

CITY of CORAL GABLES



Ordinance No. 859



BUILDING CODE

ORDINANCE NO. 859

AN ORDINANCE OF THE CITY OF CORAL GABLES, FLORIDA, TO BE KNOWN AS THE CORAL GABLES BUILDING CODE, PRESCRIBING RULES AND REGULATIONS FOR THE ERECTION, REPAIRS, REMOVAL AND DEMOLITION OF BUILDINGS IN SAID CITY; PROVIDING FOR THE SUBMISSION OF PLANS AND MAKING APPLICATION FOR PERMIT FOR ERECTING, REPAIRING OR REMOVING BUILDINGS; PROVIDING A PENALTY FOR THE VIOLATION OF THIS ORDINANCE.

BE IT ORDAINED BY THE COMMISSION OF THE CITY OF CORAL GABLES, FLORIDA:

That the following basic building principals are hereby adopted by the City Commission of the City of Coral Gables, Florida:

SECTION 1

GENERAL REQUIREMENTS

1.01 SCOPE: No wall, structure, building, or part thereof, shall hereafter be built or constructed, except in the conformity with the provisions of this ordinance. No building already erected, or hereafter erected, shall be razed, altered, moved or built upon in any manner that would be in violation of any of the provisions of this ordinance, or the approval issued thereunder.

1.02 DEMOLITION AND REMOVAL OF BUILDINGS: Before the demolition of any or removal of any building or structure is begun, a verified application shall be prepared by the owner, architect, builder, or contractor, on appropriate blanks furnished by the Building Inspector, containing a statement of the facts in relation thereto, as to the ownership and location thereof. The application shall be filed with the Building Inspector and a written permit obtained from him as hereinafter provided.

1.03 PROTECTIVE SHEDS: When any building or structure over 25 feet in height is being erected, repaired

or demolished, upon or along any sidewalk, the person erecting, altering, or demolishing such building shall erect and maintain an approved and substantial shed from the property line to the curb for the full frontage of the building. No shed shall be required when a building is erected 8 feet or more back of a sidewalk line. The street side shall be kept open for a height of not less than 7 feet above the curb and shed shall be kept properly lighted at night.

1.04 LAND SURVEY (ORD 598)

SECTION 2

MISCELLANEOUS PROVISIONS

2.01 MOVING STRUCTURES: No building or structure, shall be moved until a permit has been obtained from the Building Inspector. Detail plans of the new location and the streets to be used for moving of the building shall be filed with the Building Inspector. Sufficient bond shall be given to insure the City against any damages to streets, or other City property, that might be brought about by the removal of the building or structure, before permission is given to remove any building.

2.02 CONSTRUCTION SHEDS: Temporary one story frame buildings, for the use of the builder, his supplies and tools, may be erected on the plot or ground without securing a separate permit provided however, that a permit has been issued by the Building Department for any new work to be done thereon. Such shack shall be moved or razed immediately upon completion of the new building, or the expiration of a permit.

2.03 REPAIRS: Any repairs or renewals to an existing building, or additions thereto, whether such repairs are made necessary by fire, or otherwise, shall be made in conformity with the provisions of this Ordinance.

2.04 CLEANUP: Within 15 days after the completion of a new building, structure, addition or repairs, all debris shall be moved from the lot or adjoining lots, alleys, or streets, by the contractor or owner of same. If the person or persons whose duty it shall be shall neglect or fail to do so within 48 hours after receipt of notice from the Building Inspector, then the Building Inspector may enter upon the premises and employ such labor and take steps as, in his judgment, may be necessary to remove such debris, at the cost and expense of the party whose duty it was to remove same. This cost and expense immediately becomes a lien upon the said property.

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SECTION 3

PERMITS

3.01 APPLICATION: Before the erection, construction or alteration of any building or structure or part of same is begun, there shall be submitted to the Building Inspector an application on appropriate blanks to be furnished by the Building Inspector.

3.02 STATEMENTS: The application shall contain a sworn statement, giving full name and residence and business address of the owner of the building and of the premises upon which the building or structure is to be erected, altered, or removed. The application shall describe and give the location of the building, structure, or premises, and the address of the architect or other representatives duly authorized to perform or to have performed said work. The said attested statement and detailed application, with a copy of plans and specifications, shall be kept on file in the office of the Building Inspector. 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.

3.03 PLANS AND SPECIFICATIONS: Where the total cost of the proposed work shall exceed \$2,000.00, or shall involve structural design, or shall affect the exterior appearance of an existing or proposed structure, the application shall be accompanied by full and complete plans and specifications, in duplicate, for such proposed work and such detail structural drawings thereof as the Building Inspector may require. All such plans and specifications shall bear the signature of an architect or engineer registered under the laws of the State of Florida. The plans of all buildings to be erected in Coral Gables, that are governed by State Laws, must have the standard approval of the State representative before application is made for permit. All plans for construction in Coral Gables shall be in full detail and accompanied by complete specifications. They shall consist of the following:

1/4" Scale Floor Plans

3/4" Scale Section, showing all wall, floor and roof construction

1/4" Scale Elevations of all facades of building

3/4" Scale Details of all ornamental work and full size sections of all mouldings

Specifications shall be full and complete as to character of the work, strength of material, and workmanship.

3.04 STRUCTURES TO BE USED BY THE PUBLIC: Plans and specifications for the construction of any building intended for the use of or to be open and accessible to the general public, for any purpose whatsoever, shall be examined and approved and certified by a qualified structural engineer registered under the laws of the State of Florida before any permit for the erection thereof shall be issued. Where structural design not covered by this Code is involved the Building Inspector shall have the right to require that all such construction be supervised by a registered structural engineer. The cost of such supervision shall not be an obligation of the City.

3.05 APPROVAL: Before any permit shall be issued for the erection, construction or alteration of any structure, approval shall first be obtained from the Building Inspector, the Structural Engineer and the Board of Supervising Architects as provided for under the Zoning Ordinance of the City of Coral Gables, Florida.

3.06 EXPIRATION OF APPROVAL: All approvals of applications, plans, specifications and detail drawings and amendments thereto, as well as permits shall expire by limitation 6 months from the date of the original approval or issue but not apply when work thereunder has begun and carried on with reasonable continuity within 6 months from the original application. It shall be the duty of the Building Inspector to approve or reject any plan filed with him pursuant to the provisions of this section within a reasonable time.

3.07 PERMITS: Permits are required and shall be obtained from the Building Department to cover all work involved in any erection, construction, alteration or repair work wherein the total cost is over \$50.00. Such permits shall be obtained before any building material, construction shack, or sign is placed at the site of the work, or before any excavation or other work is performed.

3.08 PERMIT FEES: The Building Inspector shall charge and collect for building permits at the following rates, to-wit;

A. BUILDINGS

(a)	For a one story structure of 3,000 square feet or less in floor area . . .	\$20.00
	For each additional 3,00 square feet or fraction thereof in area, an additional fee of	6.00
(b)	For a two story structure of 3,000 square feet or less in floor area . . .	24.00
	For each additional 3,000 square feet or fraction thereof in area, an additional fee of	8.00
(c)	For a three story of more story structure of 3,000 square feet or less in floor area	\$30.00
	For each additional 5,000 square feet or fraction thereof in area, an additional fee of	10.00
(d)	For additions to existing structures, the cost of which addition does not exceed \$1,000.00	5.00
	For each additional 5,00 square feet or For each additional \$1,000.00 cost or fraction thereof, an additional fee of	1.00
(e)	For repairs and minor alterations to structures the cost of which exceeds \$50.00	3.00
(f)	For moving a building	3.00
(g)	For razing a building when no application is made for a new building upon the site	3.00

B. SIGNS

For the erection, installation or painting of any sign on any structure the following fees shall be paid:

Estimated cost of sign:

\$ 1.00 through \$50.00	\$ 2.00
50.00 through \$100.00	4.00
100.01 through \$200.00	6.00
200.00 through \$500.00	8.00
Over \$500.00	10.00

C. AWNINGS

- (a) For the erection, installation or replacement of awnings
per building \$ 1.00

3.09 DISPLAY BUILDING CARD: Any person who shall construct, alter or remove a building or structure, shall keep the numbered Building Permit Card displayed in plain view from the street until completion of the building or structure.

3.10 REINSPECTION: For each reinspection made due to condemnation of work, or due to the fact that work was not ready at the time inspection was called for or for failure to call for an inspection where required . . \$ 2.00

3.11 PERMITS AFTER WORK STARTS: Where work for which a permit is required by this ordinance is started or proceeded with prior to obtaining said permit, the fees above specified shall be doubled, but the payment of such double fee shall not relieve any persons from fully complying with the requirements of this ordinance in the execution of the work nor from any other penalties prescribed herein.

3.12 PERMITS — DAY LABOR: Permit fees established by this ordinance shall be increased 100% for all work done by day labor under supervision and direction of a person not certified by the Building Inspector or the proper examining board of the City of Coral Gables as being skilled and experienced in the nature of the work to be undertaken.

SECTION 4

DEFINITIONS

The following terms when used in this Ordinance shall be construed to have the meaning here given them:

4.01 APARTMENT HOUSES: Apartment House is any house or building, or portion thereof, which, either rented or leased, is to be occupied in whole or in part as the home or residence of three or more families living independently of each other, and doing their cooking upon the premises and having a common right in yards, hallways, stairways, etc.

89 2

4.02 AREAWAYS: An Areaway is an open, sub-surface space, adjacent to a building, for lighting or ventilating cellars or basements.

4.03 BASEMENT: A basement is a story partly, but not more than one-half ($\frac{1}{2}$) below the level of the curb, but not more than five (5) feet above the level of the curb.

4.04 CELLAR: A story that is entirely below the curb line. It shall not be counted as a story in determining the height of a building.

4.05 CEMENT MORTAR: Cement Mortar shall be made of cement and sand in the proportions of one part of cement and not to exceed three parts sand by volume. Cement Lime Mortar shall be made of one part of cement, one part of slaked lime, and not more than three parts of sand to each.

4.06 COURT: An open, unobstructed space, other than a yard, on the same lot on which the building is located. A court entirely surrounded by the building is an inner court. A court bounded on three sides by the building and on the fourth side by the lot line is a "Lot-line Court"; a court, at least one side of which is open to a yard, alley or street is an "Outer Court".

A court shall not be covered by a roof or skylight, but shall be at every point open from the ground to the sky, unobstructed.

4.07 LOT GRADE: An established grade at the center of the principal front of the building fronting on one street only. In case of a building fronting on two streets, the established grade on the highest street shall be taken.

4.08 DOWNSPOUTS: A pipe of metal or other material to conduct rain water from roofs to ground, tanks or storm sewers.

4.09 DWELLING: A residence building designed for, or used as, the home or residence of not more than one separate and distinct family.

4.10 DUPLEX DWELLING: A residence building designed for, or used for, the home or residence of not more than two (2) separate and distinct families.

4.11 LOADS: Dead Load: The weight of walls framing, floors, roofs, tanks with their contents, and all permanent construction.

Live Loads: All loads other than dead loads. All portions which are subject to removal or rearrangement shall be considered as live load.

4.12 FACTORY: A building, a portion thereof, designed or used to manufacture or assemble goods, wares, or merchandise, the work being performed partly or wholly by machinery.

4.13 FIBRE PLASTER BOARD: A board consisting of any intimate mixture of gypsum plaster composition and a fibrous binding material.

4.14 FIRE DOOR: A door, frame and sill, which will successfully resist a fire for one hour in accordance with test specifications of National Board of Underwriters as given.

4.15 FIRE EXIT PARTITION: A subdividing partition, with exits, thereto, built for the purpose of protecting life by providing an area of refuge.

4.16 FIRE SHUTTER: A metal shutter which will successfully resist a fire for one hour as in accordance with test specifications of National Board of Underwriters.

4.17 FOUNDATION WALL: Any wall or pier built below the curb level or nearest tier of beams to that level.

4.18 GARAGE: A garage is (a) that portion of a structure in which a motor vehicle containing volatile inflammable liquid in its fuel storage tank is stored, housed, or kept. (b) All that portion of such structure that is on, above, or below the space mentioned in (a) which is not separated therefrom by tight, unpierced firewalls and fire-proof floors.

4.19 HOTEL: Any building or portion thereof, designed or used for supplying food or shelter to residents or guests, and containing more than 5 sleeping rooms on or above the first story.

4.20 INCOMBUSTIBLE: Material or construction which will not ignite or burn when subjected to fire.

4.21 OFFICE BUILDING: One used for professional or clerical purposes. No part of which shall be used for living purposes, except by the janitor's family.

4.22 OUT-HOUSE: All structures not exceeding ten (10) feet in height nor more than 150 square feet in area.

4.23 WALLS.

4.23a PANEL WALL: An exterior non-bearing wall in a skeleton structure built between columns or piers and supported at each story.

PARAPET WALLS: That portion of any wall which extends above the roof line and bears no load except as it may serve to support a tank.

PARTY WALL: A wall used or adapted for joint service between two buildings.

RETAINING WALLS: One constructed to support a body of earth, or to resist lateral thrust.

4.23b BEARING WALL: A wall which supports any load other than its own weight.

4.23c FIRE WALL: A wall built for the purpose of restricting the area subject to the spread of fire.

4.24 SHAFT: Any vertical enclosed space within a building, which extends from its lowest level through the entire height of the building and is open to the sky, used for air, light, elevator, dumb-waiter, or any purpose not otherwise hereinafter prohibited.

4.25 SHED: A roofed structure open on one or more sides, which does not exceed 16 feet in height, or more than 500 square feet in area.

4.26 SKYLIGHT: Any cover or enclosure placed above the roof openings for the admission of light.

4.27 STRUCTURE: Includes the terms building, appurtenance, wall platform, staging or flooring used for standing or seating purposes; a shed, sign or billboard, fence on public or private property, or on, above or below a public high-way.

4.28 THEATRE OR MUSIC HALL: Any building or part of a building designed or used for theatrical or operatic purposes with accommodation for an audience of more than 250 persons and having a permanent stage upon which movable scenery and theatrical appliances are employed; including also moving picture theatres, either with or without a stage.

4.29 WAREHOUSE: A building, or portion thereof, designed or used for the storage of goods, wares and merchandise.

4.30 WORK SHOP: A building or portion thereof, in which articles of merchandise are manufactured or repaired, wholly or principally by hand.

4.31 VOLATILE INFLAMMABLE LIQUID: This shall mean any liquid that will emit inflammable vapor.

SECTION 5

CLASSIFICATION OF CONSTRUCTION

5.01 FRAME CONSTRUCTION: (No building of the following construction will be permitted in Coral Gables.) A building having the exterior walls of portions thereof of wood, also a building with wooden framework veneered with brick, stone, terra-cotta or concrete, or covered with plaster, stucco, or sheet metal, shall be classed as a frame building and is prohibited within the territory lying East of Red Road. This provision shall not, however, apply to public buildings of the City of Coral Gables erected in any of the public parks or grounds of said City, and which shall be located two hundred feet (200) or more, distant from privately owned structures.

5.02 MASONRY CONSTRUCTION: A building having masonry walls, with floors and partitions or wood, joist and stud construction. The supporting posts and girders may be of wood, metal or concrete.

5.03 MILL CONSTRUCTION: A building having masonry or reinforced concrete walls and heavy timber interior construction.

5.04 FIRE PROOF CONSTRUCTION: Buildings of masonry, cement, or reinforced concrete, constructed in accordance with sections 14 to 19 incl. shall be considered fireproof.

5.05 FOUR STORY & OVER: All buildings or structures hereafter to be built in the City of Coral Gables of four or more stories in height, shall be constructed of fire-proof construction, as defined in this Ordinance.

SECTION 6

WEIGHT OF MATERIALS

6.01 The weight of various materials shall be assumed to be as follows:

	Pounds per cubic foot
Brickwork-Ordinary	120
Brickwork-Pressed Brick	130
Concrete-Local stone	125
Granite, Bluestone, and Marble	170
Linestone	145
Sandstone	145
Oak	50
Spruce and Hemlock	30
White Pine	27
Yellow Pine	42
Yellow Pine, Grade II	35
Maple	43
Birch	45
Douglas Fir and Cypress	35

SECTION 7

PERMISSIBLE WORKING STRESSES

7.01 LIVE LOADS: All floors shall be constructed to bear a safe weight, per square foot, exclusive of the weight of the materials of which they are composed, as follows:

BUILDING CODE REQUIREMENTS FOR LIVE LOADS:

Apartments	50 lbs. per sq. ft.				
Public Rooms	100	"	"	"	"
Halls	100	"	"	"	"
Assembly Halls	100	"	"	"	"
Drill Rooms	150	"	"	"	"
Dance Halls	150	"	"	"	"
Fixed Seat Auditorium	100	"	"	"	"
Movable Seat Auditorium	100	"	"	"	"
Churches	150	"	"	"	"
Theatres	100	"	"	"	"
Dwellings	50	"	"	"	"
Hospitals	50	"	"	"	"
Hotels	50	"	"	"	"
First Floor	100	"	"	"	"
Corridors	80	"	"	"	"
Office Rooms	50	"	"	"	"
Manufacturing	100	"	"	"	"
Light Manufacturing	100	"	"	"	"
Mercantile	100	"	"	"	"
Retail Stores	250	"	"	"	"
Heavy Warehouses	250	"	"	"	"
Offices	60	"	"	"	"
First Floors	100	"	"	"	"
Corridors	80	"	"	"	"
Schools					
Classrooms	75	"	"	"	"
Assembly Rooms	75	"	"	"	"
Sidewalks	300	"	"	"	"
Houses					
Garages	100	"	"	"	"
Stairways —					
General	75	"	"	"	"
Roofs	30	"	"	"	"
Wind Pressure	30	"	"	"	"

7.02 WORKING STRESSES: The safe carrying capacity of the various materials of construction, when not otherwise specified, shall be determined by the following working stresses in pounds per square inch of section area:

Steel and Iron	Pounds per Square Inch
Compression in Short Blocks	
Rolled Steel	16,000
Cast Steel	16,000
Cast Iron	16,000
Steel pins, shop, and Power driven field rivets (bearing)	20,000
Steel field rivets (driven by hand) (bearing)	16,000
Steel field bolts (bearing)	12,000

TENSION

Rolled Steel	16,000
Cast Steel	16,000

SHEAR

Steel web plates	10,000
Steel shop and power driven field rivets and pins	10,000
Steel field rivets (driven by hand)	8,000
Steel field bolts	7,000
Cast steel	9,000
Cast iron	1,500

EXTREME FIBRE STRESS

Rolled steel beams and riveted steel beams	16,000
Rolled steel pins and rivets and bolts	20,000
Cast iron compression side	16,000
Cast iron tension side	2,500

7.03 CONCRETE AND MASONRY:

Compression

Grout, Portland cement, neat	800
Grout, Portland cement, net between steel in foundation not over 1/2 inch	1,000
Concrete, Portland cement, 1; sand, 2; stone, 4	500
Concrete, Portland cement, 1; sand 2 1/2; stone, 5	400
Concrete, Natural cement, 1; sand, 2; stone, 4	125
Concrete, Natural cement, 1; sand, 2 1/2; stone 5	80
Brickwork in Portland cement mortar	250
Brickwork in Natural cement mortar	208
Brickwork in Lime and Portland cement mortar	208
Brickwork in Lime mortar	111
Rubble stonework in Portland cement mortar	140
Rubble Stonework in lime and cement mortar	100
Rubble stonework in lime mortar	70
Cut stone masonry, other than sandstone	600
Sandstone masonry	300
Granites, according to test	1,000 to 2,400
Gneiss	1,000
Limestones, according to test	700 to 2,300
Marbles, according to test	400 to 1,600
Slate	1,000

SHEAR

Pounds
per square
Inch

Shearing stress involving diagonal tension in Portland cement concrete, in the proportions of 1—2—4—	40
Direct shear (punching shear), in Portland cement concrete, in the proportions of 1—2—4—	1 20

7.04 STRUCTURAL TIMBER: The following stresses apply to seasoned timber to be kept under shelter in a dry location, and deflection not to increase with time. If the timber is to be used under other conditions, these stresses should be modified.

	Safe Fibre Stress	Maxi- mum Longi- tudinal Shear	Perpen- dicular to the Grain	Parallel to the Grain, Columns L with — less d than 10
Western Hemlock	1,300	75	250	1,000
Norway Pine	1,000	75	250	800
Oak	1,400	120	400	1,000
Yellow Pine, Grade 1	1,600	120	350	1,200
Yellow Pine, Grade 11	1,200	85	325	900
Douglas Fir	1,500	100	300	1,100
Eastern Spruce	1,000	75	200	900

L—unsupported length in inches

d—diameter or least side in inches

Where a moderate increase in deflection after first placement of the load is not objectionable, the compression and extreme fibre stresses here given may be increased ten per cent (10%). Stresses for timber subject to vibration and impact, should not be thus increased.

All materials used in building construction and referred to in this Ordinance, shall be qualified to meet the standard and latest specifications of the American Society of Testing Materials.

SECTION 8

EXCAVATIONS

8.01 GUARDS: The person or persons causing any excavation to be made for a building shall have the same properly guarded and protected. Wherever necessary, he shall, at his own expense, properly sheath pile and erect masonry or steel construction or a sufficient retaining wall to properly support the adjoining earth. Such retaining wall shall extend full depth of excavation to the level of the adjoining earth and shall be properly coped. Whenever any excavation is to be made, the person causing same shall report the fact in writing, to any adjoining property owners and to the Building Inspector.

Over all excavations, between the building line and curb, there shall be constructed a substantial foot bridge, with proper guard-rail on each side, for the protection of the public.

SECTION 9

WOODEN PILES

9.01 MATERIAL: Wooden piles shall be of approved timber. They shall be sound and straight. The diameter at the butt shall be not less than 10 inches and the diameter at the point shall be not less than 6 inches. Any pile over 20 feet in length shall be not less than 12 inches at the butt. The minimum distance shall be 2 feet. Piles shall be driven to refusal and the method of driving shall be such as not to impair their strength. The maximum load carried by a pile driven through firm soil to rock shall not exceed 500 lbs. per sq. inch, to be computed by multiplying the average area of cross section in inches by 500 pounds, but in no case shall such load exceed 15 tons. The safe sustaining power of a pile not driven to refusal, shall in no case exceed 8 tons in natural sand formation or 5 tons in all filled lands.

9.02 CAPPING: Piles shall be cut off so that the tops are always below the level of mean low water. Portland cement concrete shall be rammed down the interspace between the heads of the piles to a depth not less than 10 inches laterally, for a distance of not less than 12 inches on each side of the rows of piles.

SECTION 10

CONCRETE PILES

10.01 MATERIAL: Concrete piles, consisting of steel tubes filled with concrete, shall have a minimum inside diameter of 10 inches and the thickness of the metal tube not less than $\frac{3}{8}$ inch. The length shall not exceed 40 times the inside diameter. The ends of the tubes shall be faced perpendicular to its axis. No more than one splice of an approved design shall be used in the total length of the pile. When driven to rock, the load on such piles shall not exceed 500 pounds per sq. inch on the concrete, and 7500 pounds per sq. inch on the steel. In computing the effective area of the concrete pile, the steel tube shall not be taken into consideration. Concrete mixture for concrete piles to be not less than one part of cement to $2\frac{1}{2}$ parts of sand and $3\frac{1}{2}$ parts of rock. Rock to be equal to hardest Ojus or canal bank, washed and screened rock.

10.02 DRIVING: Concrete piles moulded and cured before driving shall be provided with not less than $2\frac{1}{2}\%$, nor more than $4\frac{1}{2}\%$ longitudinal reinforcement, with bands or hoops not less than $\frac{3}{8}$ inch in diameter, and spaced not further apart than 6 inches. The top of the piles shall be protected with a cushion cap of approved design and, when driven to rock, the foot shall be provided with a metal shoe having square bearing, and shall be at least 14 days old before driving.

10.03 LENGTH: Concrete piles for loose wet soil, or filled ground, shall not exceed twenty (20) times the inside of the diameter in length. Piles driven out of plumb shall be condemned. The clear space between the heads of concrete piles shall be not less than 18 inches.

10.04 LOAD: Concrete piles cast in place shall be not less than 14 inches in diameter. The carrying capacity of such piles shall be determined by means of one or more test piles, and the allowable working load shall be no greater than one-half ($\frac{1}{2}$) the test load under which the test pile begins to settle, nor greater than 350 lbs. per sq. inch. No pile or group of piles shall be loaded eccentrically.

SECTION 11

FOUNDATIONS

11.01 MATERIAL: The footings for foundation walls, piers, and columns, shall be constructed of plain concrete, reinforced concrete, or of steel grillage beams, resting on a bed of concrete.

