THE PROGRESSION OF HISTORIC PRESERVATION IN MIAMI BEACH
AND THE CHALLENGES OF SEA LEVEL RISE

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ABBREVIATIONS

100RC = 100 Resilient Cities
AIA = American Institute of Architects
BFE = Base Flood Elevation
CBA = Cost-Benefit Analysis
CRO = Chief Resiliency Officer
CRS = Community Rating System
DHT = Dade Heritage Trust
DRB = Design Review Board
FEMA = Federal Emergency Management Agency
HPB = Historic Preservation Board
HUD = Department of Housing and Urban Development
LEED = Leadership in Energy and Environmental Design
MDPL = Miami Design Preservation League
NFIP = National Flood Insurance Program
NHPA = National Historic Preservation Act
NOAA = National Oceanic and Atmospheric Administration
NPS = National Park Service
RCAP = Regional Climate Action Plan
SFRCC = Southeast Florida Regional Climate Compact
SFWMD = South Florida Water Management District
SLR = Sea Level Rise
SROI = Social Return on Investment
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ABSTRACT

Climate-based disasters caused $46 billion in damage and killed at least 138 in the 48 contiguous United States last year, with inland flooding emerging as the costliest weather event for the first time since 1997.\(^1\) The number of billion-dollar occurrences in 2016 was the second highest since 1980.\(^2\) Combined with increasing sea levels on prone low-lying coastal areas, disaster mitigation has been a top concern of municipalities. Miami Beach currently averages just four feet above sea level, and has already begun to rigorously experiment with resiliency infrastructure.\(^3\) This is especially concerning as experts estimate beachfront property in Miami-Dade County to be valued at $15 billion, with over $3.5 trillion in losses by 2070.\(^4\) This thesis examines a chronological progression of historic preservation in Miami Beach as a case study for understanding and applying past lessons learned for future integration within citywide resiliency planning and adaptation.

Current conditions and future constraints necessitate timely, proactive action plans, with at least 28% of historic resources at risk by 2050, and 56% by 2100.\(^5\) Understanding how municipal policies were accomplished, the compromises that had to be made, and historical reactions to past challenges will help Miami Beach move forward as a city at the forefront of applying solutions and adapting to concerns between climate change resiliency and historic resources. The past success of economic and architectural revitalization in Miami Beach through historic preservation needs to be applied as a future societal benefit with positive sustainability contributions in the face of the inevitability of sea level rise. The City of Miami Beach should integrate historic preservation into resiliency planning to allow the expenditure of adaptation of historic structures as municipal capital improvement projects. While the ideal scenario would involve federal and state contributions, the current neoliberal governmental environment should rely mainly on increased municipal funding resources.\(^6\) This thesis demonstrates their importance not only as “public goods”, but also as drivers of economic, architectural, and environmental success, which deserve the same amount of fiscal attention as large-scale infrastructure projects currently underway.

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2 It was the first time that more than two inland flooding events caused losses exceeding $1 billion each. Hurricane Matthew in October and flooding in Louisiana in August topped the 2016 list causing $10 billion in damage each. Matthew killed 49 people in the U.S., while 13 died in Louisiana’s floods. “Billion-Dollar Weather and Climate Disasters: Overview,” National Oceanic and Atmospheric Administration, https://www.ncdc.noaa.gov/billions/. Accessed February 13, 2017.
3 The Miami metropolitan region has the greatest amount of exposed financial assets and 4th-largest population vulnerable to sea level rise in the world. The only other cities with a higher combined (financial assets and population) risk are Hong Kong and Calcutta; Gus Lubin and Mike Nudelman, “Rising Sea Levels Could Cause Staggering Damage To These Cities,” Business Insider, April 22, 2014.
5 Detailed geospatial analyses in Chapter 4, Section 2.
6 ‘Neoliberalism’ is defined as “a modern politico-economic theory favoring free trade, privatization, minimal government intervention in business, reduced public expenditure on social services, etc.;” Collins English Dictionary, 2012.
1.1. INTRODUCTION

Today, Miami Beach remains a dominant international tourist destination with a robust imagery of oceanfront Art Deco properties. However, from the late 1970s through the 1980s, Miami Beach was experiencing a nadir in its historically boom and bust economy. As an epicenter for crime, tourists were attracted to disparate locales and the city was deteriorating from within, leading to increased abandonment. This thesis provides a chronological overview of the progression of an historic preservation ethos and highlights fundamental advancements in municipal policymaking: from the pioneering early history and development of Miami Beach at the turn of the 20th century, through the economic development incentives of the 1970s and 1980s, to the present municipal implementation of historic preservation in resiliency planning. An evaluation of this evolution and its regulatory practices, patterns of political dynamics and lessons learned can help address present and future challenges for heritage resources. Following principles absorbed from its past dependence on historic preservation as a policymaking tool for economic and architectural revitalization, the ability to integrate these tools within resiliency planning to create a “vibrant, tropical, historic community” through environmental revitalization will prove fortuitous.1

Figure 1.1: Miami Beach from oceanfront
Figure 1.2: Rooflines in Miami Beach Architectural District

The city’s ecological record as a porous dredge and fill foundation is currently reinventing itself through infrastructure improvements, but the question endures with the adaptation and solutions for its historic resources, of which much of the city’s employment relies on through tourism revenue. Multiple layers of resiliency defense including beach renourishment, dune systems, elevation of structures, and strengthened building code standards will continue the sustainable trajectory of Miami Beach for future generations, but threatens the accepted notions of integrity, authenticity, and adaptation in current historic preservation standards. The success of these transitions can only be

1 The motto for City of Miami Beach agencies is “We are committed to providing excellent public service and safety to all who live, work and play in our vibrant, tropical, historic community.”
measured in forthcoming years, however historical precedents demonstrate the remarkable narration of Miami Beach as a paradigm of survival, one of genuine resilience.

1.2. RATIONALE

A current gap in knowledge of the effects of historic preservation regulation in Miami Beach from its inception of the 1983 Historic Preservation Ordinance and the future challenges of sea level rise were the primary objectives for research. Though there are studies relating to post-Katrina New Orleans and the post-Sandy New York-New Jersey area, no contemporary studies particular to Miami Beach exist to examine the future architectural and policymaking vision. This research is timely and relevant due to the geographic constraints, inevitably of sea level rise, and the vast quantity and importance of historic resources within the city. Currently composed of 7 square miles of land mass, 29.81% of all buildings and 25.03% of all land area are under historic preservation regulation.  

Topographic geospatial analysis confirms that 28% of tax parcels within either local and National Register historic districts will intersect at a two foot elevation of sea level rise, and 56% at a four foot elevation. With two feet of sea level rise predicted by 2050, quick and proactive action to decide the future of Miami Beach’s historic resources will demand immediate municipal policymaking attention.  

Examining historical progressions, current conditions, and future constraints, an evaluation of the sequential processes of decision-making can be applied. The values ascribed to historical resources will inform forthcoming revisions of the municipal Historic Preservation Ordinance. Zoning and building code amendments, which will eventually need to allow retrofitting and adaptation of existing historic properties, make prospective policy implementation another critical moment in Miami Beach’s historic preservation movement. This thesis will address the context of these issues and recommend creative opportunities for the integration of historic resources to robustly contribute to resiliency planning.

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2 Information obtained from City of Miami Beach Planning Department, as of 2009.
3 Sea level rise projections are based on estimates from the Southeast Florida Regional Climate Change Compact, 2012.
5 On January 6, 2017, the National Park Service launched a finalized version of their “Cultural Resources and Climate Change Strategy” cementing these proposals as a top priority for their organization.
1.3. RESEARCH OBJECTIVES

This thesis has three primary objectives to rationalize lessons learned from Miami Beach’s progression of an historic preservation ethos: detail the history of the historic preservation movement and the evolution of values ascribed to heritage resources; understand the patterns of political and societal influence in the advancement of municipal historic preservation regulations; and determine the challenges and opportunities for integration of historic preservation in future resiliency planning goals. These three focus areas were influenced by the following questions:

A. What (Background)

• What are the historical valuations of historic resources in Miami Beach and how have these community standards influenced and directed the evolution of municipal preservation policies?

B. Why (Challenges and Opportunities)

• Why have the realms of political, economic, and historic preservation-oriented advocacy shifted over the past 40 years in Miami Beach?

C. How (Recommendations)

• How can Miami Beach integrate past successful preservation policies into a holistic view of resiliency plans currently being developed by the city?

For Miami Beach, this will be significant as the city once again reimagines what its future expresses and how to represent their unique architectural qualities in a competitive tourism market. The federal government advocates three solutions for flood hazard mitigation: elevation, relocation, or demolition, prompting historic preservation to reassess its societal and communal values. Through the lens of cost-benefit and social-benefit analyses, this thesis will look to the city’s recurring history of resilience and the central role that historic preservation tools have played in the economic, architectural, and cultural recovery of the city.

1.4. INTERGOVERNMENTAL STAKEHOLDERS
This following outlines the entities that the City of Miami Beach coordinated with for their “2025 Comprehensive Plan” and identifies the intergovernmental relationships and stakeholders involved. Of these organizations, the following have current historic preservation objectives: State of Florida Division of Historic Resources, Miami Design Preservation League, Florida Trust for Historic Preservation, and Dade Heritage Trust. The Miami Design Preservation League is the only active advocacy organization focusing on Miami Beach currently.

Adjacent municipalities:
- Miami
- North Bay Village
- Surfside

Miami-Dade County:
- Planning Department
- Department of Environmental Resource Management
- Water and Sewer Department
- Office of Emergency Management
- Miami-Dade Transit
- Public Works
- Metropolitan Planning Organization
- Biscayne Bay Shoreline Development Review Committee

Regional:
- South Florida Regional Planning Council
- South Florida Water Management District

State:
- Department of Community Affairs
- Department of Transportation
- Department of Natural Resources
- Department of Environmental Regulation
- Division of Historical Resources

Others:
- Miami-Dade County School Board
- The Housing Authority of Miami Beach
- Miami Beach Community Development Corporation
- Miami Design Preservation League
- Florida Trust for Historic Preservation
- Dade Heritage Trust
- U.S. Department of Housing and Urban Development

6 The “2025 Comprehensive Plan” was effective July 1, 2011 and issued the following mission statement: “We are committed to providing excellent public service and safety to all who live, work, and play in our vibrant, tropical, historic community.” Full version can be found online, http://www.miamibeachfl.gov/WorkArea/linkit.aspx?LinkIdentifier=id&itemId=65891&libId=68869. Accessed April 2, 2017.
1.5. DEFINITIONS

In order to communicate the need for adaptation efforts, clear terminology of issues surrounding resiliency efforts must be described. Mitigation is categorized by the Department of Homeland Security as “the social attempt to reduce the occurrence of a disaster, to reduce the vulnerability of certain populations, and to more equitably distribute the costs within the society.”

Adaptation “involves efforts to limit vulnerability...through various measures, while not necessarily dealing with the underlying cause of those impacts.” The Intergovernmental Panel on Climate Change defines adaptation as “an adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities.”

Adaptation of historic resources will be a focus, rather than historic resources as a positive contributor to long-term mitigation efforts.

From the City of Miami Beach, sustainability “refers to the extent which a system in its current state will be able to meet the economic, environmental, and social needs of future generations, and Sustainability Plans are “guiding documents designed to help a community plan and act more sustainably by providing structure to its long-term and short-term resource management and policy decisions.” Resiliency addresses more dramatic change than sustainability and is defined as “emphasizing redundancy and expecting disaster, a series of constant crises throwing systems out of balance.” In urban planning, resilience is defined as “the capacity of a system to absorb disturbance; to undergo change and still retain essentially the same function, structure, and feedbacks.” This thesis focuses on the use of historic preservation to provide a sustainable tool in the implementation of citywide resiliency.

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1.6. METHODOLOGY

This thesis was developed through the examination of a myriad of resources: archival research of the city’s urban and media development, a literature review of existing historical narratives and articles, comparative regional and municipal policy reviews, qualitative interviews with key stakeholders, comparative photographic analyses, case studies particular to planning for flood hazards, geospatial analyses, and current discussions in the wider climate change-heritage arena. The conclusions derived from these analyses fostered lessons learned for future application of historic preservation policymaking and its integration with resiliency planning.

Figure 1.3: Outline of research objectives that lead methodological approaches

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<th>Chronological progression</th>
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<td>Historic preservation</td>
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<td>Reevaluate social and environmental contributions of historic preservation</td>
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<td>Necessity for funding assistance outside municipal controls</td>
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<td>Reactionary policymaking cannot transpire with sea level rise</td>
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<td>Translate economic and architectural resilience to the future of environmental resilience</td>
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Integration of historic preservation within municipal resiliency planning

Figure 1.3: Outline of research objectives that lead methodological approaches
1.6.1. Archival research

Extensive archives and research were available as primary resources. A popular phrase states, “Few people are born in Miami Beach, but many choose to be from here.” This passion for the city has created a manifold of informative resources. Primary research was completed at History Miami, the Miami Design Preservation League archives, City of Miami Beach online archives, University of Miami libraries, and the Miami-Dade Public Library Collections. This research augmented secondary sources.

1.6.2. Literature review

Early development and architectural histories of the city proved to be invaluable assets. The context of understanding condensed in these resources allowed an extensive inquiry into the thesis research objectives. Academic research provided quantitative evidence of relationships to economic development and preservation incentives that currently underpin the successes of increased historic preservation regulations in Miami Beach. However, a lack of resources particular to the results of historic preservation planning confirmed the need to conduct this research. Relevant books, articles, and academic resources highlighted a robust historical narrative, however no analysis of how historic preservation municipal planning will be thought of in the future currently exists.

1.6.3. Comparative regional and municipal policy review

Recent regional compacts have dictated municipal reactions to resiliency planning. A comprehensive review of these documents underscored the lack of historic preservation planning inherent in these documents. Documents from the City of Miami Beach planning department and commission notes from the Sustainability and Resiliency committee were obtained to understand the Key Intended Outcomes (KIO) of the 2008 Strategic Plan which listed “Enhance the Environmental Sustainability of the Community” as a clear objective. The online archives of meeting minutes, video documentation and presented items were key to understanding the aims of current municipal resiliency discourse and how historic preservation can be integrated. The existing framework will inform future policymaking, and this gap served as a basis for concluding recommendations.

13 City of Miami Beach’s Sustainability and Resiliency Committee was established in spring 2009. Information can be found online here, http://web.miamibeachfl.gov/cityclerk/scroll.aspx?id=77916.
1.6.4. Qualitative interviews

Interviews with experts from varying backgrounds provided direction in how the past can inform the future of Miami Beach, as well as current planning from community thought leaders. Among those interviewed were a City Commissioner, an early South Beach real estate investor and son of Barbara Baer Capitman, an initial MDPL and MDCDC board member, a prominent conservator, the DHT Executive Director, the Preservation Manager for the City of Miami Beach, and the Senior Manager from the NTHP’s Green Lab. These interviews were crucial to gain timely insight and inform concluding recommendations.14

1.6.5. Comparative photographic analyses

To understand past results of historic preservation regulatory implementations, comparative photographic sequences have been interspersed to demonstrate the link between policymaking and the subsequent built environment. As a visual tool, these comparisons were imperative to underscore the concluding recommendation of proactive historic preservation advocacy in the face of imminent sea level rise.

1.6.6. Geospatial analyses

Lack of GIS data specific to historic resources and sea level rise in Miami Beach prompted a geospatial study of percentages of tax parcels affected at two and four foot intersects, as well as a comparative to the entirety of the city. Results demonstrate the immediacy for action and provide additional choropleths which map individual historic districts and their affected resources for targeted action.

1.6.7. Current discussions in the Climate Change-Heritage exchange

A broader examination of current events was fostered through an email listserv entitled “Climate Change-Heritage Discussion Group” to help facilitate exchanges from international professionals on the topic of climate change and cultural heritage.15 Throughout the course of

14 Full transcripts of the interviews are available in Appendix C.
15 The listserv is hosted by the Union of Concerned Scientists (UCS) and will be jointly administered by staff from UCS and the National Trust for Historic Preservation.
research, the completion of a 15-week certification from the United Nation’s Sustainable Development Solutions Global Initiative (SDG Academy) on “Sustainable Cities” identified issues of urban sustainability.\textsuperscript{16} Actions centered upon the improvement of urban governance and financing for sustainable development.\textsuperscript{17} These resources provided a context from a local to universal level of the most recent discussions taking place in communities facing similar challenges as Miami Beach.

### 1.6.8. Supplementary Appendices

In Appendix A, a chronology separated by theme (historic event, policy, historic preservation, and urban development) highlights important aspects of the progression of historic preservation implementation. In Appendix B, case studies explore prevailing themes of resiliency planning (the Netherlands), reaction to disaster events (Galveston), tourism and flood hazards (Venice), and conflicts of sea level rise adaptation (North Beach in Miami). In Appendix C, interview transcripts provide qualitative discussions of the future constraints between historic preservation and sea level rise. In Appendix D, relevant sections of the “City of Miami Beach’s Regional Climate Action Plan” were included to compare resiliency objectives and integrate historic preservation.

