Excerpt from BUOYANT CITY: Historic District Resiliency & Adaptation Guidelines
Report for City of Miami Beach, 2020
Shulman + Associates, Prime Consultant/Allan Shulman, Principal

1.3 GENERAL RECOMMENDATIONS

1.3.1 CONTINUE TO PRESERVE

- Conserve the urban and architectural character of historic neighborhoods.
- Affirm the ongoing, organic and human character of its historic neighborhoods as fundamental to the city's identity.
- Engage conservancy of place, cultural identity and community as intrinsic values of preservation.
- Take a broad and flexible view of what cultural and built identity actually mean going forward.
- Challenge conventional thinking about preservation and develop local historic preservation priorities.

1.3.2 RECONCILE PRESERVATION/ADAPTATION EFFORTS

- Reconcile historic preservation ordinances and practices with resiliency-oriented codes and objectives.
- Incorporate adaptation as a requirement in all preservation planning; integrate historic preservation concerns into all adaptation planning and permitting.
- Grant the Historic Preservation Board increased authority over resiliency-based decisions.
- Advocate for changes to the Florida Building Code, the National Electrical Code, FEMA's floodplain management guidelines and other national codes that emphasize the particular needs of Miami Beach.
- Authorize the City Building Official to interpret the application of these codes to historic properties in a manner that is consistent with the City's larger preservation and resiliency goals.

1.3.3 EMBRACE INCREMENTAL ADAPTATION

- Embrace an ongoing and dynamic process of learning, adjustment and implementation.
- Take immediate steps to emphasize adaptation and resilience in building/renovation projects.
- Adopt adaptation strategies that consider a mid- to long-term timeframe in order to instrumentalize investment.

1.3.4 DESIGNATE EXPERIMENTAL ACTION AREAS

- Designate the study areas as Experimental Action Areas.
- Prototype new codes and process mechanisms in these areas, and allow developers to explore adaptive redevelopment procedures.
- Adopt an integrated and consistent approach in each Experimental Action Area.

1.3.5 DEVELOP A VISION

- Adopt strategies that effectively govern future redevelopment in historic districts of Miami Beach.
- Explore adaptation strategies particular to each neighborhood, applying either the Adapt in Place or Raise option, but not both; and conceive of code revisions that support these models.
- Emphasize values already present in Miami Beach's urban and preservation ecosystems, like respect for existing architecture, adaptive use, intensification of density and layering of new and old architecture. Emphasize the distinct urban paradigms of the city.
- Embrace the experimental nature of the current predicament.

1.3.6 INCENTIVIZE ADAPTATION

- Incentivize adaptation of historic properties and districts over new construction.
- Leverage the economic vibrancy of Miami Beach to encourage developers to build/adapt a new resilient layer of the city.
- Consider phased resiliency bonuses for adaptation projects that employ resiliency strategies, are brought up to current Building Code, and incorporate future-proofing tactics.

1.3.7 INTEGRATE PUBLIC SPACES & RIGHT OF WAYS INTO THE VISION

- Develop a plan for public infrastructure, right-of-ways and public places in historic districts that is consistent with the adaptive character of those districts.
- Consider public areas from a three-dimensional point of view, understanding that the variable raising of public and private realms will challenge current understandings of the historic district.
- Anticipate the complex relationship that will develop as the adaptation of streets, sidewalks, yards and buildings is staged at different levels, creating a multi-level city.
- Consider ecological goals in its future infrastructure planning.
- Consider the capacity to serve as a national leader in using its public realm as a test-bed in resilient and multi-functional infrastructure.

1.3.8 INTEGRATE LANDSCAPE INTO THE VISION

- Emphasize the power of landscape design to improve the resilience of historic buildings and districts.
- Align the landscape standards for the city's historic districts toward an ecological approach, considering the performance of various species, the need for water storage and drainage and anticipated larger and saltier volumes of water.
- Emphasize landscapes that tolerate or thrive with water.