11.02 LOAD: Footings shall be so designated that the loads they sustain per unit of area shall be as nearly uniform as possible, and the stresses shall conform to the requirements of this Ordinance. The dead loads carried on by the footings shall include the actual weight of the superstructure and foundations down to the bottom of the footings. All tanks or other receptacles for liquids shall be figured as being full. All vaults or similar built-in structures shall be considered parts of the building.

The live load on column or wall footings shall be assumed to be the same as the live load in the lowest tier of columns.

In no case shall the load per sq. ft., under any portion of any footing due to the combined dead, live, and wind loads, exceed the safe sustaining power of the soil upon which the footing rests.

11.03 CLEAN EXCAVATION: Area covered by footings shall be thoroughly cleared. All vegetation, trash, or foreign matter shall be removed, until suitable foundation is obtained.

11.04 SPECIFICATIONS: The footings of all building shall be of reinforced concrete and shall be not less than 10 inches vertically not less than 16 inches in width for non joist bearing walls and not less than 10 inches by 20 inches for full bearing walls and contain not less than 2 complete line of five-eighth ($\frac{5}{8}$) inch steel reinforcement rods in same. The size of design of all footings shall be subject to the approval of the structural engineer.

11.05 WALL FOOTINGS: All walls shall have a footing not less than 8 inches vertically and 10" horizontally not less than 2 complete lines of one-half ($\frac{1}{2}$ ") inch steel reinforcement rods in same.

11.06 PIERS: All columns posts, or piers shall have a footing not less than 8 inches wider on all sides and not less than four (4) five-eighth inch ($\frac{5}{8}$ ") rods at right angles.

11.07 ISOLATED PIERS: If the nature of the ground and the character of the building are such as to make it necessary or advisable, isolated piers may be used instead of a continuous wall to support the building.

11.08 GRILLAGE BEAMS: Grillage beams shall be united by bolts and separators, and the grillage filled with solid concrete. All metal which forms parts of any footing or foundation shall be protected from rust by a wash of rich Portland cement grout, or by the use of other approved coating, and shall be entirely encased with at least 4 inches of concrete.

11.09 SOIL BEARING CAPACITY: The safe bearing capacity of different soils shall be determined by borings and, in the absence of tests, shall not exceed the values given with the following tables:

Filled land	per sq. ft.....	$\frac{1}{2}$ ton .
Natural sand formation	" " "	2 $\frac{1}{2}$ tons.
Rock, yellow porous	" " "	10 tons.

SECTION 12

WALLS

12.01 THICKNESS: Thickness (minimum) of reinforced concrete bearing or party walls for all structures not over three (3) stories high shall be as specified below:

STORIES	1	2	3
Basement	8"	10"	11"
1st.	8"	9"	10"
2nd.		8"	9"
3rd.			8"

The minimum thickness of exterior masonry bearing or party walls for all structures not over 3 stories high shall not be less than eight inches in thickness.

Walls for any structure over three stories or twenty feet high shall be designed subject to the approval of the Structural Engineer of the City of Coral Gables after the height has been approved by the City Commission.

12.02 SPACING OF COLUMN & BEAM: No part of any eight-inch masonry wall shall be of greater height than fourteen feet between horizontal reinforced concrete beams. The entire width of any eight-inch masonry wall shall not exceed twenty feet between vertical reinforced concrete columns or shall not be greater than a maximum of 256 sq. ft. of wall area in all multiple family and commercial structures.

12.03 PARAPET: A parapet wall eight inches thick and not less than eighteen inches above the roof at all points shall be required on all buildings having a flat roof, except in the following cases:

- (a) In areas zoned Industrial, where the roof is constructed entirely of incombustible materials.
- (b) On boat houses provided some ornamental railing, design, or other treatment, approved by the Board of Supervising Architects is made or placed upon flat roofs.
- (c) On modernistic type houses.
- (d) Parapet walls shall be coped with a minimum of concrete beam of eight by eight inches, or sixty-four square inches, reinforced with two one-half

(e) *Permitting a 6" parapet on lots 18 & 19, Block 10, C. S. Sec. 6d 87A*
inch deformed steel rods, and such coping shall be anchored to the tie-beams immediately underneath with the equivalent of eight by twelve inch concrete struts reinforced with four, one-half inch rods, such struts to be placed directly over and tied to steel in columns below.

(f) *Bedding with parapets (see ord 892)*
12.04 RAKES: There shall be an eight by eight inch, or sixty-four square inches, reinforced concrete tie-beams, constructed in the same manner as above coping beam, on the rake at the end of gables.

12.05 FIRE WALL: Fire Walls shall be built of fire-resisting material having a minimum fire resistance rating of two hours and shall be not less than eight inches thick.

12.06 BRICK WALL: In brick walls, every sixth course shall be a heading course, except where walls are faced with brick in Flemish bond, in which case the headers of every third course shall be full brick and bonded into the backing. Where running bond is used, it shall be bonded into the backing by cutting the corners of every brick of every sixth course of brick and putting a row of diagonal headers behind the same, and suitable metal anchors shall also be used in the bonding at intervals not exceeding 3 feet each way. Where face brick is used of a different thickness from the brick used for backing, the course of the exterior brickwork shall be brought to a level bed at intervals of not more than 8 courses in height of the face brick, and the face brick shall be properly tied to the backing by a full heading course of the face brick, or other approved method. Face brick shall be laid the same time as the backing and shall in no case be laid after the backing is in place.

12.07 HOLLOW BLOCK: When walls of hollow blocks are veneered, the facing shall either be bonded to the backing with a row of headers every 16 inches, or be attached to backing with a row of headers every 16 inches, or be attached to backing with approved galvanized metal wall ties, bedded with mortar joints. Such ties shall not be spaced further apart on centers than 16 inches vertically and 2 feet horizontally. Such veneering shall not be considered as part of the required thickness of the wall. Brick facing or veneering may, however, be considered as part of a hollow terra cotta or concrete wall (or vice versa), provided the veneering is bonded at least 4 inches into the wall at intervals not exceeding six courses of brick. When veneering is used, special care shall be taken to fill all joints flush with mortar around

wall openings. The wall of each story shall be built up with the full thickness to the top of the beams above.

12.08 CHASE: No pipe chase shall extend into any eight-inch masonry wall more than four inches, or into any concrete beam more than two inches. No horizontal chase shall extend over 5 feet in length in any eight-inch masonry wall. No chase shall be wider than six inches in any eight-inch masonry bearing wall.

No chase in any wall shall be made within a distance of six feet from any other chase in the same wall. Chases shall not be permitted within the required area of any pier. Chases or recesses in walls built of hollow cement blocks or hollow tile shall not be forced by cutting of blocks or tile, or by any other method which would impair the strength of the wall.

All chases and recesses shall be formed in all cement block or hollow tile walls by using hard burned or cement brick and carrying the regular bond to top of all chases or recesses.

12.09 RETAINING WALL: No bulkhead, retaining wall or similar installation shall be built or constructed within the City of Coral Gables unless such bulkhead, retaining wall or similar installation be of masonry or native stone construction.

12.10 TIE BEAMS FOR RESIDENCES: All residences shall have continuous concrete wall tie beams placed at 2nd floor and roof line, with a depth of at least 12" reinforced with four (4) 5/8" rods, two placed at top and two at bottom of beam, and well tied at corners of building.

12.11 TIE BEAMS FOR APARTMENTS AND OFFICE BUILDINGS: All apartment houses, commercial and office buildings shall have reinforced concrete frame for exterior walls and floor joists shall be carried on concrete beams. These beams shall have a minimum size of not less than 8" x 12" and be reinforced with not less than 4 5/8 inch rods. Maximum column spacing shall be 20' - 0". All exterior columns shall be carried to top of parapet wall and tied into continuous concrete parapet beam.

Steel splices in concrete columns shall be not less than 18".

12.12 ARCHES AND LINTELS: Openings for all doors, windows or vents shall have arches of masonry or lintels of reinforced concrete or metal which shall have a bearing at end of not less than four inches in the wall. Two one-half inch tie rods shall be used in all masonry arches or lintels.

12.13 FACING: Stone or architectural terra cotta ashlar used for the facing of any building or structure, shall not be less than one inch thick. In stone ashlar, each stone shall have a reasonable uniform thickness, but all stones need not necessarily be the same thickness. Each block of ashlar, or other approved facing, shall either be bonded into the backing, or securely anchored to the backing with galvanized metallic anchors, at least one for each twenty-four (24) inches lineal length of course.

12.14 MASONRY MATERIALS: Masonry materials in outside walls of buildings and structures in the City of Coral Gables shall be faced or treated as follows:

- (a) 8 x 8 x 16 cement block — stuccoed.
- (b) 4 x 8 x 16 cement block — stuccoed.
- (c) 4 x 8 12 adobe rough face agitated or vibrated concrete block or brick, painted or impregnated during manufacture with water proofing.
- (d) Clay brick — stuccoed or if used only for trim may be unfaced.
- (e) Slump brick — plain, painted, or color impregnated.
- (f) Native or other natural stone — plain (stone and pattern to be approved by Board of Supervising Architects).
- (h) Masonry materials not listed above shall be subject to the approval of the Board of Supervising Architects, and samples thereof shall be submitted to the Building Inspector with the application for building permit.

12.15 COLUMNS: Where columns are required they shall have minimum dimensions of not less than 8 inches by 16 inches (8" x 16") and contain not less than four $\frac{5}{8}$ inch bars of deformed reinforcing steel properly spaced and secured by $\frac{1}{4}$ inch hoops 4 foot on center. Concrete column block shall not be used in lieu of any required column.

SECTION 13

BUILDING BLOCKS

13.01 CEMENT: Portland cement only shall be used in the manufacture of concrete blocks and the coarse aggregate shall be of suitable material. In no case shall the cellular space exceed 50% of the cubical content of the block figured to its outside dimensions.

13.02 SPECIFICATIONS: All building blocks used for bearing walls shall be marked or branded for identification, and such marks or brands shall be registered with the Building Inspector. Concrete Blocks shall be manufactured of concrete, the proportions of sand and cement to be used in the concrete block shall not be less than one part of cement and not more than 6 parts sand. Concrete blocks shall not be used until they have attained an age of 28 days. The average compressive strength for concrete blocks, when tested with the cells vertical, shall be not less than 800 lbs. per sq. inch. The allowable working loads on all concrete blocks shall not exceed one-eighth ($\frac{1}{8}$) of the average crushing strength of the block when laid in lime-cement mortar. The average amount of water absorbed in 48 hours by 3 units 28 days old shall not exceed 10% of the weight of the dry units.

13.03 TESTS: On all construction work in which concrete building blocks are to be used, tests of same must be furnished the Building Bureau, showing that said blocks meet the requirements of the City Building Code, before any blocks are used therein.

SECTION 14

FIREPROOF CONSTRUCTION AND FIREPROOFING.

GENERAL REQUIREMENTS FOR FIREPROOF BUILDINGS

14.01 SPACE UNDER FLOORS: The space between the floor arches or slabs and the floor finish shall be solidly filled with concrete.

14.02 SHAFTS & HALLS: All shafts and public hallways shall be enclosed and separated from the rest of the

floor space by fire resistance enclosures, and shall have floor surfaces and rim of approved incombustible material. The stairway landing and stairs shall be of approved incombustible material.

14.03 WOODWORK: No woodwork or other combustible material shall be used in the construction of any fireproof building, except wooden sleepers, grounds, bucks, and nailing blocks when entirely embedded in incombustible material, and interior doors and windows, when not otherwise specified, with their frames, trim, and casing; and interior finish when backed solidly with fireproof material, may be of wood. Wooden wainscoting more than 3 feet high, or wooden ceilings, shall not be permitted.

Wood exterior doors and windows may be used in fireproof construction except in cases of unusual fire risk to adjoining property in which case metal or fire-proof doors and windows may be required by the Chief of the Fire Department.

14.04 CONSTRUCTION BETWEEN STEEL BEAMS: Fireproof construction between steel floor or roof beams, shall consist of segmental arches of brick or concrete, or of segmental or flat arches of hollow terra-cotta, or reinforced stone, or gravel concrete; or of such other equally fire-resisting material of construction as may be approved by the Building Inspector.

14.05 ARCH TIE RODS: All segmental arches shall have a rise of $1\frac{1}{4}$ inches to the foot of span. Steel tie-rods of proper size, spacing, and location shall be used in all arches to properly resist the thrust. Such tie-rods shall be completely encased to a depth of at least 2 inches in the fireproofing material which shall extend into and be anchored to the arch.

14.06 ROOF BEAM SPACING: The spacing of floor or roof beams in the fireproof construction shall not exceed 8 feet on centers except when the slabs between them are imposed of reinforced stone or gravel concrete, in which case they shall be limited by the design according to Section 7.

SECTION 15

FIREPROOF CONSTRUCTION

15.01 BRICK ARCHES: Segmental arches of brick wall have a thickness of not less than 4 inches for spans of 5 feet or less, and 8 inches for spans exceeding 5 feet and not exceeding 8 feet. Brick arches shall be composed of good, hardburned common or hollow brick. The brick shall be lined on the centers and properly and solidly bonded; each longitudinal line of brick shall break joints with the adjoining lines. The arches shall spring from suitably designed solid skewings made of the same material as the arches, and be properly keyed. The brick shall be well wet before laying, and the joints solidly filled with mortar.

15.02 TERRA COTTA ARCHES: Hollow terra cotta tile used for floor or roof arches shall be hard burned or semi-porous and of uniform density and hardness. All terra cotta arches shall be properly keyed. The key blocks shall always be placed within the middle third of the span.

15.03 SEGMENTAL ARCHES: Segmental arches shall have sufficient depth between the top and bottom faces to carry the load to be imposed, but not less than 6 inches. The tile shall have at least two cellular spaces in the depth.

15.04 FLAT ARCHES: Flat arches shall have a depth of not less than $1\frac{3}{4}$ inches for each foot of span between the beams, this not to include any portion of the depth of tile that projects below the under side of the beams. The total depth shall in no case be less than 9 inches, and the tile shall have not less than three cellular spaces in the depth.

15.05 ARCH BLOCKS: The shells of arch blocks shall be not less than $\frac{3}{4}$ inch in thickness, and the webs shall be not less than $\frac{5}{8}$ inch in thickness. Every arch block shall have at least one continuous vertical internal web for each 4 inches in width. There shall be rounded fillets at all internal intersections. The skewbacks of all hollow tile arches shall be of such form and section as to accurately fit the beams and properly receive the thrust of the arches, and shall have shells at least 1 inch thick, and webs not less than $\frac{3}{4}$ inch thick.

15.06 LOADING DESIGN: The safe working load on terra cotta arches shall be determined by design. The allowable extreme fibre stress in compression in terra cotta floor tile shall be taken as 500 pounds per square inch on net section.

15.07 CONCRETE ARCHES AND SLABS: All segmental arches or flat slabs of reinforced concrete shall be designed and constructed in accordance with the requirements of this section and part of Section 14.

S E C T I O N 16

R O O F

16.01 GENERAL: Hollow terra cotta or concrete tile, or solid gypsum blocks may be used for fireproofing between the steel framework of roof construction; but such tiles or blocks shall not be less than 3 inches thick, and the supporting steel members shall be spaced not more than 25 inches on centers. When solid blocks or tile are properly reinforced to resist the bending stresses, the steel supporting members may be spaced not to exceed 30 inches apart. The bottom flanges of steel members shall be protected as elsewhere provided.

S E C T I O N 17

WALLS, COLUMNS & BEAMS

FIREPROOF CONSTRUCTION

17.01 PROTECTION OF WALL COLUMNS: All columns which support steel girders carrying exterior walls, and all columns which are built into walls and support floors only, shall be protected against corrosion by a coating of Portland cement mortar at least $\frac{1}{4}$ inch thick and against moisture and fire by a casing of masonry, which shall not be less than 4 inches of brick or 3 inches of concrete on all surfaces all to be bonded into the masonry of the enclosing walls.

17.02 PROTECTION OF WALL GIRDERS: The wall girders shall have a casing of Portland cement mortar and the same masonry protection as required for wall columns, all to be securely tied and bonded; but the extreme outer edges of the flanges or beams, or plates or angles connected to the beams may project within 2 inches of the outside surface of such casing. The inside surfaces of the girders shall be similarly protected by masonry, or if projecting inside the walls, they shall be protected by concrete, terra cotta, or other approved fireproof material not less than 2 inches thick.

17.03 All metal structural members which support loads or resist stresses, other than those provided for by the two preceding paragraphs, shall have a protection of fireproofing as herein specified. The protection material shall be brick, concrete, terra cotta or gypsum block. Terra cotta may be solid or hollow, and shall be porous or semi-porous, neither shells nor webs shall be less than $\frac{5}{8}$ inch thick; gypsum blocks shall be solid and of quality approved by the Building Inspector. Plaster shall not be considered a part of any required fireproofing for metal structural members except where specifically mentioned as such.

All bricks or blocks used for fireproofing shall be set in Portland cement mortar, except gypsum blocks may be set in gypsum mortar.

17.04 INTERIOR COLUMNS:

- (a) The protection shall cover the columns at all points to a thickness of not less than 3 inches thick and be continuous from the base to the top of the column. The extreme outer edges of lugs, brackets, and similar supporting metal may project to within 1 inch of the outer surface of the protection.
- (b) If bricks or blocks are used for fireproofing columns, they shall be accurately fitted, laid with broken joints, and all spaces between the outside layers and the metal solidly filled with masonry; or concrete filling may be used. No voids between the metal and the protecting cases are permitted.
- (c) Galvanized steel wire not smaller than No. 12 gauge, shall be securely wrapped around block column coverings so that every block is crossed at least once by a wire. The wire shall not be wound spirally around the column, but each turn or band shall be a separate unit and shall be twisted tightly or otherwise securely bound. Other equivalent anchorage may be employed if approved by the Building Inspector. No block used for this purpose shall exceed 12 inches in vertical dimension.
- (d) Columns located in damp places shall receive a coat of at least 1 inch of Portland cement mortar before application of the fireproofing.
- (e) Columns made of steel or wrought iron pipe filled with concrete, shall be protected by at least 1½ inches of fireproofing.
- (f) Where the fireproofing of columns is exposed to damage from trucking or handling of merchandise, the fireproofing shall be jacketed on the outside for a height of not less than 3 feet from the floor with metal or other approved covering.

17.05 PROTECTION OF STEEL GIRDERS AND BEAMS:

- (a) The protection of the webs and bottom flanges of girders, and all members of trusses shall have a thickness of not less than 2 inches at all points. The protection of the webs and bottom flanges of beams, lintels, and all other structural members shall not be less than $1\frac{1}{2}$ inches at any point.
- (b) If hollow terra cotta tile be used for protection, the lower flanges of beams and similar members shall be encased by lugs which form part of the skewbacks and extend around the flanges meeting in the middle; or by tile slabs held in position by dove-tailed lugs projecting from the skewbacks. In either case, care shall be taken to insure that all joints be solidly filled with mortar.

17.06 SECURING PROTECTION: Concrete protection for all structural members shall be held in position by suitable designed interior steel anchors hooked securely around the flanges or angles of the members, at intervals not exceeding 8 inches apart; these anchors shall be not less than $\frac{1}{8}$ inch in thickness if flat or $\frac{1}{10}$ inch in diameter of wire, and shall be located at a distance of not less than $\frac{3}{4}$ inch, not more than 1 inch from the outside surface. Provision shall be made to prevent displacement of anchors while concrete is being deposited. When the flange width of steel members exceeds 6 inches, the wire used for anchoring the concrete protection shall be not less than $\frac{1}{8}$ inch diameter.

17.07 MISCELLANEOUS STRUCTURAL MEMBERS: Steel angle or channel struts, or other structural framing not elsewhere provided for, which are used for support in any wall, partition, or other construction, shall be fireproofed as required in this section.

17.08 METAL FRONTS: Metal fronts on the exterior of buildings over one story high shall be backed up or filled with masonry not less than 8 inches thick.

S E C T I O N 18

MISCELLANEOUS FIREPROOFING PROVISIONS

18.01 DEFECTIVE MATERIAL: Defective or damaged fireproofing materials shall not be used. All fireproof construction injured or damaged after being erected shall be repaired to the satisfaction of the Building Inspector before any filling or finish is placed over same.

18.02 ITEMS NOT TO BE INCASED: No pipes, wires, cables or other materials shall be incased within or embedded in the required fireproof protection of columns or other structural members.

18.03 CEILING SUPPORTS: All metal lath and plaster ceilings shall be supported by hangers or clamps attached to the floor or roof construction in an approved manner. Such supports shall be of such section and weight as will support the wet plaster without deflecting more than 1/30 inch per foot span.

All studding for metal lath partitions or wall furring shall be made from steel stock weighing not less than 0.5 of a pound per lineal foot, shall be spaced not over 16 inches center to center and shall be securely fastened to the floor and ceiling construction.

18.04 METAL LATH: Metal lath shall be of galvanized steel weighing not less than 54 oz. per square yard. Wire lath shall not be less than No. 20 gauge, and sheet metal lath not less than No. 24 gauge. Metal lath shall be laced to the supporting frame, furring, or studs at intervals not exceeding 6 inches.

18.05 FLOOR OPENINGS: After floors are constructed, no opening greater than 2 square feet shall be cut through them unless suitable metal framing or reinforcing is provided around the opening. After pipes or conduits are in place, all openings around them shall be filled in solidly with fireproofing material unless approved close fitting individual sleeves are provided.

SECTION 19

PARTITIONS IN FIREPROOF BUILDINGS

19.01 GENERAL: In fireproof buildings, all partitions enclosing public halls or separating the spaces occupied by different tenants, and all other permanent partitions, shall be built not less than 4 inches thick of solid or hollow brick, terra cotta, concrete, gypsum blocks, or tile; or not less than 3 inches thick of reinforced concrete or solid metal lath and cement plaster; or of such incombustible materials and thickness as shall meet the approval of the Building Inspector. The required thickness for block or tile partitions shall be exclusive of plaster. All such partitions shall be securely fastened to the fireproof construction of the floor and ceiling. All bricks, blocks or tile shall be laid with broken joints.

19.02 OTHER PARTITIONS: All partitions not enumerated above shall be incombustible materials, except for woodwork permitted in this ordinance.

19.03 SUPPORT: All partitions in fireproof buildings shall be independently supported at each floor level, and where lateral support is not sufficient they shall be stiffened by such steel reinforcement encased in the construction as the Building Inspector may require and approve.

19.04 FRAMING: Structural steel members necessary for supporting a partition, or for framing doorways or other openings through it, shall be protected by at least 1 inch of fireproofing. Cement plaster, or cement-tempered plaster may be accepted for this purpose if properly keyed.

19.05 MATERIALS: Reinforced concrete partitions shall be as required in this section. Terra cotta tile shall be porous or semi-porous in quality, and if hollow, shall have two cells in the thickness of shells inclusive of plaster key, not less than $\frac{3}{4}$ inch, and thickness of web not less than $\frac{5}{8}$ inches. Gypsum shall be used only in dry locations. Metal lath and studding shall conform to the requirements of Section 18.

SECTION 20

REINFORCED CONCRETE CONSTRUCTION

GENERAL REQUIREMENTS

20.01 DEFINITION: The term "reinforced concrete" in this Ordinance shall mean an approved concrete mixture in which steel is embedded in such a manner as to resist the tensile stresses and to add rigidity and strength to concrete in compression.

20.02 WHERE APPROVED: Reinforced concrete will be approved for all types of building construction, provided the design conforms with good engineering practice, and the working stresses do not exceed those herein specified. The construction shall meet the requirements of this Ordinance in all respects, and in addition shall conform to such other rules as may be issued by the Building Inspector or State authorities having jurisdiction. Apartments or offices built over stores shall have concrete slab floor construction at second floor.

20.03 CONSTRUCTION PLANS AND SPECIFICATIONS: The plans and specifications required to be filled with the Building Inspector shall be accompanied by stress computations and descriptions if required showing the general arrangement of the entire construction in all important details, including the size, length, and points of bending of all reinforcement, the qualities, proportions, and methods of mixing the materials used in the concrete and the dead and alive loads each floor is designed to carry.

20.04 PREPARATION OF PLANS: All such plans and specifications shall be made and signed or sealed by an architect or engineer, registered under the laws of the State of Florida. In no case shall the construction deviate from the approved plans and specifications except by written consent of the Building Inspector.