### 1.7. LIMITATIONS

Issues of the integration of historic preservation within resiliency planning are complex and challenging. By focusing on Miami Beach as a case study, the discussion of these issues demanded succinct representation given the time constraints of this thesis preparation. Additional limitations include:

A. Perspectives within historic preservation to address issues of climate change are in constant flux and progression. This thesis aims to provide a comprehensive snapshot of issues to March 2017, with specific reference to issues as they relate to Miami Beach. Other localities will deal with divergent and analogous issues, but due to time limitations those particular to municipal planning efforts in Miami Beach were prioritized.


\textsuperscript{17} These topics included: how cities function as systems of systems; how we can increase urban productivity and reduce urban poverty and inequality; enable urban inclusion and safety; provide universal basic services, housing and infrastructure; protect the urban environment, and reduce risk and vulnerability.
B. Miami Beach can be referred to as an island-nation that deals singularly with economic, sustainability, and social issues through the regulation of municipal policies. Historically viewed as a wealthy resort community, that mentality has persisted to this day with historic preservation valued primarily for its tourism revenues. This fact can be viewed as an opportunity, however the use of historic preservation as a tool for resiliency planning presents distinctive economic and social challenges that may not be applicable to other municipal planning discussions.

C. The choice to focus on municipal policymaking is based on the dominance of local historic preservation regulations to dictate the built environment, rather than federal policies. Though federal policies and academic interests influence the progression of historic preservation regulation, this thesis is limited to the analysis of Miami Beach as a case study through regional and municipal policy review.

D. The scope of citywide policymaking presents unique challenges of divergent socioeconomic character, historic resource typologies, and ownership structures based on neighborhood. The rationale to encompass the entire municipal scope through its historical development and planning policies are based on the fact that the entire barrier island chain is under FEMA’s Flood Hazard Zone A.\(^{18}\)

1.8. EXECUTIVE SUMMARY

Miami Beach is adept at reinvention, branding and promoting its own architectural identity. From a failed coconut plantation, “America’s Playground” blossomed. From the devastation of the 1926 "Great Miami" hurricane, one of the most impressive collections of 20th-century architecture rebuilt its identity. From the abandonment and increasing dilapidation of the 1970s/80s, the city’s activists and entrepreneurs created one of America’s most successful economic development preservation initiatives, despite fierce opposition from historically pro-development city officials. The next challenge will be to establish Miami Beach as a leader in resiliency and adapt to climate change while maintaining the city’s internationally recognizable architectural identity.

An overall history of resilience can be patterned from the city’s inception to today. The entrepreneurial spirit and nimbleness of municipal government to enact policies based on economic

\(^{18}\) FEMA defines Flood Hazard Zone A as high risk area with the Areas with a 1% annual chance of flooding and a 26% chance of flooding over the life of a 30 year period.
development and tourism incentives are unparalleled in the state of Florida. In municipal discussions, Miami Beach functions almost as a sovereign island-nation, willing to seek solutions and demonstrate leadership in maintaining quality of life concerns, safeguarding historic resources, and continuing the desirability of real estate investment. As Susan M. Torriente, Miami Beach’s Chief Resilience Officer, stated in the 100 Resilient Cities press release, “Together, we are writing the textbook for addressing sea level rise, reducing our risks, and creating a vibrant and resilient city of tomorrow. Our creative and collective efforts today are the foundation for the future of Greater Miami and the Beaches.” The examination of Miami Beach as a case study to analyze the extent to which historic preservation has been utilized as a tool for economic and architectural revitalization, aims to incorporate opportunities for these tools to integrate with future resiliency planning and adaptation to sea level rise.

CHAPTER TWO
EARLY HISTORY, 1817-1970
2.1. INTRODUCTION

From the beginning, Miami Beach was a town of tremendous periods of boom and bust, created from the vivid imagination of early prominent developers, and envisioned as a playground for the wealthy and famous. In establishing these historical community attitudes of Miami Beach and what it truly values as its identity, themes across different forms of resiliency—architectural, economic, and environmental can be explored. Important lessons from the late-19th century to America’s bicentennial in 1976 solidify three facts about Miami Beach to be discussed in further detail throughout the early chronology:

(1) Miami Beach has a long-standing connection to private development driving policy and planning decisions;
(2) Miami Beach’s relationship to its environment and weather events have continuously been integral to its historical expansion;
(3) Historic preservation remains a highly contested political pursuit, where compromise is necessary to achieve “shared” goals.

2.2. WARFARE AND THE HOMESTEAD ACT

Florida was America’s final frontier of the contiguous United States, and its development had many similarities with the westward expansion.¹ Both used warfare on their native populations as means to force relocation and secure American populations in these harsh territories. In Florida, the First Seminole War (1817-18) began as an attempt by military forces, under General Andrew Jackson, to recapture runaway slaves living among Seminole tribes. As a result of the war, Spain ceded its Florida territory to the United States under the Transcontinental Treaty.²

The Second Seminole War (1835-42) arose from Seminole resistance against forced relocation to the Arkansas and Oklahoma territories.³ Florida achieved its statehood shortly

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¹ Carolyn Klepser, Lost Miami Beach (Charleston: The History Press, 2014), 11.
³ Whites coveted this land and sought to oust the Seminoles under the Indian Removal Act. Led by their dynamic chief Osceola, the Seminole warriors hid their families in the Everglades and fought vigorously to defend their homeland, using guerrilla tactics. As many as 2,000 U.S. soldiers were killed in this prolonged fighting, which cost the government between $40,000,000 and
after the War on March 5, 1845, during the second session of the 28th Congress.

Figure 2.1: Act establishing Florida statehood, 1845

Figure 2.2: The Homestead Act, (12 Stat. 392)

Even prior to full security in the Miami area, a promising opportunity of fortune and adventure lured courageous pioneers. During the 1830s, Richard Fitzpatrick, one of the first plantation owners along the Miami River, created a homestead from the swampy wilderness.4 In this early settlement period, pioneers would row over to the beach, near current day Miami Beach, to play and relax in the ocean. Even initial inhabitants of Miami used the nearby barrier islands, later to be incorporated as Miami Beach, as an escape from the everyday struggles and hardships facing early pioneers.

On May 20, 1862, the U.S. government passed the Homestead Act under President Abraham Lincoln. The law encouraged the settling of federal lands in western territories, including Florida.5 The act granted 160 acres of public land free to any adult citizen who improved the land and lived there continuously over a period of five years. Alternatively, one could purchase it for $1.25 per acre after only six months of residency. Even these incentives

$60,000,000. Only after Osceola’s capture while parleying under a flag of truce did Indian resistance decline. With peace, most Seminoles agreed to emigrate. Though issues through Second Seminole War were considered resolved, a Third Seminole War (1855-58) was perpetuated by remaining tribes for further compensated to relocate westward.

4 Avra Moore Parks, Forgotten Frontier (Miami: Centennial Press, 2004),139.

brought relatively few courageous homesteaders, as the tropical environment of southern Florida provided an uncertain economic future. Those that settled in these swamplands were predominately agricultural specialists keen on making their fortunes growing and selling rare and exotic fruits.

### 2.3. EARLY INFRASTRUCTURE AND PIONEERS

Florida, like the rapid land development of the West, began with railroad infrastructure. America’s first transcontinental railroad navigated the West in 1869 and in 1886, Standard Oil tycoon Henry Flagler began constructing rail service down Florida’s Atlantic coast. Starting in northern Florida at Saint Augustine, the Florida East Coast Railway reached Palm Beach in 1894 and the Miami River in 1896. This extension to Miami began the foundations of Miami Beach as a resort town, prime for development and innovation.

![Figure 2.3: Information Booklet, 1909-1910](image1)

![Figure 2.4: Miami railroad station, which also served Miami Beach, c.1920](image2)

#### 2.3.1. Failed coconut plantation

Flager wasn’t the only entrepreneur to see potential in Florida’s expansion opportunities. In 1882, New Jersey entrepreneurs Elnathan Field, Ezra Osborn and Henry Lum purchased sixty miles of oceanfront land extending from Key Biscayne to Jupiter, Florida

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6 Klepsor, 11.
7 Prior to Flagler’s involvement, the first railroad that would eventually become part of FECR was the St. John’s Railway, which opened in 1859 and operated from Tocoi Landing on the St. Johns River to St. Augustine, initially using mules for power. It was also the first abandoned of the predecessor railroads, being taken out of service in 1896; Florida East Coast Railway, “History,” fecrwy.com, https://www.fecrwy.com/about/history, (accessed December 21, 2016).
with plans to start a coconut plantation.\(^8\) Though the coconut plantation failed a few years later due to harsh environmental conditions not suitable for growing tropical fruit, another significant character in Miami Beach’s development emerged.

John S. Collins, later the founder of Miami Beach, was an early investor in the Field, Osborn and Lum farm. After the failed coconut plantation investment, Collins traveled to Miami Beach to observe the location of his $5,000 speculation. As a wealthy Quaker and nationally regarded pioneer in fruit cultivation, he decided to begin planting avocado and mango trees brought over from Miami on Miami Beach in 1907.\(^9\) After four years of unsuccessful production, Collins decided he needed a more direct route to streamline his operations.

### 2.3.2. Beginning of dredge and fill

These plans included dredging a canal directly from the farm to Biscayne Bay.\(^10\) In addition to the railroad infrastructure, these canal improvements ushered in an early cultural acceptance of private developers influencing the expansion and development of the City of Miami Beach. Historical infrastructure decision-making that sculpted the landscape on the barrier islands still affect development throughout the city today, impacting community reception of preservation policies drafted by predominately pro-development commissions.

### 2.3.3. Refuge for swimming

By the start of the 20\(^{th}\) century, relatively little existed in Miami Beach as a permanent settlement. Valued primarily for its relationship to the ocean, farmers and homesteaders still used the barrier islands as a refuge of relaxation, though not suitable for residences. In 1904, a two-story boathouse pavilion provided a more permanent shelter for swimmers. Ferryboats made twice-daily trips from Miami's downtown docks, and any other access to the

\(^{8}\) Klepser, 14.

\(^{9}\) Ibid., 15.

island would have to be completed privately. Native flora and fauna were still predominately intact aside from cleared plantation areas, though this environment would soon be tamed and controlled just a few decades later.

Figure 2.5: “Matheson Hammock of tropical Miami”, c.1962

Figure 2.6: Landscaping Miami Beach, c.1920s

2.3.4. Technique for reclamation

Development continued in spite of Miami Beach’s natural ecology as a barrier island, and the initial land boom in Miami Beach needed to be primed. First, the existing palmetto and mangrove roots were cleared to favor permanent infrastructure. Next, concrete seawalls were planned to define and safeguard these investments. Finally, suction dredges worked to deposit the sandy bay bottom to reinforce the perimeter of the island. Though this technique of reclamation was not unique to Miami Beach, the surrounding canals and ocean made it a desirable venture. The tabula rasa foundation was now established for land speculation and a more reliable means of access to Miami Beach was soon to follow.

13 The Dutch began building dykes and pumping systems to create new lands trace back to the 9th century. Similar examples can be seen in San Francisco near the end of the Gold Rush in the 1850s to fill demand for new housing, large portions of New York, Boston, Seattle, and Hong Kong; Emmett Fitzgerald, “Making Up Ground,” 99% Invisible, Podcast, Episode 228, September 13, 2016.
Figure 2.7: Ad demonstrating technology, c.1923  Figure 2.8: Biscayne Bay meets ocean with creation of Government Cut, 1905

Figure 2.9: Physical evolution of Miami Beach over 150 years
2.4. ACCESS OF INFRASTRUCTURE AND THE COLLINS BRIDGE

The notion of private developers creating Miami Beach continued with Collins and his ambition to build a bridge linking Miami Beach to mainland Miami. Dreams of turning the barrier island into verdant plantations quickly changed into aspirations of creating a luxurious seaside resort town. Collins partnered with his children to form the Miami Beach Improvement Company.15 This was the first instance that “Miami Beach” was used to describe the peninsula and solidified Collins’s legacy as its first pioneer real estate developer. As early as June 3, 1912, their company charter defines the aims of their pursuits as, “to buy, hold, own, improve and enjoy, and to sell, lease, mortgage, rent, and convey real estate of every description… to build and construct sidewalks and sewer systems; to grade, pave and build roads, causeways and streets for all purposes.”16

15 Kleinberg, 20, 24.
2.4.1. The Collins Bridge

John Collins and his son-in-law, Thomas Pancoast, sought financing from local bankers, the Lummus brothers in order to begin dredging the Collins Canal and allow construction capital for the bridge.\(^{17}\) Seeing potential upon completion of these new infrastructure accesses, the Lummus brothers made an investment of their own to purchase six-hundred acres of land at the southern tip of Miami Beach.\(^{18}\) The construction of the 2.5-mile long “Collins Bridge” became a spectacle in itself. At the time of assembly, it was the longest wooden bridge in the world and mainland residents made daily visits to check the progress as a million and a half feet of lumber was assembled to complete the structure.

Due to significant delays, Collins and Pancoast ran out of money just four months into the project, which became known as “Collins Folly.”\(^{19}\) Advertisements were already marketing 50x130 foot plots from $600 to $1200, including free bridge tolls for five years.\(^{20}\) Without the completion of the bridge, plans and investments from other private developers would be effectively futile.

\(^{17}\) Klepser, 23; At the east end of the canal, the Collins company bulkheaded and dredged Lake Panacoast and removed an island in Indian Creek near Thirty-third Street.


\(^{19}\) M. Barron Stohik, Saving South Beach (Gainesville, University of Florida Press, 2006), 10; Kleinberg, 24-25

\(^{20}\) Kleinberg, 30-31.


2.4.2. Carl Fisher

This unfortunate circumstance ushered in further investment from Carl Fisher, another prominent early developer of Miami Beach. As an automobile headlight manufacturer and creator of the Indianapolis Speedway, Fisher agreed to back a bond for the bridge in exchange for two hundred acres of prime oceanfront land, plus one-hundred acres separately from the Lummus Brothers.21 The deal was approved and Miami Beach was finally opened to automobile and foot traffic in 1913. The opening day was a major celebration for the city of Miami and began the legacy of Miami Beach as a premiere oceanfront resort destination.

![Opening of Collins Bridge, 1913](image)

2.4.3. The Lummus brothers

As early as 1913, the Lummus brothers began clearing the west side of Miami Beach, previously a tangled mangrove swamp.22 The clearing allowed dredging and filling of artificial islands by Fisher. As John Rothschild described, “Once the dredges corrected the basic defect, developers were left with a tabula rasa of dried silt, empty and devoid of precedent.”23 Over the next two years, Fisher’s industrious nature led to the accumulation of much of the Lummus brothers’ holdings. The continual dredging and filling along the bayfront extended the western peninsula of Miami Beach, creating more real estate opportunities.24 The land was primed and the only thing left to do was realize the grand resorts and private

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21 Nash, 20.
22 Klepsper, 23.
24 Klepsper, 23; Six million cubic yards of fill were brought in.
residences they had been imaging since each of these three major development groups first set eyes on the wilderness of these barrier islands.

2.5. URBAN PLANNING THROUGH PRIVATE DEVELOPMENT

Shortly after the bridge completion, dredging began to extract the soft limestone bottom of the bay on the west side of Miami Beach to create solid land. The reclamation process created land out of seemingly nothing, but would lead to future problems of overdevelopment and porous basements now experienced by owners and residents through sunny-day flooding and the residual effects of climate change. As soon as a primary access point was established through the Collins Bridge, a network of streets were quickly planned and named. One of the first “unofficial” planning acts occurred in 1912, through the Lummus Brother’s Ocean Beach Realty Company. They platted their southern portion of Miami Beach into a gridiron of streets into blocks generally four hundred feet by three hundred feet, bisected by alleys and parcelled into fifty-foot-wide lots. Wide avenues extended north and south while the narrower streets ran east to the beach. Most of the initial building pursuits were targeted at earlier pleasure facilities and a boardwalk was built.25

Figure 2.16: Telegram from Wanamaker to Fisher, 1924

Figure 2.17: Dredging project map, by Closk & Co., 1924

25 Lejeune and Shulman, 10.
26 Notes “…achievement of another forward step in the splendid work you are doing to turn the waste spaces of the earth into places of beauty.”
2.5.1. Contrasting divisions of development

Different visions of Miami Beach quickly began to materialize under the two main landowners: Carl Fisher and the Lummus Brothers. Fisher’s idea of an ostentatious resort town for the wealthy diverged from the humbler ambitions of the Lummus Brothers’ idea of a family beachside hideaway.27 As early as 1914, Miami Beach became the suburban setting for both modest homes and palatial mansions set within highly curated Mediterranean landscapes. The early development of the city was built in vernacular wood traditions, while grander residences could afford to be faced in masonry and stucco. The scale and character of these fifty-foot wide lots established an arrangement, similar to other American suburbs of the time.28 Northward along the waterfront, Fisher’s development required larger plots for more affluent homeowners, which became reflected into the less rigid grid north of the Lummus properties. Here prominent, primarily Midwestern industrialists, men gathered to create their tropical villas in the sun.

