ORDINANCE NO. 24

This is the comprehensive Building Code of the Town of Golden Beach.

Sec. 3. 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.

Sec. 4. Any false swearing in a material point in any statement submitted in pursuance of the provisions of this article shall be deemed perjury and shall be punishable as such.

Sec. 5. All approvals of applications, plans, specifications, detail drawings and amendments thereto, shall expire by limitation 6 months from the date of the original approval; but shall not apply when work thereunder has been 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 article within a reasonable time.

Sec. 6. The invalidity of any section or provision of this ordinance shall not invalidate any other section or provision thereof.

Sec. 7. When the Building Inspector shall have stamped the plans and specifications as approved, the applicant for permit shall pay to the Town of Golden Beach, before issuance of final permit, inspection fees as follows, based on the cost of the work to be performed:

| | |
|---|---|
| More than $100.00 and less than $1000.00 | $ 5.00 |
| More than $1000.00 and less than $5000.00 | $ 10.00 |
| More than $5000.00 and less than $10,000.00 | 15.00 |
| More than $10,000.00 and less than $15,000.00 | 20.00 |
| More than $15,000.00 and less than $25,000.00 | 25.00 |
| More than $25,000.00 the fee shall be $1.00 per $1000.00 or fraction thereof. | |

## ARTICLE 5.

## DEFINITIONS

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

Section 1. AREAWAY. An areaway is an open, sub-surface space, adjacent to a building, for lighting or ventilating cellars or basements.

Sec. 2. BASEMENT. A basement is a story partly, but not more than one-half (½) below the level of the curb, but not more than five (5) feet above the level of the curb.

Sec. 3. 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.

Sec. 4. 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.

Sec. 5. COURT. An open, unobstructed, unoccupied 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.

Sec. 6. 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.

Sec. 7. DOWNSPOUT. A pipe of metal or other material to conduct rain water from roofs to ground, tanks or storm sewers.

Sec. 8. DWELLING. A residence building designed for, or used as, the home or residence of not more than one separate and distinct family.

Sec. 9. LOAD. Dead load: The weight of walls, framing, floors, roofs, tanks with their contents, and all permanent construction.

Sec. 10. FIBRE PLASTER BOARD. A board consisting of any intimate mixture of gypsum plaster composition and a fibrous binding material.

Sec. 11. FOUNDATION WALL. Any wall or pier, built below the curb level or nearest tier of beams to that level.

Sec. 12. 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 fireproof floors.

Sec. 13. INCOMBUSTIBLE. Material or construction which will not ignite or burn when subjected to fire.

Sec. 14. ACCESSORY BUILDING. All structures not exceeding ten (10) feet in height nor more than 150 square feet in area.

Sec. 15. WALL PANEL WALL: An exterior non-bearing wall in a skeleton structure built between columns or piers and supported at each story.

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

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

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

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

Sec. 16. SHAFT. Any vertical enclosed space within a building, which extends from its lowest level through the entire height of building and is open to the sky, used for air, light, elevator, dumb-waiter, or any other purpose not otherwise hereinafter prohibited.

Sec. 17. 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.

Sec. 18. SKYLIGHT. Any cover or enclosure placed above roof openings for the admission of light.

Sec. 19. VOLATILE INFLAMMABLE LIQUID. This shall mean any liquid that will emit inflammable vapor.

Sec. 2. Temporary one-story frame buildings, for use of builders, mixer-stands, platforms and builders' apparatus may be erected without a permit, but shall immediately be razed upon completion of the new building, or the expiration of the permit.

Sec. 3. 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.

Sec. 4. Within 15 days after the completion of a new building, structure, addition or repairs, all debris shall be removed 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 so to do within 48 hours after the receipt of notice from the Building Inspector, then the Building Inspector may enter upon the premises and employ such labor and take such 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.

## A R T I C L E 3.

## PENALTY

Section 1. No person shall construct any part of any building or alter in any respect any building or remove or maintain a 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

# ORDINANCE NO. 24

AN ORDINANCE OF THE TOWN OF GOLDEN BEACH, FLORIDA, PRESCRIBING RULES AND REGULATIONS FOR THE ERECTION, REPAIR, REMOVAL AND DEMOLITION OF BUILDINGS IN SAID TOWN: PROVIDING FOR THE SUBMISSION OF PLANS AND THE MAKING OF APPLICATION FOR PERMITS FOR THE ERECTION, REPAIR, REMOVAL OR DEMOLITION OF BUILDINGS; PROVIDING FOR A BOND INSURING CLEAN-UP AFTER CONSTRUCTION OR REPAIR; PRESCRIBING RULES AND REGULATIONS AS TO PLUMBING DONE WITHIN SAID TOWN, THE QUALIFICATION OF PLUMBERS; PRESCRIBING RULES AND REGULATIONS WITH REFERENCE TO THE INSTALLATION OF ELECTRICAL WIRING AND OTHER ELECTRICAL APPLIANCES FOR HEATING AND LIGHTING BUILDINGS; PRESCRIBING PENALTIES FOR FAILURE TO COMPLY WITH THE PROVISIONS OF THIS ORDINANCE AND REPEALING ALL ORDINANCES IN CONFLICT HERETO.

BE IT ENACTED BY THE TOWN COUNCIL OF THE TOWN OF GOLDEN BEACH, FLORIDA:

## ARTICLE 1.

### GENERAL REQUIREMENTS

Section 1. No wall, structure, building or part thereof, shall hereafter be built or constructed nor shall the plumbing or wiring of any building, structure or premises be installed or altered, except in conformity with the provisions of this ordinance.

Sec. 2. No building already erected, or hereafter to be 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.

Sec. 3. Before the demolition 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 hereinbefore provided.

Sec. 4. Ordinary repairs on buildings or structures, the cost of which shall not exceed $100.00, may be made without notice to the Building Inspector.

## ARTICLE 2.

### EXISTING BUILDINGS, RAZED, ALTERED, REPAIRED OR MOVED

Section 1. 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 the building shall be filed with the Building Inspector. Sufficient bond shall be given to insure the Town against any damages to streets or other Town property, that might be brought about by the removal of the building or structure, before permission is given to remove any building.

## ARTICLE 6.

### CLASSIFICATION OF CONSTRUCTION

Section 1. ORDINARY CONSTRUCTION. A building having masonry walls, with floors and partitions of wood, joist and stud construction. The supporting posts and girders may be of wood, metal or concrete.

Sec. 2. FIRE-PROOF CONSTRUCTION. Buildings of masonry, cement, or reinforced concrete, constructed in accordance with Articles 15 to 19 inclusive, shall be considered fire-proof.

## ARTICLE 7.

### WEIGHT OF MATERIALS

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

| | Pounds per Cubic Foot |
|---|---|
| Brickwork, Ordinary, | 120 |
| Brickwork, Pressed Brick, | 130 |
| Concrete | 125 |
| Granite, Bluestone, and Marble | 170 |
| Limestone | 145 |
| Sandstone | 145 |
| Oak | 50 |
| Spruve and Hemlock | 30 |
| White Pine | 27 |
| Yellow Pine, Grade I | 42 |
| Yellow Pine, Grade II | 35 |
| Maple | 43 |
| Birch | 45 |
| Douglas Fir and Cypress | 35 |

## ARTICLE 8.

### PERMISSIBLE WORKING STRESSES

Section 1. 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 sectional area:

Sec. 2. STEEL AND IRON.

| COMPRESSION IN SHORT BLOCKS | Pounds per Square inch |
|---|---|
| Rolled steel | 16,000 |
| Cast steel | 16,000 |
| Cast iron | 16,000 |
| Steel pins, shop & 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 & power driven field rivets & pine | 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 & riveted steel beams | 16,000 |
| Rolled steel pins & rivets & bolts | 20,000 |
| Cast iron, compression side | 16,000 |
| Cast iron, tension side | 2,500 |

Sec. 3. CONCRETE AND MASONRY

COMPRESSION

| | |
|---|---|
| Grout, Portland cement, neat | 800 |
| Grout, Portland cement, neat, between steel in foundation not over $\frac{1}{2}$ inch | 1,000 |
| Concrete, Portland cement 1; sand 2; stone 4 | 500 |
| Concrete, Portland cement 1; sand $2\frac{1}{2}$; stone 5 | 400 |
| Concrete, Natural cement 1; sand 2; stone 4; | 125 |
| Concrete, Natural cement 1; sand $2\frac{1}{2}$; 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 |
| Limestone, according to test | 700 to 2,300 |
| Marbles, according to test | 600 to 1,200 |
| Sandstones, according to test | 400 to 1,600 |
| Slate | 1,000 |

SHEAR

| | |
|---|---|
| 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 | 120 |

Sec. 4. 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.

| | BENDING | | COMPRESSION | |
|---|---|---|---|---|
| | Extreme Fibre Stress | Maximum Longitudinal Shear | Perpendicular to the Grain | Columns with L/d less than 10 Parallel to the Grain |
| Oak | 1,400 | 120 | 400 | 1,000 |
| Yellow Pine, Grade I | 1,600 | 120 | 350 | 1,200 |
| Yellow Pine, Grade II | 1,200 | 85 | 325 | 900 |
| Douglas Fir | 1,500 | 100 | 300 | 1,100 |
| Eastern Spruce | 1,000 | 75 | 200 | 900 |
| Western Hemlock | 1,300 | 75 | 250 | 1,000 |
| Norway Pine | 1,000 | 75 | 250 | 800 |

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 timbers, subject to vibration and impact, should not be thus increased.

All material 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.

## A R T I C L E 9 .

## EXCAVATION

Section 1. 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 permanently 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.

Sec. 2. 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

Engineer. No drop hammers shall be permitted in the driving of piles, but all piles, including concrete piles, shall be driven by hammers under steam pressure.

## A R T I C L E 11 .

### CONCRETE PILES

Section 1. 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 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. When driven to rock, the load on such piles shall not exceed 500 pounds per square inch on the concrete and 7,500 pounds per square 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 2½ parts of sand and 3½ parts of rock. Rock to be equal to hardest Ojus or canal bank, washed and screened rock.

Sec. 2. Concrete piles moulded and cured before driving shall be provided with not less than 2½%, nor more than 4½% longitudinal reinforcement, with bands or hoops not less than 3/8 inch in diameter, and spaced not farther 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.

Sec. 3. Concrete piles for loose wet soil, or filled ground, shall not exceed twenty (20) times the inside 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.

## A R T I C L E 12 .

### FOUNDATIONS

Section 1. 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. Concrete footings for one-story buildings shall be not less than 24" wide and 12" in depth. For two-story buildings they shall be not less than 30" wide and 12" in depth. Concrete footings shall be reinforced with not less than four one-half inch square steel rods.

The foundation walls shall be of concrete, not less than eight inches in thickness, cast integral with the footing and shall extend to the under side of the first floor joist, which shall be not less than twelve inches above the natural ground level. For buildings two stories or more in height, foundation walls shall be not less than twelve inches in thickness.

