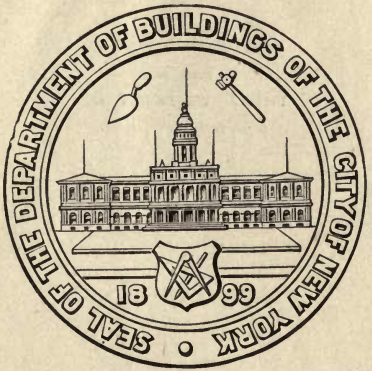
# THE BUILDING CODE OF THE CITY OF NEW YORK.



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# DEPARTMENT OF BUILDINGS.

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1901.

# THE BUILDING CODE

PROVIDING FOR ALL MATTERS CONCERNING, AFFECTING OR RELATING TO THE CONSTRUCTION, ALTERATION OR REMOVAL OF BUILDINGS OR STRUCTURES ERECTED OR TO BE ERECTED IN THE CITY OF NEW YORK, AS CONSTITUTED BY THE GREATER NEW YORK CHARTER.

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ADOPTED BY THE BOARD OF ALDERMEN SEPT. 12, 1899.

ADOPTED BY THE COUNCIL OCT. 10, 1899.

APPROVED BY THE MAYOR OCT. 24, 1899.

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*Be it ordained by the Municipal Assembly, pursuant to section 647 of the Greater New York Charter, as follows:*

## PART I.

### SHORT TITLE OF THIS ORDINANCE.

### A REMEDIAL ORDINANCE.

Sec. 1.—*This ordinance to be known and cited as the Building Code, and presumptively contains the Building Law, except so far as such provisions are contained in the Charter*—The following provisions shall constitute and be known as The Building Code and may be cited as such, and presumptively provides for all matters concerning, affecting or relating to the construction, alteration or removal of buildings or structures erected or to be erected in The City of New York, as constituted by the "Greater New York Charter," except so far as such provisions are contained in said charter.

Sec. 2.—*Building Code to Be Construed Liberally.* This ordinance is hereby declared to be remedial, and is to be construed liberally, to secure the beneficial interests and purposes thereof.

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## PART II.

### PRELIMINARY REQUIREMENTS.

Section 3.—*New Buildings and Buildings to Be Altered.* No wall, structure, building, or part thereof, shall hereafter be built or constructed, nor shall the plumbing or drainage of any building, structure or premises, be constructed or altered, in the City of New York, except in conformity with the provisions of this Code. No building already erected, or hereafter to be built, in said

city, shall be raised, altered, moved or built upon in any manner, that would be in violation of any of the provisions of this Code, or the approval issued thereunder.

Sec. 4.—*Filing Plans and Statements.* Before the erection, construction or alteration of any building or part of any building, structure, or part of any structure, or wall, or any platform, staging or flooring to be used for standing or seating purposes, and before the construction or alteration of the plumbing or drainage of any building, structure or premises is commenced, the owner or lessee, or agent of either, or the architect or builder employed by such owner or lessee in connection with the proposed erection or alteration, shall submit to the Commissioner of Buildings for the borough in which the premises are situated a detailed statement in triplicate of the specifications, on appropriate blanks to be furnished to applicants by the Department of Buildings and a full and complete copy of the plans of such proposed work, and such structural detail drawings of said proposed work as the Commissioner of Buildings having jurisdiction may require, all of which shall be accompanied with a statement in writing, sworn to before a notary public or commissioner of deeds, giving the full name and residence, street and number, of the owner, or of each of the owners of said building, or proposed building, structure or proposed structure, premises, wall, platform, staging or flooring. If such erection, construction or alteration, plumbing or drainage, or the alteration thereof, is proposed to be made or executed by any other person than the owner or owners of the land in fee, the person or persons intending to make such erection or alteration, or to construct such plumbing or drainage, shall accompany said detailed statement of the specifications and copy of the plans, with a statement in

writing, sworn to as aforesaid, giving the full name and residence, street and number, of the owner or owners of the land, or proposed building, structure, or proposed structure, premises, wall, platform, staging or flooring either as owner, lessee, or in any representative capacity, and that he or they are duly authorized to perform said work. Such statement may be made by the agent, or architect of the person or persons hereinbefore required to make the same. Any false swearing in a material point in any statement submitted in pursuance of the provisions of this section shall be deemed perjury, and shall be punishable as such. Said sworn statement, and detailed statement of specifications, and copy of the plans shall be kept on file in the office of the Commissioner of Buildings for the borough where the premises to which they relate are situated, and the erection, construction, or alteration of said building, structure, wall, platform, staging or flooring, or any part thereof, and the construction or alteration of the said plumbing or drainage, shall not be commenced or proceeded with, until said statements and plans shall have been so filed, and approved by the said Commissioner of Buildings, and the erection, construction or alteration of such building, structure, platform, staging or flooring, and the construction or alteration of such plumbing or drainage when proceeded with shall be constructed in accordance with such approved detailed statement of specifications and copy of plans. Nothing in this section shall be construed to prevent a commissioner of buildings from granting his approval for the erection of any part of a building, or any part of a structure, where plans and detailed statements have been presented for the same before the entire plans and detailed statements of said building or structure have been submitted. Any approval

which may be issued by a commissioner of buildings pursuant to the provisions of this section, but under which no work is commenced within one year from the time of issuance, shall expire by limitation. Ordinary repairs of buildings or structures, or of the plumbing or drainage thereof, may be made without notice to the Department of Buildings, but such repairs shall not be construed to include the cutting away of any stone or brick wall, or any portion thereof, the removal or cutting of any beams or supports, or the removal, change or closing of any staircase, or the alteration of any house sewer or private sewer or drainage system, or the construction of any soil or waste pipe. The foregoing provisions and all the provisions of this Code shall apply with equal force to buildings, both municipal and private. It shall be the duty of the commissioner of buildings having jurisdiction to approve or reject any plan filed with him pursuant to the provisions of this section within a reasonable time.

Sec. 5.—*Demolishing Buildings.* When plans and detailed statements are filed in the Department of Buildings for the erection of a new building, if an existing building or part of an existing building is to be demolished, such fact shall be stated in the statement so filed.

In demolishing any building, story after story shall be completely removed. No material shall be placed upon the floor of any such building in the course of demolition, but the brick, timbers and other structural parts of each story shall be lowered to the ground immediately upon displacement. The owner, architect, builder or contractor for any building, structure, premises, wall, platform, staging or flooring to be demolished shall give not less than twenty-four hours' notice to the Department of Buildings of such intended demolition.

## PART III.

### Definitions.

Sec. 6.—*Measurement of Height for Buildings and Walls.* The height of buildings 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 beams in the case of flat roofs, and for high-pitched roofs the average of the height of the gable shall be taken as the highest point of the building.

In case a wall is carried on iron or steel girders or iron or steel girders and columns, or piers of masonry, the measurements, as to height for the wall, may be taken from the top of such girder.

When the walls of a structure do not adjoin the street, then the average level for the ground adjoining the walls may be taken instead of the street curb level for the height of such structure.

Sec. 7.—*Measurement for Width of Buildings.* For the purposes of this Code, the greatest linear dimension of any building shall be considered its length and the next greatest linear dimension its width.

Sec. 8.—*Private Dwellings, Definition Of.* A private dwelling shall be taken to mean and include every building, which shall be intended or designed for, or used as, the home or residence of not more than two separate and distinct families or households, and in which not more than fifteen rooms shall be used for the accommodation of boarders, and no part of which structure is used as a store or for any business purpose. Two or more such dwellings may be connected on each story when used for boarding purposes, provided the halls and stairs of each house shall be left unaltered. Any

such building hereafter erected shall not cover more than ninety per cent. of the lot area.

Sec. 9.—*Apartment-Houses, Definition Of.* An apartment-house shall be taken to mean and include every building, which shall be intended or designed for, or used as, the home or residence of three or more families or households, living independently of each other, and in which every such family or household, shall have provided for it a kitchen, set bath tub and water closet, separate and apart from any other. Any such building hereafter erected shall not cover any greater percentage of a lot than is lawful to be covered by a tenement-house, and the requirements for light and ventilation for a tenement-house shall also apply to an apartment-house.

Sec. 10.—*Hotel, Definition Of.* A hotel shall be taken to mean and include every building, or part thereof, intended, designed or used for supplying food and shelter to residents or guests, and having a general public dining-room or a café, or both, and containing also more than fifteen sleeping rooms above the first story. Whenever any such building hereafter erected shall be located on any other than a corner lot or plot, it shall not cover in the aggregate more than 90 per cent. of the area of such lot or plot at and above the second story floor level, if not more than five stories in height, and two and one-half per cent. less for every additional story in height; and on a corner lot, when covering an area of not more than 3,000 square feet, it shall not occupy more than 95 per cent. of the area of such lot at and above the second story level. In case any such building is to occupy a number of lots, the Commissioner of Buildings having jurisdiction may allow the free air space, proportioned as herein stated, to be distributed in such manner

as, in his opinion, will equally as well secure light and ventilation.

Sec. 11.—*Office Buildings, Definition Of.* An office building shall be taken to mean and include every building which shall be divided into rooms above the first story, and be intended and used for business purposes, and no part of which shall be used for living purposes, excepting only for the janitor and his family.

Office buildings when not erected on a corner shall not cover more than 90 per cent. of the lot area, at and above the second story floor level.

Sec. 12.—*Frame Buildings, Definition Of.* A frame building shall be taken to mean a building or structure of which the exterior walls or a portion thereof shall be constructed of wood. Buildings sheathed with boards, and partially or entirely covered with four inches of brickwork, shall be deemed to be frame buildings. Wood frames covered with metal shall be deemed to be wood structures.

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## PART IV.

### Quality of Materials.

Sec. 13.—*Brick.* The brick used in all buildings shall be good, hard, well burnt brick.

When old brick are used in any wall they shall be thoroughly cleaned before being used, and shall be whole and good, hard, well burnt brick.

Sec. 14.—*Sand.* The sand used for mortar in all buildings shall be clean, sharp grit sand, free from loam or dirt, and shall not be finer than the standard samples kept in the office of the Department of Buildings.

Sec. 15.—*Lime Mortar.* Lime mortar shall be made of one part of lime and not more than four parts of sand. All lime used for mortar shall be thoroughly burnt, of good quality, and properly slaked before it is mixed with the sand.

Sec. 16.—*Cement Mortar.* Cement mortar shall be made of cement and sand in the proportion of one part of cement and not more than three parts of sand, and shall be used immediately after being mixed. The cement and sand are to be measured and thoroughly mixed before adding water.

Cements must be very finely ground and free from lumps.

Cements classed as Portland cement shall be considered to mean such cement as will, when tested neat, after one day set in air be capable of sustaining without rupture a tensile strain of at least 120 pounds per square inch, and after one day in air and six days in water be capable of sustaining without rupture a tensile strain of at least 300 pounds per square inch. Cements other than Portland cement shall be considered to mean such cement as will, when tested neat, after one day set in air be capable of sustaining without rupture a tensile strain of at least 60 pounds per square inch, and after one day in air and 6 days in water be capable of sustaining without rupture a tensile strain of at least 120 pounds per square inch. Said tests are to be made under the supervision of the Commissioner of Buildings having jurisdiction, at such times as he may determine and a record of all cements answering the above requirements shall be kept for public information.

Sec. 17.—*Cement and Lime Mortar.* Cement and lime mortar mixed shall be made of one part of lime, one

part of cement and not more than three parts of sand to each.

Sec. 18.—*Concrete.* Concrete for foundations shall be made of at least one part of cement, two parts of sand and five parts of clean broken stone, of such size so as to pass in any way through a 2-inch ring, or good clean gravel may be used in the same proportion as broken stone. The cement, sand and stone or gravel shall be measured and mixed as is prescribed for mortar. All concrete when in place shall be properly rammed and allowed to set without being disturbed.

Sec. 19.—*Quality of Timber.* All timbers and wood beams used in any building shall be of good sound material free from rot, large and loose knots, shakes or any imperfection whereby the strength may be impaired, and be of such size and dimensions as the purposes for which the building is intended require.

Sec. 20.—*Tests of New Materials.* New structural material of whatever nature shall be subjected to such tests to determine its character and quality, as the Commissioner of Buildings for the borough in which the material is to be used shall direct; the tests shall be made under the supervision of said Commissioner, or he may direct the architect or owner to file with him a certified copy of the results of tests, such as he may direct shall be made.

Sec. 21.—*Structural Material. Wrought Iron.* All wrought iron shall be uniform in character, fibrous, tough and ductile. It shall have an ultimate tensile resistance of not less than 48,000 lbs. per square inch, an elastic limit of not less than 24,000 lbs. per square inch, and an elongation of 20 per cent. in eight inches, when tested in small specimens.

Steel. All structural steel shall have an ultimate tensile strength of from 54,000 pounds to 64,000 pounds per square inch. Its elastic limit shall be not less than 32.-000 pounds per square inch and a minimum elongation of not less than 20 per cent. in eight inches. Rivet steel shall have an ultimate strength of from 50,000 to 58,000 pounds per square inch.

Cast Steel. Shall be made of open hearth steel, containing one-quarter to one-half per cent. of carbon, not over eight one-hundredths of one per cent. of phosphorus, and shall be practically free from blow-holes.

Cast Iron. Shall be of good foundry mixture, producing a clean, tough, gray iron. Sample bars, five feet long, one inch square, cast in sand moulds, placed on supports four feet six inches apart, shall bear a central load of 450 pounds before breaking. Castings shall be free of serious blow-holes, cinder spots and cold shuts. Ultimate tensile strength shall be not less than 16,000 pounds per square inch when tested in small specimens.

## PART V.

### Excavations and Foundations.

Sec. 22.—*Excavations.* All excavations for buildings shall be properly guarded and protected so as to prevent the same from becoming dangerous to life or limb and shall be sheath-piled where necessary to prevent the adjoining earth from caving in, by the person or persons causing the excavations to be made. Plans filed in the Department of Buildings shall be accompanied by a statement of the character of the soil at the level of the footings.

Whenever an excavation of either earth or rock for building or other purposes shall be intended to be, or

shall be carried to the depth of more than ten feet below the curb, the person or persons causing such excavation to be made shall at all times, from the commencement until the completion thereof, if afforded the necessary license to enter upon the adjoining land and not otherwise, at his or their own expense preserve any adjoining or contiguous wall or walls, structure or structures from injury, and support the same by proper foundations, so that the said wall or walls, structure or structures, shall be and remain practically as safe as before such excavation was commenced, whether the said adjoining or contiguous wall or walls, structure or structures, are down more or less than ten feet below the curb. If the necessary license is not accorded to the person or persons making such excavation, then it shall be the duty of the owner refusing to grant such license to make the adjoining or contiguous wall or walls, structure or structures, safe, and support the same by proper foundations so that adjoining excavations may be made, and shall be permitted to enter upon the premises where such excavation is being made for that purpose, when necessary. If such excavation shall not be intended to be, or shall not be, carried to a depth of more than ten feet below the curb, the owner or owners of such adjoining or contiguous wall or walls, structure or structures, shall preserve the same from injury, and so support the same by proper foundations that it or they shall be and remain practically as safe as before such excavation was commenced, and shall be permitted to enter upon the premises where such excavation is being made for that purpose, when necessary.

In case an adjoining party wall is intended to be used by the person or persons causing the excavation to be made, and such party wall is in good condition and suf

ficient for the uses of the adjoining building, then and in such case the person or persons causing the excavations to be made shall, at his or their own expense, preserve such party wall from injury and support the same by proper foundations, so that said party wall shall be and remain practically as safe as before the excavation was commenced.

If the person or persons whose duty it shall be to preserve or protect any wall or walls, structure or structures from injury shall neglect or fail so to do after having had a notice of twenty-four hours from the Department of Buildings, then the Commissioner of Buildings may enter upon the premises and employ such labor, and furnish such materials, and take such steps as, in his judgment, may be necessary to make the same safe and secure, or to prevent the same from becoming unsafe or dangerous, at the expense of the person or persons whose duty it is to keep the same safe and secure. Any party doing the said work, or any part thereof, under and by direction of the said Department of Buildings, may bring and maintain an action against the person or persons last herein referred to, to recover the value of the work done and materials furnished, in and about the said premises, in the same manner as if he had been employed to do the said work by the said person or persons. When an excavation is made on any lot, the person or persons causing such excavation to be made shall build, at his or their own cost and expense, a retaining-wall to support the adjoining earth; and such retaining-wall shall be carried to the height of the adjoining earth, and be properly protected by coping. The thickness of a retaining-wall at its base shall be in no case less than one-fourth of its height.

Sec. 23.—*Bearing Capacity of Soil.* Where no test of the sustaining power of the soil is made different soils, excluding mud, at the bottom of the footings, shall be deemed to safely sustain the following loads to the superficial foot, namely: Soft clay, one ton per square foot; ordinary clay and sand together, in layers, wet and springy, two tons per square foot; loam, clay or fine sand, firm and dry, three tons per square foot; very firm, coarse sand, stiff gravel or hard clay, four tons per square foot, or as otherwise determined by the Commissioner of Buildings having jurisdiction. Where a test is made of the sustaining power of the soil the Commissioner of Buildings shall be notified so that he may be present in person or by representative. The record of the test shall be filed in the Department of Buildings. When a doubt arises as to the safe sustaining power of the earth upon which a building is to be erected the Department of Buildings may order borings to be made, or direct the sustaining power of the soil to be tested by and at the expense of the owner of the proposed building.

Sec. 24.—*Pressure Under Footings of Foundations.* The loads exerting pressure under the footings of foundations in buildings more than three (3) stories in height are to be computed as follows: For warehouses and factories they are to be the full dead load and the full live load established by section 130 of this Code. In stores and buildings for light manufacturing purposes they are to be the full dead load and seventy-five per cent. of the live load established by section 130 of this Code.

In churches, school-houses and places of public amusement or assembly, they are to be the full dead load

and seventy-five per cent. of the live load established by section 130 of this Code.

In office buildings, hotels, dwellings, apartment-houses, tenement-houses, lodging-houses and stables they are to be the full dead load and sixty per cent. of the live load established by section 130 of this Code.

Footings shall be so designed that the loads will be as nearly uniform as possible and not in excess of the safe bearing capacity of the soil, as established by section 23 of this Code.

Sec. 25.—*Foundations.* Every building except buildings erected upon solid rock or buildings erected upon wharves and piers on the water front, shall have foundations of brick, stone, iron, steel or concrete laid not less than four feet below the surface of the earth, on the solid ground or level surface of rock, or upon piles or ranging timbers when solid earth or rock is not found. Piles intended to sustain a wall, pier or post shall be spaced not more than thirty-six or less than twenty inches on centres, and they shall be driven to a solid bearing if practicable to do so, and the number of such piles shall be sufficient to support the superstructure proposed. No pile shall be used of less dimensions than five inches at the small end and ten inches at the butt for short piles, or piles twenty feet or less in length, and twelve inches at the butt for long piles, or piles more than twenty feet in length. No pile shall be weighted with a load exceeding forty thousand pounds. When a pile is not driven to refusal, its safe sustaining power shall be determined by the following formula: Twice the weight of the hammer in tons multiplied by the height of the fall in feet divided by least penetration of pile under the last blow in inches plus one. The Com-

missioner of Buildings shall be notified of the time when such test piles will be driven, that he may be present in person or by representative. The tops of all piles shall be cut off below the lowest water line. When required, concrete shall be rammed down in the interspaces between the heads of the piles to a depth and thickness of not less than twelve inches and for one foot in width outside of the piles. Where ranging and capping timbers are laid on piles for foundations, they shall be of hard wood not less than six inches thick and properly joined together, and their tops laid below the lowest water line. Where metal is incorporated in or forms part of a foundation it shall be thoroughly protected from rust by paint, asphaltum, concrete, or by such materials and in such manner as may be approved by the Commissioner of Buildings. When footings of iron or steel for columns are placed below the water level, they shall be similarly coated, or inclosed in concrete, for preservation against rust. When foundations are carried down through earth by piers of stone, brick or concrete in caissons, the loads on same shall be not more than fifteen tons to the square foot when carried down to rock; ten tons to the square foot when carried down to firm gravel or hard clay; eight tons to the square foot in open caissons or sheet pile trenches when carried down to rock. Wood piles may be used for the foundations under frame buildings built over the water or on salt meadow land, in which case the piles may project above the water a sufficient height to raise the building above high tide, and the building may be placed directly thereon without other foundation.

Sec. 26.—*Foundation Walls.* Foundation walls shall be construed to include all walls and piers built below the curb level, or nearest tier of beams to the curb, to

serve as supports for walls, piers, columns, girders, posts or beams. Foundation walls shall be built of stone, brick, Portland cement concrete, iron or steel. If built of rubble stone, or Portland cement concrete, they shall be at least eight inches thicker than the wall next above them to a depth of twelve feet below the curb level; and for every additional ten feet, or part thereof, deeper, they shall be increased four inches in thickness. If built of brick, they shall be at least four inches thicker than the wall next above them to a depth of twelve feet below the curb level; and for every additional ten feet, or part thereof, deeper, they shall be increased four inches in thickness.

The footing or base course shall be of stone or concrete, or both, or of concrete and stepped-up brickwork, of sufficient thickness and area to safely bear the weight to be imposed thereon. If the footing or base course be of concrete, the concrete shall not be less than twelve inches thick. If of stone, the stones shall not be less than two by three feet, and at least eight inches in thickness for walls; and not less than ten inches in thickness if under piers, columns or posts; the footing or base course, whether formed of concrete or stone, shall be at least twelve inches wider than the bottom width of walls, and at least twelve inches wider on all sides than the bottom width of said piers, columns or posts. If the superimposed load is such as to cause undue transverse strain on a footing projecting twelve inches, the thickness of such footing is to be increased so as to carry the load with safety. For small structures and for small piers sustaining light loads, the Commissioner of Buildings having jurisdiction may, in his discretion, allow a reduction in the thickness and projection for footing or

base courses herein specified. All base stones shall be well bedded and laid crosswise, edge to edge.

If stepped-up footing of brick are used in place of stone, above the concrete, the offsets, if laid in single courses, shall each not exceed one and one-half inches, or if laid in double courses, then each shall not exceed three inches, offsetting the first course of brickwork. back one-half the thickness of the concrete base, so as to properly distribute the load to be imposed thereon.

If, in place of a continuous foundation wall, isolated piers are to be built to support the superstructure, where the nature of the ground and the character of the building make it necessary, in the opinion of the Commissioner of Buildings having jurisdiction, inverted arches resting on a proper bed of concrete, both designed to transmit with safety the superimposed loads, shall be turned between the piers. The thrust of the outer piers shall be taken up by suitable wrought iron or steel rods and plates.

Grillage beams of wrought iron or steel resting on a proper concrete bed may be used. Such beams must be provided with separators and bolts inclosed and filled solid between with concrete, and of such sizes and so arranged as to transmit with safety the superimposed loads.

All stone walls twenty-four inches or less in thickness shall have at least one header extending through the wall in every three feet in height from the bottom of the wall, and in every three feet in length, and if over twenty-four inches in thickness, shall have one header for every six superficial feet on both sides of the wall, laid on top of each other to bond together, and running into the wall at least two feet.

All headers shall be at least twelve inches in width

and eight inches in thickness, and consist of good flat stones.

No stone shall be laid in such walls in any other position than on its natural bed.

No stone shall be used that does not bond or extend into the wall at least six inches. Stones shall be firmly bedded in cement mortar and all spaces and joints thoroughly filled.

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## PART VI.

### Walls, Piers and Partitions.

Sec. 27.—*Materials of Walls.* The walls of all buildings, other than frame or wood buildings, shall be constructed of stone, brick, Portland cement concrete, iron, steel or other hard, incombustible material, and the several component parts of such buildings shall be as herein provided. All buildings shall be inclosed on all sides with independent or party walls.

Sec. 28.—*Walls and Piers.* In all walls of the thickness specified in this code, the same amount of materials may be used in piers or buttresses. Bearing walls shall be taken to mean those walls on which the beams, girders or trusses rest. If any horizontal section through any part of any bearing wall in any building shows more than thirty per centum area of flues and openings, the said wall shall be increased four inches in thickness for every fifteen per centum, or fraction thereof, of flue or opening area in excess of thirty per centum.

The walls and piers of all buildings shall be properly and solidly bonded together with close joints filled with mortar. They shall be built to a line and be carried up

plumb and straight. The walls of each story shall be built up the full thickness to the top of the beams above. All brick laid in non-freezing weather shall be well wet before being laid. Walls or piers, or parts of walls and piers, shall not be built in freezing weather, and if frozen, shall not be built upon.

All piers shall be built of stone or good, hard, well-burnt brick laid in cement mortar. Every pier built of brick, containing less than nine superficial feet at the base, supporting any beam, girder, arch or column on which a wall rests, or lintel spanning an opening over ten feet and supporting a wall, shall at intervals of not over thirty inches apart in height have built into it a bond stone not less than four inches thick, or a cast-iron plate of sufficient strength, and the full size of the piers. For piers fronting on a street the bond stones may conform with the kind of stone used for the trimmings of the front. Cap stones of cut granite or blue stone, proportioned to the weight to be carried, but not less than five inches in thickness, by the full size of the pier, or cast-iron plates of equal strength by the full size of the pier, shall be set under all columns or girders, except where a four-inch bond stone is placed immediately below said cap stone, in which case the cap stone may be reduced in horizontal dimensions at the discretion of the Commissioner of Buildings having jurisdiction. Isolated brick piers shall not exceed in height ten times their least dimensions. Stone posts for the support of posts or columns above shall not be used in the interior of any building. Where walls or piers are built of coursed stones, with dressed level beds and vertical joints, the Department of Buildings shall have the right to allow such walls or piers to be built of a less thickness than specified for brickwork, but in no

case shall said walls or piers be less than three-quarters of the thickness provided for brickwork.