20.05 GENERAL MIX: The concrete shall consist of a mixture of a pastic or viscous consistency of one part of cement to not more than six parts of aggregate fine and coarse, either in the proportion of one part of cement, two parts of sand and four parts of stone and gravel, or in such

proportion as to produce a maximum density. Such concrete shall develop a crushing strength of at least 2500 pounds per sq. inch at 28 days when made under laboratory conditions of manufacture; the materials and consistency being practically the same as that used in the field.

20.06 SPECIAL MIX: Concrete in the proportion of one part of cement to four and one-half parts of aggregate, which may be desirable for special work, such as columns, shall develop a crushing strength of not less than 2,400 pounds per sq. inch at 28 days, and the working stress of such concrete may be increased 20 per cent over that permitted elsewhere in this paragraph.

20.07 TEST REQUIREMENTS: The Building Inspector may require additional tests to be made upon specimens cast during construction of the building. The test specimens shall be secured at such times and in such portions of the structure as the Building Inspector may direct. This test concrete may be taken from the barrows as the concrete is being wheeled into place or from forms after it is deposited.

20.08 TEST METHODS: Each test shall consist of a set of at least three duplicate specimens in the shape of cylinders with a height of double the diameter; or cubes having a least dimension of 6 inches. Cubes shall be tested standing on bed and 75 per cent of the resulting test strength shall be assumed as the strength of the standard cylinder specimen 8 inches in diameter and 16 inches high. The average of the three tests shall be taken as the result for record. The smallest dimension of the test piece should be at least four times the size of the coarsest particle of stone. Test specimens shall be removed from mould as soon as set and stored in damp sand until tested.

20.09 QUALITY OF CEMENT: All cement used in reinforced concrete shall be Portland cement meeting the requirements of American Society for Testing Materials.

20.10 QUALITY OF FINE AGGREGATE: Fine aggregate shall consist of sand or crushed stone, screening, passing when dry, a screen having $\frac{1}{4}$ inch diameter holes and not more than 6 per cent, passing a sieve having 100 meshes per lineal foot. It shall be clean and free from quicksand, vegetable loam, perishable organic matter, or other deteious materials.

20.11 TESTS ON FINE AGGREGATE: Fine aggregate shall always be tested. It shall be of such quality that mortar composed of one part Portland cement and three parts fine aggregate by weight, when made into briquetts shall show a tensile strength at least equal to the strength of 1 to 3 mortar of the same consistency made with the same cement and standard Ottawa sand, and shall show a tensile strength of at least 180 lbs. per square inch at the age of 7 days. If the aggregate be of poorer quality, the proportion of cement should be increased to secure the desired strength.

20.12 QUALITY OF COARSE AGGREGATE: Coarse aggregate shall consist of crushed stone which is retained on a screen having $\frac{1}{4}$ inch diameter holes, and shall be graded in size from small to large particles. The maximum size shall be such that all the aggregate will pass through a $1\frac{1}{4}$ inch diameter ring. The particles shall be clean, hard, durable, and free from all deteious material.

Stone shall be equal in strength to the hardest Ojus or coral bank stone.

20.13 QUALITY OF REINFORCEMENT: All steel used in reinforced concrete shall meet the requirements of the current Standard Specifications for Billet-Steel Concrete Reinforcement Bars of the American Society for Testing Materials. No reinforcements produced from re-rolled rails or second-hand materials shall be used in any structure without the written permission of the Building Inspector. If such reinforcements be permitted, it shall meet the requirements of the current Standard for Rail-Steel Concrete Reinforcement Bars of the American Society for Testing Materials. Cold drawn steel wire made from open hearth billets of the grade of rivet steel or from Bessemer billets, may be used in floor and roof slabs, clomn hooping, and reinforcements for temperature and shrinkage stresses. It shall have an ultimate strength of not less than 85,000 lbs. per square inch and test specimens shall bend 180 degrees around their own diameter without fracture.

S E C T I O N 21

FACTORS CONTROLLING DESIGN

21.01 ALLOWABLE UNIT WORKING STRESSES:

In the design of reinforced concrete structures when the concrete is mixed in the proportions of 1:2:4, and satisfied the strength requirements of Section 20.05, the following working stresses for concrete and steel shall be used.

	Lbs. per Sq. Inch
Extreme fibre stress on concrete in compression	600
Concrete in direct compression	500
Shearing stress in concrete when diagonal tension is not resisted by steel	40
Shearing stress in concrete when web reinforcement is proportioned to resist two thirds of the extreme vertical shear	120
Bond stress between concrete and deformed bars	80
Bond stress between concrete and plain reinforcing bars	100
Tensile stress in steel reinforcement	16,000 to 18,000

Compressive stress in steel as specified in Section 7.02, or in the ratio of the moduli of elasticity of steel to concrete. In continuous beams the extreme fibre stress in concrete in compression may be increased 15 per cent adjacent to the supports. In proportioning the section of concrete for shearing stresses, the effective depth from center of compression area to center of steel shall be used.

Bearing on a concrete surface having a total area at least three times the area of the loaded portion, may be taken at $37\frac{1}{2}$ per cent of the ultimate strength of the concrete, when all other stresses are properly provided for.

Stress in concrete mixed in the proportions of $1:1\frac{1}{2}:3$ in accordance with this Section may be increased 20 per cent in excess of the above stresses.

21.02 GENERAL ASSUMPTIONS: As a basis for calculating the strength of beams and slabs, the following assumption shall be made:

- (a) A plane section before bedding remains plane after bending.
- (b) The modulus of elasticity of concrete in compression remains constant within limits of working stresses fixed in this Ordinance.
- (c) The adhesion between concrete and reinforcement is perfect.
- (d) Concrete has no value in resistance to tension.
- (e) Initial stress in the reinforcement due to contraction or expansion in the concrete is negligible.
- (f) The ratio of the moduli of elasticity of 1:2:4 stone or gravel concrete and steel inflexure shall be taken as 1:5.
- (g) The ratio of the moduli of elasticity of 1:1½:3 stone or gravel concrete and steel inflexure shall be taken as 1:12.

The span length for beams and slabs shall be taken as the distance from center to center of supports, but need not be taken to exceed the clear span plus the over all depth of beam slab. Brackets shall not be considered as reducing the clear span in the sense here intended.

21.03 BENDING MOMENTS OF UNIFORMLY LOADED FLOOR AND ROOF SLABS:

—Bending Moments of Slabs Supported on Two Sides—

The bending moments of slabs due to uniformly distributed loads shall be taken as not less than:

1-8 WL, at center when simply supported.

1-10 WL(at center and continuous support when supported at one end and continuous at the other.

1-12 WL, at center and intermediate support when continuous over more than two supports.

W—Total distributed dead and live loads.

L—Length of span.

21.04 BENDING MOMENTS OF SLABS SUPPORTED ON FOUR SIDES: The bending moments of uniformly loaded slabs supported on four sides and reinforced in both directions shall be taken as:

1-8 WL, at center in each direction when simply supported.

1-10 WL, at center and continuous support when continuous over one support.

1-12 WL, at both center and supports when continuous over two or more supports.

21.05 DISTRIBUTION OF LOADS: The distribution of loads on square and rectangular slabs supported on four sides, shall be determined by the following formula:

$$r = \frac{14}{14 - b^4}$$

in which r — the proportion of the load supported by the transverse reinforcement.

L — Length of slab

B — Breadth of slab

If the length of the slab exceeds $1\frac{1}{2}$ times its width, the transverse reinforcement shall be designed to carry the entire load.

21.06 BENDING MOMENTS OF UNIFORMLY LOADED BEAMS AND GIRDERS:

—TERM “BEAM” DEFINED—

The term “beam” as used in this section shall be understood to include the term girder, unless distinction be made.

—BEAMS WITH CONTINUOUS SUPPORT—

The bending moments of uniformly loaded beams shall be taken as:

1-8 WL, at center when simply supported.

1-10 WL, at center and over continuous support when supported at one end and continuous at the other.

1-12 WL, at both center and supports when continuous over more than two supports.

21.07 BEAMS SUPPORTING RECTANGULAR

SLABS: Beams supporting rectangular slabs reinforced in both directions, shall be assumed to take the proportions of load as determined by the formula in this Section.

The bending moments of slabs, beams, or girders which are continuous for two spans only, shall be taken as 1-8 WL over the central support and 1-10 WL near the middle of the span.

GENERAL REQUIREMENTS FOR BEAM AND SLAB CONSTRUCTION

21.08 SPECIAL MEMBERS: The bending moments for slabs or beams with spans of unusual length or due to other than uniformly distributed loads, shall be more exactly computed according to accepted theory.

21.09 CONTINUOUS FLOOR CONSTRUCTION: In continuous slabs, beams or girders, full provisions shall be made for the negative bending movements over the supports by placing sufficient negative reinforcement near the top of the members to resist the stress. This reinforcement shall pass beyond the point of inflection in beams and girders and be anchored in the compression concrete of the member a sufficient negative reinforcement near the top of the members to resist the stress. This reinforcement shall pass beyond the point of inflection in beams and girders and be anchored in the compression concrete of the member a sufficient distance to develop the full strength of the steel through bond stress. The critical section of continuous construction is over the support.

— WEB REINFORCEMENT IN BEAMS —

21.10 A Members of web reinforcement in beams shall be designed for diagonal tensile stresses, using the calculated vertical shearing stress as a measure of these tensile stresses. They shall not be spaced to exceed three-fourths of the depth of the beam in that portion where the web stresses exceed the allowable value of the concrete in shear. It shall be assumed that two-thirds of the external vertical shear is provided for by the steel in calculating the stresses in stirrups, diagonal web members, and bent up bars; and the remaining one-third of the shear shall be assumed as taken by concrete, in accordance with this section.

B Web members such as stirrups, when not rigidly attached to the longitudinal steel at both top and bottom, shall be carried around and bent over the longitudinal members or otherwise sufficiently anchored in the compression concrete to develop the tensile stresses existing in them. Diagonal members shall be rigidly attached to the longitudinal steel on the tension side. Stirrups at the end of continuous girders shall be inverted with the free ends anchored in the compression concrete at the bottom of the beam. The length of stirrups or diagonals embedded in compression concrete shall be sufficient to develop their tensile stresses by adhesion.

21.11 A T BEAMS: Where adequate bond is provided at junction between slab and beam, and the two are cast at the same time as a unit, the slab may be considered as an integral part of the beam, provided its effective width shall not exceed on either side of the beam one-sixth of the span length of the beam nor be greater than four times the thickness of the slab on either side of the beam; the measurements being taken from the line of intersection between the slab and beam.

B In beams with T-sections the width of the stem only shall be used in calculating longitudinal shear and diagonal tension. An effective bond shall be provided at the junction of the beam and slab when the principal slab reinforcement in parallel to the beam, by the use of the transverse reinforcement extending over the beam and well into the slab.

C In the design of T-beams acting as continuous beams, sufficient compression area shall be provided on the under side of the support, either by the use of properly designed brackets or by imbedding additional compression steel in the concrete extending to the point of inflection.

21.12 MINIMUM THICKNESS OF SLABS: The minimum thickness of concrete floor slabs shall be 4 inches and for roof slabs $3\frac{1}{2}$ inches.

21.13 CEMENT FLOOR FINISH: Cement or concrete floor finish shall not be considered in calculating the strength of floor members.

21.14 COMPOSITE FLOORS: The design of composite floors consisting of rows of hardburned terra cotta tile, concrete blocks, sheet steel, or other approved fire resistant material, separated by ribs or beams of reinforced concrete (stone), shall conform to all the provisions of this part so far as they are applicable. The ribs shall be at least 4 inches wide. The tile or blocks shall be regarded only as fillers, and shall not be considered in the design except as dead load. If designed as a T-beam, the slab portion above the fillers shall be at least $2\frac{1}{2}$ inches thick, and shall consist of the same mixtures used for the ribs, and shall be cast at the same time; under these conditions it may be considered in the design of the ribs. Tile or concrete block fillers shall be laid with Portland cement mortar joints, and shall be thoroughly wet before the concrete is poured. The protection for steel bars in bottom of ribs shall be the same as for other beams.

To resist expansion stresses, reinforcement bars not less than $\frac{1}{2}$ inch diameter, shall be placed in the concrete at right angles to the ribs and above the fillers, at intervals not exceeding 30 inches.

21.15 LENGTH OF COLUMNS: The length of columns shall be taken as the maximum unsupported length.

The unsupported lengths of columns shall not exceed fifteen times the least side or diameter, and in no case shall the least side or diameter be less than 12 inches. The length shall include any corbel or knee brace attached to the column.

21.16 COLUMNS WITHOUT HOOPS: Axial compression in reinforced concrete columns without hoops, bands, or spirals, containing not less than $\frac{1}{2}$ per cent, nor more than 3 per cent of vertical reinforcements, secured against lateral displacement by steel ties placed not farther apart than 15 diamets of the vertical rods, nor more than 12 inches, shall not exceed 500 pounds per square inch on the effect area of the concrete plus 6000 lbs. per sq. in. on the vertical reinforcement. The percentage of reinforcement shall be calculated upon the effective area of the column, which is the area within the reinforcement. Steel ties shall not be less than $\frac{1}{4}$ inch in diameter or least dimension. At least four vertical bars shall be used in every reinforced column, and no bar shall have an area of less than $\frac{1}{4}$ square inch.

21.17 COLUMNS WITH HOOPS: Axial compression in reinforced concrete columns with not less than 1 per cent of hoops or spirals (that is, a volume of steel equal to 1 per

cent of the volume of concrete within the hoops of spirals for a unit length of column), spaced not farther apart than one-sixth of the diameter of enclosed column, but in no case more than 3 inches, with not less than one nor more than 4 per cent of vertical reinforcement, shall not exceed 750 lbs. per square inch on the effective area of the concrete, plus 9000 pounds per square inch on the vertical reinforcement. The hoops or spirals shall be uniformly spaced, and shall be rigidly attached to at least four vertical bars in each convolusion.

Columns required to be settled before being built upon, Section 23.

21.18 STRUCTURAL STEEL AND CONCRETE COLUMNS: Axial compression in structural steel columns thoroughly encased in concrete having a minimum thickness of 4 inches and reinforced with not less than 1 per cent of steel (that is, a volume of steel equal to 1 per cent of the volume of concrete within the hoops) equally divided between vertical reinforcement and hoops and spirals spaced not more than 12 inches apart, may be taken at 16,000 pounds per square inch on the net section of the structural steel, no allowance being made for the concrete casing. The hoops or spirals shall be placed not nearer than $1\frac{1}{2}$ inches from the outer surface of the concrete. The ratio of length to least radius of gyration of the structural steel section shall not exceed 120.

21.19 COLUMNS CONSTRUCTED WITH SPECIAL CONCRETE: In reinforced concrete columns the compression on the concrete may be increased 20 per cent when the fine and coarse aggregates are carefully selected, and the proportion of cement to total aggregates increased to one part of cement to not more than four and one-half parts of aggregate, fine and course, either in proportion of one part of cement, one and one-half parts of sand and three parts of stone or gravel, or in such proportions as will secure the maximum density. The unit stress on the vertical reinforcement in such columns shall not exceed twelve times the unit stress on the concrete.

21.20 COLUMNS ECCENTRICALLY LOADED :

Bending stresses in columns due to eccentric loads, shall be provided for by increasing the section of concrete or steel so that the total unit stress shall not exceed the allowable working stress in flexure.

21.21 STEEL BASE PLATES: Suitable steel base plates or castings shall be provided at the bottom of columns to distribute the loads over the footings, and the vertical reinforcement bars shall bear squarely on these plates, or the reinforcing bars shall be carried down into an enlarged footing to distribute the load through bond stress.

21.22 WALLS: Exterior and interior bearing walls of reinforced concrete shall be securely anchored to all intersecting walls, columns, and floors, and the allowable compressive stress shall not exceed 250 pounds per square inch. The thickness shall be not less than two-thirds that specified for brick walls, and in no case less than 8 inches. All such walls shall be reinforced with steel running both horizontally and vertically. The amount of reinforcement shall be not less than 1-5 of 1 per cent of the cross section of the wall, and shall be equally disposed near each face of the wall; except that in walls or partition 8 inches or less in thickness, the reinforcement may be placed as a single layer in the middle. Reinforcement shall not be spaced more than 18 inches apart. Additional reinforcement shall be placed around the wall openings, and all vertical and horizontal reinforcement shall be wired or have other mechanical bond at intervals not exceeding 18 inches in either direction.

SECTION 22

CONCRETE JOISTS

22.01 MANUFACTURING METHODS: There shall be a satisfactory casting yard and equipment which will assure uniformity in the shape and quality of the joists, and methods of handling that will prevent the damaging of the joists after they have been cast.

22.02 DESIGN OF JOISTS: Joists may be manufactured for use in conformance with the "Design Table" for Pre-Cast Joists used as Independent Beams" as prepared by the Portland Cement Association, manufacturers may submit their own tables to the Building Departments for approval, or joists may be manufactured to special designs of Structural Engineers for specific jobs. No design based on "T" action with the floor slab will be accepted.

22.03 CONTROL OF MANUFACTURE: Manufacture shall be under the control of a Testing Laboratory, a qualified structural engineer or other agency agreeable to the Building Departments, who shall make compression tests of the concrete of the joists, and who shall have sufficient control of the methods of construction to certify the joists as meeting these standards.

22.04 QUALITY OF CONCRETE: The minimum compressive strength of concrete used in pre-casting joists shall be three thousand pounds (3000) per sq. inch after twenty-eight (28) days, and shall not be moved from casting yard until they have attained a strength of 2500 P.S.I. Aggregate shall be of such sizes that the concrete can be worked into the corners of the form and around the steel, and of such grading, mix and plasticity that the use of vibrators will not cause the separation of the materials or permit free water to collect on the surface of the concrete.

22.05 REINFORCING STEEL: Reinforcing steel shall be deformed, meeting the requirements of the American Society of Testing Materials, and shall be free from rust scale or other injurious coating at the time of incorporation into the joist. Adequate methods shall be used to maintain the position of the steel during the pouring of the concrete.

22.06 MARKING: Each joist shall be clearly marked on the side web with the name of the manufacturer, the date of manufacture, the quality of the concrete, the size and number of reinforcing bars top and bottom, and the name or mark of the agency providing the control supervision.

SECTION 23

REQUIREMENTS FOR REINFORCEMENTS

23.01 EXTERNAL AND INTERNAL DEFECTS: All reinforcements shall be free from excessive rust, scale, grease, paint or any coating which would tend to reduce or destroy the bond between the steel and the concrete. Bars shall also be free from injurious seams, slivers, flaws, and other mill defects. The weight of any lot of bars shall not vary more than 5 per cent from the standard weight of the lot as given by manufacturers' handbooks.

23.02 PLACING AND SPACING OF REINFORCEMENT: All reinforcement shall be accurately located and mechanically secured against displacement during the placing of concrete. Reinforcement bars for slabs shall not be spaced farther apart than two and one-half times the thickness of the slab. The spacing of the parallel bars in beams shall not be less than three diameters from center to center nor less than one inch. The clear spacing between the two layers of bars shall be not less than one inch. In restraining or cantilever construction reinforcement shall extend beyond the supports into adjacent construction for full and effective anchorage, except that when this is not practicable, anchorage shall be obtained by other means acceptable to the Building Inspector. Special reinforcement shall be provided to resist concentrated loads. Slabs reinforced in one direction only, shall have shrinkage rods not less than $\frac{3}{8}$ inch in diameter placed above the reinforcement and spaced not over 2 feet apart. All reinforcement shall be assembled well in advance of the placing of the concrete, and shall be inspected and approved by the Building Inspector before concrete is deposited.

23.03 PROTECTION FOR REINFORCEMENT: Steel reinforcement shall have a minimum protection of concrete on all sides as follows:

In columns and girders, $2\frac{1}{2}$ inches; in beams and walls, and slabs 2" inches; and in floor slabs, $1\frac{1}{2}$ inches.

The steel in footings for walls and columns shall have a minimum protection of 4 inches of concrete.

23.04 SPLICES IN REINFORCEMENT: Splices in reinforcing bars shall be designed to transfer the calculated stress at the joint either by bond and shear through the concrete, or by bearing between the steel. Splices wherever possible shall be avoided at points of maximum stress. Lap splices of bars shall be sufficient length to develop the required stress in the joint without exceeding the bond stress permitted. In columns where necessary to splice vertical bars having areas in excess of $1\frac{1}{4}$ square inches, it shall be done by cutting the bars squarely at the ends and enclosing them in a close-fitting pipe-sleeve, or uniting them by a thread splice or other mechanical connection which will transfer the load from one to the other without stressing the adjoining concrete excessively. The middle point of such splices shall be within one foot above the floor level. Splices in column hooping where necessary, shall be sufficient to develop the full strength of the hooping.

23.05 MIXING: The separate ingredients of concrete shall be accurately measured, and thoroughly mixed in a manner to produce a homogeneous mass of uniform color and of such a viscous consistency that it will flow to all parts of the forms without spreading or separation of the coarse aggregate from the mortar. Except when limited quantities are required, or when the conditions of the work make hand mixing preferable, mixing shall be done in a mechanical batch mixer from which a complete batch shall be discharged before another is received. All ingredients shall be mixed together for at least one minute, the mixer making at least 20 revolutions.

23.06 DEPOSITING: Concrete shall be deposited, thoroughly tamped and worked to place before initial set begins, and shall be then kept free from shocks and disturbances of every kind until it has fully hardened. Retamping of concrete after its initial set shall be prohibited.

When the work of placing concrete is suspended, all necessary grooves for joining future work shall be made before the concrete sets.

23.07 JOINING POURS: Before depositing new concrete upon concrete already set, the contact surfaces shall be roughed, cleaned, or all laitance and loose material, and

then drenched with water and slushed with a grout consisting of one part Portland cement and not more than two parts fine aggregate immediately before placing the fresh concrete. If a water-tight joint is desired, or of granolithic is to be used or deposited on old concrete, it is necessary that a neat cement grout be used.

23.08 DRYING: When fresh concrete is exposed to rapid drying conditions, precautions shall be taken to keep it moist for a period of at least seven days after being deposited. Where practical this shall be done by a covering of wet sand, burlap, or some other equally effective method. Thorough wetting twice a day is recommended.

23.09 JOINTS: Construction joints shall be avoided wherever practicable, but when they are necessary they shall be located at such sections as will least affect the structural strength and shall be made at right angles to the direction of principal compressive stress. In members of floor systems, joints shall be made within the middle third of the span where practicable. In columns, joints shall only be permitted at the bottom face of the lowest connecting floor members. Temperature changes and shrinkage during setting necessitates joints in independent walls at intervals of 50 to 80 feet when not otherwise provided for, by effective reinforcement.

23.10 COLUMNS: Girders, beams, and slabs shall not be cast upon freshly poured columns until a period of 4 to 6 hours have elapsed to permit settlement.

23.11 CONSTRUCTION OF FORMS: Forms shall be substantial and unyielding, and care shall be exercised to make them as nearly water-tight as possible and practicable.

Care shall be taken to insure that all debris is removed from forms, and that they are thoroughly greased or wetted before concrete is deposited in them. Beam forms shall be so designed that at least one side may be removed without disturbing bams and slab forms. Cleanout holes shall be provided in the bottom of column forms where necessary to insure the removal of woodchips or other debris.

23.12 REMOVAL OF FORMS: The time for the removal of forms shall always be subject to approval by the Building Inspector.

23.13 SCHEDULE FOR REMOVAL OF FORMS:

- | | | |
|---|--|---------|
| A | Bottom of slabs, spans of 6 feet
plus one day extra for each additional
foot of length | 4 days |
| B | Bottom of beams and girders of
ordinary length | 14 days |
| C | Beams of span of 20 feet | 21 days |
| D | Sides of lintels, girders and beams | 3 days |
| E | Thin walls | 3 days |
| F | Columns | 2 days |
| G | Girders of 25 foot span or over shall be considered
as special cases and shall be subject to the in-
spection of the Building Inspector before the
removal of the supports. | |
| H | Composite floors, same as for ordinary beams. | |
| I | All reinforced concrete shall be carefully inspect-
ed to insure its soundness and reliability before
main supports are removed. | |
| J | No loads shall be placed upon a reinforced con-
crete floor before the removal of the form sup-
ports which would in any way tend to overstress
such supports or those below. | |

SECTION 24

CAST IRON AND STEEL CONSTRUCTION

24.01 CONSTRUCTION METHODS: There shall be a satisfactory fabricating yard and adequate equipment, jigs, and other appurtenances of manufacture to assure uniformity in the shape and quality of the joists. Workmen, such as welders, rivetters, etc., shall be skilled and competent in their work and capable of producing uniformly good results.