- Consider the resilience of various species as a factor in future Certificate of Appropriateness reviews and in the development of future master plans.

1.3.9 EMPHASIZE SOCIAL EQUITY

- Affirm the already diminishing role of its historic districts as reservoirs of affordability and social equity.
- Develop active guidelines that support retaining the mix of income groups that characterize the city.
- Offer development incentives for low cost housing and microhousing, and should consider requirements to preserve some low and moderate-cost housing in adapted properties that benefit from these incentives.

1.3.10 CELEBRATE THE NARRATIVE OF ADAPTATION

- Promote the city's evolving resilience as part of the story of Miami Beach.
- Emphasize that architectural changes to contributing buildings in order to enhance resilience should be legible and interpretable as a visible layer of Miami Beach's ongoing rich history.
- Collaborate with city residents, professionals and academic institutions in finding imaginative ways for Miami Beach to leverage its status as an adapting city as an intentional part of its identity.
- Celebrate Miami Beach's creative identity and cultural industries through art and placemaking initiatives.
- Highlight the way historic preservation frameworks are departing from museum-city orientation and creating an identity-preserving focus to resiliency efforts.

2.5 RECOMMENDATIONS | WATER RELATED

2.5.1 DESIGN FLOOD ELEVATION

Following projections from the South Florida Climate Change Compact (Compact) out to 2080, data suggests that water levels during cyclical and repetitive events like King Tides and rain events will exceed the current standard of BFE +1 (9.0 NGVD) in the Flamingo Park and Collins Waterfront historic districts. Tracking current data, King Tides may reach 7.9' NGVD and 10-year rain event flooding may reach 8.6' NGVD. The City of Miami Beach should re-examine the determination and application of Base Flood Elevation in order to promote and facilitate new development that pre-loads anticipated water conditions:

- Explore whether a more flexible standard for adapting historic properties is appropriate.
- Consider a new standard: Design Flood Elevation (DFE).
- Consider at what point the application of DFE to existing historic buildings is counterproductive.
- Agree provisionally on a set of flood projections, either following the Compact or other projections. For the purpose of this study, 10.0 NGVD is used as a project DFE.

2.5.2 RESISTANCE VS RESILIENCE

By 2080, the Compact projects that water levels during a 100-year storm surge will exceed current standard of BFE +1 (9.0 NGVD) in the Flamingo Park and Collins Waterfront districts. Tracking this data, a 100-year storm surge may reach 18.1' NGVD.

- Storm surge flooding raises complex issues, because raising ground floor levels and their underlying structure to meet these flood levels might imply an extraordinary and unreasonable amount of raising.
- Preliminary indications show the current average ground floor elevation in Flamingo Park district at 6.5' NGVD and the current ground floor elevation in Collins Waterfront district at 5.5; using an average floor-to-floor elevation of 10', this would put even the second floor of most buildings at risk.
- Adapting historic building by raising floors would imply raising floor levels between 11.7' and 12.7' above current elevation, or more.

Resistance

- Adapted building structures should positively resist cyclical and frequent occurrence water events (King Tide, High Tide, Low Tide, rain events, etc.). This will involve either raising floor levels, or dry- or wet-floodproofing ground floors and their structures to the city's new DFE.
- This work may include reconstructing floor levels, changing the materiality of the ground floor, and at times altering ground floor use.

Resilience

- Adapted buildings should be upgraded to be resilient to infrequent storm surges (100-year storm surge). This means taking the approach of accepting the water and bouncing back as quickly as possible.
- Resilience would involve upgrading the structure and shell of the building to withstand storm surge impacts.
- It may involve wet-floodproofing buildings to anticipated storm surge levels (for instance by incorporating flood vents), material change in structure and the use of flood resistant materials in construction and finishes.

