

1770

BY-LAW NO. 1416

*Amended By
By Law 1613*

BEING a By-law to regulate the construction and the safety of buildings.

WHEREAS the Municipal Council of the City of North Bay deem it advisable to revise the present Building By-laws of the Corporation of the City of North Bay.

THEREFORE be it enacted and it is hereby enacted by the Municipal Council of the City of North Bay as follows:

Continued next Page.

BY-LAW NO. 1416

BUILDING LINE - FIRE LIMIT - ZONING

*Amended by
By Law 1506
1460*

PART 1.

ADMINISTRATION

SECTION 1. CONFLICTING ORDINANCES REPEALED.

All By-laws or sections of By-Laws, or amendment thereto not consistent with the provisions of this By-Law are hereby repealed.

SECTION 2. DATE OF EFFECT.

This ordinance shall take effect and be in force from and after its passage.

SECTION 3. BUILDING INSPECTOR.

The Council shall appoint a competent, practical and discreet man to be Building Inspector at such a salary as they see fit to provide. The Salary shall as far as possible be met from the fees and fines, if any, levied under this By-Law. If no other appointment be made the work shall be absorbed in the office of *Fire Chief* and in any case permits to be valid shall be signed or countersigned by him.

SECTION 4. DUTIES OF BUILDING INSPECTOR.

It shall be the duty of the Building Inspector to enforce the provisions of this By-Law, the Zoning Ordinance and the Plumbing By-Law, and to prepare all permits in connection therewith.

SECTION 5. BUILDING INSPECTOR MAY ENTER PRIVATE PROPERTY.

The Building Inspector or his assistants shall have the right to visit, enter and inspect from time to time and at all reasonable hours.

- (a) Any building which is being or has recently been erected, altered, reconstructed, repaired or wrecked.
- (b) Any building which he has reason to believe is in a dangerous or defective condition, caused either by faulty or poor construction, damage by fire or accident, or deterioration due to ordinary wear and tear.
- (c) Any building which he has reason to believe is being used, for a purpose for which it is not suited by reason of its construction or location.

SECTION 6. PERMITS REQUIRED.

- (a) BUILDING. A permit must be obtained by the owner or the legally authorized agent or contractor of the owner before the work on any wall, structure, excavation for structure, chicken pen, sign, billboard, gasoline pump or tank, building or part thereof shall be built, made, installed, enlarged repaired wrecked, demolished, or altered, or the use of any building materially changed. A separate permit must be obtained for each and every job, and the building permit fees must be paid before any of the above mentioned work is commenced.
- (b) STORING WOOD OR LUMBER. A permit must be obtained before any pile of lumber, exceeding 1,000 feet or firewood exceeding five cords may be stored within ten feet of any building.

(c) **BLASTING.** A permit must be obtained before blasting or unusual building operations are commenced, and the person applying for such permit shall provide a bond satisfactory to the City Solicitor protecting the City against any suit, or any damage which might be caused by such blasting or building operations.

(d) **USE OF STREETS.** A permit must be obtained by every person requiring the use of City streets or City property for storing materials temporarily during building operations or for the closing or barricading any portion of any said streets or property. All applications for such permit must be accompanied by a cash deposit of \$10.00 for every \$1000 ~~xx~~ of construction cost, provided however that \$50.00 shall be the maximum charge for one building, unless in the opinion of the Inspector the damage to streets, sidewalks or other City Property will exceed this amount, in such cases the Inspector may require a deposit sufficient to replace all such damage, which amount will be returned to the applicant upon the report of the Building Inspector or that such streets or property have been left in a satisfactory condition. In the event of the applicant being delinquent about cleaning up the said streets or property covered by his permit, and, if the material still remains twenty-four hours after notice by the Building Inspector to have it removed, the Building Inspector may use the whole or such part of said deposit as may be necessary to have the street or property properly cleared and return the balance of said deposit, if any, to the applicant.

Every person using the City streets or public property by permit issued under the authority of this clause must comply with the following regulations;

1. Gutters must be kept clear.
2. Owner or his agents must assume all liability for accident or damage and must protect the public by maintaining sufficient lights or barriers.
3. Dirt, gravel or other material must be kept up neatly in a pile.
4. Not over one-third of the width of the roadway or pavement shall be used at one time.
5. Materials shall not be piled on street except opposite property for which permit is issued.

(e) **EXCAVATION OR ENCROACHMENT ON STREETS.** A permit must be obtained from the Building Inspector before any excavation is started on any public property or street, or before any encroachment is made thereon clear from ground to sky or below the ground for any purpose whatsoever.

(f) **MOVING BUILDINGS, ETC.** A Permit must be obtained from the Building Inspector before any building, tractor, steam shovel, heavy trucks or other machinery, or Equipment which are liable to interrupt traffic or damaged city property, may be moved across or along any city streets, lanes or public property.

SECTION #7 APPLICATION FOR PERMITS.

All applicants for permits to be issued under the authority of this By-Law shall give clearly and fully in writing the information required on the official forms.

SECTION 8. PLANS SUPPLIED BY APPLICANT.

If required by the building Inspector there shall be filed with him, plans, section details, and specifications showing the uses to which the building will be put, dimensions and character of the proposed work together with a block plan showing its position and levels with reference to the nearest adjoining street, also a description of the materials to be used, the quantity of each material, and the estimated cost. A copy of all plans to be retained by the Inspector.

SECTION 9. GRANTING OF PERMITS.

When the Building Inspector is satisfied the applicant has complied with all the requirements of this By-Law, the Zoning By-Law of any other By-Law of the City of North Bay affecting such application, he shall prepare the required permit together with a signed placard which shall be conspicuously displayed on the work. The use of the placard may be dispensed with in any case where in the opinion of the Building Inspector it will serve no useful purpose. In any case where the plans submitted do not conform to the provisions of this By-Law, the applicant shall be required, before a permit is prepared, to make the necessary alterations so that the plans will conform to said provisions. It shall also be necessary for the applicant to properly initial said alterations so that there will be no doubt as to by whom the alterations were made.

SECTION 10. OWNER RESPONSIBLE.

It is provided that neither the granting of a permit nor the inspections made from time to time by the Building Inspector or his assistants in any way relieves the owner, agent or architect from full responsibility for the carrying out of the work in strict accordance with the requirements of this By-Law or for the stability of the structure.

SECTION 11. PERMIT NO LICENSE TO USE PREMISES.

It is also provided that a permit is granted exclusive of any permission for license or other authority to use the premises.

SECTION 12. COPIES OF BY-LAW AVAILABLE.

It is provided that a copy of this By-Law shall be furnished for 50¢ each by the Building Inspector to applicants.

SECTION 13. PERMIT EXPIRES.

Every permit shall expire and become null and void if active work is not commenced within a period of six months from the date of issue.

SECTION 14. DEVIATION FROM PERMITS.

If, during construction, the applicant finds it necessary or desirable to alter his plans he shall apply to the Building Inspector, and, provided the Building Inspector consents, shall make the required alterations and initial the same, on the plans supplied with the original application. If, in any case the alterations are so drastic, that the Building Inspector considers new plans necessary, he may order the applicant to furnish them and may stop construction on such work until the necessary plans are forthcoming.

SECTION 15. APPEALS.

Applicants who are not granted permits in the form or the extent desired may in all cases appeal to the Building Committee of the City Council, but, the provisions of this By-Law shall not be deviated from unless under exceptional circumstances, and then only by the passing of the recommendation of the Committee through the Council.

SECTION 16. ENGINEER TO GIVE GRADES.

Upon request of any prospective builder together with a fee of Five Dollars (\$5.00) the City engineer shall determine the sewer and sidewalk grades for any unimproved section of a street and give the necessary levels to said prospective builder. A record of the levels given shall be kept in a book used solely for that purpose and the given levels must be adhered to when the sewer or sidewalk is constructed. The full responsibility rests with the builder to see that his building conforms to the levels given.

SECTION 17. FEES.

The applicant shall pay to the City Treasurer a fee for such permit based on the estimated cost of the work, as submitted to the Building Inspector according to the following schedule; If the estimated cost is not in excess of \$200.00 the fee shall be 50¢cents; If the estimated cost is in excess of \$200.00 and not more than \$500.00 the fee shall be \$100.00; If the estimates cost is in excess of \$500.00 and not more than \$1000.00 the fee shall be \$2.00. If the estimated cost is in excess of \$1000.00 and not more than \$50,000.00 the fee shall be \$2.00 for the first \$1,000.00 and \$1.00 for each additional \$1,000.00 of cost or portion thereof in excess of \$1,000.00; If the estimated cost is in excess of \$50,000.00 and not more than \$100,000.00 the fee shall be \$51.00 for the first \$50,000.00 and 75 cents for every additional \$1,000.00 of cost, or portion thereof in excess of \$50,000.00; If the estimated cost is in excess of \$100,000.00 the fee shall be \$88.50 for the first \$100,000.00 and 50 cents for every additional \$1,000.00 of cost, or portion thereof in excess of \$100,000.00. For reinforced concrete buildings an additional fee of 25 cents per \$1,000.00 ~~ix~~ shall be collected.

SECTION 18. PERMITS ISSUED FREE OF CHARGE.

All permits issued under the authority of this By-Law shall be given free of charge to any properly constituted Municipal Body, provided however that all the provisions of the City By-Laws affecting said permits are strictly complied with.