24.02 DESIGN OF JOISTS: Joists may be manufactured for use in conformance with the Steel Joists Institute standards of manufacture and table of loads; manufacturers may submit their own table of design and loading to the Building Departments for approval; or joists may be manufactured to special designs of Structural Engineers for specific jobs. Open web joists shall be designed as trusses, and all joists shall be so designed as to admit of a rational analysis in accordance with the accepted principles of mechanics. No design based on "T" action with the floor construction will be accepted.

24.03 CONTROL OF MANUFACTURE: Manufacture shall be under the control of a Testing Laboratory, qualified Structural Engineer, or other agency agreeable to the Building Departments, who shall have sufficient control of the methods of fabrication, and who shall make tests of the welding and such other tests, as are necessary to certify the joists as meeting these standards.

24.04 QUALITY OF STEEL: Steel used in the fabrication of steel joists shall meet the standards of the American Society of Testing Materials for new billet steel of Structural or Intermediate grade.

24.05 MARKING OF JOISTS: Each joist shall be clearly marked on the top with the name of the manufacturer, the grade of steel, the designation of size which shall conform to the Steel Joist Institute markings unless otherwise proved, and the name or mark of the agency providing the control supervision.

24.06 DESIGN — CAST IRON: The outside diameter or least side of cast iron columns shall be not less than five inches (5"), nor shall their unsupported length exceed (60) times their radius of gyration. The finished thickness of

metal in the shaft shall be not less than one-half ($\frac{1}{2}$) the outside diameter of the greatest lateral thickness or dimension of cross section, nor less than three-fourth ($\frac{3}{4}$) inch. The thickness of metal flanges, lugs, seats, and brackets shall be not less than one inch (1").

In all cast iron columns not cast with open side, at least 3 holes $\frac{3}{8}$ " in diameter, shall be drilled 90 degrees (90) apart, near the middle of shaft for the purpose of measuring the thickness of metal.

24.07 IMPERFECTIONS: Whenever the core of a cast iron column has shifted more than one-fourth ($\frac{1}{4}$) 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 rejected if this computation shows the strength to be less than required. A cast iron column shall be rejected whenever blow holes or other imperfections reduce the effective area of the cross section more than ten per cent (10%).

24.08 END JOINING: The ends of all cast iron columns shall be planed to a true surface perpendicular to the axis of the column. Successive column lengths shall be bolted together through end flanges with at least 4 bolts not less than $\frac{3}{4}$ " in diameter. No shims shall be used between flanges. If the core of a cast iron column below a joint is larger than the core of the column above, the core of the lower column shall be tapered up for a distance of not less than 6", to the size of the core, or the column above. In lieu of a tapering core, a steel or cast iron plate of sufficient thickness may be used between the flanges. The difference between the diameters or side of any two successive column lengths shall not be greater than 2".

24.09 CONNECTIONS: The connections of beams and girders to cast iron columns shall be effected by means of seats reinforced by brackets of sufficient depth and thickness to support the entire load, and by lugs to which the webs of the beams and girders shall be bolted. The projection of the seat beyond the face of the column shall in general be not greater than 4". All holes in cast iron columns shall be drilled. Cored, or cored and reamed holes shall not be permitted. The diameter of holes shall not be more than 1-16" greater than diameter of bolt or rivet. The distance from the center of a hole to the edge of a flange or lug shall not be less than $1\frac{1}{2}$ ". Cast iron columns shall not be used in any case where the load is sufficiently eccentric to reduce the unit of compression to zero in the extreme fibre on one side of the axis of the column.

24.10 GENERAL: Cast iron columns shall not be used in the structural frame of buildings. The height of which is greater than 3 times their width. Cast iron columns shall not be painted or covered until after the inspection by the Building Inspector. All wrought and cast structural steel and iron shall conform to the test requirements of the current Standards Specifications of the American Society for Testing Materials.

24.11 BASES: Cast iron bases or shoes shall be planned on top. Bases which rest on steel girders shall be planed on top and bottom. The thickness of metal shall be not less than one inch (1"). The inclination of the outer edge of the ribs with the horizontal shall be not less than 45 degrees (45°). Whenever one side of the bed plate exceeds 3 ft. in length, a reinforcing flange, at least 3" high, shall be provided. Cast iron lintels shall be not less than $\frac{3}{4}$ " in thickness, and shall not be used for spans exceeding six feet (6').

24.12 STEEL-DESIGN: No rolled steel column shall contain material, whether in body of column or used at lattice bar or stay-plate, of less thickness than $\frac{1}{4}$ ". In steel columns built up of a web plate and angles and having an unsupported length greater than 60 times at the least gyration, the thickness of metal in the angles shall be not less than 1-12 the width of the outstanding legs of the angles.

24.13 COLUMN LENGTHS: The unsupported length of a rolled steel column shall not exceed 120 times its least gyration, nor 40 times its least lateral dimension or diameter. The ends of all columns shall be faced to a plane surface at right angles to the axis of the columns. Wherever practicable, the connections between them shall be made with splice plates. When a section of the columns to be used or spliced, are such that splice plates cannot be used, a connection formed of plates and angles designed to properly distribute the stress may be used. Where any part of the section of a column projects beyond that of the column above, the difference shall be made up by filling plates secured to the column by the proper number of rivets. The pitch of rivets at end of built up columns shall not exceed 4 diameters of the rivets for a length equal to twice the greatest lateral dimension of the columns.

24.14 STEEL GIRDERS AND BEAMS: The thickness of the web in built up girders shall be not less than 1-20 of the distance between the flanges angles or stiffeners, nor less than $\frac{1}{4}$ inch. When the unsupported length (1) of

the compression flanges of a girder exceeds 10 times its width (B), the unit stress in such flange shall not exceed 19,000-300 L-B; but in no case shall the unsupported length of the compression flange exceed 40 times its width. Stiffeners shall be provided over the supports and under the concentrate 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 stress to the web plate. If the unsupported depth of the web plate exceeds 60 times its thickness, intermediate stiffeners shall be provided. All stiffeners shall be in pairs, with close bearing against the flange angle. When roller steel beams are used in pairs to form girders, they shall be connected together by bolts and iron or steel separators at intervals of not more than 5 ft. All beams 12" or over in depth shall have at least 2 bolts to each separator. Beams supported by girders shall be riveted or securely bolted to the same. Every beam, lintel, or girder supported by a wall, shall be properly anchorer thereto, and shall rest upon a steel or iron plate so designed as to properly distribute the load over the masonry.

24.15 FRAMING AND CONNECTING STRUCTURAL STEEL WORK: Steel girders, columns, beams, trussed and other steel work or floors and roofs shall be well and firmly connected together, and to the walls. All beams framed into other beams, girders or columns shall be connected thereto either by angles or knees with sufficient rivets or bolts in both legs of each connection to the supporting beam girder, or column; or a seat sufficiently strong to carry the full load with a single angle to hold the beam in place may be used.

24.16 STEEL TRUSSES: Trusses shall be so designed 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 placed so that the maximum limit of length to least radius of gyration, established in this Ordinance is not exceeded. For tension members, the actual net area only, after deducting rivet holes $\frac{1}{8}$ larger than the rivets, shall be considered as resisting the stress. Compression members in pin-connected trusses shall be so designed that the stresses shall not exceed 75% of the permissible working stress for columns. The heads of all eyebars shall be made upsetting or forging. No weld shall be allowed in the body of the bar. Steel eyebars shall be annealed. Bars shall be straight before boring. All pin holes shall be true and at right angles to the axis of the members, and must fit the pin within 1-16". Eye and screw ends shall be so proportioned that, upon test

to destruction, fracture will take place in body of the member. All pins shall be accurately turned.

24.17 RIVETING AND BOLTING: All components part of built up columns, girders and trusses shall be riveted. All column connections in building over 3 stories in height shall be riveted. Riveting shall also be used in column splices, in web and flange splices of girders and trusses, and in all connections of beams and girders to columns. Where riveting is impracticable, turned bolts may be used, provided the holes are punched and reamed to a template and the bolts are accurately fitted. All shop rivets, wherever practicable, shall be machine driven. The pitch of rivets shall never be less than 3 diameters of the rivet, nor more than 6". In the direction of the stress, it shall not exceed 16 times the least thickness of the outside member. At right angles to the stress, it shall not exceed 32 times the least thickness of the outside member. Rivets shall fill the holes completely; the heads shall be spherical and concentric with the axis of the rivet; the length between heads shall not exceed 5 times the diameter. Where riveting is not required, connections may be made by bolts, and the thread shall be of sufficient length to allow the nut to be screwed up tightly. When bolts are used in tension, the working stress shall be reduced to 7000 lbs. per square inch of net area for steel, and to 5000 lbs. per square inch for wrought iron, and the load shall be transmitted into the head of nut by washers, distributing the pressure evenly over the entire surface of same. In the construction of exterior stairs, landings, platforms and balconies, no rivets shall be less than $\frac{3}{8}$ diameter, and no bolt less than one-half ($\frac{1}{2}$) inch diameter.

24.18 PROTECTION: All metal work shall be cleaned of all scale, dirt, and rust and be given one coat of paint at the shop, completely covering all exposed surfaces. After erection, all such work shall be painted at least one additional coat of a shade different from the first. The first coat of paint shall be made of pigments, which shall be chemically inert after application and shall be mixed with linseed, or other drying oil. The amount of Colatile matter shall be sufficient for easy spreading, and shall not injure the film of the paint. The paint must dry sufficiently hard within the 24 hours so it will not rub or abrade easily. When the steel reaches the job, all abraded or injured portions must be thoroughly recoated with the same material as the shop coat, before the second coat is applied. The second coat of paint shall be such as will not act as a solvent of the first coat, and shall be mixed with a pigment which shall

be inert after application and the vehicle shall be one which will not saponify under the action of cement mortar. Surfaces of riveted work which come in contact with each other, shall be painted with 2 coats of paint before assembling. All iron and steel used in damp locations, or under water, shall be embedded in Portland cement concrete. No paint shall be applied to the steel surfaces which are to be encased in concrete. Any structural steel work may be so placed as to be inaccessible for inspection after erection, shall be thoroughly cleaned of all rust and encased in Portland cement concrete before it is rendered inaccessible.

SECTION 25

TRANSFORMER ROOMS

25.01 GENERAL: All transformer rooms shall be of absolute fire-proof construction and shall be located as near as possible to the point at which the service wires enter the building and must be placed in an enclosure of fire resistant material, with an air space of at least 6" on every side. The enclosure must be securely locked, and access allowed only to authorized persons. It must be thoroughly ventilated, preferably through a chimney or flue to the outside air. The enclosure must be consisted of concrete not less than 6" in thickness, or of brick, not less than 8" inches in thickness, except that when the total transformer capacity so enclosed is not over 100 kilo-volt amperes the above thickness may be reduced to 4", provided approved fire-proof material is employed and the construction of the vault is specifically approved by the inspection department having jurisdiction. All ventilating openings not connected to chimneys or flues shall be provided with automatic or manually controlled dampers, to prevent the emission of smoke or fire. Damper controls shall be arranged to be operated from a point outside of vault.

25.02 ENTRY DOOR: The doorway to the vault, or transformer room, must be thoroughly closed by means of an approved tight fitting fire door. A door sill not less than 4" in height must be provided. In all cases, the sill must of sufficient height to confine within the vault the oil from the largest transformer installed.

SECTION 26

WOOD JOISTS & BEAMS

26.01 GENERAL. The ends of all wooden floor, ceiling, or roof beams, which rest on masonry or concrete walls, shall be cut to a bevel of 3 inches in their depth. No wood beams or joists shall be placed within 2 inches of the outside face of a chimney or flue. No wooden furring or studding shall be placed against chimney. All joists shall have at least 3" bearing on partitions or walls. Each tier of joists shall be anchored to the masonry bearing walls, at intervals of not more than ten (10) feet with good, strong, wrought iron anchors. Where joists are blocked up, it shall be done with masonry materials or if wood is used, it shall be a solid block the full width and length of the joist bearing.

26.02 FLOOR JOISTS. Maximum Spans. Minimum stress (1200 psi).

Size	Spacing	Max. Span
2 x 8	12" o.c.	14 ft. 0 in.
2 x 8	16" o.c.	12 ft. 0 in.
2 x 10	12" o.c.	18 ft. 0 in.
2 x 10	16" o.c.	15 ft. 0 in.
2 x 12	12" o.c.	23 ft. 0 in.
2 x 12	16" o.c.	20 ft. 0 in.

Above for 1st floor — for 2nd floor subtract 1 ft. from each span.

MINIMUM SIZE 2 x 8.

MAXIMUM SPACING 16 o.c.

26.03 CEILING JOISTS: Maximum Spans. Minimum Stress (1200 psi).

Size	Spacing	Max. Span
2 x 6	16" o.c.	14 ft. 0 in.
2 x 8	16" o.c.	20 ft. 0 in.
2 x 10	16" o.c.	24 ft. 0 in.

MINIMUM SIZE 2 x 6.

MAXIMUM SPACING 16" o.c.

26.04 RAFTERS: Minimum Spans. Minimum Stress (1200 psi).

Size	Spacing	Max. Span
2 x 6	16" o.c.	10 ft. 0 in.
2 x 8	16" o.c.	14 ft. 0 in.
2 x 10	16" o.c.	18 ft. 0 in.

MINIMUM SIZE 2 x 6.

MAXIMUM SPACING 16" o.c.

26.05 CLEARANCE FROM GROUND: A minimum of 18" shall be maintained between all floor joists and the ground beneath.

26.06 WOOD FLOOR JOISTS: Ends of all wood floor joists shall be treated with a wood preservative material, and shall have iron wall ties at every fourth joist. Joists shall be thoroughly spiked to form continuous tie from wall to wall.

Studs of interior partitions are not to be placed the 2" way, use of the full depth of stud being required.

26.07 RATPROOFING: All openings in walls under first floor joists shall be screened in such a manner as to prevent rats from entering the building.

Where plumbing or other pipes extend through exterior walls, such pipes shall be fitted with sleeves and flanges to prevent rats from entering the building.

Around floor joists at walls and where any holes occur around studding shall be filled in solidly with masonry.

26.08 TERMITE SHIELDS: Termite shields shall be placed around all foundation walls.

SECTION 27

WIND PRESSURE

27.01 GENERAL: Every building shall be so designed and built to resist a horizontal wind pressure of 30 lbs. for every sq. foot of exposed surface, in addition to dead loads and live loads as specified above.

27.02 WAREHOUSES, PUBLIC GARAGES, ETC.: All exterior door and window openings in these types of

construction shall be designed to readily close and to withstand a wind pressure of 30 pounds per sq. foot.

The roofs of such buildings shall be properly equipped with skylights and ventilators in order to relieve the wind pressure.

SECTION 28

TENTS

*Amended by ord.
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28.01 No tent or screened structure of any kind shall be erected or maintained within the city limits of Coral Gables, without the approval of the City Commission.

SECTION 29

PROJECTIONS

29.01 No bay, oriel, show-window, coping, window sills, capitols, water tables, or cornices, shall project over the sidewalk of the ground floor or more than four feet on the second floor or floors above, and in no case shall be less than ten (10) feet above the sidewalk or the curb. (3) All awnings or marquee shall be approved as to design and color by the City of Coral Gables and those over sidewalks must have at least 7 ft. of clearance above the sidewalk and shall have no support in the sidewalk nor shall in any wise interfere with the free passage of pedestrians.

SECTION 30

AWNINGS AND CANOPIES

30.01 **GENERAL REQUIREMENTS:** All awnings and canopies shall be erected in conformity with the requirements of the Zoning Ordinance of the City of Coral Gables, Florida.

30.02 **PLANS:** Plans showing all details as to the structural design of awnings and canopies shall be submitted to the Building Inspector for approval.

30.03 **APPROVAL - STRUCTURAL DESIGN:** The structural design and method of installation of all awnings and canopies shall be approved by the Building Inspector before a permit is issued for the erection of any such awning or canopy.

SECTION 31

MEANS OF EGRESS

(Except Dwellings)

31.01 EXITS REQUIRED: Every building, except dwellings, and every story in each building, above the first, shall have at least two means of exit, remote from each other. One of these shall open to a street, and one may open to a yard or other space deemed safe by the Building Inspector and Fire Chief, and of sufficient area to accommodate all persons in the building. Two means of exit remote from each other shall be provided from each story when two or more stories in height.

31.02 DIRECTION OF OPENING: All exit doors leading from rooms having an occupancy of eight or over shall open in the direction of exit travel.

31.03 ROOM EXITS: Every room having an occupancy of 50 or more persons shall have at least two doorways remote from each other, leading to exits. The opening of one door shall not be permitted to obstruct another, and the arc of opening of doors which open upon stairway landings or platforms shall not reduce the width of passage way to less than the required width of stairs.

31.04 HALLS: Hallways or corridors at the street or court level, furnishing exit from stairways shall be not less in width than the aggregate width of the required stairways which they serve. Every hallway or corridor which may serve as an exit for 50 or more persons shall have at least 44 inches of width for the first 50 persons, and 6 inches additional for each additional 50 persons to be accommodated thereby. This computation shall be based on the number of persons in the story having the largest occupancy served by said corridor.

31.05 OFFICE: Each office, store, or separate enclosure, intended for the use of merchandising and servicing of the public; i.e., to the sale of tangible goods or merchandise, shall have two means of exit remote from each other, and the rear or secondary exit shall open or lead directly to a public way, or fireproof corridor. Such exit corridor shall be unobstructed at all times and shall not be equipped with

door at the main opening, provided that such corridors are to be used by more than one store or enclosure.

The minimum width of such store or separate enclosure shall not be less than 10 feet in width.

31.06 MEZZANINE: Mezzanine floor accommodating ten (10) or more persons shall have a rear exit or stairway to the street, alley or court, and in any event such mezzanine shall have an outside opening other than the stairway.

31.07 FASTENINGS: At all times, the fastenings or locks shall be such as may be easily opened from the inside without the use of keys.

31.08 SIGNS: A clearly painted sign, marked "EXIT" in red letters, not less than 6 inches in height, shall be placed over all exits in the above specified buildings.

31.09 ELEVATOR SIGNS: The elevators shall be provided with similar signs, marked "Elevator". Such signs shall be illuminated when necessary, by means of artificial lighting. The color of such light shall be green.

31.10 EXCEPTIONS: Elevators, escalators and revolving doors shall not be considered in calculating exit requirements.

SECTION 32

STAIRS AND STAIRWAYS

32.01 RISER & TREAD: All stairways and steps used by the public for more than ten (10) persons shall have a uniform rise of not more than $7\frac{3}{4}$ inches and a uniform tread of not less than $9\frac{1}{2}$ inches, measuring from tread to tread, and riser to riser. No winders shall be used. There shall not be more than 16 risers between platforms. Every platform shall be at least as wide as the stairway, measuring at right angles to the direction of travel.

32.02 HAND RAILS: All stairways and steps of more than 4 risers shall have at least one handrail. Stairways and steps 5 feet or more in width, or open on both sides, shall have a hand-rail on each side. Stairways which are required to be more than 8 feet wide shall be divided by center rails into widths not more than 8 feet nor less than 3 feet 8 inches (3' 8"). Center rails shall have upper newel posts at

least 5 feet in height or railway to be turned down to floor in a manner to prevent hindrance. Rails shall be not less than 2 feet 6 inches vertically above nose of tread, or 3 feet above platform.

32.03 WIDTH: Stairways used as required means of exit shall be at least 44 inches between faces of walls or between face of wall and open balustrade, or between two open balustrades. All such stairways shall be clear of all obstructions. All stairwells shall have walls or well secured balustrades or guards on both sides.

SECTION 33

CHIMNEYS, FLUES, AND HEATING APPARATUS

33.01 MATERIAL: All chimneys hereafter erected shall be of brick, reinforced concrete or other improved incombustible material with walls not less than 8 inches thick, laid in cement mortar, without addition of lime, extending at least 3 feet above point of contact with a flat roof or 2 feet above the ridge of a pitch roof, and shall be properly capped with terra cotta, stone, cast iron, or other approved incombustible weather-proof material. 8" concrete block shall not hereafter be used regularly at a point below the flu liner.

33.02 THICKNESS: The brickwork, or reinforced concrete, of the smoke flues of all boilers, furnaces, bakers' ovens, large cooking ranges, laundry stoves, and all flues used for similar purposes, shall be at least 8 inches in thickness. Brick set on edge shall not be permitted in fireplace or chimney construction.

33.03 MULTIPLE FLUES: Where two or more smoke flues are contained in the same chimney, the walls between the several flues shall be of brick and not less than 4 inches thick. Chimneys hereafter erected of stone, or cement block, shall be 4 inches thicker than required for brick or reinforced concrete.

33.04 LINING: Every smoke flue contained in a chimney hereafter erected shall have a net area of at least 62 square inches and shall be lined with firebrick or hard-burned terra cotta flue lining, made smooth on the inside. The flue lining shall start from the bottom of the flue, or from the throat of the fireplace, and shall be carried up continuously the entire height of the flue.

33.05 GENERAL: In no case shall a chimney be corbled more than 8 inches from the wall, and such corbling shall consist of at least 5 courses of brick. Piers which support chimneys shall start from the foundation on the same line with the chimney breast. No chimney shall rest upon nor be carried by woodwork. No combustile furring or sheathing shall be placed against any smoke flue or chimney breast.

33.06 BOILER FLUES: The smoke flue of every high pressure steam boiler and every appliance producing a corresponding temperature in the smoke flue shell, if built of brick, stone, reinforced concrete or other approved masonry, be lined on all sides with not less than 4 inches of fire brick, laid in fire clay mortar for a distance of at least 25 feet from the point where the smoke connection of the boiler enters the flue.

33.07 No smoke pipe shall pass through any floor, outside window or door, nor through any combustibile roof or combustibile outside wall, nor through any closet, attic or similarly concealed space. No smoke flues shall have a connection in more than one story of a building.

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

33.09 No wooden beams or joists shall be placed within 2 inches of outside face of chimney or flue. The header beam, carrying the tail beams of a floor and supporting the trimmer arch in front of fireplace, shall be not less than 20 inches from the chimney breast. No wooden furring or studding shall be placed against any chimney. The plastering shall be directly on the masonry or on metal lathing and metal studding.

Outer hearths of all fireplaces shall be built up from the ground of masonry material and joists doubled around same.

SECTION 34

SIGNS

34.01 GENERAL REQUIREMENTS: All signs shall be erected in conformity with the requirements of the Zoning Ordinance of the City of Coral Gables, Florida.

34.02 PLANS: Permit applications for signs requiring structural design of any nature shall be accompanied by detailed plans. Such structural design shall be subject to the approval of the Building Inspector.

SECTION 35

THEATRES

35.01 ENTRANCE: The main entrance or entrances shall not be at a higher level than 4 steps of 6½ inches each above the sidewalk at that point. The floor level at the highest row of seats, on the main floor, shall not be more than 7 feet above the sidewalk level at the main entrance; and the floor level at the lowest row of seats, on said floor, shall not be more than 4 feet below the level of the adjoining sidewalk.

35.02 SHOP AREAS: No workshops, storage, or general property room shall be allowed in or under the auditorium, above the stage, or under same, or in any of the fly galleries; but such rooms or shops may be located in the rear of, or at the side of, the stage, and in such cases, they shall be separated from the stage vertically and horizontally by a brick or concrete wall, not less than 12 inches in thickness, or other equally efficient cut-off, and the openings leading into said portion shall have self-closing, underwriters' labeled firedoors on one side of the wall and automatic firedoors on the other side of the walls.

35.03 SLEEPING ACCOMMODATIONS: No sleeping accommodations shall be allowed in any part of the building communicating with the auditorium or stage.

35.04 AREA SEPARATION: Interior fireproof walls or partitions shall separate the auditorium from the entrance vestibule, and from any communicating room or rooms over or under the same, also from lobbies, corridors, refreshment, or other rooms forming part of the theatre. The openings

in all such walls shall be protected by approved firedoors or firewindows. The doors shall be self-closing and the windows shall be stationary.

35.05 FLOORS: All floor surfaces shall be of concrete or other incombustible material and no wooden boards or sleepers shall be used as a covering for floors, seat platforms, aisles, steps, landings, passages or stairs.

35.06 SEATS: All seats in the auditorium, except those contained in boxes accommodating not more than 12 persons, shall be firmly secured to the floor, and shall be placed not less than 32 inches from back to back, measured horizontally.

35.07 GALLERY SEATS: No seat in any gallery shall have more than 5 seats intervening between it and the aisle, or more than 12 seats in a row between any two aisles. No platforms in galleries, formed to receive the seats, shall be more than 21 inches in height of riser nor less than 32 inches in width of platform. No such platform shall be nearer than 8 feet from the ceiling.

