URBAN HEAT ISLAND ORDINANCE

ORDINANCE	E NO.	

AN ORDINANCE OF THE MAYOR AND CITY COMMISSION OF THE CITY OF MIAMI BEACH, FLORIDA, AMENDING CHAPTER 114, "GENERAL PROVISIONS," SECTION 114-1, "DEFINITIONS," TO DEFINE "COOL PAVEMENT," "HIGH ALBEDO SURFACES," "POROUS PAVEMENT," "SOLAR CARPORT," AND RELATED DEFINITIONS; CHAPTER 118, ADMINISTRATION AND REVIEW PROCEDURES." ARTICLE I. "IN GENERAL," SECTION 118-7. - "FEES FOR THE ADMINISTRATION OF LAND DEVELOPMENT REGULATIONS," TO WAIVE APPLICATION FEES FOR LAND USE BOARD APPROVAL FOR SUSTAINABLE ROOFING SYSTEMS, SOLAR CARPORTS, OR COOL PAVEMENTS; CHAPTER 130 ENTITLED "OFF-STREET PARKING." ARTICLE III ENTITLED "DESIGN STANDARDS," TO CREATE REQUIREMENTS FOR SURFACE AND ROOFTOP PARKING; CHAPTER 133, "SUSTAINABILITY RESILIENCY," ARTICLE II, "SEA LEVEL RISE AND RESILIENCY REVIEW CRITERIA," TO ESTABLISH REVIEW CRITERIA THAT TO THE REDUCE HEAT ISLAND EFFECT OF BUILDINGS; CHAPTER 142, "ZONING DISTRICTS AND REGULATIONS," ARTICLE IV, "SUPPLEMENTARY DISTRICT REGULATIONS," DIVISION I, "GENERALLY, AT SECTION 142-875, ENTITLED "ROOF REPLACEMENTS AND NEW ROOFS," TO ESTABLISH REQUIREMENTS FOR SUSTAINABLE ROOFS AND CREATE A "SUSTAINABLE ROOF FEE" TO USE ALTERNATIVE ROOF TYPES: AND CHAPTER 142, "ZONING DISTRICTS AND REGULATIONS," DIVISION 4, "SUPPLEMENTARY YARD REGULATIONS," AT SECTION 142-1132, ENTITLED "ALLOWABLE **ENCROACHMENTS** WITHIN REQUIRED YARDS," TO ALLOW FOR SOLAR CARPORTS AS AN ALLOWABLE **ENCORACHMENT AND TO CREATE DRIVEWAYS REQUIREMENTS** INCORPORATING PERVIOUS SURFACE AREAS: AMENDING APPENDIX A, "FEE SCHEDULE," IN ORDER TO ESTABLISH A SUSTAINABLE ROOF FEE; PROVIDING FOR CODIFICATION; REPEALER; SEVERABILITY; AND AN EFFECTIVE DATE.

WHEREAS, heat islands are urbanized areas that experience higher temperatures than surrounding areas; and

WHEREAS, heat islands are created by development that creates impermeable and dry surfaces replacing open land and vegetation; and

WHEREAS, Climate Change is leading to higher temperatures; and

WHEREAS, the increased temperatures due to Climate Change are more severe in areas with heat islands; and

WHEREAS, heat islands lead to increased energy consumption for air conditioning, especially in summer months; and

WHEREAS, efforts to cool urban heat islands produce many benefits, including lower temperatures, electricity demand, air pollution, greenhouse gases, and harmful health impacts; and

WHEREAS, Comprehensive Plan Future Land Use Element Policy 3.6 requires that the City "Maximize unpaved landscape to allow for more stormwater infiltration. Encourage planting of vegetation that is highly water absorbent, can withstand the marine environment, and the impacts of tropical storm winds. Encourage development measures that include innovative climate adaption and mitigation designs with creative co-benefits where possible;" and

WHEREAS, the City of Miami Beach ("City") Comprehensive Plan designates the entire City as an Adaptation Action Area ("AAA") containing one or more areas that experience coastal flooding due to extreme high tides and storm surge, and that are vulnerable to the related impacts of rising sea levels for the purpose of prioritizing funding for infrastructure and adaptation planning; and

WHEREAS, Comprehensive Plan Conservation/Coastal Zone Management Element Policy 13.4 states that "the City will develop and implement adaptation strategies for areas vulnerable to coastal flooding, tidal events, storm surge, flash floods, stormwater runoff, salt water intrusion and other impacts related to climate change or exacerbated by sea level rise, with the intent to increase the community's comprehensive adaptability and resiliency capacities;" and

WHEREAS, Comprehensive Plan Conservation/Coastal Zone Management Element Policy 13.8 states that the "City shall integrate AAAs into existing and future City processes and city-wide plans and documents which may include: Land Development Regulations;" and

WHEREAS, the amendments set forth below are necessary to accomplish all of the above objectives.