SECTION 19. PENALTIES.

Any person convicted of a breach of any of the provisions of this By-Law shall forfeit and pay at the discretion of the convicting magistrate a penalty not exceeding (exclusive of costs) the sum of Fifty Dollars for each offence, and in default of payment of the said penalty and costs forthwith, the said penalty and costs, or costs only, may be levied by distress and sale of the goods and chattels of the offender, and in case of there being no distress found, out of which such penalty may be levied, the convicting Magistrate may commit the offender to the common goal of the District of Nipissing, North Bay, Ontario, for any period not exceeding three calender months, unless the said penalty and costs (if any) including the costs of the said distress and of the committal and conveyance of the offender to the said goal are sooner paid. The imposition of one penalty for any violation of this ordinance shall not excuse the violation or permit it to continue, and all such persons shall be required to correct or remedy such violations or defects within a reasonable time, and whennot otherwise specified each ten days that prohibited conditions are maintained shall constitute a separate offence.

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PART 2

DEFINITIONS OF TERMS

SECTION 1. AISLE shall mean any of the passages in a church, hall, theatre or other public building into which the pews or seats open.

SECTION 2. CENTRE AISLE shall mean an aisle which has rows of seats or pews on both sides adjacent to it.

SECTION 3. SIDE AISLES shall mean an aisle which has rows of seats or pews on one side only adjacent to it.

SECTION 4. APARTMENT OR TENEMENT HOUSE shall mean a building which is, or is proposed to be erected or altered for the purpose of providing three or more separate suites or sets of rooms for separate occupation by one or more persons.

SECTION 5. APPROVED shall mean approved by the Building Inspector unless specially mentioned otherwise.

SECTION 6. BASEMENT shall mean a story which is partly but not one-half below the curb level.

SECTION 7. PRESSED BRICK shall mean brick that is manufactured by high pressure in separate moulds and burned to the highest point of consolidation without vitrification.

SECTION 8. HARD BRICK shall mean brick that is burned almost to the point of vitrification and which gives out a clear ringing sound when struck with metal.

SECTION 9. SOFT OR SALMON BRICK shall mean brick which are light coloured of a soft crumbling nature, low in crushing resistance and which will not ring when struck with metal.

SECTION 10. SAND LIME BRICK shall mean brick composed of a mixture of sand and lime, molded in presses and hardened by steam under pressure.

SECTION 11. BUILDING shall include:

(a) Any tank, bin or bunker or

(b) Any platform, stage, gallery, stadium, grandstand, bleacher, or other such structure for the use or accomodation of the public or for the gathering or assemblage of people.

SECTION 12. BUILDING LINE shall mean the line in front of which no portion of the main front wall of a building may extend.

SECTION 13. PUBLIC BUILDING shall mean a theatre, moving picture theatre, lodge room, concert hall, college, hospital, asylum, hotel, church, school or other building having provisions for the accomodation of an assemblage of people.

SECTION 14. VENEERED BUILDING shall mean a building erected of frame construction, the enclosing walls of which are covered above the foundation walls, with brick not less than four inches in thickness, or with stones not less than five inches in thickness, or with asbestos shingles, insul brick, which in all cases, is adequately secured to the woodwork and supported upon the foundation walls.

SECTION 15. CELLAR shall mean a story which is one-half or more below the curb level. It shall not be counted as a story in determining the height of buildings.

SECTION 16. ORDINARY CONSTRUCTION shall mean a type of construction having wooden joists with wooden, steel or iron columns or beams (which columns or beams may or may not be protected with fire resistive coverings) and having the external or party walls constructed of brick, stone or other incombustible material, and having the internal or partition walls protected with lath and plaster or other incombustible material.

SECTION 16A. FRAME CONSTRUCTION Shall mean a type of construction whereby the external or party walls are constructed wholly or partly of wood.

SECTION 17. PIER CONSTRUCTION shall mean a type of construction wherein certain portions of the walls commonly known as pilasters or piers, are made of greater transverse thickness than are required in ordinary construction, and the building so designed that the weight of the walls between piers, and the weight of the floors and roofs and the loads superimposed thereon, are carried at each story, directly to the piers by means of beams or arches.

SECTION 1. MILL CONSTRUCTION - See Part 9 - Section 2.

SECTION 19. FIRE RESISTIVE CONSTRUCTION shall mean a type of construction in which the buildings are constructed wholly of steel, iron, concrete, stone, brick, structural hollow tile or other products of burnt clay, and in which the metallic structural members are protected against the effect of fire by coverings of an entirely incombustible material, which shall also be a slow heat conductor.

SECTION 20. SECOND CLASS FIRE RESISTING CONSTRUCTION shall consist of mill construction (See Sec. 2 Part 9) or semi mill construction where the exterior walls shall be masonry. The interior construction of structural steel columns, beams and girders and the floor construction of timber not less than two inches in thickness the structural steel columns beams and girder and underside of floor fire proofed with metal lath and plaster provided however that insulation may be eliminated if protection is afforded by the installation of an automatic sprinkler system. Roof covering shall be of incombustible material.

SECTION 21. SKELETON CONSTRUCTION shall mean a type of construction in which all external and internal loads are transmitted from the top of the building to the foundation by a skeleton or framework of metal or reinforced concrete.

SECTION 22. REINFORCED CONCRETE CONSTRUCTION - See Section 1 - Part Nine.

SECTION 23. CURTAIN WALL CONSTRUCTION shall mean a type of construction in which the weight of all floors and roofs and the loads superimposed thereon, are carried by columns, piers or pilasters, the walls forming merely an enclosure and carrying no load other than their own weight.

SECTION 24. CUT-OFF shall mean the fire resisting construction by which a room, stairway or elevator shaft is separated from the rest of the building.

SECTION 25. DWELLING shall mean a building, either detached or in a row, used solely as a residence and occupied by not more than two families.

SECTION 26. FACTORY shall mean a building in which merchandise is manufactured.

SECTION 27. FIRE DOOR shall mean a door (including hardware, lintels, sill and frame when required) manufactured and installed in accordance with the requirements of, and approved by the Canadian Fire Underwriters Association.

SECTION 28. FLOOR AREA shall mean the entire floor space between exterior wall or fire walls.

SECTION 29. FIRE PROOF MATERIAL shall mean incombustible fire and water proofed materials that will withstand the action of conflagration without serious deformation. Plastering, unless of Portland cement mortar, shall not be considered as a fire-proof covering. Cinder concrete shall not be used as fire-proofing.

SECTION 30. FOOTING OR FOOTINGS shall mean the projecting course or courses of concrete, stone, brick, etc., under the base of foundation, cellar basement or other walls, or under piers of columns.

SECTION 31. FOUNDATION of a building or structure shall mean the ground or substructure upon which such building or structure rests, the foundation walls not being considered as part of the foundation.

SECTION 32. FRAME CONSTRUCTION shall mean a type of construction whereby the external or party walls are constructed wholly or partly of wood.

SECTION 33. PUBLIC GARAGE shall mean a building used for the storage of three or more cars for hire or gain or for the repair of cars.

SECTION 34. HEIGHT OF BUILDING or structure shall be measured from the curb level at the centre of the front of the building to the top of the highest point of the roof. When the walls of a building or structure do not adjoin the street, then the average level of the ground adjoining the walls of the building or structure is to be taken instead of the curb level in measuring the height of the building or structure.

SECTION 35. HEIGHT OF STORY shall mean the vertical distance from the top of the beams or joists in one story to the corresponding point in the next story.

SECTION 36. LODGING HOUSE shall mean a building in which persons are accommodated with sleeping apartments.

SECTION 37. HOTEL shall mean a building in which meals and sleeping accommodations are provided for the general public.

SECTION 38. INCOMBUSTIBLE is a term applied to materials or construction which will not ignite and burn when subjected to fire.

SECTION 39. DEAD LOAD shall include the weight of walls, framing, roofs, tanks and their contents, and all permanent construction.

SECTION 40. LIVE LOADS shall include all loads other than dead loads. All partitions subject to rearrangement shall be considered as live loads.

SECTION 41. CEMENT MOTAR shall mean mortar which is made with Portland cement and clean sharp sand in the proportion by volume of one part of cement to not more than three parts of sand, the ~~ingredients~~ ingredients to be measured dry and thoroughly mixed before the water is added. The mortar should be used immediately after being mixed and not more than ten per cent. of hydrated lime added.

SECTION 42. LIME MORTAR shall mean mortar which is made by mixing three parts by volume of clean sharp sand with one part of thoroughly burned lime of good quality to be slacked before mixing.

SECTION 43. LIME AND CEMENT MORTAR shall mean mortar made by mixing one part of hydrated lime, one part of Portland cement and not more than six parts by volume of clean sharp sand measured dry. It shall be mixed with water and used immediately.

SECTION 44. MASONRY shall mean stone, concrete block, brick, structural hollow tile, or other products of burnt clay laid up in mortar.

SECTION 45. OWNER shall mean any person, firm, corporation or agent controlling the property under consideration.

SECTION 46. PERMIT shall mean the written permission from the authorized city officials to an owner to proceed with an undertaking in conformity with the terms of all regulations affecting same.

SECTION 47. MANSARD ROOF shall mean a roof or portion thereof, which also serves as an external wall of the building, the rafters, having a slope or batter of not less than one and one half inches and not more than six inches, horizontally, to one foot vertically.