Maps depict the different visions and urban forms created between north and south regions of Miami Beach

Figure 2.18: Southern half dense grid, c.1915 Figure 2.19: Northern half, suburban plots, c.1920

27 Stofik, 11; Fisher’s hotels would be opulent, suitably luxurious for the elite and the prosperous who played croquet and were accustomed to having their afternoon tea served from sterling silver. His building lots would be generous in size to accommodate the most ostentatious winter residence
28 Lejeune and Shulman, 31; Functional zoning, particularly within the southern Lummus owed properties, maintained a residential character with uniform setbacks and the regularity of height reinforced the suburban scale
Soon after, different urban patterns imposed on the new landscape reflected the independent organization of three distinct real estate development firms. In South Beach, the Ocean Beach Realty Company assembled the traditional elements of a seaside resort city: an oceanfront “boardwalk” as the setting for an architectural promenade with “bathing casinos” built along the ocean and an entertainment pier including a mix of homes, hotels and boarding houses. To the north, in the area that became known as Collins Park, the Miami Beach Improvement Company planned an oceanfront community of hotels and houses beyond the limits of a functioning farming district maintained by developer John Collins. The primary development concerns were tourist-driven resorts and amenities or residential in nature. Carl Fisher founded the Alton Beach Realty Company in 1913, and planned Lincoln Road as the commercial center connecting Biscayne Boulevard all the way east to the oceanfront.

Contrary to the urban gridiron of South Beach, the north and west sides of Miami Beach adhered to larger plots, similar to picturesque garden suburbs. Residences were organized along the new bayfront edge as well as along canals, lakes, artificial islands, recreational amenities and parkways.29 The combination of garden suburb, grand hotel, golf course and elegant shopping district established a model of development that would be repeated throughout Florida.

29 Lejeune and Shulman, 12; Probably influenced by the contemporary Parks Movement and Frederick Law Olmsted’s picturesque plans for urban parks and garden cities, this area of private villas was anchored by a series of grand hotels that were linked to the city’s amenities, and by the shopping district of Lincoln Road.
2.5.2. Invention of tropical ideal

Miami Beach projected a convincing image of an idealistic environment. The natural setting of South Florida was transformed to reflect what a generation of Americans thought the tropics should look like, rather than a naturally evolved landscape of swamplands and mangroves. Nature was manipulated to conform to this image of the new city. This reinvention was part of a development plan that began, Denise Scott Brown noted, “by elaborating the values of nature and then adding the architecture.”\textsuperscript{30} The creation and remaking of Miami Beach, was evidence of a “faith in technology” among early twentieth century developers, and has parallels through the continual attitude of Miami Beach politicians and owners to find technological solutions to sea level rise.\textsuperscript{31} It also reflected the tremendous power these city builders would establish in future policy decisions. Assessed valuations of these creations by Miami Beach today reflected the exponential growth within a short five-year period of development.

Figure 2.23: Assessed valuation in 1917 was $647,500 compared to $6,000,000 estimated by 1921, Miami Beach Today, 1921

\textsuperscript{30} Denise Scott Brown, \textit{City of Miami Beach (Florida) Washington Avenue Revitalization Plan, City of Miami Beach (Miami Beach, Florida: City of Miami Beach, 1979).}

\textsuperscript{31} Lejeune and Shulman
2.5.3. City incorporation in 1915

By 1915, Collins, Fisher, and the Lummuses merged their ambitions and incorporated their land as the Town of Miami Beach. By 1915, the continual push northwards of the city limits were also established through the influence of private developers. Through 1915, the boundary was established around 46th Street, but by September 1917, the Dade Country Commission granted right of way for another prominent landowners and realtors, the Tatum Brothers, to extend the oceanfront road up to 163rd Street so they could access their landholdings. This not only allowed an extension northwards to unincorporated land ready to be developed and subsequently purchased, but also promoted the concept of municipal policies being directed by influential stakeholders. As early as 1918, the city was accessible by car, the terminus of “more than 600 miles of perfect roads radiating in every direction from Miami Beach.”

Figure 2.24: Property of The Miami Ocean View Co., 1918
Figure 2.25: Dixie Highway to Miami

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32 Kleinberg, 37-40, 58; The state required three hundred registered voters for an area to become a city and Miami Beach had only thirty-three. Two years later, the City was officially incorporated.
33 Klepsner, 56; Miami and subsequently Miami Beach’s connection to Dixie Highway, the most important connection of Florida to the Midwest was assembled by Fisher and America’s first transcontinental highway.
34 Brochure, “The Call of Miami Beach, Florida,” c. 1923; This is currently McArthur Causeway, which carries State Road 836 and State Road A1A over the Biscayne Bay.
2.5.4. Causeway and artificial island development

In 1920, a second causeway was completed across the bay at Fifth Street, built on fill dredged from Government Cut. At the same time, the deteriorating Collins Bridge was replaced by a more permanent concrete structure, today known as the Venetian Causeway. Five additional islands were constructed around the new causeway. In the process of deepening the bay to create a racecourse for speedboats and additional means of water access for Fisher’s clients, islands were inadvertently created from the dredgings. It didn’t take long to realize that new real estate could be created by pumping the fill into retaining walls, while creating an appealing landscape between land and water to further the tropical ideal.

Figure 2.26: 1940s postcard of Venetian Causeway
Figure 2.27: Dredging Biscayne Bay to create new land

2.5.5. Ambitions of a great city

As Abraham D. Lavender stated, 1920 marked a landmark year in its hope to become a great city, “…with it’s first large, luxurious hotel, it was the year that the causeway opened, the trolley began operating, the city got its first automatic telephone system, first post office and Miami Beach address instead of being a rural route to Miami, first public school, first PTA, and first religious house of worship.” The importance of dredging and filling to create new real estate opportunities added an additional 2,760 acres of land to the 1,600

35 Klepser, 23.
36 Rivo Alto, DiLido and San Marino were in Miami Beach; San Marco and Biscayne were within the Miami city limits.
existing acres of sandbar, totaling 63 percent of the formerly mangrove landmass. In 1916, only one hotel existed, Fisher’s Lincoln Hotel, with sixteen rooms, but by 1925, there were over 234 hotels and apartment houses, 8,000 permanent residents, 300 shops and offices, 8 bathing casinos, 3 schools, 4 polo fields, 3 theaters and 2 churches. Dredging was the primary source for new real estate. First Flagler (now Monument) and Star Islands and then Palm and Hibiscus Islands were formed through these technological advancements. In 1923, Fisher dug out Sunset Lake, turning what were 4 small peninsulas into the Sunset Islands. Farther north, Fisher carved out Surprise Lake and its 3 waterways, and in 1924, he dredged Allison and La Gorce Islands and built the first bridge across Indian Creek. Several miles to the north, in April 1925, a cut was completed at Baker’s Haulover that linked bay to ocean and forever changed the tidal flow.

International imagery branded Miami Beach as an ideal resort city. Largely formulated by Fisher, press propelled its subsequent development with publicity campaigns proclaiming, “Miami Beach is calling you”. Tourists and developers responded positively with

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38 Ibid., 13.
39 The city’s first electric trolley system opened on December 8, 1920, also connecting Miami Beach to Miami and providing local service with 13 stops within Miami Beach.
40 Lejeuene and Shulman, Preface by Diane Camber, 5.
41 At the north end of the city, Biscayne Point was created in the bay in 1925, and developer Henri Levy began dredging and filling in the south half of the former Meade Island to create Normandy Isle. In 1929, on Levy’s initiative, a third causeway crossed the bay there. Another point, Biscayne Beach, reached into the bay at Eighty-fourth Street in 1947. The bayfront at Forty-first Street were filled in as the Mount Sinai Medical Center grew, and Julia Tuttle Causeway, the city’s fourth, was built in 1959; Klepser, 24.
an unprecedented boom in land sales, construction, and tourism. The newly invented landscape of tropical plantings and dredged islands became a stage setting for the imposition of Mediterranean inspired resorts and residences.  

**2.6. AMERICA’S PLAYGROUND**

Miami Beach earned the reputation of “America’s Playground,” beginning in the 1920s. Developed as a publicity campaign, images of Miami Beach created a phenomenon. The architecture became a critical backdrop for its success as a real estate development venture. It was marketed nationally as a luxurious destination to escape the cold northern winters and socialize with the wealthy and famous. Fisher invested large amounts of money and used his political capital to develop the “World’s Winter Playground,” with polo, golf, boating tennis, ladies’ horseback riding, deep-sea fishing, and seaplane flying.  

From its inception, this image of a resort town still prevails today, despite media attention on issues of sea level rise and climate change in Miami Beach.

Figure 2.30: “Winter bathing, Smiths Casino, Miami, Feb. 6, 1921. Miami Beach should set a precedent in dress and become known throughout the world as ‘the bathing suit city.’ Businessmen should go to their offices in bathing suits and robes. That is a very, very sensible idea,” Unknown author, c.1927

The Great Land Boom coincided with the dominance of the Mediterranean eclectic in Florida architecture. Early Miami Beach architecture favored vernacular structures, predominately wooden assemblies. The introduction of the Mediterranean eclectic provided a

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43 Lavender, 15.
44 Lejeune and Shulman, 32; This regional expression derived partially from nineteenth century eclectic traditions, but its appearance in Florida was contemporary with the Spanish Colonial style popular in the early twentieth century and evoked notably at San Diego’s 1915 Panama-California Exposition.
more refined vision for the city. The style defined an image of fantasy, intended to associate former swamplands with a transition to an exotic, sumptuous escape.

Figure 2.31: Tea dances on at The Flamingo, c.1920s  
Figure 2.32: Tourist camps in Miami for those unable to afford Miami Beach, 1925

2.6.1. Mediterranean eclectic style

Compared to the wood vernacular structures that had begun to define the character of Miami Beach, the Mediterranean eclectic was an ostentatious vision of South Florida development. It became the predominant style of Miami Beach by the 1920s.\textsuperscript{45} It was instantly adapted in the elaborate villas built for the elite. Even the courtyard prototype and formal street presence of the Mediterranean eclectic was translated as a suitable option for this tropical setting.\textsuperscript{46} The scale of buildings became grander, with monumental facades. Miami Beach was fulfilling the dreams its early developers originally intentioned.

As the buildings became grander, so did the outlandish events pursued by developers. Even President-elect Warren G. Harding accepted an invitation to play golf on Fisher’s new golf course, with one of Miami Beach’s mascots, Rosie the Elephant, serving as his caddy for a famous photo opportunity. Soon, the “well-bred socialites, well-connected politicians, and well-paid celebrities began to arrive by private train car.”\textsuperscript{47} Advertising capitalized on this glamour and used the sunshine and oceanfront location as its predominant marketing strategy. The Miami Beach Improvement Company declared, “Come

\textsuperscript{45} Mediterranean revival was assimilated into almost every type of project, including the small hotels and apartment buildings that arose in areas originally planned for small homes.


\textsuperscript{47} Stofik, 13.
to Miami Beach THIS Winter; Live on Miami Beach, where you get the most from life,” and copywriting proofs assert “Miami Beach was built on sunshine.”

Figure 2.33: President-elect Warren G. Harding at Fisher’s new golf course, 1935

Figure 2.34: Miami Beach Improvement Co. ads (1927-34)

2.6.2. Increased land value

As the 1920s progressed, land values in South Florida began to skyrocket. Miami Beach’s successful marketing campaigns, thanks largely to Fisher’s efforts, created a wealth of eager buyers outbidding one another for a plot in paradise, just a few years earlier considered worthless farmland. Soon, additional connections from the mainland were necessary to accommodate the growing influx of visitors to the south end of Miami Beach, as demonstrated by increased federal and municipal funding for infrastructure projects.48 Ever the opportunist, Fisher continued to simultaneously dredge and create artificial islands adjacent to the new causeway route. Hibiscus, Palm, and Star islands, which would become some of the most exclusive private addresses, were created from virtually nothing.49

48 Having undergone several lane and structural expansions following opening of the original two-lane road, the State Road Board and Dade County Commission voted to rename the causeway in honor of World War II General Douglas MacArthur in 1942. The MacArthur Causeway carries State Road 836 and State Road A1A over the Biscayne Bay. Interstate 395 ends at Fountain Street, the entrance to Palm Island Park which has a traffic light as well as bus stops; The wooden Collins Bridge was rapidly deteriorating for overuse and the county began its first efforts to create the first government infrastructure project. The County Causeway began construction in 1917 to link c downtown Miami to Fifth Street on Miami Beach; Lavender, 160.

49 Stoflik, 13; Kleinberg, 55. Construction of the causeway resulted in Miami Beach becoming an island. It effectively dammed Biscayne Bay, which prevented tidal flushing. Residents of the north bay area lobbied for creation of a new inlet from the Atlantic at a narrow spot called Baker’s Haulover, north of today’s town of Bal Harbour. The new cut, completed in 1925, severed the peninsula from the mainland.
2.6.3. Income and inheritance tax

Fisher’s wealthy friends were drawn to the tropical warm of Miami Beach, but also by the 1924 amendment to the Florida constitution that prohibited income tax and inheritance tax. Oceanfront mansions began to be built by American titans of industry including the Maytags, Honeywells, Hearsts, Reynolds, Kresges, Fords, and Gannetts. Miami Beach attracted the newly wealthy from the Midwest predominately, whose fortunes were welcome here as opposed to more established wealth havens such as Palm Beach to the north. The frenzied speed of construction continued and soon building supply began to outpace demand. Investors returned to more established cities and prices began to plummet. Still the assembly of roads, speculative housing, and creation of Mediterranean resorts continued.

Development continued northwards and the trend of generating artificial islands through dredging and bulkheading still made good investment sense, even in a saturated market.

The Mediterranean eclectic marked the first intensive urbanization of South Beach following the Great Florida Land Boom of the mid-1920s. During this period, the character of the southernmost section, South Beach, began to shift from houses to apartments, and a new typology of housing appeared. The pressure of the boom accelerated these transitions to a

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51 “This was a long step in advance for Florida to take at a time when every other State in the Union was either imposing such taxes or contemplating their imposition. It was adopted with the frankly avowed purpose of inducing persons of wealth to make Florida their legal residence.” F.P. Stockbridge and J.H. Perry, Florida in the Making (Kingsport, TN: de Bower Publishing, Co., 1926), 153.
modern city. Low-rise apartment blocks and towers, emblematic of the urban development of Manhattan and its outer boroughs, became the preferred housing prototypes.

2.7. THE HURRICANE OF 1926 AND GREAT DEPRESSION

Just as the unfortunate investment of the original coconut plantation brought the pioneer developer John Collins to Miami Beach, another unforeseen environmental event had a great impact on the future image of the city. The “Great Miami” Hurricane battered the barrier island at two o’clock in the morning of Saturday, September 18, 1926. The storm solidified the end of the real estate boom and ushered in an early warning of the forthcoming Great Depression. Salty ocean water inflicted damage against wood structures with wind gusts up to 150 miles per hour. The storm surge pushed the ocean and the bay up to meet in the middle of the southern tip of the peninsula, and caused and estimated $164 billion in damage in today’s terms.

![Surveying destruction on Ocean Drive, post-1926 Hurricane](image1)

![Destruction of estates](image2)

Many planned developments were halted or abandoned after the devastating economic aftermath and loss of life. The reputation of Miami Beach floundered and the land boom stalled. Still, Miami Beach survived and swiftly rebuilt once construction capital became available again. Visitors returned and reconstruction continued to accommodate the

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52 Lejeune and Shulman, 18.
54 Eric S. Blake and Ethan J. Gibney, The Deadliest, Costliest, and Most Intense United States Tropical Cyclones from 1851 to 2010, United States National Oceanic and Atmospheric Administration Technical Memorandum, National Hurricane Center, August 2011, http://www.nhc.noaa.gov/pdf/nws-nhc-6.pdf, Accessed December 21, 2016; The toll for the storm was $100 million ($1.34 billion 2016 USD). It is estimated that if an identical storm hit in the year 2005, with modern development and prices, the storm would have caused $140–157 billion in damage; this would make the storm the costliest on record in the United States, adjusted for inflation, if it were to occur in contemporary times.
resurgent tourism sectors. As soon as winter approached, families once again descended from the north for vacation time. The boom and the Mediterranean eclectic ended definitively with the Great Depression of 1929.\(^{55}\)

The modest post-hurricane structures followed traditional wood vernacular bungalow styles with large windows, deep porches and wide eaves, and were sometimes faced with local oolitic limestone to adapt to the local climate and materials.\(^{56}\) Residential pattern books illustrated a variety of models characteristic of evolving regional styles, predominately featuring vernacular and Mediterranean eclectic examples.\(^{57}\) The hurricane allowed another tabula rasa for a new imagination of the city to solidify its place as a premiere and modern tourist destination.

Between the day of the Crash and 1931, an estimated $319 billion in stocks was lost across America.\(^{58}\) Yet, Miami Beach began growing again, ushering in its next construction

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55 Lejeune and Shulman, 21.
56 Ivan A. Rodrigues, Margot Ammidown, Emily Perry, Dietrich, Bogue Wallin, Wilderness to Metropolis (Miami: Metropolitan Dade County Office of Community Development, Historic Preservation Division, 1982), 79.
57 Brochure, Homes “Miami Beach” Florida, c. 1918, Historical Museum of Southern Florida. A consortium of The Miami Beach Ocean View Company, United Companies Realty Corporation, Miami Beach Improvement Company and Alton Beach Realty Company likely published this brochure.
58 “In total, $25 billion — some $319 billion in today’s dollars — was lost in the 1929 crash,” Claire Suddath, “BRIEF HISTORY OF The Crash of 1929,” TIME, October 29, 2008.
Weinstein-Berman boom. It weathered the depression better than most of the country. The vastly wealthy were now simply very rich and could still afford a warm winter vacation. The still-employed middle class also wanted to escape the national gloom, even if it was for a shorter period. By July 1936, at the depth of the Depression, Miami Beach building permits soared to near a monthly average of $1 million. In September 1936, three new schools, with construction costs totaling $700,000 paid for by a Public Works Administration loan and grant, opened in Miami Beach.