NOW THEREFORE, BE IT ORDAINED BY THE MAYOR AND CITY COMMISSION OF THE CITY OF MIAMI BEACH, FLORIDA.

SECTION 1. Chapter 114, "General provisions," Section 114-1, "Definitions," of the Code of the City of Miami Beach is hereby amended as follows:

Albedo, see solar reflectance

* * *

Blue roof means a non-vegetated source control to detain stormwater. A blue roof slows or stores stormwater runoff by using various kinds of flow controls that regulate, block, or store water instead of vegetation.

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Carport/shelter means a canopy or rooflike structure, open on at least two sides, which may be attached or detached from the main building, for the purpose of providing shelter for one or more motor vehicles.

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Carport, solar means a canopy or rooflike structure, where the top surface is composed

of solar panels, open on at least two sides, which may be attached or detached from a building, for the purpose of providing shelter for one or more motor vehicles.

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<u>Cool pavement means a paving material that has a high albedo surface and reflects</u> more solar energy or has been otherwise modified to remain cooler than conventional pavements.

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Cool roof: See "white roof."

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Green roof means a green space created by layers of growing medium and vegetation added on top of a traditional roofing system. It may also include additional layers such as a root barrier and drainage and irrigation systems.

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Solar reflectance means the percentage of solar energy reflected by a surface.

* *

<u>High albedo surface means a material that has a solar reflectance value of 0.65 or greater on the Solar Reflectance Index (SRI) via the Cool Roof Rating Council Standard (CRRC-1).</u>

* * *

<u>Porous pavement means a pavement material that allows for water to drain through the pavement surface into the ground. Such pavement shall have a minimum of 20 percent of air content, or voids to allow for the water to drain.</u>

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<u>Sustainable roof fee means a fee that is charged for the use of non-sustainable roofing systems.</u> The funds collected shall be deposited in the "Sustainability and Resiliency Fund," established pursuant to section 133-8 of the City Code.

Sustainable roofing system means a solar roof, blue roof, white roof, cool roof, green roof, metal roof, or any other roofing system recognized by a green building certification agency that reduces heat island effect, allows for the reuse or retention of stormwater or reduces greenhouse gases.

* * *

White roof means a roof that has been painted white or is surfaced with some other light or reflective material.

SECTION 2. Chapter 118, Administration and review procedures," Article I, "In general," Section 118-7. – "Fees for the administration of land development regulations," of the Code of the City of Miami Beach is hereby amended as follows:

Sec. 118-7. - Fees for the administration of land development regulations.

The fees identified herein, and as outlined in Appendix A are for the purpose of defraying expenses for public notices, and administrative costs associated with processing and analyzing the request. These fees shall be evaluated and adjusted annually based on the consumer price index for all urban consumers (CPI-U). No application shall be considered complete until all requested information has been submitted and all applicable fees paid. The cost associated notice is the responsibility of the applicant. There shall be no refund or adjustment of fees. Any unpaid fees, including fees assessed for failure to appear before a board, shall become a lien against the property. The fee for application for public hearing related only to a solar roof or a renewable energy system, sustainable roofing system, solar carports, porous pavements, or cool pavements on an existing building or parking facility shall be waived. If the application includes other components, the standard fee shall apply. Additionally, the fee per variances related only to a solar roof or a renewable energy system shall also be waived.

SECTION 3. Chapter 130 entitled "Off-Street Parking," Article III entitled "Design Standards," of the Code of the City of Miami Beach is hereby amended as follows:

Sec. 130-62. - Drainage and maintenance.