Sec. 2. Footings shall be so designed that the loads they sustain per unit of area shall be as nearly uniform as possible and the stresses shall conform to the requirement of this Ordinance. The dead loads carried by the footings shall include the actual weight of the super-structure and foundations down to the bottom of the footing. 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.

Sec. 3. In no case shall the load per square foot, 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.

Sec. 4. Concrete footings shall be not less than twelve (12) inches thick, except as provided in Article 24.

Sec. 5. 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.

Sec. 6. Grillage beams shall be united by bolts and separators and the grillage filled solid with 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.

Sec. 7. 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 square foot $\frac{1}{2}$ ton
Natural sand formation, per square foot $2\frac{1}{2}$ tons.

## ARTICLE 13.

Section 1. Schedule for reinforced concrete walls of residence.

| Number Stories | 1st | 2nd | 3rd |
|---|---|---|---|
| 1 | 8'' | | |
| 2 | 8'' | 8'' | |
| 3 | 10'' | 8'' | 8'' |

Sec. 2. Schedule for brick and cement block walls as per classification in Article 13, Paragraph 1:

| Number Stories | 1st | 2nd | 3rd |
|---|---|---|---|
| 1 | 8'' | | |
| 2 | 8'' | 8'' | |
| 3 | 12'' | 8'' | 8'' |

Sec. 3. Provided, however, that no part of an eight inch wall shall be of greater than fourteen feet between horizontal supports and that the entire height of any eight inch wall shall not exceed twenty-four feet and further provided, that no part of a twelve inch wall shall be of greater height than twenty-two feet between horizontal supports, and that the entire height of any twelve inch wall shall not exceed thirty-four feet. Whenever the limits above stated are exceeded, said wall or wall portion shall be increased in thickness by not less than four inches, or it shall be reinforced by wall piers, not over sixteen feet between centers; the least sectional dimension of which shall not be less than four inches greater than the thickness of the wall and the other section of dimension shall not be less than twenty-two inches. Suitable steel reinforced columns may be used in place of the piers, subject to the approval of the Building Inspector.

Sec. 4. Parapet walls shall be full thickness of the top story walls, and shall project not less than 24 inches above the roof at all points. Where such parapet walls project to a greater height than 24 inches above the roof, they shall be suitably braced, in a manner to be approved by the Building Inspector, and all such walls shall be properly coped.

Sec. 5. Fire walls shall be built of fire resisting material, with the exception of concrete block. Fire walls shall not be less than 12 inches thick and increasing 4 inches in thickness for each two stories or fraction thereof below.

Sec. 6. 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 face 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. 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 at the same time as the backing and shall in no case be laid after the backing is in place.

Sec. 7. 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 approved galvanized metal wall ties, bedded with mortar joints. Such ties shall not be spaced farther apart on centers than 16 inches vertically and 2 ft. 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 walls of each story shall be built up the full thickness of the top of the beams above.

Sec. 8. No pipe chases shall extend into any wall more than one-third (1/3) of its required thickness. No horizontal chase shall exceed 4 feet in length in any wall. No chase shall be wider than 12 inches in any bearing wall.

Sec. 9. No recess in any wall shall be made within a distance of six feet from any other recess 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 formed by cutting of blocks or tile or by any other method which would impair the strength of the wall.

Sec. 10. All chases or recesses shall be formed in all cement block or hollow tile walls by using hard burned brick and carrying the regular bond to top of all chases or recesses.

Sec. 11. 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 eight inches on the wall. Tie-rods shall be used in all arches where necessary to resist the thrust.

Sec. 12. Stone or architectural terra cotta ashlar, or other approved material used for the facing of any building or structure, shall be not less than 4 inches 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, and the backing, independent of facing, shall conform to the wall thickness required by this Ordinance. Where every alternate course of facing is at least eight inches thick and bonded into the backing, at least 4 inches, the ashlar may be counted as part of the thickness of the wall. No wall faced with ashlar shall be less than 12 inches thick.

## A R T I C L E 1 4 .

## BUILDING BLOCKS

Section 1. Portland cement only shall be used in the manufacture of concrete blocks and the course 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.

Sec. 2. 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 square inch. The allowable working loads on all concrete blocks shall not exceed (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. Where concrete blocks are used in the construction of framing, timbers shall bear on one course of header brick. In lieu of the foregoing, the concrete block may be filled solidly with concrete or a continuous reinforcement made, constructed on all bearing walls.

Sec. 3. In buildings two stories or more in height, all concrete block construction shall have concrete corner columns and a continuous concrete wall tie beam, not less than eight by twelve inches or its equivalent in size, supporting all floor and ceiling joists above the first floor.

A concrete column not less than eight by twelve inches in size shall be cast as an integral part of the upper continuous concrete wall tie beam and extended to the top of the parapet wall, where it shall be tied into a continuous concrete parapet coping which shall contain an area of not less than sixty-four square inches. These columns shall be spaced not more than sixteen feet, center to center.

All concrete columns, beams and coping herein referred to shall be reinforced with not less than two half-inch square rods, or its equivalent well anchored at all corners.

## A R T I C L E 1 5 .

## GENERAL REQUIREMENT FOR FIREPROOF BUILDINGS

Section 1. The space between the floor arches or slabs and the floor finish shall be solidly filled with concrete as specified

in Article 16. The filling beneath wooden flooring shall be made flush with the under side of the floor boards.

Sec. 2. All shafts and public hallways shall be enclosed and separated from the rest of the floor space by fire-resistive enclosures and shall have floor surfaces and rim of approved incombustible material. The stairs and stairway landings shall be of approved incombustible material.

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

Sec. 4. 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 fireproof doors and windows may be required by the Building Inspector.

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.

Flat arches shall have a depth of not less than 1 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.

The shells of arch blocks shall be not less than 3/4 inch in thickness, and the webs shall be not less than 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 3/4 inch thick.

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.

Sec. 6. 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 Article 8.

Sec. 7. Hollow terra cotta or concrete tile, or solid gypsum blocks may be used for fireproofing between the steel framework of roof construction; but such tile 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.

## A R T I C L E 1 7.

### FIREPROOFING STRUCTURAL MEMBERS

Section 1. 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 1/4 inch thick and against moisture and fire by a casing of masonry, which shall be not less than 4 inches of brick or 3 inches of concrete on all surfaces; all to be well bonded into the masonry of the enclosing walls.

Sec. 2. 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 edge of the flanges of 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.

Sec. 3. 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 protecting 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 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.

Sec. 4. All bricks or blocks used for fireproofing shall be set in Portland cement mortar, except that gypsum blocks may be set in gypsum mortar.

Sec. 5. (a) The protection shall cover the columns at all points to a thickness of not less than 3 inches 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 brick or blocks are used for fireproofing columns, they shall be accurately fitted, laid with broken joints and all spaces between the outside layer and the metal solidly filled with masonry; or concrete fillings may be used. No voids between the metal and the protecting cases shall be permitted.

(c) Galvanized steel wire not smaller than No. 12 guage, 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 1 1/2 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.

Sec. 6. (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 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 either by lugs which form part of the skewbacks and extend around the flanges meeting at 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.

Sec. 7. Concrete protection for all structural members shall be held in position by suitably designed interior steel anchors hooked securely around the flanges or angles of the members, at intervals not exceeding 8 inches; these anchors shall be not less than 1/8 inch in thickness if flat or 1/10 inch in diameter if of wire, and shall be located at a distance not less than 3/4 inch, nor 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 1/8 inch diameter.

Sec. 8. 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.

Sec. 9. 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.

## A R T I C L E 1 8 .

## MISCELLANEOUS FIREPROOFING PROVISIONS

Section 1. 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.

Sec. 2. No pipes, wires, cables, or other materials shall be incased within or embedded in the required fireproof protection of columns or other structural members.

Sec. 3. 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 of span.

Sec. 4. 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.

Sec. 5. 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 furring or studs at intervals not exceeding 6 inches.

Sec. 6. 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.

## A R T I C L E 1 9 .

Section 1. 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, or gypsum blocks or tile; or not less than 3 inches thick of reinforced concrete or solid metal lath and cement plaster; or of such other 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.

Sec. 2. All partitions not enumerated above shall be of incombustible materials, except for woodwork permitted in this ordinance.

Sec. 3. 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.

Sec. 4. 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.

Sec. 5. Reinforced concrete for partitions shall be as required in this article. Terra cotta tile shall be porous or semi-porous in quality and if hollow, shall have two cells in the thickness, with the thickness of shells inclusive of plaster key, not less than 3/4 inch and thickness of web not less than 5/8 inch. Gypsum shall be used only in dry locations. Metal lath and studding shall conform to the requirements of Article 18.

## A R T I C L E 2 0 .

## REINFORCED CONCRETE CONSTRUCTION

Section 1. 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.

Sec. 2. 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 the 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.

Sec. 3. The plans and specifications required to be filed with the Building Inspector shall be accompanied by stress computation 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 live loads each floor is designed to carry.

Sec. 4. All such plans and specifications shall be signed by the architect, engineer, contractor or person applying for the permit. In no case shall the construction deviate from the approved plans and specifications except by written consent of the Building Inspector.

Sec. 5. The concrete shall consist of a mixture of a plastic or viscuous consistency of one part of cement to not more than six parts of aggregate fine and coarse, either in the proportion of one oart of cement, two parts of sand and four parts of stone or gravel, or in such proportion as to produce a maximum density. Such concrete shall develop a crushing strength of at least 2000 pounds per square 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.

Sec. 6. 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 square inch at 28 days and the

working stress of such concrete may be increased 20 per cent over that permitted elsewhere in this Article.

Sec. 7. 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 to place or from the forms after it is deposited.

Sec. 8. 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.

Sec. 9. All cement used in reinforced concrete shall be Portland cement meeting the requirements of American Society for Testing Materials.

Sec. 10. Fine aggregate shall consist of sand or crushed stone screenings, passing, when dry, a screen having 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 quick sand, vegetable loam, perishable organic matter or other deleterious materials.

Sec. 11. 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 briquettes, 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.

Sec. 12. Coarse aggregate shall consist of crushed stone which is retained on a screen having 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 1/4 inch diameter ring. The particles shall be clean, hard, durable and free from all deleterious material.

Sec. 13. Stone shall be equal in strength to the hardest Ojus or canal bank stone.

Sec. 14. 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 reinforcement 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 reinforcement be permitted, it shall meet the requirements of the current Standard Specifications 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, column hooping, and reinforcement 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.

Sec. 15. All steel dowels and splices shall have a length of not less than forty diameters.

## A R T I C L E 2 1 .

## ALLOWABLE UNIT WORKING STRESSES

Section 1. 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 Article 20, 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 external 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 |

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

Compressive stress in steel shall be as specified in Article 8, 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.

Stresses in concrete mixed in the proportions of 1:1 1/2:3, in accordance with this section, may be increased 20 per cent in excess of the above stresses.