Figure 2.41: Ten Year Economic Change in Miami demonstrates 350% growth from 1920-30, outpacing Miami

Miami Beach achieved the scale of a true city during the 1930s. As post-Depression building evolved, skyscraper hotels were erected along the largely underutilized oceanfront. Activity was so great that, describing the rapid completion of forty-one oceanfront hotels in 1939, Architectural Forum noted that the “chatter of riveting machines competed with the roll of the surf along Miami Beach.” The transformation toward a more urban Miami Beach was determined by a number of factors: changes in the urban structure of the city, increased population densities, and the prevalent image of the high-rise American city.

59 Though this wasn’t true for one of Miami Beach’s early pioneers, Carl Fisher. Spread too thin with his Miami Beach projects and another real estate development at Montauk Point, Long Island, Carl Fisher was financially wrecked by the real estate bust and the stock market crash. He mortgaged the green polo fields, floated bonds against his magnificent hotels, sold the golf course, but in the end he lost it all.

60 Stofik, 15.

61 Kleinberg, 128.

62 Lejeune and Shulman, 28.

63 “Boom Over Miami Beach.” Architectural Forum (December 1940), 10.
The growth of Miami Beach, both as a vacation destination and as a place to live, created the need for more development. On South Beach, dozens of small hotels were built quickly and cheaply on the empty lots of Collins Avenue and Ocean Drive.\(^6^4\) The architects designed them to be easy to build, and decorated only the street side of the buildings, using a new streamlined look that was gaining popularity. Between 1934 and 1940, hundreds of new hotels and apartment buildings, large and small, were built—most designed by relatively unknown architects who would remain obscure until they were posthumously discovered in the late 1970s.\(^6^5\) In Miami Beach, these changes occurred within only ten to fifteen years of its initial development and began to reflect a modern streamlined imagery.

### 2.8. ART DECO AND THE REIMAGINING OF MIAMI BEACH

Through the devastation of the 1926 Hurricane and the Great Depression, entrepreneurs once again saw opportunity in Miami Beach, much like the pioneer developers of Miami Beach. A relatively blank slate had returned the area to one that could be molded into the most fashionable, yet affordable architectural styles of the time. Fisher, a believer in the machine age that would later inspire the modern architects of the 1930s, established Miami Beach’s fundamental relationship between landscape and machine. It was a city built

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\(^6^4\) Stofik, 16; An economy-minded couple could get a hotel room for $8 a day or opt for the “American plan,” which included breakfast and dinner, for $11 a day. If they had a few extra dollars, they could hop on a plane for a quick visit to Havana for $36, round trip.

\(^6^5\) Kleinberg, 128; A new high school, Ida M. Fisher, opened at 1420 Drexel Avenue; South Beach Elementary opened at Lenox Avenue between Third and Fourth Streets; North Beach Elementary was completed at 41st Street between Prairie and Chase Avenues.
for the automobile and the environment was viewed as something to be manipulated and controlled to achieve real estate aims.  

2.8.1. Art Deco influences

Art Deco had been a recognized design since its introduction at the Exposition Internationale des Arts Decoratifs et Industriels Modernes in Paris in 1925, although the term “Art Deco” didn’t enter the architectural lexicon until 1966, when it was devised by a writer doing a catalog for a retrospective of the Paris show. Architects looking for a new form of expression, especially after the damage seen in World War I, quickly adapted modernist design elements. As stated in From Wilderness to Metropolis, “Forms came under different labels: the German Bauhaus, the Dutch De Stijl, the Russian Constructivism all had the same back-to-basics simplicity in their architectural vocabulary as a trademark.” In order to harmonize with a tourist-centric architecture, the thoughts of the 1908 Ornament and Crime by Adolf Loos, and influences of International Style architects such as Walter Gropius, Mies van der Rohe, and Le Corbusier, Miami Beach sought to define its own architectural vocabulary between these two extremes. The resulting aesthetics were intended as a compromise between the intended audience and architectural styles of the time. In Miami Beach, the higher Art Deco from the Paris show was tempered into an austere hybrid of modernism.

2.8.2. Art Deco in Miami Beach

Architects created a streamlined style that was inspired by the automobile, the train, the ocean liner, and the airplane. As Paul Golderberger highlights in his forward to The Making of Miami Beach: 1933-1942, Miami Beach’s art modern architecture was

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66 Miami Beach was also design for yachting and a variety of airplanes, which happened to be other passions of Fisher.  
67 The first Art Deco skyscrapers began appearing on New York’s skyline in 1929.  
68 Rodgriguez, et. al., 148.
“fantasy tempered by geometry.”\textsuperscript{69} The outlandish Mediterranean eclectic styles simply became too expensive in the midst of a national economic depression. New materials, such as Vitrolite, chrome, stainless steel, and glass block, allowed designers to combine the functional aesthetics of the Arts and Crafts movement with improved industrial technology.\textsuperscript{70} Bright colors, influenced by the surrounding landscape, projected green, blue, orange and pink trims projected from the beige and white backgrounds of the streamlined modernism.

In order to maximize economy, projects used massing, rounded corners, horizontal fenestration and racing stripes, and flat parapet roofs to achieve angularity. Hundreds of Miami Beach buildings, including most apartment houses and hotels, are derived from the Art Deco style to this day, providing a low-scale continuity of exterior forms and hierarchies. It was in the post-Depression 1930s that Miami Beach achieved the definitive form and iconic imagery for which it is noted. Its architects created an urban and architectural transformation that accommodated new building typologies. Lawrence Murray Dixon, Henry Hohauser, Roy France, Anton Skislewicz, Albert Anis and others, were responsible for a large number of buildings, each becoming a visionary of the new city.\textsuperscript{71} These architects were predominately middle-class professionals who designed vernacular residences, apartment buildings, and hotels in the humble modernism of the time.\textsuperscript{72}

\begin{figure}[h]
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\includegraphics[width=\textwidth]{Fig243MiamiBeachArchitecturalDistrict.png}
\caption{Art Deco architecture in the Miami Beach Architectural District}
\end{figure}

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\textsuperscript{69} Lejeune and Shulman, 7. \\
\textsuperscript{70} Famous Art Deco designs gained notoriety with New York City’s Chrysler Building, the Empire State Building, and the Chicago Board of Trade. \\
\textsuperscript{71} Lejeune and Shulman, 21. \\
\textsuperscript{72} Rodriguez, et.al., 153.
\end{flushright}
Beach, the sum of these structures is greater than any individual achievement, and the ensemble remains exemplary among 20th century American architecture.

Figure 2.44: Architectural renderings of Crescent Hotel, Ocean Drive, by Henry Hohauser, 1938, and Governor Hotel, 435 21st Street, Henry Hohauser, 1940.

2.8.3. Increased tourism and urbanization

Miami Beach’s population soared from 6,500 in 1930 to 28,000 by the end of the decade and ballooned to 75,000 during the winter tourist season. The grand hotels were landmarks and icons of the city’s real estate development. This generated residential demand for single-family homes and estates. The subsequent construction of houses spanned many years and architectural styles. Variations in lot size and orientation yielded a varied image of the American suburb, contrary to the denser urban fabric to the south of Lincoln Road.

One impetus for new housing models was the increasing density of South Beach. The process of infilling diminished the amount of open space and in less than a decade urbanism triumphed. Ignited by a national housing shortage and war-era reforms programs, the progress of European housing and the German Siedlungen model in particular were introduced to Americans in the late 1920s, as well as exhibits such as the Museum of Modern Art’s 1932 International Style Exhibition. The ideas were further elaborated by the Housing Division of the Public Works Administration, which built low-cost housing after the Depression and in 1935 codified and published model plans and type configurations for new

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73 Stofik, 16; 74 As one brochure described it, hotel builders “selected a point far from the developed sections, moving materials and men to the point, proceeded to build first the grounds, then the building, sometimes a half-million dollar project—oftentimes more, and then awaited the building of the city around the hotel;” Florida Editors Associated, The Book of Florida: An Illustrated Description of the Advantages and Opportunities of the State of Florida and the Progress that has been Achieved with a Biographical Record of Those Citizens Whose Endeavor has Produced the Superb Structure (Florida Editors Association, 1925), 67-68. 75 Lejeune and Shulman, 24-25.
housing stock.\textsuperscript{76} The pressure to compact the maximum amount of uses onto the small lots of Miami Beach propelled the development of mixed-used buildings, particularly at the intersections of commercial and residential streets.

\begin{figure}[h]
\centering
\includegraphics[width=0.5\textwidth]{image.png}
\caption{Notice of public hearing of Miami Beach Zoning Commission, May 22, 1930. The commission circulated a proposed ordinance that would prescribe zoning and use regulations.}
\end{figure}

The 1930s were characterized by urbanization, which also evolved alongside the implementation of planning policies. The advent of municipal zoning in 1933 was integral to the development of more coherent planning and architectural guidelines.\textsuperscript{77} Miami Beach’s zoning prescribed high and low density districts, and regulated setbacks and density.\textsuperscript{78} The new zoning ordinance helped standardize new construction in harmony with existing structures, although the city’s architects had largely observed these standards since the 1920s without any regulation.

\section*{2.9. DEMOGRAPHIC SHIFTS}

\hspace{1em} \textsuperscript{76} The Housing Division of the Public Works Administration, “Unit Types of Plans for Low-Rent Housing Projects,” \textit{Architectural Record} (March 1935).

\hspace{1em} \textsuperscript{77} Lejeune and Shulman, 31; In a 1938 essay, \textit{Architectural Forum} compared the construction of the mid-1930s boom with the earlier 1920s boom: “when building began again about four years later, new building laws provided a sounder basis for construction but the resort character remained and today the fad is modern… In the growing understanding of nature of modern planning, however, there is a basis for an architecture in Florida that is both local in character and contemporary.”

\hspace{1em} \textsuperscript{78} This was probably responding to other examples, such as New York City’s landmark 1916 zoning laws.
Divisions of class, originating from the differing visions of Miami Beach between the initial developments of Collins and the Lummus brothers, and later ethnic divisions became a permanent feature of Miami Beach. These partitions were reflected in the urban form and later preservation efforts of stakeholders focused on specific areas as a result of cultural histories. Below Lincoln Road was the rational grid which evolved to accommodate a dense district of housing, ushering in a lower- to middle-class citizenry. To the north, meandering streets with open, green spaces and individual lots delineated a typical suburb atmosphere of wealth and privilege for a high-class populace. This differentiation linked directly to private decisions by Fisher to limit the availability of building lots in order to maintain price levels. 

Ethnic requirements in the northern section of Miami Beach were also restricted to Caucasian gentiles. Miami Beach had the beginnings of municipal zoning regulations in place, but these policies further enforced a segregated city as reflected in the differing architectural typologies between north and south.

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79 Lejeune and Shulman, 21.
2.9.1. Rising middle class

The increasing wealth of the 20th century brought new means of access and transportation across America. The rising middle class, mainly northern urbanites, quickly adopted Miami Beach as the ideal tropical vacation, further enlarging the number and diversity of tourists. The new class of tourists was the focus of Miami Beach’s development activity through the 1930s. As early as the 1920s, the construction of numerous small hotels, apartment buildings and rooming houses was consolidated in South Beach as a working class resort.80

Synchronized with its densification, Miami Beach became the chosen location for a community of middle-class dwellers. Like much of the United States in the first half of the 20th century, Fisher's Collin’s companies had practiced open anti-Semitism in their hotel and land sales businesses.81 Sixty-five percent of other Miami Beach hotels and apartments followed their lead. Owners of apartment buildings painted "Gentiles Only" in black letters on the side of their buildings and hotels posted similar signs in the lobby. The restriction was mentioned openly in advertising. John LaGorce, associate editor of National Geographic Magazine, wrote in a promotional pamphlet that Miami Beach was a vacation wonderland for "a regular American of the approved type." Exceptions were made only for "the right kind" of Jews, such as department store magnate Bernard Gimbel and John Hertz, the founder of Yellow Cab.

2.9.2. Influx of Jewish population

The Lummus brothers were more egalitarian than Collins and Fisher. Their Ocean Beach development opened its hotels and apartments to anyone, and lots were sold to those who were "white, law-abiding and could afford the down payment."82 Miami Beach’s hotel

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80 Records of building construction and occupancy during the 1930s indicate that the construction of the city during those years was also a “Jewish phenomenon.”; Lejeune and Shulman, 33.
81 Stofik, 17; Kleinberg, 70.
82 Stofik, 17; Blacks could stay in the city overnight only if they were live-in domestic servants or the few farm workers who lived on the remaining part of the John Collins farm.
owners, builders and guests were also predominately Jewish.\textsuperscript{83} The communal culture of a getaway from the city, previously established in pleasure centers along the Atlantic City boardwalks, now shifted to the hundreds of new hostels and entertainment facilities reproduced along South Florida’s barrier island beaches. Kosher restaurants, groceries, bakeries, and delis opened to cater to the expanding market and synagogues were formed. An invisible border south of Lincoln Road created two Miami Beaches. For Jews going on vacation, South Beach was the only destination.

Gentile-only policies officially were outlawed in 1949. As Jewish workers in the northeast reached retirement age, they continued the warmer climates of South Beach to spend their golden years.\textsuperscript{84} More affluent Jewish tourists, however, began to move up the beach to the elaborate new hotels and motels. The city had put the garage for the garbage trucks south of Fifth, along with the city dump. South Beach became the "wrong" end of the island, and it was an intentional position away from the elite northern end of the island.\textsuperscript{85} It was significant that Jews continued to prosper and contributed through various roles in the development of the city as owners, developers, architects, and patrons.\textsuperscript{86} In that sense, Miami Beach ultimately became an expression of assimilation, and its architecture and architects were the tools of its evolution into the destination we know today.

\subsection*{2.9.3. Boom and bust mentality}

Shulman described, “The American gridiron, the Garden City movement, the picturesque tradition of the American Parks movement were all significant in it’s early planning. Later, vernacular, Mediterranean and modern architectural traditions were superimposed on the plan of the city.”\textsuperscript{87} In spite of its heritage of planning traditions, Miami

\textsuperscript{83} The Jewish life of Miami Beach had roots in the segregation of resort tourism that was a feature of the early twentieth century and that excluded urban Jews, especially the working class, from fashionable resorts. Miami Beach was the southern anchor for these populations.
\textsuperscript{84} The warmth and familiarity of South Beach were represented in the kosher markets and synagogues. Joe and Jennie Weiss’s restaurant (Joe’s Stone Crab) was familiar, and Yiddish was prevalent on the streets.
\textsuperscript{85} Stofik, 17.
\textsuperscript{87} Lejeune and Shulman, 38.
Beach’s urban development was spontaneous, generally left to the imaginative forces of speculative developers. Processes of building and rebuilding, which coincided with boom and bust periods of growth, still remain in the architectural ethos of many who reside and govern Miami Beach today. Though an appreciation of Miami Beach’s unique past deserves praise for its foresightedness, these historical associations will be further discussed in the next chapters of the value imposed on these cultural resources and the resulting policies to protect them.

As early as 1935, Miami Beach was once again the fastest growing city in the country with a per capita building rate twenty times higher than the next highest city, Washington D.C. 88 “A hotel for every group of 75 permanent residents is the usual offering of Miami Beach,” declared the Miami News. 89 Between 1935 and 1942, the year when the city was virtually converted into a military training center, this phenomenal growth produced hundreds of new and modern resort structures.

2.10. IMPACTS OF WORLD WAR II (1939-1945)

Initially, it was assumed that America’s entry into the war following the Japanese attack on Pearl Harbor would lead to another downturn in Miami Beach’s tourism sector. In fact, growth continued. Figures released in April 1941 showed Miami Beach to be second in the nation among smaller cities in population increase from the previous decade. 90 Between 1930 and 1940, Miami Beach’s population increased by 61,535—a growth of 331.4%. 91 The 1940 Census placed Miami Beach’s permanent population at 28,012 with an equal number of tourists. Almost daily announcements in the local newspapers touted construction of a new hotel, apartment building or restaurant. The increased construction spending was

88 Lejeune and Shulman, 31.
89 “Hotels Number One for Each 75 Beach Residents,” Miami News, January 23, 1938.
90 Kleinberg, 140; Hobbs, New Mexico was the first.
91 Lavender, 150.
reflected in an article from *The Beach Beacon* in 1937, citing a total of $98,550,000 in new construction from 1925-1936.\(^{92}\)

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</tr>
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<td>$12,526,107.00</td>
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</tbody>
</table>

Figure 2.48: Increasing amount of dollars spent on new buildings, mostly hotels, from 1925-36, “Construction Totals $98,550,000,” 1937

Another article from December 1940 in *Architectural Forum*, entitled “Boom over Miami,” boasted 41 hotels with 2,789 rooms and 166 apartment buildings containing 1,683 apartment units accounted for the major portion of Miami Beach’s activity in 1940, higher than any other year on record.\(^ {93}\) Themes of the increasing influence of private developers and dependence on tourism for municipal revenue continued. Even during the 1941-42 winter season, with the full impact of the war, visitors still followed through with their seasonal visit to South Florida.