5.8 RECOMMENDATIONS | RESILIENCY AND PRESERVATION RELATED

5.8.1 REVIEW HISTORIC DESIGNATIONS

The City of Miami Beach should review local and national district designations to study how adaptation will affect those designations. The City should consider changes/amendments to these designations that would prepare them for dealing with likely issues connected with adaptation. Where these designations are constructed on architectural criteria alone (i.e. the Miami Beach Architectural District), expand the criteria to include cultural and other criteria. Expand the platform of significance to support the relevance of the districts going forward.

5.8.2 SELECT A RESILIENCY STRATEGY

The City of Miami Beach should establish Experimental Action Areas (EAA) in each study area, or a subdistrict of a study area, in order to test resiliency strategies and approaches. Within each EAA, it should adopt a coordinated, integrated and consistent resiliency strategy (for instance, select the Adapt-in-Place strategy, or the Raise strategy, but not both). Within each EAA, it should emphasize goals associated with the selected strategy. For instance, emphasize contextual appropriateness in Adapt-in-Place strategies, and the connection of building to ground –stoops, planters, entranceways --in Raise strategies. The City should allow a period of experimentation, and commission a review of the results. The team vision for implementation of each strategy is further explained in Chapter 6..

5.8.3 DEVELOP A TIERED PRESERVATION MODEL

The City of Miami Beach may consider different levels of preservation for different types of structures.

Tiering is a system in use abroad, such as in the UK, where the Historic England Grading System has been in place since 1947. Under the English system, historic buildings fall into one of three grades, based on differing levels of significance: Grade II buildings are of special interest, warranting every effort to preserve them; Grade II* buildings are particularly important and of more than special interest; Grade I buildings—the highest grade—are of exceptional interest.

In Miami Beach, such a tiering system may be based on civic/artistic quality or current degree of authenticity. The system may emphasize more stringent preservation requirement to capital structures, while allowing more flexibility in the vastly larger number of modest hotels, residential and commercial buildings that make up the fabric of the city. Note: such a system should not be construed as selecting what to preserve, since most buildings that make up Miami Beach historic district are modest structures, and the districts are significant for the way these structures work together to establish character and identity. However, within this fabric, the varied resilience characteristics of contributing buildings, and

the greater importance of the building façade in establishing significance, argue for more flexibility. The tiered preservation system could work as follows:

- Tier 1: highest degree of civic/artistic quality and degree of authenticity
  Example: the Miami Beach Post Office (Howard Lovewell Cheney, 1937)
  Allow/require building elevation to minimize impacts to contributing structure. Require low-impact solutions with minimal effect on interior resources.

- Tier 2: moderate degree of civic/artistic quality and degree of authenticity
  Example: An oceanfront Art Deco hotel facing Lummus Park, such as The Breakwater (Anton Skislewicz, 1936)
  Allow creative approaches to adaptation, including building elevation; allow some flexibility in pursuing adaptive use of ground floor, prioritize wet floodproofing as a low-impact solution to infrequent flooding.

- Tier 3: lowest degree of civic/artistic quality
  Example: modest residential building type
  Focus on maintaining the facades and elements that contribute to the continuity of the surrounding district. Allow the most flexibility in the interior of the building, including reconstruction with adaptive materials. Allow elevation in Experimental Action Areas where Raise has been selected as the appropriate adaptation strategy. Follow resilience design guidelines, enforced by the HP Board, for most renovations.

Note: Under this system, the City of Miami Beach should tier all buildings (in the same way all buildings are currently classified as contributing or non-contributing). For the purposes of this study, the team would consider all buildings in the Flamingo Park study area and most buildings in the Collins Waterfront study area as Tier 3 structures. Hotels in the Collins Waterfront study area may be considered Tier 2.