### GENERAL ASSUMPTIONS

Sec. 2. As a basis for calculating the strength of beams and slabs, the following assumptions shall be made:

(a) A plane section before bending 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 1:1/2:3 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 of slab. Brackets shall not be considered as reducing the clear span in the sense here intended.

BENDING MOMENTS OF UNIFORMLY LOADED FLOOR AND ROOF SLABS

BENDING MOMENTS OF SLABS SUPPORTED ON TWO SIDES

Sec. 3. 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 supports when continuous over more than two supports.

W - Total distributed dead and live loads.

L - Length of span.

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.

BEAMS SUPPORTING RECTANGULAR SLABS

Sec. 8. Beams supporting rectangular slabs reinforced in both directions, shall be assumed to take the proportions of load as determined by the formula in this Article.

Sec. 9. The bending moment 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 DESIGN REQUIREMENTS FOR BEAM AND SLAB CONSTRUCTION - SPECIAL MEMBERS

Sec. 10. The bending moment 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.

CONTINUOUS FLOOR CONSTRUCTION

Sec. 11. In continuous slabs, beams or girders, full provision shall be made for the negative bending moment 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 or 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.

Sec. 12. 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 the concrete, in accordance with this Article.

Sec. 13. 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 ends 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 entire tensile stresses by adhesion.

T BEAMS

Sec. 14. 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 line of intersection between slab and beam.

Sec. 15. 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 is parallel to the beam, by the use of transverse reinforcement extending over the beam and well into the slab.

Sec. 16. In the design of T-beams acting as continuous beams, sufficient compression area shall be provided on the under side at the support, either by the use of properly designed brackets or by embedding additional compression steel in the concrete extending to the point of inflection.

MINIMUM THICKNESS OF SLABS

Sec. 17. The minimum thickness of concrete floor slabs shall be 4 inches and for roof slabs 3 1/2 inches.

FLOOR FINISH

Sec. 18. Cement or concrete floor finish shall not be considered in calculating the strength of floor members.

COMPOSITE FLOORS

Sec. 19. The design of composite floors, consisting of rows of hard-burned terra cotta tile, concrete blocks, sheet steel or other approved fire resistive material, separate by ribs or beams of reinforced stone concrete, 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 1/2 inches thick, and shall consist of the same mixture 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 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.

DESIGN OF COLUMNS AND WALLS - LENGTH OF COLUMNS

Sec. 20. The length of columns shall be taken as the maximum unsupported length.

The unsupported length 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.

COLUMNS WITHOUT HOOPS

Sec. 21. Axial compression in reinforced concrete columns without hoops, bands, or spirals containing not less than 1/2 per cent, nor more than 3 per cent of vertical reinforcement, secured against lateral displacement by steel ties placed not farther apart than fifteen diameters of the vertical rods, nor more than 12 inches, shall not exceed 500 pounds per square inch on the effective area of the concrete, plus 6000 pounds per square inch 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 be not less than 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 1/4 square inch.

COLUMNS WITH HOOPS

Sec. 22. 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 pounds 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 convolution.

Columns required to be settled before being built upon.

STRUCTURAL STEEL AND CONCRETE COLUMNS

Sec. 23. 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 or 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 inch from the structural steel or nearer than 1 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.

COLUMNS CONSTRUCTED WITH SPECIAL CONCRETE

Sec. 24. 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 coarse, 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.

COLUMNS ECCENTRICALLY LOADED

Sec. 25. 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.

STEEL BASE PLATES

Sec. 26. 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.

WALLS

Sec. 27. 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 partitions 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 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.

Sec. 28. All arches shall be of reinforced concrete or brick. Where brick is used, the arch shall be composed of not less than two courses or eight inches.

## ARTICLE 22.

### REQUIREMENTS FOR REINFORCEMENT EXTERNAL AND INTERNAL DEFECTS

Section 1. All reinforcement 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.

### PLACING AND SPACING OF REINFORCEMENT

Sec. 2. All reinforcement shall be accurately located and mechanically secured against displacement during the placing of the 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 parallel bars in beams shall be not less than three diameters from center to center, nor less than one inch. The clear spacing between two layers of bars shall be not less than one inch. In restrained 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 1/4 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.

### PROTECTION FOR REINFORCEMENT

Sec. 3. Steel reinforcement shall have a minimum protection of concrete on all sides as follows:

In columns and girders, 2 inches; in beams and walls, 1 1/2 inches; and in floor slabs, 1 inch.

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

### SPLICES IN REINFORCEMENT

Sec. 4. 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 at points of maximum stress shall be avoided where possible. Lap splices of bars shall be of 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 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 threaded splice or other mechanical connection that 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.

## WORKMANSHIP FOR CONCRETE

### MIXING

Sec. 5. 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 separation of the coarse aggregate from the mortar.

Sec. 6. 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.

### DEPOSITING

Sec. 7. Concrete shall be deposited, thoroughly tamped and worked to place, before initial set begins, and shall then be kept free from shocks and disturbances of every kind until it has fully hardened. Re-tempering of concrete after its initial set shall be prohibited.

Sec. 8. When the work of placing concrete is suspended, all necessary grooves for joining future work shall be made before the concrete sets.

Sec. 9. Before depositing new concrete upon concrete already set, the contact surfaces shall be roughened, cleaned of 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 if granolithic is to be deposited on old concrete, it is necessary that a neat cement grout be used.

### DRYING

Sec. 10. When fresh concrete is exposed to rapid drying condition, 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.

### JOINTS

Sec. 11. 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 shrinkages during setting necessitate joints in independent walls at intervals of 50 to 80 feet when not otherwise provided for by effective reinforcement.

Sec. 12. Girders, beams and slabs shall not be cast upon freshly formed columns until a period of 4 to 6 hours have elapsed to permit settlement.

## CONSTRUCTION OF FORMS

Sec. 13. Forms shall be substantial and unyielding and care shall be exercised to make them as nearly water-tight as practicable.

Sec. 14. 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 the bottom portion of the forms and its supports; and column forms, so that they may be removed without disturbing beam and slab forms. Cleanout holes shall be provided in the bottom of column forms where necessary to insure the removal of wood chips or other debris.

In all cast iron columns not cast with open side, at least 3 holes 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.

Sec. 2. Whenever the core of a cast iron column has shifted more than one-fourth (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 columns 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%).

Sec. 3. 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 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 of 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".

Sec. 4. The connection 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 be not less than 1 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.

Sec. 5. 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 inspection by the Building Inspector. All wrought and cast structural steel and iron shall conform to the test requirements of the current Standard Specifications of the American Society for Testing Materials.

Sec. 6. Cast iron bases or shoes shall be planed 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 3/4" in thickness and shall not be used for spans exceeding six feet (6').

## STEEL CONSTRUCTION

Sec. 7. No rolled steel column shall contain material, whether in body of column or used at lattice bar or stay-plate, of less thickness than 1/4". In steel columns built up of a web plate and angles and having an unsupported length greater than 60 times the least radius gyration, the thickness of metal in the angles shall be not less than 1/12 the width of the outstanding legs of the angles.

Sec. 8. The unsupported length of a rolled steel column shall not exceed 120 times its least radius of 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 the sections of the columns to be 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 ends of built up columns shall not exceed 4 diameters of the rivets for a length equal to twice the greatest lateral dimension of the column.

## STEEL GIRDERS AND BEAMS

Sec. 9. The thickness of the web in built up girders shall be not less than 1/120 of the distance between the flange angles or stiffeners, nor less than 1/4 inch. When the unsupported length (L)of the compression flange 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 concentrated loads. They shall be of sufficient strength as a column to carry the loads and shall be connected with a sufficient number of rivets to transmit the 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 rolled 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 anchored thereto and shall rest upon a steel or iron plate so designed as to properly distribute the load over the masonry.

## FRAMING AND CONNECTING STRUCTURAL STEEL WORK

Sec. 10. Steel girders, columns, beams, trusses and other steel work of 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 angle to transmit the entire load coming on the 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.

## STEEL TRUSSES

Sec. 11. 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 spaced 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 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 by 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.

## RIVETING AND BOLTING

Sec. 12. All component parts of built up columns, girders and trusses shall be riveted. All column connections in buildings 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 for the same 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, which shall be wrought iron or mild steel with the United States Standard threads. The threads shall be full and clean; the nut shall be truly concentric with the bolt and the thread shall be of sufficient length to allow the nut to be screwed up tightly. When bolts 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 rivet shall be less than 3/8" diameter and no bolt less than one-half (1/2") inch diameter.

Sec. 13. All metal structural 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 volatile matter shall be sufficient for easy spreading and shall not injure the film of the paint. The paint must dry sufficiently hard within 24 hours so it will not rub off 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 that 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 or 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 which 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.

## ARTICLE 24.

### ORDINARY CONSTRUCTION

Section 1. Footings and foundations shall conform to Article 12.

### CONTINUOUS SPREAD FOOTINGS

Sec. 2.

| | | | | |
|---|---|---|---|---|
| Exterior | 3 story | 36" x 14" | concrete | 4 - $\frac{1}{2}$" square bars. |
| | 2 story | 30" x 12" | concrete | 4 - $\frac{1}{2}$" square bars. |
| | 1 story | 24" x 12" | concrete | 4 - $\frac{1}{2}$" square bars. |

Exterior footings shall be continuous around the entire building.

| | | | | |
|---|---|---|---|---|
| Interior | 3 story | 30" x 12" | concrete | 4 - $\frac{1}{2}$" square bars. |
| | 2 story | 24" x 12" | concrete | 4 - $\frac{1}{2}$" square bars. |
| | 1 story | 18" x 12" | concrete | 4 - $\frac{1}{2}$" square bars. |

### FOUNDATION WALLS

Exterior 1 to 3 stories 12" wide concrete where joists bear.
8" wide concrete where joists do not bear.

Walls to extend to the underside of joists where frame floor construction is used and to top of slab where concrete floor construction is used. Bottom of wood joists to be at least 12" above grade.

Interior 1 to 3 stories 8" wide concrete.
8" wide blocks where holes in blocks are grouted and a 6" deep concrete cap is poured on top of blocks.

Where footings and footing walls are not poured in the same operation, $\frac{1}{2}$" round dowels shall be placed in the footings in line with the wall, spaced at intervals not to exceed 5'.

A creosoted timber plate shall be placed on top of the foundation walls where joists bear.

### COLUMNS

Sec. 3. Where columns are required they shall be of the size as follows, placed at not over 16' intervals and shall extend from the footing wall to the top tie-beam, where pitch roofs are used and to the parapet coping where flat roofs are used.

| | | | |
|---|---|---|---|
| Residences | 1 story | None required. | |
| | 2 story | 8" x 12" concrete | 4 - $\frac{1}{2}$" square bars. |

## TIE BEAMS

Tie-beams shall be of the following sizes and shall be continuous around the entire building at all floors and the roof.