35.08 GALLERY DESIGN: There shall be no more than 10 feet rise, measured vertically, in any aisle in any gallery without direct exit by tunnel, or otherwise, to a corridor or passage with a free opening to the gallery stairs, or other direct discharge to the street. At such elevation of 10 feet or less, an intervening or cross aisle leading to an exit may be substituted for the tunnel. No such tunnel or cross aisle shall be less than 4 feet wide in the clear.

35.09 AISLES: Aisles shall not be less than 3 feet wide at the beginning, and all aisles shall be increased in widths toward the exits, 4 inches for every 10 feet of length. Steps in aisles shall be full width of the aisles. No riser shall be more than 8 inches in height, and no tread shall be less than 10 inches in width, and whenever the rise of seat platforms is 4 inches or less, the floor of the aisles shall be made as a gradient. Where steps are placed in passages, they shall be grouped together and shall be clearly lighted.

35.10 EXITS—GENERAL: In the auditorium, there shall be no step within 4 feet of the front of any exit or entrance doorway, not within one foot (1') of the side thereof. No mirrors shall be placed as to give the appearance of a doorway, exit or passage. There shall be no false doors or windows. No entrance stairway to any tier in the auditorium

shall be less than 5 feet wide. Entrance stairways and passages for the dressing rooms shall be at least 3 feet wide and extend independently to the street or court. No stairs in the stage section shall be less than 32 inches wide.

35.11 MOTION PICTURE THEATER EXITS: In buildings used for motion picture shows and having no stage, the exits and courts required may be replaced by equivalent exits and courts at the rear, if consistent with the adequate distribution of the entire entrance and exit facilities.

35.12 COURTS: The minimum width of open courts shall be 8 feet, when the total capacity is 750 or less; 10 feet wide when the capacity is between 750 and 1000 and, when the capacity exceeds the width of the courts, shall be increased one foot (1') for each additional 500 people, or fraction thereof in excess of 1000.

35.13 PROSCENIUM WALL: Proscenium walls is a fire wall built of brick and concrete, not less than 12 inches thick in any portion, and shall separate the auditorium from the stage and shall extend at least 4 feet above the stage roof, or the auditorium roof, if the latter be higher. Any windows in the structure above the auditorium which faces over the roof of stage section, within 100 feet of stage roof, must be protected with fire-shutters or fire-windows. Above proscenium opening there shall be a girder, or other support of sufficient strength to safely carry the load. If a girder be used, it shall be protected against fire by at least 4 inches of fireproof material, with special provision to reinforce or support it.

35.14 PROSCENIUM CURTAIN: The Proscenium opening shall be provided with a rigid fireproof curtain, built in conformity with the following specifications, or their equivalent in efficiency:

The curtain shall have a rigid, rivet jointed, steel framework. The front or audience side of the frame, shall be covered with sheet steel of a thickness not less than No. 20 gauge. The back shall be covered with a vitrified cellular asbestos board, at least one inch thick (1"), or other material equally fire resisting. Both coverings shall be securely attached to the frame work and joints properly scaled. The curtain shall be designed to resist a wind pressure of ten pounds (10) per square foot of surface with its closing.

35.15 CURTAIN THICKNESS: The thickness of the curtain shall be not less than 3 inches where the width of the proscenium wall opening is 30 feet or less. Curtains for larger openings shall increase in thickness in proportion to the increase in width of opening they cover. An asbestos roll of a diameter not less than one-half ($\frac{1}{2}$) the thickness of the curtain, shall be securely attached to the bottom of the curtain, to form a smoke seal between the curtain and the stage floor. The curtain shall overlap the proscenium wall opening at least 12 inches at each side of the opening and not less than 2 feet at the top. The guide members at the sides shall be rolled steel shapes, none of which shall be less than $\frac{3}{8}$ of an inch thick, and shall form a continuous smoke seal from top to bottom. No part of the curtain guides shall be supported by or fastened to any combustible material. The hoisting apparatus for the curtain shall be designed with a factor of safety of 8. The points of suspension shall always be an even number, but never less than 4. In no case shall the distance between any two points of supports exceed 10 feet.

35.16 CURTAIN OPERATOR: The device for controlling the curtain shall be ample in design and capable of convenient operation from both sides of the stage and from the tie-galleries. The curtain may be operated by hydraulic or other mechanism approved by the Building Inspector. The drop speed of the curtain shall be uniform and not less than one foot, (1') per second. The audience side of the curtain may be decorated with a paint in which no oil is used. No combustible material shall be applied or attached to the curtain. Counterweights shall be enclosed by guards. A wood finish floor without air space may be used on the stage in front of the curtain.

35.17 LOFT: The gridiron or tiggig left shall have a lattice metal floor, capable of sustaining a live load of 75 pounds per square foot, and be readily accessible by metal stairs or ladders.

35.18 FLY & TIE GALLERIES: The fly and tie galleries shall be of fireproof construction, designed to safely sustain a live load of 90 pounds per square foot.

35.19 LIGHTING: Only electric lights shall be used in the auditorium and stage section. Two separate and distinct services must be installed; one service to be of sufficient capacity to supply current for the entire equipment of the theatre while the other service must at least sufficient to supply all lights in the outside courts, lobbies, stairways, corridors, and other portions of the theatre which are normally controlled by a special switch located in the lobby and accessible only to authorized persons. The stage switchboard shall have a metal hood over the top and fully protecting same from anything falling above.

35.20 FIRE HOSE CONNECTION: At the stage end of the theatre, there shall be a 2½ hose connection thread same as City Fire Department, with gate valve, connected with the city water main by a four-inch pipe.

35.21 PROJECTION BOOTHS:

- (a) No motion picture machine shall be installed, maintained, or operated in any frame building or structure.
- (b) Every picture machine installed or operated shall be enclosed with a booth, to be not less than 6 ft. x 8 ft. in size and 7 ft. high, the frame of which shall be composed of angle iron not less than 1½ inches by 1½ inch by ¼ inch (1½ x 1½ x ¼”), properly braced to secure rigidity, and securely riveted or bolted at the joints. Every such booth shall be sheathed and roofed with sheet iron of not less than No. 20 U. S. metal gauge, or with ¼ inch hard asbestos board, securely riveted or bolted to the angle iron frame, or 2 inches of solid metal lath and Portland cement plaster may be used, or any other materials that are approved by the National Board of Underwriters and the Chief of the Fire Department.
- (c) The booth shall be floored with the same material as the sides and roof, riveted to the iron frame and covered with some non-conducting material.

- (d) The entrance doors into the booth shall be no larger than two feet six inches by six feet six inches (2'6" x 6'6") of the same construction as the booth and so arranged as to close automatically by metal rope and weight attachment, or by a spring of sufficient strength and tension to keep the door securely closed and to meet the National Underwriters Standard for fire doors. The orifice or opening for the operator's view, through which the picture is thrown, shall not be larger than six inches by twelve inches (6" x 12"), and shall be provided with a gravity door of the same construction as the booth, which door shall be held open by fusible links placed in series with fine cords, so arranged that one of the links is suspended directly over the film when in the slide of the apparatus, or the door shall be so arranged as to be normally closed and held open by pressure of the operator's feet.
- (e) All shelves within the booth shall be constructed of non-combustible material. Each booth must have an opening not less than twelve (12") inches in diameter, for ventilation, which must be flanged to carry standard conductor pipe for exhausting the hot air generated in operating the machine. Connection for ventilation should vent to a chimney or outside of building, in order to carry off the hot air or explosive gases.
- (f) In all respects the electrical wiring shall conform to the requirements embodied in the National Electrical Code. Each lamp connected with a picture machine must be provided with a separate switch, located within the booth.

SECTION 36

ELEVATORS, ESCALATORS, DUMBWAITERS

36.01 CONSTRUCTION AND MAINTENANCE: In addition to the requirements of this Section, the construction, alteration, use and maintenance of all elevators, escalators and dumbwaiters shall comply with the requirements of "Safety Code For Elevators" recommended by the American Standards Association 1925 Edition and its subsequent Editions and Amendments.

In addition to the above requirements and subject to the inspection and approval of the Electrical Inspector of the City of Coral Gables, the installation of any and all electric wiring apparatus or appliance and power for all elevators, escalators, and dumbwaiters shall comply with the requirements of the "National Electrical Code", 1934 Edition effective November 1, 1953, and its subsequent editions and amendments.

Elevators and Escalators shall not be included in the calculation of the number of stairways required in this Code.

Stairways shall abut on not more than one side of the elevator enclosures.

Walls and partitions of shafts and chutes and openings therein shall be of not less than two-hour fire-resistant material and construction.

Not more than two (2) elevators shall be allowed in one enclosure. Not less than one-hour fire-resistant construction shall be required between banks of two elevators.

36.02 DEFINITIONS: The term "elevator" as used in this Ordinance shall include all elevators, escalators or lifts used for carrying passengers or freight. The term "dumbwaiter" shall include such special form of elevator, the dimensions of which do not exceed six (6) square feet in horizontal section and four (4) feet in height, and which is used for the conveyance of small packages and merchandise.

36.03 MISCELLANEOUS: Any hand power elevator having a rise of more than thirty-five (35) feet shall comply with all requirements of this section. No belt elevators driven from a counter shaft shall be installed for passenger service.

36.04 APPLICATIONS AND PERMITS: Before any elevator shall hereafter be installed or altered in any building, the owner shall submit, on appropriate blanks furnished thereof, to the Building Inspector an application in triplicate stating the construction and mode of operation of such elevator to be installed or altered, accompanied by such plans and drawings as may be necessary, and shall obtain his approval hereof. Before any such elevator shall be put into service, the same shall have been duly tested and inspected by the Building Inspector and a certificate of inspection and approval obtained. In making any change or alterations to elevator shafts, rails, overhead machinery or power, all the work is changed or altered shall be made to conform to these regulations.

36.05 CARRYING CAPACITY: The owner of an elevator now in operation and the manufacturer of any such elevator hereafter placed in any building, shall cause to be fastened in a conspicuous place in said elevator, a metal plate having suitable raised letters on same which shall designate the number of pounds which said elevator shall be permitted to carry, but in no case shall a carrying capacity of less than one hundred (100) pounds per square foot of platform area inside the car be permitted on any passenger elevator.

36.06 OPERATOR: Every elevator, except full automatic push button elevators, shall be in charge of a competent, reliable operator, not less than eighteen years of age, who shall have had at least one week's experience in running an elevator under the constant supervision of a person who has received a certificate of competency as an elevator operator.

36.07 CERTIFICATE OF COMPETANCY: No person shall run any passenger or freight elevator in the City of Coral Gables unless he shall first register at the office of the Building Inspector, his name and address, also the location of the building in which he is to perform such service, and shall first receive from the Building Inspector a certificate of competency.

36.08 DOORS AND THEIR CONTROL: Not more than one door in the elevator shaft shall be allowed on each floor, and all openings in the several stories shall be one above the other, except where the operating device of the elevator is placed that the operator can readily control all doors without leaving the car control, in which case more than one door opening may be permitted on a floor.

36.09 DOOR SAFETY CONTROL: All elevators hereafter installed in vertical shafts shall be controlled by some mechanical device that will automatically prevent the car being moved until the shaft door or gate, at which the car is standing is shut and securely fastened; and which will prevent any of its gates or doors being moved until the shaft door or gate at which the car is standing shall be locked or bolted, all in such a manner as to permit opening only by the operator of the car.

36.10 COUNTERWEIGHTS: All counterweights shall have their sections strongly bolted together. There shall be not less than three (3) feet clearance between the top of counterweights and the underside of overhead beams when the car is resting on the bumpers. No continuous forged straps shall be permitted on counterweights.

36.11 CARS: Elevator cars shall be constructed of incombustible materials except that flooring may be made of hardwood. There shall be not more than one and one-quarter ($1\frac{1}{4}$) inches space between the floor on the car and the floor saddles; where the saddles project into the shaft the same shall be properly leveled on the underside. The underside of the car shall be of incombustible materials. Cars of all elevators shall be properly lighted.

36.12 GUIDE RAILS: All guide rails for both car and counterweights shall be of steel, and shall be bolted to the sides of the shaft with steel or cast iron brackets, so spaced that the guide rails will be rigid. The splices in the rails shall be located as near such rigid supports as possible. Elevators with a travel-speed not exceeding one hundred (100) feet per minute may be installed with guide rails for car and counter-weights, made of suitable hardwood.

36.13 FREIGHT AND PASSENGER COMBINATION PROHIBITED: No passenger elevator shall be permitted to have a freight compartment attached to it in any manner.

36.14 GRATING AT TOP OF SHAFT: Immediately under the sheaves at the top of every elevator shaft in any building, there shall be provided a concrete slab or substantial grating of steel having not more than one (1) inch space between the members of said grating, and of such construction as shall be approved by the Building Inspector.

36.15 OPENING AND CLEARANCE: TOP AND BOTTOM OF SHAFTS: A clear space of not less than three (3) feet shall be provided between the bottom of the shaft and the lowest point of the underside of the car when the car is at its lowest landing; and between the top of the cross head and the underside of the overhead grating when the car is at its top landing; except that this latter shape shall not be less than five (5) feet for elevators having a speed in excess of three hundred fifty (350) feet per minute, and may be reduced to two (2) ft. for elevators having a total rise of not exceeding thirty (30) feet and a speed not exceeding one hundred (100) ft. per minute.

36.16 MACHINERY ENCLOSURE: All parts of the elevator machinery shall be enclosed by suitable partitions of incombustible materials, and such enclosures shall be lighted. Free and safe access shall be provided to all parts of the elevator machinery. Where the machine is located at the bottom of the shaft it shall be protected with a substantial pit pan.

36.17 BUFFER: At the top and bottom of all elevator shafts there shall be placed substantial buffer springs for car and counterweights.

36.18 LIVE LOADS: The carrying beams and other support for all machinery shall be of steel designed for double the live loads to be supported.

36.19 EMERGENCY EXITS: Every passenger elevator shall have a trap door in the top of the car of such a size to afford easy egress for passengers, or where two cars are in the same shaft such means of egress may be provided in the side of each car.

36.20 NIGHT SERVICE: In every building exceeding one-hundred (100) feet in height, at least one passenger elevator shall be kept in readiness for immediate use by the fire department during the hours of the night and day, including holidays and Sundays.

36.21 SPEED AND SAFETY DEVICES: It shall be unlawful to use any elevator that is not provided with safety devices for bringing the elevator car to rest without serious injury to passengers or operators whenever it may for any reason exceed its rated speed by more than forty per cent, or reach a speed of eight hundred fifty (850) feet per min-

ute. Safety devices are not required upon the plunger type of elevators, nor upon sidewalk elevators, which travel less than thirty (30) feet.

36.22 INSPECTIONS: The Building Inspector shall cause an inspection of elevators carrying passengers or employees to be made at least once every three (3) months. And shall require any necessary repairs to be made promptly by the owner. If the Building Inspector at any time considers an elevator to be unsafe, he may require its operation to cease until such repairs or alterations have been made which will, in his judgement, produce safety. In lieu of such inspection by his own Department, the Building Inspector may accept the report of inspections made by other reliable and properly constituted authorities which in his judgement are competent and satisfactory.

36.23 CONTROL BY BUILDING INSPECTOR: The Building Inspector shall issue and enforce such other regulations regarding the construction, erection, operation or repair of elevators as he may consider necessary to insure safety.

SECTION 37

DUMBWAITERS

(Except in Dwellings.)

37.01 ENCLOSURE: All Dumbwaiters and other shafts or chutes, not exceeding six (6) square feet in area, shall be continuously enclosed by partition of brick, terra cotta, concrete, metal lath and cement plaster, gypsum blocks or other approved fire-proof material not less than four (4) inches thick. Such walls or partitions shall rest upon incombustible foundations. Gypsum blocks may be set in gypsum mortar; all other blocks shall be set in Portland cement mortar.

37.02 FIRE DOOR: All openings in Dumbwaiter shafts shall be provided with approved self-closing fire doors.

37.03 WOODWORK: No woodwork, other than guides and car, shall be permitted in the construction of any such shaft.

SECTION 38

—SCUTTLES AND ATTICS—

(Except in Dwellings)

38.01 EXIT DOOR: Upon the roof of every building more than one story high, there shall be a scuttle with a substantial stationary ladder leading to same, which shall be easily accessible at all times to all occupants without the use of keys. The roof opening shall be at least 2 ft. x 3 ft. in size.

38.02 VENTILATION: All buildings or structures hereafter erected, with roof not exceeding 3" to the foot rise, shall have an attic space of not less than 18" measured vertically between the bottom of rafters and top of ceiling joist at lowest point of roof, properly ventilated.

SECTION 39

DRY CLEANING ESTABLISHMENTS

39.01 GENERAL: Any building to be used as a dry cleaning establishment or dry dyeing business is defined to be the business of cleaning or dyeing cloth, clothing, feathers, or any sort of fabrics by the use of carbon bisulphide, gasoline, naphtha, benzine, or other light petroleum or coal tar products, or cleaning or dyeing by process known as dry cleaning or dry dyeing, where inflammable volatile substances are used.

39.02 APPLICATION FOR PERMIT: No building to be used for the business of dry cleaning or dry dyeing as above defined, or for the storage of volatile substances for use in such business, shall be located, constructed or maintained until an application for permission to do so, accompanied by full plans and specifications of the structure and its location, shall have been filed with and approved by the Chief of the Fire Department. All buildings used for the purpose of the business of dry cleaning or dry dyeing, as above defined, must be of fire resisting design and construction, not in excess of 2500 square feet, ground area, and without basement, cellar or open space below the grade floor.

39.03 SPECIFICATION: All walls of such structure shall be of brick, laid in cement mortar, or of reinforced con-

crete, not less than 12 inches in thickness, or of skeleton steel frame and terra cotta construction, or of stone laid in cement mortar. The roof or ceiling of such structure or room shall also be of fire resisting construction. There shall be no sewer connection from such structure and the floor of same shall be of concrete construction laid on a level with the surface of the earth surrounding the walls.

39.04 VENTILATION: Ventilating apertures, of a size not less than 10" x 6", shall be placed in the walls of such structure at or near the level of its floor, and be properly screened by wire mesh. Additional means of ventilating shall be provided by location of an exhaust fan, operated by other means than motor with commutator, at a point in one of the walls, close to floor of the structure, of such capacity as to insure a complete change of air within the building enclosed each 5 minutes; the said fan to discharge into a metal pipe of sufficient area to carry off vapors delivered by said fan, area to carry off vapors delivered by said fan, and said metal discharge pipe to be erected against the outside wall of the cleaning or dyeing structure and to be carried 2 feet above its roof, the top of said discharge pipe to be a covered "U" cap or goose-neck; such exhaust fan shall be in continuous service and operated during the handling or use of volatile substance within the structure.

39.05 FIRE PREVENTION: For the purpose of extinguishing fires, there shall be located at convenient points in the room, where they will be readily accessible, metal pails filled with dry sand—5 pails for each 1000 square foot of floor area or fraction thereof; but no such building to have less than 5 pails of sand. A fire extinguisher of 3 gallons capacity must be provided for such 1000 square feet of floor area or fraction thereof. No heat generated device, nor any electric dynamo or generator shall be located, maintained or used inside of, or within a distance of 10 feet of any opening of such structure used for the business of dry cleaning or dry dyeing as above defined.

39.06 LIGHTING: The lighting of such structures shall be secured only by keyless socket incandescent electric lights, with globes or bulbs enclosed in a vapor proof receptacle, and all switches, cut-outs, or fuses used in installation or operation of such lights shall be located and operated from the outside of such structure. The entire electric equipment must conform to the most advanced stage of the art at the time of installation.

39.07 HEATING: The heating of such structure shall be secured only in the use of steam or hot water circulation systems.

39.08 STORAGE TANKS: All volatile substance received for use in the business of dry cleaning or dry dyeing as above defined, shall be stored in steel tanks, which shall not be less than 12 U. S. guage; the interior of such tanks to be coated with approved rust preventative, and all joints in same shall be caulked in an approved manner. No such tanks shall exceed a capacity of 280 gallons, and each shall be buried under-ground to such a depth as to secure a covering of at least 2 feet of earth above the top of the tank at the surface level of the ground, or such tank may be enclosed in a cement lined under-ground pit, having an arched cement roof at the level of the surrounding ground level.

39.09 TANK VENTS: All tanks shall be provided with a vent pipe, not less than one (1) inch in diameter, extending from the top of tank to outer air, and discharging at a point not less than 2 feet above the roof of the highest building within a radius of 30 feet of such pipe. Said vent pipe must be provided with brass wire screen of 30 mesh at a point near the junction of the pipe of the tank, and also be provided at its discharge with an inverted "U" cap or gooseneck.

39.10 FEED PIPE: All such tanks shall be provided with a filling pipe of not less than 2 inches in diameter, extending from top of tank to within 1 inch of the bottom of the tank. Each such feed pipe shall be provided with two brass screens of not larger than 30 mesh, one of such screens to be placed in the pipe at or near its junction with said tank, and the other immediately above the controlling cock or valve at its intake end. Said filling pipe must be laid with inclination towards the tank to secure proper drainage. The intake end of said feed pipe shall be fitted with a controlling feed-cock or valve, which shall be kept closed except when in use, and the intake end of pipe above such cock or valve shall be provided with a screw cap securely screwed on the feed pipe inlet when not in use. Both the controlling cock or valve and the feed pipe inlet must be inclosed in an iron box or hood, set level with the surface of the ground, and be kept securely locked when not in use. Such feed pipe inlet and controlling cock or valve shall in no case be located inside of any building.

39.11 PIPE ATTACHING: All pipes connected with such storage tanks must enter or be attached to same at the

top. Service pipes, carrying the volatile substance from the storage tank to the cleaning or dyeing process, shall extend from the top of the tank shell to within 2 inches of its bottom and be provided with brass wire screen of not larger than 30 mesh at or near its junction with the shell of the tank and also below the controlling cock or valve at its delivery and inside of the cleaning or dyeing structure. Such controlling cock or valve shall be kept closed when not in use.

39.12 SERVICE PUMP: No volatile substance shall be carried or be conveyed into the cleaning or dyeing structure or any of its apparatus or machines, or be returned to the storage tank from such devices, except through service pipe as above described. The movement or transmission of such volatiles through said service pipe shall be secured by pump or syphon only, such devices to be so located as to insure the return of all volatile substances remaining in service pipe, when delivery is shut off from the storage tank, by gravity. All volatile substances to be used for cleaning or dyeing purposes shall be kept in tightly closed machines or apparatus during the process incident to said operations of cleaning and dyeing. The use, storage, or handling of any such volatile substance in vessels, vats, pans, or devices of any kind which are open to the air is absolutely prohibited.

S E C T I O N 4 0

GARAGES

40.01 DEFINITION—PUBLIC GARAGE: Public or commercial garage is a building or that portion wherein are kept more than 4 automobiles or motor cars charged with or containing a volatile inflammable liquid for fuel, or power, and where any portion of a building is used for a garage the aforesaid term shall apply to and embrace all of the building not separated from said garage by proper standards fire walls.

40.02 OPENINGS: All openings in the fire-walls of such garages shall be protected on both sides by standard, self-closing fire doors, which shall be kept constantly closed, except when necessarily temporary opened for passage.

40.03 PRIVATE GARAGES: Private garages housing not more than four automobiles, if not within 15 feet of any other building, may be built of ordinary construction.

Walls of all private garages shall be of masonry construction.

Masonry walls of garages are required to have a reinforced concrete girt at ceiling or roof level and a reinforced concrete cap in the same manner as is specified in the Building Code for residences.

40.04 FIREPROOFING: No building exceeding one story in height shall be used as a garage unless it be of fire-proof construction. No basement or cellar shall be allowed under such garage, nor shall any building be used as such garage unless the floor on which automobiles containing volatile inflammable liquid are stored shall be of concrete, or other suitable non-combustible material.

SECTION 41

FIRE ESCAPES AND STANDPIPES

41.01 OUTSIDE FIRE ESCAPES: Every hotel, rooming house or restaurant, and all public buildings in Coral Gables, occupied by one or more families or tenants, aggregating 10 persons or more, which is more than 2 stories high, having accommodations for 10 or more persons on the third floor, shall be equipped with a complete iron stairway, fire escape, or fire escapes, or fire tower, reaching to the ground on the outside of the building, and if three storied or more high and having accommodations for 15 or more persons, there shall be one such additional fire escape for each 20 or less persons on each additional floor, connecting each floor above the ground floor and to the cornice of the building, with openings from each floor, which shall be well fastened and secured, with landings not less than 6 feet in length and 4 feet in width, guarded by an iron railing, not less than 30 inches in height. Such landings shall be connected by iron stairs not less than 2 feet wide, with steps not less than 6 inch tread, and placed at an angle not more than 45 degrees (45°).

