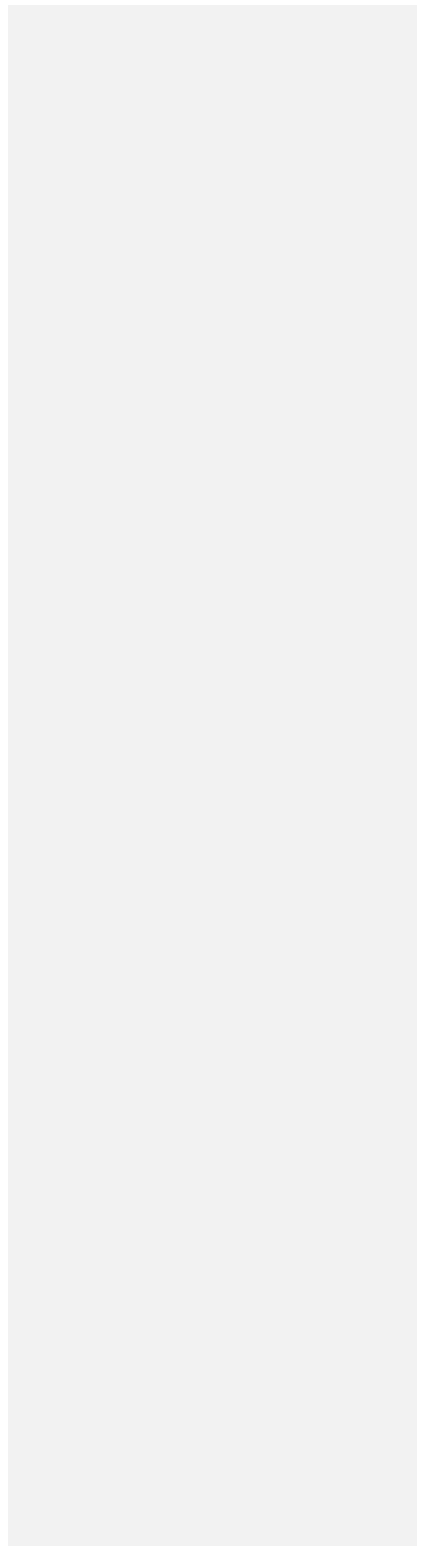


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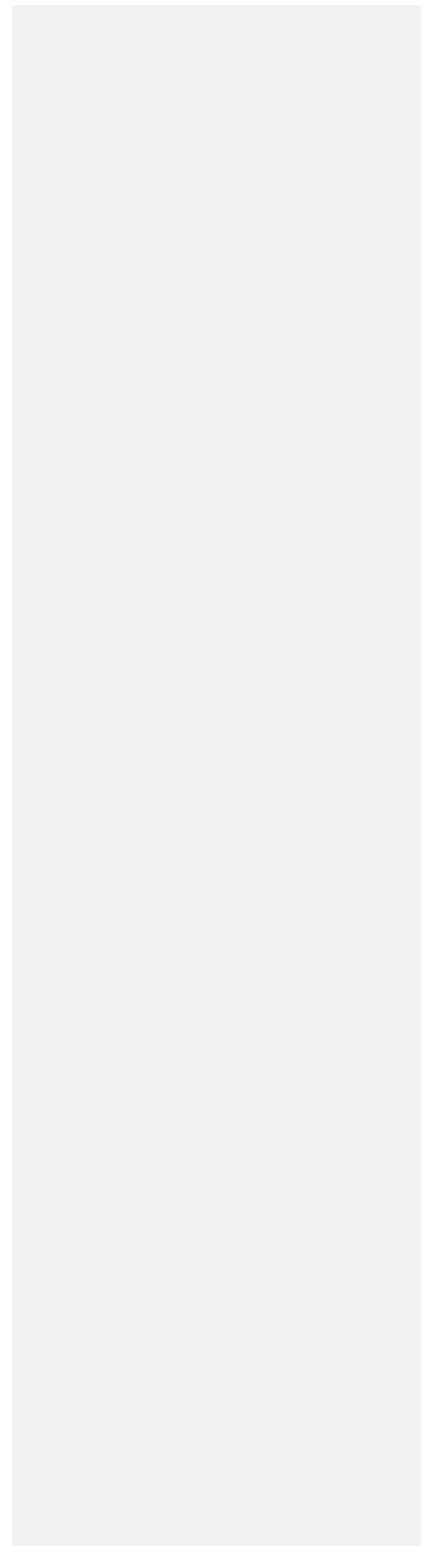
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AMENDMENTS TO MIAMI 21			
ORDINANCE	DATE APPROVED	DESCRIPTION	LEGISLATIVE ID
13235	11-18-2010	Minor and non-substantial modifications throughout the Code	10-00956zt