Residences 8" x 12" concrete 4 - ½" square bars.

Where there is a change in the elevation of a tie-beam there shall be a vertical concrete connection, not less than 12" wide, reinforced with 4 - ½" square bars.

Where the gable end of a building has an area in excess of 100 square feet above the top tie-beam, a slope tie-beam having an area not less than 64 square inches, shall be poured. It shall be reinforced with not less than 2 - ½" round bars, the ends of which shall be imbedded in the horizontal tie-beam.

## PARAPET COPING

All parapet walls shall be capped with a concrete coping, having a cross-sectional area of not less than 64 square inches. It shall be reinforced with not less than 2 - ½" round bars. This coping shall be connected to the upper tie-beam, at intervals of not over 16', with 8" x 12" vertical concrete ties, reinforced with 4 - ½" square bars. The minimum height of a parapet wall shall be 18" above the low point of the roof.

## TRANSIT MIXED CONCRETE

The least cement content of transit mixed concrete shall be five sacks of cement to the yard of concrete.

Sec. 4. When changing from concrete to wood construction, the wooden plate or sill shall be not less than 2" x 6", and shall be fastened to the concrete by not less than ½" x 12" bolt, firmly embedded in the concrete foundation, beam, girder, or lintel, at least every five feet, and securely bolted through wood plate or sill.

Sec. 5. All columns, posts or piers shall have a footing not less than twelve inches wider on all sides than the column, post or pier which it supports. It shall be not less than twelve inches thick, reinforced with not less than four half inch rods at right angles.

Sec. 6. The ends of all wooden floor, ceiling or roof joists, which rest on masonry or concrete walls shall be given a coat of

black asphaltum. Wrought iron anchors shall be firmly embedded in the continuous concrete beam at least every fourth joist or rafter and securely fastened to such joist or rafter. No wood beams or joists shall be placed within two inches of the outside face of a chimney or flue. No wooden furring or studding shall be placed against any chimney.

Sec. 7. No wooden floor joist used in any building shall be less than 2" x 8", nor spaced more than sixteen inches on centers. Joists 2" x 8" shall not exceed twelve foot span; 2" x 10" not to exceed sixteen foot span; 2" x 12" not to exceed twenty-four foot span. All floor and ceiling joist shall be cross bridged, herring bone style, with at least 1" x 6" material at intervals of not less than ten feet.

Sec. 8. Not less than 2" x 6" shall be used as ceiling joist or roof rafter. Hip roofs shall have collar beams securely braced. At least every fourth roof rafter shall be diagonally braced to ceiling joist.

Sec. 9. 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 any chimney.

Sec. 10. No wooden floor beams used in any building shall be less than 2" x 8", nor spaced more than 16 inches on centers. Beams 2" x 8" shall not exceed 14 foot span; 2" x 10" not to exceed 18 foot span; 2" x 12" not to exceed 24 foot span.

## A R T I C L E 2 5 .

### WIND PRESSURE

Section 1. For purposes of design the wind pressure upon all vertical plane surfaces of all buildings and structures shall be taken at not less than thirty (30) pounds per square foot for those portions less than forty (40) feet above ground and not less than thirty-five (35) pounds per square foot for those portions more than forty (40) feet above ground.

Where it shall appear that a building or structure will be exposed to the full force of the wind throughout its entire height and width, the pressure upon all vertical surfaces thus exposed shall be taken at not less than thirty-five (35) pounds per square foot.

The overturning moment resulting from the above calculations shall in no case exceed sixty-six and two-thirds (66 2/3%) per cent of the resisting moment.

## A R T I C L E 2 6 .

### TENTS

Section 1. No tent or screened structure of any kind shall be erected or maintained within the Town limits of the Town of Golden Beach without the approval of the Town Council.

### PROJECTIONS

Sec. 2. SOLAR WATER HEATERS: No solar water heater shall be installed in any building without first securing the approval of the Building Inspector.

## FENCES

Sec. 3. Private or party fences over eight feet (8') in height are prohibited.

## A R T I C L E 2 7 .

## STAIRS AND STAIRWAYS

Section 1. All stairways and steps shall have a uniform rise of not more than 7 3/4 inches and a uniform tread of not less than 9 1/2 inches, measuring from tread to tread, and riser to riser. 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.

All stair wells shall have walls or well secured balustrades or guards on both sides.

## A R T I C L E 2 8 .

## CHIMNEYS, FLUES AND HEATING APPARATUS

Section 1. All chimneys hereafter erected shall be of brick, reinforced concrete or other approved 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 weatherproof material.

Sec. 2. The brickwork, or reinforced concrete, of the smoke flues of all boilers, furnaces and all flues used for similar purpose, shall be at least 8 inches in thickness. Brick set on edge shall not be permitted in fireplace or chimney construction.

Sec. 3. 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.

Sec. 4. 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.

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

Sec. 6. The smoke flue of every high pressure steam boiler and every appliance producing a corresponding temperature in the smoke flue shall, if built of brick, stone, reinforced concrete or any 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.

Sec. 7. All flue-holes, when not in use, shall be closed with tight fitting metal covers.

Sec. 8. 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.

Sec. 9. Boiler or heater rooms in all residences and other similar buildings shall be of fireproof construction with ceilings of reinforced concrete not less than six inches in thickness, for fire protection.

## ARTICLE 29.

### GARAGES

Section 1. Private garages housing not more than four automobiles, if not within 15 feet of any other building, may be built of ordinary construction.

If more than one story in height and having living quarters on the second floor, such garages shall be of concrete block or other similar fire resisting material. The ceiling separating the living quarters from the garage shall be covered with sheet rock or other similar fire resisting material. No openings shall be permitted between garage and living quarters.

Private garages, built as a part of a residence, shall be constructed of concrete block or other similar fire resisting material.

## ARTICLE 30.

### VENTILATION

Section 1. 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.

Sec. 2. In every building, every sleeping room shall be not less than 8 ft. 6 inches (8' 6") high, from finished floor to finished ceiling and the floor area shall not be less than 80 square feet.

Sec. 3. Every bathroom and toilet room shall be provided with a window of not less than 4 square feet opening directly to the open air or a ventilating shaft, of not less than four square feet area, open to the sky.

## ARTICLE 31.

### Section 1. ROOF COVERINGS

All buildings shall have roof coverings of approved standard quality, such as brick, concrete, tile, slate, highest grade of tin roofing, asbestos shingles, or built up roofing, felt with gravel or slag surface, or built up asbestos roofing, or of like grade, which would rank as Class A or B under test specifications of the National Board of Fire Underwriters.

Sec. 2. All flashings shall be of metal properly incorporated with the roofing material, or of same material as roof, properly flashed into outer roofing and into walls.

Sec. 3. No wooden shingle roof permitted.

## A R T I C L E  3 2 .

### SKY-LIGHTS

Section 1. All sky-lights shall have metal frames and sash, and the frames and parts thereof, shall be riveted or otherwise securely fastened in addition to soldering.

Sec. 2. 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.

## A R T I C L E  3 3 .

### GENERAL POWERS AND DUTIES OF THE BUILDING INSPECTOR

Section 1. The Building Inspector shall be appointed by the Mayor and approved by the Town Council. He shall have the power, and it shall be his duty, to enforce the provisions of this 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 Town Attorney, subject to the approval of the Mayor, to institute any and all actions that may seem proper or necessary for the enforcement of its provisions.

Sec. 2. The Building Inspector shall not have power to vary or modify any provisions of this Ordinance, or of any existing law or ordinance relating to the construction, alteration or removal of any building or structures erected or to be erected within his jurisdiction.

Sec. 3. 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, 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 Town Council, setting forth the grounds for the desired variation or modification, and requesting permission that he or his representatives may appear before the Town Council, or a committee appointed by the President of the Council, and be heard. The Town Council shall fix a date within a reasonable time, for a hearing upon such application, and shall, as soon as practicable, render a decision thereon, which decision shall be final.

Sec. 4. 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 desirable form of construction can be employed in any specific case, the owner of such building or structure, or his duly authorized agent, may appeal to the Town Council from the decision of the Building Inspector where the amount involved by such decision shall exceed the sum of one hundred dollars ($100.00).

Sec. 5. 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 Town Attorney, subject to approval of the Building Committeeman, 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.

## A R T I C L E  3 4 .

### PROCEEDINGS IN CONNECTION WITH UNSAFE OR COLLAPSED BUILDINGS

### UNSAFE BUILDINGS

Section 1. Notice to Make Safe. When it is reported to the Building Inspector that any building or structure or part thereof is unsafe or dangerous, he shall immediately cause an examination of the property to be made. If this examination shows the building or structure or any portion thereof to be unsafe or dangerous, as to the construction, the occupancy or exits, the Building Inspector shall at once serve notice upon the owner, or, if absent from Dade County, Florida, then upon the agent or occupant. Such notice shall contain a description of the building or structure considered unsafe or dangerous, and shall require the same to be made safe and secure, or removed, as may be considered necessary by the Building Inspector; and it shall 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. If he immediately certifies in writing his consent to comply therewith, he shall be allowed 24 hours following the service of such notice in which to begin to secure, make safe or remove the building or structure. He shall employ sufficient labor and materials, and immediately begin to secure, make safe or remove the same. The work shall be done as speedily as possible and shall be continuously prosecuted to the satisfaction of the Building Inspector.

Sec. 2. Notice of Survey. Should the person so served with notice neglect or refuse to comply with any of the requirements of said notice to the satisfaction of the Building Inspector, a further notice shall thereupon be served upon him in the manner heretobefore prescribed. Said notice shall state that a survey of the premises specified therein will be made by a Committee of Surveyors, to be appointed as prescribed in Section 7 hereof, at a stated time and place. If the owner proceeds to secure, make safe or remove the unsafe or dangerous building or structure, or part thereof, and prosecutes the work in a manner satisfactory to the Building Inspector, the survey may be adjourned or cancelled, at his discretion.

Sec. 3. Survey. Should the Building Inspector consider it necessary, a survey shall be held. The Committee of Surveyors shall attend at the time and place specified, or as soon thereafter as practicable, examine the building or structure and report in writing its opinion thereof to the Building Inspector. Should two members of the committee report the building or structure unsafe or dangerous, a copy of their report, with a copy of the notice of survey, shall forthwith be posted in a conspicuous place upon the building or structure. A copy of their report shall also be presented by the Building Inspector to the Town Attorney, who shall forthwith apply to the Court for an order, if he deems it legal, directed to the Building Inspector, commanding him to remove the building or structure or part thereof, or make the same safe and secure.