SECTION 48. HABITABLE ROOM shall mean a room for human habitation but shall not be interpreted to include kitchenettes having a floor area of less than one hundred square feet, sunrooms, bathrooms and toiletrooms.

SECTION 49. REPAIRS shall mean the renewal of any part or parts of an existing building by which its fire risk or strength is not affected.

SECTION 50. RESIDENCE shall be construed to mean and include all buildings in which sleeping accommodations (other than for janitor or watchman) are provided.

SECTION 51. FIRST STORY shall mean the story the floor of which is the first floor above the level of thirty inches below the finished grade measured at the middle point of the front of the building.

SECTION 52. SECOND STORY shall mean the story the floor of which is first above the first story. (Higher stories shall be numbered similarly in regular succession, counting upwards.)

SECTION 53. STORE OR SHOP shall mean a building used for the retail sale of merchandise.

SECTION 54. STOREHOUSE shall mean a building used for the storage of merchandise or other goods.

SECTION 55. SUNROOM shall mean a room outside the main enclosing walls of the building and erected for the purpose of providing a larger amount of light and air than is generally provided for an ordinary room. A minimum window area of forty per cent. of the floor area of the room shall be considered as fulfilling this requirement.

SECTION 56. THEATRE shall mean a building having a stage, with fixed or movable scenery, and used for dramatic operatic or other similar purposes.

SECTION 57. MOVING PICTURE THEATRE shall mean a building where moving pictures are shown, but having no stage for dramatic or operatic purposes.

SECTION 58. FOUNDATION WALL OR WALLS shall mean that part of the wall or walls which are below the joists forming the first story of a building.

SECTION 59. BEARING WALL shall mean a wall upon which floors, roofs, joists, beams, trusses, girders, etc., are supported.

SECTION 60. PARTY WALL shall mean a wall built upon the dividing line between adjoining premises for the use of both premises.

SECTION 61. EXTERNAL WALL shall mean an outside enclosing wall of a building or structure.

SECTION 62. APRON WALL shall mean the portion of an enclosing wall between a door or window head in a story and the door or window sill above it in the next story.

SECTION 63. SPANDRILL WALL shall mean that portion of an enclosing wall between columns or piers in a building of either skeleton or pier construction, and which is supported by beams or girders at each story.

SECTION 64. CURTAIN WALL shall mean that portion of a non-bearing enclosing wall between columns or piers, and is not supported by beams or girders at each story.

SECTION 65. PARTITION WALL shall mean any interior wall in a building.

SECTION 66. THICKNESS OF WALL shall mean the minimum thickness of such wall. When four and one-half, nine, thirteen, eighteen, twenty-two inches thick walls are mentioned, it shall be understood to mean that the walls shall be respectively one-half brick, one brick, one and a half two bricks, two bricks and a half in thickness, and that heavier walls are figured for thickness in the same proportions, a brick being approximately eight and a half inches in length and four inches in width.

REQUIREMENTS IN CONNECTION WITH BUILDING AND STRUCTURES.SECTION 1. PROTECTION FOR PEDESTRIANS.

In all cases where building is to be erected within three feet of the sidewalk there shall be built over the said walk a roof of two inch lumber supported by 4" x 4" uprights and 2" x 6" cross timbers spaced four feet. The lowest part of the roof to be at least seven feet clear above the sidewalk. This protection shall remain as long as any materials are used or handled on the street side of the building.

In case the building to be erected is more than three feet from the inside line of the sidewalk then in lieu of said covered way the building Inspector may permit the owner to erect a board fence six feet high to enclose not more than one half of the sidewalk allowance.

In no case will the City be liable for any accident or damage which might result from the activities of a builder.

SECTION 2. OUTSIDE SCAFFOLDING.

Where outside scaffolding is used the construction of such scaffolding and all provisions thereon for the safety of the workmen and the public shall be made to the satisfaction of the Building Inspector.

SECTION 3. FLOORING.

As soon as the walls of a building have reached the level of the first floor, the joists for such floor shall be placed, permanently secured in position and floored, either temporarily or permanently.

SECTION 4. SAFEGUARDING EXCAVATIONS.

All excavations for or in connection with buildings shall be properly guarded and protected, from becoming dangerous to life or limb, by the party making or causing the same to be made. Such excavations shall be sheet piled where necessary, to prevent the adjoining earth from sliding or caving in on account of its own weight, or from any other cause.

SECTION 5. UNDERPINNING.

Whenever an excavation is carried to any depth below the grade line, the party making the same or causing the same to be made, shall, at his or their own expense, preserve any wall, sidewalk or roadway liable to be affected by such excavation from injury, and shall sustain, protect and under-pin the same so that they will remain in the same condition as before the excavation was commenced. The said party shall give the adjoining property owners written notice of the intention to make or have such excavation made, and such adjoining property owners shall permit the necessary occupancy of their ground and premises to enable their walls to be underpinned and sustained.

SECTION 6. PROJECTIONS AND AWNINGS.

No projection on any building shall extend over the street line or other public property except main cornices, bolt courses and cornices over shop windows, or windows that are placed at or above the second floor level of the building.

No awning shall be supported on iron or other supports extending to the sidewalks in front any building but said awnings shall be supported on iron or steel framework secured to the building and no part of the awning shall be nearer the sidewalk than seven feet.

Permanent awnings may extend over the street lines provided that the construction, drainage and methods of construction are satisfactory to the City Engineer, or Building Inspector.

SECTION 6. PROJECTIONS AND AWNINGS. (Continued)

In no case shall any part of permanent awnings be lower than eight feet six inches (8'-6") above the sidewalk level.

SECTION 7. GASOLINE PUMPS.

See By-Law 836 covering Gasoline Pumps which was amended by By-Law 838.

SECTION 8. FENCES.

(a) An open wire, metal or lattice fence with the openings at least half the area of fence may be erected up to nine feet in height if located back of the front wall of a building, if between the front of a building and the property line, four feet in height.

(b) A close board fence may only be erected back of the front wall of a building and then only to a height of four feet six inches (4'-6").

(c) In any district except residential, a fence may be seven feet (7') in height if closed, or nine feet (9') if open.

SECTION 9. SIGNS AND BILL-BOARDS.

(a) No sign shall project more than eight feet from the face of a building nor farther than the curb line.

(b) All signs shall be erected at a height of not less than twelve feet from the level of the sidewalk and electric signs shall be at least twelve inches clear from the face of the building. The permits of this section shall not apply to signs less than one square foot in area unless same are objected to by the Building Inspector.

(c) The manner of securing the sign shall be satisfactory to the Building Inspector and the wiring shall be approved by the District Electrical Inspector. If a sign is deemed unsafe or unsightly by the Building Inspector he may at any time have same removed at the owner's expense.

(d) In the event of a sign being an interference to the Fire Department in case of fire the Chief shall have the power and right to cut the wires or cause them to be cut, and to tear down, or cause to be torn down, the sign, without the said Chief or the Corporation being in any way liable to compensate the owner of same for loss or damage or otherwise.

(e) The Owner of the sign shall indemnify the City of North Bay against damage of all kinds which may arise or be caused by reason of erection or construction or maintenance of the said sign.

STRENGTH OF BUILDING. No sign or advertising device shall be erected upon any building unless such building will carry the additional dead and wind loads due to the erection of such sign or advertising device, without exceeding the stresses permitted on the respective materials by this By-Law.

WOODEN SIGNS. Every sign or advertising device constructed wholly of wood shall have one dimension not exceeding two feet (out ~~in~~ to out).

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GROUND SIGNS PARTLY OF WOOD. Signs or advertising devices supported directly from the ground, may be erected upon private property, but shall have a clear space of at least two feet between the bottom of any sign or advertising device and the ground. The highest point of any such sign or advertising device shall be not more than fifteen feet above the ground.

MAINTENANCE. The owner, lessee or agent of the premises upon which any sign or advertising device is located, shall maintain, or cause such sign or advertising device to be maintained, in a proper state of repair.

REMOVAL OF SIGNS. Any sign or advertising device, whether or not it was erected under permit from the Building Inspector, shall be removed after a reasonable length of time if so ordered by the Building Inspector, acting upon instructions from the City Council.

SECTION 13. ELECTRICAL INSTALLATIONS.

All electrical installations shall be in accordance with the regulations for Ontario, and no installations of electrical equipment shall be made except in conformity thereto. Buildings listed as first class fire resistive construction shall include all electric wiring to be in approved conduit. Radio aerials shall not be allowed to cross over high tension wires or public thoroughfares.

SECTION 14. MAIL SLOTS AND HOUSE NUMBERS.

Every dwelling shall be provided by the owner with numbers and a mail receiving device. The mail slot shall be not less than one inch by four and one-half inches in size and shall be placed in or at the side of the front entrance. This section shall apply to and include all existing buildings.

SECTION 15. DRAINAGE.

Plumbing and sewerage requirements for all buildings, both Public and private, shall be performed in accordance with all the regulations of the provincial Department of Health and with the Plumbing and Sewage By-Law and regulations of the City of North Bay.

SECTION 16. WINDOW SPACE.

Every room in each dwelling shall have one or more window or skylight opening into the external air, the area of which openings combined shall not be less than 10 per cent. of the floor space in the room.

SECTION 17. DEPTH OF CELLAR.