A major military presence in Miami Beach came in February 1942 when the Army Air Corps announced that 4,000 men in training to become administrative officers would arrive in Miami Beach.\(^ {94}\) The Miami Beach City Council leased out the municipal golf course—now known as Bayshore Golf Course for $1 a year as the school’s headquarters and drill grounds. The Army occupied over six hotels and, with the city commission’s approval, closed off certain streets in the vicinity of the school and training course. The *Miami Daily News* observed on March 1, 1942, “Ten days ago [Dade Boulevard] bordered

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94 The first contingent of 500 soldiers and students began classes on February 23, 1942. Officers moved into the Boulevard Hotel, the first hotel to be taken over by the Army.
the Miami Beach golf course... Now all that is changed. The golf course is a drill field, many of the adjacent hotels are barracks, and the clubhouse is the administrative building of the U.S. Army Air Corps Officer Candidate School.95

2.10.1. Demand and lack of housing supply

Even before the war ended, a boom analogous to the early 1920s commenced. Soldiers began bringing their families to Miami Beach where they received their military training.96 The city soon became overcrowded and many could not find hotel accommodations. Due to federal restrictions on construction during the war years, prices for existing structures swelled and the demand for further development was imminent.

The end of WWII ushered in modern motels designed for a middle-class tourist arriving by automobile, which cost 50 percent less to construct than a first-rate hotel that Fisher envisioned. The demographic shifts influenced the architecture and began to shift the image of Miami Beach from an elite destination to one that anyone could afford, if they could reach it by car.97 A rapid construction boom allowed tourism to flourish and technological advancements of commercial aviation and air conditioning allowed an expanded influx of visitors.98

2.11. POST-WAR DEVELOPMENT

The postwar years brought Miami Beach its second boom, as well as social shifts with the residual effects of the rise of the middle-class across America.99 Between 1880 and 1925, an estimated 2.5 million Jews had emigrated from Eastern Europe. The nation had the impression that a majority of this elderly population retired to Miami Beach and its reputation

95 Kleinberg, 141-142.
96 Ibid., 151.
97 Stofik, 16; The introduction of parking lots accommodated Buick and Mercury station wagons coming from New Jersey and Michigan.
98 Kleinberg, 153.
99 Klepser, 74-75
as a premiere destination rapidly deteriorated as more exotic, international destinations became fashionable. As M. Barron Stofik chronicled, “The reputation of Miami Beach as a seaside Hebrew home for the aged was turning away the jet set and the young, free-spending tourist.”100 City leaders desperately aspired to revert back to Miami Beach’s vision as “America’s Playground” from the 1920s to revitalize their most lucrative industry, tourism.

2.11.1. Criminal Elements

More bad publicity followed as tales of Al Capone’s headquarters in Miami Beach and the expansion of the illegal gambling industry persisted through the late 1940s. It garnered national attention and in 1949, the Congressional Crime Committee, began to investigate and found that economic power of these corrupt individuals allowed them to persuade municipal policies.101 As a result, many gambling establishment were forced to close. Though this was ultimately a benefit to the community at large, the short-term losses and continual downturn prompted city officials to act quickly and spur development.

2.11.2. Upzoning begins 1950s

The mansions of Millionaires’ Row fell to rezoning, which the property owners themselves urged in the 1950s as children of these sizeable inherited villas couldn’t afford the upkeep. Investors once again saw potential in a slumped market. They began to construct towering hotels on the demolished razed oceanfront areas to the north, creating icons such as the Fontainebleau and Eden Roc. Humbler Art Deco hotels and apartments in South Beach fell out of fashion, but were comfortable for retirees and middle-class visitors. Developers assembled properties to demolish structures and capitalize on new zoning incentives through the 1970s to erect large residential towers that dwarfed the two- and three-story buildings of South Beach.

100 Stofik, 19.
101 Rodriguez, et. al., 172.
2.11.3. “God’s Waiting Room”

Miami Beach south of Lincoln Road had a history of catering to moderate-to-lower income people, as demonstrated by the early Lummus brother’s humbler ambitions. Art Deco hotels and apartments, designed in the 1930s, had been taken over by the elderly. Kleinberg painted the demographic shifts, “On any day, from the 1950s to the 1980s, the sight of hundred of retirees sitting on webbed chairs on the porches of these hotels was a familiar one.”

Miami Beach went from the most desirable tourist destination to “God’s waiting room” in the span of a few decades. A new generation of larger and more glamorous hotels

102 Kleinberg, 173.
Weinstein-Berman surged north along the oceanfront from the 1950s to 1960s. Changes to the urban landscape also evolved and the imaginings of Carl Fisher were vanishing. The golf course north of Lincoln Road was converted into a civic complex that included parking facilities, an auditorium designed by Morris Lapidus, the convention center, and a new city hall.\textsuperscript{103}

The dominant change of Miami Beach in the 1960s was demographics. Aside from the influx of an elderly Jewish population, a first and subsequent wave of Cubans came to Miami Beach in great numbers. After Fulgencio Batista’s departure from Havana in 1959 to flee Fidel Castro’s army, many of Cuba’s professional class followed to South Florida.\textsuperscript{104} Previously, Cubans came as tourists just like the rest of the world, not only due to political reasons, but the latest exiles were fleeing a communist dictatorship.\textsuperscript{105} The Hispanic population continued to swell. In 1960, only 1\% of the population in Miami Beach was Hispanic, but following the mass migration from Cuba, Hispanics made up 10\% by 1970.\textsuperscript{106}

\begin{figure}[h]
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\caption{Deserted Ocean Drive and elderly in front of Chelsea Hotel, c.1970s}
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\textbf{2.11.4. Renewed tourism interests}

Despite the decline of South Beach, large development in the northern sections of Miami Beach renewed interest in the city as a destination. Its image as an elite-only destination would never truly return, but in 1961, the Greater Miami telephone directory

\begin{itemize}
  \item \textsuperscript{103} Kleinberg, 178; The auditorium, transformed several times to become the Jackie Gleason Theater of Performing Arts, had its first fame as the site of boxing matches every Tuesday night.
  \item \textsuperscript{104} Ibid., 17; Cubans, both as tourists and as exiles, have an extended history in Miami Beach. As early as 1933, former Cuban president General Mario Menocal took up residence here.
  \item \textsuperscript{105} Ibid., 172; In 1947, it was reported that more than 6,500 Cubans were vacationing in the area each week.
  \item \textsuperscript{106} Lavender, 151-152; By 1980, Hispanics accounted for 22 percent of the city’s population; by 1990, 47 percent, and by 2000, 53 percent. Now, about half of the Hispanics are non-Cuban.
\end{itemize}
listed 460 hotels on the Beach and its immediate environs to the north, which didn’t even include motels. Image-conscious from early development marketing continued through the 1960s and 1970s. Major events attracted famous personalities and international media attention. In 1964, The Beatles recorded the Ed Sullivan Show, Muhammad Ali was victorious over heavyweight champion Sonny Liston, and Jackie Gleason moved his CBS show to Miami Beach. Three major political conventions were headquartered in Miami Beach: the 1968 Republican Convention, and the 1972 Republican and Democratic Conventions.\textsuperscript{107}

\begin{figure}[h]
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\caption{The Beatles in Miami Beach for the Ed Sullivan Show, 1964}
\end{figure}

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{images/2.56.png}
\caption{Muhammad Ali training at the 5th Street Boxing Gym in Miami Beach}
\end{figure}

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{images/2.57.png}
\caption{Postcard from Jackie Gleason which taped on Miami Beach, 1968}
\end{figure}

2.11.5. Opportunity for historic preservation

For all this notoriety, by 1970, South Beach and businesses outside of the prominent northern hotels struggled to make ends meet. Interior architecture of the smaller Art Deco hotels and apartments were remodeled to include kitchenettes to attract long-term guests, effectively becoming residential hotels for the elderly. As Stofik noted, “...they recreated the shtetls of Eastern Europe, a close-knit community.”\textsuperscript{108} Second waves of Cubans, known as the Muriel refugees, also began to settle in South Beach and were socioeconomically distinctive from the first wave of professionals. Though ethnically diverse, this deteriorating neighborhood inspired efforts of Barbara Capitman and Leonard Horowitz as they drove around South Beach in 1976.\textsuperscript{109} They saw a unique opportunity for historic preservation in what many considered an area slated for urban renewal. Miami Beach’s demographics shifted to an elderly population and many saw this reflected in its “tired” architecture.

\textsuperscript{107} Kleinberg, 179.
\textsuperscript{108} Stofik, 18.
\textsuperscript{109} Ibid., 18.
However, an alternative appreciation for revitalization instead of demolition was gaining national momentum.

The combination of preservation and development came out of national ideas surrounding America’s 1976 Bicentennial. Later that same year, the Miami Design Preservation League (MDPL) was founded. As Denise Scott Brown wrote Norman Giller on January 26, 1973, “The progression from south to north along Miami Beach is also a progression through recent American architectural history from the 1930s to the 1970s.” Miami Beach was something to be treasured and a renewed interest in vernacular American architecture spurred advocacy from notable architects Denise Scott Brown and Robert Venturi, who pointed out the potential of Miami Beach as a record of design history and a “priceless record of the early 1930s.” They later submitted a planning proposal to preserve South Beach. Barbara and Leonard understood the evolving role of historic districts in preservation and urban revitalization. The preservation movement began in Miami Beach in direct opposition to another entity formed in 1976, the South Shore Redevelopment Authority.

2.12. KEY TAKEAWAYS

This chapter highlighted distinctive periods of Miami Beach’s evolution to becoming an internationally renowned beachside resort city. From the city’s founding, to its early marketing as “America’s Playground” and the Great Florida Land Boom of the early 1920s, to the devastating 1926 Hurricane, through the development of its colorful Art Deco architecture and the post-Depression boom through the 1940s, and concludes with its economic decline of the 1970s. These periods of development occurred in spite of harsh weather events, economic hardships, World War I and II, and political revolutions. Establishment of these ascribed values to historic resources will set the basis for further discussion surrounding the progression of a historic preservation ethos.

110 Lejeune and Shulman, 5.
CHAPTER THREE
BIRTH OF THE PRESERVATION MOVEMENT
3.1. INTRODUCTION

Similar to other preservation movements in many cities, Miami Beach started with irreparable loss. Similar to the demolition of the original Penn Station and resistance to the Grand Central addition by Jane Jacobs and other grassroots organizers, Miami Beach’s movement was solidified by the demolition of the New Yorker Hotel in April 1981. The historical context of Miami Beach in the 1970s was significant. It was no longer a glamorous destination. Instead many portions, especially South Beach, were dilapidated and truly earned the reputation of “God’s Waiting Room” with the swift demographic changes. As Stofik stated, “These dramatic shifts could give a neighborhood whiplash. A sundried store trying to serve the needs of its customers had to stock beach towels for sunburned tourists in the Sixties, extra-strength arthritis medicine for senior citizens in the Seventies, a gun under the counter in case of robbery in the Eighties, and designer bottled water for supermodels in the Nineties. Residents, property owners, and seasonal visitors were carried along the waves of change with seemingly little say over their destiny.”

The regeneration of the city through preservation was hard-fought and continues. It was carefully crafted by an ensemble of passionate individuals of varying levels of expertise and socioeconomic backgrounds. Each policy decision, advocacy effort, and personal triumph echoed in the outcome of Miami Beach’s return to a premiere tourist destination with invaluable historic resources.

3.2. THE AMERICAN PRESERVATION MOVEMENT THROUGH THE 1970s

1 Stofik, xiv.
The nation's first venture into historic preservation was the Antiquities Act of 1906, which authorized the president to set aside historic landmarks on land controlled by the federal government. The Historic Sites Act of 1935 established a national policy to preserve historic structures for public use and gave purview over these initiatives to the Secretary of the Interior. In 1949, Congress created The National Trust for Historic Preservation, and in 1966 the National Historic Preservation Act was adopted. The impacts on the fiscal and physical management of cultural resources can be traced to this pioneering statute. The triumph of the establishment of architectural preservation policies in Miami Beach wouldn't be possible without national awareness of these issues.

Figure 3.1: Antiquities Act of 1906, signed by President Theodore Roosevelt

Figure 3.2: President Theodore Roosevelt pictured with preservationist John Muir at Yosemite National Park


3 Historic Sites Act of 1935, 49 Stat. 666; 16 U.S.C. sections 461-467, (1935); First assertion of historic preservation as a government duty, "...that it is a national policy to preserve for public use historic sites, buildings, and objects of national significance..." Section 462 of the act enumerates a wide range of powers and responsibilities given to the NPS and United States Secretary of the Interior, including: (1) codification and institutionalization of the temporary Historic American Buildings Survey; (2) authorization to survey and note significant sites and buildings, which became National Historic Landmark program, which was integrated into the National Register after the 1966 National Historic Preservation Act; (3) authorization to actually perform preservation work. Section 463 established the National Park System Advisory Board to assist the Secretary of the Interior with administration.

encourage public and private efforts to identify, evaluate and protect historic resources.\(^5\) Properties must retain integrity through location, design, setting, materials, workmanship, feeling and association, which defines the resources’ significance. Resources should also be at least fifty years old, unless a waiver of exceptionality is obtained.\(^6\) If a structure met these requirements, through the 1976 Tax Reform Act, rehabilitation expenditures would be eligible for tax incentives, making preservation a tangible possibility for owners and developers.\(^7\) In the following years, more than five hundred landmark preservation commissions were established across American municipalities.\(^8\)

The NHPA also authorized the creation of the Secretary of the Interior’s *Standards for the Treatment of Historic Properties*, which can be applied to varying resource typologies on the National Register.\(^9\) Accompanying *Guidelines for Preserving, Rehabilitating, Restoring and Reconstructing Historic Buildings* apply specifically to buildings.\(^10\) Though not prescriptive, the use of the *Standards* is mandatory for preservation projects seeking federal funding, including tax credits or Historic Preservation Fund grants, crucial to the economic viability of many projects across America, and which were utilized in Miami Beach.\(^11\)

In regards to municipal policies, Charleston, South Carolina instituted the first municipal preservation law in 1929, to fight the construction of a gas station that would demolish a historic mansion.\(^12\) Though this was unsuccessful, it led to the city adopting the first preservation ordinance in America in 1931. This became a model for municipal regulation in other cities.

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\(^5\) This list includes districts, sites, buildings, structures and objects that meet the Criteria for Evaluation. These criteria are defined as: significance in American history, associated with the life of a noteworthy person, embodying distinctive characteristics of a type, or yielding information through archeological investigation.


\(^11\) Chapter 6 discusses specific quantitative metrics of federal historic tax credits used in Miami Beach, particularly in South Beach (Miami Beach Architectural District).

3.3. NATIONAL EVENTS LEADING UP TO THE PRESERVATION MOVEMENT

The Bicentennial engaged Americans in a burst of patriotism. People were buying flags and planning celebrations to commemorate two hundred years of advancement and the triumph of democracy. The festivities allowed designers from a multitude of backgrounds to reflect on what the nation had built over the last two centuries. In Miami Beach, zoning bonuses created glass and steel architecture with no character particular to the city’s history. The incentivization of taller condominiums was the desired image, symbolizing progress and modernity. Construction approvals and demolition of historic areas slated for redevelopment led to increasing abandonment and undesirability across Miami Beach. In addition to the ethnic distinction embedded in “God’s Waiting Room,” the city established a campaign and committee “To Keep Greater Miami Beach Young” in 1967. Their main objective was to attract younger, more affluent residents.

Ideas of preservation as a means to establish a unique tourist destination was gaining momentum, but was absent from the lexicon of Miami Beach policies. In 1976, there were no historic preservation ordinances in Miami-Dade County. The restoration of the Vieux Carre in New Orleans began in 1927 and made New Orleans one of the most popular tourism destinations. 

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13 Interview with Andrew Captiman led to discussions of his mother’s anti-development perspective and the boom in “thoughtless modern architecture” across Miami Beach and Miami.
14 Kleinberg, 197; The committee met with some success in luring 23 families in the first six months, but the “senior citizen” image held firm.
Ideas of preservation as a means to establish a unique tourist destination was gaining momentum, but was absent from the lexicon of Miami Beach policies. In 1976, there were no historic preservation ordinances in Miami-Dade County. The restoration of the Vieux Carre in New Orleans began in 1927 and made New Orleans one of the most popular tourism destinations in the South. Like Miami Beach, a relatively small number of permanent Key West residents provided services for a seasonal tourism industry. By the 1960s, it was also in danger of losing its unique identity, as the town became increasingly rundown, however during the 1970s, it was recreated into the architectural identity presented today. This became a model for the possible revitalization in Miami Beach.