41.02 EXIT DOORS — SCHOOLS:

- (a) All the outer doors of any public school building shall be so hung that when they are opened they will swing to the outside.
- (b) All doors leading to any fire escape landing shall be so hung that when they are opened they will swing to the outside, leaving the lien of travel free and clear.

41.03 STANDPIPES — GENERAL:

- (a) One standpipe shall be provided for each separate fire area of 2500 square feet or fraction thereof, with at least one (1) standpipe within 75 feet of every exterior wall in the building.
- (b) Where more than one standpipe is required in a building they shall be connected at their bases by pipes of size equal to that of the largest standpipe, so that the water from any source will supply all the standpipes.
- (c) Standpipes shall extend from the cellar to and through the roof with a 2½ inch hose connection and provided with standard couplings used by the City Fire Department, and a gate valve not over five (5) feet above the floor level in each story, including cellar. Where standpipes are located inside of building hose sufficient to reach all parts of the fire section, but not in excess of 50 feet, shall be attached to each outlet. Hose shall not be less than 1½ inches in diameter. Standpipes shall be wrought iron and steel, galvanized and, together with fittings and connections, shall be of such strength as to safely withstand at least 300 lbs. water pressure to the square inch, when ready for service, without leaking at joints, valves, or fittings; such tests to be made by the Fire Chief. No standpipe shall be less than 4" in diameter.
- (d) Standpipe shall be connected to a Siamese 2½ inch connection outside of the building, by a pipe of diameter equal to that of the largest standpipe supplied. Such connections shall be made on street front. Siamese shall be about 2 feet above the curb level and shall be provided with check valves, and substantial caps to protect threads on connection. The thread shall be uniform with that used by the city Fire Department. A suitable iron plate with raised letters shall be provided, reading "To standpipe". Just inside the building, in a horizontal section, shall be placed a straightway check valve.
- (e) All buildings three or more stories in height shall be equipped with a standpipe system.

(e) Amended By ORD. 912 See also
ord. 872

78

(f) added by ORD. 912

(g) Added By ORD. 912

SECTION 42

VENTILATION

42.01 WINDOW SIZES: In all buildings, every sleeping room shall be provided with a window or windows, opening directly upon a street, yard or court. The windows of every sleeping room shall have an area of not less than 12 square feet between the stop beads, and the sash shall be arranged to open to the extent of one-half ($1/2$) their area.

42.02 MINIMUM SLEEPING ROOM SIZE: In every building, every sleeping room shall be not less than 8 ft. 0 inches (8'0") high, from finished floor to finished ceiling, and the floor area shall be not less than 70 square feet.

42.03 BATH VENTILATION: Every bathroom and toilet room shall be provided with a window of not less than 64 square inches opening directly to the open air or a ventilating shaft, of not less than 64 square inches, open to the sky.

42.04 ATTIC VENTILATION: For ventilation of attics see section 38.

SECTION 43

ROOF COVERINGS AND DRAINAGE

43.01 ROOF COVERINGS:

(a) Except in Golden Gate, McFarlane Homestead, and Coconut Grove Warehouse Section, that part of the Industrial Section abutting U.S. Number One Highway, and where plastic or glass translucent material is used as permitted below, all pitched roofs shall be covered with clay tile or concrete tile, provided however, that concrete tile shall be in accordance with the specifications set forth elsewhere in this Ordinance.

(b) In Golden Gate, McFarlane Homestead, and Coconut Grove Warehouse Center Subdivision, and that part of the Industrial Section facing U.S. Highway Number One, pitched roofs shall be covered with roofing material meeting the requirements of Class "A" or "B" specifications of the Underwriters' Laboratories, Incorporated.

- XX Flat roof
- (c) All buildings with other type of roof shall have coverings of approved standard quality, such as concrete, gypsum, tile, built-up roofing of tar and paper, or tar paper and gravel, asbestos roofing, or of like grade, which would rank as Class "A" or "B" under test specifications of the National Board of Fire Underwriters.
 - (d) Any plastic or glass translucent material, as approved by the Board of Supervising Architects, and the Public Works Department, may be used as a roof covering on screened enclosures or screened porches of residences.

43.02 SPECIFICATIONS FOR APPLYING SHEETING, ROOFING FELTS, METAL DRIPS AND ROOFING TILE:

- (a) The Roofing Contractor shall notify the Building Inspector upon starting of roof so that the Building Inspector may inspect application of roof as so desired in all stages.
- (b) On all work where wood sheathing is used, either tongue and groove or $\frac{1}{2}$ " thick exterior type or grade plywood may be used, provided, however that plywood will be permitted as roof sheathing only in cases where rafters are spaced 16" on center or less and where the plywood is nailed to the rafters with 8d. "screw type" nails spaced not more than 8" on center.
- (c) The Dry Sheet consisting of not less than one 30-lb. felt or two 15-lb. felts (shingled in) on all roofs, excepting exposed ceilings, shall be tin-tagged 6 inches (6") on center of head lap and twelve inches (12") on center in field, with tin caps and roofing nails of not less than one-inch (1") in length and 90-lb. mineral surface felt shall be hot mopped over entire area.
- (d) Eaves drip, gable drip, and gravel stop and drip, shall be nailed six inches, (6") on center; metal to be not less than 20 gauge galvanized, 16 ounce copper, or .025 aluminum.

- (e) On exposed ceilings the dry sheets of not less than one 30-pound felt or two 15 pound felts (shingles in) shall be tin-tagged six inches (6") on center on all rafters (vertically) with tin caps and roofing nails of not less than one and one-fourth ($1\frac{1}{4}$ ") inches length. Field between rafters to be tin-tagged twelve inches (12") on center with tin caps and nails not longer than three-fourths ($\frac{3}{4}$ ") in length.
- (f) All tile are to be set on roof in bed or mortar, and mortar shall be sandwiched in between all laps at the butts of shingle tile, and all laps at the butts of pan and barrel tile. Mortar shall be sandwiched alongsides of all barrel tile. The head lap on both shingle and barrel tile shall not be less than two and one-half inches ($2\frac{1}{2}$ ") and one and one-half inches ($1\frac{1}{2}$ ") on side of barrel tile.
- (g) The mortar mix for applying tile shall be not less than one part of Portland cement and three parts of sand with not more than 25% lime by volume.
- (h) All tile shall be thoroughly wet with hose allowing excess water to drain off after wetting.
- (i) Nailing of tile at eaves on roofs less than four inches (4") in twelve inch (12") pitch shall be optional, but first course of tile at all eaves shall be laid in a heavy bed of mortar.

43.03 SPECIFICATIONS FOR CONCRETE ROOFING TILE:

- (a) **SIZE AND SHAPE:** All types of concrete roofing tile shall conform to standard size and shape generally accepted as good practice in this area. Tile along hips and valleys shall be manufactured special to proper angles.
- (b) **COLOR:** All tile shall be white in color, except pan tile used in connection with a clay barrel type tile. Where concrete pan tiles are used in connection with a clay barrel roof, pigments shall be added to match the clay tile to the satisfaction of the Building Department.

- (c) **SURFACE FOR WHITE CONCRETE TILE:** Only White Domestic Portland Cement shall be used for finished surfaces. The mix used shall be one part of white fine sand to one part of white cement and shall be mixed dry in a color mill to obtain uniform results. The mix shall continue for at least 30 minutes. The mix thus obtained shall be sprinkled and troweled into the surface of the tile. This process shall be repeated twice so as to form a smooth, uniform white surface. This surface shall be applied at the time of manufacture of tile.
- (d) **AGGREGATES:** Aggregates for concrete tile shall be well graded and free from harmful amounts of soluble salts, organic matter and other deleterious material which might produce efflorescence. Particular care shall be taken in selecting the source of aggregate and its weathering qualities fully determined. All material shall pass $\frac{1}{4}$ inch screen.
- (e) **CEMENT:** All cement used in the manufacture of the tile shall be domestic Portland Cement. That used in the surface shall be a white domestic Portland Cement, except pan tile for barrel clay roofs.
- (f) **PROPORTIONING AND MIXING:** The mix used in the manufacture of all tile shall not be leaner than one part of Portland Cement to three parts of well graded durable aggregate. Mixing shall be mechanical and continue for not less than three minutes after all materials and water are in the mixer.
- (g) **CURING:** After manufacture, the tile shall be placed on racks and permitted to harden before they are stacked. The tile shall be stacked as soon as possible, but in no case shall they be permitted to remain on the racks for a period longer than twenty four hours. After the tile is stacked, they shall be kept continuously moist for a period of fourteen (14) days. All curing shall be done in a closed building protected from the sun and wind.

- (h) **TESTS:** Tile when tested, shall meet the following requirements:
- (1) **SHINGLE TILE:** Shingle tile shall be subjected to the Modulus of Rupture and absorption tests, essentially as outlined in A.S.T.M. Standard Method of Testing Brick — Serial Designation C67-37. The average Modulus of Rupture shall be not less than 400 lbs. per sq. inch. The absorption shall not exceed 10%. All other types of tile shall be tested in accordance with methods approved by the City Manager. All tile shall be delivered on the job fourteen (14) days prior to its application on the roof. Random tests may be taken from the job at any time during the aforementioned fourteen (14) day period for testing purposes and if demanded the owner shall reimburse the city for the expense of these tests.
 - (2) **BARREL TYPE TILE:** Barrel Type Tile shall be tested for crushing strength and absorption by a method modeled from A.S.T.M. Standard Specification for Concrete Sewer Pipe, Serial Designation C-14-35. The crushing strength shall average not less than 450 pounds per lineal foot of tile, with no individual specimen being less than 350 pounds per lineal foot of tile. The absorption shall not exceed 10%. All other types of tile shall be tested in accordance with methods approved by the City Manager. All tile shall be delivered on the job fourteen (14) days prior to its application on the roof. Random tests may be taken from the job at any time during the aforementioned fourteen (14) day period for testing purposes and if demanded the owner shall reimburse the city for the expense of these tests.
- (i) **APPLICATION:** All tile shall be applied by a licensed Roofing Contractor in accordance with the method specified elsewhere in this Ordinance. No ad-mixtures shall be added either to the tile or to the surface for the purpose of waterproofing. Ends of barrel cover tile shall be filled with cement at eaves. 1/2" weep holes shall be provided in this cement fill for drainage.

- (2) All flashings shall be of metal incorporated with the roofing material, or of same material as construction of roof properly flashed into outer roofing and into walls.
- (3) Scuttles: See Section 35, Par. 1 and Par. 2.

43.04 DRAINAGE:

- (a) All buildings having a flat roof shall be provided with metal water downspouts, which shall be connected to the storm sewer; where there are no storm sewers, such downspouts shall be either connected by pipes below surface to the street gutter, or may empty into an existing alley provided approval is first obtained from the Superintendent of Public Works. Downspouts in all cases shall not protrude into sidewalks, streets, alleys, or any right of ways established by recorded plats.
- (b) The cross sectional area of roof downspouts shall be determined by the total area of the roof to be drained and shall be not less than one square inch per hundred and fifty feet of roof surface, and in no case less than four square inches.
- (c) If the roof is so constructed as to form a basin, the only outlet of which is the downspouts, the cross sectional area of the roof water downspouts shall be increased one square inch over that specified in the above paragraph. Wherever practical roofs shall slope toward the street or storm sewer.
- (d) Where roof deck is enclosed by parapet walls, weep holes of equal area as required for downspouts shall be provided for overflow in event roof drain becomes clogged.

43.05 DOWNSPOUTS: Downspouts emptying in the top of the sidewalks is prohibited. All downspouts emptying upon the sidewalks shall have a conductor underneath the sidewalk leading to the curb.

43.06 Roof Pitch - See ord, 926

SECTION 44

OPENINGS TO EXTERIOR

44.01 METAL FRAMES: All sky-lights shall have a metal frame and sash, and the frames and parts thereof, shall be riveted or otherwise securely fastened, in addition to soldering.

44.02 WIRED GLASS: All sky-lights shall be glazed with wired glass, or heavy plain glass may be used, if protected below by galvanized wire screens. The mesh of such screens shall not exceed one inch (1") and the wire shall be of a size not less than 12 Gauge U.S. Metal.

44.03 WIND PRESSURE: All sky-lights shall be fitted with wire glass and shall be so designed as to withstand a wind pressure of 30 pounds per square foot, and shall be properly ventilated at sides. (Added Ord. 54).

44.04 GLASS: No glass windows, doors or other glass covering, fillings, or covering any opening or openings in any building of a dimension in excess of five feet in width shall be erected, constructed or installed, except and until the plans, specifications and methods of installation thereof shall have first been approved by the Building Inspector and the Planning Commission.

44.05 EXTERIOR WINDOW AND DOOR OPENINGS — GENERALLY: All exterior window and door openings shall have frames thoroughly anchored to walls by metal or other approved frames.

All exterior wood sash and doors shall in no case be less than $1\frac{3}{4}$ " thick, and shall be so designed and equipped with proper hardware to withstand a wind-pressure of 30 pounds per square foot. Hardware shall be approved by the Building Inspector.

Screens shall be made readily removable in order to give free access to sash.

SECTION 45

GENERAL POWERS AND DUTIES OF THE BUILDING INSPECTOR

45.01 GENERAL: The Building Inspector shall be appointed by the City Manager. He shall have the power, and it shall be his duty to enforce the provisions of the Ordinance; to approve or disapprove within a reasonable time, applications, plans, detail drawings, and amendments thereto; to issue permits, notices, and certificates: to make rules and specifications, to assist in the proper application of this Ordinance, or providing for necessary additional regulations covering details of special construction, to pass upon questions relative to the mode, manner of construction, or materials to be used in the erection or alteration of a building; to require that such mode, manner of construction, or materials, shall conform to the true intent, and meaning of the several provisions of this Ordinance; to authorize the City Attorney, subject to approval of the City Manager, to institute any and all actions that may seem proper or necessary for the enforcement of its provisions.

45.02 APPEAL:

- (a) Where there are practical difficulties in the way of executing the strict letter of the law, so that the spirit of the law shall be observed and public safety secured and substantial justice done, a written application shall be filed by the owner of such building or structure or by his duly authorized agent, addressed to the Zoning Board of Appeals. The board shall fix a date within a reasonable amount of time for a hearing upon such application, and shall, as soon as practicable, render a decision thereon, which decision shall be final. Subject to approval by the City Commission.
- (b) Whenever the Building Inspector shall reject or refuse to approve the mode or manner of construction proposed to be followed, or materials to be used in the erection or alteration of any building or structure, or when it is claimed that the rules and specifications of the Building Inspector or the provisions of this Ordinance do not apply, or that an equally good or more de-

sirable form or structure, or his duly authorized agent, may appeal to the Zoning Board of Appeals from the decision of the Building Inspector where the amount involved by such decision shall exceed the sum of one hundred dollars (\$100.00).

45.03 ACTION ON VIOLATIONS: Whenever the Building Inspector has evidence that there exists in any building or structure erected or in course of erection or alteration a violation of any provision of this Ordinance, he may in his discretion, authorize the City Attorney, subject to approval of the City Manager, to institute any appropriate action or proceeding at law or in equity, to restrain, correct, or remove such violation; prevent further work upon the building or structure; require its removal; or prevent the occupation or use of the building or structure.

45.04 INSPECTION REQUESTS: Contractors shall notify the Building Inspector at least 24 hours in advance when requesting any building inspections. When possible emergency inspections will be made on 4 hour advance notice.

45.05 INSPECTIONS REQUIRED: Inspections shall be made on the following:

- 1 Footings, 2 Leveling cap, 3 Tie-beam and cols.,
- 4 Rake beam, 5 slabs, 6 Framing, 7 Final.

45.06 REINSPECTIONS: When an inspection is rejected the request for reinspection shall be made in person by the contractor at the Building Department. The reinspection fee, as provided for in Section 3.10, shall be paid before any reinspections are made.

45.07 WORK NOT INSPECTED: Should any work proceed without prior approval of a required inspection the Building Inspector shall have the right to order any such work removed, uncovered, or tested to determine whether such work meets the minimum standards of this Code. The cost of any such work shall not be an obligation of the City or it's representatives.

45.08 MISCELLANEOUS: Temporary toilets shall be installed before any construction work is started. Footing inspections shall not be made until such facilities are installed. Temporary toilets shall be kept in a clean and sanitary condition at all times and shall be located at a distance not greater than 200 feet from the work site. No ground or pit toilets shall be permitted.

SECTION 46 (repealed by Ord. 164)

PROCEEDINGS IN CONNECTION WITH UNSAFE OR COLLAPSED BUILDINGS

46.01 GENERAL: When the Building Inspector of the City of Coral Gables shall have information that any building or structure or part thereof is unsafe or dangerous, either by reason of dilapidation or decay, or because of erection contrary to law, or by reason of partial or incomplete construction, or which for any other cause may be a nuisance, he shall immediately cause an examination and inspection of property to be made. If, upon examination, he shall be of opinion that the building or structure or any portion thereof is unsafe, or dangerous, he shall at once serve, or cause to be served, notice upon the owner, if he can be found, then upon the agent or occupant of the building; such notice shall contain a description of the building or structure considered unsafe, or dangerous or a nuisance and shall require the same to be made safe and secure or removed or the nuisance abated, as may be considered necessary by the Building Inspector. Such notice shall also require the person served therewith to immediately certify, in writing, to the Building Inspector, his consent or refusal to secure, make safe or remove the building or structure or part thereof or abate the nuisance. If he immediately certifies, in writing, his consent to comply therewith, he shall be allowed twenty-four hours following the service of such notice in which to begin to secure, make safe, or remove the building or structure or abate the nuisance. He shall employ sufficient labor and materials and immediately begin to secure, make safe or remove same. The work shall be done as speedily as possible and shall be continuously prosecuted to the satisfaction of the Building Inspector. All notices required by the terms of this Ordinance may be delivered either personally or through the United States mails; provided, however, that if the owner, agent or occupant, required in any case hereunder to be served with notice, cannot be found, then such notice may be served by posting a copy thereof upon the building or structure. If the condition of the building is such as to be wholly unsafe for occupancy, then, the Building Inspector may order the building to be closed, pending completion of work necessary to put it into safe condition for occupancy; it shall be unlawful for any person to occupy or use the said building, after the Building Inspector shall order the same closed, until the work ordered by him to be done to make it safe for occupancy has been completed.

46.02 FAILURE TO ACT: In case of failure of the owner, agent or occupant to take the steps herein required to secure, make safe or remove the building or structure or abate the nuisance as herein required, the Building Inspector shall condemn the said building or structure and serve notice of such condemnation upon the owner, agent or occupant in like manner as provided in Section 3 hereof.

46.03 ACTION BY CITY: Whenever a building or structure shall be condemned by the Building Inspector, under the terms of this Ordinance, it shall be his duty to transmit to the City Manager, within ten days thereafter, a written report, stating the facts as to the condition of the building, structure or nuisance, and the facts as to dates and manner of service of notices, together with copies of notice served; an estimate of the cost of removal of the building or structure or abatement of the nuisance and of the salvage value of the material in the building or structure. Upon receipt of such report from the Building Inspector, the City Manager shall cause to be served upon the owner, agent or occupant of the building, (in like manner as provided in Section 46.01 thereof), a notice that the City Manager will apply to the Commission of the City of Coral Gables, at a date to be specified in such notice, for authority to remove the building or structure or abate the nuisance, to sell and dispose of any salvaged material and to apply the proceeds thereof, so far as the same will extend, to reimbursement of the City for the cost of such removal. If the owner, agent or occupant, or representative of either, shall appear before the City Commission at the time stated in such notice, he shall be permitted to offer any evidence as to the condition of such building or structure, or as to the existence of a nuisance; if the City Commission shall find, from the facts presented, that the building or structure is unsafe or dangerous, or that a nuisance exists, it may order or authorize the Building Inspector, or any official or employee of the City, to remove, or cause to be removed, said building or structure, or to abate, or cause to abate, any such nuisance; to sell or dispose of (at private or public sale) any salvaged material and to credit the proceeds thereof against the cost of removal of the building or structure or abatement of the nuisance; if there be a surplus, such surplus shall be held by the City, subject to the order of the owner and/or other parties interested in the premises.

46.04 EXPENSE: The net expense of removing such building, or of making it safe, or abating or removing such a nuisance, shall be paid by the owner of such property and shall be a charge against the lot or lots of land upon which the nuisance exists, and such costs may be recovered by an appropriate action at law, or by enforcing the said lien in the same manner as improvement liens in favor of the City, or enforced in any other manner provided by law.

46.05 DEFINITION — OWNER: The word “owner” shall be construed to include individuals, partners, joint owners and corporations.

SECTION 47

CERTIFICATE OF OCCUPANCY

47.01 That it shall be unlawful for any person to occupy as a residence any house or any unit of any apartment house before the Building Inspector of the City of Coral Gables shall have approved the house or apartment as a completed structure in conformity with the plans filed at the time of issuing the building permit and the building code of The City of Coral Gables.

47.02 UTILITY CONNECTION: It shall be unlawful for any person, firm or corporation to cause to be connected or to connect any utility service, excepting for construction purposes, by wire, pipe or otherwise to any building to be used for residential purposes in The City of Coral Gables until after the Building Inspector shall have issued a certificate showing that said building has been completed in compliance with the plans and specification filed at the time of issuing the permit therefor and the building code of The City of Coral Gables.

SECTION 48

LAND CLEARING, FILLING & EXCAVATION

48.01 That before any block or parcel of land in the City of Coral Gables, Florida, shall be cleared of trees and other growth, excavated, filled, and/or graded, the owner thereof or his contractor shall apply to the building inspector of the City of Coral Gables for a permit therefor, and for such permit shall pay a fee of Two Dollars (\$2.00), which fee shall be deposited to the general fund of the City of Coral Gables as payment for the cost of inspection of such work as it progresses and at its completion.

48.02 POSTING OF BOND: Before any permit authorized in Section 48.01 hereof shall be issued, the owner of the affected property or his contractor shall deposit with the City of Coral Gables that amount which in the opinion of the building inspector and/or the City Manager shall be adequate to reimburse the City of Coral Gables, or any neighboring property owner, for damage which may result to sidewalks, parkways, parkway trees and shrubs, street pavement or other municipal or private property, or improvement from such work and the equipment and materials used in connection therewith, and for the removal of debris or excess material upon the completion of said work, and shall sign an undertaking to the City of Coral Gables to pay the amount of any deficiency between the amount of said deposit and the cost of repairing any such damage or removal of any such debris or excess materials. Upon completion of the work, the building inspector or such other person as may be designated by the City Manager, shall make final inspection and if he shall find that no damage has resulted, and no debris or material remains on the site, the said deposit shall be returned to the depositor, or, if any damage shall be repaired by the City, or any debris or excess material be removed by the City, and the cost thereof shall be less than the deposit, then the difference between such cost and the amount of the deposit shall be returned to the depositor.

48.03 EXCAVATIONS: No person shall excavate soil from any property in the City of Coral Gables for the purpose of removal of such soil from the premises without applying to and obtaining from the Building Inspector of the City of Coral Gables a permit therefor and paying the sum of Five Dollars (\$5.00) permit fee. Any permit so granted shall specify the exact location, the approximate quantity of soil to be removed and the depth of excavation permitted. No such permit shall authorize excavation to such depth as will create a pool of standing or stagnant water, or as would create a hazard to public health or safety.

48.04 PAYMENT OF TAXES: No permits for such excavation shall be issued until all delinquent and current City taxes upon the property where such excavation is proposed to be made shall have been paid to the City of Coral Gables.