- (1) Off-street parking facilities shall be drained to prevent damage to abutting property and/or public streets and alleys and surfaced with erosion-resistant material in accordance with applicable city specifications.
- (2) The use of porous paving materials for surface parking and driveways areas shall be encouraged.
- (3) Off-street parking areas shall be maintained in a clean, orderly, and dust free condition, at the expense of the owner or lessee, and shall not be used for the sale, repair, or dismantling or servicing of any vehicles, equipment, materials or supplies.

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Sec. 130-68. – Commercial and noncommercial parking garages.

* *

10. Where there is parking that is open to the sky all driveway and parking areas shall have a high albedo surface.

* *

Sec. 130-69. - Commercial and noncommercial parking lots.

* * *

(3) Where there is parking that is open to the sky all driveway and parking areas shall have a high albedo surface, except for portions that utilize porous paving materials.

SECTION 5. Chapter 133, "Sustainability and Resiliency," Article II, "Sea level rise and resiliency review criteria," of the Code of the City of Miami Beach is hereby amended as follows:

ARTICLE II. - SEA LEVEL RISE AND RESILIENCY REVIEW CRITERIA

Sec. 133-50. - Criteria

The City's Land Use Boards shall consider the following when making decisions within their jurisdiction, as applicable:

- (a) Criteria for development orders:
 - (1) A recycling or salvage plan for partial or total demolition shall be provided.
 - (2) Windows that are proposed to be replaced shall be hurricane proof impact windows.
 - (3) Where feasible and appropriate, passive cooling systems, such as operable windows, shall be provided.
 - (4) Whether resilient landscaping (salt tolerant, highly water-absorbent, native or Florida friendly plants) will be provided.
 - (5) Whether adopted sea level rise projections in the Southeast Florida Regional Climate Action Plan, as may be revised from time-to-time by the Southeast Florida Regional Climate Change Compact, including a study of land elevation and elevation of surrounding properties were considered.
 - (6) The ground floor, driveways, and garage ramping for new construction shall be adaptable to the raising of public rights-of-ways and adjacent land.
 - (7) Where feasible and appropriate, all critical mechanical and electrical systems shall be located above base flood elevation.
 - (8) Existing buildings shall be, where reasonably feasible and appropriate, elevated to the base flood elevation.
 - (9) When habitable space is located below the base flood elevation plus City of Miami Beach Freeboard, wet or dry flood proofing systems will be provided in accordance with Chapter of 54 of the City Code.
 - (10) Where feasible and appropriate, water retention systems shall be provided.
 - (11) Where feasible and appropriate, cool pavement materials shall be utilized.
 - (12) Where feasible and appropriate, porous pavement materials shall be utilized.

- (13) For new construction, sustainable roofing systems shall be utilized to the greatest extent possible.
- (14) Where feasible and appropriate, solar carports for surface and rooftop parking lots shall be provided.

SECTION 5. Chapter 142, "Zoning Districts and Regulations," Article IV, "Supplementary District Regulations," Division I, "Generally," at Section 142-875, entitled "Roof replacements and new roofs," of the Code of the City of Miami Beach is hereby amended as follows:

Sec. 142-875. - Roof replacements and new roofs.

- (a) In all districts the following standards shall apply:
 - (1) For new construction, roofs shall consist of a sustainable roofing system.
 - (2) Alternatively, pitched roofs may consist of flat tiles, barrel tiles, or other roof types as specified in subsections below; however, for new construction, the "sustainable roof fee" shall be paid in the amount identified in Appendix A of the City Code for the square footage of the enclosed floor area immediately one floor below the roof.
 - (3) Alternatively, flat or non-pitched roofs which do not meet the requirements of a sustainable roofing system may be utilized; however, for new construction, the "sustainable roof fee" shall be paid in the amount identified in Appendix A of the City Code for the square footage of the enclosed floor area immediately one floor below the roof.
 - (4) Roofs shall be subject to the review and approval of the planning department, in accordance with the following criteria:
 - A. In single-family residential districts, the style, design and material used for the main structure and all accessory structures shall be compatible when located on the same property.
 - B. The color of the roof shall be neutral and shall not overwhelm or cause the roof to stand out in a significant manner.
 - C. The design, details, dimensions, surface texture and color shall be consistent with the architectural design, style and composition of the structure.
 - <u>D.</u> The design, details, dimensions, surface texture and color shall be consistent with the established scale, context and character of the surrounding area.
 - (5) Asphalt shingles shall be prohibited.
- (b) In addition to the requirements in subsection (a) above, for properties located outside of a locally designated historic district, site or structure, glass roofs may be proposed for new construction, existing multifamily and townhome structures, existing commercial buildings,