Figure 3.5: Historic Vieux Carre, New Orleans
Figure 3.6: French Quarter remains a top tourist destination, 2016
Figure 3.7: Ocean Drive looking north from 12st Street, 1978

15 Stofik, 20.
J. Jackson Walter, former president of the National Trust for Historic Preservation, quoted the mayors of Chicago, Providence, Philadelphia, Savannah, and Dallas crediting historic preservation as a "cornerstone for future prosperity".\textsuperscript{16} Detroit, Pittsburgh, and Seattle elected strong pro-preservation mayors in the 1970s years.\textsuperscript{17} Each city had recognized that uniqueness, ambiance, and the architectural context that had collectivized over their histories created an appealing destination for tourists.\textsuperscript{18} City leaders were discerning both the economic and tourism benefits of their characteristic historic areas. Developers were learning the financial advantages of preservation. Environmentalists supported the recycling of existing buildings and the inherent sustainability of these policies. Miami Beach had a very different strategy in mind.\textsuperscript{19}

Prominent preservationists like Jane Jacobs would inspire a generation of activists with her triumph over Robert Moses.\textsuperscript{20} With neighborhood support, she successfully blocked a public initiative that would have destroyed more than four hundred historic buildings in the creation of a ten-lane expressway through lower Manhattan.\textsuperscript{21} These successes gained national attention and politicians began to understand historic preservation as a means for downtown revitalization.

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\caption{Figure 3.8: Jane Jacobs protesting to save Penn Station \quad Figure 3.9: Proposed Lower Manhattan Expressway}
\end{figure}

\begin{itemize}
\item[18] Diamondstein, 16; Tony Wrenn and Elizabeth E. Mullay, \textit{America’s Forgotten Architecture} (New York: Pantheon Books, 1976), 25.
\item[19] Stofik, 21.
\end{itemize}
3.4. POLITICAL LANDSCAPE OF 1970s MIAMI BEACH

The City of Miami Beach was not convinced of preservation. In keeping with historical traditions of governmental roles composed of developers solely voting for pro-development initiatives whenever possible, the political landscape of the 1970s offered little hope for preservationists. In 1974, the city had agreed to rent controls which dictated that the legal maximum rent of an apartment had to remain what existed on the effective freeze date of October 16, 1974. The act disincentivized maintenance on properties since increases in rent could only occur if “there was a mutual agreement between the landlord and tenant; or if there had been a major capital improvement in the property since October 16, 1973; or if there were unique circumstances prevailing at a time of the rent freeze.” The policy directly led to the degradation of many structures owned by absentee landlords who couldn’t realize an increased profit. The city’s aging demographics didn’t demand the necessity for luxury upgrades or accommodations.

Ever the pro-development city, in 1975, the city commission declared the area south of Sixth Street “blighted” and slated for redevelopment. The old buildings and people were detracting tourism and investors. The only way for progress was to start from scratch; similar to the tabula rasa they were afforded after the 1926 Hurricane, and demolish any remnant of the historical architecture in Miami Beach. A University of Miami studio reexamined this claim and found that at the time, 80 percent of buildings south of Sixth Street were in good to excellent shape and only 6 percent were considered to be in poor condition. Many questioned the aims of the commission to issue this bold stance without...
qualifying evidence or if the decision would provide any significant improvement to the quality of life or tourism concerns.28

However, with impending plans for redevelopment, a 1977 Miami Beach City Council voted to terminate the Rent Stabilization Law and leases began to rise again.29 This municipal decision combined with the planned relocation of many of the elderly within the “South Shore” development area created confusion and fear among residents.30 Policymakers saw this as the only solution to improve an undesirable residential demographic, negative tourism branding, and minimized tax revenue.

3.5. SOUTH SHORE REDEVELOPMENT AUTHORITY

The 1975 policy of declaring the South Shore area blighted was a deliberate action. It was a last-ditch effort to save the image of Miami Beach, as former Mayor Harold Rosen recalled, “It wasn’t that blighted. That was just a word we had to use. Some parts of it were bad, but the majority was good. I think we just had to change the image.”31 Legally, the prerequisite of a state mandate needed a “blight” declaration in order to authorize and obtain approval of a municipal redevelopment area.32 Without this proclamation,

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28 Interview with Andrew Capitman.
29 “Last-Ditch Effort to Save Rent Controls Voted Down,” Miami Beach Sun Reporter, June 10, 1977.
30 This area of “South Shore” was defined from the ocean to the bay and from Sixth Street to Government Cut. One of the main issues discussed in Barbara Baer Capitman’s rationale for preservation was the importance of providing quality housing for existing residents through rehabilitation. Discussed in interview with Andrew Capitman and Jack Johnson.
government intervention does not have the authority to consolidate individual lots previously under multiple ownerships, complete with infrastructural improvements.

Figure 3.12: Resolution 75-14624, declaring 6th St “blighted”

The South Shore Redevelopment Authority was founded in 1976, with the intent to promote a master plan clearing the existing architecture and relocating the elderly population south of Sixth Street.\textsuperscript{33} Headed by Steven Muss, the $400 million plan backed by the City Commission would consist of a succession of artificial waterways connecting the district with 2,100 new apartments intended for mixed-income residents, several large hotels, smaller hotels and motels, tennis, restaurant and shopping amenities.\textsuperscript{34} Only $270 million of the funding would come from private developers. The redevelopment met resistance, but by July 1978, the South Florida Regional Planning Council approved the project.\textsuperscript{35} By August of 1978, the Worsham Brothers of Atlanta were awarded the development contract. A large component absent from the initial plan was the relocation for six thousand, mainly elderly

\textsuperscript{33} Muss and his colleagues hired a consultant in 1973 to create a slide show that would persuade the city commission to create this independent agency; Frederic Tasker, “Asked for a hotel, Muss offered a community,” Miami Herald, September 24, 1978.

\textsuperscript{34} Kleinberg, 199; “South Beach Sees Tomorrow a as a Waterway Wonderland,” Miami Herald, July 19, 1976. It was designed by Steve Siskind, brought in from San Francisco to be the full-time director of the South Shore Redevelopment Agency.

\textsuperscript{35} The stipulation to redesign the proposed canalway to prevent water stagnation and decrease the prospect of hurricane damage was included, as well as prohibited construction within 50 feet of the beach erosion line; residential units would be built for the people to be relocated and a new elementary school was built in the district.
Jews, who would be displaced in the process. This became an important component of Barbara Baer Capitman and Leonard Horowitz’s fight to preserve South Beach and its residents.

Despite strong political support, opposition of to the urban renewal project continued. In 1979, Mel Mendelson, an opponent to the redevelopment proposal, won a commission seat. Environmental groups unrelented in their challenges of the newly redefined landscapes of canals and waterways propositioned. The project persevered through litigation and public debates until 1981, when commissioner Simon Wikler proposed to abolish the redevelopment agency. By 1982, the city owned 54 percent of the land in the South Shore area, but they had in effect created a slum-like environment with their building moratorium and poor public policy decisions. Finally, on December 13, 1982, the city commission lifted the building moratorium and abolished the Redevelopment Agency in favor of “redevelopment in South Beach through a rezoning plan and private enterprise.” Aside from the personal trauma endured by residents and owners in this district, the architecture suffered. Buildings were in an unrepaired state from over eight years of uncertainty, vacant lots were overgrown, and the population continued to decline.

36 Stoilk, 24.
37 Discussed in interview with Andrew Capitman.
38 Stoilk, 60.
39 “Beach Redevelopment Gets a Helping ‘Handshake,’” Miami Herald, December 31, 1979. Former city attorney Joe Wanick was also preparing a lawsuit on behalf of the Taxpayers, Homeowners and Tenants Protective Association that would challenge these compromises.
40 Stoilk, 92.
41 Eric Reider, “Dade’s year; more scars than stars,” Miami Herald, January 1, 1983.
43 Interview with Andrew Capitman.
As the largest property owner in Miami Beach and savior of the Fontainebleau renewal, Muss returned to private investments and was even honored by the Miami Beach Chamber of Commerce as “Man of the Year” in 1979. Political scandals were a part of Miami Beach’s past, and continued into the 21st century. Real estate speculation and the involvement of developers on many commission boards led to a multitude of conflicts inherent in the influence of regulatory policies. In the case of the South Shore Redevelopment Agency, a side effect of declaring the area “blighted” banned all new construction, including major repairs, improvement, or additions. The choice of this targeted area stems from its historical evolution of the Lummus brother’s more modest planning ambitions, through its position as the epicenter of elderly life in Miami Beach. The perceived image was more important than the reality, and the current state of the city did not align with the commission’s idea of a money-generating environment.

3.6. DECLINE OF THE TOURISM INDUSTRY

Through the early history, branding and the commoditization of “sunshine” have been the primary revenue generators and job providers in Miami Beach. With the commercialization of less-expensive aviation and international travel, northerners could find other affordable, exotic locales for their winter vacations. Travellers choose the casinos of Las Vegas or nearby international settings in the Caribbean for the same price. Statistics demonstrated that in-season tourism was down 10% from 1982 to 1983, and 25% from 1981 to 1983. Only 35% of available hotel rooms were occupied during the 1983 summer months. Disney World opened in nearby Orlando taking the revenue of young families.

44 Kleinberg, 202.
45 “Miami Beach Mayor Alex Daoud was indicted today on federal charges of racketeering, extortion and money laundering. Mr. Daoud had announced last November that he would not seek re-election after a record three terms as mayor and almost 12 years on the City Commission of the resort city of 93,000 people.” “Miami Beach Mayor Named in Indictment,” The New York Times, October 31, 1991.
46 Current 21st century projection will be discussed further in Chapter 6.
47 Stofik, 180.
48 Kleinberg, 203; “Resort City is Suffering Worst Slump,” Miami Herald, September 18, 1983.
crime was rising, and city was losing revenue. City commissioners were desperate to find a fundamental alternative in public policy to truly incentivize revitalization.49

Unemployment was the highest in five years by 1982, while condominium construction diminished to almost nothing, which further impacted the city’s income from building fees.50 Tourism continued to decline, and the city was forced to lay off dozens of employees.51 A national recession, combined with decreased Latin American tourism created a negative atmosphere for investment in preservation projects.

3.7. MARIEL BOAT LIFT AND SECOND WAVE OF CUBAN REFUGEES

At the same time of the debates surrounding the South Shore Redevelopment Agency, Fidel Castro released numerous criminals with a secondary wave of fleeing refugees. With the abandonment of many South Beach hotels and apartments, these buildings became refuge for new immigrants through forced placement by public agencies.52 A subsequent rise

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49 Interview with Andrew Capitman.
50 Stofik, 89.
52 “Officials thought of South Beach, with its old apartments and hotels, many empty after the exodus of those fleeing the South Shore redevelopment and steady attrition of the elderly population. There had been a growing Latin American colony in the area since the 1960s. A refugee family could rent one dingy, cramped rooms with their $119 a month government checks... Linda Polansky received a call from city administrators and was asked if they could put fifty refugees at her Clay Hotel on Espanola Way. The government would pay for them... The refugees who were delivered to her hotel were worse. There were robberies and armed assaults everyday.” Stofik, 66-8.
in crime rates left dire hope for revitalization. Combined with failed public policies to renew the area, many investors considered Miami Beach undesirable.

Crime increased further driving away tourism in an increasingly competitive market. Police answered 57 calls and made 36 arrests in a five-month period at just one apartment house on Jefferson Avenue.\(^53\) The reality of the early 1980s in Miami Beach has been memorialized with the film *Scarface*, however police reports demonstrate that the uptick in crime could not only be scapegoated on the Muriel refugees. Of the 1,307 Hispanics arrested in Miami Beach or crimes such as homicide, rape, aggravated assault, burglary, theft and arson during 1981 and 1982, the period of release for many Marielitos, only 144 were of this subset.\(^54\) Though that remains a sizable number, Mayor Norman Ciment installed roadblocks to disallow refugees back on to Miami Beach.\(^55\) Poor leadership led to further decline and tarnished the once exemplary image of Miami Beach.

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55 Stofik, 106.
The political legacy of the 1970s through 1980s left an undesirable architectural landscape. Preservation was gaining momentum as a solution to many social, economic, and tourism issues, but needed a champion. In addition to subsequent waves of Cubans fleeing communism, Haitians risked their lives to make it to South Florida’s shores in the hope of opportunity, the Colombian drug cartels were increasing their hold on the Port of Miami, and the violence of Miami’s inner-city neighborhoods were so disastrous that a curfew was in effect.56 Miami was proclaimed a federal disaster area, and poor publicity from *Time* magazine’s cover article entitled “Paradise Lost” made the situation worse.57 The last mechanism anyone believed the city commission would turn to would be the implementation of historic preservation policies.58

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58 Interview with Jack Johnson.
3.8. PRESERVATION IN MIAMI

Early examples of preservation in Miami were singular efforts. The county’s oldest building, The Spanish Monastery, was built in 1141 and imported by William Randolph Hearst in 1928. After twenty-six years of reassembly, it became a tourism sensation. Another illustration was the preservation of the Villa Vizcaya, constructed in 1914. The lavish Italian Renaissance villa was the winter residence of James Deering, a prominent figure in the development of Miami. In 1957, the Vizcayans and Vizcaya Volunteer Guides were formed to support the museum, initiating an important and ongoing relationship with volunteers. These efforts to safeguard monuments through volunteerism and government support were an important foundation for the preservation movement in Miami Beach.

Though politicians never directly mention ideas of historic preservation, a burgeoning movement was occurring in Miami-Dade County. The Dade Heritage Trust was founded in

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61 Interview with Christine Rupp.
1972 and became the county’s first nonprofit organization with the aim of preserving historic architecture. Just one year later, in 1973, the nearby city of Coral Gables established their first historic preservation law to protect their inventory of Spanish Mediterranean buildings, plazas, entrances, and fountains.

By 1977, twenty Miami-Dade County buildings were listed on the National Register of Historic Places, but none of them were in Miami Beach. In Miami Beach, a movement to revitalize Lincoln Road and the declining retail businesses became a precedent for preservation efforts. Once a flourishing avenue of stylish shops, the commercial corridor began to feel the impact of large hotels where tourists would be able to shop in the lobby stores without leaving their location. To counter the deteriorating business, merchants of Lincoln Road banded together in the late 1950s and convinced the City of Miami Beach to pursue a half-million dollar bond issue, guaranteed by the shop owners, to recreate Lincoln Road as a pedestrian mall. After years of declining income, Lincoln Road made a comeback, in part due to the increasing attention of the Art Deco movement.

### 3.9. THE IMPACT OF BARBARA BAER CAPITMAN

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64 Stofik, 133.
65 Kleinberg, 176.
66 Interview with Ricky Arriola.
Barbara Baer Capitman was a force to be reckoned with. Her political involvement began with the successful opposition to the South Shore Redevelopment Agency’s plan to demolish and reconfigure 230 blocks in South Beach. She saw the potential in historic preservation as the key to revitalization, and an opportunity to keep the more than six thousand residents intact. The impetus was not only aesthetic preservation, but as M. Barron Stofik wrote, “…by recreating the Art Deco glamour of the 1930s, [South Beach] could become a national paradigm for the needy elderly, talented artists, young professionals, and moneyed visitors to live together respectfully and enjoy the kinds of lives that each of them wanted.”

The first to chronicle Capitman’s efforts was Jo Werne, a Miami Herald home and design writer, who reported in 1978 that the then relatively unknown woman was calling a community forum to discuss growth limitations, preservation of old buildings, and Art Deco. Capitman organized a meeting entitled, “An Inquiry into the Restoration of Art Deco Miami Beach Hotels of the 20s and 30s,” which attracted over 200 architects and designers. There was a plan in place, but broad-based community support was lacking and the political landscape heavily favored pro-development.
Capitman was determined and understood the power of media. Articles about “Old Miami Beach” were published in the Sunday Review, Preservation News, The New York Times, The Wall Street Journal, airline magazines, and European publications. Stories appeared in the local media and began to gain national momentum. Her prolific achievements in historic preservation for the City of Miami Beach were memorialized with obituaries in Time, Newsweek, the Miami Herald, the New York Times, the Chicago Tribune, the Los Angeles Times and other newspapers upon her passing on March 29, 1990.

3.10. MIAMI DESIGN PRESERVATION LEAGUE

Capitman’s growing MDPL group embarked on a project to locate hotels that, in their opinion, were well designed. She realized that a focused group would need to be created to make an impact. Designers, not seasoned preservationists, made up her grassroots organization, and the focus was on the “design and time period of the buildings and the people who lived there.” On May 6, 1977, the MDPL was incorporated by the State of Florida. With support of her sons, Leonard Howoritz, and a Board of Directors, Capitman proposed the preservation of South Beach by creating a historic district called “Old Miami Beach.” In January 1978, the MDPL received a ten-thousand-dollar grant for the survey.

72 Prior to its current naming of the “Miami Beach Architectural District,” commonly referred to as the Art Deco Historic District, documents referred to the area as “Old Miami Beach.”
73 As discussed in interview with Andrew Capitman, a memorial statue in her honor was dedicated during Art Deco Weekend 2016 in front of the Miami Design Preservation League Welcome Center.
74 Other local preservation organizations, such as the Dade Heritage Trust, focused on monumental, rather than vernacular architecture, and already had their agendas full with projects across Miami-Dade County.
In order to accomplish this, a building survey was compiled to assess the concentration of historic architecture within the district. Capitman spoke with foresight: “We believe that tourism would benefit if some of these old hotels which are real treasures were restored. Most seasoned travelers prefer to stay in a hotel that has some history or attractive design to recommend it.” She emphasized that contemporary hotels could qualify, but her focus was on the existing, historic resources. “Instead of tearing down the old hotels,” she challenged, why not put money into interior improvements, paint, landscaping, promenades? Why not use some of the small hotels primarily as restaurants, some as dormitories for older people?” This was an uphill battle, even among others in the preservation community. Though the examination of American vernacular architecture was becoming increasingly researched, this was one of the first instances that twentieth-century middle-class architecture was seen as worthy of preservation.