Every builder must before excavating for a cellar or basement ascertain at the Engineer's office or otherwise the depth of sewers existing on his street, and no cellar shall be constructed which cannot be properly sewered.

SECTION 18. CELLAR TO BE DAMP PROOF.

Unless the character of the soil or location of the building insure a dry cellar, weeping tile shall be laid at least six inches below the cellar floor surface, such tile to be connected with a small covered well, not less than eighteen inches square and twelve inches in depth, from which a pipe shall be connected to the main cellar trap. Where agriculture tile is laid on the outside of the basement wall the tile shall be carried through wall to sump in the cellar, and connected to cellar drain trap.

The Building Inspector may also insist on pitching the outside of cellar or basement walls, use of supercement or toximent or other reasonable method of ensuring a damp proof construction.

SECTION 19. NUMBER AND SIZE OF ROOMS.

No building which is to be used as a dwelling shall be erected with less than three rooms. The ground area of such a building, if one storey only, shall be not less than 500 square feet, or 400 feet if the building is 2 storeys.

SECTION 20. HEIGHT OF STOREY.

Every room in every building to be used as a dwelling and in every building remodelled or altered to be used as a dwelling shall have a minimum clear head room as follows;

Two storey houses, eight feet (8') for the 1st storey and seven feet six inches (7'-6") for the 2nd storey.

One storey houses having less than 5 rooms on 1st floor 8'.

One storey houses having more than 5 rooms on 1st floor 8'- 6".

SECTION 21.

Every dwelling house or other erection to be occupied as a dwelling house not located at the intersection of two streets shall be so located and erected on the respective premises as to provide for and reserve a yard area to be free from all construction from ground to sky, such open space shall be situated at the rear of the main front wall or production of the main front wall, but in no event shall said yard area be less than ten per cent, of the area of the said lot. Buildings on business streets may cover the entire area of a lot for each, of the storeys, beginning with the lower part, as are used for business purposes only.

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PART 4

CLASSIFICATION OF BUILDINGS AND AREAS.

SECTION 1. ZONING AND BUILDING LINE RELATIVE TO BUILDING BY-LAW.

The zoning and building line designates and restricts the classification and occupancy of buildings in residential, business and manufacturing districts and its classification shall operate in conjunction with this by-law.

SECTION 3. FIRST CLASS FIRE RESISTIVE CONSTRUCTION WITHIN FIRE LIMITS.

1. Shall be used for all buildings over four storeys and cellar or three storeys and basement in height within the fire limits.
2. For all buildings exceeding seventy-five feet in height.
3. For all buildings over three stories and cellar or two storeys and basement and intended to be used for apartment, tenement house or hotel.
4. For all buildings such as theatres or assembly halls having a seating capacity of more than one thousand persons.
5. For all public garages.

SECTION 4. SECOND CLASS FIRE RESISTIVE CONSTRUCTION.

1. First or second class fire resistive construction shall be used for all buildings over two storeys and cellar or one storey and basement in height and under four storeys within the fire limits.
2. For all buildings exceeding fifty feet in height and under seventy-five feet in height.

SECTION 5. ORDINARY CONSTRUCTION.

All buildings which are not required to be of first class or second class fire resistive construction, and which are not contained in the following list for which exceptions are made shall be built of ordinary construction.

1. Brick veneer construction shall be permitted outside the fire limits of residences and buildings using number one hard brick only.
2. Rigid asbestos, shingles, nail brick, cement, magnesite, or other approved stucco for exterior use maybe used on wood, galvanized or metal lath or other suitable base in the exterior residences outside the fire limits. Such coverings however, are acceptable throughout on a masonry base to within twelve inches of the grade line.
3. Cement, magnesite or other approved stucco for exterior use may be used on galvanized metal lath on the exterior of one storey buildings not exceeding 16' x 40' exterior dimensions outside the fire limits.
4. Frame construction shall be allowed for residences not more than two storeys in height outside the fire limits.
5. Wood shingles laid on asbestos paper weighing not less than ten pounds per hundred square feet may be used on the roof and on the gables of residences outside the fire limit.

SECTION 6. SHEDS, OUT-BUILDINGS, ANNEX BUILDINGS AND CHICKEN COOPS.

Sheds, out-buildings and annex buildings outside fire limits with non-hazardous occupancies may be built of frame for one storey only provided the floor area does not exceed 14' x 20'.

Chicken coops will be allowed of frame construction if located at least thirty feet (30') from any dwelling and no fence or other enclosure, shall be ~~be~~ erected to form a chicken run nearer than thirty feet (30') to any residence except that of the owner.

SECTION 7. PRIVATE GARAGES.

A private garage in a residential zone not more than 20' x 24' outside dimensions and if ten feet detached from any dwelling, apartment, shop, factory, store or any annex of same may have a frame work of wood including roof, if not detached the construction shall be of brick, stone, metal, concrete or a framework of studding only covered outside with metal or stucco and inside with gyproc. There shall be no openings in such a building except to the external air unless protected with metal clad door, and fire resisting wall.

If not in a residential zone a garage may be erected for storage of private autos or trucks only of brick, stone, metal, concrete or may have a frame of studding only covered on the outside with metal or stucco on wire lath and lined on the inside with gyproc, providing size and location is satisfactory to Building Inspector and Fire Chief.

FOUNDATIONS, FOOTINGS AND SUBSTRUCTURES.

SECTION 1. SOIL LOADINGS.

The permissible load per square foot to which the different kinds of natural soils may be subjected, shall be as follows, and the width of all footings shall be at least sufficient to meet these requirements:--

Gravel Compacted.....	4 tons per sq. ft.
Sand, clean and compact.....	4 tons per sq. ft.
Clay on thick beds, always dry.....	4 tons per sq. ft.
Clay on thick beds, moderately dry.....	3 tons per sq. ft.
Sand, clean and dry.....	3 tons per sq. ft.
Earth, dry.....	1 to 2 tons per sq. ft.

When buildings are to be constructed on filled in ground test pits shall be dug and proper test made under the direction and to the approval of the Building Inspector.

SECTION 2. FOOTINGS.

1. Foundation walls, pilasters, piers and columns in all buildings shall rest upon footings of masonry or concrete. The bottom surface of external footings shall in all cases be placed so that they are protected from frost by at least four feet of earth. The footings shall be proportioned to sustain within the limits of safety permitted by this by-law, all loads superimposed thereon, which shall include all dead and live loads.
2. The effective portion of offsets of footings shall be considered as not more than one-half of the depth of the course.
3. PILES. In case solid earth cannot be reached within a reasonable distance, piles or concrete may be used. If pile construction is used, the Building Inspector shall be notified of the time when test or initial piles will be driven so that he may be present to satisfy himself of the adequate bearing power of the same.

SECTION 3. RESIDENTIAL BUILDINGS.

Footings of masonry or concrete shall extend at least three inches on each side of foundation walls.

SECTION 4. COMPOSITION OF ORDINARY CONCRETE.

The proportion of cement, sand, broken stone or screened gravel in concrete used for ordinary footing or foundation walls shall be as follows; One part Portland Cement, to not more than three parts sharp gritty sand, and six parts of clean stone, broken so as to go through a two and one-half inch ring. Or if gravel is used the proportion shall not be leaner than 1-7. It shall be thoroughly mixed into a pasty mass and placed immediately thereafter. The wet concrete shall then be properly spaded and tamped. Form work must be of sufficient strength to withstand this work together with the weight of the concrete.

PART 6

LIVE AND DEAD LOADS.

SECTION 1. FLOORS.

The floors of all buildings shall be designed and constructed to sustain not only the actual dead weight of the material comprising their construction but also a live load acting on every square foot of floor area of an amount equal to those of the following table:-

1st--Dwellings and rooming houses.....	50	lbs.	per	sq.	ft.
2nd--Apartment or tenement houses, private rooms.....	50	"	"	"	"
Corridors and elsewhere.....	75	"	"	"	"
3rd--Hotels, Bedrooms and Offices.....	50	"	"	"	"
Corridors, dining rooms, halls and elsewhere.....	85	"	"	"	"
4th--Hospitals, private rooms.....	50	"	"	"	"
Wards.....	60	"	"	"	"
Corridors and elsewhere.....	75	"	"	"	"
5th--Schools and Colleges--Bedrooms and Dormitories.....	50	"	"	"	"
Class rooms and Offices.....	60	"	"	"	"
Corridors and elsewhere.....	85	"	"	"	"
6th--Office Buildings--All floors above 1st floor.....	75	"	"	"	"
First floor and elsewhere.....	85	"	"	"	"
7th--Churches, theatres, public halls, etc... (except where used for dancing)	85	"	"	"	"
8th--Stores, restaurants, dancing halls, and gymnasiums.....	100	"	"	"	"
9th--Warehouses, storehouses, printing establishments, garages drill halls.....	120	"	"	"	"
10th--Floor leads for buildings not included in the above clause shall be determined by the Building Inspector.					
11th--All roofs having a pitch of not more than twenty degrees shall have a live load of forty pounds per square foot.					

All roofs having a pitch of more than twenty degrees shall be calculated to carry a load of twenty pounds per square foot of horizontal projection and to resist a wind pressure of thirty pounds per square foot of surface.

SECTION 2. WEIGHTS OF MATERIALS.