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General Principles

Public access waterfront walkways shall:

1. Feel public. No one should feel as if he or she is intruding on private property. The public should feel welcome and at ease to move along the entire length of the waterfront. Signage should clearly establish the public's right to use the walkway.
2. Be usable. Young and old, handicapped and joggers, lovers, fishermen, business and men and women, everyone should find the waterfront usable. Potential conflicts between active and passive users should be prevented through segregation of waterfront walk use zones. (See Design Standards below).
3. Provide visual access. The attraction is the water. All landscaping, furniture, lighting, guard rails and planters should be subordinated to enhance maximum visibility to the water. Simplicity of design is preferred. The views of adjacent private development should not be obstructed.
4. Enhance visual quality. Parking and service areas must be completely screened from the walkway. Materials, color and forms should complement the natural shoreline environment.
5. Connect to other public areas. Public parks, transit stops, thoroughfares, midblock walkways, shopping areas, and publicly accessible plazas should connect to the waterfront.
6. Take advantage of waterfront setting. Where practical, boating and fishing activities should be incorporated into waterfront designs. Elevated viewing areas, historically interpretive markers and signs are desirable. Boat access from the water to the land is encouraged.

Bulkheads or Seawalls

1. Permanent-type bulkheads, seawalls, living shorelines, or other shoreline protection structures/elements must be constructed to a minimum elevation of 6.00 feet NAVD (88) along all tidally-influenced areas. All such protective structures/elements must be designed and built in a substantially impermeable manner, certified/signed & sealed by a civil/structural engineer registered in the State of Florida, and provided with the appropriate modification details to be capable of being raised to a final elevation of 8.00 feet NAVD (88) to mitigate high tide flooding associated with realized and additional sea level rise through the year 2070. All such structures must be designed and constructed in accordance with the City of Miami's Department of Resilience and Public Works Design and Construction Standards.
2. Bulkheads or seawalls must be constructed eighteen (18) to twenty-four (24) inches in width (min.) at the top and meet all City of Miami departments' requirements. The top of the bulkhead or seawall must be at a constant elevation for the length of the bay / river walk.
3. Deviations to the requirements may be granted by the Director of the Department of Resilience and Public Works to construct bulkheads or seawalls at a height other than the standard NAVD 88 set by the City due to a justifiable request. Any deviations from the City standard bulkhead elevation where a waterfront walkway is being proposed would require the property owner to construct, on the applicant's property, a connecting transition at a consistent A.D.A. compliant width and grade to the waterfront walkway on adjacent

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**Deleted:** Bulkheads and Seawalls constructed on properties north of the Rickenbacker Causeway and along the Miami River or Biscayne Bay shall be constructed five (5) feet above National Geodetic Vertical Datum (NGVD). Bulkheads and seawalls constructed on properties south of the Rickenbacker Causeway and on Biscayne Bay shall be constructed six (6) feet above NGVD. All other bulkheads located in the City of Miami shall meet the minimum Miami-Dade County Standards.

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AS ADOPTED - JULY 2012. All requests for a deviation to the mandated seawall/bulkhead elevation must be made in writing to the Director of the Department of Resilience and Public Works and

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must include all appropriate architectural and engineering or other documentation needed to make a determination.

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### Natural Shorelines

1. Walkways along a natural shoreline or rip rap shoreline may be set back from the edge of the shoreline and meander within the waterfront setback area.
2. Areas with natural shorelines must transition to adjacent properties in elevation and alignment to create a cohesive baywalk or riverwalk circulation.

### Design Standards for Bulkheads or Seawalls

1. The top of the bulkhead or seawall must be at a constant elevation for the length of the waterfront. It must be a minimum of eighteen (18) to twenty-four (24) inches wide at the top.
2. Safety ladders of stainless steel or aluminum must be placed a maximum of 100 feet apart along the face of the seawall or bulkhead, to allow for climbing out of the water at low tide.
3. The top of the seawall/bulkhead must be six (6) to eight (8) inches higher than the surface of the adjacent baywalk or riverwalk safety zone.
4. The inside edge of the seawall/bulkhead shall be beveled.

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### Design Standards for Waterfront Walkways

Waterfront walkway landscaped areas should be landscaped with native plant materials. Shade trees are required within the Passive/Transition Zones and may also be planted along the Safety Buffer Zone, in lieu of palms, to create an alley of trees. Shrubs, low shrubs, and groundcovers (low level plantings) should be planted at the base of trees and palms to enhance waterfront walkway aesthetics and to help buffer the walkway perimeters.

The following walkway zones are listed in order from the landward edge of the seawall/bulkhead cap and progressing landward towards the private property. NOTE: the top of the bulkhead cap must be six (6") to eight (8") inches above the waterfront walkway elevation.