An important addition was Diane Camber. As a Miami Beach native, she provided an impressive pedigree including an art history degree from Barnard. Her ability to provide a scholarly framework to the largely volunteer organization was necessary. At the same time, Miami-Dade County was completing a comprehensive survey of all historic buildings. Historic preservation was gaining momentum in planning departments nationwide, and Ernie Martin set up a division of historic preservation within the county’s Office of Community and

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76 Stoflik, 145.
77 Capitman, 86-90.
78 Ibid.
79 Stoflik, 82.
80 Rodriguez, et.al.
Economic Development. \(^81\) Ivan Rodriguez was hired to complete Miami Beach’s survey. He had a master’s degree in architectural history and historic preservation from the University of Florida and trained staff to evaluate structures based on the Historic American Building Survey standards. Even with increased local expertise, Capitman grasped the importance of federal recognition to educate and apply political pressure to local leaders.

An important figure in evaluating criteria for significance was Carl Weinhardt Jr., an experienced Miami preservationist, director of Miami’s Villa Vizcaya, and a Harvard graduate. \(^82\) His expertise confirmed the prodigious inventory of Art Deco architecture. In addition, notable Mediterranean Revival, Mission, Moorish and Florida vernacular styles contributed to the evolution of 1920s Miami Beach through the 1940s. \(^83\) The concentrations of these properties were remarkable for their collective assembly, rather than any individual structure. With this, MDPL was armed with volunteers, a goal, and the data to solidify their claims.

The pro-development ethos ingrained in Miami Beach’s identity from the beginning needed to be counterbalanced. Demolitions throughout the 1950s and 1960s erased Miami

\(^81\) Stofik, 36. 
\(^82\) Ibid., 30-33. 
\(^83\) Capitman, 86-90.
Beach’s history for the sake of clearing more developable land and keeping up with the demands for modern, luxurious condominiums and hotels.\textsuperscript{84} Public education and widespread support were critical to advance the values associated with Miami Beach’s cultural resources.

Figure 3.36: Postcards demonstrating development along oceanfront and Indian Creek, c. 1960s

Upon invitation, Capitman persuaded the chief of planning for the National Register of Historic Places and representatives of the National Trust for Historic Preservation to visit.\textsuperscript{85} One caution was the 50-year rule, whereby a structure or district would need to prove exceptionality to be considered appropriate within the national criteria. In order to achieve these aims, only the architecture was qualified, rather than Miami Beach’s cultural history, and a federal job training grant program provided the MDPL with funds to work on the proposed historic district. Two Columbia University graduate students in the Historic Preservation program, Elan Zingman and Everett Scott, used their internships to examine the architects of the Art Deco period and completed comparative analyses of historic photos and existing conditions.\textsuperscript{86} Assisted by a staff of fifteen, guidance from Capitman, and a roster of volunteers, the research began in May 1978 and was submitted to the state historic preservation office just a few months later in August 1978.

3.11. MIAMI BEACH ARCHITECTURAL DISTRICT DESIGNATION

\textsuperscript{84} This included the 1950 demolition of the 1921 mansion of early Beach resident William Tarades, the demolition of The Lummus Building in 1941, Smith’s Casino in 1964, Carl Fisher’s home in 1968, and The Roney Plaza in 1968.

\textsuperscript{85} Stoflik, 82.

\textsuperscript{86} Ibid., 59.
The boundaries of the designation extended from the ocean to an irregular line near the bay on the west, and from Sixth Street north to Dade Boulevard. Assemblies of recent construction were omitted, as well as the South Shore redevelopment area, which was considered too politically charged. Everything west of Washington Avenue, north of Lincoln Road and to the south of Sixth Street was included. The statement of significance highlighted the importance of the area to capture a particular period, environment, and approach in architecture that was unique to America. The designation report had no mention of the area’s cultural history or individual landmarks, rather it highlighted the ensemble of contiguous contributing structures. Increasing pressure from the South Shore Redevelopment Agency prompted the urgency of this nomination. The sooner the district gained approval, the more likely local politicians were to halt further demolition and protect historic resources.

Capitman knew that in order to promote success she must link the designation with one of Miami Beach’s long-held values: architecture as a background to its successful tourism campaigns. Cultural tourism was the answer. The first “Art Deco Week” was planned for October 1978 to garner further local support and prove to elected officials and the community that the historic architectural district could be a driver for tourism. This was

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87 Interview with Andrew Capitman.
88 “Miami Beach Architectural District-Statement of Significance,” National Register of Historic Places Inventory Nomination Form.
89 Christopher Boyd, “Old Glories… can Deco, disco and developers salvage a city?” Miami Herald, May 31, 1987; Interview with Andrew Capitman.
also the start of an annual event that would celebrate Miami Beach’s Art Deco. In 2017, the event celebrated its 40th anniversary, welcoming over 150,000 people to over 85 educational events held during its 3-day festival.\(^{90}\)

Though the term “Art Deco” did not enter the English lexicon until 1968, when it appeared as the title name of a book by Bevis Hiller, the challenge was in cultivating an appreciation for its vernacular forms. Art Deco encompassed several categories of design dating back to the 1920s.\(^{91}\) Even with an impressive architectural inventory, a booklet published in 1968 by the South Florida Chapter of the American Institute of Architects ran photographs of 80 examples of architecture in the Greater Miami area and not one portrayed any buildings that later would be considered as Art Deco.\(^{92}\) Education was an important component for municipal regulatory achievement.

In spite of swelling support from an international community and local residents, the National Register nomination was rejected twice.\(^{93}\) The third draft submission was accepted. Time was of the essence and in these delays, local businesses began to speak out in opposition of the district, seeing it as a threat to future development.\(^{94}\) As Stofik wrote, “City officials and developers were appalled at the prospect of having almost fifteen percent of the city frozen in time. If every old building was saved, where could anyone build?”\(^{95}\) Miami Beach was historically future-oriented. Residents began to question the validity of a nationally significant nomination based on buildings that were constructed after their own children were born.

In November 1978, the state preservation office held a meeting on Miami Beach to hear public support for both sides. MDPL had mustered enough local and national support to overwhelm their detractors, using the sentiments around Economic Benefits of Historic...
Preservation from Heritage Conservation and Recreation Service (HCRS) to herald the district as a “solution to problems of unemployment, inflation, poor housing, dying inner cities, and depressed small towns.” Revitalization was seen as an alternative to urban renewal, but the economic results that cultural tourism had the potential to generate were the most successful arguments from the city commission’s perspective.

Finally, on May 14, 1979, the Department of the Interior officially designated one square mile of South Beach as the Miami Beach Architectural District to the National Register. It was the “largest concentration of 1920s and 1930s era resort architecture in the United States,” and the first 20th century historic district to join more fifteen hundred other historic districts already honored on the National Register. Though it was a triumph, victory was met with mixed reviews. The elderly residents, who the MDPL initially sought to protect and upgrade the living conditions for, feared gentrification.

3.12. NEXT STEPS FOR ADVOCACY

The National Register provided legitimacy to MDPL’s claims, but local regulation lagged. Remnants of “blighted” declarations from the 1970s led to redlining across Miami Beach. Banks were not willing to lend money for restoration projects. The Home Mortgage

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96 The Heritage Conservation and Recreation Service (HCRS) was an agency within the United States Department of the Interior which subsumed its functions from the National Park Service and Bureau of Outdoor Recreation; Ibid., 51.
97 Interview with Andrew Capitman.
Disclosure Act of 1975 and the Community Reinvestment Act of 1977 began to pressure banks to reveal their geographic lending practices before new branches and mergers were approved. Still, areas of Miami Beach, particularly South Beach, were seen as poor investments and were prevented from receiving loans.

Figure 3.43: Redlining, 1935
Figure 3.44: Home Owner's Loan Corporation lending map, 1984
South Beach “C” and “B”, Middle Beach “A”, with “A” as highest rank
Figure 3.45: Former Miami Beach Dog Track used as informal dumping grounds, South Beach, 1984

The revolution had begun. The MDPL had succeeded in putting the Miami Beach Architectural District on the National Register, but funding to revitalize the nation’s first 20th century historic district was the next hurdle to overcome. “Art Deco” had become a stock term among travel agents and tourists, and Andrew Capitman, son of Barbara, knew that sophisticated travelers would pay for niche services in these hotels. With her son’s help and a group of investors, on June 19, 1979, Capitman purchased the Cardozo Hotel so it could serve as a model for successful economic and architectural preservation.

The Capitmans led the way through personal investments, but backroom politics within the MDPL began to shift. Andrew Capitman and his partner Mark Shantzis, with the help of investors, purchased six hotels and an apartment building by 1982, but still were experiencing opposition from banks on funding for rehabilitation. Finally Capitman was able to coalesce an investor team and secure $11 million in capital. With a stronger financial

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100 Ibid., 54-55
101 Interview with Andrew Capitman.
foundation, the Capitmans made an impact on the historic built environment, but preservation policies were still undeveloped.

3.13. THE OPPOSITION OF ABE RESNICK

Abe Resnick was a staunch supporter of development in any form and was quoted to declare that “there’s nothing historic there,” in reference to designation of the Miami Beach Architectural District. Not only was he an opponent of the MDPL, but also he was a prominent property owner and developer. Typical arguments of “unsafe” structures led to the demolition of multiple buildings under his ownership, including the former Boulevard Hotel just north of the Historic District boundary just a few months after its listing on the National Register.

The history of Miami Beach as a pro-development opportunity prime for improvement was further exacerbated by the zoning regulations of the early 1970s that allowed taller, luxury-driven condominiums to dominate the oceanfront. Developers bought older, dilapidated structures precisely because they could be demolished and saw no value in keeping their architectural history intact. The rezoning of the residential areas along the oceanfront to allow commercial density represented a compromise between preservationists, property owners, and the city commission. Increased densities meant increased revenues for the municipality and pro-development contenders dominated the city commission.

Figure 3.46: Low-scale development of historic districts to large towers of former South Shore Redevelopment area

105 Interview with Andrew Capitman.
Similar to the demolition of the Pennsylvania Station in Manhattan, the razing of the New Yorker Hotel in 1981 served as the momentous call-to-arms for local preservationists. Resnick agreed to save the façade of the historic hotel and to integrate the structure with two neighboring parcels. A few days later, the hotel was demolished without warning, deprived of the possibility of salvaging the interior elements. The MDPL and Capitman felt hopeless, and though the hotel was on the federally recognized National Register, no local regulations precluded destruction.

Though many Miami Beach preservationists believed everything deserved salvation, it was clear that compromises needed to be achieved to secure its future support among planning commissions and the wider public. Nancy Liebman and Matti Bower were able to bridge those gaps. When the Dade County School Board threatened demolition of historic buildings on South Beach in 1980, they along with their PTA coalition opposed the redistricting and demolition of older educational facilities. They combined forces with the MDPL and won the ability to preserve the structures and retain alterations aesthetically compatible with the existing architecture.

Notable figures, such as Leonard Horowitz were not classic preservationists, but understood the importance of branding. Horowitz’s specialty was evoking a bold perspective

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106 Ellen Bartlett, “Both sides agree; We love New Yorker hotel deal,” Miami Herald, February 19, 1981.
108 Nancy Liebman served from 1993 through 2001 as a Miami Beach City Commissioner with prior capacities as Executive Director of the Miami Design Preservation League and as a Trustee of Dade Heritage Trust. Matti Herrera Bower was mayor of Miami Beach from 2007 to 2013, city commissioner from 1999 to 2007, and previously spent decades with MDPL as an advocate.
109 Stofik, 76-77.
with paint palettes. As a designer, he knew that South Beach needed a facelift from the historic white backgrounds and muted colors of jade green, ochre, and coral elements currently fading into the background. His vision was for audacious pastels that reflected the sand, sea, and sky surrounding him, and golden sand, shell pink, seafoam green, Caribbean blue, and orange sunrise began to be tested on dilapidated facades. These building needed to be “loved” in order to garner widespread support.

Figure 3.49: Nancy Liebman at successful 1992 City Commission campaign
Figure 3.50: Matti Bower, local activist, preservationist, and three term Mayor of Miami Beach
Figure 3.51: Helen Mar Apartment Hotel, c.1940
Figure 3.52: Restoration, 1986

All of these factors and actors contributed to the next critical step in Miami Beach’s historic preservation policy progression. In July 1981, the Metropolitan Miami-Dade County Commission enacted a countywide historic preservation ordinance. The empowerment of an influential county board would be able to designate individual landmarks and historic

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110 Julia Duba, “Mett the man behind all those South Beach pastels,” WLRN, November 16, 2013.
111 Metropolitan Miami-Dade County Historic Preservation Ordinance, Ord. No. 81-13, § 1, 2-17-81 (1981).
districts, regulate alterations, and delay or prevent demolition. Municipalities were tasked with enacting their own preservation ordinances within the year.\(^{112}\) Though not without significant losses, the pro-development political environment in Miami Beach was finally challenged legally to reform.

### 3.14. ESTABLISHMENT OF THE HISTORIC PRESERVATION BOARD

More than six hundred buildings, mainly those within the 1930s early Art Deco period, were reaching the 40-year recertification age.\(^{113}\) This would require almost 40 percent of the city’s architectural infrastructure to undergo inspection, making it another critical moment for the MDPL to muster political support to safeguard these irreplaceable structures. Even with the county proclamation, pro-development Miami Beach was not going to change overnight.\(^{114}\) Millions of dollars in real estate and tourism values were at stake.

The mayor appointed a committee to draft an ordinance, but even these selections became politicized. Barbara Capitman was selected, as was her antithesis Abe Resnick. After objections to property owner consent clauses were qualified, on June 16, 1982, the first Miami Beach Historic Preservation Ordinance, No. 82-2318, was adopted.\(^{115}\) It stipulated the protection of structures within the Miami Beach Architectural District, but there was a 100 percent owner consent provision. According to a leading preservation lawyer in Washington, D.C., Miami Beach’s attempt was “probably the weakest of the nation’s nine hundred existing preservation ordinances.”\(^{116}\) Shortly after, the Miami-Dade County Historic Preservation Board found that the ordinance was not in compliance with county requirements.

On October 20, 1982, the City Commission appointed the first Historic Preservation Board of Miami Beach. Regardless of its shortcomings, the ordinance passed the U.S. Department of the Interior approval to be in compliance with National Register standards for municipal

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\(^{112}\) Ibid., Sec. 16A-3.

\(^{113}\) Stofik, 85.

\(^{114}\) Interview with Andrew Capitman and Jack Johnson.

\(^{115}\) Miami Beach Historic Preservation Ordinance, Chapter 118, Article II, Division 4 and Chapter 118, Article X of the Land Development Regulations of the Code of the City of Miami Beach (1982).

\(^{116}\) Stofik, 85.
governments on January 31, 1983.

Improvements were quickly made on the ordinance in favor of more stringent preservation protections and on April 20, 1983, Ordinance No. 83-2367 amended Historic Preservation Ordinance No. 82-2318, changing owner consent from 100 percent to 51 percent requirement for designation. Miami-Dade County was still not satisfied with these concessions and with others filed a lawsuit on August 15, 1983, which sought to invalidate the Miami Beach Historic Preservation Ordinance. The application of Miami Beach’s history and vernacular structures were gaining international attention and the county applied political pressure to ensure a shift in previously pro-development policies.

The City Commission adopted Ordinance No. 83-2388 on October 5, 1983, which designated the Old City Hall building as the city’s first locally designated landmark. Finally, a Design Review Board (DRB) to handle aesthetic concerns was empowered on April 4, 1984 through Ordinance No. 84-2405. Public and political support for preservation were gaining momentum, and once again as in Carl Fisher’s marketing of the 1920s, the city reclaimed the international spotlight through media and a burgeoning creative scene.

117 City of Miami Beach Ordinance Code, Sec. 118-591 (1983).
118 Old City Hall, Local Historic Site, ID 15414, City of Miami Beach (1983).
3.15. REBRANDING FOR ARTISTIC ENDEAVOURS

With a renewed revitalization effort and affordable accommodations, Miami Beach became a haven for artists.\footnote{120 Interview with Andrew Capitman.} Internationally renowned artists Christo and Jeanne-Claude used Capitman’s hotels as workshops for their newest installation “Surrounded Islands”.\footnote{121 Christo and Jim Stingley, “Art Deco district also basks in pink glow of Christo,” Miami News, May 4, 1983.} By 1983, only 35% of hotel rooms were occupied during the summer months and it was clear that all of Miami Beach was following South Beach into decline.\footnote{122 Michael Kranish, South Beach: Where dreams die,” Miami Herald, August 29, 1983.} The city was at the height of organized crime and the side effects of economic deterioration and shrinking tourism followed. Christo remarked on his vision for the project, “I had visited Miami earlier, and was very influenced by the flatness and horizontality of the landscape; also the way earth and water mix gently here… And then there’s the relationship of people to it. They use Biscayne Bay as a water, rather than a grass, park.”\footnote{123 Grace Glueck, “Christo drapes Miami Isles in pink,” The New York Times, May 5, 1983.}

After two years of planning, hundreds of volunteers descended on Miami Beach to compose 200 feet of pink polypropylene fabric over the surface of the water of eleven islands in Biscayne Bay. Using 6.5 million square feet of floating pink fabric, Christo and Jeanne-Claude encircled eleven islands in Miami’s Biscayne Bay, extending the perimeter of each island by 200 feet. The “spoil” islands, as they are called, are man-made.\footnote{124 They were formed in the 1920s when an intercostal waterway was built and sand was dredged to establish new landscaped geographies. Discussed in further detail in Chapter 1.} Reminiscent of tropical flowers and flamingos, the vibrant woven fabric was sewn to correspond to the individual contours of each island. As the unfurling began on May 4, 1983, the islands

Figure 3.55: Overview of “Surrounded Islands”, 1983

Figure 3.56: Christo’s artwork sketch
themselves appeared to bloom. As their fifth ephemeral artwork, the project was visible to the public for only two weeks.\textsuperscript{125} The work underlined the various elements and ways in which people of Miami Beach live, between land and water.

