall consist of a sleeve not less than 200 millimeters in diameter through the floor extending to and flush with the ceiling below and with a top flange, recessed with an inside shoulder, to receive the lid and flush with the finished floor surface. The lid shall be a solid casting and shall have a ring lift recessed on the top thereof, so as to be flushed. The lid shall have the words "FOR FIRE DEPARTMENT ONLY, DO NOT COVER UP" cast on the top

- thereof. The lid shall be installed in such a manner as to permit its removal readily from the inlet.
- b. *Location.* Basement pipe inlets shall be strategically located and kept readily accessible at all times to the Fire Department.
5. *Approval* - All fire-extinguishing systems, including automatic sprinklers, wet and dry standpipes, automatic chemical extinguishers, basement pipe inlets, and the appurtenances thereto shall meet the approval of the Fire Department as to installation and location and shall be subject to such periodic test as it may require.
- ### SECTION 1213. Stages and Platform
1. *Stage Ventilators* - There shall be one (1) or more ventilators constructed of metal or other incombustible material near the center and above the highest part of any working stage raised above the stage roof and having a total ventilation area equal to at least 5% of the floor area within the stage walls. The entire equipment shall conform to the following requirements:
 - a. *Opening Action* - Ventilators shall open by spring action or force of gravity sufficient to overcome the effects of neglect, rust, dirt, or expansion by heat or warping of the framework.
 - b. *Glass* - Glass, if used in ventilators, must be protected against falling on the stage. A wire screen, if used under the glass, must be so placed that if clogged it cannot reduce the required ventilating area or interfere with the operating mechanism or obstruct the distribution of water from the automatic fire extinguishing systems.
 - c. *Design* - Ventilators, penthouses, and supporting framework shall be designed in accordance with the Code.
 - d. *Spring Actuation* - Springs, when employed to actuate ventilator doors, shall be capable of maintaining full required tension indefinitely. Springs shall not be stressed more than 50% of their rated capacity and shall not be located directly in the air stream, nor exposed to elements.
 - e. *Location of Fusible Links* - A fusible link shall be placed in the cable control system on the underside of the ventilator at or above the roof line or as approved by the Building Official, and shall be so located as not to be affected by the operation of fire-extinguishing systems.
 - f. *Control* - Remote, manual or electrical control shall provide for both opening and closing of the ventilator doors for periodic testing and shall be located at a point on the stage designated by the Building Official. When remote control of ventilator 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.
 2. *Gridirons* -
 - a. Gridirons, fly galleries, and pin-rails shall be constructed of incombustible materials and fire protection of steel and iron may be omitted. Gridirons and fly galleries shall be designed to support a live load of not less than 367 kilograms per sq. meter. Each loft block well shall be designed to support 373 kilograms per linear meter and the head block well shall be designed to support the aggregate weight of all the loft block wells served. The head block well must be provided with an adequate strongback or lateral brace to offset torque.
 - b. The main counterweight sheave beam shall be designed to support a horizontal and vertical uniformly distributed live load sufficient to accommodate the weight imposed by the total

number of loft blocks in the gridiron. The sheave blocks shall be designed to accommodate the maximum load for the loft or head blocks served with a safety factor of five (5).

3. *Rooms Accessory to Stage* - In a building having a stage, the dressing room sections, workshops, and storerooms shall be located on the stage side of the proscenium wall and shall be separated from each other and from the stage by not less than a One-Hour Fire-Resistive Occupancy Separation.
4. *Proscenium Walls* - A stage shall be completely separated from the auditorium by a proscenium wall of not less than two-hour incombustible construction. The proscenium wall shall extend not less than 1.20 meters above the roof over the auditorium. Proscenium walls may have, in addition to the main proscenium openings, one (1) opening at the orchestra pit level and not more than two (2) openings at the stage floor level, each of which shall be not more than 2.00 sq. meters in area. All openings in the proscenium wall of stage shall be protected by a fire assembly having a one and one-half - hour fire-resistive rating. The proscenium opening, which shall be the main opening for viewing performances, shall be provided with a self-closing fire-resistive curtain as specified in the **Code**.
5. *Stage Floor* - The type of construction for stage floors shall depend upon the requirements based on the Type of Occupancy and the corresponding fire-resistive requirements. All parts of the stage floor shall be designed to support not less than 620 kilograms per square meters. Openings through stage floors shall be equipped with tight-fitting trap doors of wood of not less than 50 millimeters nominal thickness.
6. *Platforms* - The type of construction for platforms shall depend upon the requirements based on the Type of Occupancy and corresponding fire-resistive requirements. Enclosed platforms shall be provided with one (1) or more ventilators conforming to the requirements of stage ventilators; Except, that the total area shall be equal to 5% of the area of the platform. When more than one (1) ventilator is provided, they shall be so spaced as to provide proper exhaust ventilation. Ventilators shall not be required for enclosed platforms having a floor area of 45.00 sq. meters or less.
7. *Stage Exits* - At least one (1) exit not less than 900 millimeters wide shall be provided from each side of the stage opening directly or by means of a passageway not less than 900 millimeters in width to a street or exit court. An exit stair not less than 750 millimeters wide shall be provided for egress from each fly gallery. Each tier of dressing rooms shall be provided with at least two (2) means of egress each not less than 750 millimeters wide and all such stairs shall be constructed in accordance with the requirement specified in the Code. The stairs required in this Sub-section need not be enclosed.

SECTION 1214. Motion Picture Projection Rooms

1. *General Requirements* - The provisions of this Section shall apply only where ribbon type motion picture films in excess of 22-millimeter width and electric projection equipment are used. Every motion picture machine using ribbon type film in excess of 22 millimeter width and electric arc projections 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.
2. *Construction* - Every projection room shall be of not less than one-hour fire-resistive construction throughout and the walls and ceiling shall be finished with incombustible materials. The ceiling shall be not less than 2.40 meters from the finished floor. The room shall have a floor area of not less than 7.00 sq. meters and 3.50 sq. meters for each additional machine.
3. *Exit* - Every projection room shall have at least two doorways separated by not less than one-third the perimeter of the room, each at least 750 millimeters wide and 2.00 meters high. All entrances

to a projection room shall be protected by a self-closing fire assembly having a three-fourth - hour fire-resistive rating. Such doors shall open outward and lead to proper exits as required in the Code and shall not be equipped with any latch. The maximum width of such door shall be 750 millimeters.

4. *Ports and Openings* - Ports in projection room walls shall be of three (3) kinds: projection ports; observation ports; and combination ports used for both observation and for stereopticon, spot or floodlight machines.
 - a. *Ports Required* - There shall be provided for each motion picture projector not more than one (1) projection port, which shall be limited in area to 750 sq. centimeters, and not more than one (1) observation port, which shall be limited in area to 1,300 sq. centimeters. There shall be not more than three (3) combination ports, each of which shall not exceed 750 millimeters by 600 millimeters. Each port opening shall be completely covered with a pane of glass; *Except*, that when acetate safety film is used, projection ports may be increased in size to an area not to exceed 4,500 sq. centimeters.
 - b. *Shutters* - Each port and every other opening in projection room walls, including, any fresh-air inlets but excluding exit doors and exhaust ducts, shall be provided with a shutter of not less than 2.4 millimeters thick sheet metal or its equivalent large enough to overlap at least 25 millimeters on all sides of such openings. Shutters shall be arranged to slide without binding in guides constructed of material equal to the shutters in strength and fire-resistance. Each shutter shall be equipped with a 74° fusible link, which when fused by heat will cause closure of the shutter by gravity. Shutters of a size greater than 1,300 sq. centimeters shall be equipped with a counter-balance. There shall also be a fusible link located over the upper magazine of each projector, which upon operating, will close all the shutters. In addition, there shall be provided suitable means for manually closing all shutters simultaneously from any projector head and from a point within the projection room near each exit door. Shutters on openings not in use shall be kept closed; *Except*, that shutters may be omitted when only acetate safety film is used.
5. *Ventilation*
 - a. *Inlet* - A fresh-air inlet from the exterior of the building not less than 900 sq. centimeters and protected with wire netting, shall be installed within 50 millimeters of the floor in every projection room, the source of which shall be remote from other outside vents or flues.
 - b. *Outlets* - Ventilation shall be provided by one (1) or more mechanical exhaust systems which shall draw air from each arc lamp housing to out-doors either directly or through an incombustible flue used for no other purpose. Exhaust capacity shall not be less than 0.50 cu. meter nor more than 1.40 cu. meter per minute for each arc lamp plus 5.60 cu. meters for the room itself. Systems shall be controlled from within the enclosure and shall have pilot lights to indicate operation. The exhaust systems serving the projection room may be extended to cover rooms associated therewith such as rewind rooms. No dampers shall be installed in such exhaust systems. Ventilation of these rooms shall not be connected in any way with ventilating or air-conditioning systems serving other portions of the building. Exhaust ducts shall be of incombustible material and shall either be kept 25 millimeters from combustible material or covered with 10 millimeters of incombustible heat-insulating material.
6. *Regulation of Equipment* - All shelves, fixtures, and fixed equipment in a projection room shall be constructed of incombustible materials. All films not in actual use shall be stored in metal cabinets having individual compartments for reels or shall be in generally accepted shipping containers. No solder shall be used in the construction of such cabinets.