In all brick walls every sixth course shall be a heading course, except where walls are faced with brick in running bond, in which latter case, every sixth course shall be bonded into the backing by cutting the course of the face brick and putting in diagonal headers behind the same, or by splitting the face brick in half and backing the same with a continuous row of headers. Where face brick is used of a different thickness from the brick used for backing, the courses of the exterior and interior brickwork shall be brought to a level bed at intervals of not more than ten courses in height of the face brick, and the face brick shall be properly tied to the backing by a heading course of the face brick. All bearing walls faced with brick laid in running bond shall be four inches thicker than the walls are required to be under any section of this Code.

Sec. 29.—*Ashlar.* Stone used for the facing of any building, and known as ashlar, shall be not less than four inches thick.

Stone ashlar shall be anchored to the backing and the backing shall be of such thickness as to make the walls, independent of the ashlar, conform as to the thickness with the requirements of sections 31 and 32 of this Code, unless the ashlar be at least eight inches thick and bonded into the backing, and then it may be counted as part of the thickness of the wall.

Iron ashlar plates used in imitation of stone ashlar on the face of a wall shall be backed up with the same thickness of brickwork as stone ashlar.

Sec. 30.—*Mortar for Walls and Ashlar.* All foundation walls, isolated piers, parapet walls and chimneys above roofs shall be laid in cement mortar, but this shall

not prohibit the use in cold weather of a small proportion of lime to prevent the mortar from freezing. All other walls built of brick or stone shall be laid in lime, cement, or lime and cement mortar mixed.

The backing up of all stone ashlar shall be laid up with cement mortar, or cement and lime mortar mixed, but the back of the ashlar may be parged with lime mortar to prevent discoloration of the stone.

Sec. 31.—*Walls for Dwelling-Houses.* The expression "walls for dwelling-houses" shall be taken to mean and include in this class walls for the following buildings:

Dwellings, asylums, apartment-houses, convents, club-houses, dormitories, hospitals, hotels, lodging-houses, tenements, parish buildings, schools, laboratories, studios.

The walls above the basement of dwelling-houses not over three stories and basement in height, nor more than forty feet in height, and not over twenty feet in width, and not over fifty-five feet in depth, shall have side and party walls not less than eight inches thick, and front and rear walls not less than twelve inches thick. All walls of dwellings exceeding twenty-feet in width and not exceeding forty feet in height, shall be not less than twelve inches thick. All walls of dwellings twenty-six feet or less in width between bearing walls which are hereafter erected or which may be altered to be used for dwellings and being over forty feet in height and not over fiftv feet in height, shall be not less than twelve inches thick above the foundation wall. No wall shall be built having a twelve-inch thick portion measuring vertically more than fifty feet. If over fifty feet in height and not over sixty feet in height the wall shall be not less than sixteen inches thick in the story next above the

foundation-walls and from thence not less than twelve inches to the top. If over sixty feet in height, and not over seventy-five feet in height, the walls shall be not less than sixteen inches thick above the foundation-walls to the height of twenty-five feet, or to the nearest tier of beams to that height, and from thence not less than twelve inches thick to the top. If over seventy-five feet in height, and not over one hundred feet in height, the walls shall be not less than twenty inches thick above the foundation-walls to the height of forty feet, or to the nearest tier of beams to that height, thence not less than sixteen inches thick to the height of seventy-five feet, or to the nearest tier of beams to that height, and thence not less than twelve inches thick to the top. If over one hundred feet in height and not over one hundred and twenty-five feet in height, the walls shall be not less than twenty-four inches thick above the foundation-walls to the height of forty feet or to the nearest tier of beams to that height, thence not less than twenty inches thick to the height of seventy-five feet, or to the nearest tier of beams to that height, thence not less than sixteen inches thick to the height of one hundred and ten feet, or to the nearest tier of beams to that height, and thence not less than twelve inches thick to the top. If over one hundred and twenty-five feet in height and not over one hundred and fifty feet in height, the walls shall be not less than twenty-eight inches thick above the foundation-walls to the height of thirty feet, or to the nearest tier of beams to that height; thence not less than twenty-four inches thick to the height of sixty-five feet, or to the nearest tier of beams to that height; thence not less than twenty inches thick to the height of one hundred feet, or to the nearest tier of beams to that height, thence not less

than sixteen inches thick to the height of one hundred and thirty-five feet, or to the nearest tier of beams to that height, and thence not less than twelve inches thick to the top. If over one hundred and fifty feet in height, each additional thirty feet in height or part thereof, next above the foundation walls, shall be increased four inches in thickness, the upper one hundred and fifty feet of wall remaining the same as specified for a wall of that height.

All non-fireproof dwelling-houses erected under this section, exceeding twenty-six feet in width, shall have brick fore-and-aft partition walls. All non-bearing walls of buildings hereinbefore in this section specified may be four inches less in thickness, provided, however, that none are less than twelve inches thick, except as in this Code specified. Eight-inch brick partition walls may be built to support the beams in such buildings in which the distance between the main or bearing walls is not over thirty-three feet; if the distance between the main or bearing walls is over thirty-three feet the brick partition wall shall be not less than twelve inches thick; provided, that no clear span is over twenty-six feet. No wall shall be built having any one thickness measuring vertically more than fifty feet. This section shall not be construed to prevent the use of iron or steel girders, or iron or steel girders and columns, or piers of masonry, for the support of the walls and ceilings over any room which has a clear span of more than twenty-six feet between walls, in such dwellings as are not constructed fireproof, nor to prohibit the use of iron or steel girders, or iron or steel girders and columns in place of brick walls in buildings which are to be used for dwellings when constructed fireproof. If the clear span is to be over

twenty-six feet, then the bearing walls shall be increased four inches in thickness for every twelve and one-half feet or part thereof, that said span is over twenty-six feet, or shall have instead of the increased thickness, such piers or buttresses as, in the judgment of the Commissioner of Buildings having jurisdiction, may be necessary.

Whenever two or more dwelling-houses shall be constructed not over twelve feet six inches in width, and not over fifty feet in height, the alternating centre wall between any two such houses, shall be of brick not less than eight inches thick above the foundation wall; and the ends of the floor beams shall be so separated that four inches of brickwork will be between the beams where they rest on the said centre wall.

Sec. 32.—*Walls for Warehouses.* The expression "walls for warehouses" shall be taken to mean and include in this class walls for the following buildings:

Warehouses, stores, factories, mills, printing-houses, pumping stations, refrigerating-houses, slaughter-houses, wheelwright shops, cooperage shops, breweries, light and power houses, sugar refineries, office buildings, stables, markets, railroad buildings, jails, police stations, court-houses, observatories, foundries, machine shops, public assembly buildings, armories, churches, theatres, libraries, museums. The walls of all warehouses, twenty-five feet or less in width between walls or bearings, shall be not less than twelve inches thick to the height of forty feet above the foundation walls. If over forty feet in height, and not over sixty feet in height, the walls shall be not less than sixteen inches thick above the foundation walls to the height of forty feet, or to the nearest tier of beams to that

height, and thence not less than twelve inches thick to the top. If over sixty feet in height, and not over seventy-five feet in height, the walls shall be not less than twenty inches thick above the foundation walls to the height of twenty-five feet, or to the nearest tier of beams to that height, and thence not less than sixteen inches thick to the top. If over seventy-five feet in height, and not over one hundred feet in height, the walls shall be not less than twenty-four inches thick above the foundation walls to the height of forty feet, or to the nearest tier of beams to that height; thence not less than twenty inches thick to the height of seventy-five feet, or to the nearest tier of beams to that height, and thence not less than sixteen inches thick to the top. If over one hundred feet in height, and not over one hundred and twenty-five feet in height, the walls shall be not less than twenty-eight inches thick above the foundation walls to the height of forty feet, or to the nearest tier of beams to that height; thence not less than twenty-four inches thick to the height of seventy-five feet, or to the nearest tier of beams to that height; thence not less than twenty inches thick to the height of one hundred and ten feet, or to the nearest tier of beams to that height, and thence not less than sixteen inches thick to the top. If over one hundred and twenty-five feet in height, and not over one hundred and fifty feet the walls shall be not less than thirty-two inches thick above the foundation walls to the height of thirty feet, or to the nearest tier of beams to that height; thence not less than twenty-eight inches thick to the height of sixty-five feet, or to the nearest tier of beams to that height; thence not less than twenty-four inches thick to the height of one hundred feet, or to the nearest tier of beams to that height; thence not

less than twenty inches thick to the height of one hundred and thirty-five feet, or to the nearest tier of beams to that height; and thence not less than sixteen inches thick to the top. If over one hundred and fifty feet in height, each additional twenty-five feet in height, or part thereof next above the foundation walls shall be increased four inches in thickness, the upper one hundred and fifty feet of wall remaining the same as specified for a wall of that height.

If there is to be a clear span of over twenty-five feet between the bearing walls, such walls shall be four inches more in thickness than in this section specified, for every twelve and one-half feet, or fraction thereof, that said walls are more than twenty-five feet apart, or shall have instead of the increased thickness such piers or buttresses as, in the judgment of the Commissioner of Buildings, may be necessary.

The walls of buildings of a public character shall be not less than in this Code specified for warehouses with such piers or such buttresses, or supplemental columns of iron or steel, as, in the judgment of the Commissioner of Buildings having jurisdiction, may be necessary to make a safe and substantial building.

In all stores, warehouses and factories over twenty-five feet in width between walls there shall be brick partition walls, or girders supported on iron, steel, or wood columns, or piers of masonry.

In all stores, warehouses or factories, in case iron, steel or wood girders, supported by iron, steel or wood columns, or piers of masonry, are used in place of brick partition walls, the building may be seventy-five feet wide and two hundred and ten feet deep, when extending from street to street, or when otherwise located may cover an area of not more than eight thou-

sand superficial feet. When a building fronts on three streets it may be a hundred and five feet wide and two hundred and ten feet deep, or if a corner building fronting on two streets it may cover an area of not more than twelve thousand five hundred superficial feet; but in no case wider nor deeper, nor to cover a greater area, except in the case of fireproof buildings. An area greater than herein stated may, considering location and purpose, be allowed by the Board of Buildings when the proposed building does not exceed three stories in height.

Sec. 33.—*Increased Thicknesses of Walls for Buildings more than one hundred and five feet in Depth.* All buildings, not excepting dwellings, that are over one hundred and five feet in depth, without a cross-wall or proper piers or buttresses, shall have the side or bearing walls increased in thickness four inches more than is specified in the respective sections of this Code for the thickness of walls for every one hundred and five feet, or part thereof, that the said buildings are over one hundred and five feet in depth.

Sec. 34.—*Reduced Thickness for Interior Walls.* In case the walls of any building are less than twenty-five feet apart, and less than forty feet in depth, or there are cross walls which intersect the walls, not more than forty feet distant, or piers or buttresses built into the walls, the interior walls may be reduced in thickness in just proportion to the number of cross walls, piers or buttresses, and their nearness to each other; provided, however, that this clause shall not apply to walls below sixty feet in height, and that no such wall shall be less than twelve inches thick at the top, and gradually increased in thickness by set-offs to the bottom.

The Commissioner of Buildings having jurisdiction is, hereby authorized and empowered to decide (except where herein otherwise provided for) how much the walls herein mentioned may be permitted to be reduced in thickness, according to the peculiar circumstances of each case, without endangering the strength and safety of the building.

Sec. 35.—*One-story Brick Buildings.* One-story structures not exceeding a height of fifteen feet may be built with eight-inch walls when the bearing walls are not more than nineteen feet apart, and the length of the eight-inch bearing walls does not exceed fifty-five feet. One-story and basement extensions may be built with eight-inch walls when not over twenty feet wide, twenty feet deep and twenty feet high to dwellings.

Sec. 36.—*Inclosure Walls for Skeleton Structures.* Walls of brick built in between iron or steel columns, and supported wholly or in part on iron or steel girders, shall be not less than twelve inches thick for seventy-five feet of the uppermost height thereof, or to the nearest tier of beams to that measurement, in any building so constructed, and every lower section of sixty feet, or to the nearest tier of beams to such vertical measurement, or part thereof, shall have a thickness of four inches more than is required for the section next above it down to the tier of beams nearest to the curb level; and thence downward, the thickness of walls shall increase in the ratio prescribed in section 26, this Code.

Sec. 37.—*Curtain Walls.* Curtain walls built in between piers or iron or steel columns and not supported on steel or iron girders, shall be not less than twelve inches thick for sixty feet of the uppermost height thereof,

or nearest tier of beams to that height, and increased four inches for every additional section of sixty feet or nearest tier of beams to that height.

Sec. 38.—*Existing Party Walls.* Walls heretofore built for or used as party walls, whose thickness at the time of their erection was in accordance with the requirements of the then existing laws, but which are not in accordance with the requirements of this Code, may be used, if in good condition, for the ordinary uses of party walls, provided the height of the same be not increased.

Sec. 39.—*Lining Existing Walls.* In case it is desired to increase the height of existing party or independent walls, which are less in thickness than required under this Code, the same shall be done by a lining of brickwork to form a combined thickness with the old wall of not less than four inches more than the thickness required for a new wall corresponding with the total height of the wall when so increased in height. The said linings shall be supported on proper foundations and carried up to such height as the Commissioner of Buildings having jurisdiction may require. No lining shall be less than eight inches in thickness, and all lining shall be laid up in cement mortar and thoroughly anchored to the old brick walls with suitable wrought-iron anchors, placed two feet apart and properly fastened or driven into the old walls in rows alternating vertically and horizontally with each other, the old walls being first cleaned of plaster or other coatings where any lining is to be built against the same. No rubble wall shall be lined except after inspection and approval by the Department.

Sec. 40.—*Walls of Unfinished Buildings.* Any building, the erection of which was commenced in accordance with specifications and plans submitted to and approved by the Department of Buildings prior to the passage of this Code, if properly constructed, and in safe condition, may be completed, or built upon in accordance with the requirements of law, as to thickness of walls, in force at the time when such specification and plans were approved.

Sec. 41.—*Walls Tied, Anchored and Braced.* In no case shall any wall or walls of any building be carried up more than two stories in advance of any other wall, except by permission of the Commissioner of Buildings having jurisdiction, but this prohibition shall not include the inclosure walls for skeleton buildings. The front, rear, side and party walls shall be properly bonded together, or anchored to each other every six feet in their height by wrought-iron tie anchors, not less than one and a half inches by three-eighths of an inch in size, and not less than twenty-four inches in length. The side anchors shall be built into the side or party walls not less than sixteen inches, and into the front and rear walls, so as to secure the front and rear walls to the side, or party walls, when not built and bonded together. All exterior piers shall be anchored to the beams or girders on the level of each tier. The walls and beams of every building, during the erection or alteration thereof, shall be strongly braced from the beams of each story, and when required, shall also be braced from the outside, until the building is inclosed. The roof tier of wood beams shall be safely anchored, with plank or joist, to the beams of the story below until the building is inclosed.

Sec. 42.—*Arches and Lintels.* Openings for doors and windows in all buildings, shall have good and sufficient arches of stone, brick, or terra-cotta, well built and keyed with good and sufficient abutments, or lintels of stone iron or steel of sufficient strength, which shall have a bearing at each end of not less than five inches on the wall. On the inside of all openings in which lintels shall be less than the thickness of the wall to be supported, there shall be timber lintels, which shall rest at each end not more than three inches on any wall, which shall be chamfered at each end, and shall have a suitable arch turned over the timber lintel. Or the inside lintel may be of cast iron, or wrought iron or steel, and in such case stone blocks or cast iron plates shall not be required at the ends where the lintel rests on the walls, provided the opening is not more than six feet in width.

All masonry arches shall be capable of sustaining the weight and pressure which they are designed to carry, and the stress at any point shall not exceed the working stress for the material used, as given in section 139 of this Code. Tie rods shall be used where necessary to secure stability.

Sec. 43.—*Parapet Walls.* All exterior and division or party walls over fifteen feet high, excepting where such walls are to be finished with cornices, gutters or crown mouldings, shall have parapet walls not less than eight inches in thickness and carried two feet above the roof, but for warehouses, factories, stores and other buildings used for commercial or manufacturing purposes the parapet walls shall be not less than twelve inches in thickness and carried three feet above the roof, and all such walls shall be coped with stone, terra-cotta or cast iron.

Sec. 44.—*Hollow Walls.* In all walls that are built hollow the same quantity of stone, brick or concrete shall be used in their construction as if they were built solid, as in this Code provided, and no hollow wall shall be built unless the parts of same are connected by proper ties, either of brick, stone or iron, placed not over twenty-four inches apart.

Sec. 45.—*Hollow Bricks on Inside of Walls.* The inside four inches of all walls may be built of hard-burnt hollow brick, properly tied and bonded into the walls, and of the dimension of ordinary bricks. Where hollow tile or porous terra-cotta blocks are used as lining or furring for walls, they shall not be included in the measurement of the thickness of such walls.

Sec. 46.—*Recesses and Chases in Walls.* Recesses for stairways or elevators may be left in the foundation or cellar walls of all buildings, but in no case shall the walls be of less thickness than the walls of the fourth story, unless reinforced by additional piers with iron or steel girders, or iron or steel columns and girders, securely anchored to walls on each side. Recesses for alcoves and similar purposes shall have not less than eight inches of brickwork at the back of such recesses, and such recesses shall be not more than eight feet in width, and shall be arched over or spanned with iron or steel lintels, and not carried up higher than eighteen inches below the bottom of the beams of the floor next above. No chase for water or other pipes shall be made in any pier, and in no wall more than one-third of its thickness. The chases around said pipe or pipes shall be filled up with solid masonry for the space of one foot at the top and bottom of each story. No horizontal recess or chase in any wall shall

be allowed exceeding four feet in length without permission of the Commissioner of Buildings having jurisdiction. The aggregate area of recesses and chases in any wall shall not exceed one-fourth of the whole area of the face of the wall on any story, nor shall any such recess be made within a distance of six feet from any other recess in the same wall.

Sec. 47.—*Furred Walls.* In all walls furred with wood the brickwork between the ends of wood beams shall project the thickness of the furring beyond the inner face of the wall for the full depth of the beams.

Sec. 48.—*Light and Vent Shafts.* In every building hereafter erected or altered, all the walls or partitions forming interior light or vent shafts, shall be built of brick, or such other fireproof materials as may be approved by the Commissioner of Buildings having jurisdiction. The walls of all light or vent shafts, whether exterior or interior, hereafter erected, shall be carried up not less than three feet above the level of the roof, and the brick walls coped as other parapet walls. Vent shafts to light interior bath-rooms in private dwellings may be built of wood filled in solidly with brick or hard-burnt clay blocks, when extending through not more than one story in height, and carried not less than two feet above the roof, covered with a ventilating skylight of metal and glass.

Sec. 49.—*Brick and Hollow Tile Partitions.* Eight-inch brick and six-inch and four-inch hollow tile partitions, of hard-burnt clay, or porous terra-cotta, may be built, not exceeding in their vertical portions a measurement of fifty, thirty-six and twenty-four feet respectively, and in their horizontal measurement a length not exceeding seventy-five feet, unless strengthened by

proper crosswalls, piers or buttresses, or built in iron or steel framework. All such partitions shall be carried on proper foundations, or on iron or steel girders, or on iron or steel girders and columns or piers of masonry.

Sec. 50.—*Cellar Partitions in Residence Buildings.* One line of fore-and-aft partitions in the cellar or lowest story, supporting stud partitions above, in all residence buildings over twenty feet between bearing walls in the cellar or lowest story, hereafter erected, shall be constructed of brick, not less than eight inches thick, or piers of brick with openings arched over below the under side of the first tier of beams, or girders of iron or steel and iron columns, or piers of masonry may be used; or if iron or steel floor beams spanning the distance between bearing walls are used of adequate strength to support the stud partitions above in addition to the floor load to be sustained by the said iron or steel beams, then the fore-and-aft brick partition, or its equivalent, may be omitted.

Stud partitions which may be placed in the cellar or lowest story of any building, shall have good solid stone or brick foundation walls under the same, which shall be built up to the top of the floor beams or sleepers, and the sills of said partitions shall be of locust or other suitable hard wood; but if the walls are built five inches higher of brick than the top of the floor beams or sleepers, any wooden sill may be used on which the studs shall be set.

Sec. 51.—*Main Stud Partitions.* In residence buildings where fore-and-aft stud partitions rest directly over each other, they shall run down between the wood floor beams and rest on the top plate of the partition below, and shall have the studding filled in solid between the uprights to the depth of the floor beams, with suitable incombustible materials.

Sec. 52.—*Timber in Walls Prohibited.* No timber shall be used in any wall of any building where stone, brick or iron is commonly used, except inside lintels, as herein provided, and brace blocks not more than eight inches in length.

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## PART VII.

### Apartment-Houses, Tenement-Houses and Dwellings of Certain Heights.

Sec. 53.—*Apartment-Houses, Tenement-Houses and Dwellings of Certain Heights.* Every non-fireproof building hereafter erected or altered for an apartment-house or tenement-house, five stores in height, or having a basement and four stories in height above a cellar, to be occupied by one or more families on any floor above the first shall have the first floor above the cellar or lowest story constructed fireproof in such manner as required in section 106 of this Code. When any such non-fireproof building, exceeding five stories in height or having a basement and five stories in height above a cellar, has a store on the first story, the entire second story floor shall also be constructed fireproof. No non-fireproof apartment-house, tenement-house or dwelling-house shall be hereafter erected more than six stories in height, nor exceed a height of seventy-five feet, unless such building has both the first and second story floors constructed fireproof, and then the height shall be not more than seven stories nor exceed eighty-five feet in height. Fireproof apartment-houses or tenement-houses, if constructed entirely in accordance with the requirements of section 105 of this Code, for fireproof construction may be erected to a height not

to exceed one hundred and fifty feet but not more than twelve stories in height upon all streets and avenues exceeding seventy-nine feet in width, and one hundred and twenty-five feet, but not more than ten stories in height upon all streets and avenues not exceeding seventy-nine feet in width, but any such building when exceeding one hundred feet in height shall be not less than forty feet in width. If any such building shall have a frontage exceeding forty feet and exceeds eighty-five feet in height, it shall have at least two separate fireproof stairways accessible from each apartment, leading from the ground floor to the roof, one of which shall be remote from elevator shafts.

The stairs from the cellar or lowest story to the fireproof floor next above, when placed within any such building, shall be located, when practicable, to the rear of the staircase leading from the first story to the upper stories and be inclosed with brick or stone walls, and such stairway shall be provided with self-closing fireproof doors at the top and bottom of said flight of stairs. When such stairway is placed underneath the first story staircase, it shall be constructed fireproof and be roofed over with fireproof material, and be also inclosed with brick walls, with self-closing fireproof doors at the top and bottom of said flight of stairs.

When the stairs from the first story to the cellar or lowest story are located in an open side court the door leading thereto from the first story may be placed underneath the staircase in the first story, and the strings and railings of such outside stairs shall be of iron, and if the stairs be inclosed from the weather incombustible material only shall be used for that purpose. No closet shall be constructed underneath the first story staircase, but the space thereunder shall be left entirely open and

kept free from incumbrance, but this shall not prohibit the inclosing without openings the under portions of the staircase from the foot of the same to a point where the height from the floor line to the soffit of the staircase shall not exceed five feet.

All non-fireproof apartment-houses and tenement-houses exceeding five stories in height, or having a basement and five stories in height above a cellar, shall be constructed as in this section before described, and shall also have the halls and stairs inclosed with twelve-inch brick walls. Eight-inch brick walls not exceeding fifty feet in their vertical measurement, may inclose said halls and stairs, and be used as bearing walls where the distance between the outside bearing walls does not exceed thirty-three feet, and the area between the said brick inclosure walls does not exceed one hundred and eighty superficial feet. The floors, stairs and ceilings in said halls and stairways shall be made of iron, steel, brick, stone, tile, cement, or other hard incombustible materials, excepting that the flooring and sleepers underneath the same may be of wood and the hand-rails of the stairs may be of hard wood, and the treads may be of oak not less than one and five-eighths of an inch in thickness, provided that where such wooden treads are used the under side of the stairs shall be entirely lathed with iron or wire lath, and plastered thereon, or covered with metal. At least one flight of such stairs in each of said buildings shall extend to the roof, and be inclosed in a bulkhead built of fireproof materials. The said halls and stairways shall have a connecting fireproof hallway inclosed with suitable walls of brick or such other fireproof materials including the ceiling in all cases, as may be approved by the Commissioner of Buildings having jurisdiction, in the first story and extend to the street.

## PART VIII.

### Vaults, Areas and Cellars.

Sec. 54.—*Cellars to Be Connected with Sewers.* Before the walls of buildings are carried up above the foundation walls the cellar shall be connected with the street sewers. Should there be no sewer in the street, or if the cellars are below water level, or below the sewer level, then provision shall be made by the owner to prevent water accumulating in the cellars to the injury of the foundations.