- single-family homes constructed after 1942, and nonarchitecturally significant single-family homes constructed prior to 1942.
- (c) In addition to the requirements in subsection (a) above, for architecturally significant single-family homes constructed prior to 1942, the planning director, or designee, may approve a metal, glass or sustainable roofing system if it is determined that the scale, massing and design of the subject home can accommodate a metal, glass or sustainable roofing system, and that such roofing system will not negatively impact the established architectural context of the immediate area.
- (d) In addition to the requirements in subsection (a) above, within any locally designated historic district, site or structure, the following shall apply:
 - (1) The use of glass or sustainable roofing systems on new construction shall require the review and approval of the historic preservation board, in accordance with the criteria in subsections (a)(4) above, and chapter 118, article X of these land development regulations. For non-contributing buildings, or if new construction is eligible for administrative review under chapter 118, article X of the land development regulations, the planning director, or designee, may approve a metal, glass or sustainable roofing system if it is determined that the scale, massing and design of the proposed new structure can accommodate a metal, glass, or sustainable roofing system, and that such roofing system will not negatively impact the established architectural context of the immediate area. Such review by the planning director, or designee, shall be subject to the criteria in subsections (a)(4) above.
 - (2) Glass or sustainable roofing systems proposed for contributing buildings shall require the review and approval of the historic preservation board, in accordance with the criteria in subsections (a)(4) above, and chapter 118, article X of these land development regulations.
- (e) The appeal of any decision of the planning department under subsections (a) through (d) above, shall be to the board of adjustment, in accordance with chapter 118, article VIII of these land development regulations. The review by the board of adjustment, either by appeal or if the metal, glass or sustainable roofing system does not qualify for planning director approval as provided above, shall also be pursuant to the criteria in subsections (a)(4) above.
- (f) Notwithstanding the above, for those structures constructed and substantially maintained in the Mediterranean revival or mission style of architecture, the use of roof material other than concrete, clay or ceramic tile shall be subject to the review and approval of the design review board or historic preservation board, as applicable. For purposes of this subsection, Mediterranean revival or mission architecture shall be defined as those structures built between 1915 through 1942 and characterized by, but not limited to, stucco walls, low pitch terra cotta or historic Cuban tile roofs, arches, scrolled or tile capped parapet walls and articulated door surrounds, or Spanish baroque decorative motifs and classical elements.
- (g) Notwithstanding the above, in the event a material other than flat or barrel tile was permitted for a pitched roof in any district, such roof may be replaced with the same material, subject to the criteria in subsection (a)(4) above.

- (h) For those structures which contain historic Cuban barrel tiles, such tiles shall be retained and preserved, subject to the provisions of the applicable building codes.
- (i) No variances from any of these provisions shall be granted. However, in the event that the building official determines that limitations exist regarding the load capacity of an existing roof, a roofing material other than those authorized in this section may be approved by the planning director, or designee, for any type of structure, in accordance with the criteria specified in subsections (a)(4) above.
- (a) In all districts, the new construction, repair or replacement of any pitched roof may consist of flat or barrel tile, which shall be composed of concrete or clay material. Asphalt shingles shall be prohibited in all districts.
- (b) For properties located outside of a locally designated historic district, site or structure, metal, glass or sustainable roofing systems may be proposed for new construction, existing multifamily and townhome structures, existing commercial buildings, single-family homes constructed after 1942, and nonarchitecturally significant single-family homes constructed prior to 1942, and shall be subject to the review and approval of the planning department, in accordance with the following criteria:
 - (1) In single family residential districts, the style, design and material used for the main structure and all accessory structures shall be compatible when located on the same property.
 - (2) The color of the roof shall be neutral and shall not overwhelm or cause the roof to stand out in a significant manner.
 - (3) The design, details, dimensions, surface texture and color shall be consistent with the architectural design, style and composition of the structure.
 - (4) The design, details, dimensions, surface texture and color shall be consistent with the established scale, context and character of the surrounding area.
- (c) For architecturally significant single family homes constructed prior to 1942, the planning director, or designee, may approve a metal, glass or sustainable roofing system if it is determined that the scale, massing and design of the subject home can accommodate a metal, glass or sustainable roofing system, and that such roofing system will not negatively impact the established architectural context of the immediate area. Such review by the planning director, or designee, shall be subject to the criteria in subsections (b)(1)—(4) above.
- (d) The appeal of any decision of the planning department under subsections (a), (b) or (c) above, shall be to the board of adjustment, in accordance with chapter 118, article VIII of these land development regulations. The review by the board of adjustment, either by appeal or if the metal, glass or sustainable roofing system does not qualify for planning director approval as provided above, shall also be pursuant to the criteria in subsections (b)(1) (4) above.
- (e) Within any locally designated historic district, site or structure, the following shall apply:
 - (1) The use of metal, glass or sustainable roofing systems on new construction shall require the review and approval of the historic preservation board, in accordance with the criteria in subsections (b)(1)—(4) above, and chapter 118, article X of these land development regulations. For non-contributing buildings, or if new construction is eligible for administrative review under chapter 118, article X of the land development