For the purpose of computing the weight upon floors, walls, piers, columns and other supports, the following shall be taken as the weight of the materials;

	Pounds
Pine or Hemlock (dry) per foot, board measure	2½
Pine or Hemlock (green) per foot, board measure	4
Yellow Pine (southern) per foot, board measure	4½
Yellow Pine (northern) per foot, board measure	4
Brickwork (ordinary) per cubic foot	112
Brickwork (pressed) per cubic foot	140
Concrete (stone or gravel) per cubic foot	144
Concrete (slag) per cubic foot	132
Concrete (cinder) per cubic foot	96
Stonework (mortar rubble) per cubic foot	155
Sandstone masonry (well dressed) per cubic foot	145
Granite or limestone masonry (well dressed) per cubic foot	165
Slating, per square foot	8
Tiles, plain, per square foot	10
Four-ply felt and gravel roofing, per square foot	6
Lath and plaster (one side) per square foot	6

SECTION 3. ALLOWABLE COMPRESSION.

The maximum load in compression placed upon walls, piers, pilasters, buttresses or other supports constructed of first class materials of the several kinds mentioned in this article shall never exceed the amounts tabulated as follows:-

Material	Tons per square foot	Pounds Per square inch
Soft brick laid in lime mortar.....	5	70
Medium brick laid in lime mortar.....	6	83
Hard brick laid in lime mortar.....	7	98
Medium brick laid in lime and cement mortar... 9		126
Hard brick laid in lime and cement mortar....11		153
Hard brick laid in cement mortar.....15		208
Concrete (as spec. in Part 5, Sec. 4).....15		208
Rubble stone laid in lime mortar..... 4		56
Rubble stone laid in lime and cement mortar... 6		83
Rubble stone laid im cement mortar..... 8		111
Dressed limestone or sandstone.....43		600

Other similar materials as permitted by the Building Inspector.

SECTION 4. SAFE LOAD ON CAST IRON COLUMNS.

The maximum concentric load cast iron columns shall not exceed that determined by the following formula:-

$$S=10,000--60 L$$

$$\frac{\quad}{R}$$

S=Safe load in pounds per square inch.
L=Length of column in inches.
R=Least radius on Gyration.

PART 7

TIMBER CONSTRUCTION

SECTION 1. STUDS IN BEARING PARTITIONS.

Frame walls other than those which are both internal and non-bearing shall be constructed having a framework of scantling which shall be adequately braced. Each scantling shall be not less in cross sectional area than two inches by four inches and spaced not further apart than sixteen inches on centres, and four inch face running at right angles to the partition.

SECTION 2. DOUBLE STUDS, where required.

1. In frame bearing walls and bearing partitions all scantlings at corners, angles and openings shall be doubled. All such walls shall be provided with top and bottom plates which shall be composed of double scantling, each scantling having a cross-sectional area of not less than two inches by four inches.

2. Scantlings in exterior frame walls shall be of the size and thickness and doubled according to the preceeding clause and shall extend in one length from the sill plate of the foundation to the roof with the second floor joists bearing on a sound one inch by six inch girt carried around the building and let into the framework. Corners of exterior frame walls shall be braced diagonally with one inch by four inch bracing extending over three scantlings or two inch by four inch pieces cut in between scantlings.

SECTION 3. BRIDGING.

All wooden floor and roof joists shall be bridged, once in every eight feet of span, with two inch by two inch cross-bridging, provided however, that bridging in a residence may be two by one inch. The bridging shall be nailed at each end of each piece with two nails, each two and one half inches in length.

SECTION 4. WALL BEARINGS AND STIRRUPS.

All beams, joists and rafters entering masonry or concrete walls for support, shall have a bearing upon such walls of at least three and one-half inches, with a maximum, in the case of joists, of four inches. Their ends shall be so placed that the upper portion will extend not more than one inch into the wall. It is also provided that timber may be hung, either at wall bearing or at intersection on metal stirrups approved by the Building Inspector.

SECTION 5. TRIMMING ABOUT FLUES.

Wooden beams, joists or other timbers shall not rest upon the walls enclosing chimney flues, but shall be trimmed away from them, the trimmers and headers to be kept at least two inches distant from such walls.

SECTION 6. JOISTS, RAFTERS AND ROOF SHEETING.

Joists shall be of sound material and shall not be placed more than sixteen inches from centre to centre for sizes up to 3" x 12".

Rafters shall be of sound material and shall not be placed more than two feet, centre to centre, Hip and valley rafters shall be two inches deeper than common rafters.

All roofs of any description must be close boarded or sheeted to within one inch spacing with material not less than Thirteen Sixteenths inches in thickness.

SECTION 7. TRIMMERS, HEADERS AND RAFTERS.

Any opening more than three feet in width shall be protected by a header proportioned to carry the weight imposed thereon. Any trimmer supporting more than three joists shall be doubled providing said joists have a span of more than eight feet. Joists supporting ends of said trimmers shall be doubled. Two by four rafters shall have a maximum spacing of sixteen inches centre to centre and two by five rafters shall have a maximum spacing of twenty-four inch centre to centre providing the spans shall not exceed the stresses allowed by this by-law.

SECTION 8. PERMISSIBLE STRESSES.

Formula for determining size of beams and joists.

The loads to which timber used for beams or joists may be subjected shall not exceed those determined by the following formula:--

$$S = \frac{C \times B \times D^2}{L}$$

- S-Representing the safe load in pounds.
- Where B-Width of beam or joist in inches.
- " D-Depth of beam or joist in inches.
- " L-Length of clear span in feet.
- " C-160 for long leaf pine or fir.
- 120 for Oak.
- 110 for Red Pine.
- 100 for White Pine or Spruce.
- 90 for Hemlock or Cedar..

SECTION 8. MAXIMUM ALLOWABLE SPANS AND FLOOR JOISTS, UNIFORMLY LOADED.

Size of Joists (Nominal) in Inches	Spacing of Joists Center to Center in Inches	Maximum allowable lengths between supports			
		Live load 50 lbs. per Sq. Ft. of floor area.		Live load 60 lbs. per Sq. Ft. of floor area.	
		Determined by Bending	Determined by Deflection	Determined by Bending	Determined by Deflection
		For Extreme Fibre Stress of 900 lbs. per sq. in. in Bending, use this Column.	For Extreme Fibre Stress of 1000 lbs per sq. in. or more in Bending, use this column.	For Extreme Fibre Stress of 900 lbs per sq. in Bending, use this column.	For Extreme Fibre Stress of 1000 lbs per sq.in. or more in Bending, use this column
2 x 6	12	9 - 1	9 - 0	8 - 2	8 - 3
	16	8 - 3	8 - 0	7 - 3	7 - 7
2 x 8	12	12 - 0	11 - 10	10 - 9	10 - 11
	16	10 - 11	10 - 10	9 - 8	10 - 2
2 x 10	12	15 - 2	15 - 0	13 - 8	13 - 9
	16	13 - 9	13 - 6	12 - 2	12 - 9
2 x 12	12	18 - 3	18 - 0	16 - 5	16 - 7
	16	16 - 8	16 - 5	14 - 8	15 - 5 1/2
3 x 12	12	21 - 4	21 - 0	19 - 6	19 - 6
	16	19 - 7	19 - 3	18 - 1	18 - 1
2 x 14	12	21 - 9	21 - 4	19 - 9	19 - 10
	16		19 - 6		18 - 6
3 x 14	12		24 - 4		22 - 9
	16		22 - 4		21 - 2

NOTE:--The lengths are based on:

Maximum allowable deflections of 1-360 of span length.

Modulus of Elasticity of 1,200,000 lbs. per sq. in.

Dead Load--Weight of joist

Weight of plaster ceiling 10 lbs. per sq. ft.

Double thickness flooring 5 lbs. per sq. ft.

Live Load--As indicated.

MAXIMUM SPANS FOR ROOF RAFTERS, UNIFORMLY LOADED.

Inclination of 1/5 pitch to 1/2 pitch
Roof Covering 2.5 lbs. per sq. ft.

Maximum Allowable Lengths Between Supports.

Size of Rafters (Nominal) in Inches.	Spacing of Rafters Centre to Centre in ins.	Determined by Deflection of 1-360 of Span	Determined by Bending					
			For Extreme Fibre Stress of 900 lbs. per sq. in. in Bending, use this column.	For Extreme Fibre stress of 1000 lbs. per sq. in. in Bending, use this Column.	For Extreme Fibre Stress of 1100 lbs. per sq. in. in Bending, use this column.	For Extreme Fibre Stress of 1200 lbs. per sq. in. in Bending, use this column.	For Extreme Fibre Stress of 1300 lbs. per sq. in. in Bending, use this column.	For Extreme Fibre Stress of 1600 lbs. per sq. in. in Bending, use this column.
		Ft. Ins.	Ft. Ins.	Ft. Ins.	Ft. Ins.	Ft. Ins.	Ft. Ins.	Ft. Ins.
2 x 4	12	6 - 10	7 - 8	8 - 1	8 - 6	8 - 10	9 - 2	10 - 2
	16	6 - 3	6 - 9	7 - 1	7 - 5	7 - 9	8 - 1	9 - 0
2 x 6	12	10 - 6	11 - 9	12 - 4	12 - 11	13 - 6	14 - 1	15 - 8
	16	9 - 7	10 - 3	10 - 9	11 - 4	11 - 10	12 - 4	13 - 8
2 x 8	12	13 - 10	15 - 5	16 - 3	17 - 1	17 - 10	18 - 6	20 - 7
	16	12 - 8	13 - 6	14 - 3	14 - 11	15 - 7	16 - 2	18 - 0
2 x 10	12	17 - 5	19 - 4	20 - 4	21 - 4	22 - 4	23 - 2	25 - 9
	16	15 - 11	16 - 11	17 - 10	18 - 9	19 - 7	20 - 4	22 - 7

NOTE:-- The Lengths are based on:
 Modulus of Elasticity of 1,200,000 lbs. per sq. in.
 Dead Load--Weight of rafter
 Sheathing 2.5 lbs. per sq. ft.
 Covering 2.5 lbs. per sq. ft.