Sec. 55.—*Vaults Under Sidewalks.* In buildings where the space under the sidewalk is utilized, a sufficient stone or brick wall, or brick arches between iron or steel beams, shall be built to retain the roadway of the street, and the side, end or party walls of such building shall extend under the sidewalk, of sufficient thickness, to such wall. The roofs of all vaults shall be of incombustible material. Openings in the roofs of vaults for the admission of coal or light, or for manholes, or for any other purposes, if placed outside the area line, shall be covered with glass set in iron frames, each glass to measure not more than sixteen square inches, or with iron covers having a rough surface, and rabbeted flush with the sidewalk. When any such cover is placed in any sidewalk, it shall be placed as near as practicable to the outside line of the curb. All vaults shall be thoroughly ventilated.

Sec. 56.—*Areas.* All areas shall be properly protected with suitable railings, or covered over.

When areas are covered over, iron, or iron and glass combined, stone or other incombustible materials shall be used, and supported on brick or stone walls, or on iron or steel beams.

Sec. 57.—*Cellar Floors.* The floor of the cellar or lowest story in every dwelling-house, apartment-house, tenement-house, lodging-house, hotel, workshop, factory, school, church, hospital and asylum hereafter erected, shall be concreted not less than four inches thick.

Where wood floors are to be laid in such cellars or lowest stories, the sleepers shall be placed on top of the concrete.

Sec. 58.—*Cellar Ceilings.* The ceiling over every cellar or lowest floor in every residence building more than four stories in height, hereafter erected, when the beams are of wood, shall be lathed with iron or wire lath and plastered thereon with two coats of brown mortar of good materials, or such other fireproof covering as may be approved by the Commissioner of Buildings having jurisdiction.

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## PART IX.

### Wood Beams, Girders and Columns.

Sec. 59.—*Wood Beams.* All wood beams and other timbers in the party wall of every building built of stone, brick or iron, shall be separated from the beam or timber entering in the opposite side of the wall by at least four inches of solid mason work. No wood floor beams or wood roof beams used in any building, hereafter erected, shall be of a less thickness than three inches. All wood trimmer and header beams shall be proportioned to carry with safety the loads they are intended to sustain. Every wood header or trimmer more than four feet long, used in any building, shall be hung in stirrup-irons of suitable thickness for the size of the timbers. Every wood beam, except header and tail

beams, shall rest at one end four inches in the wall, or upon a girder as authorized by this Code. The ends of all wood floor and roof beams, where they rest on brick walls, shall be cut to a bevel of three inches on their depth. In no case shall either end of a floor or roof beam be supported on stud partitions, except in frame buildings. All wood floor and wood roof beams shall be properly bridged with cross bridging, and the distance between bridging or between bridging and walls shall not exceed eight feet. All wood beams shall be trimmed away from all flues and chimneys, whether the same be a smoke, air or any other flue or chimney. The trimmer beam shall be not less than eight inches from the inside face of a flue and four inches from the outside of a chimney breast, and the header beam not less than two inches from the outside face of the brick or stone work of the same; except that for the smoke flues of boilers and furnaces where the brickwork is required to be eight inches in thickness, the trimmer beam shall be not less than twelve inches from the inside of the flue. 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. The safe carrying capacity of wood beams for uniformly distributed loads shall be determined by multiplying the area in square inches by its depth in inches and dividing this product by the span of the beam in feet. This result is to be multiplied by seventy for hemlock, ninety for spruce and white pine, one hundred and twenty for oak, and by one hundred and forty for yellow pine. The safe carrying capacity of short span timber beams shall be determined by their resistance to shear in accordance with the unit stresses fixed by section 139 of this Code.

Sec. 60.—*Anchors and Straps for Wood Beams and Girders.* Each tier of beams shall be anchored to the side, front, rear or party walls at intervals of not more than six feet apart, with good, strong, wrought iron anchors of not less than one and a half inches by three-eighths of an inch in size, well-fastened to the side of the beams by two or more nails made of wrought iron at least one-fourth of an inch in diameter. Where the beams are supported by girders, the girders shall be anchored to the walls and fastened to each other by suitable iron straps. The ends of wood beams resting upon girders shall be butted together end to end and strapped by wrought-iron straps of the same size and distance apart, and in the same beam as the wall anchors, and shall be fastened in the same manner as said wall anchors.

Or they may lap each other at least twelve inches and be well spiked or bolted together where lapped.

Each tier of beams front and rear, opposite each pier, shall have hard wood anchor strips dovetailed into the beams diagonally, which strips shall cover at least four beams and be one inch thick and four inches wide, but no such anchor strips shall be let in within four feet of the centre line of the beams; or wood strips may be nailed on the top of the beams and kept in place until the floors are being laid. Every pier and wall, front or rear, shall be well anchored to the beams of each story, with the same size anchors as are required for side walls, which anchors shall hook over the fourth beam.

Sec. 61.—*Wood Columns and Plates.* All timber columns shall be squared at the ends perpendicular to their axes.

To prevent the unit stresses from exceeding those fixed in this Code, timber or iron cap and base plates shall be provided.

Additional iron cheek plates shall be placed between the cap and base plates and bolted to the girders when required to transmit the loads with safety.

Sec. 62.—*Timber for Trusses.* When compression members of trusses are of timber they shall be strained in the direction of the fibre only. When timber is strained in tension, it shall be strained in the direction of the fibre only. The working stress in timber struts of pin-connected trusses shall not exceed seventy-five per cent. of the working stresses established in section 139, this Code.

Sec. 63.—*Bolts and Washers for Timber Work.* All bolts used in connection with timber and wood beam work shall be provided with washers of such proportions as will reduce the compression on the wood at the face of the washer to that allowed in section 139, this Code, supposing the bolt to be strained to its limit.

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## PART X.

### Chimneys, Flues, Fireplaces and Heating Pipes.

Sec. 64.—*Trimmer Arches.* All fireplaces and chimney breasts where mantels are placed, whether intended for ordinary fireplace uses or not, shall have trimmer arches to support hearths, and the said arches shall be at least twenty inches in width, measured from the face of the chimney breast, and they shall be constructed of brick, stone or burnt clay. The length of a trimmer arch shall be not less than the width of the chimney breast. Wood centres under trimmer arches shall be removed before plastering the ceiling underneath. If a heater is placed in a fireplace, then the hearth shall be the full width of the heater. All fireplaces in which

heaters are placed shall have incombustible mantels. No wood mantel or other woodwork shall be exposed back of a summer piece; the ironwork of the summer piece shall be placed against the brick or stone work of the fireplace. No fireplace shall be closed with a wood fireboard.

Sec. 65.—*Chimneys, Flues and Fireplaces.* All fireplaces and chimneys in stone or brick walls in any building hereafter erected, except as herein otherwise provided, and any chimney, or flue hereafter altered or repaired, without reference to the purpose for which they may be used, shall have the joints struck smooth on the inside, except when lined on the inside with pipe. No parging mortar shall be used on the inside of any fireplace, chimney or flue. The firebacks of all fireplaces hereafter erected shall be not less than eight inches in thickness, of solid masonry. When a grate is set in a fireplace, a lining of fire brick, at least two inches in thickness, shall be added to the fireback, unless soapstone, tile or cast iron is used, and filled solidly behind with fireproof material. The stone or brickwork of the smoke flues of all boilers, furnaces, bakers' ovens, large cooking ranges, large laundry stoves, and all flues used for a similar purpose shall be at least eight inches in thickness, and shall be capped with terra-cotta, stone or cast iron.

The inside four inches of all boiler flues shall be fire brick, laid in fire mortar, for a distance of twenty-five feet in any direction from the source of heat. All smoke flues of smelting furnaces or of steam boilers, or other apparatus which heat the flues to a high temperature, shall be built with double walls of suitable thickness for the temperature with an air space between the walls, the inside four inches of the flues to be of fire brick

All smoke flues shall extend at least three feet above a flat roof, and at least two feet above a peak roof.

On dwelling-houses and stables, three stories or less in height, not less than six of the top courses of a chimney may be laid in pure cement mortar and the brickwork carefully bonded and anchored together in lieu of coping.

In all buildings hereafter erected every smoke flue, except the flues hereinbefore mentioned, shall be lined on the inside with cast iron or well-burnt clay, or terra-cotta pipe, made smooth on the inside, from the bottom of the flue, or from the throat of the fireplace, if the flue starts from the latter, and carried up continuously to the extreme height of the flue. The ends of all such lining pipes shall be made to fit close together, and the pipe shall be built in as the flue or flues are carried up. Each smoke pipe shall be inclosed on all sides with not less than four inches of brickwork properly bonded together.

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

Sec. 66.—*Chimney Supports.* No chimney shall be started or built upon any floor or beam of wood.

In no case shall a chimney be corbeled out more than eight inches from the wall, and in all such cases the corbeling shall consist of at least five courses of brick, but no corbeling more than four inches shall be allowed in eight-inch brick walls. Where chimneys are supported by piers, the piers shall start from the foundation on the same line with the chimney breast, and shall be not less than twelve inches on the face, properly bonded into the walls. When a chimney is to be cut off below, in whole or in part, it shall be wholly

supported by stone, brick, iron or steel. All chimneys which shall be dangerous in any manner whatever, shall be repaired and made safe, or taken down.

Sec. 67.—*Chimneys of Cupolas.* Iron cupola chimneys of foundries shall extend at least ten feet above the highest point of any roof within a radius of fifty feet of such cupola, and be covered on top with a heavy wire netting. No woodwork shall be placed within two feet of the cupola.

Sec. 68.—*Hot Air Flues, Pipes and Vent Ducts.* All stone or brick hot air flues and shafts shall be lined with tin, galvanized iron or burnt-clay pipes. No wood casing, furring or lath shall be placed against or cover any smoke flue or metal pipe used to convey hot air or steam. No smoke pipe shall pass through any wood floor. No stovepipe shall be placed nearer than nine inches to any lath and plaster or board partition, ceiling or any woodwork. Smoke pipes of laundry stoves, large cooking ranges and of furnaces shall be not less than fifteen inches from any wood work, unless they are properly guarded by metal shields; if so guarded, stovepipes shall be not less than six inches distant, smoke pipes of laundry stoves, large cooking ranges and of furnaces shall be not less than nine inches distant from any wood work. Where smoke pipes pass through a lath and plaster partition they shall be guarded by galvanized iron ventilated thimbles at least twelve inches larger in diameter than the pipes, or by galvanized iron thimbles built in at least eight inches of brickwork. No smoke pipe shall pass through the roof of any building unless a special permit be first obtained from the Building Department for the same. If a permit is so granted, then the roof through which the smoke pipe passes shall be protected in the following manner: A galvanized

iron ventilated thimble of the following dimensions shall be placed; in case of a stovepipe, the diameter of the outside guard shall be not less than twelve inches and the diameter of the inner one, eight inches, and for all furnaces, or where similar large hot fires are used, the diameter of the outside guard shall be not less than eighteen inches and the diameter of the inner one, twelve inches. The smoke pipe thimbles shall extend from the under side of the ceiling or roof beams to at least nine inches above the roof, and they shall have openings for ventilation at the lower end where the smoke pipes enter, also at the top of the guards above the roof. Where a smoke pipe of a boiler passes through a roof, the same shall be guarded by a ventilated thimble, same as before specified, thirty-six inches larger than the diameter of the smoke pipe of the boiler. Tin or other metal pipes in brick or stone walls, used or intended to be used to convey heated air, shall be covered with brick or stone at least four inches in thickness. Woodwork near hot-air pipes shall be guarded in the following manner: A hot-air pipe shall be placed inside another pipe, one inch larger in diameter, or a metal shield shall be placed not less than one-half inch from the hot-air pipe; the outside pipe or the metal shield shall remain one and a half inches away from the woodwork and the latter must be tin lined, or in lieu of the above protection, four inches of brickwork may be placed between the hot-air pipe and the woodwork. This shall not prevent the placing of metal lath and plaster directly on the face of hot-air pipes or the placing of woodwork on such metal lath or plaster, provided the distance is not less than seven-eighths of an inch. No vertical hot-air pipe shall be placed in a stud partition, or in a wood inclosure, unless

it be at least eight feet distant in a horizontal direction from the furnace. Hot-air pipes in closets shall be double, with a space of one inch between them. Horizontal hot-air pipes shall be placed six inches below the floor beams or ceiling; if the floor beams or ceiling are plastered and protected by a metal shield, then the distance shall be not less than three inches.

Vent flues or ducts for the removal of foul or vitiated air in which the temperature of the air cannot exceed that of the rooms, may be constructed of iron, or other incombustible material, and shall not be placed nearer than one inch to any woodwork, and no such pipe shall be used for any other purpose.

In the support or construction of such ducts, if placed in a public school room, no wood furring or other inflammable material shall be nearer than two inches to said flues or ducts, and shall be covered on all sides other than those resting against brick, terra-cotta, or other incombustible material, with metal lath plastered with at least two heavy coats of mortar, and having at least one-half inch air space between the flues or ducts and the lath and plaster.

Sec. 69.—*Steam and Hot Water Heating Pipes.* Steam or hot water heating pipes shall not be placed within two inches of any timber or woodwork, unless the timber or woodwork is protected by a metal shield; then the distance shall be not less than one inch. All steam or hot water heating pipes passing through floors and ceilings or lath and plastered partitions shall be protected by a metal tube one inch larger in diameter than the pipe, having a metal cap at the floor, and where they are run in a horizontal direction between a floor and ceiling, a metal shield shall be placed on the under side of the floor over them, and on the sides of wood beams running parallel with said pipe.

All wood boxes or casings inclosing steam or hot water heating pipes and all wood covers to recesses in walls in which steam or hot water heating pipes are placed, shall be lined with metal.

All pipes or ducts used to convey air warmed by steam or hot water shall be of metal or other fireproof material. All steam and hot water pipe coverings shall consist of fireproof materials only.

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## PART XI.

### General Construction.

Sec. 70.—*Ducts for Pipes.* All ducts for pipes, wires, and other similar purposes shall be inclosed on all sides with fireproof material, and the opening through each floor shall be properly fire-stopped.

Sec. 71.—*Studded-off Spaces.* Where walls are studded-off, the space between the inside face of the wall and the studding shall be fire-stopped with fireproof material placed on the under side of the wood beams above, for a depth of not less than four inches, and be securely supported; or the beams directly over the studded-off space shall be deafened with not less than four inches of fireproof material, which may be laid on boards cut in between the beams.

Sec. 72.—*Wainscoting.* When wainscoting is used, in any building hereafter erected, the surface of the wall or partition behind such wainscoting shall be plastered flush with the grounds and down to the floor line.

Sec. 73.—*Bay, Oriel and Show Windows.* Bay windows, oriel windows and show windows on the street front or side of any building may project not more than one foot beyond the building line and shall be con-

structed of such materials and in such manner as will meet with the approval of the Department of Buildings.

Any such window that does not extend more than three feet above the second-story floor of any dwelling-house may be built of wood covered with metal.

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## PART XII.

### Stairs and Entrance.

Sec. 74.—*Entrance to Basement.* Every dwelling-house arranged for or occupied by two or more families above the first story, hereafter erected, shall be provided with an entrance to the basement thereof from the outside of such building.

Sec. 75.—*Stairs, Number Regulated by Area of Building.* In any building hereafter erected to be used as a store, factory, hotel or lodging-house, covering a lot area exceeding two thousand five hundred feet and not exceeding five thousand feet, there shall be provided at least two continuous lines of stairs remote from each other; and every such building shall have at least one continuous line of stairs for each five thousand feet of lot area covered, or part thereof, in excess of that required for five thousand feet of area. When any such building covers an area of lot greater than fifteen thousand feet the number of stairs shall be increased proportionately, or as will meet with the approval of the Commissioner of Buildings having jurisdiction.

Sec. 76.—*Engineers' Stationary Ladders.* Every building in which boilers or machinery are placed in the cellar or lowest story, shall have stationary iron ladders or stairs from such story leading direct to a manhole above on the sidewalk, or other outside exit.

Sec. 77.—*Slate and Stone Treads of Stairs to Be Supported.* In all buildings hereafter erected more than seven stories in height where the treads and landings of iron stairs are of slate, marble or other stone, they shall each be supported directly underneath, for their entire length and width, by an iron plate made solid or having openings not exceeding four inches square in same, of adequate strength and securely fastened to the strings. In case such supporting plates be made solid the treads may be of oak, not less than one and five-eighths inches thick.

## PART XIII.

### Skylights and Floor-Lights.

Sec. 78.—*Metal Skylights.* All skylights having a superficial area of more than nine square feet, placed in any building, shall have the sashes and frames thereof constructed of iron and glass. Every fireproof roof hereafter placed on any building, shall have, besides the usual scuttle or bulkhead, a skylight or skylights of a superficial area equal to not less than one-fiftieth the superficial area of such fireproof roof. Skylights hereafter placed in public buildings, over any passageway or room of public resort, shall have immediately underneath the glass thereof a wire netting, unless the glass contains a wire netting within itself.

Sec. 79.—*Floor-Lights.* Floor-lights, used for transmission of light to floors below, shall be constructed of metal frames and bars or plates, and if any glass in same measures more than sixteen square inches, the glass shall be provided with a mesh of wire either in the glass or under the same, and the floor-lights shall be of the same proportional strength as the floors in which they are placed.

## PART XIV.

### Inclosure and Shed Coverings for the Protection of Pedestrians.

Sec. 80.—*Inclosure and Shed Coverings for the Protection of Pedestrians.* Whenever buildings shall be erected or increased to over sixty-five feet in height, upon or along any street, the owner, builder or contractor constructing or repairing such buildings, shall have erected and maintained during such construction or repair, a shed over the sidewalk in front of said premises, extending from building line to curb, the same to be properly, strongly and tightly constructed, so as to protect pedestrians and others using such streets. Whenever outside scaffolds are required to carry on the construction of buildings over eighty-five feet in height, whether the same be constructed by poles or thrust-out scaffold, there shall be erected on its outer edge and ends an inclosure of wire netting of not over two-inch mesh, or of boards not less than three-fourths of an inch thick, placed not over one and one-half inches apart, well secured to uprights not less than two inches by four inches, fastened to planks or timbers, and resting on put-logs or thrust-outs. The said inclosure shall be carried up at least five feet in advance above the level on which the workmen employed on said front are working. The said thrust-outs shall be not less than three by ten of spruce or yellow pine, and to be doubled or tripled, as may be required for the load to be carried, and to be thoroughly braced and secured; or said timbers can be in one stick if proportioned to the load. The flooring on thrust-outs and put-logs shall be tightly constructed with plank. This said floor and inclosure shall not be removed until a

like floor and inclosure is already prepared and in position on the story above. In all buildings over eighty-five feet in height, during construction or alteration the windows on each floor above the second shall be properly inclosed as soon as the story is built. If the walls of such buildings are carried up two stories or more above the roofs of adjoining buildings, proper means shall be provided and used for the protection of skylights and roofs of such adjoining buildings. The protection over skylights shall be of stout wire netting not over three-fourths-inch mesh on stout timbers and properly secured. All such sheds and inclosures are to be subject to the inspection of the Department of Buildings. Should said adjoining owner, tenant or lessee refuse to grant permission to have said roofs and skylights so protected, such refusal by said owner, tenant or lessee shall relieve the owner of the building in course of construction from any responsibility for damage done to persons or property on or within the premises affected. Should such inclosure or protection not be so erected, the Commissioner of Buildings having jurisdiction, shall cause a notice to be served personally upon the owner, or his authorized agent, constructing or repairing such buildings, or the owner, tenant or lessee of adjoining premises, requiring such inclosure or protection, as provided in this section, specifying the manner in which same shall be erected; and if such inclosures or protections are not erected, strengthened or modified as provided in such notice within three days after the service thereof, the said Commissioner of Buildings having jurisdiction, shall have full power and authority to cause such inclosure to be erected on the fronts and roofs and the skylights protected, and all expenses connected with same may

become a lien on the property in interest so inclosed and protected, and which lien may be created and enforced in the same manner as now provided for in section 156 of this Code.

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## PART XV.

### Miscellaneous Buildings.

Sec. 81.—*Grain Elevators.* Nothing in this Code shall be so construed as to apply to or prevent the erection of what are known as grain elevators, as usually constructed, provided they are erected on tidewater, or adjacent to the river front in said city, in isolated localities, under such conditions as the Department of Buildings may prescribe, including location.

Sec. 82.—*Exhibition Buildings.* Buildings for fair and exhibition purposes, towers for observation purposes and structures for similar uses, whether temporary or permanent in character, shall be constructed in such manner and under such conditions as the Board of Buildings may prescribe.

Sec. 83.—*Smokehouses.* All smokehouses shall be of fireproof construction, with brick walls, iron doors and brick or metal roofs. An iron guard shall be placed over and three feet above the fire, and the hanging rails shall be of iron. The walls of all smokehouses shall be built up at least three feet higher than the roof of the building in which they are located.

## PART XVI.

### Heating Apparatus, Drying Rooms, Gas and Water Pipes.

Sec. 84.—*Heating Furnaces and Boilers.* A brick-set boiler shall not be placed on any wood or combustible floor or beams. Wood or combustible floors and beams under and not less than three feet in front and one foot on the sides of all portable boilers shall be protected by a suitable brick foundation of not less than two courses of brick well laid in mortar on sheet iron; the said sheet iron shall extend at least twenty-four inches outside of the foundation at the sides and front. Bearing lines of bricks, laid on the flat, with air spaces between them, shall be placed on the foundation to support a cast-iron ash pan of suitable thickness, on which the base of the boiler shall be placed, and shall have a flange, turned up in the front and on the sides, four inches high; said pan shall be in width not less than the base of the boiler and shall extend at least two feet in front of it. If a boiler is supported on a cast-iron base with a bottom of the required thickness for an ash pan, and is placed on bearing lines of brick in the same manner as specified for an ash pan, then an ash pan shall be placed in front of the said base and shall not be required to extend under it. All lath and plaster and wood ceilings and beams over and to a distance of not less than four feet in front of all boilers shall be shielded with metal. The distance from the top of the boiler to said shield shall be not less than twelve inches. No combustible partition shall be within four feet of the sides and back and six feet from the front of any boiler, unless said partition shall be covered with metal to the height of at least three feet above the floor, and shall extend from the end or back of the boiler to at least

five feet in front of it; then the distance shall be not less than two feet from the sides and five feet from the front of the boiler. All brick hot-air furnaces shall have two covers, with an air space of at least four inches between them; the inner cover of the hot-air chamber shall be either a brick arch or two courses of brick laid on galvanized iron or tin, supported on iron bars; the outside cover, which is the top of the furnace, shall be made of brick or metal supported on iron bars, and so constructed as to be perfectly tight, and shall be not less than four inches below any combustible ceiling or floor beams. The walls of the furnace shall be built hollow in the following manner: One inner and one outer wall, each four inches in thickness, properly bonded together with an air space of not less than three inches between them. Furnaces must be built at least four inches from all woodwork. The cold-air boxes of all hot-air furnaces shall be made of metal, brick or other incombustible material, for a distance of at least ten feet from the furnace. All portable hot-air furnaces shall be placed at least two feet from any wood or combustible partition or ceiling, unless the partitions and ceilings are properly protected by a metal shield, when the distance shall be not less than one foot. Wood floors under all portable furnaces shall be protected by two courses of brickwork well laid in mortar on sheet iron. Said brickwork shall extend at least two feet beyond the furnace in front of the ash pan.

Sec. 85.—*Registers.* Registers located over a brick furnace shall be supported by a brick shaft built up from the cover of the hot-air chamber; said shaft shall be lined with a metal pipe, and all wood beams shall be trimmed away not less than four inches from it. Where a register is placed on any woodwork in connection with a metal pipe or duct, the end of the said pipe or

duct shall be flanged over on the woodwork under it. All registers for hot-air furnaces placed in any woodwork or combustible floors shall have stone or iron borders firmly set in plaster of paris or gauged mortar. All register boxes shall be made of tin plate or galvanized iron with a flange on the top to fit the groove in the frame, the register to rest upon the same; there shall be an open space of two inches on all sides of the register box, extending from the under side of the border to and through the ceiling below. The said opening shall be fitted with a tight tin or galvanized-iron casing, the upper end of which shall be turned under the frame. When a register box is placed in the floor over a portable furnace, the open space on all sides of the register box shall be not less than three inches. When only one register is connected with a furnace said register shall have no valve.

Sec. 86.—*Drying Rooms.* All walls, ceilings and partitions inclosing drying rooms when not made of fireproof material, shall be wire lathed and plastered, or covered with metal, tile or other hard incombustible material.

Sec. 87.—*Ranges and Stoves.* Where a kitchen range is placed from twelve to six inches from a wood stud partition, the said partition shall be shielded with metal from the floor to the height of not less than three feet higher than the range; if the range is within six inches of the partition, then the studs shall be cut away and framed three feet higher and one foot wider than the range, and filled in to the face of the said stud partition with brick or fireproof blocks, and plastered thereon. All ranges on wood or combustible floors and beams that are not supported on legs and

have ash pans three inches or more above their base, shall be set on suitable brick foundations, consisting of not less than two courses of brick well laid in mortar on sheet iron, except small ranges such as are used in apartment houses that have ash pans three inches or more above their base, which shall be placed on at least one course of brickwork on sheet iron or cement. No range shall be placed against a furred wall. All lath and plaster or wood ceilings over all large ranges and ranges in hotels and restaurants, shall be guarded by metal hoods placed at least nine inches below the ceiling. A ventilating pipe connected with a hood over a range shall be at least nine inches from all lath and plaster or woodwork, and shielded. If the pipe is less than nine inches from lath and plaster and woodwork, then the pipe shall be covered with one inch of asbestos plaster on wire mesh. No ventilating pipe connected with a hood over a range shall pass through any floor. Laundry stoves on wood or combustible floors shall have a course of bricks, laid on metal, on the floor under and extended twenty-four inches on all sides of them. All stoves for heating purposes shall be properly supported on iron legs resting on the floor three feet from all lath and plaster or woodwork; if the lath and plaster or woodwork is properly protected by a metal shield, then the distance shall be not less than eighteen inches. A metal shield shall be placed under and twelve inches in front of the ash pan of all stoves that are placed on wood floors. All low gas stoves shall be placed on iron stands, or the burners shall be at least six inches above the base of the stoves, and metal guard plates placed four inches below the burners, and all woodwork under them shall be covered with metal.