### LEGAL PROCEEDINGS

Sec. 4. Duty of Town Attorney to Proceed. Upon written request by the Building Inspector, subject to approval of the Mayor,

the Town Attorney shall sue for and collect all penalties and take charge of and conduct all legal proceedings imposed or provided for by this Ordinance; and all suits or proceedings instituted for the enforcement of any of the several provisions of this Ordinance or for the recovery of any penalty hereunder shall be brought in the name of the Town of Golden Beach by the Town Attorney, to whom all notices of violation shall be returned for prosecution, and it shall be his duty to take charge of the prosecution of all such suits or proceedings, collect and receive all money that may be collected upon judgments, suits or proceedings so instituted, or which may be paid by any parties who have violated any of the provisions of this Ordinance and upon settlement of judgment and removal of violations thereunder, execute satisfaction therefor.

Sec. 5. Temporary Injunctions. In any action or proceeding for the enforcement of the provisions of this Ordinance, the Town of Golden Beach may apply to the Court for an order enjoining and restraining any violation, ordering the property vacated or prohibiting its use for any purpose whatsoever, until the hearing and determination of such action and the entry of final judgment therein.

Sec. 6. If an owner be absent as hereinbefore mentioned, and a notice of violation hereof, notice to make safe or of survey should be served, service thereof upon the agent of the owner collecting rents or having the management of the premises, or in the absence of such, upon the occupant shall be as effectual as if served upon the owner.

COMMITTEE OF SURVEYORS

Sec. 7. Said committee of surveyors shall consist of three persons, one of whom shall be the Building Inspector, an Engineer, or Building Committeeman; another of whom shall be an architect, civil engineer or builder of at least three years' practice in Dade or Broward County, appointed by the Mayor of said Town; another of whom shall be a practicing architect, engineer or builder, of at least ten years' practice, appointed by the owner of said building or structure. In case the owner fails to appoint, or, having appointed, the said representative fails to attend according to notice, the two surveyors first named shall make the survey, and if they do not agree, they shall appoint another member, who shall be a practicing architect, engineer or builder of at least ten years' practice.

ARTICLE 35.

Section 1. No building permit shall be issued to any person, firm or corporation unless the applicant therefor shall at the time of issuance of such permit make a deposit with the proper official of said Town authorized to issue such permit, of the sum of Fifty Dollars, provided, however, that the aggregate of such deposits, made by one contractor, shall not at any time exceed $150.00 for all permits obtained by him, and at the same time entering into an agreement with said Town that he will immediately upon completion of the construction or repair, for which such permit is to be issued, clear the street and all property used by such applicant in such construction or repair, of all building material, equipment, rubbish and other things placed or used by him in such construction or repair, and agreeing that, if he does not so clear such premises, the said Town may appropriate such part or all of said Fifty Dollars as may be necessary in the clearing of such premises as aforesaid and that, after such premises are so cleared, if done by said Town, then that part of it not used in paying the expense of such clearance shall be returned to said applicant.

Sec. 2. For the purpose of this ordinance such construction or repair shall be deemed to have been completed when such building shall be occupied in part or in whole, after such construction or repair, or when such completion shall have been accomplished, or have been accomplished except for the doing of some minor thing which may necessitate a delay.

Sec. 3. Said agreement shall be in substantially the following form:

"KNOW ALL MEN BY THESE PRESENTS: That I_____ in consideration of the issuance to me by the Town of Golden Beach, Florida, of a permit to construct or repair a building at or upon the following described property in said Town:_____, do hereby deposit with the Town of Golden Beach, Florida, the sum of Fifty Dollars, and I agree with said Town that, when such construction shall have been completed by me within the meaning of the Ordinances of said Town, I will clear all premises used by me for the deposit of material or equipment in the construction or repair and that, if I do not so clear such premises immediately upon the completion of such construction within the meaning of such Ordinances, the said Town may clear the same and pay the cost of such clearance out of the aforesaid Fifty Dollars, and return the remainder to me; and that if I shall clear said property immediately as aforesaid, then said Fifty Dollars shall be returned to me.

WITNESS MY HAND and seal at Golden Beach, Florida, this_____ day of _____19___. _____(SEAL)"

Sec. 4. The Town Clerk receiving any funds pursuant to the terms of this Ordinance, shall deposit the same in the Town Treasury and disburse the same upon the authority of the Town Building Inspector.

## ARTICLE 36.

### PLUMBING PERMITS

No person, as principal, agent, manager, or employee, shall place or install or cause or permit to be placed or installed, any plumbing including pipes, connections, fixtures, apparatus and all other plumbing work of any kind whatsoever; or make, or cause or permit to be made, any alterations, change in, addition to or repair of any such plumbing in the Town of Golden Beach, without first obtaining a written permit for such plumbing work from the Plumbing Inspector of the Town of Golden Beach. Such permit shall be denominated a "Plumbing Permit" and shall contain a description of the work to be done thereunder and a statement of the place, by street and number or by description sufficient to locate the same, where such work is to be done. Plumbing permits shall be granted upon written application therefor to the Plumbing Inspector. The Plumbing Inspector shall investigate such application, and applicants for plumbing permits shall furnish proof that applications for the introduction of a supply of water into any premises or for the extension of pipe for the conveyance of such water, has been made in writing on the contract form furnished by the Water Department of the Town of Golden Beach; and shall furnish drawings, specifications, plans and details of such contemplated work, when required by the Plumbing Inspector. If the Plumbing Inspector, after investigation, is satisfied that the work desired can be done without violating any of the provisions of this ordinance or of any other ordinance or law governing such work in the Town of Golden Beach, and that the applicant therefor is duly licensed to do plumbing in the Town of Golden Beach, he shall

issue a plumbing permit to such applicant, upon payment of the fees therefor. The issuance of a plumbing permit shall not be construed as an approval by the Plumbing Inspector of the drawings, specifications, plans or details of such contemplated work insofar as the same, or any portion thereof, may be in conflict with the provisions of this ordinance or any other ordinance or law governing such work in the Town of Golden Beach.

The holder of a plumbing permit shall not do or perform, or cause or permit to be done or performed, any work other than that designated in such plumbing permit, at the place mentioned therein; and shall not do or perform, or cause or permit to be done or performed any work designated in such plumbing permit at any place other than that designated therein.

In case any plumbing is desired in the construction, alteration, or repair of any building or structure requiring building permit, no plumbing permit shall be issued until after a building permit for such building or structure shall have been previously issued. No plumbing permit shall be issued for repairing leaks in drain, soil, waste or vent pipe but should any trap, drain, soil, pipe, waste or vent pipe become so defective as to require removal or replacement with new material, in whole or in part, or should any toilet, wash basin, laundry tray, sink, slop sink, slop hopper or any other fixture be taken up or reset, or be replaced with a new fixture, a plumbing permit must first be procured therefor. No person, as principal, agent, manager or employee, shall put in or cause or permit to be put in, any septic tank in the Town of Golden Beach without having first obtained from the Plumbing Inspector a plumbing permit therefor. Such plumbing permit for a septic tank shall not be issued until the applicant has paid a permit fee of $2.00.

## A R T I C L E  3 7.

### FEES FOR PLUMBING PERMITS

There shall be charged and collected by the Town Clerk, on certification by the Plumbing Inspector, an inspection fee of seventy-five cents (75¢) for each fixture in new and reconstructed plumbing work, before the issuance of a permit, which said fee shall be placed to the credit of the General Fund of the Town of Golden Beach. The minimum fee for any permit shall be $5.00.

## A R T I C L E  3 8.

### PENAL COSTS

Any person, as principal, agent, manager, or employees, commencing or doing any plumbing work, for which plumbing permit is required, without first obtaining a plumbing permit therefor, shall pay double the fee therein provided for a plumbing permit authorizing such work; provided that a double shall not be charged in cases of emergency work necessary to be done in order to prevent material injury or damage to property and provided that the issuance of a permit upon payment of such double fee shall not be a defense to a prosecution for a violation of any of the provisions of this ordinance.

## A R T I C L E  3 9.  NOTICE TO PLUMBING INSPECTOR

All plumbing work done shall be subject to inspection and notice be given to the plumbing inspector by the person, firm or corporation doing such plumbing work or having same done, as soon as the work is ready for inspection. Such notices shall be given for inspection of both the rough and finished work. The person, firm or corporation doing such plumbing work shall secure a certificate from the Plumbing Inspector, showing the result of such inspection and shall deliver the said certificate to the owner of

the premises, on which the same is done, or to the authorized representative of such owner.

## A R T I C L E 4 0 .

### WORK UNCOVERED

All plumbing work shall be left uncovered and convenient for examination until inspected and approved by the Plumbing Inspector. Floors shall be left up in bath-rooms and elsewhere above the plumbing, where there is less than twenty inches of space between the floor and joist and the ground, until the plumbing pipes and other plumbing work shall have been examined, tested and approved by the Plumbing Inspector.

## A R T I C L E 4 1 .

### TIME FOR INSPECTION

Inspection of plumbing shall be made within forty-eight (48) hours after a notice that the same is ready for inspection shall have been received by the Plumbing Inspector.

## A R T I C L E 4 2 .

### TESTS

The Plumbing Inspector may apply the water test on all new plumbing work.

## A R T I C L E 4 3 .

Where water is introduced into any building a stop-cock must be placed so that water may be shut off from the whole building and year hydrants, without closing the curb-cock.

No person shall occupy or make use of any house, building or other structure in which plumbing has been installed or constructed, until after the Plumbing Inspector shall have issued a final certificate and approval of the plumbing work therein, or in connection therewith.

## A R T I C L E 4 4 .

### MASTER PLUMBER

For the purpose of this ordinance, a master plumber shall be deemed to be the person engaged in or carrying on the business of plumbing or doing the plumbing work when licensed to do work in Dade and Broward Counties.

## A R T I C L E 4 5 .

### JOURNEYMAN PLUMBER

For the purpose of this ordinance, a journeyman plumber shall be deemed to be any person who is employed to do plumbing work for wages or salary, but who does not furnish any materials or supplies in the execution or performance of the plumbing work.

## A R T I C L E 4 6 .

### APPRENTICE

For the purpose of this ordinance, an apprentice shall be deemed to be any person doing plumbing work under the direct supervision and in the presence of a certified master plumber or a certified journeyman plumber.

## ARTICLE 47.

### SEWER CONNECTIONS

Every building or other structure, in or for which any drainage or plumbing arrangements are constructed, shall first be inspected and approved by the Plumbing Inspector before any such building or structure shall be connected with an accepted city sewer or septic tank; when said sewer is constructed along the street, avenue or alley adjacent to the property upon which such building or structure is situated or in close proximity thereto, then such building or structure shall have at least one four inch vent as provided for in this ordinance and all other fixtures in such building or structure shall be vented.

## ARTICLE 48.

### SEPTIC TANKS

When any building or other structure, in or for which any drainage or plumbing arrangements are constructed, is not situated so as to require connection to a city sewer, then such drainage or plumbing arrangements shall be connected with a septic tank. Such septic tank shall not be located less than five feet from any property line or less than ten feet from any dwelling, except when it is impossible to maintain these distances, then the Plumbing Inspector may issue a permit for a septic tank at a less distance from property lines and dwellings, provided the same shall not be detrimental to health or unsanitary. Gravel shall be required to be placed around all field tile drain from the septic tank.