Live Load--30 lbs. per sq. ft. of roof surface considered as acting normal to the roof surface.

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MAXIMUM SPANS FOR CEILING JOISTS AND ATTIC FLOOR JOISTS

UNIFORMLY LOADED.

(Nominal) in Inches	Space of Joists Centre to Centre in Inches	Maximum Allowance Lengths Between Supports	
		Determined by Deflection (For Extreme Fibre Stress of 900 lbs. per sq. in. or more bending).	
Ceiling Joists, Attic Floor Joists			
2 x 4	12	9 - 11	
	16	9 - 12	
2 x 6	12	15 - 1	10 - 9
	16	13 - 11	9 - 9
2 x 8	12	19 - 8	14 - 2
	16	18 - 3	13 - 0
2 x 10	12	24 - 4	17 - 10
	16	22 - 8	16 - 4
2 x 12	12	21 - 4	
	16	19 - 8	

NOTE: The lengths are based on:
 Maximum allowable deflection of 1-360 of span length.
 Modulus of Elasticity of 1,200,000 lbs. per sq. in.
 Ceiling Joists;

Dead Load--Weight of Joists.
 Plastering 10 lbs. per sq. ft.
 Rough floor 2.5 lbs. per sq. ft.

Live Load--20 lbs. per sq. ft.

PART 8

BRICK, STONE AND CONCRETE CONSTRUCTION.

Section 1. Wall Thickness Tabulated.

TABLE 1

(a) Residences, apartment, tenement, lodging and rooming houses

Number of Storeys	Foundation Walls			First Storey	Second Storey	Third Storey	Fourth Storey
	Stone	Brick	Concrete				
One	16	13	12	9			
One and one-half and two, area under 1600 sq. ft.	16	13	12	9	9		
Two--area over 1600 sq. ft. without masonry party wall	16	13	13	9	9		
Three	16	13	13	13	9	9	

TABLE 11

(b) Private stables, garages, sheds, one storey office buildings or stores.

FOUNDATION

Number of Storeys	Stone	Brick	Concrete	First Storey	Second Storey	Third Storey
One	16	13	12	9		
One and one-half and two storeys under 800 sq. ft. in area.	16	13	12	9	9	
Two, area over 800 sq. ft.	16	13	12	9	9	
Three	16	13	13	13	9	9

TABLE 111

(c) Hotels, office and public buildings, stores or shops, warehouses, storehouses, factories, stables, garages and other buildings not included in Tables 1, or 11.

Number of storeys	Founda- tion Walls		Thickness of Wall in Inches											
			First Storey	Second Storey	Third Storey	Fourth Storey	Fifth Storey	Sixth Storey	Seventh Storey	Eighth Storey	Ninth Storey	Tenth Storey		
	Rubble Stone	Brick or Concrete												
One	18	13	13											
Two	20	18	13	13										
Three	22	18	18	13	13									
Four	24	22	18	18	13	13								
Five	27	22	22	18	18	13	13							
Six	30	27	22	22	18	18	13	13						
Seven	33	31	27	22	22	18	18	13	13					
Eight	35	31	27	27	22	22	18	18	13	13				
Nine	38	36	31	27	27	22	22	18	18	13	13			
Ten	40	36	31	27	27	27	22	22	18	18	13	13		

SECTION 2. TABULAR THICKNESS DECREASED.

1. Where the first floor is carried directly upon the ground, the foundation walls may have the same thickness as walls of the first storey, provided such foundation walls do not exceed six feet measured vertically.

2. Where pilasters, buttresses, piers or columns adequately reinforcing the wall (to the approval of the Inspector of Buildings) and not exceeding twenty feet apart on centres, are provided, a reduction of four and one-half inches may be made. It is provided, however, that no wall so reduced shall be less than nine inches in thickness..

3. Where walls are internal and bearing, they may be four and one-half inches less in thickness than called for in the tables, provided that no such wall shall be less than nine inches in thickness, It is further provided that internal non-bearing partition walls up to ten feet in height, may be erected four and one-half inches in thickness.

4. Where the two upper storeys of a three storey building are used for human habitation and the first storey is used for stores or offices the walls in the first storey may be reduced to fourteen inches in thickness.

SECTION 3. MAXIMUM HEIGHT OF ISOLATED PIERS.

No isolated pier shall exceed in height seven times its least lateral dimension.

SECTION 4. WALL LININGS AND FURRINGS.

Wall linings and furrings shall not be included in the measurement of the thickness of walls.

SECTION 5. THICKNESS OF WALLS AT JOIST LEVELS.

All changes in the thickness of walls shall be made at the top of the joists, and all interior walls shall be made at the top of the joists, and all interior walls supporting joists shall be carried up to and levelled one inch below the top of joists.

SECTION 6. ANCHORING OF WALLS.

The Walls of each storey above the first floor of every building shall be anchored to each floor, with approved, substantial wrought iron or steel anchors, which shall be built solidly into the walls from a point not more than four and one-half inches from the outside face of the walls, the distance between anchors not to exceed eight feet.

SECTION 7. LEDGES TO FURRED WALLS.

Where wood strapping is used on masonry or concrete walls, concrete ledges shall be built or cement mortar shall be plastered on the walls. The ledges or mortar shall project out to face of the strapping and extend from the bottom of the joists to one inch above the top of the joists. In place of ledges or mortar, wood strips two inches high and thick enough to extend from the face of the wall to the face of the strapping shall be placed continuously along the top and bottom of the joists.

SECTION 8. WALL BETWEEN CEILING AND ROOF.

The wall between the ceiling and the roof shall be the same in thickness as that of the upper storey, and where it extends more than six feet above the top of the ceiling joists, it shall be classed as a full storey.

SECTION 9. DETAILS OF MASONRY WORK.

1. All masonry work shall be laid in single course across the walls. It shall be well bedded in and flushed up with mortar, and carried up plumb, level and true.
2. All adjoining or abutting walls shall be adequately bonded together, or anchored to each other every five feet in height with approved wrought iron anchors.
3. All brick laid in non-freezing weather shall be wetted immediately before being laid.
4. All stone shall be laid upon its natural bed.

SECTION 10. BRICK BONDING.

1. In all brick work, no more than five course of stretchers shall be laid without a course of headers. Vertical joints exceeding one course in height are prohibited.
2. Face brick may be bonded to the backing with galvanized metallic wall ties at least every fifth course, the ties to be placed not more than two feet apart, or ties may be used every fifth course and a row of solid headers every ninth course the clipping of corners for blind headers being prohibited.

SECTION 11. MORTARS.

1. The sand used for mortar shall be clean, sharp and coarse, and perfectly free from loam or other material having a tendency to lessen the adhesive or compressive strength of the mortar.
2. All lime used for mortar shall be of good quality, thoroughly burned and properly slacked before it is mixed with the sand.
3. Lime Mortar. (see Def.)
4. Cement Mortar. (see Def.)
5. Lime and cement mortar. (see Def.)

SECTION 12. OLD AND BROKEN BRICKS.

1. Old brick shall not be used in any pier or chimney, or in any bearing wall below the top storey of any public or mercantile building.

2. No brick wall shall have in its construction an amount of broken bricks (bats) in excess of ten per cent. of the volume of such wall, and such bricks shall be uniformly distributed through the wall.

SECTION 13. LINTELS AND ARCHES OVER OPENINGS.

1. Openings under four feet in width may have wood lintels placed over them on the inside of the wall, provided that a brick relieving arch is built over the lintel. In such cases the lintel shall have a bearing at each end of four and one-half inches on the wall, and the top of the lintel shall be neatly cambered to receive the brick arch above. The depth of the lintel at the ends shall be above three inches or the height of one course of brick. (This is not meant to apply to fire-resistive construction.)

2. All masonry and concrete work over openings under four feet in width, not carried as specified in Section (1) of this article and all masonry and concrete work over openings exceeding four feet in width, shall be supported on stone, reinforced concrete, iron or steel lintels of sufficient strength to carry the super-imposed weights, excepting where such masonry and concrete work is supported by properly tied and substantial arches.

SECTION 14. TIMBER IN WALLS.

Timber other than cambered lintels wood brick not exceeding nine inches in length and three-eighth inch nailing strips not less than eight courses of brick apart shall not be used in any masonry or concrete wall.

SECTION 15. ANCHORAGE OF SILLS, MOULDS, BELTS, ETC.

All cut stone, terra-cotta, artificial stone or other incombustible trim of walls, such as sills, lintels, cornices, moulds, belts, etc., shall be properly anchored or tied to the backing. It shall have at least sixty-five per cent. of its mass, with a minimum dimension of four and one-half inches, laid and bearing directly upon the walls or in lieu of this requirement it shall be carried upon steel lookouts adequately anchored to the walls.