SECTION 1215. Lathing, Plastering, and Installation of Wall Boards

The installation of lath, plaster and gypsum wall board shall conform to the fire-resistive rating requirements and the type of construction of building.

(emphases and underscoring supplied)
Rule XIII follows

RULE XIII - ELECTRICAL AND MECHANICAL REGULATIONS

SECTION 1301. Electrical Regulations

All electrical systems, equipment and installations mentioned in the Code shall conform to the provisions of the Philippine Electrical Code Part 1 (PEC-1) and Part 2 (PEC-2), as adopted by the Board of Electrical Engineering pursuant to Republic Act 7920, otherwise known as the Philippine Electrical Engineering Law.

1. Overhead Service Entrance

In **Subdivisions, Housing Projects**, Commercial and Industrial Buildings, overhead transmission and distribution voltages are required to supply power source including transformers, poles and supporting structures.

2. Attachments on and Clearances from Buildings

- a. An Attachment Plan approved by professional electrical engineer shall cover power lines and cables, transformers and other electrical equipment installed on or in buildings and shall be submitted to the local Building Official.
- b. Where building/s exceed 15.00 meters in height, overhead lines shall be arranged where practicable so that clear space or zone at least 1.80 meters (horizontal) will be left adjacent to the building or beginning not over 2.45 meters (horizontal) from the building, to facilitate the raising of ladders where necessary for fire fighting.

EXCEPTION: This requirement does not apply where it is the rule of the local fire department to exclude the use of ladders in alleys or other restricted places, which are generally occupied by supply lines.

3. Open Supply Conductors Attached to Buildings

Where the permanent attachment of open supply conductors to any class of buildings is necessary for service entrance, such conductors shall meet the following requirements:

- a. Conductors of more than 300 volts to ground shall not be carried along or near the surface of the building unless they are guarded or made inaccessible.
- b. To promote safety to the general public and to employees not authorized to approach conductors and other current-carrying parts of electric supply lines, such parts shall be arranged so as to provide adequate clearance from the ground or other space generally accessible, or shall be provided with guards so as to isolate persons effectively from accidental contact.

- c. Ungrounded service conduits, metal fixtures and similar noncurrent-carrying parts, if located in urban districts and where liable to become charged to more than 300 volts to ground, shall be isolated or guarded so as not to be exposed to accidental contact by unauthorized persons. As an alternative to isolation or guarding noncurrent-carrying parts shall be solidly or effectively grounded.
- d. Service drops passing over a roof shall be securely supported by substantial structures. Where practicable, such supports shall be independent of the building.

4. Conductors Passing By or Over Buildings

- a. Unguarded or accessible supply conductors carrying voltages in excess of 300 volts may be either beside or over buildings. The vertical or horizontal clearance to any buildings or its attachments (balconies, platforms, etc.) shall be as listed in Table XIII.1. The horizontal clearance governs above the roof level to the point where the diagonal equals the vertical clearance requirements. This Rule should not be interpreted as restricting the installation of a trolley contact conductor over the approximate centerline of the track it serves. (Figure XIII.1.)
- b. Supply conductors of 300 volts or more, when placed near enough to windows, verandas, fire escapes, or other ordinarily accessible places, shall be properly guarded by grounded conduit and barriers.
- c. Where the required clearances cannot be obtained, supply conductors shall be grouped or bundled and supported by grounded messenger wires.

5. Clearance of Service Drops

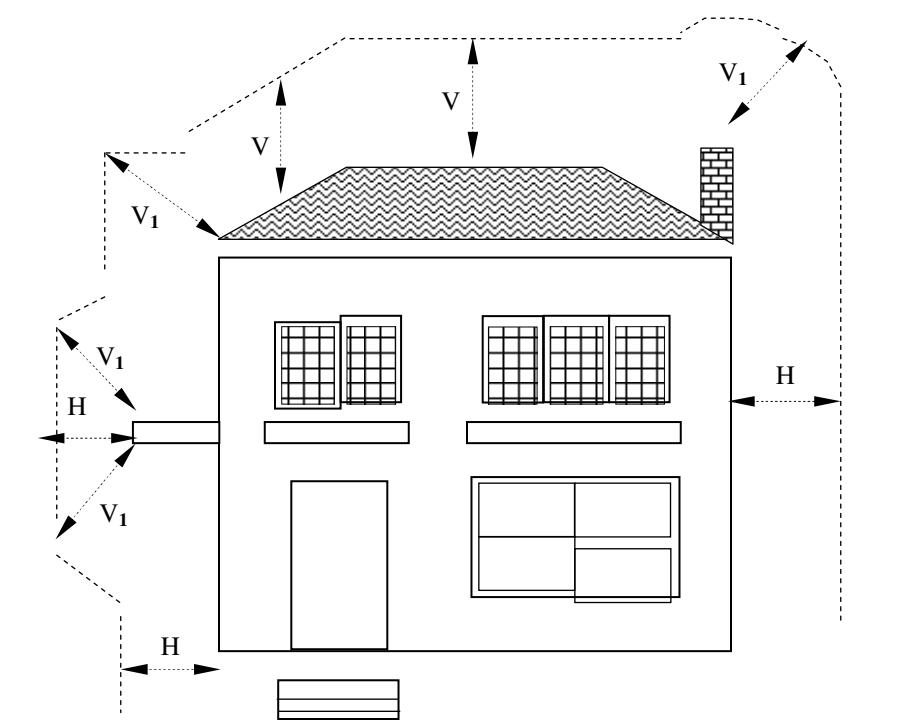
- a. Service drop conductors shall not be readily accessible and when not in excess of 600 volts, shall conform to the following:
 - i. Conductors shall have a clearance of not less than 2.50 meters from the highest point of roofs over which they pass with the following exceptions:
 - (a) Where the voltage between conductors does not exceed 300 volts and the roof has a slope of **not** less than 100 millimeters in 300 millimeters, the clearance may not be less than 1.00 meter.
 - (b) Service drop conductors of 300 volts or less which do **not** pass over other than a maximum of 1.20 meters of the overhang portion of the roof for the purpose of terminating at a through-the-roof service raceway or approved support may be maintained at a minimum of 500 millimeters from any portion of the roof over which they pass.
 - b. Conductors shall have a clearance of **not** less than 3.00 meters from the ground or from any platform or projection from which they might be reached.
 - c. Conductors shall have a horizontal clearance of not less than 1.00 meter from windows, doors, porches, fire escapes, or similar locations and shall be run less than 1.00 meter above the top level of a window or opening.

- d. Service drop of conductors, when crossing a street, shall have a clearance of not less than 5.50 meters from the crown of the street or sidewalk over which it passes; and shall have a minimum clearance of 3.00 meters above ground at its point of attachment to the building or pedestal.
- e. No parts of swimming and wading pools shall be placed under existing service drop conductors or any other overhead wiring; nor shall such wiring be installed above the following:
 - i. Swimming and wading pools and the area extending 3.00 meters outward horizontally from the inside of the walls of the pool;
 - ii. Diving structures;
 - iii. Observation stands, towers or platforms.

TABLE XIII.1. Clearance of Wires, Conductors, Cables and Unguarded Rigid Energized Parts Adjacent but not Attached to Buildings and Other Installations Except Bridges

Clearance of	Insulated Communication conductors and cables; messengers; surge protection wires; grounded guys; neutral conductors	Supply cables of 0 to 750 V (mm)	Unguarded rigid energized parts, 0 to 750 V; non-insulated communication conductors (mm)	Supply cables over 750 V; open supply conductors, 0 to 750 V (mm)	Open supply conductors, over 750 V to 22 kV (mm)	Unguarded rigid energized parts, over 750 V to 22 kV (mm)
1. Buildings						
a. Horizontal						
(1) To walls, projection and guarded windows	1400	1500	1500	1700	2300	2000
(2) To unguarded windows	1400	1500	1500	1700	2300	2000
(3) To balconies and areas readily accessible	1400	1500	1500	1700	2300	2000
b. Vertical						
(1) Over or under roofs or projections not readily accessible to pedestrians	900	1070	3000	3200	3800	3600
(2) Over or under balconies and roofs readily accessible to pedestrians	3200	3400	3400	3500	4100	4000
(3) Over roofs accessible to vehicles but not subject to truck traffic	3200	3400	3400	3500	4100	4000
(4) Over roofs accessible to truck traffic	4700	4900	4900	5000	5600	5500

2. Signs, chimneys, billboards, radio and television antennas, and other installations not classified as buildings or bridges						
a. Horizontal	900	1070	1500	1700	2300	2000
b. Vertical over or under	900	1070	1700	1800	2450	2300



V - Minimum vertical clearance, measured either diagonally or vertically

V_1 - Transition

Where:

$$V_1 = V$$

Figure XIII.1.
CLEARANCE DIAGRAM FOR BUILDING

Annotation. The appropriate protective devices for high tension wires shall be provided.