SECTION 49

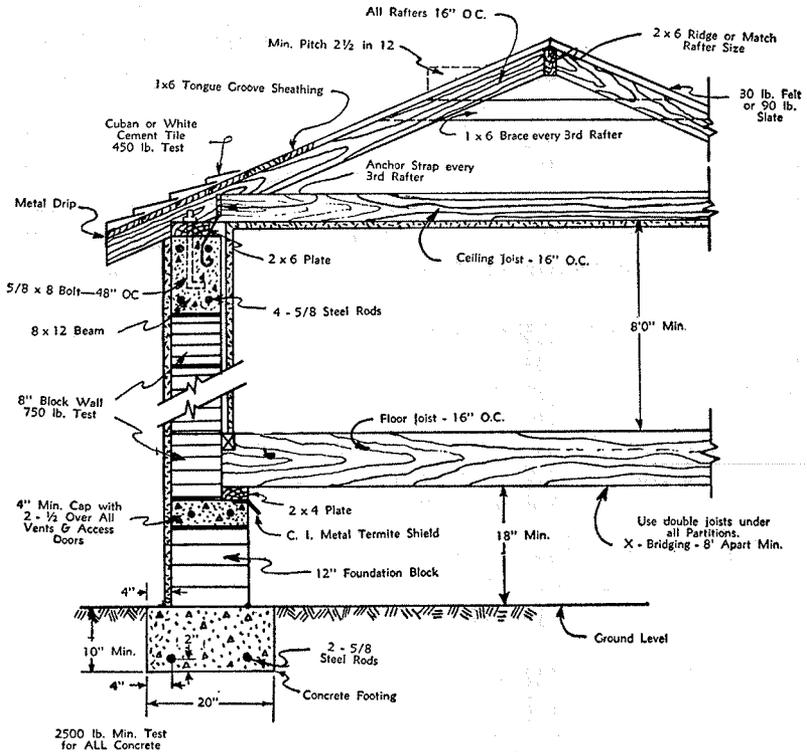
DETAIL CODE DRAWINGS

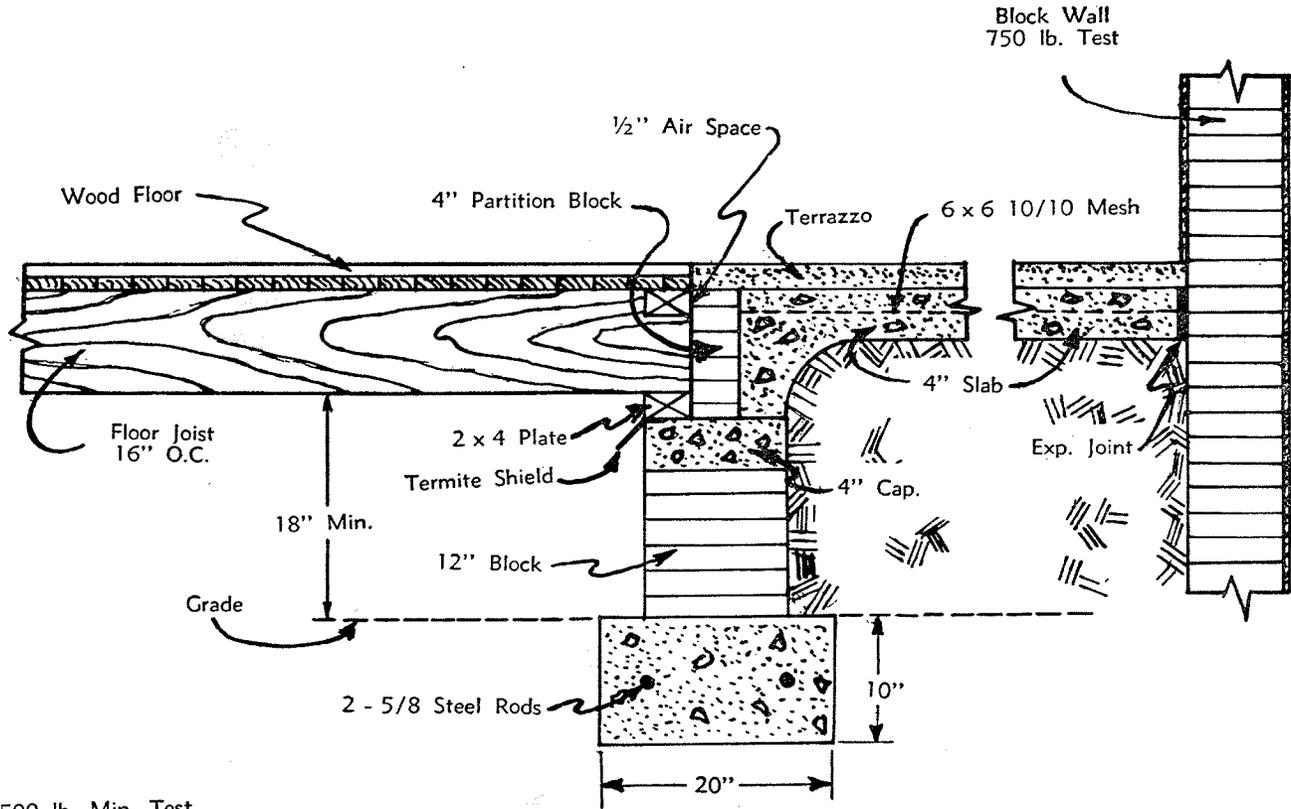
49.01 DRAWINGS: The specifications for various types of building construction as show on drawings 49.02, 49.03, 49.04 and 49.05 are required minimum standards for all buildings and structures.

SECTION 49.02

*a. see ord. 896.
b. see ord 925.*

TYPICAL RESIDENTIAL CONSTRUCTION



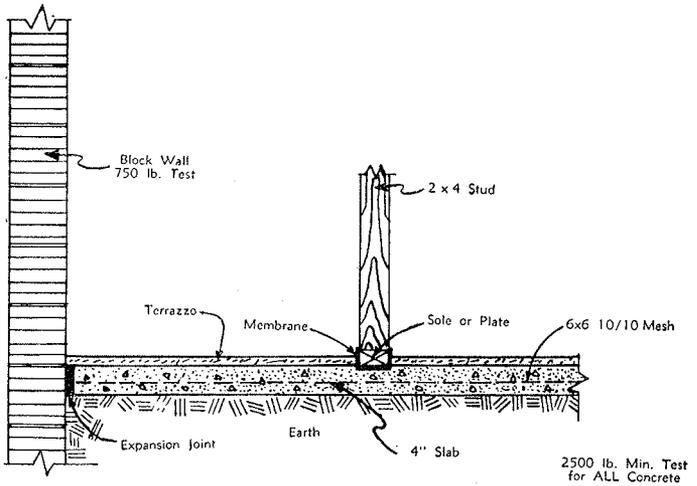
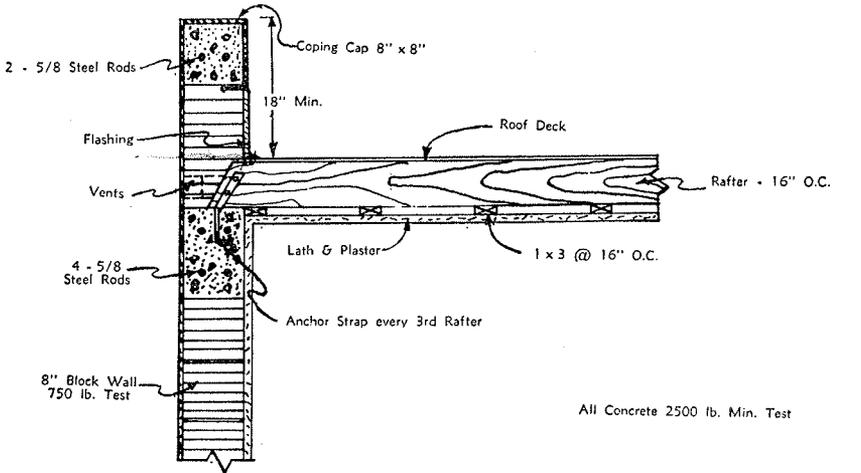


SECTION 49.03
DETAIL OF CONCRETE ON FILL FLUSH
WITH WOOD FLOOR

2500 lb. Min. Test
for ALL Concrete

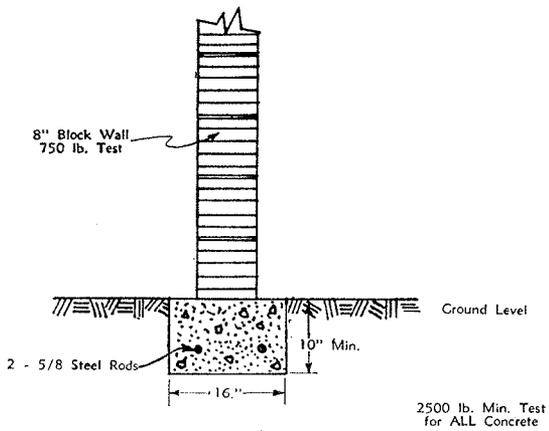
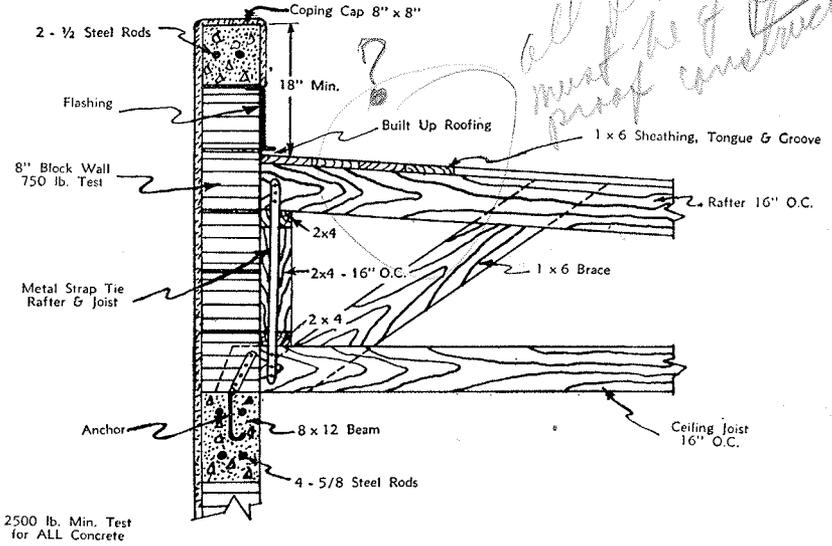
SECTION 49.04

DETAIL OF SINGLE ROOF CONSTRUCTION (Commercial or Industrial)



SECTION 49.05

DETAIL OF DOUBLE FLAT ROOF CONSTRUCTION (Commercial or Industrial)



SECTION 50

50.01 SEPARATE OFFENSES: No person shall construct any part of any building or alter in any respect any building or structure or any of its appurtenances in violation of any of the provisions of this ordinance, notwithstanding a permit may have been issued for the construction of a building pursuant to the provisions of this ordinance, and each day that any person does any work with reference to a building, whether it be construction, alteration, removal or maintenance, contrary to any of the provisions of this ordinance shall be deemed a separate and distinct offense against the provisions hereof.

SECTION 51

51.01 SEPARABILITY: If any section, part of section, sentence, clause or phrase of this ordinance shall be held to be unconstitutional or invalid, the remaining provisions hereof shall nevertheless remain in full force and effect.

SECTION 52

52.01 CONFLICTING ORDINANCES: All ordinances or parts of ordinances inconsistent or in conflict herewith are hereby repealed insofar as there is conflict.

SECTION 53

53.01 PENALTIES: Any person or persons violating any of the provisions of this ordinance shall, upon conviction therefor in the Municipal Court of the City of Coral Gables, be punished by a fine of not more than Two Hundred Dollars (\$200.00) or imprisonment in the city jail for not more than sixty (60) days, or either or both such fine and imprisonment, in the discretion of the Municipal Judge.

PASSED AND ADOPTED THIS 14th
DAY OF SEPTEMBER A. D. 1954.

APPROVED: DAVID H. HENDRICK, JR.
MAYOR

ATTEST:

L. W. ROBINSON, JR.
CITY CLERK

Pages 97 to 114 reserved for future additions.

ORDINANCE NO. 669

AN ORDINANCE DEFINING, REGULATING AND GOVERNING CONTRACTORS, ELECTRICIANS AND PLUMBERS PERFORMING WORK WITHIN THE CITY LIMITS OF CORAL GABLES, FLORIDA, AND THE ISSUANCE OF LICENSES AND CERTIFICATES THERETO; ADOPTING FOR LICENSE PURPOSES THE CLASSIFICATIONS OF CONTRACTORS ESTABLISHED IN THE OCCUPATIONAL LICENSE ORDINANCES OF THE CITY; SPECIFYING CERTAIN CLASSIFICATIONS OF CONTRACTORS, ELECTRICIANS AND PLUMBERS FOR WHICH AN EXAMINATION FOR PROFICIENCY IS REQUIRED PRIOR TO ISSUANCE OF LICENSE OR CERTIFICATE; PRESCRIBING THE TIME WHEN EXAMINATIONS SHALL BE CONDUCTED; CREATING A BOARD OF EXAMINERS FOR CONTRACTORS; CREATING A BOARD OF EXAMINERS FOR ELECTRICIANS; CREATING A BOARD OF EXAMINERS FOR PLUMBERS; CREATING A BOARD OF EXAMINERS FOR SEPTIC TANK CONTRACTORS; DEFINING THE DUTIES AND POWERS OF EACH BOARD; PRESCRIBING THE FEES TO BE CHARGED FOR EACH EXAMINATION; REQUIRING THE FILING OF A CREDIT REPORT, EVIDENCE OF COMPLIANCE WITH WORKMEN'S COMPENSATION INSURANCE LAWS, AND AN INDEMNITY BOND OR EVIDENCE OF PUBLIC LIABILITY-PROPERTY DAMAGE INSURANCE IN LIEU THEREOF, PRIOR TO THE ISSUANCE OF ANY LICENSE FOR CONTRACTORS; PROVIDING PENALTIES FOR THE VIOLATION OF THE TERMS HEREOF; REPEALING ALL ORDINANCES AND PARTS OF ORDINANCES IN CONFLICT OR INCONSISTENT HEREWITH; PROVIDING FOR THE SEPARABILITY OF THE PROVISIONS HEREOF; AND DECLARING THIS ORDINANCE TO BE AN EMERGENCY ORDINANCE.

BE IT ORDAINED BY THE COMMISSION OF THE CITY OF CORAL GABLES, FLORIDA:

SECTION 1. DEFINITIONS

- (a) **Contractor**—Every person, firm, co-partnership, corporation, association or other organization or any combination of any thereof, who is engaged in the business of accepting orders or contracts on cost plus, fixed fee, stated sum, percentage or any

combination thereof, or other compensation other than wages, to do work on or in any building or structure requiring the use of paint, stone, brick, mortar, cement, wood, glass, canvas, steel or iron, sheet iron, metallic piping, tin, lead or any other building material; or to do any grading, paving or curbing of sidewalks, or streets on public or private property, using asphalt, brick, stone, cement, or wood or any combination thereof; or to do excavating, dredging, pile driving, land clearing or scarifying; or to do any work requiring the use of copper wire, aluminum wire, metal boxes, metal switches, or other electrical material; or to do any work requiring the use of copper tubing, galvanized pipe, wrought iron pipe, cast iron pipe or any other plumbing material; or to construct water or sewage disposal systems, septic tanks, bridges, docks, wharves, dams, sea walls, bulkheads and similar structures or improvements of any and all descriptions; or who is engaged in the business of building, remodeling, repairing, razing, or moving buildings or structures, shall be deemed to be a "contractor" within the meaning of this ordinance.

- (b) **Journeyman Electrician**—A Journeyman Electrician is a person who performs the manual work of installing electrical wiring and fixtures under the direction of a Master Electrician, and who holds a current Journeyman Electrician's certificate issued by the Board of Examiners of Electricians of the City of Coral Gables certifying his fitness to perform such manual work.
- (c) **Master Electrician**—A Master Electrician is a person who assumes responsible charge and direction of other persons in the installation of electrical wiring and fixtures (and who may perform the manual work of installing electrical wiring and fixtures) and who holds a current Master Electrician's certificate issued by the Board of Examiners of Electricians of the City of Coral Gables certifying his fitness to assume such responsibility.
- (d) **Journeyman Sign Electrician**—A Journeyman Sign Electrician is a person who performs the manual work of installing electrical signs under the direction of a Master Sign Electrician, and who holds a current Journeyman Sign Electrician's certificate issued by the Board of Examiners of Electricians of the City of Coral Gables certifying his fitness to perform such manual work.
- (e) **Master Sign Electrician**—A Master Sign Electrician is a person who assumes responsible charge and direction of other persons in the installation

of electrical signs (and who may perform the manual work of installing electrical signs) and who holds a current Master Sign Electrician's certificate issued by the Board of Examiners of Electricians of the City of Coral Gables certifying his fitness to assume such responsibility.

(f) **Journeyman Plumber**—A Journeyman Plumber is a person who performs the manual work of installing plumbing under the direction of a Master Plumber, and who holds a current Journeyman Plumber's certificate issued by the Board of Examiners of Plumbers of the City of Coral Gables certifying his fitness to perform such manual work.

(g) **Master Plumber**—A Master Plumber is a person who assumes responsible charge and direction of other persons in the installation of plumbing (and who may perform the manual work of installing plumbing) and who holds a current Master Plumber's certificate issued by the Board of Examiners of Plumbers of the City of Coral Gables certifying his fitness to assume such responsibility.

(h) **Helper**—A Helper is a person who performs the manual work of installing plumbing, or electrical wiring and fixtures, or electrical signs, as the case may be, under the direction of a Master or Journeyman in the respective field. No examination for proficiency is required for a Helper, but no person shall engage in work as an Electrical Helper until he has been issued a permit therefor by the Electrical Inspector in accordance with rules of the Board of Examiners of Electricians.

SECTION 2. BOARD OF EXAMINERS OF CONTRACTORS

A Board of Examiners of Contractors shall be appointed by the City Manager for terms of one year beginning January 1 of each year. The Board shall consist of four members, one of whom shall be the Building Inspector of the City of Coral Gables. One member shall be actively engaged in the construction of buildings or structures on land and shall hold a license as a general contractor in the City of Coral Gables. One member shall be a licensed and registered structural engineer in the State of Florida and shall hold a license as such in the City of Coral Gables. One member shall be a licensed and registered architect in the State of Florida and shall hold a license as such in the City of Coral Gables. This Board shall have jurisdiction over the examining of all contractors where such jurisdiction is not specially designated to another examining board by Sections 3, 4 and 5 hereof.

SECTION 3. BOARD OF EXAMINERS OF ELECTRICIANS

A Board of Examiners of Electricians shall be appointed by the City Manager for terms of one year beginning January 1 of each year. The Board shall consist of three members, one of whom shall be the Electrical Inspector of the City of Coral Gables. One member shall be a duly licensed Master Electrician of the City of Coral Gables. One member shall be a duly licensed Journeyman Electrician of the City of Coral Gables. This board shall have jurisdiction over the examining of Master and Journeyman Electricians and Master and Journeyman sign Electricians.

SECTION 4. BOARD OF EXAMINERS OF PLUMBERS

A Board of Examiners of Plumbers shall be appointed by the City Manager, for terms of one year beginning January 1 of each year. The Board shall consist of three members, one of whom shall be the Plumbing Inspector of the City of Coral Gables. One member shall be a duly licensed Master Plumber of the City of Coral Gables. One member shall be a duly licensed Journeyman Plumber of the City of Coral Gables. This Board shall have jurisdiction over the examining of all master and Journeyman Plumbers.

SECTION 5. BOARD OF EXAMINERS OF SEPTIC TANK CONTRACTORS

The Board of Examiners of Septic Tank Contractors shall consist of four (4) members, who shall be the three (3) duly constituted members of the Board of Examiners of Plumbers as established by Section 4 hereof, together with one (1) duly licensed Septic Tank Contractor of the City of Coral Gables who shall be appointed by the City Manager for a term of one year beginning January 1 of each year. This board shall have jurisdiction over the examining of Septic Tank Contractors.

SECTION 6. VACANCIES

If vacancies occur in any Board for any cause, the same shall be filled by appointment by the City Manager. Each Member shall hold over after the expiration of his term until his successor has been appointed and qualified. Any Member of any Board may be removed from office by the City Manager.

SECTION 7. OATH OF OFFICE

Each member of each Board shall before entering upon the discharge of his duties of office, prepare and file with the City Clerk an oath in writing, to properly perform the duties of the office as a member of said Board and to uphold the laws of the City of Coral Gables, the Constitution and Laws of the State of Florida, and the Constitution of these United States.

SECTION 8. MEETINGS OF BOARD EXAMINERS

(a) Each Board of Examiners shall meet at least twice each year, once during the period from March 15th to 31st and once during the period from September 15th to 30th, for the purpose of giving examinations and transacting such other business as may properly come before them. Special meetings may be called by the Building Inspector, Electrical Inspector or Plumbing Inspector if approved by the City Manager, for the purpose of giving examinations; and provided further that the Chairman or Secretary of any Board is hereby empowered to call meetings to consider violations of this Ordinance as provided for hereafter.

(b) Each Board shall meet as soon as possible after the first of the year to elect a chairman and other necessary officers. The City employee member of each Board shall act as Secretary.

(c) Each Board shall have the power to make such by-laws, rules and regulations governing its body as it may deem necessary, providing same do not conflict with the laws of the City of Coral Gables and the State of Florida.

(d) A majority of members shall constitute a quorum.

SECTION 9. DUTIES OF SECRETARIES

Each Secretary shall keep a record of all proceedings of his Board, together with the necessary registers showing all applications for examination and license, showing thereon for each, the date of application, name, qualifications, place of business, place of residence and whether the application was granted or refused.

SECTION 10. EXAMINATIONS — LICENSES — CERTIFICATES OF COMPETENCY

(a) Every contractor shall procure and maintain at all times while so engaged, a City license therefor as is provided for in this ordinance, and by the general occupational license ordinances of the City of Coral Gables; and for occupational license purposes, Contractors, as defined herein, shall be classified and arranged as set forth in the general occupational license ordinances of this City. The terms of this ordinance shall be deemed cumulative and in addition to, and not in lieu of, the terms of the general occupational license ordinances of the City of Coral Gables, insofar as it applies to contractors licenses, and the issuance of Contractors' licenses shall be governed by the terms and provisions of the general occupational license ordinances, except insofar as such provisions may be modified or supplemented by the provisions hereof.

- (b) An examination for proficiency shall be required as provided in Section 11 hereof prior to the issuance of an occupational license to engage in the business of contracting under or within the following classifications:

Engineering Contractor
Construction Contractor
General Building Contractor
Sub-General Building Contractor
Masonry Contractor
Plastering Contractor
Painting Contractor
Roofing and Sheet Metal Contractor
Tile and Terrazzo Contractor
Tile Contractor
Glazing Contractor
Structural Steel Contractor
Elevator Contractor
Septic Tank Contractor

provided, however, that no Septic Tank Contractor licensed as such by the City of Coral Gables upon the effective date of this ordinance, shall be required to be examined as herein provided. No occupational license to engage in the business of Electrical, Plumbing or Electrical Sign Contractor shall be issued unless the licensee, or some employee of the licensee who shall supervise all work of the licensee, holds a current certificate of competency as a master in the respective field of work. An examination shall not be necessary or required prior to the issuance of a license to engage in any of the other classifications of contracting work established by the license ordinances of this City; provided, however, that under the classification "Miscellaneous Contractor" any of the several boards of examiners may, after examination, qualify an applicant to engage in any of the specific lines of work within the larger scope of work permitted under some other classification for which a prior examination is required.

(c) An examination for proficiency shall be required prior to the issuance of a certificate of competency, authorizing the person named therein to engage in or perform work within the City of Coral Gables, in any of the following classifications as defined herein:

- (1) Master Plumber
- (2) Journeyman Plumber
- (3) Master Electrician
- (4) Journeyman Electrician
- (5) Master Sign Electrician
- (6) Journeyman Sign Electrician

and no person shall perform or engage in any work in the said listed classifications within the City of Coral Gables until and unless such a certificate of competency has first been issued to him as provided hereafter; and provided, further, that no person holding a certificate of competency in any of the classifications listed in this sub-paragraph may engage in the business of contracting in the City of Coral Gables until and unless he has been issued a Contractor's occupational license as provided by this ordinance and by the occupational license ordinance of this City. All electrical or plumbing work in the City of Coral Gables must be done under the supervision of a person qualified as a master in the respective field of work.

(d) Any person desiring to take an examination for the purpose of being licensed or qualified as a Contractor, Master Electrician, Master Sign Electrician or Master Plumber, as above defined, in the City of Coral Gables, shall make application therefor to the proper board by filling in the printed form which may be obtained from the Department of Public Works and paying an examination fee of \$10.00; like applications shall be made by persons desiring to be qualified as journeymen electricians or plumbers, but the examination fee for journeymen shall be \$2.00. The Board of Examiners to which the application is referred shall then proceed to examine the qualifications and experience of the applicant in the classification of contracting or field of work selected by him. The examination may be in writing or may be verbal and/or practical in the discretion of the Board of Examiners. The examinations shall be such as to properly show the Board of Examiners that the applicant is either qualified or not qualified to engage in the business of contracting or to perform work in the classification selected. If the result of the written or verbal or practical examination is satisfactory, the Board shall issue a certificate of competency certifying that such applicant is qualified to engage in the business of contracting or to perform work in the particular field or classification covered by the examination taken. Any person failing to pass the examination may be re-examined at the next regular or special meeting of the board.