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### Safety Buffer Zone

Safety Buffer Zone - A minimum three (3) to four (4) foot wide area adjacent to the seawall/bulkhead. (See Plan Detail- 3' minimum where there is no planting, 4' minimum where planting beds are provided.)

1. Since railings, walls and/or other barriers are not desirable along the water's edge, waterfront users need to be warned when coming close to the water with a minimum three (3) foot wide safety buffer zone consisting of a rough textured surface that discourages walking.

2. Paving within the safety buffer zone shall be a type of cobble stone with "river rock," approximately  $\frac{3}{4}$  to  $1\frac{1}{2}$  inches in diameter, set in concrete leaving a relief of  $\frac{1}{4}$  to  $\frac{1}{2}$  inches or similar aggregate pavers with ADA domes.
3. Planting beds shall be a minimum four (4) feet wide with trees or palms planted at grade providing shade to pedestrians and low level plantings provided at the base of the trees or palms. Landscape lighting may be provided to accentuate trees or palms in this area.
4. In areas between the planting beds, a minimum three (3) foot wide uniform exposed aggregate finish such as a river rock textured surface shall be provided to warn pedestrians of the water's edge meeting Americans with Disabilities Standards.
5. Bollard lighting within the textured surface adjacent to the Circulation Zone shall be installed to provide pedestrian / pathway lighting.

### Circulation Zone

Circulation Zone – A minimum fifteen (15) to sixteen (16) foot wide unobstructed linear pedestrian walkway. (See Plan Detail- 15' minimum where adjacent plantings are provided in the Safety Zone, 16' minimum where there are no plantings in the Safety Zone.)

1. The waterfront circulation zone shall consist of a linear pedestrian walkway or promenade and shall be a minimum fifteen (15) feet wide.
2. The walkway may meander along the shoreline; however all offsets in the alignment of the walkway shall not exceed six (6 ) feet and be spaced not less than fifty (50) feet apart.
3. Obstructions to movement (trees, bollards, lighting, etc.) within the circulation zone shall not reduce the clear width of the walkway to less than fifteen (15) feet at any point.
4. The Circulation Zone shall be constructed of non-slip paving materials with high aesthetic appearance and structural qualities to support emergency vehicle access.
5. Variable textures and materials may be used to surface the promenade.
6. The promenade surface shall be at a constant elevation, and shall be accessible to handicapped persons throughout the entire length of the waterfront.

### Passive Zone

Passive Zone – A minimum three (3) foot wide area interspersed with shade trees, low level plantings, site furniture, lighting and accessories.

1. The area for sitting, accent landscaping and concessions shall be located along the inland side of the waterfront, and shall be not less than three (3) feet wide.



2. Short lengths of the passive zone may be elevated eighteen (18) to twenty-four (24) inches above the level of the promenade for enhanced bay and river views.
3. All benches shall have back rests, and their placement shall emphasize direct views of the water.
4. Site furniture may include overhead canopies, concessions, etc. and shall be confined to this zone. All furniture shall be permanently installed preferably by direct burial in concrete.
6. Accessories include benches, trash receptacles, drinking fountains, pedestrian scale light poles and landscape lighting. Appropriate additional furniture including overhead canopies or shelters, drinking fountains, etc., shall be confined to the passive zone.
7. The passive zone may be paved in plain concrete or the paver on the main circulation zone.

### **Transition and Security Zone**

Transition Zone—A minimum three (3) foot wide area, immediately adjacent to the Passive Zone to buffer private development from the waterfront walkway and collect stormwater.

1. To buffer private development from the adjacent waterfront a minimum three (3) foot wide transition zone shall border the waterfront facility.
2. This visual and functional transition from public to private space shall generally be marked by low level shrubbery and overhead shade or ornamental trees.
3. Security to limit public access to private property may be provided by fences, grade changes or retaining walls. All screens and walls shall be landscaped to reduce their visual impact on the walkway.
4. For adjacent developments that serve the public (i.e., restaurants, shops, hotels, entertainment, etc.) provision of wide, visible and easy pedestrian access to the waterfront shall be assured.
5. In general, landscaping and security barriers shall not visually screen the waterfront from adjacent active uses, such as retail restaurants, or entertainment.

### **Standards and Guidelines for Design Elements**

#### **Landscaping**

1. Palms may be used along either edge of the waterfront, but Coconut Palms or Sabal Palms are particularly appropriate for the water's edge.
2. Raised planters, if used, shall be confined to the passive zone, and all planter walls shall double as sitting walls, fifteen (15) to thirty (30) inches in height.