6. Wiring Methods

Service entrance conductors extending along the exterior or entering buildings or other structures shall be installed in rigid steel conduit or concrete encased plastic conduit from point of service drop to meter base and from meter base to the disconnecting equipment. However, where the service entrance conductors are protected by approved fuses or breakers at their terminals (immediately after the service drop or lateral) they may be installed in any of the recognized wiring methods as provided by PEC-1.

- a. Abandoned lines and/or portions of lines no longer required to provide service shall be removed.
- b. Power pole, lines, service drop and other line equipment shall be free from any attachment for antennas, signs, streamers and the like.

7. Transformers

- a. Oil-insulated transformers rated more than 15 kV between conductors shall be installed inside a transformer vault.
- b. Dry-type and other transformers with non-flammable insulation shall be installed in a transformer room.
- c. Transformers shall be guarded as follows:
 - i. Appropriate provisions shall be made to minimize the possibility of damage to transformers from external causes where the transformers are located exposed to physical damage.
 - ii. Dry-type transformers shall be provided with a non-combustible moisture resistant case or enclosure which will provide reasonable protection against accidental insertion of foreign objects.
 - iii. The transformer installation shall conform to the provisions for guarding of live parts in PEC-1.
 - iv. The operating voltage of exposed live parts of transformer installations shall be indicated by signs or visible markings on the equipment or structures.

8. Provisions for Transformer Vault

- a. A transformer vault when required, shall be constructed in accordance with PEC-1 latest edition.

b. Transformers and transformer vaults shall be accessible only to qualified personnel for inspection and maintenance.

c. Adequate ventilation shall be provided for the transformer vault.

9. Capacitor

a. This applies to installation of capacitors on electric circuits in buildings.

EXCEPTION: 1. Capacitors that are component of other apparatus shall conform to the requirements for such apparatus.

2. Capacitors in hazardous locations shall comply with additional requirements as prescribed in PEC-1.

b. Installation of capacitors in which any single unit contains more than 11 liters of flammable liquid shall be in a vault or outdoor fence enclosures complying with PEC-1.

c. Capacitors shall be protected from physical damage by location or by suitable fences, barriers or other enclosures.

d. Capacitors shall be provided with non-combustible cases and supports.

10. Emergency Power Systems

a. Shall provide electric power for the safety to life and property when normal electric power supply is interrupted.

b. Shall have adequate capacity for the operation of the emergency load.

c. For hospitals, the transition time to transfer power supply from the instant of interruption of normal power supply to the emergency supply shall not exceed 10 seconds.

11. Electrical Room

a. An adequate space or area shall be provided at load centers where panel boards, breakers, switchgears and other electrical equipment are installed.

12. Service Equipment

a. An adequate space or area shall be provided for the service equipment that shall be located in a readily accessible area, either inside or the outside walls of the building.

13. Metering Facilities

- a. Metering Vault, when required for primary service, shall be provided with natural or artificial ventilation.
- b. Metering space shall be provided for single metering or multi-metering centers for secondary service.

SECTION 1302. Mechanical Regulations

1. All mechanical systems, equipment and installations mentioned in the Code shall conform to the provisions of the Philippine Mechanical Code, as adopted by the Board of Mechanical Engineering pursuant to **RA 8495** as amended, otherwise known as the Philippine Mechanical Engineering Law.

2. Guarding of Moving and Dangerous Parts

All prime movers, machines and machine parts, power transmission equipment shall be so guarded, shielded, fenced or enclosed to protect any person against exposure to or accidental contact with dangerous moving parts.

3. Cranes

- a. Adequate means like ladders, stairs or platforms shall be provided for cranes having revolving cabs or machine houses, to permit the operator to enter or leave the crane cab and reach the ground safely, irrespective of its position. If a step-over is provided, the gap must not exceed 300 millimeters.
- b. A gong or other effective warning device shall be mounted on each cage or cab.
- c. Temporary crane operation without warning device may be allowed provided there is a flagman whose sole duty is to warn those in the path of the crane or its load.
- d. The maximum rated load of all cranes shall be plainly marked on each side of the crane. If the crane has more than one hoisting unit, each hoist shall have marked on it or its load block, its rated capacity clearly legible from the ground or floor.

4. Hoists

- a. Operating control shall be plainly marked to indicate the direction of travel and provided with an effective warning device.
- b. Each hoist designed to lift its load vertically shall have its rated load legibly marked on the hoist or load block or at some easily visible space.

- c. A stop, which shall operate automatically, shall be provided at each switch, dead end rail or turntable to prevent the trolley running off when the switch is open.
- d. Each electric hoist motor shall be provided with electrically or mechanically operated brake so arranged that the brake will be applied automatically when the power is cut off from the hoist.

5. Elevators

Elevators shall be installed in all private and public buildings for public use accessible to disabled persons, pursuant to the objectives of *Batas Pambansa Bilang 344* (Accessibility Law).

- a. Hoistway for elevators shall be substantially enclosed throughout their height, with no openings allowed except for necessary doors, windows or skylights.
- b. Ropes, wires or pipes shall not be installed in hoistways, except when necessary for the operation of the elevators.
- c. Hoistway pits shall be of such depth that when the car rests on the fully compressed buffers, a clearance of not less than 600 millimeters remains between the underside of the car and the bottom of the pit.
- d. When four (4) or more elevators serve all or the same portion of a building, they shall be located in not less than two (2) hoistways and in no case shall more than four (4) elevators be located in any one hoistway.
- e. Where a machine room or penthouse is provided at the top of a hoistway, it shall be constructed with sufficient room for repair and inspection. Access shall be by means of an iron ladder or stairs when the room is more than 600 millimeters above the adjacent floor or roof surface. The angle of inclination of such ladder or stairs shall not exceed 60° from the horizontal. This room shall not be used as living quarters or depository of other materials and shall be provided with adequate ventilation.
- f. Minimum number of hoisting ropes shall be three (3) for traction elevators and two (2) for drum type elevators.
- g. The minimum diameter of hoisting and counterweight ropes shall be 30 millimeters.
- h. Elevators shall be provided with Fall-Free Safety Device, over-load switch and reverse polarity relay.
- i. In apartments or residential condominiums of five (5) storeys or more, at least one (1) passenger elevator shall be kept on twenty-four (24) hour constant service.

6. Escalators

- a. The angle of inclination of an escalator shall not exceed 30° from the horizontal.
- b. The width between balustrades shall not be less than 560 millimeters nor more than 1.20 meters. This width shall not exceed the width of the steps by more than 330 millimeters.
- c. Solid balustrades of incombustible material shall be provided on each side of the moving steps. If made of glass, it shall be of tempered type glass.
- d. The rated speed, measured along the angle of inclination, shall be not more than 38 meters per minute.

7. Boilers and Pressure Vessels

a. Location of Boilers

- i. Boilers may be located inside buildings provided that the boiler room is of reinforced concrete or masonry and that the boiler room shall not be used for any other purpose. No part of the boiler shall be closer than 1.00 meter from any wall and shall have at least two (2) separate exits.
- ii. In case the main building is not made up of fire resistive materials, boilers shall be located outside the building at a distance of not less than 3.00 meters from the outside wall of the main building and the building housing the boiler shall be made up of fire-resistive materials.
- b. Smokestacks, whether self-supporting or guyed, shall be of sufficient capacity to handle fuel gases, shall be able to withstand a wind load of 175 kilometers per hour and shall rise at least 5.00 meters above the eaves of any building within a radius of 50.00 meters.
- c. Manufacturers/assemblers of boilers/pressure vessels/pressurized water heaters shall stamp each vessel on the front head or on any other suitable location with the name of the manufacturer, serial number, year of manufacture maximum allowable working pressure, heating surface in sq. meters, and thickness of shell.
- d. Boilers of more than 46.00 sq. meters heating surface shall each be provided with two (2) means of feeding water, one (1) steam driven and one (1) electrically driven, or one (1) pump and one (1) injector.
- e. Two (2) check valves shall be provided between any feed pump and the boiler in addition to the regular shut-off valve.
- f. Where two (2) or more boilers are connected in parallel, each steam outlet shall be provided with a non-return valve and a shut-off valve.

- g. In no case shall the maximum pressure of an existing boiler be increased to a greater pressure than would be allowed for a new boiler of same construction.
- h. Each boiler shall have at least one (1) safety valve. For boilers having more than 46.00 sq. meters of water heating surface or a generating capacity exceeding 910 kilograms per hour, two (2) or more safety valves shall be required.
- i. Each boiler shall have a steam gauge, with a dial range of not less than one and one-half times and not more than twice the maximum allowable working pressure. It may be connected to the steam space or to the steam connection to the water column.
- j. Repairs/replacements on any parts shall comply with the applicable section on New Installation of Boilers/Pressure Vessels of the Philippine Mechanical Code.
- k. Upon the completion of the installation, the Building Official shall conduct an inspection and test, and if found complying with requirements, a certificate of operation for a period not exceeding one (1) year shall be issued after payment of the required inspection fees.
- l. After a permit has been granted to install a boiler/pressure vessel/pressurized water heater upon payment of the installation fees therefore, it shall be the duty of the Building Official to make periodic inspection of the installation to determine compliance with the approved plans and specifications.
- m. The **Building Official** shall notify the owner in writing of the intended date of the annual inspection at least fifteen (15) days in advance but not to exceed thirty (30) days from the intended date of inspection.
- n. The owner/user shall prepare the boiler(s) for inspection and provide all labor and equipment required during said inspection.