- regulations, the planning director, or designee, may approve a metal, glass or sustainable roofing system if it is determined that the scale, massing and design of the proposed new structure can accommodate a metal, glass, or sustainable roofing system, and that such roofing system will not negatively impact the established architectural context of the immediate area. Such review by the planning director, or designee, shall be subject to the criteria in subsections (b)(1) (4) above.
- (2) Metal, glass or sustainable roofing systems proposed for contributing buildings shall require the review and approval of the historic preservation board, in accordance with the criteria in subsections (b)(1) (4) above, and chapter 118, article X of these land development regulations.
- (3) The appeal of any decision of the planning director, or designee under this subsection shall be the board of adjustment. The review by the board of adjustment, either by appeal or if the metal, glass or sustainable roofing system does not qualify for planning director approval as provided above, shall also be pursuant to the criteria in subsections (b)(1)—(4) above and section 118-564.
- (f) Notwithstanding the above, for those structures constructed and substantially maintained in the Mediterranean revival or mission style of architecture, the use of roof material other than concrete, clay or ceramic tile shall be subject to the review and approval of the design review board or historic preservation board, as applicable. For purposes of this subsection, Mediterranean revival or mission architecture shall be defined as those structures built between 1915 through 1942 and characterized by, but not limited to, stucco walls, low pitch terra cotta or historic Cuban tile roofs, arches, scrolled or tile capped parapet walls and articulated door surrounds, or Spanish baroque decorative motifs and classical elements.
- (g) Notwithstanding the above, in the event a material other than flat or barrel tile was permitted for a pitched roof in any district, such roof may be replaced with the same material, subject to the criteria in subsection (a) above.
- (h) For those structures which contain historic Cuban barrel tiles, such tiles shall be retained and preserved, subject to the provisions of the applicable building codes.
- (i) No variances from any of these provisions shall be granted. However, in the event that the building official determines that limitations exist regarding the load capacity of an existing roof, a roofing material other than concrete, clay or ceramic tile may be approved by the planning department for any type of structure, in accordance with the criteria specified in subsections 142-875(b)(1) (4) above.

SECTION 7. Chapter 142, "Zoning Districts and Regulations," Division 4, "Supplementary Yard Regulations," at Section 142-1132, entitled "Allowable encroachments within required yards," of the Code of the City of Miami Beach is hereby amended as follows:

Sec. 142-1132. - Allowable encroachments within required yards.

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- (e) Carports and Solar Carports. Only one (1) carport or solar carport shall be erected within a required yard of a single-family home, subject to the following requirements, as applicable:
 - (1) Carports shall be subject to the following requirements:

- <u>A.</u> Carports shall be constructed of canvas and pipe for the express purpose of shading automobiles.
- B. Setbacks. Minimum setbacks for carports shall be as follows:
 - i. Front yard 18 inches from the property line, provided it is attached to or immediately adjacent to the main building.
 - ii. Interior side yard four (4) feet from the property line.
 - <u>iii.</u> Side yard facing the street 18 inches feet from the property line, provided it is attached to or immediately adjacent to the main building.

and shall have a minimum required interior side yard setback of four feet. The carport shall be permitted to extend into any front yard of a single-family residence, provided such carport is at least 18 inches from the property line or sidewalk, and provided it is attached to the main building. When the main entrance to a house is located on a side of the house facing the street, the carport shall be permitted to extend into the side yard facing the street, provided such carport is at least 18 inches from the property line or sidewalk and provided it is attached to the main building. The side of the carport that faces the required rear yard may be permitted to align with the walls of the existing residence, provided the residence is located a minimum of five feet from the rear property line. When a carport is detached it shall not be located in the required front or side facing the street yards.