Sec. 88.—*Notice as to Heating Apparatus.* In cases where hot water, steam, hot air or other heating appliances or furnaces are hereafter placed in any building, or flues or fire-places are changed or enlarged, due notice shall first be given to the Department of Buildings by the person or persons placing the said furnace or furnaces in said building, or by the contractor or superintendent of said work.

Sec. 89.—*Gas and Water Pipes.* Every building, other than a dwelling house, hereafter erected, and all factories, hotels, churches, theatres, school-houses and other buildings of a public character now erected in which gas or steam is used for lighting or heating, shall have the supply pipes leading from the street mains provided each with a stop-cock placed in the sidewalk at or near the curb, and so arranged as to allow of shutting off at that point. No gas, water or other pipes which may be introduced into any building shall be let into the beams unless the same be placed within thirty-six inches of the end of the beams; and in no building shall the said pipes be let into the beams more than two inches in depth. All said pipes shall be installed in accordance with the rules and regulations prescribed by the Board of Buildings. All gas brackets shall be placed at least three feet below any ceiling or woodwork, unless the same is properly protected by a shield; in which case the distance shall be not less than eighteen inches. No swinging or folding gas bracket shall be placed against any stud partition or woodwork. No gas bracket on any lath and plaster partition or woodwork shall be less than five inches in length, measured from the burner to the plaster surface or woodwork. Gas-lights placed near window curtains or any other combustible material shall be protected by a proper shield.

## PART XVII.

### Roofs, Leaders, Cornices, Bulkheads, Scuttles and Tanks.

Sec. 90.—*Mansard Roofs.* If a mansard or other roof of like character having a pitch of over sixty degrees be placed on any building, except a wood building, or a dwelling-house not exceeding three stories nor more than forty feet in height, it shall be constructed of iron rafters and lathed with iron or steel on the inside and plastered, or filled in with fireproof material not less than three inches thick, and covered with metal, slate or tile.

Sec. 91.—*Cornices and Gutters.* On all buildings hereafter erected within the fire limits, the exterior cornices, inclusive of those on show windows, and gutters shall be of some fireproof material. All fireproof cornices shall be well secured to the walls with iron anchors, independent of any woodwork. In all cases the walls shall be carried up to the planking of the roof. Where the cornice projects above the roof the walls shall be carried up to the top of the cornice. The party walls shall in all cases extend up above the planking of the cornice and be coped. All exterior wooden cornices that may now be or that may hereafter become unsafe or rotten shall be taken down, and if replaced, shall be constructed of some fireproof material. All exterior cornices of wood or gutters that may hereafter be damaged by fire to the extent of one-half shall be taken down, and if replaced shall be constructed of some fireproof material; but if not damaged to the extent of one-half, the same may be repaired with the same kind of material of which they were originally constructed.

Sec. 92.—*Bulkheads on Roofs and Scuttles.* Bulkheads used as inclosures for tanks and elevators, and coverings for the machinery of elevators and all other bulkheads, including the bulkheads of all dwelling houses more than four stories in height hereafter erected or altered, may be constructed of hollow fireproof blocks; or of wood, covered with not less than two inches of fireproof material, or filled in the thickness of the studding with such material, and covered on all outside surfaces with metal, including both surfaces and edges of doors. All such buildings shall have scuttles or bulkheads covered with some fireproof materials, with ladders or stairs leading thereto, and easily accessible to all occupants. No scuttle shall be less in size than two by three feet. No staging or stand shall be constructed or occupied upon the roof of any building without first obtaining the approval of the Commissioner of Buildings having jurisdiction.

Sec. 93.—*Tanks.* Tanks containing more than five hundred gallons of water or other fluid hereafter placed in any story, or on the roof or above the roof of any building now or hereafter erected, shall be supported on iron or steel beams of sufficient strength to safely carry the same; and the beams shall rest at both their ends on brick walls or on iron or steel girders or iron or steel columns or piers of masonry. Underneath any said water tank or on the side near the bottom of the same, there shall be a short pipe or outlet, not less than four inches in diameter, fitted with a suitable valve having a lever or wheel handle to same, so that firemen or others can readily discharge the weight of the fluid contents from the tank, in case of necessity. Such tanks shall be placed where prac-

ticable at one corner of a building, and shall not be placed over nor near a line of stairs. Covers on top of water tanks placed on roofs, if of wood shall be covered with tin.

Sec. 94.—*Roofing and Leaders within the Fire Limits.* The planking and sheathing of the roofs of buildings shall not in any case be extended across the side or party wall thereof. Every building and the tops and sides of every dormer-window thereon shall be covered and roofed with brick, tile, slate, tin, copper, iron; or plastic slate, asphalt, slag, or gravel may be used, provided such roofing shall be composed of not less than five layers of roofing felt, cemented together and finished with not less than ten gallons of coal tar, pitch or asphalt to each one hundred square feet of roof, or such other quality of fireproof roofing as the Board of Buildings, under its certificate, may authorize, and the outside of the frames of every dormer-window hereafter placed upon any building shall be made of some fireproof material. No wood building within the fire limits more than two stories or above twenty feet in height above the curb level to the highest part thereof, which shall require roofing, shall be roofed with any other roofing or covered except as aforesaid. Nothing in this section shall be construed to prohibit the repairing of any shingle roof, provided the building is not altered in height. All buildings shall be kept provided with proper metallic leaders for conducting water from the roofs in such manner as shall protect the walls and foundations of said buildings from injury. In no case shall the water from the said leaders be allowed to flow upon the sidewalk, but the same shall be conducted by pipe or pipes to the sewer. If there be no sewer in the street upon which such

buildings front, then the water from said leader shall be conducted by proper pipe or pipes, below the surface of the sidewalk to the street gutter.

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## PART XVIII.

### Elevators, Hoistways and Dumb Waiters.

Sec. 95.—*Elevators and Hoistways.* In any building in which there shall be any hoistway or freight elevator or wellhole not inclosed in walls constructed of brick or other fireproof material and provided with fireproof doors, the openings thereof through and upon each floor of said building, shall be provided with and protected by a substantial guard or gate and with such good and sufficient trap-doors as may be directed and approved by the Department of Buildings; and when in the opinion of the Commissioner of Buildings having jurisdiction, automatic trap-doors are required to the floor openings of any uninclosed freight elevator, the same shall be constructed so as to form a substantial floor surface when closed, and so arranged as to open and close by the action of the elevator in its passage either ascending or descending. The said Commissioner of Buildings shall have exclusive power and authority to require the openings of hoistways or hoistway shafts, elevators and wellholes in buildings to be inclosed or secured by trap-doors, guards or gates and railings. Such guards or gates shall be kept closed at all times, except when in actual use, and the trap-doors shall be closed at the close of the business of each day by the occupant or occupants of the building having the use or control of the same.

Sec. 96.—*Elevator Inclosures.* All elevators hereafter placed in any building, except such fireproof buildings as have been or may be hereafter erected, shall be inclosed in suitable walls of brick, or with a suitable framework of iron and burnt clay filling, or of such other fireproof material and form of construction as may be approved by the Department of Buildings, except that the inclosure walls in non-fireproof buildings used as warehouses, stores or factories shall be of brick. If the inclosure walls are of brick, laid in cement mortar, and not used as bearing walls, they may be eight inches in thickness for not more than fifty feet of their uppermost height, and increasing in thickness four inches for each lower fifty feet portion or part thereof. Said walls or construction shall extend through and at least three feet above the roof. All openings in the said walls shall be provided with fireproof shutters or fireproof doors, made solid for three feet above the floor level, except that the doors used for openings in buildings intended for the occupancy of one family may be of wood covered on the inner surface and edges with metal, not including the openings in the cellar, nor above the roof in any such shaft walls. The roofs over all inclosed elevators shall be made of fireproof materials, with a skylight at least three-fourths the area of the shaft, made of glass, set in iron frames. When the shaft does not extend to the ground, the lower end shall be inclosed in fireproof material.

Sec. 97.—*Dumb-waiter Shafts.* All dumb-waiter shafts, except such as do not extend more than three stories above the cellar or basement in dwelling-houses, shall be inclosed in suitable walls of brick or with burnt clay blocks, set in iron frames of proper

strength or fireproof blocks strengthened with metal dowels, or such other fireproof material and form of construction as may be approved by the Commissioner of Buildings having jurisdiction. Said walls or construction shall extend at least three feet above the roof and be covered with a skylight at least three-fourths the area of the shaft, made with metal frames and glazed. All openings in the inclosure walls or construction shall be provided with self-closing fireproof doors. When the shaft does not extend to the floor level of the lowest story, the bottom of the shaft shall be constructed of fire-proof material.

Sec. 98.—*Elevators in Staircase Inclosures.* Open grillwork inclosures for passenger elevators, not extending below the level of the first floor, may be erected in staircase inclosures in buildings where the entire space occupied by the stairs and elevator is inclosed in brick or stone walls, and the stairs are constructed as specified in Section 53 of this Code.

Sec. 99.—*Elevators in Existing Hotels.* In every non-fireproof building, used or occupied as a hotel, in which there is an elevator not inclosed in fireproof shafts, such elevator shall be inclosed in suitable walls, constructed and arranged as in this Code required for elevator shafts.

Sec. 100.—*Screen Under Elevator Sheaves.* Immediately under the sheaves at the top of every elevator shaft in any building there shall be provided and placed a substantial grating or screen of iron or steel, of such construction as shall be approved by the Department of Buildings.

Sec. 101.—*Inspection of Elevators.* The Commissioners of Buildings shall cause an inspection of ele-

vators carrying passengers or employes to be made at least once every three months, and shall make regulations for the inspection of such elevators with a view to safety; and shall also prescribe suitable qualifications for persons who are placed in charge of the running of such elevators. The regulations shall require any repairs found necessary to any such elevators to be made without delay by the owner or lessee. In case defects are found to exist which endanger life or limb by the continued use of such elevator, then, upon notice from the Department of Buildings, the use of such elevator shall cease, and it shall not again be used until a certificate shall be first obtained from said Department that such elevator has been made safe. No person shall employ or permit any person to be in charge of running any passenger elevator who does not possess the qualifications prescribed therefor.

Every freight elevator or lift shall have a notice posted conspicuously thereon as follows: Persons riding on this elevator do so at their own risk.

## PART XIX.

### Fire Appliances, Fire-Escapes and Fireproof Shutters and Doors.

Sec. 102.—*Auxiliary Fire Apparatus for Buildings.* In every building now erected, unless already provided with a three-inch or larger vertical pipe, which exceeds one hundred feet in height and in every building hereafter to be erected exceeding eighty-five feet in height, and when any such building does not exceed one hundred and fifty feet in height, it shall be provided with a four-inch stand pipe, running from cellar to

roof, with one two-way three-inch Siamese connection to be placed on street above the curb level, and with one two-and-one-half inch outlet, with hose attached thereto on each floor, placed as near the stairs as practicable; and all buildings now erected, unless already provided with a three-inch or larger vertical pipe, or hereafter to be erected, exceeding one hundred and fifty feet in height, shall be provided with an auxiliary fire apparatus and appliances, consisting of water tank on roof, or in cellar, stand pipes, hose, nozzles, wrenches, fire extinguishers, hooks, axes and such other appliances as may be required by the Fire Department; all to be of the best material and of the sizes, patterns and regulation kinds used and required by the Fire Department. In every such building a steam pump and at least one passenger elevator shall be kept in readiness for immediate use by the Fire Department, during all hours of the night and day, including holidays and Sundays. The said pumps, if located in the lowest story, shall be placed not less than two feet above the floor level. The boilers which supply power to the passenger elevators and pumps, if located in the lowest story, shall be so surrounded by a dwarf brick wall laid in cement mortar, or other suitable permanent waterproof construction, as to exclude water to the depth of two feet above the floor level from flowing into the ash pits of said boilers. When the level of the floor of the lowest story is above the level of the sewer in the street, a large cess-pool shall be placed in said floor and connected by a four-inch cast iron drain pipe with the street sewer. Stand pipes shall be not less than six inches in diameter for all buildings exceeding one hundred and fifty feet in height. All stand pipes shall extend to the street and

there be provided at or near the sidewalk level with the Siamese connections. Said stand pipes shall also extend to the roof. Valve outlets shall be provided on each and every story, including the basement and cellar, and on the roof. All valves, hose, tools, and other appliances, provided for in this section, shall be kept in perfect working order, and once a month the person in charge of said building shall make a thorough inspection of the same to see that all valves, hose, and other appliances are in perfect working order and ready for immediate use by the Fire Department. If any of the said buildings extend from street to street, or form an L shape, they shall be provided with stand pipes for each street frontage. In such buildings as are used or occupied for business or manufacturing purposes there shall be provided, in connection with said stand pipe or pipes, two-and-one-half inch perforated iron pipes placed on and along the ceiling line of each floor below the first floor and extending to the full depth of the building. Such perforated pipe shall be provided with a valve placed at or near the stand pipe, so that the water can be let into same when deemed necessary by the firemen, or in lieu of such perforated pipes automatic sprinklers may be put in. When the building is twenty-five feet or less in width, two lines of perforated pipes shall be provided, and one line additionally for each twelve and one-half feet, or part thereof that the building is wider than twenty-five feet. A suitable iron plate with raised letters shall be fastened to the wall near said stand pipe to read: This stand pipe connects to perforated pipes in the cellar.

Sec. 103.—*Fire-Escapes.* Every dwelling-house occupied by or built to be occupied by three or more families, and every building already erected, or that may hereafter be erected, more than three stories in height, occupied and used as a hotel or lodging-house, and every boarding-house, having more than fifteen sleeping rooms above the basement story, and every factory, mill, manufactory or workshop, hospital, asylum or institution for the care or treatment of individuals, and every building three stories and over in height used or occupied as a store or workroom, and every building in whole or in part occupied or used as a school or place of instruction or assembly, and every office building five stories or more in height, shall be provided with such good and sufficient fire-escape, stairways, or other means of egress in case of fire as shall be directed by the Department of Buildings; and said Department shall have full and exclusive power and authority within said city to direct fire-escapes and other means of egress to be provided upon and within said building or any of them. The owner or owners of any building upon which a fire-escape is erected shall keep the same in good repair and properly painted. No person shall at any time place any incumbrance of any kind whatsoever before or upon any fire-escape, balcony or ladder. It shall be the duty of every fireman and policeman who shall discover any fire-escape balcony or ladder of any fire-escape incumbered in any way, to forthwith report the same to the commanding officer of his company or precinct, and such commanding officer shall forthwith cause the occupant of the premises or apartment to which said fire-escape balcony or ladder is attached or for whose use the same is provided, to be notified, either verbally

or in writing, to remove such incumbrance and keep the same clear. If said notice shall not be complied with by the removal, forthwith, of such incumbrance, and keeping said fire-escape, balcony or ladder free from incumbrance, then it shall be the duty of said commanding officers to apply to the nearest police magistrate for a warrant for the arrest of the occupant or occupants of the said premises or apartment of which the fire-escape forms a part, and the said parties shall be brought before the said magistrate, as for a misdemeanor; and, on conviction, the occupant or occupants of said premises or apartment shall be fined not more than ten dollars for each offense, or may be imprisoned not to exceed ten days, or both, in the discretion of the court. In constructing all balcony fire-escapes, the manufacturer thereof shall securely fasten thereto, in a conspicuous place, a cast-iron plate having suitable raised letters on the same, to read as follows: Notice: Any person placing any incumbrance on this balcony is liable to a penalty of ten dollars and imprisonment for ten days.

All buildings requiring fire-escapes shall have stationary iron ladders leading to the scuttle opening in the roof thereof, and all scuttles and ladders shall be kept so as to be ready for use at all times. If a bulkhead is used in place of a scuttle, it shall have stairs with sufficient guard or hand-rail leading to the roof. In case the building shall be a tenement-house, the door in the bulkhead or any scuttle, shall at no time be locked, but may be fastened on the inside by movable bolts or hooks.

Sec. 104.—*Fireproof Shutters and Doors.* Every building which is more than two stories in height

above the curb level, except dwelling-houses, hotels, school-houses and churches, shall have doors, blinds or shutters made of iron, hung to iron hanging frames or to iron eyes built into the wall, on every exterior window and opening above the first story thereof, excepting on the front openings of buildings fronting on streets which are more than thirty feet in width, or where no other buildings are within thirty feet of such openings. The said doors, blinds or shutters may be constructed of pine or other soft wood of two thicknesses of matched boards at right angles with each other, and securely covered with tin, on both sides and edges, with folded lapped joints, the nails for fastening the same being driven inside the lap; the hinges and bolts or latches shall be secured or fastened to the door or shutter after the same has been covered with the tin, and such doors or shutters shall be hung upon an iron frame, independent of the woodwork of the windows and doors, or two iron hinges securely fastened in the masonry; or such frames, if of wood, shall be covered with tin in the same manner as the doors and shutters. All shutters opening on fire-escapes, and at least one row, vertically, in every three rows on the front window openings above the first story of any building, shall be so arranged that they can be readily opened from the outside by firemen. All rolling iron or steel shutters hereafter placed in the first story of any building, shall be counter-balanced so that said rolling shutters may be readily opened by the firemen. No building hereafter erected, other than a dwelling-house or fireproof building, shall have inside iron or steel shutters to windows above the first story. All windows and openings above the first story of any building may be provided with other suitable protec-

tion or may be exempted from having shutters by the Board of Buildings or the Board of Examiners as the case may be. All buildings specified in this section, hereafter erected or altered, having openings in interior walls, shall be provided with suitable fireproof doors where deemed necessary by the Commissioner of Buildings having jurisdiction. All occupants of buildings shall close all exterior and interior fireproof shutters, doors and blinds at the close of the business of each day.

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## PART XX.

### Fireproof Buildings.

Sec. 105.—*Fireproof Buildings.* Every building hereafter erected or altered, to be used as a hotel, lodging-house, school, theatre, jail, police station, hospital, asylum, institution for the care or treatment of persons, the height of which exceeds thirty-five feet, excepting all buildings for which specifications and plans have been heretofore submitted to and approved by the Department of Buildings, and every other building the height of which exceeds seventy-five feet, except as herein otherwise provided, shall be built fireproof, that is to say, they shall be constructed with walls of brick, stone, Portland cement concrete, iron or steel, in which wood beams or lintels shall not be placed, and in which the floors and roofs shall be of materials provided for in Section 106 of this Code. The stairs and staircase landings shall be built entirely of brick, stone, Portland cement concrete, iron or steel. No woodwork or other inflammable material shall be used in any of the partitions, furrings or ceilings in any such fireproof buildings, excepting, however, that when the

height of the building does not exceed twelve stories nor more than one hundred and fifty feet, the doors and windows and their frames, the trims, the casings, the interior finish when filled solid at the back with fireproof material, and the floor boards and sleepers directly thereunder, may be of wood, but the space between the sleepers shall be solidly filled with fireproof materials and extend up to the under side of the floor boards.

When the height of a fireproof building exceeds twelve stories, or more than one hundred and fifty feet, the floor surfaces shall be of stone, cement, rock asphalt, tiling or similar incombustible material, or the sleepers and floors may be of wood treated by some process, approved by the Board of Buildings, to render the same fireproof. All outside window frames and sash shall be of metal, or of wood covered with metal. The inside window frames and sash, doors, trim and other interior finish may be of wood covered with metal, or of wood treated by some process approved by the Board of Buildings to render the same fireproof.

All hall partitions or permanent partitions between rooms in fireproof buildings shall be built of fireproof material and shall not be started on wood sills, nor on wood floor boards, but be built upon the fireproof construction of the floor and extend to the fireproof beam filling above. The tops of all door and window openings in such partitions shall be at least twelve inches below the ceiling line.

Sec. 106.—*Fireproof Floors.* Fireproof floors shall be constructed with wrought iron or steel floor beams so arranged as to spacing and length of beams that the load to be supported by them, together with the weights of the materials used in the construction of the said

floors shall not cause a greater deflection of the said beams than one-thirtieth of an inch per foot of span under the total load; and they shall be tied together at intervals of not more than eight times the depth of the beam. Between the wrought iron or steel floor beams shall be placed brick arches springing from the lower flange of the steel beams. Said brick arches shall be designed with a rise to safely carry the imposed load but never less than one and one-quarter inches for each foot of span between the beams, and they shall have a thickness of not less than four inches for spans of five feet or less and eight inches for spans over five feet, or such thickness as may be required by the Board of Buildings. Said brick arches shall be composed of good, hard brick or hollow brick of ordinary dimensions laid to a line on the centres, properly and solidly bonded, each longitudinal line of brick breaking joints with the adjoining lines in the same ring and with the ring under it when more than a four-inch arch is used. The brick shall be well wet and the joints filled in solid with cement mortar. The arches shall be well grouted and properly keyed. Or the space between the beams may be filled in with hollow tile arches of hard-burnt clay or porous terra-cotta of uniform density and hardness of burn. The skew backs shall be of such form and section as to properly receive the thrust of said arch; and the said arches shall be of a depth and sectional area to carry the load to be imposed thereon, without straining the material beyond its safe working load, but said depth shall not be less than one and three-quarter inches for each foot of span, not including any portion of the depth of the tile projecting below the under side of the beams, a variable distance being allowed of not over six inches in the span between the beams, if the soffits of the

tile are straight; but if said arches are segmental, having a rise of not less than one and one-quarter inches for each foot of span, the depth of the tile shall be not less than six inches. The joints shall be solidly filled with cement mortar as required for common brick arches and the arch so constructed that the key block shall always fall in the central portion. The shells and webs of all end construction blocks shall abut, one against another. Or the space between the beams may be filled with arches of Portland cement concrete, segmental in form, and which shall have a rise of not less than one and one-quarter inches for each foot of span between the beams. The concrete shall be not less than four inches in thickness at the crown of the arch and shall be mixed in the proportions required by Section 18 of this Code. These arches shall in all cases be reinforced and protected on the under side with corrugated or sheet steel, steel ribs, or metal in other forms weighing not less than one pound per square foot and having no openings larger than three inches square. Or between the said beams may be placed solid or hollow burnt-clay, stone, brick, or concrete slabs in flat or curved shapes, concrete or other fireproof composition, and any of said materials may be used in combination with wire cloth, expanded metal, wire strands, or wrought iron or steel bars; but in any such construction and as a precedent condition to the same being used, tests shall be made as herein provided by the manufacturer thereof under the direction and to the satisfaction of the Board of Buildings, and evidence of the same shall be kept on file in the Department of Buildings, showing the nature of the test and the result of the test. Such tests shall be made by constructing within inclosure walls a platform consisting of four rolled steel beams, ten inches

deep, weighing each twenty-five pounds per lineal foot, and placed four feet between the centres, and connected by transverse tie-rods, and with a clear span of fourteen feet for the two interior beams and with the two outer beams supported on the side walls throughout their length, and with both a filling between the said beams, and a fireproof protection of the exposed parts of the beams of the system to be tested, constructed as in actual practice, with the quality of material ordinarily used in that system and the ceiling plastered below, as in a finished job; such filling between the two interior beams being loaded with a distributed load of one hundred and fifty pounds per square foot of its area and all carried by such filling; and subjecting the platform so constructed to the continuous heat of a wood fire below, averaging not less than seventeen hundred degrees Fahrenheit for not less than four hours, during which time the platform shall have remained in such condition that no flame will have passed through the platform or any part of the same, and that no part of the load shall have fallen through, and that the beams shall have been protected from the heat to the extent that after applying to the under side of the platform at the end of the heat test a stream of water directed against the bottom of the platform and discharged through a one and one-eighth inch nozzle under sixty pounds pressure for five minutes, and after flooding the top of the platform with water under low pressure, and then again applying the stream of water through the nozzle under the sixty pounds pressure to the bottom of the platform for five minutes, and after a total load of six hundred pounds per square foot uniformly distributed over the middle bay shall have been applied

and removed, after the platform shall have cooled, the maximum deflection of the interior beams shall not exceed two and one-half inches. The Board of Buildings may from time to time prescribe additional or different tests than the foregoing for systems of filling between iron or steel floor beams, and the protection of the exposed parts of the beams. Any system failing to meet the requirements of the test of heat, water and weight, as herein prescribed shall be prohibited from use in any building hereafter erected. Duly authenticated records of the tests heretofore made of any system of fireproof floor filling and protection of the exposed parts of the beams may be presented to the Board of Buildings, and if the same be satisfactory to said Board, it shall be accepted as conclusive. No filling of any kind which may be injured by frost shall be placed between said floor beams during freezing weather, and if the same is so placed during any winter month, it shall be temporarily covered with suitable material for protection from being frozen. On top of any arch, lintel or other device which does not extend to and form a horizontal line with the top of the said floor beams, cinder concrete or other suitable fireproof material shall be placed to solidly fill up the space to a level with the top of the said floor beams, and shall be carried to the under side of the wood floor boards in case such be used. Temporary centering when used in placing fireproof systems between floor beams, shall not be removed within twenty-four hours or until such time as the mortar or material has set. All fireproof floor systems shall be of sufficient strength to safely carry the load to be imposed thereon without straining the material in any case beyond its safe working load. The bottom flanges of

all wrought iron or rolled steel floor and flat roof beams, and all exposed portions of such beams below the abutments of the floor arches shall be entirely incased with hard-burnt clay, porous terra-cotta or other fireproof material allowed to be used for the filling between the beams under the provisions of this section, such incasing material to be properly secured to the beams.