8. Refrigeration and Air Conditioning

- a. The effective temperature and relative humidity of the air to be used for comfortable cooling shall be maintained at 20°Celsius to 24°Celsius and 50% to 60%, respectively, with 4.60 to 7.60 meters per minute air movement within the living zone.
- b. Water from evaporators, condensers and other machinery shall be properly collected into a suitable water or drainage system.
- c. Ducts shall be constructed entirely of non-combustible materials such as steel, iron, aluminum or other approved materials. Only fire retardant lining shall be used on the inside of ducts.
- d. Access doors shall be provided at all automatic dampers, fire dampers, thermostats and other apparatus requiring service and inspection in the duct system.

- e. Where ducts pass thru walls, floors or partitions, the space around the duct shall be sealed with fire resistant material equivalent to that of the wall, floor or partition, to prevent the passage of flame or smoke.
- f. When ducts or their outlets or inlets pass through firewalls, they shall be provided with automatic fire dampers that automatically close on both sides of the firewall through which they pass.
- g. Fire doors and fire dampers shall be arranged to close automatically and remain tightly closed, upon the operation of a fusible link or other approved heat actuated device, located where readily affected by an abnormal rise of temperature in the duct.
- h. Each refrigerating system shall be provided with a legible metal sign permanently attached and easily noticeable, indicating thereon the name of manufacturer or installer, kind and total number of kilograms of refrigerant contained in the system and applied field test pressure applied.
- i. In refrigerating plants of more than 45 kilograms, refrigerant, masks and helmets shall be used. These shall be kept in a suitable cabinet outside the machine room when not in use.
- j. Not more than 140 kilograms of refrigerant in approved containers shall be stored in a machine room at any given time.
- k. Where ammonia is used, the discharge may be into tank of water, which shall be used for no other purpose except ammonia absorption. At least 1 liter of water shall be provided for every 120 gallons of ammonia in the system.
- l. In a refrigerating system containing more than 9 kilograms, stop valves shall be installed in inlets and outlets of compressors, outlets of liquid receivers, and in liquid and suction branch headers.
- m. Window type air conditioners shall be provided with drainpipe or plastic tubing for discharging condensate water into a suitable container or discharge line.
- n. Window type air conditioners shall be provided with exhaust ducts if the exhaust is discharged into corridors/hallways/arcades/sidewalks, etc., and shall be installed at not less than 2.10 meters above the floor level.

9. Water Pumping for Buildings/Structures

- a. Installation of pumping equipment to supply buildings/structures directly from existing water supply system shall not be allowed. An underground water tank or cistern must be filled by gravity flow from the water supply system, from where pumps can be installed.

- b. To maintain water pressure in all floors of a building/structure, the following systems may be used:
 - i. Overhead tank supply - may be installed above the roof supported by the building/structure or on a separate tower.
 - (a) Water tanks shall be provided with a vent and an overflow pipe leading to a storm drain and shall be fully covered.
 - ii. Pneumatic tank - an unfired pressure vessel, initially full of air, into which water from mains is pumped.
 - (a) A suitable pressure switch shall stop the pump when pressure required is attained.
 - (b) Tanks shall be designed for twice the maximum total dynamic pressure required.
 - (c) An air volume control device shall be installed to maintain correct air volume inside the tank.

10. Pipings for Fuel, Gas and Steam

- a. Piping shall, as much as possible, run parallel to building walls.
- b. Grouped piping shall be supported on racks, on either horizontal or vertical planes.
- c. Piping on racks shall have sufficient space for pipe or chain wrenches so that any single line can be altered/repaired/replaced without disturbing the rest.
- d. Piping 100 millimeters in diameter and above shall be flanged. Smaller sized pipes may be screwed.
- e. Piping subjected to varying temperatures shall be provided with expansion joints.
- f. Galvanized piping shall not be used for steam.
- g. Piping carrying steam, hot water or hot liquids shall not be embedded in concrete walls or floors and shall be properly insulated.
- h. Piping carrying propane, butane and other gas which are heavier than air, shall be provided with automatic shut-off devices. The automatic shut-off device is most effective if provided to each burner before the flexible connection.

11. Identification of piping by color and tag shall be as follows:

Material Piped	Pipe Color	Pipe Identification
Acetylene	Orange	Acetylene
Acid	Yellow	Acid
Air-High pressure	Yellow	H.P. Air
Air-Low Pressure	Green	L.P. Air
Ammonia	Yellow	Ammonia
Argon-Low Pressure	Green	L.P. Argon
Blast Furnace Glass	Orange	B.F.Gas
Carbon Dioxide	Red	Carbon Dioxide
Gasoline	Orange	Gasoline
Grease	Orange	Grease
Helium-Low Pressure	Green	L.P. Helium
Hydrogen	Orange	Hydrogen
Nitrogen-Low Pressure	Green	L.P.-Nitrogen
Oxygen	Orange	Oxygen
Oil	Orange	Oil
Steam-High Pressure	Yellow	H.P.Steam
Steam-Low Pressure	Yellow	L.P. Steam
Tar	Orange	Tar
Producer Gas	Orange	Producer Gas
Liquid Petroleum Gas	Orange	L. P. Gas
Vacuum-High	Orange	High Vacuum
Water-Boiler Feed	Yellow	Boiler Feed Water
Water-Cold	Green	Cold Water

Water-Distilled	Green	Distilled Water
Water (Fire Service)	Red	Fire Service Water
Water-Hot	Yellow	Hot Water
Water-Low-Pressure (Excl. Of fire Service)	Green	L.P. Water
Water-High Pressure (Excl. of Fire service)	Yellow	H.P. Water
Water-Treated	Green	Treated Water
Oil and Water (For hydraulic system)	Green	Oil and Water
Oil and Water (For hydraulic system)	Orange	Oil and Water

(emphases and underscoring supplied)

Rule XIV follows

RULE XIV - PHOTOGRAPHIC AND X-RAY FILMS

SECTION 1401. Storage and Handling

1. Storage rooms of unexposed photographic and x-ray films shall be provided with automatic fire extinguishing systems in the following cases:
 - a. When unexposed films in generally accepted safety shipping containers exceed the aggregate of 14.00 cu. meters;
 - b. Where shelving used for storage of individual packages not in said shipping containers exceeds 1.40 cu. meters in capacity; and
 - c. Storage is **not** in generally accepted safety shipping containers in any section **not** exceeding 14.00 cu. meters.
2. Film negatives in storage or in process of handling shall be kept in heavy Manila envelopes, not exceeding twelve (12) films to an envelope. Expanding envelopes shall not be used.
3. Film negatives shall be kept in properly insulated vented cabinets, vented storage vaults or outside storage houses. **Not** more than 110 kilograms shall be stored in any single cabinet. Where the film stored exceeds 450 kilograms, it shall be in vented storage vaults or in a detached structure or roof vault. Door openings in vaults shall be of **four-hour fire-resistive** construction and shall be kept closed except when in use.
4. Only incandescent electric light shall be permitted; protected with substantial wire guards or vapor proof globes or both. Portable lights on extension cords are prohibited. Conspicuous "NO SMOKING" signs shall be posted.
5. **No** films shall be stored within 600 millimeters of steam pipes, chimneys, or other sources of heat.
6. There shall be first aid provisions of types using water or water solutions. Discarded films shall be stored and handled in the same manner as other films until removed from the premises.

SECTION 1402. Classes of Film Exempted

1. The provisions of this Section do **not** apply to the following: film for amateur photographic use in original packages of "roll" and "film pack" films in quantities of less than 1.40 cu. meters; safety film; dental X-ray film; establishments manufacturing photographic films and their storage incidental thereto; and films stored or being used in standard motion picture booths.
2. Safety photographic X-ray film may be identified by the marking on the edge of the film.

SECTION 1403. Fire Extinguishing System

Unless otherwise provided in the **Code**, all fire extinguishing systems when so required shall be of a type, specifications, and methods of installation as prescribed in accordance with the requirements of the Secretary.

(emphases supplied)

Rule XV follows

RULE XIX - THE USE OF COMPUTERS

SECTION 1901. General Rule

The use of computer for all or any part of the design of buildings under the **Code** is permitted provided that **all programs** to be used are documented.