A separate grease trap shall be required for each kitchen sink.

## ARTICLE 49.

### SOIL AND WASTE PIPES

All soil, waste and vent to a point (2) two feet outside of the foundation line shall be of tar coated cast iron, lead or brass, provided that galvanized iron pipe and recessed drainage fittings may be used with the consent and permission of the Plumbing Inspector.

Waste pipes from Refrigerators may be of galvanized iron pipe.

No soil, drain, waste or vent pipe shall be built into masonry or concrete walls; suitable chases shall be provided for them.

## ARTICLE 50.

### VENTS

All vent pipes shall be extended up to and through roof and shall terminate at a point not less than (1) one foot above the highest opening on the roof when located not less than (10) ten feet from such vent terminal.

Vent pipes which terminate on roof used for other purposes than as a covering for a building shall be extended at least (7) seven feet above the finished roof or walk.

No vent shall terminate less than (12) twelve feet from the ground nor less than (10) ten feet from any opening of a building.

## ARTICLE 51.

### CAST IRON PIPE

All materials used in any part of a plumbing system shall be free from defects of any kind and shall be of the following quality and weight: All materials shall be extra heavy.

In case of a building or other structure being built or moved over an old sewer, such sewer shall be relaid with cast iron pipe of the same size as the old sewer. All terra cotta sewer in any building or other structure shall be replaced or repaired with cast iron pipe.

## ARTICLE 52.

### TRAPS

All traps shall be effectively vented with an air pipe of a diameter not less than that of such trap, except in case of a trap larger than two inches in diameter, in which case the air pipe shall not be less than two inches in diameter, provided that a single pipe may be used to vent two traps, through the same fitting when such fitting has effective means to prevent the drainage from one trap entering the other trap and is made of [illegible] or attached parts.

| | Trap | Branch | Vent |
|---|---|---|---|
| Water Closet | 4 " | 4 " | 2 " |
| Slop sink integral trap | 3 " | 3 " | 2 " |
| Urinal trough and stall | 2 " | 2 " | 2 " |
| Laundry tray | 1½ " | 1½ " | 1½ " |
| Kitchen sink | 1½ " | 1½ " | 1½ " |
| Bath tub | 1½ " | 1½ " | 1½ " |
| Lavatory | 1¼ " | 1¼ " | 1¼ " |

Maximum Number of Traps allowed to be served by any main Vent Pipe. The number of traps permitted under the following table shall be traps not less than two inches in diameter, and all larger traps shall be figured as multiple traps in the following equivalents:

One trap 4" diameter or over equal to six (6) traps.
One trap 3" diameter equal to four (4) traps.
One trap 2 1/2" diameter equal to three (3) traps.
One trap 2" diameter equal to two (2) traps.
Each water closet trap equal to four (4) traps.
Each urinal trap equal to four (4) traps.
Each trap less than two (2") inches diameter equal to one (1) trap.

Maximum Number of Traps (as foregoing equation) permitted on:

2 inch main vent twenty-four (24) traps.
2 1/2 inch main vent thirty (30) traps.
3 inch main vent sixty (60) traps.
3 1/2 inch main vent one hundred fifty (150) traps.
4 inch main vent two hundred (200) traps.
5 inch main vent three hundred fifty (350) traps.
6 inch main vent five hundred fifty (550) traps.

Where necessary to increase the size of a soil or vent stack, the largest size shall be extended throughout and, if a main vent stack, it shall be taken off the foot of the soil or waste stack and if over forty (40) feet in length carried through the roof independent of the main soil or waste stack, provided, that waste vent stack need not be increased throughout.

Maximum Number of fixtures or their equivalent traps allowed to discharge into a waste or soil pipe of specified size.

2 inch pipe - twelve traps 1 1/2 inch or less or six 2 inch traps, provided that only one urinal trap shall be permitted.

3 inch pipe - sixty minor fixture traps. Soil pipes or soil and waste combined.

3 inch pipe - eight minor and two major fixture traps.

In the following table the maximum number of minor fixture traps are to be figured at the ratio of four minor to one major fixture trap.

4 inch pipe - eighty (80) traps.
5 inch pipe - one hundred eighty (180) traps.
6 inch pipe - three hundred sixty (360) traps.
7 inch pipe - six hundred thirty (630) traps.
8 inch pipe - one thousand fifty (1050) traps.

Continuous or wet vent system. Wherever practicable, plumbing shall be put in on the continuous or wet vent system as follows:

The revent shall be taken out of the waste pipe between the stack and the fixture, and as many waste branches, the combined area of which do not exceed the area of said revent, may be connected under the same conditions governing the combined wastes and vents, provided, that in a sink or urinal waste the revent shall be not less than three inches, but may be reduced to two inches after rising above the sink or urinal; said revent shall then be connected with stack above all fixtures, or into a separate vent stack, or be carried through the roof separately.

Each vent pipe shall be connected above the highest fixture into the adjacent soil pipe if distant therefrom not more than five feet.

No vent shall be extended through the roof smaller than two inches.

## ARTICLE 56.

### PLUMBING DETAILS

The Plumbing Inspector, in approving plans or in accepting work of any and all persons carrying on, conducting, assuming control of, constructing or causing to be constructed any plumbing or building or other structure drainage affecting the sanitary conditions of any building or other structure in the Town of Golden Beach, shall be governed by the following regulations, and it shall be unlawful for any person to fail, neglect or refuse to comply with the same or any part thereof, upon reasonable notice, in writing, from the Plumbing Inspector so to do.

(A) TOILETS. No water closet shall be put into or upon any property, building or other structure unless the same be so constructed as to be flushed by a tank containing not less than four gallons of water, on some approved flushing valve. Plunger closets, Philadelphia Hoppers, pen closets, front washout closets and other unsanitary closets shall not be installed in the Town of Golden Beach. Cell bowls shall be made to syphon.

(B) TOP FIXTURES. A fixture that is a top fixture on a vertical stack and not more than three feet from the inlet to the stack, need not have its traps revented; provided it does not discharge into the stack below the level of its seal, except water-closets whose trap is in the bowl. All other traps shall be set true to their water seals.

(C) WASTE PIPES. Every soil or waste pipe under or inside of any building or other structure shall be of cast iron, extra heavy, lead or brass. All joints in cast iron waste pipes, whether inside or outside of the building line of such buildings or structures, shall be made of pig lead and oakum and shall be thoroughly caulked. No cement of any description shall be used in connection with any cast iron, lead, brass or galvanized iron pipe. Galvanized wrought iron pipe and fittings, known as the Durham System, shall not be used below the first floor of any building or structure, or in the ground except in perpendicular waste lines. All cast iron soil pipes inside of property lines must be laid by a licensed plumber.

(D) ROUGH TEST. Before fixtures are placed in connection with the plumbing of any building or structure, and before any portion of the drainage system of any building or structure is covered or concealed from view, the outlet from the soil pipe and all openings therein below the top shall be hermetically sealed and the pipe shall then be filled with water to the highest point in the system. Cell pipes and fittings shown to be defective shall be removed and replaced with sound pipes and fittings.

(E) CLEAN OUTS. All vertical stacks, soil and waste pipes shall be provided with a trap screw ferrule at the foot and all other places where necessary. The diameter of trap screw ferrules shall be not less than one inch of the diameter of the waste. All changes of direction of soil or waste pipes shall be made with full "Y" branches and one-eight bends, except when the waste is vertical. All cleanouts shall be extended to outer walls or some point convenient of access, not closer than one foot to the wall. When soil and waste pipes are below cement or wood floors, or in places where the cleanouts are not accessible, the said cleanouts shall be brought up to and above the floor or ground. An arm of two feet in any change of direction where one-eight bend can be used will be allowed. If possible all cleanouts to outside of building.

(F) WIPED JOINTS. All connections in lead piping shall be joined by wiped joints. Connections between soil pipes and lead pipes shall be made with brass ferrules or brass solder nipples, and such joints shall be wiped.

(G) WASTE PIPE SIZES. All waste pipes shall be of lead, cast iron or galvanized wrought iron of the following sizes, to-wit: for bath tubs, wash basins, and laundry trays not less than 1-1/2 inches; for sinks, slop hoppers and urinals, not less than two (2) inches.

(H) TRAPS AND VENTS. All traps and vents shall be the same in size as the wastes, except in sinks, urinals and wash basins. Sinks and urinals shall have 1-1/2 inch traps, and wash basins shall have one and one-quarter inch (1-1/4) traps, if not more than one fixture is vented. The sizes of the pipes for wastes and vents shall be as follows, to-wit: for two fixtures, 2", except as hereinbefore provided for sinks and urinals; for more than two and not exceeding eight fixtures, 2"; for more than eight and not exceeding sixteen fixtures, 2-1/2"; for more than sixteen and not more than twenty-eight fixtures, 3"; and for every additional sixteen fixtures an additional 1/2".

(I) CROWN VENTS. Crown vent pipes from water closets and slop hoppers shall be not less than two inches in internal diameter. Where more than one water closet and slop hopper is vented through the same pipe the size of the pipe shall be as follows, to-wit: for more than one and not exceeding four, 2 inches; for more than four and not exceeding eight, 2-1/2 inches; for more than eight and not exceeding fourteen, 3 inches; for more than fourteen and not exceeding twenty-four, 4 inches; and for every additional ten closets or slop hoppers an additional inch. Every vent pipe run at a horizontal turn shall grade toward the fixture.

(J) VENT HEIGHTS. All vents shall rise perpendicularly or at an angle of forty-five or sixty degrees in the nearest partition or wall to four inches above the floor. Fittings known as "Y" branches shall be used where the vent is taken off the waste line below the fixture.

(K) PROHIBITED CONNECTIONS. No privy vault, cesspool, exhaust from engine or blow-off from boiler shall be connected with the drain of any building or other structure.

(L) ALTERATIONS. Upon the removal or alteration of any building or structure, or the making of any addition thereto, if new plumbing fixtures are placed therein, either in the original or altered or added portion thereof such new fixtures shall be properly connected with the plumbing in the original parts of the building or structure; and if the fixtures are to be reset, either in the old or any new part of such building or structure, then both the original and additional fixtures, and all altered plumbing shall be made to comply in all respects with the provisions of this ordinance.

(M) CLOSET BENDS. Closet bends shall be of lead and brass ferrule. All sinks shall have a clean out under sink outlet and horizontal runs. All clean outs shall be brought to outside of building line.

## A R T I C L E 57.

### SEPTIC TANK OR SEWER VENT

Every building or other structure connected to a sewer or septic tank shall have at least one 4 inch vent pipe carried above the roof. Every building or structure used for human habitation shall have installed therein at least one toilet and one sink properly trapped and connected with sewer or septic tank.