The exposed sides and bottom plates or flanges of wrought iron or rolled steel girders supporting iron or steel floor beams, or supporting floor arches or floors, shall be entirely incased in the same manner. Openings through fireproof floors for pipes, conduits and similar purposes shall be shown on the plans. After the floors are constructed no opening greater than eight inches square shall be cut through said floors unless properly boxed or framed around with iron. And such openings shall be filled in with fireproof material after the pipes or conduits are in place.

Sec. 107.—*Incasing Interior Columns.* All cast iron, wrought iron or rolled steel columns, including the lugs and brackets on same, used in the interior of any fireproof building, or used to support any fireproof floor, shall be protected with not less than two inches of fireproof material, securely applied. The extreme outer edge of lugs, brackets and similar supporting metal may project to within seven-eighths of an inch of the surface of the fireproofing.

## PART XXI.

### Public Buildings, Theatres and Places of Assemblage.

Sec. 108.—*Public Buildings.* In all buildings of a public character, such as hotels, churches, theatres, restaurants, railroad depots, public halls, and other buildings used or intended to be used for purposes of public assembly, amusement or instruction, and including department stores and other business and manufacturing buildings where large numbers of people are congregated, the halls, doors, stairways, seats, passageways and aisles, and all lighting and heating appliances and apparatus shall be arranged as the Department of Buildings shall direct to facilitate egress in cases of fire or accident, and to afford the requisite and proper accommodation for the public protection in such cases. All aisles and passageways in said buildings shall be kept free from camp stools, chairs, sofas and other obstructions, and no person shall be allowed to stand in or occupy any of said aisles or passageways, during any performance, service, exhibition, lecture, concert, ball or any public assemblage. The Commissioner of Buildings having jurisdiction may at any time serve a written or printed notice upon the owner, lessee or manager of any of said buildings, directing any act or thing to be done or provided in or about the said buildings and the several appliances therewith connected, such as halls, doors, stairs, windows, seats, aisles, fire-walls, fire apparatus and fire-escapes, as he may deem necessary. Nothing herein contained shall be construed to authorize or require any other alterations to theatres existing prior to June 9, 1885, than are specified in this section.

Sec. 109.—*Theatres and Places of Public Amusement.* Every theatre or opera-house, or other building intended to be used for theatrical or operatic purposes, or for public entertainments of any kind hereafter erected, for the accommodation of more than three hundred persons, shall be built to comply with the requirements of this section. No building which, at the time of the passage of this Code, is not in actual use for theatrical or operatic purposes, and no building hereafter erected not in conformity with the requirements of this section, shall be used for theatrical or operatic purposes, or for public entertainments of any kind until the same shall have been made to conform to the requirements of this section. And no building hereinbefore described shall be opened to the public for theatrical or operatic purposes, or for public entertainments of any kind until the Department of Buildings shall have approved the same in writing as conforming to the requirements of this section. Every such building shall have at least one front on the street, and in such front there shall be suitable means of entrance and exit for the audience. In addition to the aforesaid entrances and exits on the street, there shall be reserved for service in case of an emergency, an open court or space on the side not bordering on the street, where said building is located on a corner lot; and on both sides of said building, where there is but one frontage on the street. The width of such open court or courts shall be not less than seven feet where the seating capacity is not over one thousand people, above one thousand and not more than eighteen hundred people, eight feet in width, and above eighteen hundred people, ten feet in width. Said open court or courts shall begin on a line with or near the proscenium wall and

shall extend the length of the auditorium proper, to or near the wall separating the same from the entrance lobby or vestibule. A separate and distinct corridor shall continue to the street, from each open court through such superstructure as may be built on the street side of the auditorium, with continuous walls of brick or fireproof materials on each side the entire length of said corridor or corridors, and the ceiling and floors shall be fireproof. Said corridor or corridors shall not be reduced in width to more than three feet less than the width of the open court or courts, and there shall be no projection in the same; the outer openings to be provided with doors or gates opening toward the street. During the performance the doors or gates in the corridors shall be kept open by proper fastenings; at other times they may be closed and fastened by movable bolts or locks. The said open courts and corridors shall not be used for storage purposes, or for any purpose whatsoever except for exit and entrance from and to the auditorium and stage, and must be kept free and clear during performances. The level of said corridors at the front entrance to the building shall be not greater than one step above the level of the sidewalk where they begin at the street entrance. The entrance of the main front of the building shall be not on a higher level from the sidewalk than four steps, unless approved by the Department of Buildings. To overcome any difference of level in and between courts, corridors, lobbies, passages and aisles on the ground floor, gradients shall be employed of not over one foot in twelve feet with no perpendicular rises. From the auditorium opening into the said open courts or on the side street, there shall be not less than two exits on each side in each tier from and

including the parquet and each and every gallery. Each exit shall be at least five feet in width in the clear and provided with doors of iron or wood; if of wood, the doors shall be constructed as hereinbefore in this Code described. All of said doors shall open outwardly, and shall be fastened with movable bolts, the bolts to be kept drawn during performances. There shall be balconies not less than four feet in width in the said open court or courts at each level or tier above the parquet, on each side of the auditorium, of sufficient length to embrace the two exits, and from said balconies there shall be staircases extending to the ground level, with a rise of not over eight and one-half inches to a step, and not less than nine inches tread exclusive of the nosing. The staircase from the upper balcony to the next below shall be not less than thirty-six inches in width in the clear, and from the first balcony to the ground three feet in width in the clear where the seating capacity of the auditorium is for one thousand people or less, three feet and six inches in the clear where above one thousand and not more than eighteen hundred people, and four feet in the clear where above eighteen hundrd people and not more than twenty-five hundred people, and not over four feet six inches in the clear where above twenty-five hundred people. All the before-mentioned balconies and staircases shall be constructed of iron throughout, including the floors, and of ample strength to sustain the load to be carried by them, and they shall be covered with a metal hood or awning, to be constructed in such manner as shall be approved by the Department of Buildings. Where one side of the building borders on the street, there shall be balconies and staircases of like capacity and kind, as before mentioned,

carried to the ground. When located on a corner lot that portion of the premises bordering on the side street and not required for the uses of the theatre may, if such portion be not more than twenty-five feet in width, be used for offices, stores or apartments, provided the walls separating this portion from the theatre proper are carried up solidly to and through the roof, and that a fireproof exit is provided for the theatre, on each tier, equal to the combined width of exits opening on opposite sides in each tier, communicating with balconies and staircases leading to the street in manner provided elsewhere in this section; said exit passages shall be entirely cut off by brick walls from said offices, stores or apartments, and the floors and ceilings in each tier shall be fireproof. Nothing herein contained shall prevent a roof garden, art gallery, or rooms for similar purposes being placed above a theatre or public building, provided the floor of the same forming the roof over such theatre or building shall be constructed of iron or steel and fireproof materials, and that said floor shall have no covering boards or sleepers of wood, but be of tile or cement. Every roof over said garden or rooms shall have all supports and rafters of iron or steel, and be covered with glass or fireproof materials, or both, but no such roof garden, art gallery or room for any public purpose shall be placed over or above that portion of any theatre or other building which is used as a stage. No workshop, storage or general property room shall be allowed above the auditorium or stage, or under the same, or in any of the fly galleries. All of said rooms or shops may be located in the rear or at the side of the stage, but in such cases they shall be separated from the stage by a brick wall, and the open-

ings leading into said portions shall have fireproof doors on each side of the openings, hung to iron eyes built into the wall. No portion of any building hereafter erected or altered, used or intended to be used for theatrical or other purposes as in this section specified, shall be occupied or used as a hotel, boarding or lodging house, factory, workshop or manufactory, or for storage purposes, except as may be hereafter specially provided for. Said restriction relates not only to that portion of the building which contains the auditorium and the stage, but applies also to the entire structure in conjunction therewith. No store or room contained in the building, or the offices, stores or apartments adjoining, as aforesaid, shall be let or used for carrying on any business dealing in articles designated as specially hazardous in the classification of the New York Board of Fire Underwriters, or for manufacturing purposes. No lodging accommodations shall be allowed in any part of the building communicating with the auditorium. Interior walls built of fireproof materials shall separate the auditorium from the entrance vestibule, and from any room or rooms over the same, also from any lobbies, corridors, refreshment or other rooms. All staircases for the use of the audience shall be inclosed with walls of brick, or of fireproof materials approved by the Department of Buildings, in the stories through which they pass, and the openings to said staircases from each tier shall be the full width of said staircase. No door shall open immediately upon a flight of stairs, but a landing at least the width of the door shall be provided between such stairs and such door. A fire-wall, built of brick, shall separate the auditorium from the stage, and the same shall extend at least four feet above the stage roof, or

the auditorium roof, if the latter be the higher, and shall be coped. Above the proscenium opening there shall be an iron girder of sufficient strength to safely support the load above and the same shall be covered with fireproof materials to protect it from the heat. Should there be constructed an orchestra over the stage, above the proscenium opening, the said orchestra shall be placed on the auditorium side of the proscenium fire-wall, and shall be entered only from the auditorium side of said wall. The moulded frame around the proscenium opening shall be formed entirely of fireproof materials; if metal be used the metal shall be filled in solid with non-combustible material and securely anchored to the wall with iron. The proscenium opening shall be provided with a fireproof metal curtain, or a curtain of asbestos, or other fireproof material approved by the Department of Buildings, sliding at each end within iron grooves, securely fastened to the brick wall, and extending into such grooves, to a depth of not less than six inches on each side of the opening. Said fireproof curtain shall be raised at the commencement of each performance and lowered at the close of said performance, and be operated by approved machinery for that purpose. The proscenium curtains shall be placed at least three feet distant from the footlights at the nearest point. No doorway or opening through the proscenium wall, from the auditorium, shall be allowed above the level of the first floor and such first floor openings shall have fireproof doors on each face of the wall, and the doors shall be hung so as to be opened from either side at all times. There shall be provided over the stage, metal sky-lights of an area or combined area of at least one-eighth the area of said stage, fitted up with sliding sash and glazed

with double-thick sheet glass not exceeding one-twelfth of an inch thick, and each pane thereof measuring not less than three hundred square inches, and the whole of which sky-light shall be so constructed as to open instantly on the cutting or burning of a hempen cord, which shall be arranged to hold said sky-lights closed, or some other equally simple approved device for opening them may be provided. Immediately underneath the glass of said sky-lights there shall be wire netting, but wire glass shall not be used in lieu of this requirement. All that portion of the stage not comprised in the working of scenery, traps and other mechanical apparatus, for the presentation of a scene, usually equal to the width of the proscenium opening, shall be built of iron or steel beams filled in between with fireproof material, and all girders for the support of said beams shall be of wrought iron or rolled steel. The fly-galleries entire, including pin-rails, shall be constructed of iron or steel, and the floors of said galleries shall be composed of iron or steel beams, filled with fireproof materials, and no wood boards or sleepers shall be used as covering over beams, but the said floors shall be entirely fireproof. The rigging loft shall be fireproof. All stage scenery, curtains and decorations made of combustible material, and all woodwork on or about the stage, shall be painted or saturated with some non-combustible material, or otherwise rendered safe against fire, and the finishing coats of paint applied to all woodwork throughout the entire building shall be of such kind as will resist fire to the satisfaction of the Department of Buildings. The roof over the auditorium and the entire main floor of the auditorium and vestibule, also the entire floor of the second story of the front superstructure over the entrance, lobby

and corridors, and all galleries and supports for the same in the auditorium shall be constructed of iron or steel and fireproof materials, not excluding the use of wood floor boards and necessary sleepers to fasten the same to, but such sleepers shall not mean timbers of support, and the space between the sleepers, excepting the portion under the stepping in the galleries, which shall be properly fire-stopped, shall be solidly filled with incombustible material up to the under side of the floor boards. The fronts of each gallery shall be formed of fireproof materials, except the capping, which may be made of wood. The ceiling under each gallery shall be entirely formed of fireproof materials. The ceiling of the auditorium shall be formed of fireproof materials. All lathing, whenever used, shall be of wire or other metal. The partitions in that portion of the building which contains the auditorium, the entrance and vestibule and every room and passage devoted to the use of the audience, shall be constructed of fireproof materials, including the furring of outside or other walls. None of the walls or ceilings shall be covered with wood sheathing, canvas, or any combustible material. But this shall not exclude the use of wood wainscoting to a height not to exceed six feet, which shall be filled in solid between the wainscoting and the wall with fireproof materials. The walls separating the actors' dressing rooms from the stage, and the partitions dividing the dressing rooms, together with the partitions of every passageway from the same to the stage and all other partitions on or about the stage shall be constructed of fireproof material approved by the Department of Buildings. All doors in any of said partitions shall be fireproof. All shelving and cupboards in each and every dressing room, prop-

erty room or other storage rooms, shall be constructed of metal, slate or some fireproof material. Dressing rooms may be placed in the fly-galleries, provided that proper exits are secured therefrom to the fire-escapes in the open courts, and that the partitions and other matters pertaining to dressing rooms shall conform to the requirements herein contained, but the stairs leading to the same shall be fireproof. All dressing rooms shall have an independent exit leading directly into a court or street, and shall be ventilated by windows in the external wall; and no dressing room shall be more than one story below street level. All windows shall be arranged to open, and none of the windows in outside walls shall have fixed sashes, iron grills or bars. All seats in the auditorium excepting those contained in boxes, shall be not less than thirty-two inches from back to back, measured in a horizontal direction, and firmly secured to the floor. No seat in the auditorium shall have more than six seats intervening between it and an aisle, on either side. No stool or seat shall be placed in any aisle. All platforms in galleries formed to receive the seats shall be not more than twenty-one inches in height of riser, nor less than thirty-two inches in width of platform. All aisles on the respective floors in the auditorium, having seats on both sides of same, shall be not less than three feet wide where they begin, and shall be increased in width towards the exits in the ratio of one and one-half inches to five running feet. Aisles having seats on one side only, shall be not less than two feet wide at their beginning and increased in width the same as aisles having seats on both sides. The aggregate capacity of the foyers, lobbies, corridors. passages and rooms for the use of the audience, not including aisle space between seats shall, on each

floor or gallery, be sufficient to contain the entire number to be accommodated on said floor or gallery, in the ratio of one hundred and fifty superficial feet of floor room for every one hundred persons. Gradients or inclined planes shall be employed instead of steps where possible to overcome slight difference of level in or between aisles, corridors and passages. Every theatre accommodating three hundred persons shall have at least two exits; when accommodating five hundred persons, at least three exits shall be provided; these exits not referring to or including the exits to the open court at the side of the theatre. Doorways of exit or entrance for the use of the public shall be not less than five feet in width, and for every additional one hundred persons or portions thereof to be accommodated, in excess of five hundred, an aggregate of twenty inches additional exit width must be allowed. All doors of exit or entrance shall open outwardly and be hung to swing in such a manner as not to become an obstruction in a passage or corridor, and no such doors shall be closed and locked during any representation, or when the building is open to the public. Distinct and separate places of exit and entrance shall be provided for each gallery above the first. A common place of exit and entrance may serve for the main floor of the auditorium and the first gallery, provided its capacity be equal to the aggregate capacity of the outlets from the main floor and the said gallery. No passage leading to any stairway communicating with any entrance or exit shall be less than four feet in width in any part thereof. All stairs within the building shall be constructed of fireproof material throughout. Stairs from balconies and galleries shall not communicate with the basement or cellar. All stairs shall have treads of uniform width and risers

of uniform height throughout in each flight. Stairways serving for the exit of fifty people shall be at least four feet wide, between railings, or between walls, and for every additional fifty people to be accommodated six inches must be added to their width. The width of all stairs shall be measured in the clear between handrails. In no case shall the risers of any stairs exceed seven and a half inches in height, nor shall the treads, exclusive of nosings, be less than ten and one-half inches wide in straight stairs. No circular or winding stairs for the use of the public shall be permitted. Where the seating capacity is for more than one thousand people, there shall be at least two independent staircases, with direct exterior outlets, provided for each gallery in the auditorium, where there are not more than two galleries, and the same shall be located on opposite sides of said galleries. Where there are more than two galleries one or more additional staircases shall be provided, the outlets from which shall communicate directly with the principal exit or other exterior outlets. All said staircases shall be of width proportionate to the seating capacity as elsewhere herein prescribed. Where the seating capacity is for one thousand people, or less, two direct lines of staircases only shall be required, located on opposite sides of the galleries, and in both cases shall extend from the sidewalk level to the upper gallery, with outlets from each gallery to each of said staircases. At least two independent staircases, with direct exterior outlets, shall also be provided for the service of the stage and shall be located on the opposite sides of the same. All inside stairways leading to the upper galleries of the auditorium shall be inclosed on both sides with walls of fireproof materials. Stairs leading to the first or lower gallery may be left open on one side.

in which case they shall be constructed as herein provided for similar stairs leading from the entrance hall to the main floor of the auditorium. But in no case shall stairs leading to any gallery be left open on both sides. When straight stairs return directly on themselves, a landing of the full width of both flights, without any steps shall be provided. The outer line of landings shall be curved to a radius of not less than two feet, to avoid square angles. Stairs turning at an angle shall have a proper landing without winders introduced at said turn. In stairs, when two side flights connect with one main flight, no winders shall be introduced, and the width of the main flight shall be at least equal to the aggregate width of the side flights. All stairs shall have proper landings introduced at convenient distances. All inclosed staircases shall have, on both sides, strong hand-rails firmly secured to the wall about three inches distant therefrom and about three feet above the stairs, but said hand-rails shall not run on level platforms and landings where the same is more in length than the width of the stairs. All staircases eight feet and over in width shall be provided with a centre hand-rail of metal, not less than two inches in diameter, placed at a height of about three feet above the centre of the treads, and supported on wrought metal or brass standards of sufficient strength, placed not nearer than four feet nor more than six feet apart, and securely bolted to the treads or risers of stairs, or both, and at the head of each flight of stairs, on each landing, the post or standard shall be at least six feet in height, to which the rail shall be secured. Every steam boiler which may be required for heating or other purposes shall be located outside of the building, and the space allotted to the same shall be inclosed by

walls of masonry on all sides, and the ceiling of such space shall be constructed of fireproof materials. All doorways in said walls shall have fireproof doors. No floor register for heating shall be permitted. No coil or radiator shall be placed in any aisle or passageway used as an exit; but all said coils and radiators shall be placed in recesses formed in the wall or partition to receive the same. All supply, return or exhaust pipes shall be properly incased and protected where passing through floors or near woodwork. Stand-pipes four inches in diameter shall be provided with hose attachments on every floor and gallery. as follows, namely: One on each side of the auditorium in each tier, also on each side of the stage in each tier, and at least one in the property-room and one in the carpenter's shop, if the same be contiguous to the building. All such stand-pipes shall be kept clear from obstruction. Said stand-pipes shall be separate and distinct, receiving their supply of water direct from the power pump or pumps, and shall be fitted with the regulation couplings of the Fire Department, and shall be kept constantly filled with water by means of an automatic power pump or pumps, of sufficient capacity to supply all the lines of hose when operated simultaneously; and said pump or pumps shall be supplied from the street main and be ready for immediate use at all times during a performance in said building. In addition to the requirements contained in this section, the stand-pipes shall also conform to the requirements contained in section 102 of this Code. A separate and distinct system of automatic sprinklers, with fusible plugs approved by the Department of Buildings supplied with water from a tank located on the roof over the stage and not connected in any manner with the

stand-pipes, shall be placed each side of the proscenium opening and on the ceiling or roof over the stage at such intervals as will protect every square foot of stage surface when said sprinklers are in operation. Automatic sprinklers shall also be placed, wherever practicable, in the dressing-rooms, under the stage and in the carpenter shop, paint-rooms, store-rooms and property-rooms. A proper and sufficient quantity of two and one-half inch hose not less than one hundred feet in length, fitted with the regulation couplings of the Fire Department and with nozzles attached thereto, and with hose spanners at each outlet, shall always be kept attached to each hose attachment as the Fire Commissioner may direct. There shall also be kept in readiness for immediate use on the stage, at least four casks full of water, and two buckets to each cask. Said casks and buckets shall be painted red. There shall also be provided hand pumps or other portable fire extinguishing apparatus and at least four axes, and two twenty-five-feet hooks, two fifteen-feet hooks, and two ten-feet hooks on each tier or floor of the stage. Every portion of the building devoted to the uses or accommodation of the public, also all outlets leading to the streets, and including the open courts and corridors, shall be well and properly lighted during every performance, and the same shall remain lighted until the entire audience has left the premises. All gas or electric lights in the halls, corridors, lobby or any other part of said buildings used by the audience, except the auditorium, must be controlled by a separate shut-off, located in the lobby, and controlled only in that particular place. Gas mains supplying the building shall have independent connections for the auditorium and the stage, and provision shall be made for

shutting off the gas from the outside of the building. When interior gas lights are not lighted by electricity. other suitable appliances, to be approved by the Department of Buildings, shall be provided. All suspended or bracket lights surrounded by glass, in the auditorium, or in any part of the building devoted to the public shall be provided with proper wire-netting underneath. No gas or electric light shall be inserted in the walls, woodwork, ceilings, or in any part of the building unless protected by fireproof materials. All lights in passages and corridors in said buildings, and wherever deemed necessary by the Department of Buildings, shall be protected with proper wire net-work. The foot-lights, in addition to the wire net-work, shall be protected with a strong wire guard and chain, placed not less than two feet distant from said foot-lights, and the trough containing said foot-lights shall be formed of and surrounded by fireproof materials. All border lights shall be constructed according to the best known methods, and subject to the approval of the Department of Buildings, and shall be suspended for ten feet by wire rope. All ducts or shafts used for conducting heated air from the main chandelier, or from any other light or lights, shall be constructed of metal and made double, with an air space between. All stage lights shall have strong metal wire guards or screens, not less than ten inches in diameter, so constructed that any material in contact therewith shall be out of reach of the flames of said stage lights, and must be soldered to the fixture in all cases. The stand-pipes, gas-pipes, electric wires, hose, foot-lights and all apparatus for the extinguishing of fire or guarding against the same, as in this section specified, shall be in charge and under control of the Fire Department, and the Commissioner of said

Department is hereby directed to see that the arrangements in respect thereto are carried out and enforced. A diagram or plan of each tier, gallery or floor, showing distinctly the exits therefrom, each occupying a space not less than fifteen square inches, shall be printed in black lines in a legible manner on the programme of the performance. Every exit shall have over the same on the inside the word EXIT painted in legible letters not less than eight inches high.

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## PART XXII.

### IRON AND STEEL CONSTRUCTION.

Sec. 110.—*Skeleton Construction.* Where columns are used to support iron or steel girders carrying inclosure walls, the said columns shall be of cast iron, wrought iron, or rolled steel, and on their exposed outer and inner surfaces be constructed to resist fire by having a casing of brickwork not less than eight inches in thickness on the outer surfaces, nor less than four inches in thickness on the inner surfaces, and all bonded into the brickwork of the inclosure walls. The exposed sides of the iron or steel girders shall be similarly covered in with brickwork not less than four inches in thickness on the outer surfaces and tied and bonded, but the extreme outer edge of the flanges of beams, or plates or angles connected to the beams, may project to within two inches of the outside surface of the brick casing. The inside surfaces of girders may be similarly covered with brickwork, or if projecting inside of the wall, they shall be protected by terra-cotta, concrete or other fireproof material. Girders for the support of the inclosure walls shall be placed at the floor line of each story.

Sec. 111.—*Steel and Wrought Iron Columns.* No part of a steel or wrought iron column shall be less than one-quarter of an inch thick. No wrought iron or rolled steel column shall have an unsupported length of more than forty times its least lateral dimension or diameter, except as modified by section 138 of this Code, and also except in such cases as the Commissioners of Buildings may specially allow a greater unsupported length. The ends of all columns shall be faced to a plane surface at right angles to the axis of the columns and the connection between them shall be made with splice plates. The joint may be effected by rivets of sufficient size and number to transmit the entire stress, and then the splice plates shall be equal in sectional area to the area of column spliced. When the section of the columns to be spliced is such that spliced plates cannot be used, a connection formed of plates and angles may be used, designed to properly distribute the stress. No material, whether in the body of the column or used as lattice-bar or stay-plate, shall be used in any wrought iron or steel column of less thickness than one-thirty-second of its unsupported width measured between centres of rivets transversely, or one-sixteenth the distance between centres of rivets in the direction of the stress. Stay-plates are to have not less than four rivets, and are to be spaced so that the ratio of length by the least radius of gyration of the parts connected does not exceed forty; the distance between nearest rivets of two stay-plates shall in this case be considered as length. Steel and wrought iron columns shall be made in one, two or three-story lengths, and the materials shall be rolled in one length wherever practicable to avoid intermediate splices. Where any part of the section of a column projects beyond that of the column

below, the difference shall be made up by filling plates secured to column by the proper number of rivets. Shoes of iron or steel, as described for cast iron columns, or built shoes of plates and shapes may be used, complying with same requirements.