SECTION 1902. Program Documentation

1. Documenting a program under the **Code** consists of filing with the **OBO** a reference to a publication or publications accessible to him where the detailed description of the program or a brief statement of the theoretical background of the program including a description of the algorithms used are found.
2. The software name, version number and the company that developed the program and its address shall be provided as part of the program documentation.

SECTION 1903. Submission of Computer-Generated Computations

- a. A copy of the output sheets for computer-generated computations shall be submitted as part of the design computations.
 - i. The first sheet of the output sheets shall be signed and sealed by the designer.
- b. The output sheets shall be accompanied by a certification of a designer and/or consultant that the output sheets are the results obtained through the use of documented programs. The certification should include the identification of the specific program used for each portion of the computer-generated computations being submitted.
 - i. The data provided, as computer input shall be clearly distinguished from those computed in the program.
 - ii. The information required in the output shall include date of processing, program identification, all output data, units and final results.

(emphases supplied)

Rule XX follows

RULE XV - PREFABRICATED CONSTRUCTION

SECTION 1501. Prefabricated Assembly

1. Prefabricated assembly is a structural unit, the integral parts of which have been built-up or assembled prior to incorporation in the building. It shall be made of pre-cast concrete, various metal components, unplasticized polyvinyl chloride (**uPVC**) or other construction materials acceptable to the architect/engineer.
2. To determine the structural adequacy, durability, soundness, weather and fire resistance of pre-fabricated assemblies, they shall pass the special tests conducted by any accredited material testing laboratories.
3. Every device or system to connect prefabricated assemblies shall be capable of developing the strength of the different members as an integral structure. Except, in the case of members forming part of a structural frame as specified in the **Code and this IRR**.
4. Anchorages and connections between members and the supporting elements of the structure or walls shall be capable of withstanding all probable external and internal forces or other conditions for a structurally adequate construction.
5. In structural design, proper allowances shall be made for any material to be displayed or removed for the installation of pipes, conduits, or other equipment.
6. Metal and uPVC prefabricated assembly shall be adequately provided with anchorage and connectors.
7. Placement of prefabricated assemblies shall be inspected to determine compliance with the Code.
8. During the placement of the prefabricated assembly, a safety engineer shall be required at the site.

(emphases supplied)

Rule XVI follows

RULE XVI - PLASTICS

SECTION 1601. Approved Plastics

Approved plastic materials shall be those which have a **flame-spread rating of two hundred twenty five (225) or less** and a **smoke density not greater than that obtained from the burning of untreated wood under similar conditions** when tested in accordance with generally accepted engineering practices. The products of combustion shall be **no** more toxic than the burning of untreated wood under similar conditions.

SECTION 1602. Installation

1. *Structural Requirements* - All plastic materials shall be of adequate strength and durability to withstand the prescribed design loads. Sufficient and substantial technical data shall be submitted to establish stresses, maximum unsupported spans, and such other information as may be deemed necessary for the various thicknesses and forms used.
2. *Fastenings* - Fastenings shall be adequate to withstand design loads and internal and external stresses required of the assembly. Proper allowances of plastic materials in conjunction with other materials with which it is assembled or integrated shall be provided.

SECTION 1603. Glazing of Openings

1. The location of doors, sashes and framed openings glazed or equipped with approved plastics at the exterior walls of a building shall be so arranged that in case of fire, the occupants may use such openings to escape from the building to a place of safety. The travel distance from any point of the building towards the location of such openings should not be over 45.00 meters in any place of assembly for spaces **not** protected by automatic fire suppression and 60.00 meters in areas so protected.
2. Openings glazed with approved plastics at the ground floor shall be so located such that it shall open directly to a street or into an exit court. Such openings at the upper floor shall be so located at a horizontal distance not less than 3.00 meters from the enclosed stairway, outside stairway or exit passageway leading to a street or into an exit court.
3. The use of plastic doors, sashes and framings of openings for Group A to I Occupancies may be allowed except for entrance doors and exit doors which should be of materials other than plastics permitted by the Code.
4. The size of openings glazed with approved plastics shall have a minimum dimension where one person could pass through or 600 millimeters square.
5. The maximum size of such openings depends upon the structural strength and the fastening adequacy requirements of approved plastics being used.
6. The spacing between openings glazed with approved plastics shall have a minimum distance such that the materials used in between can withstand the vertical and lateral forces within the influence of such openings. The minimum distance shall be 2.00 meters for all spans.

SECTION 1604. Skylights

1. *General* - Approved plastics may be used in skylights installed on roofs of Types I, II or III Constructions and all buildings in these categories shall be equipped with an approved automatic fire-extinguishing system in Groups A, B, C, E, F, J, H-3 and H-4 Occupancies; *Except*, that:

- a. Approved plastics may be used in any type of construction or occupancy as a fire venting system when approved by the **Building Official**.
- b. Plastics may be used in approved skylights in **Type II one-hour fire-resistive** construction which are located 300 millimeters or more above the lower flange of the ceiling. The walls of the skylight well shall be no less fire-resistive than the adjacent ceiling.
- c. Where a fire-resistive ceiling is **not** required in one-storey buildings, approved plastics may be used in skylights.

2. *Installation Requirements*

- a. Except in Group A Occupancies, no skylight shall be installed within 3.00 meters of a property line.
 - b. The edges of dome-type skylights shall be properly flashed.
 - c. Plastic skylights shall be separated from each other by at least 2.50 meters laterally and 3.00 meters along the slope of the roof.
3. *Allowable areas* - The area of individual plastic skylights shall not exceed 10.00 square meters. The total aggregate area of plastics used in skylights, monitors, and sawtooth glazing shall not exceed 20% of the floor area of the room or occupancy sheltered.
4. *Curb Requirements* - Plastic skylights in roofs having a slope of less than 1 in 3 shall have a 100 millimeters high curb. The curb may be omitted where a wire screen not smaller than No. 12 U.S. gauge with a mesh not larger than 25 millimeters is provided immediately below the skylight. The screen shall be substantially mounted below the skylight.

SECTION 1605. Light-Transmitting Panels in Monitors and Sawtooth Roofs

1. *General* - Where a fire-resistive rating is **not** required for the roof structure, and in all buildings provided with an approved automatic fire-extinguishing system, approved plastics may be used with or without sash as the light-transmitting medium in monitors and sawtooth; *Except*, that plastics used in monitors or sawtooth roofs of **Type II** Construction shall be of materials appropriate to be used according to flame-spread characteristics.
2. *Allowable Areas* - The area of individual plastic glazing used in monitors and sawtooth glazing shall not exceed 15.00 square meters. The total aggregate area of plastics used in skylights, monitors, and sawtooth glazing shall not exceed 20% of the floor area of the room or occupancy sheltered.
3. *Area Separation* - The area of such plastic panels shall be separated from each other by a section of incombustible material or by a section of the roofing material of the structure not less than 1.50 meters in length. The lower edge of the plastic material shall be at least 150 millimeters above the surface of the adjoining roof surface.

SECTION 1606. Plastic Light Diffusers in Ceilings

1. *General* - Ceiling light diffusers having an area greater than 10% of any 10.00 sq. meters of room area shall be of approved plastics conforming to the requirements specified in the Code.
2. *Installation* - Plastic light diffusers shall be installed in such a manner that they will not readily become detached when subjected to room temperature of 80°C for 15 minutes, *Except*, for plastic light diffusers which are installed in the first floor area of Group C Occupancies having egress directly to the exterior of the building; and plastic light diffusers which are located between an

approved automatic Fire-extinguishing system and the area to be protected other than public corridors for Group A, B, C, D, E, G, H, and I Occupancies if tests required by the Secretary have established that such installation will not interfere with the efficient operation of such automatic fire-extinguishing systems.

SECTION 1607. Partitions

Where partitions are not required to be of fire-resistive or incombustible construction, approved plastics conforming to the requirements specified in the Code may be used.

SECTION 1608. Exterior Veneer

1. *General* - Exterior veneer may be of approved plastic materials, and shall conform to the provisions of this Section.
2. *Height* - Plastic veneer shall not be attached to any exterior wall above the first storey; *Provided*, that plastic veneer may be attached to exterior walls above the first storey of buildings located outside of highly restrictive Fire Zones; *Provided*, further that the height of veneer is **not** in excess of 10.00 meters above the adjacent grade of elevation.
3. *Area* - Sections of plastic veneer shall not exceed 15.00 sq. meters in area, *Except*, that in less restrictive Fire Zones, the area may be increased by 50%.
4. *Separation* - Sections of plastic veneer shall be separated by a minimum of 1.20 meters vertically and 600 millimeters horizontally.

SECTION 1609. Awnings and Canopies

1. Plastic materials appropriate for use according to Flame Spread characteristics may be utilized in awnings and canopies, provided such awnings and canopies are constructed in accordance with provisions governing projections and appendages as specified in the **Code**.
2. Approved plastics may be used in awnings where untreated canvass is permitted.
3. Approved plastics may be used in lieu of plain glass in greenhouses in less restrictive Fire Zones.