(e) Certificates of competency for master and journeymen plumbers, electricians and sign electricians shall expire on September 30th of each year, and unless renewed within thirty (30) days thereafter the holder of such certificate may be required to be re-examined before issuance of a renewal certificate. A fee of \$2.00 shall be paid for each renewal of a master's certificate and a fee of \$1.00 for each renewal of a journeymen's certificate.

(f) A fee of \$1.00 shall be paid for issuance of a permit to work as an electrical helper, as provided herein. Such permits shall expire on September 30th of each year, and shall be renewed upon payment of a \$1.00 renewal fee. (Sec. 10, as amended by Ord. No. 802.)

SECTION 11. LICENSES

- (a) In all classifications of contracting wherein an examination for proficiency is required by Section 10 hereof, no contractors' licenses shall be issued to any individual until such individual shall have taken and satisfactorily passed the examination given by a board of examiners as above provided, or unless such individual employs another person, who has qualified by examination to supervise and take charge of all his contracting work; and no contractors' licenses shall be issued to any firm, partnership, association or corporation until some member, officer, employee or agent of such firm, co-partnership, corporation or association has qualified by examination as herein provided, to take charge of or to supervise the contracting work of such firm, co-partnership, corporation or association.

If the qualified person whose connection with the licensee permits the issuance of a license shall at any time sever his connection with the licensee it shall be the duty of the licensee to give immediate written notice thereof to the board of examiners involved and at the same time to surrender the license, which shall be immediately thereupon suspended; and the license shall be reinstated only upon showing that some other officer, employee or agent of the licensee has qualified by examination as herein provided to take charge of and to supervise the contracting work of the licensee in the City of Coral Gables.

- (b) Such licenses shall expire on the 30th day of September following their issuance or renewal and shall become invalid after that date, and unless renewed within thirty (30) days thereafter the holder of such license may be required to be re-examined.
- (c) Such licenses may be transferred, subject to the examination provisions of this section, when there is a bona-fide sale and transfer of the property used and employed in the business as stock in trade, provided such transfer shall be made within ten (10) days after said sale has taken place.
- (d) Any change of name under which such license has been issued must have the approval of the Department of Public Works.
- (e) An adjudication of bankruptcy against any contractor holding license under the terms of this ordinance shall automatically revoke such license.
- (f) In all classifications of contractors for which an examination for proficiency is required, no license shall be issued or transferred by the Tax Collector of the City of Coral

Gables until applicant therefor has been approved by the secretary of the board of examiners involved.

- (g) Before a license may be issued to any contractor as defined herein, whether or not an examination is required as a condition precedent to the issuance of such license, the applicant shall furnish and file with the Tax Collector:
 - (1) A credit report upon applicant prepared by a reputable credit bureau in Dade County, Florida, provided that this shall be required only on original issuance of licenses and not upon renewals of Licenses; and

(The Next Page is Page 123)

- (2) Satisfactory proof that applicant has insurance coverage as required by the Florida Workmen's Compensation Law, or has otherwise complied with such law; if such insurance coverage or other compliance with the Workmen's Compensation Law is terminated for any reason during the term of the license, then the license shall be immediately and automatically suspended, and it shall be unlawful thereafter for the licensee to engage in such business until such license is reinstated, by the Tax Collector, upon a new compliance with the requirements of this subsection; and
- (3) A good and sufficient bond in the penal sum of \$25,000, payable to the City of Coral Gables, with applicant as principal and a surety company authorized to do business in this state as surety thereon, conditioned that the principal shall well and truly comply with the provisions of all ordinances of the City of Coral Gables with respect to the conduct of such business for which the applicant seeks a license, and to indemnify and save harmless any and all persons from loss and damage by reason of the principal's failure to comply with the provisions of such ordinances. Should any bond so required for any reason become insufficient, the Tax Collector may require a new bond to be filed forthwith, and upon failure so to do the license issued to such principal shall be immediately and automatically suspended and it shall be unlawful thereafter for such principal to engage in such business until such license is reinstated, as provided below; provided, however, that if the applicant shall furnish the city evidence that such applicant is carrying a policy of public liability insurance with respect to such business in an insurance company authorized to do business in the State of Florida, for an amount not less than \$10,000 one person, \$20,000 one accident, and a policy of property damage insurance with respect to such business in an insurance company authorized to do business in the State of Florida, for an amount not less than \$1,000 one accident, \$10,000 aggregate, and that the premiums on such insurance are paid, then a certificate of such insurance shall be accepted in lieu of the bond hereinabove specified. If such insurance expires, or is at any time cancelled, during the term of the license, then the license issued to the insured shall be im-

mediately and automatically suspended, and it shall be unlawful thereafter for the licensee to engage in such business until such license is reinstated, as provided below. No new bond or new certificate shall be required as long as the original bond or insurance remains sufficient and in full force and effect. Any license suspended by the terms hereof may be reinstated by the Tax Collector upon a new compliance with the requirements of this subsection.

SECTION 12. POWER OF BOARD OF EXAMINERS

Each Board shall have the power, in addition to all other powers provided for in this Ordinance, to revoke the certificate of any Master or Journeyman, and to revoke the license of any Contractor, within their respective fields, who shall be guilty of any one or more of the following acts or omissions, to-wit:

- (a) Fraud or deceit in obtaining a license;
- (b) Negligence, incompetency, or mis-conduct in the practice of contracting within the meaning of this Ordinance;
- (c) Abandonment of any contract without legal excuse;
- (d) Diversion of property or funds received under express agreement, for prosecution or completion of a specific contract under this Ordinance, or for a specified purpose in the prosecution or completion of any contract and their application or use for any other contract, obligation or purpose with intent to defraud or deceive creditors or the owner;
- (e) Fraudulent departure from, or disregard of, plans or specifications in any material respect, without consent of the owner or his duly authorized representative; or the doing of any willful, fraudulent act by the licensee as a contractor in consequence of which another is substantially injured;
- (f) Wilful and deliberate disregard and violation of the Building, Electrical or Plumbing Codes of the City of Coral Gables and/or of the State Hotel Commission.

The Building, Plumbing, or Electrical Inspectors of the City of Coral Gables, the Architect or Engineer who is responsible for the plans under which the contractor is working or any other person directly interested in the contract may prefer charges against a licensee under this Ordinance. Such charges must be made in writing and sworn to by the complainant and submitted to the proper Board. It will then be the duty of such Board at the earliest possible date, and not later than fifteen (15) days thereafter, to investigate the charges, and the Board may dismiss the same as being unfounded or trivial. If the Board does not determine on preliminary investigation that the charges are unfounded or trivial, a public hearing shall be called and held upon such

charges, but such hearing shall be set not later than thirty (30) days after charges are preferred. A copy of the charges, together with a notice of the time and place of hearing, shall be served on the accused at least five (5) days before the date fixed for the hearing. At the hearing the accused shall have the right to appear personally and by counsel and cross-examine witnesses against him, and to produce witnesses and evidence in his defense. If, after the hearing, the Board's decision be that the licensee has been guilty of the charges preferred against him, his license shall be suspended, cancelled or revoked. A license may be reissued to any contractor whose license has been revoked, provided three or more Members of the Board vote in favor of such re-issuance, for reasons the Board may deem sufficient. Prompt notice shall be given the Tax Collector of the City of Coral Gables, of the finding of the Board on all cases. Any decision of the Board of Examiners may be appealed to the City Commission, provided notice of said appeal is given to said City Commission and the Secretary of said Board, within five (5) days of the date of such decision.

SECTION 13. EXEMPTIONS

Contractors' licenses shall not be required of:

(a) Authorized representatives of the United States of America; the State of Florida; or the City of Coral Gables, Florida.

(b) Owner-builders or sole owners of property, building single family or duplex residential structures or making repairs thereon for their own use, sole owner or owner-builders being defined as follows: A sole owner or owner-builder, the terms being used interchangeably, is hereby defined as a single natural person (not a corporation, partnership, firm or association) performing and supervising work in connection with the construction of a single family or duplex residential structure for his or her own private occupancy, and only then shall they be exempt upon complying with the following:

1. File plans and specifications and obtain approval of the Board of Architects and the Building Inspector.

2. Apply for and secure a permit for such construction.

3. Pay the required fees.

4. Apply for inspection.

5. File with the Building Inspector certificates showing that proper provision has been made to carry the necessary Workmen's Compensation, Public Liability, and Property Damage Insurance in the same amounts and meeting the same requirements as set forth in paragraph numbered 3 of Section 11 of Ordinance No. 669 of the City of Coral Gables.

6. File with the Building Inspector, as the job progresses, certificates showing the payment required by the Federal Social Security Act.

7. Assume the responsibility of not employing contractors other than properly licensed contractors, licensed by the City of Coral Gables, for any part or portion of the work.

8. Sign an affidavit, before commencing work, to the effect that he has read this article and will supervise and control the work personally and observe all of the requirements of the building, electrical, plumbing and zoning codes of the City of Coral Gables. Such affidavit to be made upon a blank to be supplied by the Building Inspector, and acknowledged before a Notary Public, or other official duly authorized to take acknowledgments.

9. In order to prevent abuses and subterfuges the right of the owner-builder or sole owner, as herein provided, shall be limited to one permit to each owner-builder or sole owner during any 12-month period, this time interval to be figured from the date of the issuance of a previous permit; and where a sole owner or owner-builder has exercised the privilege of securing this exemption no second application for such owner-builder or sole builder permit shall be granted in less than one year, figured as set forth above, unless the applicant is qualified as a licensed contractor under the applicable ordinances of said city; the limitation of time, herein contained shall not apply to maintenance, alterations, additions, or repairs to existing structures, owned by such owner-builder or sole owner. (Section 13 as amended by Ord. No. 782.)

SECTION 14. RECIPROCITY

Any person who has obtained a license or a master's or journeymen's certificate by or through examination in any other city in Dade County, Florida, which has requirements similar to those in the ordinances of this city with respect to the issuance and granting of licenses for contractors and Masters' and Journeymans' certificate, may if approved by the Examining Board established under this Ordinance, and without formality of examination, be granted a certificate or license by reciprocity upon the payment of the tax, fees or charges applicable in such case.

SECTION 15. PENALTIES

Any person or persons, and the members of any firm, co-partnership, corporation, association or other organizations or any combination thereof, presenting or attempting to file or use the license of another, or who shall give false or forged evidence of any kind to the Board, or to any Member thereof, in obtaining or maintaining a license or who shall falsely impersonate another or who shall use an expired or revoked license, or shall violate any one or more of the provisions of any section of this Ordinance, shall, upon conviction be punished by a fine not exceeding two hundred (\$200.00) dollars or be imprisoned for a period not exceeding sixty (60) days or by both such fine and imprisonment, in the discretion of the Court, for each offense.

SECTION 16. SEPARATE OFFENSES

Each day's violation of any of the terms of this Ordinance shall be deemed and considered and is hereby specially declared to be a separate and distinct violation of the terms of this Ordinance and punishable as such.

SECTION 17. SEPARABILITY

In the event that any portion of this Ordinance shall be held to be void, inconsistent or of no effect by a court of competent jurisdiction, such holding shall in no wise effect or disturb the remaining portions of this Ordinance.

SECTION 18. CONFLICTING ORDINANCES

All Ordinances, or parts of Ordinances in conflict or inconsistent herewith be, and the same are, hereby repealed, insofar as there is conflict.

SECTION 19. EMERGENCY

This Ordinance is hereby declared to be an emergency measure on the grounds of urgent public need for the preservation of peace, health, safety or property, and the requirement of reading this Ordinance on two separate days is hereby dispensed with by virtue of the affirmative vote of four-fifths of the members of the Commission.

Passed and adopted this fifth day of September, 1950.

Approved:

W. KEITH PHILLIPS,

Mayor.

Attest:

E. B. POORMAN,
City Clerk.

INDEX

A

	Section	Page
AGGREGATE		
Quality, Fine	20.10.....	34
Tests	20.11.....	35
Quality, Course	20.12.....	35
ARBITRATION, BOARD OF.....	12 - ORD 669.....	124
ARCHES, LINTELS	12.12.....	23
AWNINGS & CANOPIES	30.01.....	57
Plans	30.02.....	57
Approval	30.03.....	57

B

	Section	Page
BASE PLATES, STEEL	21.21.....	43
BEAMS		
Grillage	11.08.....	19
Rake	12.04.....	21
Tie	12.10 - 12.11.....	22
BUILDINGS		
Demolition, Removal	1.02.....	1
Moving	2.01.....	2
Repair to	2.03.....	2
BUILDING BLOCKS		
Cement	13.01.....	24
Specifications	13.02.....	24
Tests	13.03.....	24
BUILDING INSPECTION		
General	45.01.....	86
Appeal	45.02.....	86
Action on Violations	45.03.....	87
Inspection Requests	45.04.....	87
Inspections Required	45.05.....	87
Reinspections	45.06.....	87
Work not Inspected	45.07.....	87
Miscellaneous	45.08.....	87

C

	Section	Page
CAST IRON		
Design	24.06.....	49
Imperfections	24.07.....	50
End Joining	24.08.....	50
Connections	24.09.....	50
General	24.10.....	51
Bases	24.11.....	51

INDEX—Continued

	Section	Page
CEMENT, QUALITY.....	20.09	34
CERTIFICATE OF OCCUPANCY.....	47.01	90
CERTIFICATE OF COMPETENCY.....	10 - ORD 669	119
CHASE, PIPE.....	12.08	22
CHIMNEYS, FLUES & HEATING APPARATUS		
Material.....	33.01	60
Thickness.....	33.02	60
Multiple Flues.....	33.03	60
Lining.....	33.04	60
General.....	33.05	61
Boiler Flues.....	33.06	61
Pipes Through Flame.....	33.07	61
Not in Use.....	33.08	61
Framing Around Chimney.....	33.09	61
CLASSIFICATION OF CONSTRUCTION		
Frame.....	5.01	10
Masonry.....	5.02	10
Mill.....	5.03	10
Fire Proof.....	5.04	10
FOUR STORY AND OVER.....	5.05	10
CLEANUP OF SETS.....	2.04	2
COLUMNS.....	12.15	23
Design of.....	21.15	41
Columns, Without Hoops.....	21.16	41
With Hoops.....	21.17	41
Structural Steel.....	21.18	42
Special Concrete.....	21.19	42
Eccentrically Loaded.....	21.20	43
CONCRETE CONSTRUCTION		
Term "Reinforced".....	20.01	33
Approval.....	20.02	33
Plans.....	20.03	33
General Mix.....	20.05	33
Special Mix.....	20.06	34
Tests Required.....	20.07	34
Test Methods.....	20.08	34
Design.....	21.01 - 21.14	36 - 41
CONCRETE		
Mixing.....	23.05	46
Depositing.....	23.06	46
Joining Pours.....	23.07	46
Dripping.....	23.08	47
Joints.....	23.09	47
Columns.....	23.10	47
CONCRETE JOISTS.....	22.01 - 22.06	44
CONFLICTING ORDINANCES.....	52.01	96

INDEX—Continued

	Section	Page
CONSTRUCTION DETAILS	49.01	92
CONSTRUCTION SHED	2.02	2
COMPRESSION MATERIALS..	7.03	14

D

	Section	Page
DEFINITIONS	4.01	6
DEMOLITION & REMOVAL OF BUILDINGS.	1.02	1
DETAILS, CONSTRUCTION IN GENERAL	49.01	92
DRAINAGE, FROM BUILDINGS	43.04	84
Downspouts	43.05	84
DRY CLEANING ESTABLISHMENTS		
General	39.01	73
Application for Permit	39.02	73
Specifications	39.03	73
Ventilation	39.04	74
Fire Prevention	39.05	74
Lighting	39.06	74
Heating	39.07	75
Storage Tanks	39.08	75
Tank Vents	39.09	75
Feed Pipe	39.10	75
Pipe Attaching..	39.11	75
Service Pump	39.12	76
DUMBWAITERS		
Enclosure	37.01	72
Fire Door	37.02	72
Woodwork	37.03	72

E

	Section	Page
ELEVATORS, EXCALATORS		
General	36.01	68
Definitions	36.02	68
Miscellaneous	36.03	68
Applications & Permit.....	36.04	69
Carrying Capacity	36.05	69
Operator	36.06	69
Certificate	36.07	69
Doors & Their Control.....	36.08	69
Safety Control	36.09	70
Counterweights	36.10	70
Cars	36.11	70
Guide Rails	36.12	70
Freight & Passenger.....	36.13	70

INDEX—Continued

	Section	Page
Grating at Top	36.14	70
Opening & Clearance	36.15	71
Machinery Enclosure.....	36.16	71
Buffer	36.17	71
Live Loads	36.18	71
Emergency Exits	36.19	71
Night Service.....	36.20	71
Speed & Safety Devices	36.21	71
Inspections	36.22	72
Control	36.23	72
EXAMINATION, CONTRACTORS	10 - ORD 669	119
EXAMINORS, BOARD OF.....	2 - ORD 669	117
EXCAVATIONS	48.01 - 03 - 04	
EXITS		
Required	31.01	58
Direction of Opening.....	31.02	58
Room Exits	31.03	58
Halls	31.04	58
Offices	31.05	58
Mezzanine	31.06	59
Locks	31.07	59
Signs	31.08 - 31.09	59
Exceptions	31.10	59

F

FACING	12.13	23
Materials	12.14	23
FIRE PROOF CONSTRUCTION.....	5.04	10
FIRE ESCAPES	41.01	77
Exit Doors, Schools	41.02	77
FORMS, CONSTRUCTION OF.....	23.11	47
Removal of.....	23.12 - 23.13	47 - 48
FOUNDATIONS	11.01 - 11.09	18 - 19
FRAME CONSTRUCTION	5.01	10

G

	Section	Page
GARAGES, PUBLIC, DEFINITION..	40.01	76
Openings	40.02	76
Private	40.03	76
Fire Proofing	40.04	77
GENERAL REQUIREMENTS.....	1.01	1

INDEX—Continued

J

JOISTS, WOOD

	Section	Page
General	26.01	55
Floor	26.02	55
Ceiling	26.03	55
Ground Clearance.....	26.05	56
Treating	26.06	56
Ratproofing	26.07	56
Termit Shields	26.08	56

L

	Section	Page
LAND CLEARING.....	48.01	90
Cash Bond.....	48.02	91
Excavations	48.03	91
Payment of Taxes.....	48.04	91
LICENSES		
Contractors	11 - ORD 669	122
LINTELS	12.12	23
LIVE LOADS	7.01	12

M

	Section	Page
MASONRY CONSTRUCTION.....	5.02	10
MATERIAL		
Facing	12.14	23
Stress	7.02	13
Compression	7.03	14
Weight	6.01	11
MILL CONSTRUCTION	2.03	2
MOVING BUILDINGS.....	2.01	2

N - O

	Section	Page
OPENINGS		
Window Glass	44.04	85
General	44.05	85

P

	Section	Page
<i>PERMITS</i>		
Application	3.01	3
Statements	3.02	3
Plans, Etc.....	3.03	3

INDEX—Continued

	Section	Page
Public Structures.....	3.04	4
Approval	3.05	4
Expiration	3.06	4
Permits Required.....	3.07	4
Fees	3.08	4
Permit Display	3.09	6
Reinspection	3.10	6
After Starting.....	3.11	6
Day Labor.....	3.12	6
PILES, CONCRETE		
Material	10.01	17
Driving	10.02	17
Length	10.03	17
Load	10.04	17
PILES, WOODEN	9.01	16
PIPE CHASE	12.08	22
PLANS & SPECIFICATIONS	20.03	33
Preparation	20.04	33
PRIVATE GARAGES	40.03	76
PROJECTIONS	29.01	57
PROTECTIVE SHEDS	1.03	1
PUBLIC GARAGES	40.01	76

R

	Section	Page
RAFTERS		
Sizes for Roof.....	26.04	56
RATPROOFING	26.07	56
RECIPROCITY - LICENSES	14 - ORD 669	126
REINFORCING		
Steel, Quality	20.13	35
Defects	23.01	45
Placing & Spacing.....	23.02	45
Protection	23.03	45
Splices	23.04	46
REQUIREMENTS		
General	1.01	1
REPAIRS	2.03	2
ROOF DRAINAGE	43.04	84
ROOFING TILE		
Specifications	43.02	80 - 81

plastic

43.02 80

INDEX—Continued

	Section	Page
S		
<i>42.02 79</i>		
SCUTTLES & ATTICS, EXIT DOOR	38.01	73
Ventilation	38.02	73
SEPARATE OFFENSES	50.01	96
SEPARABILITY	51.01	96
SHEDS		
Protective	1.03	1
Construction	2.02	2
SIZES		
General	34.01	62
Plans	34.02	62
SKY LIGHTS		
Metal Frame	44.01	85
Wired Glass.....	44.02	85
Wind Pressure.....	44.03	85
SOIL BEARING	11.09	19
STAIRS & STAIRWAYS		
Riser & Tread	32.01	59
Hand Rails.....	32.02	59
Width	32.03	60
STAND PIPES.....	41.03	78
STEEL BASE PLATES.....	21.21	43
STEEL CONSTRUCTION		
Methods	24.01	49
Joist Design.....	24.02	49
Control of Manufacturing.....	24.03	49
Quality of Steel.....	24.04	49
Marking	24.05	49
Design	24.12	51
Column Lengths.....	24.13	51
Girders & Beams	24.14	51
Framing & Connecting.....	24.15	52
Trusses	24.16	52
Riviting & Bolting.....	24.17	53
Protection	24.18	53
STEEL, REINFORCING		
Defects	23.01	45
Placing & Spacing.....	23.02	45
Protection	23.03	45
Splices	23.04	46
STRESS	7.02	13
STRUCTURAL TIMBER.....	7.04	15
<i>1.09</i>		

PLAN SURVEX, L 98

2 (ordg)

INDEX—Continued

T

	Section	Page
TENTS	28.01.....	57
TERMITE SHIELD.....	26.08.....	56
THEATERS		
Entrance	35.01.....	62
Shop Areas	35.02.....	62
Sleeping	35.03.....	62
Area Separation	35.04.....	62
Floors	35.05.....	63
Seats	35.06.....	63
Gallery Seats.....	35.07.....	63
Gallery Design	35.08.....	63
Aisles	35.09.....	63
Exits, General.....	35.10.....	63
Exits, Motion Picture.....	35.11.....	64
Courts	35.12.....	64
Proscenium Wall.....	35.13.....	64
Proscenium Curtain.....	35.14.....	64
Curtain Thickness.....	35.15.....	65
Curtain Operator.....	35.16.....	65
Loft	35.17.....	65
Fly & Tie Galleries.....	35.18.....	65
Lighting	35.19.....	66
Fire Hose Connection.....	35.20.....	66
Projection Booth.....	35.21.....	66
TIE BEAMS		
Residence	12.10.....	22
Apartments & Commercial.....	12.11.....	22
TILE, ROOFING.....	43.03.....	81
TIMBER, STRUCTURAL.....	7.04.....	15
TOILETS		
Workmans Temporary.....	45.08.....	87
TRANSFORMER ROOMS		
General	25.01.....	54
Entry Door.....	25.02.....	54

U - V

	Section	Page
UNSAFE BUILDINGS		
General	46.01.....	88
Failure to Act	46.02.....	89
Action by City.....	46.03.....	89
Expense	46.04.....	90
Definition, Owner.....	46.05.....	90
UTILITY CONNECTIONS.....	47.02.....	90

INDEX—Continued

	Section	Page
VENTILATION		
Windows	42.01.....	79
Sleeping Rooms	42.02.....	79
Bath Rooms	42.03.....	79
Attics	38.02.....	73

W

	Section	Page
WALLS		
Thickness	12.01.....	20
Curtain	12.02.....	20
Parapet	12.03.....	20
Fire	12.05.....	21
Brick	12.06.....	21
Hollow Block.....	12.07.....	21
Retaining	12.09.....	22
Specifications	21.22.....	43
WIND PRESSURE		
General	27.01.....	56
Warehouses, Public Garages..	27.02.....	56
WINDOWS,		
Glass	44.04.....	85
General	44.05.....	85
	<i>42.01</i>	<i>79</i>
WOOD JOISTS & RAFTERS		
General	26.01.....	55
Floor, Sizes	26.02.....	55
Ceiling, Sizes	26.03.....	55
Roof, Sizes	26.04.....	56
Ground Clearance	26.05.....	56
Treating	26.06.....	56
Ratproofing	26.07.....	56
Termite Shield	26.08.....	56