5.8.4 DEVELOP A TIERED APPROACH TO HISTORIC RESOURCES

The City of Miami Beach may consider tiering of historic resources within each structure/site. Such a tiered system might give further guidance to the Historic Preservation Board in evaluating proposed rehabilitation projects in the context of implementing adaptive measures. The tiered resources model could work as follows:

Primary Resources

- Building skin facing streets and primary sideyards/courts, including all architectural features
- Projecting and decorative façade features, such as balconies, eyebrows, bas-relief
- Built-in exterior stairs, stoops, planters, railings
- Site features, such as terraces, patios, site walls

- Historic signage

Secondary Resources

- Building skin facing secondary (service or inaccessible) side yards, alleys
- Lobbies and other public spaces (except in hotels and civic buildings)
- Interior historic resources, like fireplaces, characteristic plaster moldings

Tertiary Resources

- Other unit interior areas

5.8.5 DEVELOP A RESILIENCY DESIGN STANDARD

The City of Miami Beach should set resiliency objectives, but be open to different levels of adaptation. It should set adaptation standards for new rehabilitation projects, and incentivize greater resilience. For instance, it should require or incentivize that ground floor structures be reconstructed in concrete (wet or dry-floodproofed if commercial); use only flood-resistant building materials and finishes below projected storm surge levels; and install water storm storage systems in the space below raised buildings. However, it should allow a variety of levels of engagement, allowing property owners to take a phased approach in fortifying their structures against water (for instance by using Take Action Now strategies where possible; see Chapter 6). As a guide for adherence to requirements, and for incentivization, it should establish tiered adaptation levels.

5.8.6 RECONCEIVE HISTORIC PRESERVATION STANDARDS

The City should develop revised and highly localized historic preservation standards and guidelines that complement or replace the Secretary of Interior Standards for Rehabilitation. These new guidelines should address issues posed by the two main strategies available for building adaptation: Adapt in Place and Raise.

Specific suggestions for a new historic preservation standard include:

- Prioritize contribution to the character of the historic district and urban consistency by emphasizing the typological characteristics of buildings, and the importance of facades, planters, stoops, and Miami Beach's characteristic yards and courtyards.
- Deemphasize in modest contributing residential and commercial buildings the importance of the interiors, and the integrity and authenticity of physical properties not associated with the public realm.
- Remove the existing requirement that historic structures below new multi-story additions, and facades in particular, be demolished
- Allow flood plain waivers, but favor strategies that increase the resilience of the ground floor.

5.8.7 PROMOTE INCENTIVES FOR ADAPTIVE REHABILITATION

The City of Miami Beach should consider incentivizing adaptation of historic properties/districts, over new construction, as a tool of resiliency. It should consider establishing a resiliency standard for adaptation in order to evaluate such incentive bonuses. It should consider granting incentives to adaptation projects that fully implement a resiliency strategy that meets the City's minimum standard and which are brought up to current Building Code. Bonuses should be implemented in a phased way that rewards greater efforts toward adaptation. See Section 5.5 for a full discussion of incentives.

5.8.8 DEVELOP A RESOURCE VULNERABILITY INDEX

The City of Miami Beach should integrate resource vulnerability and significance as a method of evaluating rehabilitation proposals. The City should remap its districts with new layers of information, including properties that are vulnerable due to issues related to elevation of lot or adjacent grade; elevation of basement/first floor; construction type/material content; wind resistance; and vulnerable population as owners or inhabitants.

5.8.9 UNIFY RESILIENCY AND PRESERVATION REVIEW UNDER THE HISTORIC PRESERVATION BOARD

The City of Miami Beach should unify historic preservation and adaptation decision making under the Historic Preservation Board, which should be granted increased authority over resiliency-based decisions (in the same way it was granted increased authority over zoning variances, etc.). Require for any new rehabilitation project a Resiliency Resources Report (RRR) documenting existing conditions and proposed adaptation measures.

5.8.10 DEVELOP THRESHOLD DOCUMENTATION

As the City confronts greater threats from flooding, and embarks on a new era of adaptive rehabilitation, it should employ state-of-the-art imaging technology to document the current state of its existing historic districts and resources. Such documentation would serve as a baseline for evaluating proposed changes, and could be an invaluable resource in any post-storm event reconstruction effort. It would preserve an accurate record of historic properties that can be used in research and other preservation activities. It could also be configured to bolster the very incomplete HABS documentation on file at the National Park Service. The City should solicit documentation proposals from professionals and local academic institutions. At a minimum, this documentation should cover photography, photogrammetry, imaging from drones, 3D laser scanning, and enhanced GIS database development.