(emphases supplied)

Rule XVII follows

RULE XVII - SHEET METAL PAINT SPRAY BOOTHS

SECTION 1701. Sheet Metal Paint Spray Booth

1. Paint spray booths shall be constructed of steel of **not** less than No. 18 U.S. gauge in thickness and shall be designed in accordance with the Code.
2. The area of a paint spray booth shall **not** exceed 150 sq. meters nor 10% of the basic area permitted for the major use of the building according to its Occupancy Group.
3. The floor of the spray booth and operator's working area, if combustible, shall be covered with non-combustible, non sparkling material of such character as to facilitate the safe cleaning and removal of residue.
4. Paint spray booths shall be designed to permit the free passage of exhaust air from all parts of the interior and all interior surfaces shall be smooth and continuous without outstanding edges.

SECTION 1702. Fire Protection

1. Every spray booth having an open front elevation larger than 1.00 sq. meters and which is not equipped with doors, shall have a fire curtain or metal deflector not less than 100 millimeters deep installed at the upper outer edge of the booth opening.
2. Each paint spray booth shall be separated from other operations by not less than 91 centimeters, or by a greater distance, or by such partition or wall as the Local Fire Service Marshall may require.

SECTION 1703. Light

1. Paint spray booths shall be illuminated through hammered wire or heat-treated glass panels. The glass panels shall be located in such a manner as to reduce the hazard of ignition caused by paint spray deposit.
2. When spraying areas are illuminated through glass panels or other transparent materials, only light units shall be used as source of illumination.
3. Panels shall effectively isolate the spraying area from the area in which the lighting unit is located and shall be of **non-combustible** material or such a nature or so protected that breakage will be unlikely.
4. Panels shall be arranged so that normal accumulations of residue on the exposed surface of the panel will not be raised to a dangerous temperature by radiation or conduction from the source of illumination.

SECTION 1704. Ventilation

1. Mechanical ventilation shall be provided direct to the exterior of the building. The mechanical exhaust system shall be designed to move the air through any portion of the paint spray area at the rate of not less than 30.00 lineal meters per minute.
2. The blades of exhaust fans shall be constructed of non-ferrous material and shall be mounted in such a manner as to prevent contact with the exhaust duct.
3. The motor shall not be mounted in the spray booth or the duct system and belts shall be enclosed where they enter the booth or duct system.
4. The discharge point for ducts in a paint spray booth shall be not less than 2.00 meters from the adjoining combustible construction nor less than 8.00 meters from adjoining exterior wall openings; except, that the discharge point for exhaust ducts is not regulated in a waterwash spray booth.

(emphases supplied)

Rule XVIII follows

RULE XVIII - GLASS AND GLAZING

SECTION 1801. General Requirements

1. This Rule shall apply to exterior glass and glazing in all Uses/Occupancies except Groups A, B and J Occupancies **not** over three (3) storeys in height, and to interior and exterior glass and glazing in all occupancies subject to human impact.
2. Standards for glass and glazing materials shall conform to the provision on glass dimensional tolerance, breaking stress level, and design safety factors.
3. Each light (glass panel) shall bear the manufacturer's label designating the type and thickness of glass.
4. Each light with special performance characteristics such as laminated, heat strengthened, fully tempered or insulated, shall bear the manufacturer's identification showing the special characteristics and thickness by etching or other permanent identification that shall be visible after the glass is glazed.
5. Appropriate measures shall be provided to deter persons walking into fixed glass panels where the floor contiguous thereto on to both sides is approximately the same level.
6. Glass panels **not** adjacent to wall openings may be made obvious by horizontal bars at guardrail height, a 450 millimeters opaque bulkhead, distinctive glass such as etched or translucent for guardrail height, fixed flower bins or other appropriate construction arrangement.

SECTION 1802. Area Limitation

1. Exterior glass and glazing shall be capable of safely withstanding the load due to wind pressure for various height zones above ground acting inward or outward. The area of individual light shall **not** be more than the maximum allowable area of glass according to the wind load multiplied by the appropriate adjustment factor.
2. Glass panels which are more than 600 millimeters in width and 180 millimeters or more in height adjacent to wall opening shall be safety glass unless a bulkhead of opaque materials not less than 450 millimeters high is provided.
3. The table provided below shall govern the glass area limitation for use in large area along shopping malls, commercial buildings, theaters, offices, institutional public buildings and factories other than Group A, B and J Occupancies.

THICKNESS (millimeter)	WIDTH (meter)	LENGTH (meter)
8	1.10 and below	1.10 and below
10	2.25 and below	2.25 and below
12	3.00 and below	3.00 and below
15	Over 3.00	Over 3.00

SECTION 1803. Glazing

Glass firmly supported on all **four** (4) edges shall be glazed with minimum laps and edge clearances in accordance with Section 1801 paragraph (2), *Provided*, that glass edge clearance in fixed openings shall be **not** less than what is required for wind and earthquake drift. For glass **not** firmly supported on all four (4) edges and design shall be submitted for approval of the **Building Official**. Glass supports shall be considered firm when deflection of the support at design load does not exceed 1/175 of the span.

SECTION 1804. Louvered Windows

Regular plate, sheet, or patterned glass in jalousies and louvered windows shall not be thinner than 5.6 millimeters minimal and shall not be longer than 1.20 meters. Exposed glass edges shall be smooth.

SECTION 1805. Impact

Frameless glass doors, glass in doors, fixed glass panels, and similar glazed openings which may be subject to accidental human impact shall conform with the requirements provided under Section 1802 on impact loads of glass; *Except* in the following cases:

1. Bathtub and shower enclosures shall be constructed from approved shatter-resistant materials, such as: wire-reinforced glass **not** less than 5.6 millimeters thick; fully tempered glass not less than 4.8 millimeters thick; or laminated safety glass not less than 6.4 millimeters thick.
2. Glass lights located **not** less than 450 millimeters above the adjacent finished floor or walking surface.
3. Glass lights when the least dimension is **not** greater than 450 millimeters.
4. Glass lights 1.50 sq. meters or less in area.

(emphases supplied)
Rule XIX follows

RULE XX - SIGNS

SECTION 2001. General Requirements

1. No sign or signboard shall be erected in such a manner as to confuse or obstruct the view or interpretation of any official traffic sign, signal, or device.
2. Signs which are written in any foreign language shall have a corresponding **translation in English** or in the local dialect.
3. The bottom line of all signboards adjacent to each other shall follow a common base line as determined by the **Building Official**.
4. The installation of all kinds of signs shall be such that a harmonious and aesthetic relationship of all units therein is presented.

SECTION 2002. Maintenance

All signs, together with all of their supports, braces, guys, and anchors, shall be kept in repair and in proper state of preservation. The display of all signs shall be kept neatly painted and secured at all times.

SECTION 2003. Design and Construction

Sign structures shall be designed and constructed to resist all forces in accordance with the National Structural Code for Buildings. For signs on buildings, the dead lateral loads shall be transmitted through the structural frame of the building to the ground in such a manner as not to overstress any of the elements of the building. The weight of earth superimposed over footings may be used in determining the dead load resisting moment. Such earth shall be carefully placed and thoroughly compacted.

SECTION 2004. Supports and Anchorages

1. *General.* The supports and anchorages of all signs or sign structures shall be placed in or upon private property and shall be constructed in conformity with the requirements of the **Code**.
 - a. Sign structures may be constructed only in areas where zoning regulations permit them and in accordance with the accepted standards of design, construction and maintenance.
 - b. Roof Signs
 - i. The design and construction of roof signs shall conform to the provisions of Sec. 1210 of the **Code**.
 - ii. No signs shall be erected, attached to, installed or fastened on rooftops of buildings of wooden structures or of buildings/structures with wooden roof framing.
 - iii. Adequate provisions for grounding metallic parts of roof signs exposed to lightning shall be provided.
 - iv. Installation of warning lights/obstruction lights for air traffic shall be installed where applicable.
 - c. Ground Signs

- i. Ground signs and advertising ground signs which shall be constructed in conformity with accepted engineering standards, of which height control shall be in conformity with the Local Zoning Regulation (LZR). (**Figure XX.1.**)
 - ii. Ground sign structures shall be located within the property line and under **no** circumstances shall they occupy the RROW/street or sidewalk/arcade or similar access-ways.
 - iii. Public or government signs erected or installed within the area of the sidewalk shall be so designed and located that they do **not** obstruct the easy passage of pedestrians nor distract the attention of motorists.
- d. Projecting Signs
- i. On **non-arcaded** RROW/streets, signs shall **not** extend more than 1.20 meters over the sidewalk and measured horizontally from the wall line or building line. **On arcaded RROW/streets, the signs shall not project more than 0.60 meter from the outermost portion of the wall line of the allowed structure over the arcade.** For buildings abutting on RROW/streets or alleys without sidewalks or provisions therefor, the signs shall **not** project more than 0.30 meter from the outermost portion of the building/structure. (**Figures XX.2., XX.3., and XX.4.**)
 - ii. A height clearance of not less than 3.00 meters measured from the finished road surface shall be provided below the lowest part of such signs projecting over sidewalks on buildings without arcades and a clearance of **not** less than 5.00 meters shall be provided below the lowest part of such signs projecting over arcaded RROW/streets.
 - iii. The erection of electric neon signboards or other advertisements of similar nature projecting over roadways or public streets shall be allowed, provided that:
 - (1) Clear distance between the signboards erected on one building is **not** less than 4.00 meters.
 - (2) Signboards on multi-storey buildings shall be erected on the same vertical line and shall not overlap each other.
 - (3) Tops of signboards shall **not** extend over the topmost part of the parapet or the bottom line of the eave of the building.
 - (4) Horizontal projections of signboards shall follow subsections (i) and (ii) of this Rule.
 - (5) In case of two (2) adjacent buildings, adjacent signboards shall be placed at a distance of not less than 2.00 meters from the common boundary line.
 - (6) Signboards shall **not** obstruct any window or emergency exit and shall **not** be closer than 1.00 meter from electric and telephone posts and wires.

e. Wall Signs

- i. Outdoor display signs placed against the front exterior surface of buildings shall **not** extend more than 300 millimeters from the wall with its lowest portion **not** less than 3.00 meters above the sidewalk.