SECTION 16. MASONRY AND CONCRETE SUPPORTS.

No wall, pier, pilaster or buttress of masonry or concrete shall be supported in whole or in part by wooden posts, beams or girders.

SECTION 17. HOLLOW BUILDING BLOCKS.

In buildings not more than forty feet high, hollow tile or concrete blocks may be used for outside walls and inside bearing walls, as well as for non-bearing partitions. Such blocks (except for non-bearing partitions) shall have an ultimate compressive strength of not less than seven hundred pounds per square inch of gross area. In computing the gross area, no deduction shall be made for hollow space. Hollow tile should be of shape and material especially suitable for outside walls and should have undergone tests to prove its fire and weather resisting qualities. Such walls should be further protected with three-quarter inch of cement plaster on the outside. Concrete blocks should be made of good coarse aggregate, with at least fifteen per cent. of good Portland cement, properly mixed, moulded and cured. With fine sand more cement is necessary. Hollow tile or concrete blocks of inferior quality will often not withstand weather or fire and should not be used for outside or bearing walls.

SECTION 17. HOLLOW BUILDING BLOCKS. (Continued)

The hollow spaces shall not exceed fifty-five per cent. in the case of terra cotta or clay tile, or thirty-three per cent. in the case of concrete blocks. The absorption shall not exceed twelver per cent. in forty-eight hours.

Such walls shall be laid in Portland cement mortar. The thickness of such walls shall be the same as required for brick walls but no such wall shall be higher than fifteen times its thickness.

Brick facing may be considered as part of hollow tile or concrete block wall (or vice versa) if the two materials are properly bonded with header courses of brick not farther apart than every sixth course.

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PART 9

REINFORCED CONCRETE STRUCTURAL STEEL AND MILL CONSTRUCTION

SECTION 1. REINFORCED CONCRETE CONSTRUCTION.

The term reinforced concrete in this ordinance shall mean an approved concrete mixture in which steel is embedded in such a manner as to resist all tensile stresses and to add rigidity and strength to concrete in compression or shear.

Reinforced concrete will be approved for all types of building construction, provided the design conforms with good engineering practice, as set forth in the report of the Joint Committee on concrete and reinforced concrete as published by the American Society for Testing Materials. The construction shall meet the requirements for this Ordinance in all respects.

SECTION 2. MILL CONSTRUCTION.

Mill or slow burning construction consists of masonry walls and heavy timber interior construction, designed and arranged in such a manner as to prevent concealed spaces and to expose the least number of corners or projections of combustible material to fire. Such buildings should have each floor or room isolated by means of incombustible walls having automatic closing doors and other cut-offs to prevent the rapid spread of fire and smoke. They should also be protected against fire by automatic sprinklers or a combination of automatic sprinklers and standpipes.

SECTION 3. STEEL CONSTRUCTION.

Steel construction will be approved for all buildings provided the design conforms with good engineering practice as set forth in the Code of Standard Practice and the Standard specifications for the Design Fabrication and Erection of structural steel for buildings of the American Institute of Steel Construction.

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PART 10

HEATING AND FIRE PREVENTION.

SECTION 1. SMOKE NUISANCE.

Any chimney emitting smoke so as to cause damage to or injuriously affect neighbouring properties, or the occupants of the same, shall be deemed a nuisance, and if so declared by the Building Inspector or Board of Health, then any person who shall commit such nuisance or permit the same to be committed, or shall neglect or refuse to abate the nuisance after being notified so to do in writing, shall be liable for the penalty prescribed in this by-law. All boilers of 20 H.P. or more for the production of steam for power or heat using soft or bituminous coal shall be provided and equipped with a proper and efficient smoke consuming device.

SECTION 2. BOILER CHIMNEYS.

All chimneys used to carry away noxious vapors or smoke from any boiler of 20 H.P. or more, shall not be less than seventy-five feet in height above the level of the street adjoining.

This clause shall apply to factories throughout the City but shall not be enforced for existing conditions unless same be declared a nuisance as aforesaid. The building Inspector or Board of Health, however, shall make allowance for factory or isolated districts. Any stable, chemical works or other business having objectionable odors shall ventilate by a flue fifty feet in height so as to dissipate the smell to upper air. Steam locomotives operating over City Streets shall be prohibited from causing any smoke nuisance.

The thickness of walls of every chimney seventy-five feet in height shall be for the top twenty-five feet (nine inches in thickness) increased four and one-half inches for every twenty-five feet measuring down, chimney to be built on a stone or concrete foundation not less than twenty inches in thickness, and to be laid on a stone or concrete footing two feet in thickness and extending eighteen inches on each side of the chimney.

The inside four inches of such chimney shall be fire brick for at least twenty-five feet up from the smoke connection.

~~Any~~ Chimney of all low pressure, boilers, or furnaces also the smoke flues for baker's ovens, large cooking ranges, large laundry stoves and all flues used for similar purposes if twelve by twelve or less, in area, shall be lined continuously on the inside with well burned terra cotta or fire clay chimney tile set in Portland cement, or if over twelve by twelve in area shall be at least eight inches in thickness built of hard brick. All such chimneys shall be capped with terra cotta stone, concrete or cast iron.

Metal smoke stacks may be permitted for boilers, furnaces and similar apparatus where large hot fires are used, provided they have a clearance of at least fifteen inches from all combustible material. Where passing through a roof it shall be guarded by a galvanized iron ventilating thimble extending from at least nine inches below the underside of the ceiling or roof beams to at least nine inches above the roof.

Metal smoke stacks shall not be permitted to pass through floors.

SECTION 3. HEATER CHIMNEYS.

Except as herein provided, all chimneys in every building hereafter erected, altered or re-built shall be constructed of brick, stone, or reinforced concrete.

SECTION 3. HEATER CHIMNEYS.

Masonry chimneys shall have walls four inches thick if lined on the inside with well burned terra cotta or fire clay chimney tile set in Portland cement or with inside brick on edge, in which case the wall shall not be less than six inches thick. The lining shall be continuous from the bottom of the flue to the extreme height and all shall be properly bonded together.

Every smoke flue contained in a chimney hereafter erected shall have an area of at least sixty-four square inches, except that terra cotta flue linings seven inches by seven inches rectangular or eight inches diameter inside measurements may be used.

No chimney shall be corbeled out to more than eight inches from a brick wall and such corbeling shall consist of at least five course of brick. No one course shall project more than one and one-half inches.

Brick chimneys on residences which have no basement but rest on posts, may be built on a platform, provided such platform is supported by 2x4 or 2" plank uprights resting on joists of floor immediately below platform. Bracket platforms will not be allowed and no chimney may be built on any platform on or attached to the exterior wall of any building, all chimneys on buildings having a foundation must rest on a stone or concrete abutment.

All chimneys shall project at least three feet above the point of contact with a flat roof or two feet above the ridge of a pitched roof.

All chimneys which are dangerous from any cause shall be repaired and made safe or taken down.

The Fireback of every fireplace hereafter erected shall be not less than eight inches in thickness of solid brickwork or not less than twelve inches of stone lined with firebrick.

All flue holes when not in use shall be closed with tight fitting metal covers.

SECTION 4. ASHES.

Ashes shall be kept in metal or other incombustible receptacles provided for that purpose. When the ~~ash~~ ashpit is located in a basement or cellar the enclosing walls and cover shall consist of at least four inches brick or concrete.

SECTION 5. FLUES TO BE CLEANED.

All flues in every building shall be properly cleaned and all rubbish removed and flues left smooth on the inside upon the completion of the building.

SECTION 6. STAIRWAYS AND ELEVATOR SHAFTS.

In all buildings hereafter erected except private dwellings, which are used above the first floor for business purposes or for public assemblage, or for any purpose whatever if over two storeys high, the stair shafts shall be separately and continuously enclosed by incombustible partitions. Elevator shafts in all buildings hereafter erected shall be enclosed in the same manner. The partitions shall be constructed of brick or other fireproof material approved by the Building Inspector, and all mortar used in the construction shall be cement mortar, No such hollow partition shall be less than eight inches thick and no other solid partition less than four inches thick.

All door openings in stair and elevator enclosures shall be protected by metal covered doors (and frames) mounted with wrought iron or steel hardware, and shall be securely attached to the wall or partitions, or to substantial incombustible frames anchored thereto. If glass panels be used in such doors, they shall be of wired glass not exceeding one-third the area of door.

SECTION 6. STAIRWAYS AND ELEVATOR SHAFTS. (continued)

Doors opening into stairway shafts of all public buildings, tenements and factories shall swing in the direction of exit travel, shall be self-closing and shall be at least thirty-six inches wide.

The total width of stairway interior and exterior provided for the use of each floor and those above, shall not be less than forty-four inches for the first fifty persons and nine inches for each additional fifty persons, to be accommodated thereby, and handrails are to be provided on both sides of every stairway throughout its entire length.

No abstruption of any kind shall be placed on any stair landing or stair that would obstruct the exit of persons in case of fire.

All exit doors in schools, hospitals, churches, theatres and other places of public assemblage shall open outward upon pressure.

The Building Inspector may allow automatically closing well guarded trap doors of fire resisting type at floor levels in lieu of continuous enclosure where in his opinion an open elevator is required.