Sec. 112.—*Cast Iron Columns.* Cast iron columns shall not have less diameter than five inches or less thickness than three-quarters of an inch. Nor shall they have an unsupported length of more than twenty times their least lateral dimensions or diameter, except as modified by section 138 of this Code, and except the same may form part of an elevator inclosure or staircase, and also except in such cases as the Commissioner of Buildings having jurisdiction, may specially allow a greater unsupported length. All cast iron columns shall be of good workmanship and material. The top and bottom flanges, seats and lugs shall be of ample strength, reinforced by fillets and brackets; they shall be not less than one inch in thickness when finished. All columns must be faced at the ends to a true surface perpendicular to the axis of the column. Column joints shall be secured by not less than four bolts each, not less than three-quarters of an inch in diameter. The holes for these bolts shall be drilled to a template. The core of a column below a joint shall be not larger than the core of the column above and the metal shall be tapered down for a distance of not less than six inches, or a joint plate may be inserted of sufficient strength to distribute the load. The thickness of metal shall be not less than one-twelfth the diameter or the greatest lateral dimension of cross section, but never less than three-quarters of an inch. Wherever the core of a cast iron column has shifted more than one-fourth the thickness of the shell, the

strength shall be computed assuming the thickness of metal all around equal to the thinnest part, and the column shall be condemned if this computation shows the strength to be less than required by this Code. Wherever blowholes or imperfections are found in a cast iron column which reduces the area of the cross-section at that point more than ten per cent., such column shall be condemned. Cast iron posts or columns not cast with one open side or back, before being set up in place, shall have a three-eighths of an inch hole drilled in the shaft of each post or column, by the manufacturer or contractor furnishing the same, to exhibit the thickness of the castings; and any other similar sized hole or holes which the Commissioners of Buildings may require, shall be drilled in the said posts or columns by the said manufacturer or contractor at his own expense.

Iron or steel shoes or plates shall be used under the bottom tier of columns to properly distribute the load on the foundation. Shoes shall be planed on top.

Sec. 113.—*Double Columns.* In all buildings hereafter erected or altered, where any iron or steel column or columns are used to support a wall or part thereof, whether the same be an exterior or an interior wall, and columns located below the level of the sidewalk which are used to support exterior walls or arches over vaults, the said column or columns shall be either constructed double, that is, an outer and an inner column, the inner column alone to be of sufficient strength to sustain safely the weight to be imposed thereon, and the outer columns shall be one inch shorter than the inner columns, or such other iron or steel column of sufficient strength and protected with not less than two inches of fireproof material securely applied.

except that double or protected columns shall not be required for walls fronting on streets or courts.

Sec. 114.—*Party Wall Posts.* If iron or steel posts are to be used as party posts in front of a party wall, and intended for two buildings, then the said posts shall be not less in width than the thickness of the party wall, nor less in depth than the thickness of the wall to be supported above. Iron or steel posts in front of side, division or party walls, shall be filled up solid with masonry and made perfectly tight between the posts and walls. Intermediate posts may be used, which shall be sufficiently strong, and the lintels thereon shall have sufficient bearings to carry the weight above with safety.

Sec. 115.—*Plates Between Joints of Open Back Columns.* Iron or steel posts or columns with one or more open sides and backs shall have solid iron plates on top of each, excepting where pierced for the passage of pipes.

Sec. 116.—*Steel and Iron Girders.* Rivets in flanges shall be spaced so that the least value of a rivet for either shear or bearing is equal or greater than the increment of strain due to the distance between adjoining rivets. All other rules given under riveting shall be followed. The length of rivets between heads shall be limited to four times the diameter. The compression flange of plate girders shall be secured against buckling, if its length exceeds thirty times its width. If splices are used, they shall fully make good the members spliced in either tension or compression. Stiffeners shall be provided over supports and under concentrated loads; they shall be of sufficient strength, as a column,

to carry the loads, and shall be connected with a sufficient number of rivets to transmit the stresses into the web plate. Stiffeners shall fit so as to support the flanges of the girders. If the unsupported depth of the web plate exceeds sixty times its thickness, stiffeners shall be used at intervals not exceeding one hundred and twenty times the thickness of the web.

Sec. 117.—*Rolled Steel and Wrought Iron Beams Used as Girders.* When rolled steel or wrought iron beams are used in pairs to form a girder, they shall be connected together by bolts and iron separators at intervals of not more than five feet. All beams twelve inches and over in depth shall have at least two bolts to each separator.

Sec. 118.—*Cast Iron Lintels.* Cast iron lintels shall not be used for spans exceeding sixteen feet. Cast iron lintels or beams shall be not less than three-quarters of an inch in thickness in any of their parts.

Sec. 119.—*Plates Under Ends of Lintels and Girders.* When the lintels or girders are supported at the ends by brick walls or piers they shall rest upon cut granite or bluestone blocks at least ten inches thick, or upon cast iron plates of equal strength by the full size of the bearings. In case the opening is less than twelve feet, the stone blocks may be five inches in thickness, or cast iron plates of equal strength by the full size of the bearings, may be used, provided that in all cases the safe loads do not exceed those fixed by section 139 of this Code.

Sec. 120.—*Rolled Steel and Wrought Iron Floor and Roof Beams.* All rolled steel and wrought iron floor and roof beams used in buildings shall be of full weight, straight and free from injurious defects. Holes

for tie rods shall be placed as near the thrust of the arch as practicable. The distance between tie rods in floors shall not exceed eight feet, and shall not exceed eight times the depth of floor beams twelves inches and under. Channels or other shapes where used as skew-backs, shall have a sufficient resisting moment to take up the thrust of the arch. Bearing plates of stone or metal shall be used to reduce the pressure on the wall to the working stress. Beams resting on girders shall be securely riveted or bolted to the same; where joined on a girder, tie straps of one-half inch net sectional area shall be used, with rivets or bolts to correspond. Anchors shall be provided at the ends of all such beams bearing on walls.

Sec. 121.—*Templates Under Ends of Steel or Iron Floor Beams.* Under the ends of all iron or steel beams where they rest on the walls, a stone or cast iron template shall be built into the walls. Templates under ends of steel or iron beams shall be of such dimensions as to bring no greater pressure upon the brickwork than that allowed by section 139 of this Code. When rolled iron or steel floor beams, not exceeding six inches in depth, are placed not more than thirty inches on centres, no templates shall be required.

Sec. 122.—*Framing and Connecting Structural Work.* All iron or steel trimmer beams, headers, and tail beams, shall be suitably framed and connected together, and the iron or steel girders, columns, beams, trusses and all other iron work of all floors and roofs shall be strapped, bolted, anchored and connected together, and to the walls.

All beams framed into and supported by other beams or girders, shall be connected thereto by angles or knees

of a proper size and thickness, and have sufficient bolts or rivets in both legs of each connecting angle to transmit the entire weight or load coming on the beam to the supporting beam or girder. In no case shall the shearing value of the bolts or rivets or the bearing value of the connection angles, provided for in section 139 of this Code, be exceeded.

Sec. 123.—*Riveting of Structural Steel and Wrought Iron Work.* The distance from centre of a rivet hole to the edge of the material shall be not less than—

| | | | |
|---|---|---|---|
| 5/8 | of an inch for | 1/2 | inch rivets, |
| 7/8 | " | 5/8 | " |
| 1 1/8 | " | 3/4 | " |
| 1 3/8 | " | 7/8 | " |
| 1 1/2 | " | 1 | " |

Wherever possible, however, the distance shall be equal to two diameters. All rivets, wherever practicable, shall be machine driven. The rivets in connections shall be proportioned and placed to suit the stresses. The pitch of rivets shall never be less than three diameters of the rivet, nor more than six inches. In the direction of the stress it shall not exceed sixteen times the least thickness of the outside member. At right angles to the stress it shall not exceed thirty-two times the least thickness of the outside member. All holes shall be punched accurately, so that upon assembling a cold rivet will enter the hole without straining the material by drifting. Occasional slight errors shall be corrected by reaming. The rivets shall fill the holes completely; the heads shall be hemispherical and concentric with the axis of the rivet. Gussets shall be provided wherever required, of sufficient thickness and size to accommodate the number of rivets necessary to make a connection.

Sec. 124.—*Bolting of Structural Steel and Wrought Iron Work.* Where riveting is not made mandatory connections may be effected by bolts. These bolts shall be of wrought iron or mild steel, and they shall have U. S. Standard threads. The threads shall be full and clean, the nut shall be truly concentric with the bolt. and the thread shall be of sufficient length to allow the nut to be screwed up tightly. When bolts go through bevel flanges, bevel washers to match shall be used so that head and nut of bolt are parallel. When bolts are used for suspenders, the working stresses shall be reduced for wrought iron to ten thousand pounds and for steel to fourteen thousands pounds per square inch of net area, and the load shall be transmitted into the head or nut by strong washers distributing the pressure evenly over the entire surface of the same. Turned bolts in reamed holes shall be deemed a substitute for field rivets.

Sec. 125.—*Steel and Wrought Iron Trusses.* Trusses shall be of such design that the stresses in each member can be calculated. All trusses shall be held rigidly in position by efficient systems of lateral and sway bracing, struts being spaced so that the maximum limit of length to least radius of gyration, established in Section 111 of this Code, is not exceeded. Any member of a truss subjected to transverse stress, in addition to direct tension or compression, shall have the stresses causing such strain added to the direct stresses coming on the member, and the total stresses thus formed shall in no case exceed the working stresses stated in Section 139 of this Code.

Sec. 126.—*Riveted Steel and Wrought Iron Trusses.* For tension members, the actual net area only, after deducting rivet holes, one-eighth inch larger than the

rivets, shall be considered as resisting the stress. If tension members are made of angle irons riveted through one flange only, only that flange shall be considered in proportioning areas. Rivets to be proportioned as prescribed in section 123 of this Code. If the axes of two adjoining web members do not intersect within the line of the chords, sufficient area shall be added to the chord to take up the bending strains. No bolts shall be used in the connections of riveted trusses, excepting when riveting is impracticable, and then the holes shall be drilled or reamed.

Sec. 127.—*Steel and Iron Pin-Connected Trusses.* The bending stresses on pins shall be limited to twenty thousand pounds for steel and fifteen thousand pounds for iron. All compression members in pin-connected trusses shall be proportioned, using seventy-five per cent. of the permissible working stress for columns. The heads of all eye-bars shall be made by upsetting or forging. No weld will be allowed in the body of the bar. Steel eye-bars shall be annealed. Bars shall be straight before boring. All pin-holes shall be bored true, and at right angles to the axis of the members, and must fit the pin within one-thirty-second of an inch. The distances of pin-holes from centre to centre for corresponding members shall be alike, so that, when piled upon one another, pins will pass through both ends without forcing. Eyes and screw ends shall be so proportioned that upon test to destruction, fracture will take place in the body of the member. All pins shall be accurately turned. Pin-plates shall be provided wherever necessary to reduce the stresses on pins to the working stresses prescribed in section 139 of this Code. These pin-plates shall be connected to the members by rivets of sufficient size and number to transmit the

stresses without exceeding working stresses. All rivets in members of pin-connected trusses shall be machine driven. All rivets in pin-plates which are necessary to transmit stress shall be also machine driven. The main connections of members shall be made by pins. Other connections may be made by bolts. If there is a combination of riveted and pin-connected members in one truss, these members shall comply with the requirements for pin-connected trusses; but the riveting shall comply with the requirements of section 126 of this Code.

Sec. 128.—*Iron and Other Metal Fronts to Be Filled In.* All cast iron or metal fronts shall be backed up or filled in with masonry of the thicknesses provided for in sections 31 and 32.

Sec. 129.—*Painting of Structural Metal Work.* All structural metal work shall be cleaned of all scale, dirt and rust, and be thoroughly coated with one coat of paint. Cast iron columns shall not be painted until after inspection by the Department of Buildings. Where surfaces in riveted work come in contact, they shall be painted before assembling. After erection all work shall be painted at least one additional coat. All iron or steel used under water shall be inclosed with concrete.

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## PART XXIII.

### Floor Loads—Temporary Supports.

Sec. 130.—*Floor Loads.* The dead loads in all buildings shall consist of the actual weight of walls, floors, roofs, partitions, and all permanent construction.

The live or variable loads shall consist of all loads other than dead loads.

Every floor shall be of sufficient strength to bear safely the weight to be imposed thereon in addition to the weight of the materials of which the floor is composed; if to be used as a dwelling-house, apartment-house, tenement-house, hotel or lodging-house, each floor shall be of sufficient strength in all its parts to bear safely upon every superficial foot of its surface not less than sixty pounds; if to be used for office purposes not less than seventy-five pounds upon every superficial foot above the first floor, and for the latter floor one hundred and fifty pounds; if to be used as a school or place of instruction, not less than seventy-five pounds upon every superficial foot; if to be used for stable and carriage house purposes, not less than seventy-five pounds upon every superficial foot; if to be used as a place of public assembly, not less than ninety pounds upon every superficial foot; if to be used for ordinary stores, light manufacturing and light storage, not less than one hundred and twenty pounds upon every superficial foot; if to be used as a store where heavy materials are kept or stored, warehouse, factory or for any other manufacturing or commercial purpose, not less than one hundred and fifty pounds upon every superficial foot.

The strength of factory floors intended to carry running machinery shall be increased above the minimum given in this section in proportion to the degree of vibratory impulse liable to be transmitted to the floor, as may be required by the Commissioner of Buildings having jurisdiction. The roofs of all buildings having a pitch of less than twenty degrees shall be proportioned to bear safely fifty pounds upon every superficial foot of their surface, in addition to the weight of materials composing the same. If the pitch be more than twenty

degrees the live load shall be assumed at thirty pounds upon every superficial foot measured on a horizontal plane. For sidewalks between the curb and area lines the live load shall be taken at three hundred pounds upon every superficial foot. Every column, post or other vertical support shall be of sufficient strength to bear safely the weight of the portion of each and every floor depending upon it for support, in addition to the weight required as before stated to be supported safely upon said portion of said floors. For the purpose of determining the carrying capacity of columns in dwellings, office buildings, stores, stables and public buildings when over five stories in height, a reduction of the live loads shall be permissible as follows: For the roof and top floor the full live loads shall be used; for each succeeding lower floor it shall be permissible to reduce the live load by five per cent. until fifty per cent. of the live loads fixed by this section is reached, when such reduced loads shall be used for all remaining floors.

Sec. 131.—*Load on Floors to Be Distributed.* The weight placed on any of the floors of any building shall be safely distributed thereon. The Commissioner of Buildings having jurisdiction may require the owner or occupant of any building, or of any portion thereof, to re-distribute the load on any floor, or to lighten such load, where he deems it to be necessary.

Sec. 132.—*Strength of Existing Floors to Be Calculated.* In all warehouses, storehouses, factories, workshops, and stores where heavy materials are kept or stored, or machinery introduced, the weight that each floor will safely sustain upon each superficial foot thereof, or upon each varying part of such floor, shall be estimated by the owner or occupant, or by a competent

person employed by the owner or occupant. Such estimate shall be reduced to writing, on printed forms furnished by the Department of Buildings, stating the material, size, distance apart and span of beams and girders, posts or columns to support floors, and its correctness shall be sworn to by the person making the same, and it shall thereupon be filed in the office of the Department of Buildings. But if the Commissioners of Buildings shall have cause to doubt the correctness of said estimate, they are empowered to revise and correct the same, and for the purpose of such revision the officers and employees of the Department of Buildings may enter any building and remove so much of any floor or other portion thereof as may be required to make necessary measurements and examination. When the correct estimate of the weight that the floors in any such buildings will safely sustain has been ascertained, as herein provided, the Department of Buildings shall approve the same, and thereupon the owner or occupant of said building, or of any portion thereof, shall post a copy of such approved estimate in a conspicuous place on each story, or varying parts of each story, of the building to which it relates. Before any building hereafter erected is occupied and used, in whole or in part, for any of the purposes aforesaid, and before any building, erected prior to the passage of this Code, but not at such time occupied for any of the aforesaid purposes, is occupied or used, in whole or in part, for any of said purposes, the weight that each floor will safely sustain upon each superficial foot thereof, shall be ascertained and posted in a conspicuous place on each story or varying parts of each story of the building to which it relates. No person shall place, or cause or permit to be placed on any floor of any building

any greater load than the safe load thereof, as correctly estimated and ascertained as herein provided. Any expense necessarily incurred in removing any floor or other portion of any building for the purpose of making any examination herein provided for shall be paid by the Comptroller of the City of New York, upon the requisition of the Board of Buildings, out of the fund paid over to said board under the provisions of section 158 of this Code. Such expenses shall be a charge against the person or persons by whom or on whose behalf said estimate was made, provided such examination proves the floors of insufficient strength to carry with safety the loads found upon them when such examination was made; and shall be collected in an action to be brought by the Corporation Counsel against said person or persons, and the sum so collected shall be paid over to the said Comptroller to be deposited in said fund in reimbursement of the amount paid as aforesaid. When the architect of record for any building has filed with his application to build the data required to determine the strength of floors, on one of the blank forms provided for that purpose, such examination shall not be required provided that the purposes and uses of the building have not been changed.

Sec. 133.—*Strength of Temporary Supports.* Every temporary support placed under any structure, wall girder or beam, during the erection, finishing, alteration, or repairing of any building or structure or any part thereof, shall be of sufficient strength to safely carry the load to be placed thereon.

## PART XXIV.

### Calculations. Strength of Materials.

Sec. 134.—*Safe Load for Masonry Work.* The safe-bearing load to apply to brickwork shall be taken at eight tons per superficial foot, when lime mortar is used; eleven and one-half tons per superficial foot when lime and cement mortar mixed is used; fifteen tons per superficial foot when cement mortar is used. The safe-bearing load to apply to rubble-stone work shall be taken at ten tons per superficial foot when Portland cement is used; when cement other than Portland is used, eight tons per superficial foot; when lime and cement mortar mixed is used, seven tons per superficial foot; and when lime mortar is used, five tons per superficial foot. The safe-bearing load to apply to concrete when Portland cement is used shall be taken at fifteen tons per superficial foot; and when cement other than Portland is used, eight tons per superficial foot.

Sec. 135.—*Weights of Certain Materials.* In computing the weight of walls, a cubic foot of brickwork shall be deemed to weigh one hundred and fifteen pounds. Sandstone, white marble, granite and other kinds of building stone shall be deemed to weigh one hundred and seventy pounds per cubic foot.

Sec. 136.—*Computations for Strength of Materials.* The dimensions of each piece or combination of materials required shall be ascertained by computation, according to the rules prescribed by this Code.

Sec. 137.—*Factors of Safety.* Where the unit stress for any material is not prescribed in this Code the relation of allowable unit stress to ultimate strength shall be as one to four for metals, subjected to tension or transverse stress; as one to six for timber, and as

one to ten for natural or artificial stones and brick or stone masonry. But wherever working stresses are prescribed in this Code, varying the factors of safety hereinabove given, the said working stresses shall be used.

Sec. 138.—*Strength of Columns.* In columns or compression members with flat ends of cast iron, steel, wrought iron or wood, the stress per square inch shall not exceed that given in the following tables:

| When the Length Divided by Least Radius of Gyration Equals | Working Stresses per Square Inch of Section | | |
|---|---|---|---|
| | Cast Iron | Steel | Wrought Iron |
| 120 | ..... | 8,240 | 4,400 |
| 110 | ..... | 8,820 | 5,200 |
| 100 | ..... | 9,400 | 6,000 |
| 90 | ..... | 9,980 | 6,800 |
| 80 | ..... | 10,560 | 7,600 |
| 70 | 9,200 | 11,140 | 8,400 |
| 60 | 9,500 | 11,720 | 9,200 |
| 50 | 9,800 | 12,300 | 10,000 |
| 40 | 10,100 | 12,880 | 10,800 |
| 30 | 10,400 | 13,460 | 11,600 |
| 20 | 10,700 | 14,040 | 12,400 |
| 10 | 11,000 | 14,620 | 13,200 |

And in like proportion for intermediate ratios.

| When the Length Divided by the Least Diameter Equals | Working Stresses per Square Inch of Section | | |
|---|---|---|---|
| | Long leaf yellow pine | White pine, Norway pine, spruce | Oak |
| 30..... | 460 | 350 | 390 |
| 25..... | 550 | 425 | 475 |
| 20..... | 640 | 500 | 560 |
| 15..... | 730 | 575 | 645 |
| 12..... | 784 | 620 | 696 |
| 10..... | 820 | 650 | 730 |

And in like proportion for intermediate ratios. Five-eighths the values given for white pine shall also apply to chestnut and hemlock posts. For locust posts use one and one-half the value given for white pine.

Columns and compression members shall not be used having an unsupported length of greater ratios than given in the tables. Any column eccentrically loaded shall have the stresses caused by such eccentricity computed, and the combined stresses resulting from such eccentricity at any part of the column, added to all other stresses at that part, shall in no case exceed the working stresses stated in this Code.

The eccentric load of a column shall be considered to be distributed equally over the entire area of that column at the next point below at which the column is securely braced laterally in the direction of the eccentricity.

Sec. 139.—*Working Stresses.* The safe carrying capacity of the various materials of construction (except in the case of columns) shall be determined by the following working stresses in pounds per square inch of sectional area:

Compression (Direct).

| | |
|---|---|
| Rolled steel | 16,000 |
| Cast steel | 16,000 |
| Wrought iron | 12,000 |
| Cast iron (in short blocks) | 16,000 |
| Steel pins and rivets (bearing) | 20,000 |
| Wrought iron pins and rivets (bearing) | 15,000 |

| | With Grain. | Across Grain. |
|---|---|---|
| Oak | 900 | 800 |
| Yellow pine | 1,000 | 600 |
| White pine | 800 | 400 |
| Spruce | 800 | 400 |
| Locust | 1,200 | 1,000 |
| Hemlock | 500 | 500 |
| Chestnut | 500 | 1,000 |

| | |
|---|---|
| Concrete (Portland) cement, 1; sand, 2; stone, 4 | 230 |
| Concrete (Portland) cement, 1; sand, 2; stone, 5 | 208 |
| Concrete, Rosendale, or equal, cement, 1; sand, 2; stone, 4 | 125 |
| Concrete, Rosendale, or equal, cement, 1; sand, 2; stone, 5 | 111 |
| Rubble stonework in Portland cement mortar | 140 |
| Rubble stonework in Rosendale cement mortar | 111 |

| | |
|---|---|
| Rubble stonework in lime and cement mortar | 97 |
| Rubble stonework in lime mortar | 70 |
| Brickwork in Portland cement mortar; cement, 1; sand, 3 | 250 |
| Brickwork in Rosendale, or equal, cement mortar; cement, 1; sand, 3 | 208 |
| Brickwork in lime and cement mortar; cement, 1; lime, 1; sand, 6 | 160 |
| Brickwork in lime mortar; lime 1; sand, 4 | 111 |
| Granites (according to test) | 1,000 to 2,400 |
| Greenwich stone | 1,200 |
| Gneiss (New York City) | 1,300 |
| Limestones (according to test) | 700 to 2,300 |
| Marbles (according to test) | 600 to 1,200 |
| Sandstones (according to test) | 400 to 1,600 |
| Bluestone, North river | 2,000 |
| Brick (Haverstraw, flatwise) | 300 |
| Slate | 1,000 |

Tension (Direct).

| | |
|---|---|
| Rolled steel | 16,000 |
| Cast steel | 16,000 |
| Wrought iron | 12,000 |
| Cast iron | 3,000 |
| Yellow pine | 1,200 |
| White pine | 800 |
| Spruce | 800 |
| Oak | 1,000 |
| Hemlock | 600 |

Shear.

| | |
|---|---|
| Steel web plates | 9,000 |
| Steel shop rivets and pins | 10,000 |

Shear.—*Continued.*

| | |
|---|---|
| Steel field rivets | 8,000 |
| Steel field bolts | 7,000 |
| Wrought iron web plates | 6,000 |
| Wrought iron shop rivets and pins | 7,500 |
| Wrought iron field rivets | 6,000 |
| Wrought iron field bolts | 5,500 |
| Cast iron | 3,000 |

| | With Fibre. | Across Fibre. |
|---|---|---|
| Yellow pine | 70 | 500 |
| White pine | 40 | 250 |
| Spruce | 50 | 320 |
| Oak | 100 | 600 |
| Locust | 100 | 720 |
| Hemlock | 40 | 275 |
| Chestnut | .. | 150 |

Safe Extreme Fibre Stress (Bending).

| | |
|---|---|
| Rolled steel beams | 16,000 |
| Rolled steel pins, rivets and bolts | 20,000 |
| Riveted steel beams (net flange section) | 14,000 |
| Rolled wrought iron beams | 12,000 |
| Rolled wrought iron pins, rivets and bolts | 15,000 |
| Riveted wrought iron beams (net flange section) | 12,000 |
| Cast iron, compression side | 16,000 |
| Cast iron, tension side | 3,000 |
| Yellow pine | 1,200 |
| White pine | 800 |
| Spruce | 800 |
| Oak | 1,000 |
| Locust | 1,200 |
| Hemlock | 600 |
| Chestnut | 800 |
| Granite | 180 |

Safe Extreme Fibre Stress (Bending).—*Continued.*

| | |
|---|---|
| Greenwich stone | 150 |
| Gneiss (New York City) | 150 |
| Limestone | 150 |
| Slate | 400 |
| Marble | 120 |
| Sandstone | 100 |
| Bluestone, North river | 300 |
| Concrete (Portland) cement, 1; sand, 2; stone, 4 | 30 |
| Concrete (Portland) cement, 1; sand, 2; stone, 5 | 20 |
| Concrete (Rosendale, or equal) cement, 1; sand, 2; stone, 4 | 16 |
| Concrete (Rosendale, or equal) cement, 1; sand, 2; stone, 5 | 10 |
| Brick (common) | 50 |
| Brickwork (in cement) | 30 |

Sec. 140.—*Wind Pressure.* All structures exposed to wind shall be designed to resist a horizontal wind pressure of thirty pounds for every square foot of surface thus exposed, from the ground to the top of same, including roof, in any direction. In no case shall the overturning moment due to wind pressure exceed seventy-five per centum of the moment of stability of the structure. In all structures exposed to wind, if the resisting moments of the ordinary materials of construction, such as masonry, partitions, floors and connections are not sufficient to resist the moment of distortion due to wind pressure, taken in any direction on any part of the structure, additional bracing shall be introduced sufficient to make up the difference in the moments. In calculations for wind bracing, the

working stresses set forth in this Code may be increased by fifty per centum. In buildings under one hundred feet in height, provided the height does not exceed four times the average width of the base, the wind pressure may be disregarded.