## A R T I C L E 58.

### PRIVY VAULTS PROHIBITED

No privy vault shall be dug or constructed in the Town of Golden Beach, except that the Plumbing Inspector may permit vaults to be dug or constructed for temporary use, and shall specify in the permit therefor the length of time during which

necessary will shut off the water at the stop-cock at the building. In case it is necessary to shut off the water at the curb he will notify the Water Department.

In all premises where steam boilers or hot water tanks are supplied with water from the water works, the owner must see that a suitable safety valve, vacuum, air or other valve or device, is placed, to prevent damage from collapse under heavy pressure or from explosion if water is shut off. In all cases where pipes are connected direct with boilers, feed water heaters, or other fixtures where pressure is or can be generated, there must be a check-valve placed in the pipe between such fixture and the meter. Where this is not done, the consumer will be held responsible for any damage to meter or other fixture on the service pipe and for cost of labor in repair of same.

## A R T I C L E 62

### GALVANIZED IRON

All water pipes and all water fittings inside of buildings and other structures shall be of galvanized iron, and all other water pipes and all other water fittings shall be of galvanized iron.

## A R T I C L E 63

### SIZE OF WATER PIPES.

The size of water pipe shall refer to the nominal internal diameter and shall vary with the number of fixtures supplied thereby, as follows: for nipples and tubing only, not less than three-eights of an inch (3/8"); toilet and lavatory supplies for not more than three fixtures, not less than one-half inch (1/2"); for not more than twenty-four fixtures, not less than three-quarter inch (3/4"); for not more than forty fixtures, not less than one inch; for not more than eighty fixtures not less than one and one-quarter inches (1-1/4"); for not more than one Hundred and fifty fixtures, not less than one and one-half inches; for not more than three hundred fixtures, two inches and for every additional one hundred and fifty fixtures add one-half an inch additional.

## A R T I C L E 64.

### PROHIBITED FITTINGS.

Double hubs, straight crosses, straight "T's" or short turn "L's" shall not be used on soil or waste pipe. Bands, saddles and sleeves shall not be used in any case. Double sanitary "T" branches and single "T's" are prohibited, except in perpendicular stacks. No fittings shall be used between the bath trap and perpendicular waste lines. "L's" or quarter bends will not be allowed on bottom of waste stacks. Two one-eight bends shall be used.

## A R T I C L E 65.

### TRAP SEAL.

Every trap shall have a seal with an internal diameter of not less than that of the trap.

## ARTICLE 66.

### PIPE ARRANGEMENT

All pipes shall be as straight and direct as possible, and shall be so arranged as to be readily inspected. Hangers shall be placed every seven feet apart on cast iron pipe and every ten feet apart on galvanized iron pipe.

## ARTICLE 67.

### DRAINAGE EXCAVATIONS.

All excavations required for the installation of a building or other structure drainage system, or any part thereof, within the walls of such building or structure, shall be open trench work; and all such trenches shall be kept open until the pipes therein shall have been inspected.

## ARTICLE 68.

### DEFECTIVE WORK

Every person, firm or corporation doing any plumbing work shall immediately remove and replace any and all defective material and any and all defective work, when required so to do by the Plumbing Inspector. Every soil pipe, drain pipe, vent, water closet, urinal, sink or other fixture set up or any fittings laid, used or constructed otherwise than in accordance with this ordinance, or any other ordinance or law regulating such work in the Town of Golden Beach, or which may become bad, defective, dangerous or in any way unfit for service, shall upon notice, either verbal or in writing from the Plumbing Inspector, be removed or repaired in accordance with such notice or other instructions from the Plumbing Inspector and shall be made to comply with the provisions of this ordinance and of every other ordinance and law regulating such work in the Town of Golden Beach, within the time fixed in such notice or within any extension thereof granted by the Plumbing Inspector.

## ARTICLE 69.

### CONDEMNATION

Where a building or structure has been inspected and the plumbing work condemned by the Plumbing Inspector as being in an unsanitary condition, notice to that effect shall be given in writing by the Plumbing Inspector to the owner, agent or occupant of such building or structure, and in such notice shall designate the repairs or improvements required to be made. If the owner, agent or occupant objects to such condemnation or to the making of such repairs or improvements, he may, within three days after such notice, appeal to the Town Council from the decision of the Plumbing Inspector. Such appeal shall be taken by filing with the Town Clerk, and a copy with the Plumbing Inspector, a notice, in writing, stating the objections to such condemnations or to such repairs or improvements and a statement that he appeals to the Town Council.

If an appeal is so taken by such owner, agent, or occupant, the same shall come on for hearing at the next regular meeting of the Town Council, but may be continued to other meetings of the said Town Council, provided notice of the time to which such hearing is continued shall be given to such owner, agent or occupant; and the Town Council may hear evidence and argument touching the issue and may affirm, reverse or modify the order of the Plumbing Inspector and the decision of the Town Council on such an appeal shall be final and conclusive.

When plumbing, in any building, has been condemned as unsanitary and no appeal taken as herein provided, or, if taken and the order of the Plumbing Inspector is affirmed or modified, the owner, agent or occupant shall immediately make such repairs, and improvements as may be required by the Town Council and, unless the same shall be commenced within three days after notice of the decision of said Town Council, it shall be the duty of the Plumbing Inspector to post at some conspicuous place on such building or structure one or more notices, which shall be substantially in the following form:

"WARNING".

"This building (or structure) has been condemned as unsanitary and unfit for human habitation or occupancy and it is unlawful for any person to live in or use the same. By order of the Town Council."

"Plumbing Inspector"

Such notice may be in typewriting and shall remain on such building or structure until the repairs or improvements shall have been made and the same shall then be removed by the Plumbing Inspector, or by such person as may be authorized by such official so to do; and it shall be unlawful for any person to remove or deface same. After building or structure has been placarded on account of unfit plumbing and until the repairs or improvements required shall have been made, it shall be unlawful for any person to live in or occupy such building or structure, whether for business or residence purposes, or to rent, let or hire the same or any part thereof, or to collect, receive or pay any rent therefor, whether as agent, owner, tenant, or otherwise.

## A R T I C L E 7 0 .

### DISPLAY SIGN

Every person, firm or corporation installing plumbing in the Town of Golden Beach shall, at the place of such installation, display a sign showing the full registered name of such person, firm or corporation.

## A R T I C L E 7 1 .

### PENALTIES

Every person, as principal, agent, manager or employee, violating, failing, neglecting or refusing to comply with any of the provisions of this ordinance shall be deemed guilty of a misdemeanor and, upon conviction thereof, shall be punished by a fine not exceeding Two hundred ($200.00) Dollars or by imprisonment in the Town Jail for not more than ninety days, or by both fine and imprisonment; and every day during any portion of which any of the provisions of this ordinance shall be violated shall constitute a misdemeanor and shall be punished as herein provided.

## A R T I C L E 7 2 .

### APPOINTMENT OF PLUMBING INSPECTOR

The Plumbing Inspector is to be appointed by the Mayor and approved by the Town Council.

## A R T I C L E 73.

### ELECTRICAL PERMITS

No person, as principal, agent manager or employee, shall place or install or cause or permit to be placed or installed, any wires, connections, fixtures, apparatus or other electrical work of any kind whatsoever; or make, or cause or permit to be made, any alterations, change in, addition to or repair of any such electrical work in the Town of Golden Beach, without first obtaining a written permit for such electrical work from the Electrical Inspector of the Town of Golden Beach. Such permit shall be denominated "An Electrical Permit" and shall contain a description of the work to be done thereunder and a statement of the place by street and number or by description sufficient to locate the same, where such work is to be done. Electrical permits shall be granted upon written applications therefor to the Electrical Inspector. If the Electrical Inspector, after investigation, is satisfied that the work desired can be done without violating any of the provisions of this ordinance, or of any other ordinance or law governing such work in the Town of Golden Beach, and that the applicant therefor is duly licensed to do electrical work in Dade and Broward Counties, he shall issue an Electrical permit to such applicant, upon payment of the fees therefor. The issuance of an electrical permit shall not be construed as an approval by the Electrical Inspector of the drawings, specifications, plans or details of such contemplated work insofar as the same, or any portion thereof, may be in conflict with the provisions of this ordinance or any other ordinance or law governing such work in the Town of Golden Beach. The holder of an electrical permit shall not do or perform, or cause or permit to be done or performed, any work other than that designated in such electrical permit at the place mentioned therein; and shall not do or perform or cause or permit to be done or performed any work designated in such electrical permit at any place other than that designated therein. In case any electrical work is desired in the construction, alteration or repair of any building or structure requiring building permit, no electrical permit shall be issued until after a building permit for such building or structure shall have been previously issued.

## A R T I C L E 74.

### PERMIT FEES FOR ELECTRICAL INSTALLATIONS, CONSTRUCTIONS AND INSPECTIONS.

Permits provided for in this ordinance shall not be issued by the Electrical Inspector until the following inspection fees shall have been paid to the Town Clerk or Inspector.

| | |
|---|---|
| Minimum fee | $5.00 |
| **OUTLETS** | |
| 1 to 5 Outlets, inclusive | 1.00 |
| For each additional outlet | .10 |
| **FIXTURES** | |
| 1 to 5 lights, inclusive | 1.00 |
| For each additional light | .10 |
| **SPACE OR PORTABLE HEATERS** | |
| For each space or portable heater | .50 |

STRIP HEATERS

| | |
|---|---|
| Each 1000 Watts of strip heater | $ .25 |

RANGE OR WATER HEATERS

| | |
|---|---|
| 1 Range or water heater | 1.00 |
| For each additional range or heater | .50 |

REFRIGERATORS

| | |
|---|---|
| 1 Refrigerator outlet | 1.00 |
| For each additional outlet | .25 |

MOTORS

| | |
|---|---|
| For each motor 0 to 1 H.P. inclusive | 1.00 |
| " " " 1 to 5 H.P. " | 1.50 |
| " " " 5 to 25 H.P. " | 2.50 |
| " " " 25 or over | 3.50 |

CENTERS OF DISTRIBUTION

| | |
|---|---|
| 1 Center of Distribution | 1.00 |
| For each additional Center of Distribution | .50 |

SERVICES

| | |
|---|---|
| For each change in service | 1.00 |
| For each new service | 1.00 |
| For each temporary service | 1.00 |

ALTERATIONS & ADDITIONS

| | |
|---|---|
| Fees to be based on equipment involved. Minimum fee | 10.00 |

## A R T I C L E 7 5 .

## INSTALLATION OF ELECTRICAL TUBING

The use of metallic electrical tubing as a raceway for electrical wires is hereafter forbidden in the Town of Golden Beach, Florida, in the following locations:

1. Wherever the tubing is exposed to the weather, such as on the outside of buildings, overhead services, etc.

2. Wherever the electrical tubing comes in contact with the earth, soil or cinder concrete.

3. In any location where the electrical tubing is exposed to actual physical contact with water or corrosive action of liquids or gases.