The clauses covering elevator and stairway floor openings shall apply as far as feasible to all floor openings.

SECTION 7. SKYLIGHTS.

All openings in roofs for the admission of light and air shall have incombustible frames and sash glazed with wire glass.

SECTION 8. PARAPET WALLS.

1. In buildings with flat roofs all party and exterior walls within fifteen feet of an exposure building and exceeding fifteen feet in height above the ground, shall have parapet walls above them.

2. The parapet walls shall be the same in thickness as the walls directly beneath them (but need not be thicker than thirteen inches), and shall extend at least two feet above the roof, at the point of contact. Provided however, that where the parapet wall is covered with metal on the inside or otherwise protected, it may be nine inches in thickness.

3. Where a skylight or bulkhead of any kind carried above a roof is located within five feet of a parapet wall, such parapet wall shall be carried to a height of at least fourteen inches above the skylight or bulkhead, for a length not less than twenty-five per cent. greater than the length of the skylight or bulkhead.

4. All parapet walls extending over four times their thickness above the roof supports, shall be securely braced with iron or steel braces, each eight feet of length of wall.

SECTION 9. FIRE STOPS.

At each floor level, in all buildings hereafter erected, all stud walls, partitions, furrings and spaces between joists where they rest on division walls or partitions shall be fire-stopped in a manner to completely cut off communication by fire through concealed spaces to prevent drafts both vertical and horizontal. Such fire-stopping shall extend the full depth of the joist and at least four inches above each floor level.

When sliding doors are pocketed in partitions, care should be exercised to see that such pockets be completely fire-stopped at top and bottom.

The space between stair carriages shall be fire-stopped at least once in the middle of each run, and shall be fire-stopped by a header beam at top and bottom.

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SECTION 9. FIRE STOPS (Continued)

No wooden beams or joists shall be placed within two inches of the outside face of a chimney or flue, whether the same be for smoke, air or for any other purpose, this not to include warm air ducts for heating if properly covered with asbestos paper.

No woodwork shall be within four inches of the back wall of any fireplace.

All spaces between the chimney and wooden beams shall be solidly filled with refuse mortar, loose cinders, or other incombustible material.

The header beam, carrying the tail beams of a floor, and supporting the trimmer arch in front of a fireplace, shall be not less than twenty inches from the chimney breast.

No wooden furring or studding shall be placed against any chimney; the plastering shall be directly on the masonry or on metal lathing.

SECTION 10. THEATRES.

MOVING PICTURE BOOTHS. Every picture ~~xxxx~~ machine shall before operating be installed in a booth or room of fire proof construction and all openings into the room shall be protected by automatically closing fire stops.

PROCENIUM WALLS. Every stage of a theatre or show house not used exclusively for motion pictures, shall have the stage out off from the auditorium by a procenium wall, not less than fourteen inches thick which shall be a fire wall, and an automatically lowering asbestos curtain.

SEATS. All seats on the main floor of a theatre shall be not less than thirty-two inches from back to back, measured in a horizontal direction, and no seat shall have more than ten seats intervening between it and the aisle on one side. All seats, excepting those contained in the boxes shall be firmly secured to the floor.

AISLES. All corridors, aisles and passageways shall be of ample width, not less than four feet wide and shall, during performances be kept free from all obstructions or temporary seats, and smoking shall not be permitted in any part of the theatre.

EXITS. There shall be at least two wide independent exits from each division or compartment, on the ground floor and galleries for ordinary use, leading on to suitable exits, not less than two openings in each main side wall from the main floor or auditorium, opening into a street, square, lane or passage, as will allow for the rapid exit of any audience which may be assembled therein. Similar emergency exits shall be made from each floor or interior galleries to balconies and staircases leading to the ground, placed on the outside of the walls. Proper provisions must be made for lighting those exits and approaches thereto both by electricity and gas or by some other approved form and independent source which will be dependable for emergency lighting.

All such emergent exits shall be fitted with light doors of fireproof construction and arranged so that in case of panic they will open outwards upon pressure.

SECTION 11. PUBLIC GARAGES.

(a) Public Garages, and Service Stations wherever located shall have the external walls constructed of brick, stone, concrete or other equally fire resistive materials.

(b) Such buildings shall not be heated by stoves or gravity system of hot air, nor ~~be~~ lighted with open lights.

SECTION 11. PUBLIC GARAGES. (Continued)

(c) Where such building is more than one storey in height the ceiling of that portion used in a garage shall be of concrete, tile or other fire resistive construction and there shall be no opening between that portion used as a garage and the portion used for other purposes unless protected by an automatic closing fire door.

Where wood joists exist for the support of the roof of such building they shall be covered on underside with gyproc or cement plaster on wire lath.

(d) APARTMENTS. No apartments or lodging rooms shall be allowed over a public garage.

SECTION 12. EXITS REQUIRED.

In every building hereafter erected, if three or more storeys in height shall be provided with at least two means of egress remote from each other, the location and construction of which shall be satisfactory to the Fire Chief and Building Inspector.

Elevators shall not be considered as a means of egress as specified in this section.

In case this section is not fully complied with, in existing buildings three or more storeys in height, the Fire Chief and Building Inspector shall have full authority to direct outside fire escapes to be provided for, which shall be installed, painted and kept in good repair by the owner, and they must be kept clear of snow and ice and unobstructed at all times.

SECTION 13. SMOKE PIPES.

No smoke pipe shall be closer than ten inches to any woodwork, or any wood frame-work and plaster partition or ceiling.

Where smoke pipes pass through a wood and plaster partition they shall be guarded by iron thimbles built in brickwork or other incombustible material and no woodwork shall be nearer than three and one-half inches to such thimble.

No smoke pipe shall pass through any floor, or a roof having wooden framework or covering, except as aforesaid.

SECTION 14. HOT AIR PIPES AND REGISTERS.

All heater pipes from hot air furnaces where passing through combustible partitions or floors, must be doubled tin pipes with at least one inch air space between them or be covered with asbestos one-sixteenth of an inch thick. Horizontal hot air pipes leading from furnace shall be not less than six inches from any woodwork, unless the woodwork be covered with loose fitting tin, or the single pipe be covered with asbestos, in which latter cases the distance from the woodwork may be reduced to not less than two inches.

No hot air pipe shall be placed in a wooden stud partition or any wooden enclosure unless it be at least four feet horizontal distance from the furnace. Hot air pipes contained in combustible partitions shall be placed inside another pipe arranged to maintain one-half inch space between the two on all sides, or be securely covered with asbestos.

Every hot air furnace shall have at least one register without valve or louvres.

Hot air registers placed in any woodwork or combustible floor shall be surrounded with borders of incombustible material, not less than two inches wide, securely set in place.

The register boxes shall be of metal, and be double; the distance between the two shall be not less than one inch; or they may be single if covered with asbestos not less than one-sixteenth of an inch in thickness and if all woodwork within two inches be covered with tin.

SECTION 15. STOVES AND RANGES.

No kitchen range or stove burning wood or coal, except as hereinafter prescribed, in any Building, shall be placed less than twelve inches from any woodwork or wood frame-work, or ten inches from plastered wall or ~~brick~~ partition, unless the woodwork or partition is properly protected by metal shields in which case the distance shall be nine inches, In lieu of the foregoing plastered walls may be protected with asbestos board at least three-sixteenths of an inch thick.

Hotel and restaurant ranges shall be provided with a metal hood, placed at least nine inches below any wood framework and plaster or wooden ceiling, and have an individual pipe outlet connected with a good brick flue, or other approved method of ventilating. The pipe shall be protected by asbestos covering and the ranges must be set on a fire-proof base.

Low pressure heating boilers, warm air furnaces, bake ovens and similar appliances where hot fires are used, shall rest upon entirely incombustible foundations.

All ranges that are supported by legs and have no ash pan or gas burner nearer than one foot to the floor and on which such gas burners are separated from the floor by sheet metal, may rest directly on a combustible floor.

Where any gas or gasoline burning stove or range is placed nearer than twelve inches to any combustible partition or wall or floor, such wall, partition or floor shall be protected by a proper shield.

Gas plates or gasoline stoves shall always rest on the floor or a permanent foundation and never on boxes, shelves or a temporary support.

SECTION 16. ELECTRIC IRONS.

Electric irons in all industrial and commercial buildings must be supplied with a red pilot light.

SECTION 17. STEAM AND HOT WATER PIPES.

No steam or hot water pipe shall be within one inch of any woodwork, unless covered by asbestos, and be provided with a floor and ceiling plate.

SECTION 25. STORING INFLAMMABLE FLUIDS.

All installations and all storage of inflammable fluids must be in accordance with the standards and methods as set forth by the Canadian Fire Underwriters.

SECTION 26. COMBUSTIBLE MATERIAL.

No person shall permit any hay, rubbish or other inflammable material to accumulate in his yard or building and such material shall be promptly removed on the order of the Building Inspector or Fire Chief.

READ A FIRST TIME ^{short} IN OPEN COUNCIL THIS 16th day of October 1944.
READ A SECOND TIME ^{short} IN OPEN COUNCIL THIS 16th day of October 1944.
~~RULES OF ORDER WERE SUSPENDED AND BY/LAW~~ READ A THIRD TIME SHORT AND
PASSED THIS 16th day of October 1944.

..... M A Y O R

..... C L E R K