- <u>iv.</u> The side of the carport that faces the required rear yard may be permitted to align with the walls of the existing residence, provided the residence is located a minimum of five (5) feet from the rear property line.
- <u>v.</u> When a carport is detached and located more than 12 inches from the main home it shall not be located in the required front or side-facing-the-street yards.
- C. Carports shall not be permitted to exceed 20 feet in width, 20 feet in <u>length</u>, and an unobstructed view between the grade and the lower ceiling edge of the carport of at least seven feet shall be maintained. Only one carport shall be erected within a required yard.
- <u>D.</u> Carports constructed prior to the adoption of this section shall be considered as legal nonconforming structures. Such nonconforming canopies may be repaired or replaced; however, the degree of their nonconformity shall not be increased thereby.
- (2) Solar carports. Solar carports shall be subject to the following requirements:
 - A. Setbacks. Minimum setbacks for solar carports shall be as follows:
 - i. Front yard 15 feet from the property line, provided it is attached to or immediately adjacent to the main building.

- ii. Interior side yard four (4) feet from the property line.
- iii. Side yard facing the street five (5) feet from the property line, provided it is attached to or immediately adjacent to the main building.
- iv. The sides of the solar carport that face the required rear yard may be permitted to align with the walls of the existing residence, provided the residence is located a minimum of five (5) feet from the rear property line.
- v. When a solar carport is detached and located more than 12 inches from the main home it shall not be located in the required front or side-facing-the-street yards.
- B. Solar carports shall not be permitted to exceed 20 feet in width, 20 feet in length, and an unobstructed view between the grade and the lower ceiling edge of the carport of at least seven feet shall be maintained.
- (g) *Driveways*. Driveways and parking spaces leading into a property located in single-family and townhome districts are subject to the following requirements:
 - (1) <u>Driveways</u> shall have a minimum setback of four feet from the side property lines.
 - (2) Driveways and parking spaces parallel to the front property line shall have a minimum setback of five feet from the front property line.
 - (3) Driveways and parking spaces located within the side yard facing the street shall have a minimum setback of five feet to the rear property line.
 - (4) For lots with a home built after the adoption of this ordinance, driveways and parking areas within any required yard shall be composed of porous pavement or shall have a high albedo surface.
 - (5) <u>Driveways and parking areas composed of asphalt that does not have a high albedo</u> surface shall be prohibited.

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SECTION 8. Appendix A, "Fee Schedule," of the Code of Miami Beach is hereby amended as follows:

Section this Code	Description	Amount	
	Subpart B. Land Development Regulations		
	* * *		
Chapter 142. Zoning Districts and Regulations			
	* * *	1	
	Article IV. Supplementary District Regulations		
Sec. 142-875	Sustainable roof fee, per square foot	3.00	

SECTION 9. REPEALER.

All ordinances or parts of ordinances and all section and parts of sections in conflict herewith are hereby repealed.

SECTION 10. CODIFICATION.

It is the intention of the City Commission, and it is hereby ordained, that the provisions of this Ordinance shall become and be made part of the Code of the City of Miami Beach, as amended; that the sections of this Ordinance may be re-numbered or re-lettered to accomplish such intention; and that the word "ordinance" may be changed to "section" or other appropriate word.

SECTION 11. SEVERABILITY.

If any section, subsection, clause or provision of this Ordinance is held invalid, the remainder shall not be affected by such invalidity.

SECTION 12. EFFECTIVE DATE.

This Ordinance shall take effect ten days following adoption.

PASSED and ADOPTED this	_ day of, 2017.
ATTEST:	Dan Gelber Mayor
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Rafael E. Granado City Clerk	
First Reading: September, 2018 Second Reading: October, 2018	
Verified By: Thomas R. Mooney, AICP Planning Director	

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