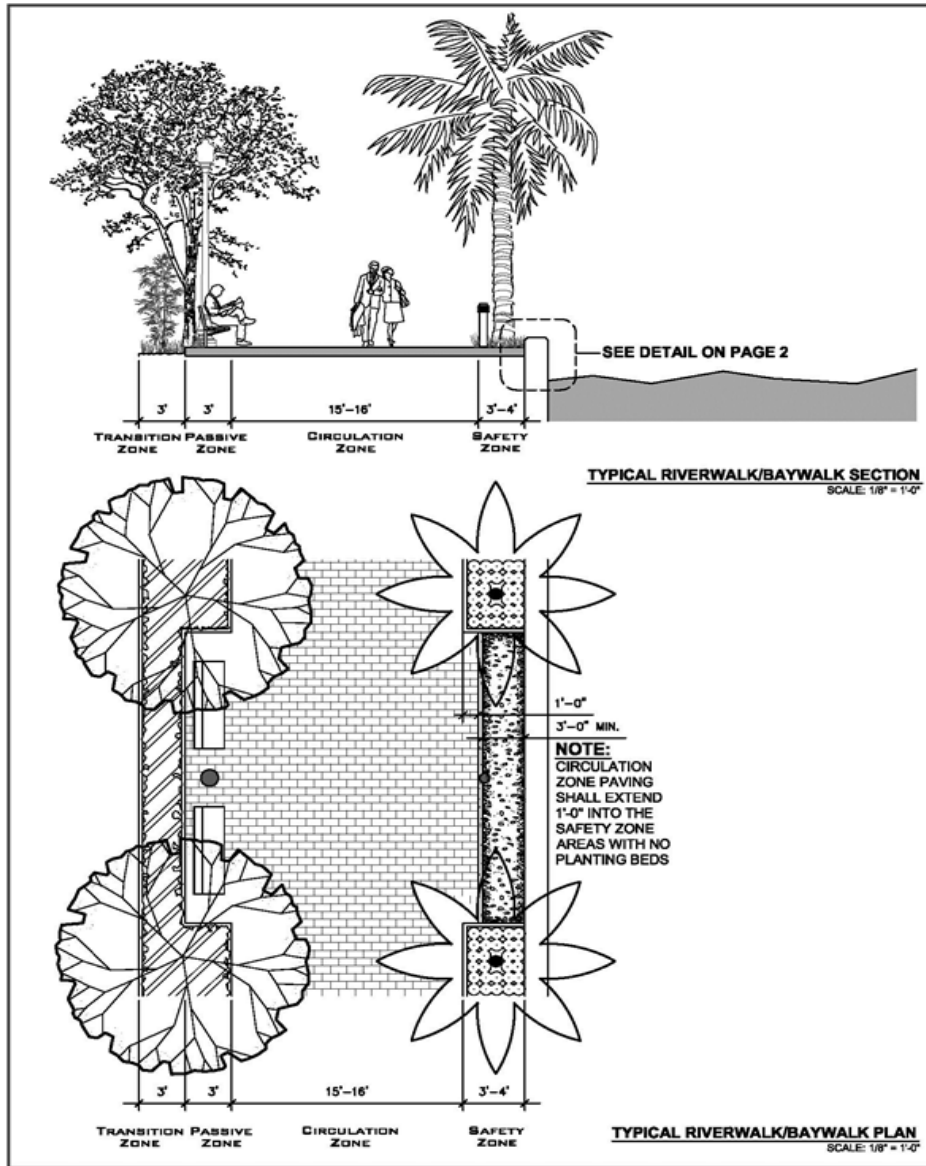
3. Plant material shall be primarily native salt-tolerant species.

### Lighting

1. Lighting at the water's edge shall be confined to eight (8) inch diameter bollards, which shall be twenty-four (24) to thirty (30) inches high and spaced approximately twenty (20) feet on center.
2. Bollards shall be one hundred (100) watt MV with down illumination not extending beyond the bulkhead line.
3. Overhead lighting shall be confined to the passive zone and consists of down lighting with lamps not over fourteen (14) feet high, 175 watt MV, and spaced approximately fifty (50) feet on center.
4. Up lighting of landscaping is encouraged.
5. Mercury vapor, metal halide lamps or similar "white" light luminaires shall be used.
6. Colored lighting, except for private signs, shall not be used.
7. Simple contemporary fixture design shall be used as opposed to highly stylized, vintage or period designs.

### Signage

1. All public access waterfront walks shall be marked with the standard "Public Shore" sign.
2. All major public access points, including park walkways, roadways, dedicated midblock walks and public plazas, shall be marked with "Public Shore" signs.
3. Adjacent accessible publicly oriented private development, such as cafes or shops, shall identify the use with signage in the transition zone.
4. Uniformly designed historic or environmental markers and descriptive plaques shall be placed in the passive zone.
5. Signage shall identify access points and adjacent activities (cafes, shops, etc.) for boaters.



REVISED: 12.04.2008