## PART XXV.

### Plumbing and Drainage.

Sec. 141.—*Plumbing, Drainage, and Repairs Thereto.*

I. The drainage and plumbing of all buildings, both public and private, shall be executed in accordance with the rules and regulations of the Department of Buildings. Said rules and regulations and any change thereof shall be published in the "City Record" on eight successive Mondays before the same shall become operative.

Repairs or alterations of such plumbing or drainage may be made without the filing and approval of drawings and descriptions in the Department of Buildings, but such repairs or alterations shall not be construed to include cases where new vertical or horizontal lines of soil, waste, vent or leader pipes are proposed to be used.

Notice of such repairs or alterations shall be given to the said Department before the same are commenced in such cases as shall be prescribed by the rules and regulations of the said Department, and the work shall be done in accordance with the said rules and regulations.

II. Once in each year, every employing or master plumber carrying on his trade, business or calling in The City of New York, shall register his name and address at the office of the Department of Buildings in said

city under such rules and regulations as said Department shall prescribe and as hereinafter provided.

And thereupon he shall be entitled to receive a certificate of such registration from said Department, provided, however, that such employing or master plumber shall, at the time of applying for such registration, hold a certificate of competency from the Examining Board of Plumbers of said city.

The time for making such registration shall be during the month of March in each year. Where, however, a person obtains a certificate of competency at a time other than in the month of March in any year, he may register within thirty days after obtaining such certificate of competency, but he must also register in the month of March in each year as herein provided.

Such registration may be canceled by the Department of Buildings for a violation of the rules and regulations for the plumbing and drainage of said Department of Buildings, duly adopted and in force pursuant to the provisions of this section or whenever the person so registered ceases to be a master or employing plumber, after a hearing had before said Department, and upon a prior notice of not less than ten days, stating the grounds of complaint and served upon the person charged with the violation of the aforesaid rules and regulations.

III. After this Code takes effect, no person, corporation or copartnership shall engage in, or carry on the trade, business or calling of employing or master plumber in The City of New York, unless the name and address of such person and the president, secretary or treasurer of such corporation and each and every member of such copartnership shall have been registered as above provided.

IV. No person or persons shall expose the sign of "Plumber" or "Plumbing" or a sign containing words of similar import and meaning in The City of New York unless each person forming such a copartnership shall have obtained a certificate of competency from the Examining Board of Plumbers, and shall have registered as herein provided.

A master or employing plumber within the meaning of this Code is any person who hires or employs a person or persons to do plumbing work.

V. The Inspectors of Plumbing in the Department of Buildings in addition to their other duties shall ascertain whether the employing or master plumber having charge of the construction, repairing or alteration of any plumbing work performed in The City of New York is registered as herein provided, and if such person is not so registered, then such inspectors shall forthwith report to said department the name of said plumber.

VI. The Commissioner of Buildings having jurisdiction may present a petition to a justice of the Supreme Court or to a special term thereof for an order restraining the person so reported from acting as an employing or master plumber until he registers pursuant to the provisions of this Code. Said petition shall state that the said person is engaged in plumbing work as an employing or master plumber without having so registered, and shall be verified by the inspector making the said report.

Upon the presentation of the petition, the Court shall grant an order requiring such plumber to appear before a special term of the Supreme Court on a date therein specified, not less than two nor more than six days after the granting thereof, to show cause why he

should not be permanently enjoined until he has obtained a certificate of registration as herein required. A copy of such petition and order shall be served upon such person not less than twenty-four hours before the return thereof. On the day specified in such order the Court before whom the same is returnable, shall hear the proofs of the parties and may, if deemed necessary, take testimony in relation to the allegations of the petition.

If the Court is satisfied that such plumber is practicing without having registered as provided by this Code, an order shall be granted enjoining him from acting as an employing or master plumber, until he has so registered.

No undertaking shall be required as a condition to the granting or issuing of such injunction order or by reason thereof.

If after the entry of such order in a County Clerk's office in The City of New York such person shall in violation of such order, practice as an employing or master plumber, he shall be deemed guilty of a criminal contempt of court, and be punishable as for a criminal contempt in the manner provided by the Code of Civil Procedure.

In no case shall the Department of Buildings be liable for costs in any such proceeding, but costs may be allowed against the defendant or defendants in the discretion of the Court.

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## PART XXVI.

### Buildings Raised, Lowered, Altered or Moved.

Sec. 142.—*Buildings Raised, Lowered, Altered or Moved.* Within the fire limits it shall not be lawful for

the owner or owners of any brick dwelling-house with eight-inch walls, or of any wood building already erected that has a peaked roof, to raise the same for the purpose of making a flat roof thereon, unless the same be raised with the same kind of material as the building, and unless such new roof be covered with fireproof material, and provided that such building, when so raised, shall not exceed forty feet in height to the highest part thereof. All such buildings must exceed twenty-five feet in height to the peak of the main roof before the said alteration and raising. In increasing the height of any such building the entire area which such building covers may be raised to a uniform height. If any such building has an extension of less width than the main building the same may be increased in width to the full width of the main building, with the same kind of material and to the same height as the main building. Any such building may be extended either on the front or rear to a depth of not more than fifteen feet and not more than the width of the building, and not more than two stories and basement in height, with the same kind of material as the building. Any frame building situated in a row of frame buildings may be increased in height to conform to the height of adjoining buildings. If any block situated within the fire limits has ninety per cent. of the buildings, located thereon, constructed of frame. any vacant lot situated therein may have a frame building placed thereon provided the same be not more than two stories and basement in height and is to be used for residence purposes only. If any building shall have been built before the street upon which it is located is graded, or if the grade is altered, such building may be raised or lowered to meet the requirements

of such grade. The restrictions contained in this section shall not prohibit one-story and basement frame dwelling-houses from being increased one additional story in height. Within the fire limits no frame building more than two stories in height, now used as a dwelling, shall hereafter be raised or altered to be used as a factory, warehouse or stable.

No wood building within or without the fire limits shall be moved from one lot to another until a statement setting forth the purposes of said removal and the uses to which said building is to be applied is filed in the Department of Buildings, and a permit be first obtained therefor. No wood building shall be moved from without to within the fire limits.

Within the fire limits no brick building shall be enlarged or built upon unless the exterior walls of said addition or enlargement be constructed of incombustible materials; provided, however, that such brick building may be raised, lowered or altered under the same circumstances, and in the manner provided for in this section.

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## PART XXVII.

### Fire Limits.

Sec. 143.—*Fire Limits. No frame or wood structure shall be built hereafter in the City of New York within the following limits:*

In the Borough of Manhattan: Within the Following Described Lines.

Beginning at a point on the North River at the Battery and running thence northerly along the pier headline to a point one hundred feet north of the northerly

side of One Hundred and Sixty-fifth street, and running thence easterly one hundred feet north of the northerly side of One Hundred and Sixty-fifth street to a point one hundred feet west of the westerly side of Broadway; thence northerly on a line drawn always one hundred feet west of the westerly side of Broadway to the bulkhead-line of the Harlem river; thence southerly along the bulkhead-line of the Harlem river to the Bronx Kills; thence easterly along the bulkhead-line of the Bronx Kills to the East river; thence southerly along the East river, passing to the east of Blackwell's Island; and thence continuing by the pierhead-line of the East river to the place of beginning.

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IN THE BOROUGH OF THE BRONX: WITHIN THE FOLLOWING DESCRIBED LINES.

ADOPTED BY THE BOARD OF ALDERMEN, DEC. 12, 1899.
ADOPTED BY THE COUNCIL, DEC. 19, 1899.
APPROVED BY THE MAYOR, DEC. 23, 1899.

Beginning at a point on the eastern bulkhead-line of the Harlem river one hundred feet south of East One Hundred and Sixty-first street, running thence easterly and parallel with East One Hundred and Sixty-first street to the east side of Sheridan avenue and one hundred feet therefrom; thence north on the east side of Sheridan avenue to a point one hundred feet north of the north line of East One Hundred and Sixty-first street; thence easterly and parallel to East One Hundred and Sixty-first street and one hundred feet therefrom to a point one hundred feet west of Park avenue; thence northeasterly and parallel to Park avenue and one hundred feet therefrom to a point distant one hundred feet west of Webster avenue; thence northerly and

parallel to Webster avenue and one hundred feet therefrom to a point one hundred feet northerly of East One Hundred and Seventy-seventh street; thence easterly and parallel to East One Hundred and Seventy-seventh street and one hundred feet therefrom to Third avenue; thence southerly along the westerly boundary line of Crotona Park, and thence easterly along the southerly boundary line of Crotona Park to a point distant one hundred feet east of Prospect avenue; thence along Prospect avenue and one hundred feet east therefrom to Westchester avenue; thence along Westchester avenue and one hundred feet east therefrom to a point one hundred feet east of the easterly line of Robbins avenue; thence southerly and parallel to Robbins avenue one hundred feet east therefrom to the Port Morris Branch Railroad; thence southeasterly along the Port Morris Branch Railroad to the East river; thence southwesterly along the East river, northwesterly along the Bronx Kills and northerly along the Harlem river to the point of beginning.

IN THE BOROUGH OF BROOKLYN: WITHIN THE FOLLOWING DESCRIBED LINES.

Beginning at a point formed by the intersection of Sixtieth street and New York bay; thence running easterly on a line drawn 100 feet south of and parallel with the southerly side of Sixtieth street to Sixth avenue; thence running northerly on a line drawn 100 feet east of and parallel with the easterly side of Sixth avenue to Thirty-sixth street; thence running westerly through the centre line of Thirty-sixth street to Fifth avenue; thence running northerly through the centre line of Fifth avenue to Twenty-fourth street; thence running easterly through the centre line of Twenty-fourth street to Sixth avenue; thence running northerly through the centre line of Sixth avenue to Twenty-third street; thence running easterly through the centre line of Twenty-third street to Seventh avenue; thence running northerly through the centre line of Seventh avenue to Twentieth street; thence running easterly through the centre line of Twentieth street to Ninth avenue, or Prospect park West; thence running northerly through the centre line of Ninth avenue, or Prospect park West to Prospect avenue; thence running easterly through the centre line of Prospect avenue to Eleventh avenue; thence running northerly through the centre line of Eleventh avenue to Fifteenth street; thence running westerly through the centre line of Fifteenth street to Ninth avenue, or Prospect park West; thence northerly through the centre line of Ninth avenue, or Prospect park West to Flatbush avenue; thence southerly along the centre line of Flatbush avenue to Ocean avenue; thence southerly on a line drawn 100 feet west of and parallel with the west side of Flatbush avenue to Avenue E; thence easterly through the centre line

of Avenue E to Flatbush avenue; thence northwesterly on a line drawn 100 feet east of and parallel with the easterly side of Flatbush avenue to Franklin avenue; thence northerly on a line drawn 100 feet east of and parallel with the easterly side of Franklin avenue to Crown street; thence easterly on a line drawn 100 feet south of and parallel with the southerly side of Crown street to East New York avenue; thence easterly on a line drawn 100 feet south of and parallel with the southerly side of East New York avenue to Gillen place; thence northerly on a line drawn 100 feet east of and parallel with the easterly side of Gillen place to Broadway; thence northerly on a line drawn 100 feet east of and parallel with the east side of Broadway to Pilling street; thence easterly through the centre line of Pilling street to Central avenue; thence northwesterly on a line drawn 100 feet east of and parallel with the easterly side of Central avenue to Flushing avenue; thence westerly from a line drawn 100 feet north of and parallel with the northerly side of Flushing avenue to Bushwick avenue; thence northerly on a line drawn 100 feet east of and parallel with the easterly side of Bushwick avenue to Metropolitan avenue; thence westerly on a line drawn 100 feet north of and parallel with the northerly side of Metropolitan avenue to Graham avenue; thence northerly on a line drawn 100 feet east of and parallel with the easterly side of Graham avenue to Skillman avenue; thence westerly on a line drawn 100 feet north of and parallel with the northerly side of Skillman avenue to Union avenue; thence northerly on a line drawn 100 feet east of and parallel with the easterly side of Union avenue to North Ninth street; thence northwesterly on a line drawn 100 feet northeast of and parallel with the northeasterly side of North

Ninth street to Bedford avenue; thence easterly on a line drawn 100 feet south of and parallel with the southerly side of Bedford avenue to North Eleventh street; thence northwesterly on a line drawn 100 feet northeast of and parallel with the northeasterly side of North Eleventh street to the East river; thence to Van Brunt street; thence northeasterly on a line drawn 100 feet east of and parallel with the easterly side of Van Brunt street to King street; thence southeasterly on a line drawn 100 feet south of and parallel with the southerly side of King street to Columbia street; thence northeasterly on a line drawn 100 feet east of and parallel with the easterly side of Columbia street to Luqueer street; thence easterly on a line drawn 100 feet south of and parallel with the southerly side of Luqueer street to Hamilton avenue; thence southerly on a line drawn 100 feet west of and parallel with the west side of Hamilton avenue to Court street; thence southwesterly on a line drawn 100 feet east of and parallel with the easterly side of Court street to Gowanus bay and New York bay to the point or place of beginning.

Also beginning at a point formed by the intersection of East river and Noble street; thence running easterly on a line drawn 100 feet south of and parallel with the southerly side of Noble street to Lorimer street; thence southerly on a line drawn 100 feet west of and parallel with the westerly side of Lorimer street to Nassau avenue; thence easterly on a line drawn 100 feet south of and parallel with the southerly side of Nassau avenue to Oakland street; thence northerly on a line drawn 100 feet east of and parallel with the easterly side of Oakland street to Newtown creek, to the East river, to the point or place of beginning.

In that part of the Twenty-ninth Ward bounded by Coney Island avenue on the west, by New York avenue

on the east and by the lines of said ward on the north and south, no row of two or more attached frame stores, dwellings or buildings shall be permitted to be erected; and no frame house or building shall be erected on any lot or building plot covering more than eighty per cent. in width of any such lot or building plot.

*Resolved,* That the Department of Buildings be and it hereby is requested to extend the fire limits in the Eighth Ward, Borough of Brooklyn, to include the territory between the south side of Forty-fifth street and the north side of Sixtieth street, and the easterly side of Sixth avenue and the westerly side of Seventh avenue.

ADOPTED BY THE COUNCIL DEC. 4, 1900.

ADOPTED BY THE BOARD OF ALDERMEN DEC. 11, 1900.

Received by the Municipal Assembly from his Honor, the Mayor, Dec. 26, 1900, without his approval or disapproval thereof; therefore, as provided in Section 40 of the Greater New York Charter, the same took effect as if he had approved it.

AN ORDINANCE relative to frame buildings in the Thirtieth Ward, Borough of Brooklyn.

Be it ordained by the Municipal Assembly of The City of New York, as follows:

Section 1. That section 143 of the Building Code be and the same is hereby amended by adding in the section allotted to the Borough of Brooklyn the following:

Any frame building erected hereafter in the territory included within the following boundary—all in the Thirtieth Ward of the Borough of Brooklyn—namely: Beginning at the Shore road and Bay Ridge avenue, along Bay Ridge avenue, including both sides of said

avenue, to Fourteenth avenue; along Fourteenth avenue, including both sides, to Eighty-sixth street; along Eighty-sixth street, including both sides, to Third avenue; along Third avenue, including both sides, to Ninety-second street; along Ninety-second street, including both sides, to Shore road; along the said Shore road to the point of beginning—shall not occupy more than eighty (80) per cent. in width of the lot on which said building is erected.

ADOPTED BY THE BOARD OF ALDERMEN DEC. 18, 1900.

ADOPTED BY THE COUNCIL DEC. 18, 1900.

Received from his Honor, the Mayor, Jan. 8, 1901, without his approval or disapproval thereof; therefore, as provided in section 40 of the Greater New York Charter, the same took effect as if he had approved it.

IN THE BOROUGH OF QUEENS: WITHIN THE FOLLOWING DESCRIBED LINES.

Bounded on the south by Newtown creek; on the north by the southerly line of Nott avenue; on the west by the East river, and on the east by the westerly line of Van Alst avenue.

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## PART XXVIII.

### FRAME BUILDINGS.

Sec. 144.—*Frame Structures Within the Fire Limits.* The provisions, in this section contained, shall apply to buildings and structures, whether temporary or permanent, within the fire limits, as the said fire limits now are or may hereafter be established.

Temporary one-story frame buildings may be erected for the uses of builders, within the limits of lots where-

on buildings are in course of erection, or on adjoining vacant lots, upon permits issued by the Commissioner of Buildings having jurisdiction.

Temporary structures shall be taken to mean and include platforms, stands, election booths, temporary buildings and circus tents.

Sheds of wood not over fifteen feet high, open on at least one side, with the sides and roof thereof covered with fireproof material, may also be built, but a fence shall not be used as the back or side thereof. Such sheds shall not cover an area exceeding two thousand five hundred square feet, except by permission of the Board of Buildings.

Fences of wood shall not be erected over ten feet high.

Signs of wood shall not be erected over two feet high on any building. Sky signs, or any device in the nature of an advertisement, announcement or direction, supported upon or above or attached to any building, constructed of sheet metal or wire fastened to wood frames, shall be deemed to be wood signs. Before any wood or metal sign shall be placed in position upon, above or attached to the outside of any building, a permit shall first be obtained from the Commissioner of Buildings having jurisdiction. Such sign shall be so constructed, placed and supported as not to be or become dangerous. All signs which shall be dangerous in any manner whatever, shall be repaired and made safe or taken down by the owner, lessee or occupant of the building. No signs or bill boards of wood or metal erected upon uprights or other supports extending into the ground shall be at any point more than ten feet above the surface of the ground, and the same shall be properly supported and braced.

Piazzas or balconies of wood on buildings other than

frame buildings which do not exceed eight feet in width, and which do not extend more than three feet above the second story floor beams, may be erected, provided a permit from the Commissioner of Buildings having jurisdiction, be granted therefor. In connected houses such piazzas or balconies may be built, provided the same are open on the front and have brick ends not less than eight inches thick, carried up above the roof of such piazza or balcony, and coped with stone. The roofs of all piazzas shall be covered with some fireproof material. Frame buildings already erected may have placed on any story piazzas, balconies or bay-windows of wood, the roofs of which may be covered with the same material as the roof of the main building.

Exterior privies, and wood or coal-houses, not exceeding one hundred and fifty square feet in superficial area and eight feet high, may be built of wood, but the roofs thereof must be covered with metal, gravel or slate.

Sec. 145.—*Frame Buildings Damaged.* Every wood or frame building with a brick or other front within the fire limits, which may hereafter be damaged to an amount not greater than one-half of the value thereof exclusive of the valuation of the foundation thereof, at the time of such damage, may be repaired or rebuilt; but if such damage shall amount to more than one-half of such value thereof, exclusive of the value of the foundation, then such building shall not be repaired or rebuilt, but shall be taken down, except as provided in this Code. In case the owner of the damaged building shall be dissatisfied with the decision of the Commissioner of Buildings having jurisdiction that such building is damaged to a greater extent than one-

half of its value, exclusive of the value of the foundation, then the amount and extent of such damage shall be determined upon an examination of the building by one surveyor who shall be appointed by the Commissioner of Buildings having jurisdiction, and one surveyor who shall be appointed by the owner or owners of said premises. In case these two surveyors do not agree, they shall appoint a third surveyor to take part in such examination, and a decision of a majority of them reduced to writing and sworn to, shall be conclusive, and such building shall in no manner be repaired or rebuilt until after such decision shall have been rendered.

Sec. 146.—*Frame Buildings, Outside of Fire Limits.* The provisions of this section shall apply to frame or other buildings hereafter erected outside of the fire limits, as the same are now or may hereafter be established, in portions of The City of New York where streets are now and where they may hereafter be legally established. Three-story frame buildings may be erected to a height of forty feet, said height being taken from the curb-line, where same exists, at the centre of front or side of building on which main entrance to upper floors is located. Where the walls of a building do not adjoin the street or building line then the average level of the ground on which the building stands may be taken in place of the curb-line. The measurement for height shall be to the highest point of roof-beams in case of flat-roof buildings, and to the average height of gable or roof in case of pitched roofs. Towers, turrets and minarets of wood may be erected to a height not to exceed fifteen feet greater than the foregoing limited height, except that the spires of churches may be erected of wood to a height not exceeding ninety feet

from the ground. All footings or bottom stones shall be at least six inches wider on each side than bottom width of foundation walls above, except where the outside of the foundation wall sets on the property line, in which case six inches wider on the inside shall be sufficient. The thickness of footings shall be not less than eight inches, if of stone, and not less than twelve inches if of concrete.

Foundations for frame structures shall be laid not less than four feet below the finished surface of the earth or upon the surface where there is rock bottom, or upon piles or ranging timbers where found necessary. The foundation walls of frame structures exceeding fifteen feet in height, if of stone, shall be not less than eighteen inches thick, and if of brick, not less than twelve inches to the grade and eight inches thick to the under side of the sill. If the foundation and first story walls are constructed of brick the foundation walls shall be not less than twelve inches thick to the first tier of beams and eight inches thick from first tier to second tier of beams; or if these walls are constructed of stone they shall be not less than twenty inches for the foundation wall and eighteen inches for the first story wall; and if the walls are faced with stone ashlar the total thickness shall be four inches greater than in this section specified. In the foundation walls there may be recesses not more than eight feet long for stairs, with brick walls not less than eight inches thick. All chimneys in frame buildings shall be built of brick or stone or other fireproof material. If of brick the flues shall have walls at least eight inches thick, except where flues are lined with burnt-clay pipe, in which case the walls around flues may be four inches thick. All flue linings shall extend

at least one foot above the roof boards. Where chimneys are built of stone the walls of the flues shall be not less than eight inches on all sides, and shall be lined with burnt-clay pipe. All chimneys shall be topped out at least four feet above the highest point of contact with the roof, and be properly capped. Chimneys in party walls or serving two rooms on the same floor may be built in the walls or partitions; elsewhere, they shall be built inside of the frame, except in the case of ornamental or exposed chimneys. In no case shall a frame building be erected within three feet of the side or rear line of a lot, unless the space between the studs on any such side be filled in solidly with not less than two and one-half inches of brickwork or other fireproof material. When two or more such buildings are built continuous the party or division studding shall be not less than four inches thick and filled in solidly with brickwork or other fireproof material extending to the under side of roof boards. When the division walls are of brick they shall be not less than eight inches thick above the foundation wall and extending to under side of roof boards, and the ends of the floor beams shall be so separated that four inches of brick will be between the beams where they rest on said walls. The sills of all frame dwellings, except where the first floor is used for store or business purposes, shall be not less than two feet above the ground to the under side of same. All frame or wood buildings exceeding a height of fifteen feet shall be built with sills, posts, girts, plates and rafters, all of suitable size and properly framed and braced with suitable studs or planks, set at proper distance apart; but this shall not prohibit the use of balloon-framing. The floor beams and rafters shall be not less than two inches in thickness. The covering of roofs may be of shingle. The walls

of light, vent and dumb-waiter shafts, whether exterior or interior, in frame buildings may be constructed of frame. Posts of locust or other hard wood and wood girders may be used instead of brick fore-and-aft partitions in cellars of frame buildings, and it shall not be necessary to use metal or wire lath for the ceilings of cellars or lowest floors of any frame building. The cellar stairs in frame buildings may be placed directly under main stairs, and no brick wall shall be necessary to inclose the same; nor shall areas be required to be built across the front of frame buildings, except where the cellar or basement is used for living purposes. The regulations governing plumbing, drainage and heating, also steam and hot-air pipes and registers, where same extend through or along stud partitions, shall also apply to frame buildings. Frame buildings may be altered, extended, raised or repaired, provided the new portions comply with the provisions of this section. No frame building exceeding three stories in height shall hereafter be erected to be occupied by more than six families, nor shall any frame building already erected, be altered to be occupied by more than six families, nor more than three stories in height. Outside of the fire limits, when any brick or stone building is to be erected of a class that could, under this Code, be constructed of wood, the Commissioner of Buildings having jurisdiction is hereby authorized and directed to allow reasonable modifications of this Code relating to brick buildings, in consideration of incombustible material being used for walls instead of wood.