- ii. Commercial signs shall **not** be attached to, painted on, installed or displayed on posts/columns, beams/girders or any other exterior portion of arcades and structures for public utilities/services, e.g. mass transit and the like.
 - iii. Display windows or wall signs within 3.00 meters above the sidewalk shall be flushed or recessed.
- 2. *Materials.* Materials for construction of signs or sign structures shall be of the quality and grade as specified in the Code. In all signs and sign structures, the materials and details of construction shall, in the absence of specified requirements, conform to the following:
 - a. Structural steel shall be of such quality as to conform to ASTM A 36. Secondary members in contact with or directly supporting the display surface may be formed of light gauge steel, provided such members are designed in accordance with the specifications of the design of light gauge steel as specified in ASTM A 242 and, in addition, shall be galvanized. Secondary members, when formed integrally with the display surface, shall be not less than No. 24 gauge in thickness. When **not** formed integrally with the display surface, the minimum thickness of the secondary members shall be No. 12 gauge. The minimum thickness of hot-rolled steel members furnishing structural support for signs shall be 6.35 millimeters, except that if galvanized, such members shall be not less than 3.18 millimeters thick. Steel pipes shall be of such quality as to conform to ASTM A 36. Steel members may be connected with one galvanized bolt provided that connection is adequate to transfer the stresses in the members.
 - b. Anchors and supports, when of wood and embedded in the soil, or within 150 millimeters of the soil, shall all be of heartwood of a durable species or shall be pressure-treated with an approved preservative.
- 3. *Restrictions on Combustible Materials* - All signs or sign structures erected in highly restrictive Fire Zones shall have structural members of incombustible materials. Ground signs may be constructed of any material meeting the requirements of the Code. Combination signs, roof signs, wall signs, projecting signs, and signs on marquees shall be constructed of incombustible materials. No combustible material other than approved plastics shall be used in the construction of electric signs.
- 4. *Non-structural Trim* - Non-structural trim and portable display surfaces may be of wood, metal, approved plastics, or any combination thereof.
- 5. *Display Surfaces* - Display surfaces in all types of signs may be made of metal, glass, or approved plastics.

SECTION 2005. Projections and Clearances

- 1. *Clearances from High Voltage Power Lines* - Clearances of signs from high voltage power lines shall be in accordance with the Philippine Electrical Code.
- 2. *Clearances from Fire Escapes, Exits, or Standpipes* - **No** signs or sign structures shall be erected in such a manner that any portion of its surface or supports will interfere in any way with the free use of any fire escape, exit, or standpipe.
- 3. *Obstruction of Openings.* **No** sign shall obstruct any opening to such an extent that light or ventilation is reduced to a point below that required by the Code. Signs erected within 1.50 meters of an exterior wall in which there are openings within the area of the sign shall be constructed of incombustible material or approved plastics.

4. *Projection over Alleys.* No sign or sign structure shall project into any public alley below a height of 3.00 meters above established sidewalk grade, nor project more than 300 millimeters where the sign structure is located 3.00 meters to 4.50 meters above established sidewalk grade. The sign or sign structure must not project more than 1.00 meter into the public alley where the sign or sign structure is located more than 4.50 meters above established sidewalk grade.

SECTION 2006. Lighting

Signs shall be illuminated only by electrical means in accordance with the Philippine Electrical Code.

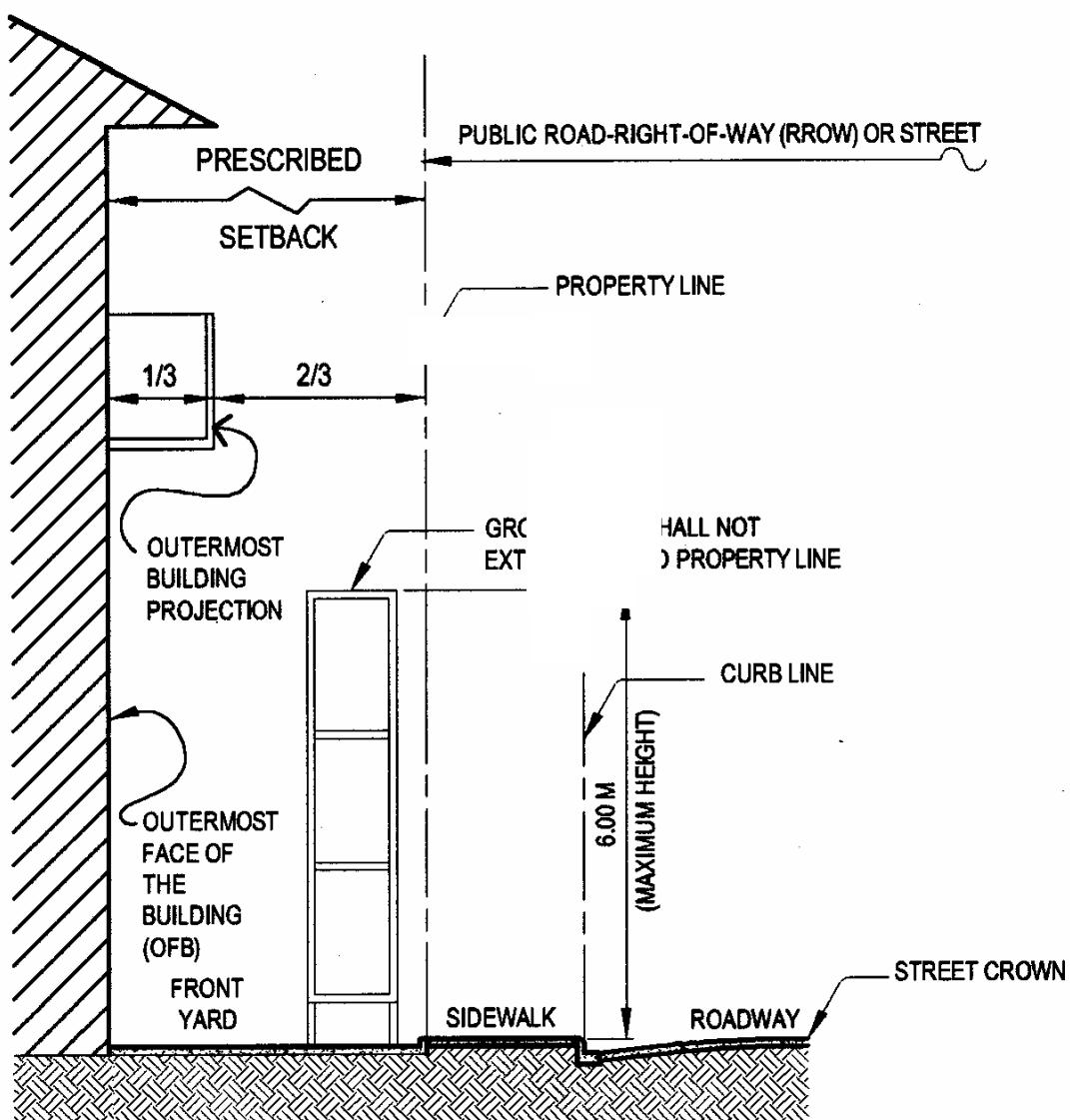


Figure XX.1.