4. In any concrete slab, column or beam within three feet of the ground level.

## A R T I C L E 7 6 .

## SPECIFICATIONS ON SERVICE EQUIPMENT.

TABLE No. 1

220 V - 3 WIRE SINGLE PHASE *

| MAIN SERVICE SWITCH | ENTRANCE CONDUCTORS MIN. WIRE | FUSES | MAX. WIRE | FUSES | MINIMUM GROUNDING CONDUCTOR | MIN. PIPE TO DRIVEN GROUND | OVERHEAD CONDUIT OR TUBING | UNDER-GROUND CONDUIT |
|---|---|---|---|---|---|---|---|---|
| 60 AMP | # 8 | 35 A. | # 4 | 60 A. | # 8 | 3/4" | 1-¼" | 1-½" |
| 100 " | 1 | 100 | 1 | 100 | 8 | 1" | 1-½" | 2 |
| 200 " | 1/0 | 125 | 4/0 | 200 | 4 | 1" | 2-½" | 2-½" |
| 400 " | 4/0 | 225 | 500M | 400 | 2/0 | 1-¼" | 3" | 3-½" |
| 600 " | 600M | 450 | 900M | 600 | 4/0 | 1-¼" | 4" | 4-½" |

## A R T I C L E 77.

### WIRING OF DISTRIBUTION PANELS

TABLE No. 2

220 V - 3 WIRE FEEDERS.

| Panel Circuits | 2 | 4 | 6 | 8 | 10 | 12 | 14 | 16 | 18 | 20 | 22 | Panel Circuits. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| #12 | X | | | | | | | | | | | 3/4" |
| #10 | | X | | | | | | | | | | 3/4" |
| # 8 | | | X | X | X | | | | | | | 1" |
| # 6 | | | | | | X | X | X | | | | 1¼" |
| # 4 | | | | | | | | | X | X | X | 1½" |

## A R T I C L E 78.

### SPECIAL REQUIREMENTS ON ITEMS OF GENERAL USE.

### RACEWAYS IN POURED CONCRETE

Conduit and/or tubing installed in poured concrete slabs shall be layed over all reinforcing steel and rigidly held in place by wiring same to reinforcing steel or other approved method. Pipe centers between outlet boxes (over eight feet) shall be raised and supported in place so the drainage will be toward the outlet boxes. No unsupported walk or runway shall be placed upon any conduit and/or tubing after same is in permanent position.

### CONCRETE OUTLET BOXES

Where outlet boxes occur in poured concrete, an approved concrete outlet box of the proper depth shall be used. Concrete coverage over the top of an outlet box shall be not less than one inch.

### UNDERFLOOR PULL BOXES.

Conduit and/or tubing under main or ground floor of any building not having a finished basement shall be continuous within that floor area. Use of bleeders, fittings or pull boxes in such pipe runs within said area is forbidden.

## SERVICE SWITCHES

A Main Service Switch or Circuit Breaker of an externally operable lever type approved for the prefailing conditions (such as exposure to weather) shall be provided for each set of service entrance conductors, and located at a readily accessible point nearest to the entrance of the conductors, either inside or outside the building wall. Exceptions to this ruling are forbidden except by the permission of the Electrical Inspector.

The Main Service Switch shall have a rating of not less than Sixty Amperes (60amp) and shall be fused in accordance with the current carrying capacity of the Service Entrance Comductor.

## GROUP SERVICE SWITCHES

The ampere rating of a group of switches used instead of one main service switch shall be considered the sum of the ampere ratings of all the switches in the group.

## SERVICE ENTRANCE SWITCHES

Service entrance conductors to any building of occupancy shall be controlled by an accessible service entrance switch or switches.

## METER CONNECTIONS

All meter connections shall be enclosed with metal enclosure. Conductors shall not be reduced in size or the current carrying capacity altered between a source of supply and its first point of distribution.

## RANGE EQUIPMENT

Minimum for range circuits shall be number six (6) wire and one and one-quarter inch conduit and/or tubing to range outlet. From range outlet to stove flexible metallic tubing not smaller than one (1) inch shall be used.

## WATER HEATER EQUIPMENT

Minimum for water heater circuits shall be number ten (10) wire and three-quarter (3/4) inch conduit. Flexible connection to water heater cabinet shall be not less than three-quarter (3/4) inch flexible metallic tubing, (exposed only).

## SPACE HEATER EQUIPMENT

Minumum for space heater circuits shall be number twelve (12) wire, and one-half (1/2) inch conduit and/or tubing, By-passing of circuit wires through space heater enclosures is forbidden.

Conduit and/or tubing shall enter space heater enclosures at the bottom or at a point on the sides near the bottom. Switches shall not be mounted in the top of space heater enclosures.

## IRON OUTLETS

Iron outlets as such shall be equipped with a pilot light, indicating switch, and single receptacle, and shall be fed by an individual circuit.

The receptacle adjacent to an ironing board shall be considered an iron outlet and shall be equipped as such.

All household laundries shall have at least one iron outlet.

## UNDERGROUND FEEDERS

Conduit smaller than three-quarter (3/4) inch will not be permitted for underground circuits.

## PANEL FEEDERS

The minimum for panel feeder circuits shall be number twelve (12) wire and three-quarter (3/4) inch conduit.

## RECESSED LIGHTS

All metal enclosures for recessed lights coming in contact with wood or other combustible materials shall be covered with not less than one-sixteenth (1/16) asbestos sheet.

## DISTRIBUTION PANELS

In no case shall a distribution panel be located within a bathroom or toilet.

## PIPE STRAPS

The use of pipe straps is required on conduit and/or tubing wherever possible.

## A R T I C L E  7 9 .

Where the connecting pipe from the driven ground enters the switching enclosure not equipped with threaded connections the connecting pipe shall be equipped with a wedge lug or other approved fitting which shall be connected by a suitable grounding jumper to the main service switch neutral block or switch neutral. See Table No. 1 for jumper sizes.

GROUNDING EQUIPMENT

All metallic raceways leaving any enclosure having other than a metallic finish shall be equipped with wedge lugs or other approved fitting which shall be connected to the switch neutral block or switch neutral of the main entrance switch by bonding jumpers of the size as shown in Table No. 1. Enclosures containing centers of distribution other than the main service switch and which have a metallic finish, double locknuts on circuit raceways shall be considered as sufficient grounding equipment. Threaded pipe connections will be considered as a sufficient bond, when enclosures are equipped with threaded fittings.

TEMPORARY SERVICES

Permits for temporary services will be issued only for that part of any electrical installation that is designated in the application for said permit submitted to the Electrical Inspector.

Temporary service for other than that to the permanent main switch, shall be for temporary equipment only and shall not be connected to any part of the permanent installation without the written consent of the Electrical Inspector.

Where any circuit, equipment or apparatus of an electrical installation is to be serviced through the permanent main service switch in accordance with a temporary service permit issued for same, all other circuits, apparatus and/or equipment of the electrical installation shall be disconnected from the main service switch by the Electrical Contractor so that only that circuit, apparatus or equipment mentioned in the service permit may be serviced.

## A R T I C L E  8 0 .

CONNECTED LOAD WATTAGES

When computing connected load wattages, the values shown in Table #3 shall be considered the minimum wattages to be used for the equipment listed.

TABLE NO. 3

CONNECTED LOAD WATTAGES

| EQUIPMENT CIRCUITS | | MINIMUM WATTAGES |
|---|---|---|
| LIGHT | | 660 |
| MOGUL SOCKETS (each) | | 1000 |
| MOTORS | (Fractional over 1/4 h.p.) | 660 |
| REFRIGERATOR | (Domestic) | 660 |
| STRIP LIGHTING | (25 Watt lamp each) | 660 |
| IRON | (Domestic) | 1000 |
| SPACE HEATER | (Bath Room only) | 1000 |
| NEON TRANSFORMERS | (Mfgrs. Rating) | 1320 |
| TOASTERS | (Commercial) | 3000 |
| SPACE HEATERS | (Other than bath room | 3000 |
| WATER HEATERS | | 3000 |
| RANGES | (Domestic | 13200 |
| MOTORS | (Above Fractional) | Mfgrs Rating |

## ARTICLE 81.

### ELECTRICAL ENCLOSURES

All enclosures for electrical conductors shall have galvanized or other approved metallic finishes.

In no case shall enclosures having painted, enameled or other non-metallic surfaces be used as electrical enclosures except by special permission of the local authorities.

When and if painting of enclosures is required, such painting shall be done after all enclosures and circuit raceways are in place. Interruption of circuit raceway continuity by the use of paint, enamel or other non-metallic coverings is forbidden.

## ARTICLE 82.

### NON-TAMPERABLE PROTECTIVE DEVICES

All protective devices of 30 amperes or less used on ungrounded conductors having not more than 125 volts to ground, shall be of a non-tamperable type.

Protective devices of the non-tamperable fuse plug type shall conform to the requirements of Article #240, Section 2452 of the National Electrical Code of 1937.

Protective devices of the non-tamperable circuit breaker type shall conform to the requirements of Article #240, Section 2481 of the National Electrical Code of 1937.

## ARTICLE 83.

### SOLDERLESS CONNECTORS

Wherever stranded conductors terminate in solderless connectors, the strands of the stranded conductors entering the solderless connector shall be soldered together for a distance equal to the wire bearing surface of the solderless connector.

## ARTICLE 84.

### INSTALLATIONS

All electrical construction, all material and all appliances used in connection with electrical work and the operation of electrical apparatus shall be in conformity to the rules and regulations set down in what is known as the "National Electric Code" of rules and regulations of the National Board of Fire Underwriters for the installation of electric wiring and apparatus as the same are now established or as the same may hereafter be established from time to time.

## ARTICLE 85.

### INSPECTION

The Town Electrical Inspector shall have the right in the discharge of his duties to enter any building for the purpose of examining and testing the electrical appliances therein or contained, and for that purpose he shall be given prompt access to all buildings, public and private, on application to the individual or company owning or in charge of same.

## ARTICLE 86.

### CERTIFICATE OF INSPECTION

Upon the completion of the wiring of any building for light,

heat or power, it shall be the duty of the company, firm or individual doing the same to notify the Electrical Inspector, who shall, within twenty-four hours of time of such notice, inspect such wiring and appliances and, if approved by him, he shall issue a certificate of satisfactory inspection, but no such certificate shall be issued unless such electric wiring and appliances be in strict conformity to the rules and regulations prescribed or required by this ordinance, nor shall current be turned on such installation until said certificate be issued.

## A R T I C L E 8 7 .

### PENALTY

Any person, firm or corporation who shall fail to correct any defect or defects in his work, after having been duly notified, for ten days, by the Town Electrical Inspector, shall not receive any further permit until such defect or defects have been corrected and any case in which any person, firm or corporation shall continue to or persistently violate the ordinance of the Town in regard to Electrical affairs or the orders of the Electrical Inspector touching the same, the license of such person, firm or corporation shall