5.8.11 NEGOTIATE PROGRAMMATIC AGREEMENTS

The City of Miami Beach should develop a Programmatic Agreement with State and Federal preservation offices that streamlines Federal action in applying alternative mitigation strategies appropriate to Miami Beach. Such an agreement should cover Federal action in National Register districts requiring an 'undertaking', as defined under Section 106 of the National Historic Preservation Act (NHPA), but also Historic Preservation Tax Credits and the status of districts listed on the National Register of Historic Places. Such a programmatic agreement may also be possible with Miami-Dade County, for the purposes of County ad-valorum tax credits. The programmatic agreement should encompass the issues that will be encountered under mid and long-term adaptation strategies, and with incentivization of resilience bonuses. Programmatic agreements should consider the large number of individual architectural and historic resources in Miami Beach districts, by developing systems that can be applied to multiple buildings and districts.

5.8.12 DEVELOP COMMUNITY ADAPTATION FUND

Establish a community adaptation fund that would provide low-cost loans to projects meeting both resiliency and social equity goals. Such a program might be funded by application fees for development outside historic districts in Miami Beach.

5.8.13 ESTABLISH CONSISTENT STANDARD FOR BUILDING RAISING

Where buildings are raised, the City should establish and enforce a consistent standard for such raising for each district. This standard might, at a minimum, include height of raise, the question of raising the building only, the building and its attendant circulation systems, or the building and lot together. An explanation of the differences in approach is demonstrated in Chapter 6.

5.8.14 MITIGATE BUILDING CODE COMPLIANCE WITH STANDARDS FOR NEW CONSTRUCTION

As a way of reducing the cost of adaptive rehabilitation, empower the City of Miami Beach Building Official to carve exemptions in practice for resilience in historic districts. Allow resiliency upgrades without triggering full code upgrade to existing structures, or compartmentalize code upgrade areas to allow experimental changes.

5.8.15 IMPLEMENT LAND USE REGULATORY CHANGES

The City should introduce zoning modifications that encourage new behaviors in EAAs. Zoning amendments that combine preservation and adaptation objectives may replace Building Codes as the most powerful tool determining and propagating adaptation models. Such changes may include:

1. Allowing mixed-uses in RM-1 district; emphasize adaptive use of ground floor areas below Design Flood Elevation.

2. Counting ground floor areas below BFE +1 at 50% of calculated floor area (similar to how basements are currently treated).
3. Reconsidering the open nature of Freeboard in rehabilitation projects. Establish a single freeboard target in each district to maintain consistency of approach.
4. Incentivizing resiliency measures in a phased or stepped manner, awarding the highest incentives to projects that meet current Building Code requirements and meet the highest standard of resiliency.
5. Incentivizing 'future-proofing' tactics with additional Floor Area. Such tactics may include the use of alternative energy systems, like solar panels and windmills, as well as gray water systems.
6. Incentivizing Social Equity goals and targets, like low-cost housing in adapted buildings, with additional Floor Area through FAR or other bonuses
7. Reducing the average unit size requirements for adapted housing
8. Removing the parking requirement for adapted housing
9. Adopting Miami-Dade County inclusionary zoning provision
10. Creating block-wide pool/credit program to incentivize lower-cost, affordable and inclusionary housing
11. Promoting greater physical accessibility to rehabilitated/adapted properties, using the FHA and ADA guidelines where appropriate, even if exempted.

5.8.16 RECYCLE BUILDINGS AND BUILDING MATERIAL

Emphasizing new regulations that promote the preservation of existing structures of development of new structures. Where buildings or building components must be demolished, require recycling as a preservation and resilience strategy.

- Allan Shulman/March 2020