GROUND SIGN

*Annotation. The ground-mounted sign must have its foundation/supports firmly planted within the property limits and **not** on any part of the RROW.*

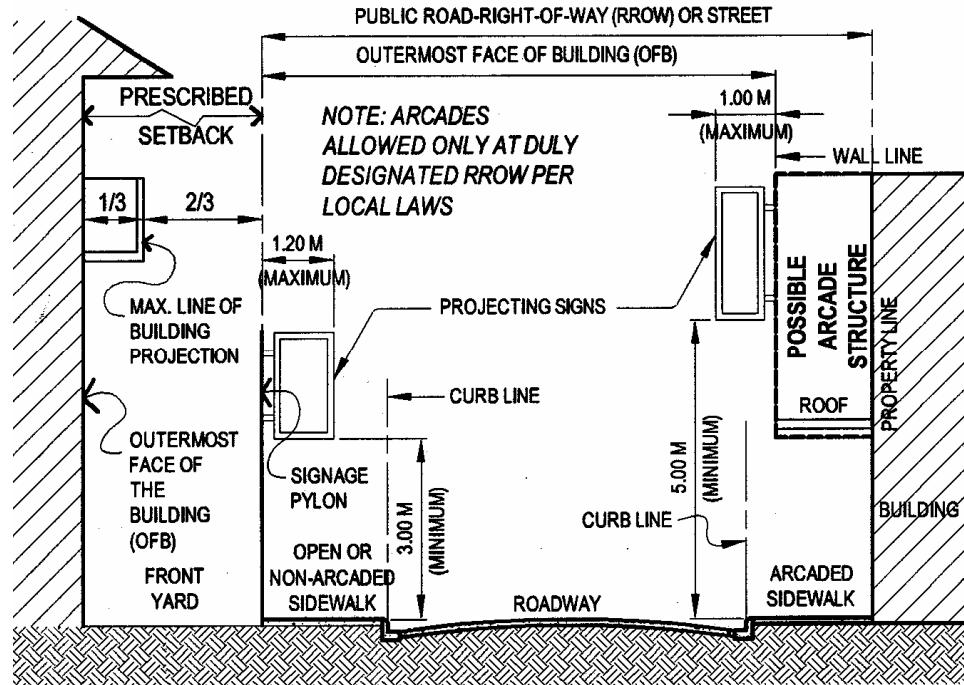
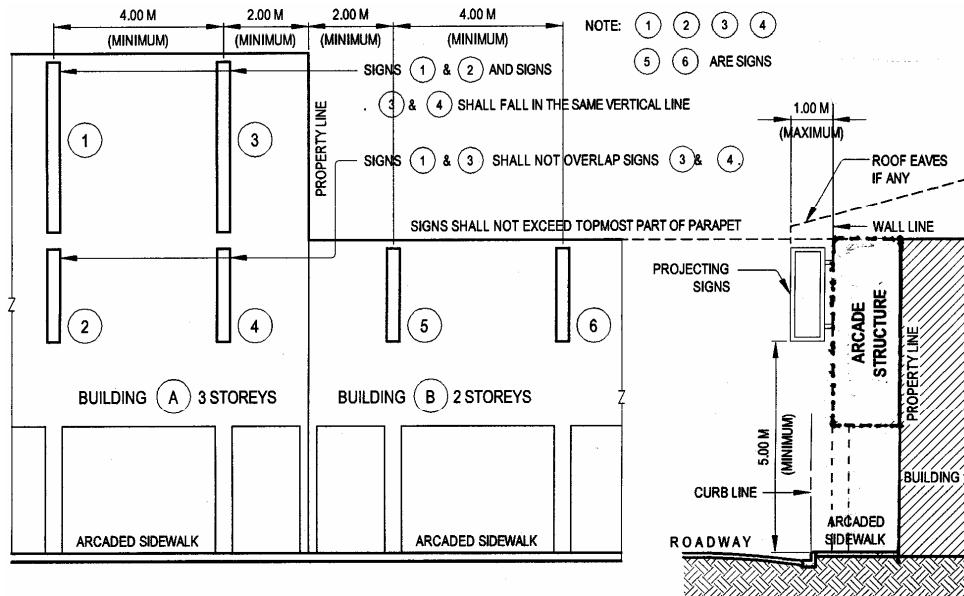


Figure XX.2.

PROJECTING SIGNS



FRONT ELEVATION

SECTION

Figure XX.3.

PROJECTING SIGNS

*Annotation. There shall be **no** ground-mounted, hanging nor projecting signboard within the arcade/arcaded sidewalk itself. The permitted signs for arcaded structures are to be located **above** portions of the RROW (**not** below the arcade structure).*

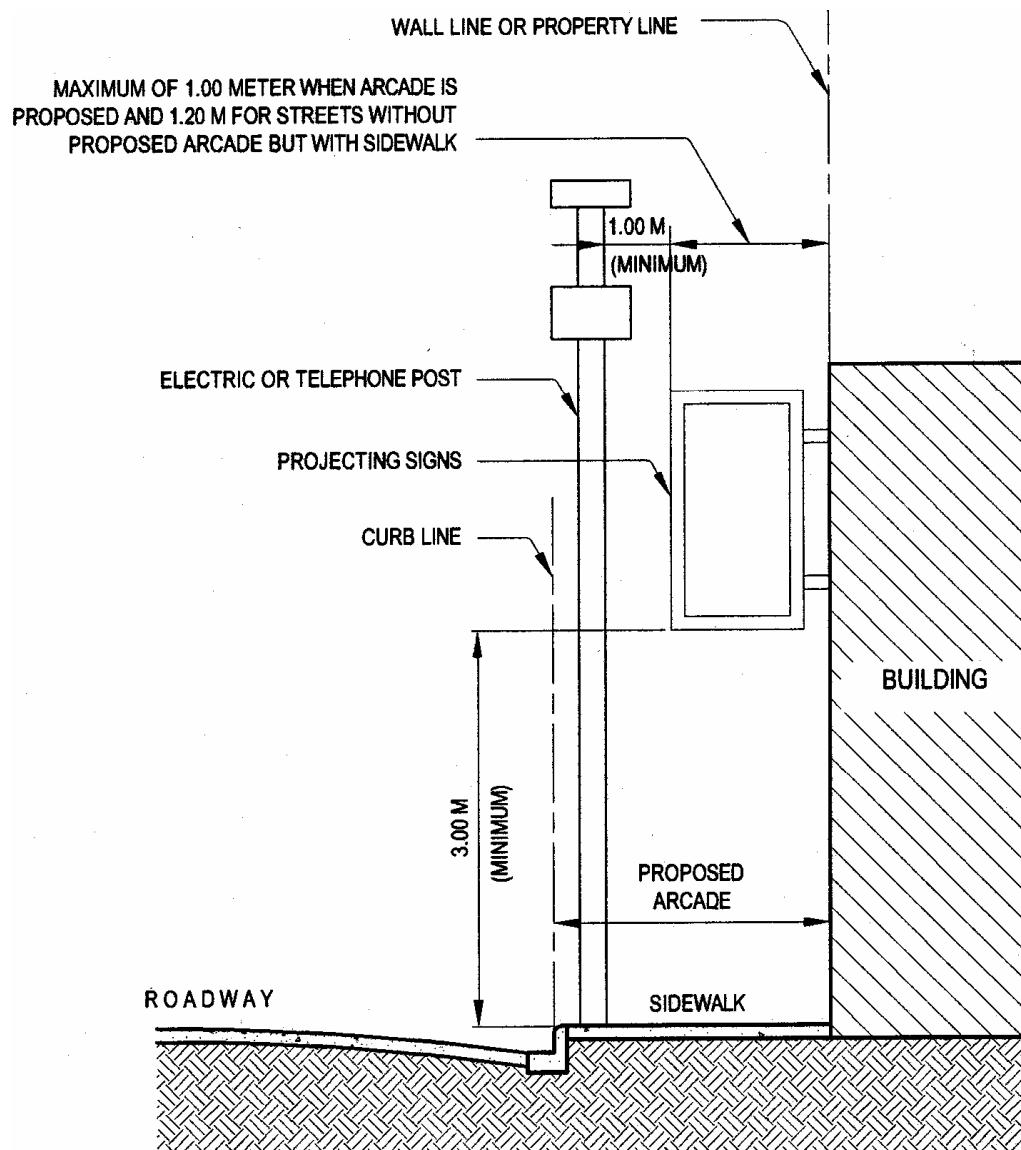


Figure XX.4.

PROJECTING SIGNS

Annotation. The example above assumes that there shall be no arcade structure (only a covered sidewalk i.e. which still qualifies as an arcade).

*(emphases, underscoring and annotations supplied)
Rule XXI follows*

RULE XXI - FINAL PROVISIONS

SECTION 2101. Separability Clause

If any provision of this **IRR** or the application thereof to any person or circumstance is declared unconstitutional or invalid by a competent court, the other sections and provisions hereof which are not affected thereby shall continue to be in full force and effect.

SECTION 2102. Repealing and Amending Clause

All Administrative Orders, rules and regulations, memoranda circulars and other issuances inconsistent herewith or contrary to the provisions of these rules and regulations are hereby repealed or modified accordingly.

SECTION 2103. Effectivity

This **IRR** shall take effect fifteen (15) days after its publication once a week for three (3) consecutive weeks in a newspaper of general circulation.

Note: The DPWH published these IRR on 01, 08 and 15 April 2005 in the Manila Standard Today. These IRR took effect 01 May 2005.

APPROVED this 29th of October 2004.

Original Signed
FLORANTE SORIQUEZ
Acting Secretary

(emphases, underscoring and annotation supplied)

Nothing follows.