Sec. 147.—*Frame Buildings; Where Streets Are Not Established.* Within portions of The City of New York where streets have not been or are not legally established and are outside of the prescribed fire limits,

no building or structure other than small outhouses shall be erected without first filing plans and a detailed statement of the proposed construction and obtaining an approval therefor, as provided in Section 4 of this Code. Within the said portions of The City of New York, hotels, tenement houses for occupancy by not more than six families, and places of public assembly may be built of wood, but shall in all other respects comply with the several provisions of this Code relating to such structures; but for all other buildings or structures only so much of the requirements, regulations and restrictions of this Code shall apply as in the opinion of the Commissioner of Buildings having jurisdiction may be necessary for safety and health. The purpose of this section is to permit greater freedom in construction and in plumbing and drainage of buildings in the outlying and undeveloped portions of The City of New York than in those portions where a street system has been adopted by the municipality or established by law.

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## PART XXIX.

### Appeals and Modifications of Law.

Sec. 148.—*The Board of Buildings.* Each Commissioner of Buildings shall have power, with the approval of the Board, to vary or modify any rule or regulation of the Board, or the provisions of Chapter 12 of the Greater New York Charter, or of any existing law or ordinance relating to the construction, alteration or removal of any building or structure erected or to be erected within his jurisdiction, pursuant to the provisions of Section 650 of the Greater New York Charter.

Sec. 149.—*Board of Examiners.* The Board of Examiners for the Boroughs of Manhattan and The Bronx shall be constituted as prescribed by Section 649 of the Greater New York Charter. Each of said examiners shall take the usual oath of office before entering upon his duties. No member of said Board shall pass upon any question in which he is pecuniarily interested. The said Board shall meet as often as once in each week upon notice from the Commissioner of Buildings.

The members of said Board of Examiners, and the Clerk of said Board, shall each be entitled to and shall receive ten dollars for each attendance at a meeting of said Board, to be paid by the Comptroller from the annual appropriation to be made therefor upon the voucher of the Commissioner of Buildings for the Boroughs of Manhattan and The Bronx.

## PART XXX.

### Violations and Penalties. Courts Having Jurisdiction.

Sec. 150.—*Violations and Penalties.* The owner or owners of any building, structure or part thereof, or wall, or any platform, staging or flooring to be used for standing or seating purposes where any violation of this Code shall be placed, or shall exist, and any architect, builder, plumber, carpenter or mason who may be employed or assist in the commission of any such violation, and any and all persons who shall violate any of the provisions of this Code or fail to comply therewith, or any requirement thereof, or who shall violate or fail to comply with, any order or regulation made thereunder, or who shall build in violation of any de-

tailed statement of specifications or plans, submitted and approved thereunder, or of any certificate or permit issued thereunder, shall severally, for each and every such violation and non-compliance, respectively, forfeit and pay a penalty in the sum of fifty dollars. Except that any such person who shall violate any of the provisions of this Code as to the construction of chimneys, fire-places, flues, hot-air pipes and furnaces, or who shall violate any of the provisions of this Code, with reference to the framing or trimming of timbers, girders, beams, or other woodwork in proximity to chimney flues or fire-places, shall forfeit and pay a penalty in the sum of one hundred dollars. But if any said violation shall be removed or be in process of removal within ten days after the service of a notice as hereinafter prescribed, the liability of such a penalty shall cease, and the Corporation Counsel, on request of the Commissioner of Buildings having jurisdiction, shall discontinue any action pending to recover the same, upon such removal or the completion thereof within a reasonable time. Any and all of the aforementioned persons who having been served with a notice as hereinafter prescribed, to remove any violation, or comply with any requirement of this Code, or with any order or regulation made thereunder, shall fail to comply with said notice within ten days after such service or shall continue to violate any requirement of this Code in the respect named in said notice shall pay a penalty of two hundred and fifty dollars. For the recovery of any said penalty or penalties an action may be brought in any municipal court, or court of record, in said city in the name of The City of New York; and whenever any judgment shall be rendered therefor, the same shall be collected and enforced, as prescribed and directed by the Code of Civil Procedure

of the State of New York. The Commissioner of Buildings having jurisdiction, through the Corporation Counsel, is hereby authorized, in his discretion, good and sufficient cause being shown therefor, to remit any fine or fines, penalty or penalties, which any person or persons may have incurred, or may hereafter incur, under any of the provisions of this Code; but no fine or penalty shall be remitted for any such violation until the violation shall have been removed. Said remission shall also operate as the remission of the costs obtained in such action.

Sec. 151.—*Courts Having Jurisdiction.* All courts of civil jurisdiction in The City of New York shall have cognizance of and jurisdiction over any and all suits and proceedings by this Code authorized to be brought for the recovery of any penalty and the enforcement of any of the several provisions of this Code, and shall give preference to such suits and proceedings over all others, and no court shall lose jurisdiction of any action by reason of a plea that the title to real estate is involved, provided the object of the action is to recover a penalty for the violation of any of the provisions of this Code. The Corporation Counsel is authorized to institute any and all actions and proceedings, either legal or equitable that may be appropriate or necessary for the enforcement of the provisions of this Code, and all civil courts in said city are hereby invested with full legal and equitable jurisdiction to hear, try and determine all such actions and proceedings, and to make appropriate orders and render judgment therein according to law, so as to give force and effect to the provisions of this Code. Whenever the Commissioner of Buildings having jurisdiction is satisfied that any building or structure, or any portion thereof, or any drainage

or plumbing, the erection, construction or alteration, execution or repair of which is regulated, permitted or forbidden by this Code, is being erected, constructed, altered or repaired, or has been erected, constructed, altered or repaired, in violation of, or not in compliance with, any of the provisions or requirements of this Code, or in violation of any detailed statement of specifications or plans submitted and approved thereunder, or of any certificate or permit issued thereunder, or that any provision or requirement of this Code, or any order or direction made thereunder has not been complied with, or that plans and specifications for plumbing and drainage have not been submitted or filed as required by this Code, the Commissioner of Buildings having jurisdiction may in his discretion through the Corporation Counsel institute any appropriate action or proceeding, at law or in equity, to restrain, correct or remove such violation, or the execution of any work thereon, or to restrain or correct the erection or alteration of, or to require the removal of, or to prevent the occupation or use of, the building or structure erected, constructed or altered, in violation of, or not in compliance with any of the provisions of this Code, or with respect to which the requirements of this Code, or of any order or direction made pursuant to any provisions contained in this Code, shall not have been complied with. In any such action or proceeding The City of New York may, in the discretion of the Commissioner of Buildings having jurisdiction and on his affidavit setting forth the facts, apply to any court of record in said city, or to a judge or justice thereof, for an order enjoining and restraining all persons from doing, or causing or permitting to be done, any work in or upon such building or structure, or in or upon such part thereof as may be designated in said affidavit, or

from occupying or using said building or structure, or such portion thereof as may be designated in said affidavit for any purpose whatever, until the hearing and determination of said action and the entry of final judgment therein. The court, or judge or justice thereof, to whom such application is made, is hereby authorized forthwith to make any or all of the orders above specified, as may be required in such application, with or without notice, and to make such other or further orders or directions as may be necessary to render the same effectual. No officer of said Department of Buildings, acting in good faith and without malice shall be liable for damages by reason of anything done in any such action or proceeding. No undertaking shall be required as a condition to the granting or issuing of such injunction order, or by reason thereof. All courts in which any suit or proceeding is instituted under this Code, shall upon the rendition of a verdict, report of a referee, or decision of a judge or justice, render judgment in accordance therewith; and the said judgment so rendered, shall be and become a lien upon the premises named in the complaint in any such action, to date from the time of filing in a County Clerk's office in The City of New York, where the property affected by such action, suit, or proceeding, is located, of a notice of lis pendens therein; which lien may be enforced against said property, in every respect, notwithstanding the same may be transferred subsequent to the filing of the said notice. Said notice of lis pendens shall consist of a copy of the notice issued by the Commissioner of Buildings having jurisdiction requiring the removal of the violation and a notice of the suit or proceedings instituted, or to be instituted thereon, and said notice of lis pendens may be filed at any time after the service of the notice issued

by the Commissioner of Buildings as aforesaid, provided he may deem the same to be necessary, or is satisfied that the owner of the property is about to transfer the same to avoid responsibility for having violated the provisions of this Code or some one of its provisions. Any notice of lis pendens filed pursuant to the provisions of this Code, may be vacated and canceled of record; upon an order of a judge or justice of the court in which such suit or proceeding was instituted or is pending, or upon the consent in writing of the Corporation Counsel, and the clerk of the said county where such notice is filed, is hereby directed and required to mark any such notice of lis pendens and any record or docket thereof as vacated and canceled of record, upon the presentation and filing of a certified copy of an order as aforesaid, or of the consent, in writing, of said Corporation Counsel. In no case shall the said Department of Buildings, or any officer thereof, or the Corporation of The City of New York, or any defendant, be liable for costs in any action, suit or proceedings that may have been, or may hereafter be, instituted or commenced in pursuance of this Code, unless specially ordered and allowed against any defendant or defendants, by a court or justice, in the course of such action, suit or proceeding.

Sec. 152.—*Notice of Violations of Code; Service of Papers.* All notices of the violation of any of the provisions of this Code, and all notices directing anything to be done, required by this Code, and all other notices that may be required or authorized to be issued thereunder, including notice that any building, structure, premises, or any part thereof, are deemed unsafe or dangerous, shall be issued by the Commissioner of Buildings having jurisdiction, and shall have his name

affixed thereto, and may be served by any officer or employe of the Department of Buildings or by any person authorized by the said Department. All such notices, and any notice or order issued by any court in any proceeding instituted pursuant to this Code to restrain or remove any violation, or to enforce compliance with any provision or requirement of this Code, may be served by delivering to and leaving a copy of the same with any person or persons violating, or who may be liable under any of the several provisions of this Code, or to whom the same may be addressed, and if such person or persons cannot be found after diligent search shall have been made for him or them, then such notice or order may be served by posting the same in a conspicuous place upon the premises where such violation is alleged to have been placed or to exist, or to which such notice or order may refer, or which may be deemed unsafe or dangerous, which shall be equivalent to a personal service of said notice or order upon all parties for whom such search shall have been made. Such notice or order shall contain a description of the building, premises or property on which such violation shall have been put or may exist, or which may be deemed unsafe or dangerous, or to which such notice or order may refer. If the person or persons or any of them, to whom said notice or order is addressed, do not reside in the State of New York, and have no known place of business therein, the same may be served by delivering to and leaving with such person or persons, or either of them, a copy of said notice or order, or if said person or persons cannot be found within said State after diligent search, then by posting a copy of the same in manner as aforesaid and depositing a copy thereof in a post-office in The City of New York, inclosed in a sealed wrapper ad-

dressed to said person or persons at his or their last known place of residence, with the postage paid thereon; and said posting and mailing of a copy of said notice or order shall be equivalent to personal service of said notice or order.

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## PART XXXI.

### Unsafe Buildings, Surveys, Court Proceedings.

Sec. 153.—*Unsafe Buildings.* Any building or buildings, part or parts of a building, staging or other structure in The City of New York, that from any cause may now be, or shall at any time hereafter become dangerous or unsafe, may be taken down and removed, or made safe and secure, in the manner following: Immediately upon such unsafe or dangerous building or buildings, or part or parts of a building, staging or structure being so reported by any of the officers of said Department of Buildings, the same shall be immediately entered upon a docket of unsafe buildings to be kept by the Commissioner of Buildings having jurisdiction; and the owner, or some one of the owners, executors, administrators, agents, lessees, or any other person or persons who may have a vested or contingent interest in the same, may be served with a printed or written notice containing a description of the premises or structure deemed unsafe or dangerous, requiring the same to be made safe and secure, or removed, as the same may be deemed necessary by the Commissioner of Buildings having jurisdiction, which said notice shall require the person or persons thus served to immediately certify to the said Commissioner his or their assent or refusal to secure or remove the same.

Sec. 154.—*Surveys on Unsafe Buildings.* If the person or persons so served with notice shall immediately certify his or their assent to the securing or removal of said unsafe or dangerous building, premises or structure, he or they shall be allowed until one o'clock P. M. of the day following the service of such notice, in which to commence the securing or removal of the same; and he or they shall employ sufficient labor and assistance to secure or remove the same as expeditiously as the same can be done; but upon his or their refusal or neglect to comply with any of the requirements of said notice so served a further notice shall be served upon the person or persons heretofore named, and in the manner heretofore prescribed, notifying him or them that a survey of the premises named in the said notice will be made at the time and place therein named, which time may not be less than twenty-four hours nor more than three days from the time of the service of said notice, by three competent persons, one of whom shall be the Commissioner of Buildings having jurisdiction, or a Superintendent of Buildings, or an Inspector, designated in writing by said Commissioner, another of whom shall be an architect, appointed by the New York Chapter of the American Institute of Architects for the Boroughs of Manhattan, The Bronx and Richmond, and by the Brooklyn Chapter of the American Institute of Architects for the Boroughs of Brooklyn and Queens, depending upon the borough or boroughs in which the property is located, another of whom shall be appointed by the person or persons thus notified, and who shall be a practical builder or architect, upon whose neglect or refusal to appoint such surveyor, however, the said other two surveyors may make such survey; and in case of a disagreement of the latter, they shall appoint a third person to take part

in such survey, who shall also be a practical builder or architect of at least ten years' practice, and the decision of the said surveyor shall be final; and that in case the said premises shall be reported unsafe or dangerous under such survey, the said report will be placed before a court therein named having jurisdiction to the extent of $1,000, and that a trial upon the allegations and statements contained in said report, be the report of said surveyors more or less than is contained in the said notice of survey, will be had before said court, at a time and place therein named, to determine whether said unsafe or dangerous building or premises shall be repaired and secured or taken down and removed; and a report of such survey, reduced to writing, shall constitute the issue to be placed before the court for trial. A copy of said report of survey shall be posted on the building by the persons holding the survey, immediately on their signing the same. The architect appointed by the Chapters of the American Institute of Architects as hereinbefore provided who may act on any survey called in accordance with the provisions of this Code, shall be entitled to, and receive the sum of twenty-five dollars, to be paid by the Comptroller upon the voucher of the Board of Buildings. And a cause of action is hereby created for the benefit of The City of New York against the owner or owners of said building, staging or structure, and of the lot or parcel of land on which the same is situated, for the amount so paid with interest, which shall be prosecuted in the name of The City of New York, by the Corporation Counsel. The amount so collected shall be paid over to the Comptroller in reimbursement of the amounts paid by him as aforesaid.

Sec. 155.—*Court Proceedings.* Whenever the report

of any such survey, had as aforesaid, shall recite that the building, premises or structure thus surveyed is unsafe or dangerous, the Corporation Counsel of The City of New York shall at the time in the said notice named, place said notice and report before the judge or justice holding a special term of the Court, in the said notice named, which said judge or justice shall immediately proceed to obtain and impanel a jury, and to the trial of said issue before said jury, whose verdict shall be exclusive and final, and shall try said issue without adjournment, except as may be necessary from day to day, giving precedence to the trial of this issue over every other business, and said judge or justice shall have power to impanel a jury, for that purpose from any jurors in attendance upon said court, or in case sufficient jurors shall not be in attendance, then from any jurors that may be summoned for that purpose; and said judge or justice shall have power to summon jurors for that purpose; and any such suit or proceeding commenced before a judge or justice may be continued before another judge or justice of the same court; a jury trial may be waived by the default of the defendant or defendants to appear at the time and place named in the said notice, or by agreement, and in such case the trial may be by court, judge, justice, or referee, whose report or decision in the matter shall be final; and upon the rendition of a verdict or decision of the court, judge, justice, or referee, if the said verdict or decision shall find the said building, premises or structure to be unsafe or dangerous, the judge or justice trying said cause, or to whom the report of the referee trying said cause shall be presented, shall immediately issue a precept out of said court, directed to the Commissioner of Buildings, having jurisdiction, reciting said verdict or decision, and

ommanding him forthwith to repair and secure or take down or remove, as the case may be, in accordance with said verdict or decision, said unsafe or dangerous building, buildings, part or parts thereof, staging, structure or other premises that shall have been named in the said report; and said Commissioner of Buildings shall immediately thereupon proceed to execute said precept as therein directed, and may employ such labor and assistance and furnish such materials as may be necessary for that purpose, and after having done so, said Commissioner of Buildings shall make return of said precept, with an indorsement of the action thereunder and the cost and expenses thereby incurred, to the judge or justice then holding the said special term of the said court, and thereupon said judge or justice shall tax and adjust the amount indorsed upon said precept, and shall adjust and allow disbursements of said proceeding, together with the preliminary expenses of searches and surveys, which shall be inserted in the judgment in said action or proceeding, and shall render judgment for such amount, and for the sale of the said premises in the said notice named, together with all the right, title and interest that the person or persons, or either of them, named in the said notice had in the lot, ground or land upon which the said building or structure was placed, at the time of the filing of a notice of lis pendens in the said proceedings, or at the time of the entry of judgment therein to satisfy the same, which shall be in the same manner and with like effect as sales under judgment in foreclosure of mortgages; and in and about all preliminary proceedings, as well as the carrying into effect any order of the Court or any precept issued by any court, said Commissioner of Buildings may make requisition upon the Comptroller of The City of New York for such amount

or amounts of money as shall be necessary to meet the expenses thereof; and upon the same being approved by any judge or justice of the court from which the said order or precept was issued and presented to said Comptroller, he shall pay the same, and for that purpose shall borrow and raise, upon revenue bonds, to be issued as provided in Section 188 of the Greater New York Charter, the several amounts that may from time to time be required, which shall be reimbursed by the payment of the amount and interest at six per cent. out of the judgment or judgments obtained as aforesaid, if the same shall be collected. In case said issue shall not be tried at the time specified in said notice, or to which the trial may be adjourned, the same may be brought to trial at any time thereafter by the said Commissioner of Buildings, without a new survey, upon not less than three days' notice of trial to the person or persons upon whom the original notice was served, or to his or their attorney, which notice of trial may be served in the same manner as said original notice. The notice of lis pendens provided for in this section shall consist of a copy of said notice of survey, and shall be filed in the office of a County Clerk in The City of New York, in the County where the property affected by such action suit or proceeding is located. Provided, nevertheless, that immediately upon the issuing of said precept, the owner or owners of said building, staging or structure, or premises, or any party interested therein, upon application to the Commissioner of Buildings, shall be allowed to perform the requirements of said precept at his or their own proper cost and expense, provided the same shall be done immediately and in accordance with the requirements of said precept, upon the payment of all costs and ex-

penses incurred up to that time, and provided, further, that the Commissioner of Buildings having jurisdiction shall have authority to modify the requirements of said precept upon application to him therefor, in writing, by the owner or owners of said building, staging or structure, or his or their representative, when he shall be satisfied that such change shall secure equally well the safety of said building, staging or structure.

Sec. 156.—*Application for Order to Remove Violations and to Vacate Buildings.* In case any notice or direction authorized to be issued by this Code is not complied with within the time designated in said notice, The City of New York by the Corporation Counsel may, at the request of the Commissioner of Buildings having jurisdiction, apply to the Supreme Court of New York, at a special term thereof, for an order directing said Commissioner to proceed to make the alterations or remove the violation or violations, as the same may be specified in said notice or direction. Whenever any notice or direction so authorized, shall have been served as directed in this Code, and the same shall not have been complied with within the time designated therein, the Corporation Counsel may, at the request of the Commissioner of Buildings having jurisdiction, in addition to, or in lieu of the remedy last above provided, apply to the Supreme Court of New York, at a special term thereof, for an order directing the said Commissioner to vacate such building or premises, or so much thereof as said Commissioner may deem necessary, and prohibiting the same to be used or occupied for any purpose specified in said order until such notice shall have been complied with. The expenses and disbursements incurred in the carrying out of any said order or orders, shall become a lien upon said

building or premises named in the said notice, from the time of filing of a copy of the said notice, with a notice of the pendency of the action or proceeding as provided in this Code, taken thereunder, in the office of the Clerk of the County where the property affected by such action, suit or proceeding is located; and the said Supreme Court, or a judge or justice thereof, to whom application shall be made, is hereby authorized and directed to grant any of the orders above named, and to take such proceedings as shall be necessary to make the same effectual, and any said judge or justice to whom application shall be made is hereby authorized and directed to enforce such lien in accordance with the mechanics' lien laws applicable to The City of New York; and in case any of the notices herein mentioned shall be served upon any lessee or party in possession of the building or premises therein described, it shall be the duty of the person upon whom such service is made to give immediate notice to the owner or agent of said building named in the notice, if the same shall be known to the said person personally, if such person shall be within the limits of The City of New York, and his residence known to such person, and if not within said city, then by depositing a copy of said notice in any post-office in The City of New York, properly inclosed and addressed to such owner or agent, at his then place of residence, if known, and by paying the postage thereon; and in case any lessee or party in possession shall neglect or refuse to give such notice as herein provided, he shall be personally liable to the owner or owners of said building or premises for all damages he or they shall sustain by reason thereof.

## PART XXXII.

### Recovery of Bodies Under Fallen Buildings.

Sec. 157.—*Recovery of Bodies Under Fallen Buildings.* In case of the falling of any building or part thereof in The City of New York, where persons are known or believed to be buried under the ruins thereof, it shall be the duty of the Fire Department to cause an examination of the premises to be made for the recovery of the bodies of the killed and injured. Whenever, in making such examination, it shall be necessary to remove from the premises any debris, it shall be the duty of the Commissioners of the Department of Docks, of the Department of Parks, of the Department of Highways, and of the Department of Street Cleaning, when called upon by the Department of Buildings to co-operate, to provide a suitable and convenient dumping place for the deposit of such debris. In case there shall be in the opinion of the Department of Buildings, actual and immediate danger of the falling of any building or part thereof so as to endanger life or property, said Department shall cause the necessary work to be done to render said building or part thereof temporarily safe until the proper proceedings can be taken as in the case of an unsafe building as provided for in this Code. The Department of Buildings is hereby authorized and empowered in such cases, and also where any building or part thereof has fallen, and life is endangered by the occupation thereof, to order and require the inmates and occupants of such building or part thereof to vacate the same forthwith, and said Department may, when necessary for the public safety, temporarily close the sidewalks and streets adjacent to such building or part thereof, and prohibit the same from being used, and the Police Department,

when called upon by the said Department of Buildings to co-operate, shall enforce such orders or requirements. For the aforesaid purposes the said Fire Department, or the Department of Buildings, as the case may be, shall employ such laborers and materials as may be necessary to perform said work as speedily as possible.

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## PART XXXIII.

### Fund for Use and Benefit of the Department of Buildings.

Sec. 158.—*Fund for Use and Benefit of the Department of Buildings.* The Corporation Counsel shall sue for and collect all penalties and take charge of and conduct all legal proceedings imposed or provided for by this Code; and all suits or proceedings instituted for the enforcement of any of the several provisions of the preceding sections of this Code or for the recovery of any penalty thereunder shall be brought in the name of The City of New York, by the Corporation Counsel, to whom all notices of violation shall be returned for prosecution, and it shall be his duty to take charge of the prosecution of all such suits or proceedings, collect and receive all moneys that may be collected upon judgments, suits or proceedings so instituted, or which may be paid by any parties who have violated any of the provisions of this Code and upon settlement of judgment and removal of violations thereunder, execute satisfaction therefor. He shall on the first day of each and every month render to each Commissioner of Buildings an account of and pay over to the Commissioner having jurisdiction, the amount of such penalties and costs received by him together with his bill for all necessary disbursements incurred or paid in said

suits, keeping a separate account for each Commissioner, and each Commissioner shall pay over monthly the amount of such penalties and costs so collected to the Comptroller of The City of New York as a fund for the use and benefit of the Department of Buildings for the purpose of paying any expense incurred by said Department, under section 157 of this Code, and also for the purpose of carrying into effect any order or precept issued by any court, or judge or justice thereof, in this Code named, to any Commissioner of Buildings, and upon the requisition of the Commissioner of Buildings having jurisdiction, said Comptroller shall pay such sum or sums as may be allowed and adjusted by any court of record, or a judge or justice thereof, for such purposes, as far as the same may be in his hands. A separate account shall be kept by the Comptroller of the moneys paid to him by each Commissioner, and no such moneys shall be paid for such purposes to any of said Commissioners except from the account of the funds received from him.

## PART XXXIV.

### Seal. Officers of Department May Enter Buildings.

Sec. 159.—*Seal.* The Board of Buildings may adopt a seal and direct its use in the Department of Buildings.

Sec. 160.—*Officers of Department May Enter Buildings.* All the officials of the Department of Buildings, so far as it may be necessary for the performance of their respective duties, have the right to enter any building or premises in said city, upon showing their badge of office.

## PART XXXV.

EXISTING SUITS AND LIABILITIES. INVALIDITY OF ONE SECTION NOT TO INVALIDATE ANY OTHER.

Sec. 161.—*Existing Suits and Liabilities.* Nothing in this Code contained shall be construed to affect any suit or proceeding now pending in any court, or any rights acquired, or liability incurred, nor any cause or causes of action accrued or existing, under any act or ordinance repealed hereby. Nor shall any right or remedy of any character be lost, impaired or affected by this Code.

Sec. 162.—*Invalidity of One Section Not to Invalidate Any Other.* The invalidity of any section or provision of this Code shall not invalidate any other section or provision thereof.

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## PART XXXVI.

ORDINANCES REPEALED. DATE WHEN ORDINANCE TAKES EFFECT.

Sec. 163.—*Repealing Section.* All Ordinances of the former Municipal and Public Corporations consolidated into The City of New York affecting or relating to the Construction, Alteration or Removal of Buildings or other Structures, and all other Ordinances or parts thereof inconsistent herewith are hereby repealed.

Sec. 164.—*Date When Ordinance is to Take Effect.* This Ordinance shall take effect sixty days after its approval by the Mayor.

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