An unintended result of the ephemeral installation was the impact it would have on the demographics of South Beach. Using the Miami Beach Architectural District as a headquarters, South Beach was seemingly overnight rebranded as a mecca for artists, entertainment professional, and celebrities.\textsuperscript{126} Developers saw value in preserving the imagery they consumed through popular culture and a previously pro-development government began advocating for historic preservation wherever possible.

Demographics of the city shifted with the international attention this project brought to South Beach. An estimated 20,000 visitors came to Miami Beach during those two weeks specifically to view the installation.\textsuperscript{127} The idea of South Beach as a location for artistic pursuits was solidified. In the 1990s, Art Basel began talks of expansion to the U.S. market. A competitive search process concluded with the announcement of Miami Beach as the second home of the event, with its first opening weekend occurring December 12–16, 2001.\textsuperscript{128} Art Basel Miami Beach remains an integral part of the city’s image and elevated the cultural capital of South Beach to an international level.

\begin{figure}
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\includegraphics[width=\textwidth]{Figure_3.57.png}
\caption{Breakwater Hotel, 1970s and 2016}
\end{figure}

\textsuperscript{126} Interview with Andrew Capitman.
\textsuperscript{127} Glueck.
\textsuperscript{128} Noelle Bodick, “A brief history of Art Basel, the world’s premier contemporary fair,” Artspace, June 17, 2014.
Aside from catalyzing South Beach to new heights in the art world, the project unintentionally became a commentary on the environmental effects these uninhabited islands suffered as a result of their vacancy. Christo and Jeanne-Claude’s crew removed 40 tons of garbage from the islands.¹²⁹ These thoughts are especially poignant today as Miami Beach faces the inevitably of sea level rise.

### 3.16. ECONOMIC AND TOURISM VALUES

Even with all its success and media attention, the same buildings were still occupied by an overwhelmingly elderly population.¹³⁰ The city commission continued to search for a valid replacement for the failed South Shore Development project. The tourism industry needed a new image and still couldn’t rationalize the economic upside to historic preservation. The sunshine and beachside setting were constant, but the architecture retained little value in the “hearts and minds” of the community as a historical record of the city’s past.¹³¹

![Figure 3.58: Cavalier Hotel on Ocean Drive, 1987 and 2017](image)

Whereas the Capitmans and their investors sought moneyed, cultured tourists, a new breed of hostels became affordable for young backpackers. In an ironic fashion, the decline of Miami Beach, especially South Beach, is ultimately what revived the city and allowed

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¹²⁹ Christo.
¹³⁰ Interview with Andrew Capitman.
¹³¹ Interview with Jack Johnson.
younger generations to travel on a budget. Artists began to take notice. Buildings were saved because no one understood the investment potential to demolish and replace them with modern architecture. The land was deemed worthless due to crime statistics and the continued downward spiral of the city tax revenue.

3.17. MIAMI BEACH COMMUNITY DEVELOPMENT CORPORATION

Another agency to use historic preservation to revitalize the city was the Miami Beach Community Development Corporation (MBCDC).\(^{132}\) Created in the early 1980s as a response to devolving economic development, Ernie Martin, former development director for the county, persuaded the state legislature to allocate funds for eleven publically funded community development districts throughout Miami-Dade.\(^{133}\) There was cross-pollination between members of MDPL and the newly formed MBCDC. Early members of the MDPL such as, Denis Russ, helped create the bylaws of the organization, Andrew Capitman and Margaret Doyle were elected to the board, Richard Hoberman became its first executive director, and Lynn Bernstein became the first assistant director.

Based on Venturi-Rauch’s 1978 Washington Avenue master plan, the MBCDC sought to make aesthetic improvements to facades, including signage and landscaping, to engage the street and retail corridor.\(^{134}\) They would agree to pay half of the enhancement costs if the owner completed the balance.\(^{135}\) Within the next eighteen months, all of Washington Avenue from Fifth Street to Lincoln Road had improved. Horowitz’s color palettes provided an enlivened background to usher in a new phase in Miami Beach’s image.

3.18. INTERNATIONAL MEDIA ATTENTION

\(^{132}\) Ibid.
\(^{133}\) Stofík, 101-2.
\(^{135}\) Interview with Andrew Capitman and Jack Johnson.
Miami Beach was once again catapulted into the international spotlight. In the mid-1980s, the city became renowned for the sordid nightlife brought weekly to televisions around the world in “Miami Vice”. Although the show glamorized all the problems of crime, neglected infrastructure, and corruptness of the city, the tourism industry began to see an uptick in interest of the Miami Beach people saw on their screens, including the bold Art Deco architectural backgrounds and oceanfront scenery.

Figure 3.59: Don Johnson filming a scene in front of Carlyle Hotel, 1984

Figure 3.60: “Miami Vice” and tourism, 1985

Though crime was rampant from drug-related incidences, tourists flocked to Miami Beach to witness filming. Reports of the county coroner renting additional refrigerated trucks to store dead bodies to be examined due to shortage of space at the morgue became overshadowed by the tourism revenue pouring in as a result of the on-screen adventures.

The show provided an opportunity to rebrand “God’s Waiting Room” onto the next chapter of Miami Beach’s tourism recovery. Just ten years after the Muriel refugees and South Shore Redevelopment Agency influenced the decline of Miami Beach, the place sizzled with nightlife, celebrities, and young people seeking “the hippest hangout on earth.”

137 Beth Dunlop, “In Vice we found our virtues,” Miami Herald, March 21, 1989.
138 Desiree F. Hicks, “Peeking behind the scenes of ‘Miami Vice,’” Miami Herald, April 17, 1986.
139 “‘Miami Vice’ may be a virtue for Dade Tourism,” Miami Herald, January 30, 1985.
140 In Miami, the long-neglected Art Deco District of South Beach is suddenly “the hippest hangout on earth”—the darling of “European families, sun-starved New Yorkers, fashion photographers, real estate speculators, designers, and assorted pacesetters from Buenos Aires to Berlin,” Top Travel Destinations, Travel and Leisure, October 1992.
3.19. NANCY LIEBMAN, A NEW VOICE IN PRESERVATION

Where Capitman demanded total preservation with her passionate pleas, Nancy Liebman became a voice of compromise at the MDPL. She was happy to take any victory to work with multiple stakeholders in order to establish a longer-term, more sustainable presence for historic preservation’s future. She was politically adept and connected with other preservation advocacy groups locally and nationally. Broadening her understanding of the economic benefits of historic preservation, she sought to partner with developers for their assistance, rather than admonish them for their single-mindedness of the monetary bottom line. She understood the expert research from economic development consultant Donovan Rypkema when he stated, “I have never visited a downtown with a successful record of economic revitalization where historic preservation wasn’t a key element of the strategy.”

The clear path forward relied on forged alliances with government incentives and powerful developers who appreciated the existing architecture.

With the help of Dade Heritage Trust and Maria Pellerin from the Miami Beach Community Development Corporation, they planned and marketed a three-day conference to target new, agreeable owner-developers who would see potential in historic preservation, as opposed to the urban renewal of the South Shore Redevelopment Plan. The Ocean Drive Developer’s Conference took place in April 1985 and welcomed investors, bankers, and developers with a track record in restoration and revitalizations of downtowns across America. After showcasing the possibilities of several rehabilitated apartments and mixed-use buildings, the investment promises began to usher in a new type of historic preservation ethos on Miami Beach. The beneficiaries were different than the originally intended elderly residents that Capitman sought to improve living conditions for. Her views were summarized,

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141 Stofik, 177.
142 Gratz, 289.
143 Program, Ocean Drive Developers’ Conference, April 11-14, 1985.
“The mission of preservation is not to keep every stone in place. It’s not a museum, it’s a living thing. It isn’t just saving buildings. It’s saving and environment and an atmosphere.”

In 1988, Liebman took over as the executive director for the MDPL, which created controversy behind the scenes with Matti Bower and Barbara Capitman. She was seen as a pragmatist and viewed “preservation as a tool to be used to stabilize and improve a living city through guided capitalism.” Liebman was receiving media attention and asked to comment on current issues, and the spotlight began to shift from Capitman. Though some thought Liebman was too easily swayed to compromise during her tenure on the Miami Beach Historic Preservation Board, her personality was needed during this critical time to guide a future permanence of historic preservation within municipal codes and regulations. She later ran a successful campaign for city commission in 1993 and used her experience from the parent-teacher associations, MDPL, and as a board member for the National Trust for Historic Preservation to directly implement policies at City Hall.

3.20. ECONOMIC DEVELOPMENT

Progress was coming to fruition, but stagnant property values, lagging imagery of crime and vice, and the declining tourism due to negative publicity required a diversification of solutions to return the city to its former glory as “America’s Playground”. Through the success of Ocean Drive Developers’ Conference, smaller Art Deco and Mediterranean Revival buildings across Miami Beach, particularly in South Beach, were being converted to condominiums targeting a young professional demographic. Prices were competitive, and the city began to actively seek out investors willing to put up personal capital for improvements, since banks still had reservations from previous redlining enforcements.

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146 Stalik, 175.
149 Don Meginley was an example of an investor who had previous experience in historic rehabilitations in Boston’s South End and came to South Beach after learning about the Art Deco district through a national preservation magazine advertisement. Though bank regulations reduced...
tide was turning for the first time in Miami Beach’s pro-development past to recognize historic preservation as the key to its future.

The weather, architecture, and walkability attracted many northern young professionals, especially from increasingly expensive Manhattan, to create a new life in Miami Beach.150 The buildings were getting the restoration that MDPL approved of, but the current residents were becoming gradually displaced. The city manager recognized the patterns of gentrification early in its transformation and stated, “If anyone will suffer, it will be low-income individuals who used to rent a one-bedroom apartment for $128 including utilities.”151 A second Ocean Drive Developers’ Conference in January 1986 coincided with the annual Art Deco Weekend, just nine months after the original meeting. Changes architecturally and socioeconomically were remarkable and historic preservation regulations followed as the economic and tourism renaissance substantiated its significance.

Two influential developers had a remarkable impact on preserving the built environment of Miami Beach: Gerry Sanchez and Tony Goldman.152 Both understood historic restoration and the development opportunities in creating economic value where it was previously unappreciated. Sanchez was a Cuban immigrant who studied accounting and law at the City University of New York before turning his ambitions to real estate.153 Responsible for the restoration work on the New York Public Library, Trinity Church, and the U.S. Embassy in Warsaw, his operations expanded from Brooklyn to offices throughout New York, New Jersey and San Francisco. After returning to Miami for his retirement, he decided to get involved in the rebirth of South Beach. He purchased eight hotels, two parking lots, and a block along Espanola Way, totaling $15 million in real estate acquisitions.154

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153 Debbie Sontag, “For South Beach, he’s the man with the golden touch,” Miami Herald, July 13, 1986.
154 He sought architecturally significant buildings from his experience in historic restorations and purchased among others, the Waldorf Towers, the Clevelander, and the Breakwater, Stofik, 142.
Unlike Sanchez, Goldman was born to a prominent manufacturing family of Manhattan, but similarly was skilled in foreseeing undervalued assets in compromised neighborhoods, particularly communities on the cusp on an artistic edge. South Beach provided him the opportunity to perfect a formula that he had replicated in the Upper West Side, SoHo of Manhattan, and nearby Coconut Grove. He purchased three hotels, but renovation was slowed due to lack of financing options. New ownership was a successful start, but city officials still needed to provide additional incentives. The livability factors of neighborhoods were becoming impossible to maintain, as cultural tourism became a progressively commercialized tool, rather than solely a mechanism for revitalization.

Aside from the displacement of elderly residents, affordable housing still remains an issue across Miami Beach. Grant money was available for rehabilitation efforts, but a three-month maximum on the rent subsidy prevented long-term stability. Once these regulations expired, the low-income housing could be rented or sold at market fair pricing. The MBCDC became instrumental in proving housing assistance through historic

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156 Fitch, 40-1
157 Miami Beach currently has 4,744 affordable housing units as of 2017 with a subset of 2,613 units utilizing Section 8 vouchers. “The City receives funds from the U.S. Department of Housing & Community Development (HUD) and the State Housing Initiative Program (SHIP) annually for a variety of programs including Public Services and Capital Improvements. However for the past several years these amounts have been declining.” The total number of housing units in Miami Beach 68,388, which allows less than 7% for affordable units. “Environmental Scan,” City of Miami Beach, 2016, 5, 127.
158 Rick Jervis, “The Beach’s needy hang on to their hopes,” Miami Herald, November 10, 1996.
rehabilitation by utilizing grant money, county funds, and loans.\textsuperscript{159} Those who couldn’t afford Miami Beach had to move westward across Biscayne Bay. No homeless shelters existed, and advocates estimated that at least four hundred homeless people were living across the island.\textsuperscript{160} Historic preservation was viewed by some as the force enabling displacement and gentrification.

### 3.21. HISTORIC DISTRICTS AND INCREASED REGULATORY TOOLS

Historic preservation worked in Miami Beach because it adhered to the historical values placed on its cultural resources: tourism and economy. By February 6, 1985, the City Commission adopted the “Ocean Drive Plan” containing recommendations for local historic district designation, and investors congregated to purchase what they could negotiate from the banks.\textsuperscript{161} Tightened regulations and pressures stemming from the Miami-Dade County ordinance and lawsuit finally conceded the adoption of Ordinance No. 85-2470 on March 20, 1985, eliminating the owner consent provision from the Historic Preservation Ordinance.\textsuperscript{162} Soon after the success of the Ocean Drive Developer’s Conference, a wave of historic districts were designated and protected.

![Espanola Way development plan and architectural survey, 1985](image)

\textsuperscript{159} The group had assisted one hundred families to buy their first homes through one of its programs and renovated an apartment building to house people living with aids; Stofik, 216. Interview with Jack Johnson.


On October 16, 1985, the City Commission adopted the “Espanola Way Plan”. Shortly after, on July 23, 1986, Ordinance No. 86-2511 designated the Espanola Way District and the Ocean Drive/Collins Avenue District as Miami Beach’s first local historic preservation districts.\textsuperscript{163} These ordinances were adopted after significant grassroots efforts and widening community support, as retention of historic resources were seen as “good business” in the eyes of politicians, developers, and residents. In 1986, a successful campaign by MDPL and MBCDC entitled “Our Drive…Ocean Drive” resulted in a $3 million bond package approved to fund the widening of the sidewalk on the west side of Ocean Drive, allowing hotels to establish sidewalk cafes.\textsuperscript{164} Though regulations were strengthening and moving forward, losses were still inevitable in an increasingly crowded real estate market.

\begin{figure}[h]
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\includegraphics[width=\textwidth]{image.png}
\caption{Ocean Drive urban design strategy demonstrating “contributing” structures, October, 1984}
\end{figure}

\textsuperscript{163} The sole dissenting vote was Abe Resnick; Christopher Wellisz, “Beach Oks Deco historic districts,” Miami Herald, June 10, 1986; “Espanola Way,” City of Miami Beach Planning Department, March 1986.

\textsuperscript{164} The Miami Beach Development Corporation (MBDC) was renamed the Miami Beach Community Development Corporation (MBCDC).
By 1986, 32 developers had spent $80 million to purchase and renovate historic structures, totaling ownership changes in 127 buildings in South Beach.\textsuperscript{165} In addition, national research demonstrated the job generating power of preservation, with 3.4 jobs created in rehabilitation compared to 1 job for new construction.\textsuperscript{166} Still, local banks were having difficulty seeing the potential in real estate speculation, and of the $165 million in financing in South Beach alone from 1986 to the first half of 1987, a majority came from out of state financiers.\textsuperscript{167}

Figure 3.65: Waldorf Towers, 1986 and 2017

Profit margins could be demonstrated through restored and flipped properties—Sanchez sold the Waldorf Towers for three and a half times what he purchased it for less than a year earlier.\textsuperscript{168} Four years had gone by since the original Historic Preservation Ordinance was adopted, and the city commission had the proof of concept they needed.

3.22. DEMOLITION AND STRENGTHENED PRESERVATION PROTECTIONS

Historic preservation was gaining momentum and broad public support, though the issue of gentrification was a reality that was still not being dealt with properly through public

\textsuperscript{165} Just two years early, in 1984, only four developers were actively renovating buildings; Debbie Sontag, “Buying wave hits Ocean Drive,” Miami Herald, September 2, 1986.
\textsuperscript{166} Gratz, 51.
\textsuperscript{167} Even if a bank would lend money, it would only be at 65 percent of the appraised value, where it would typically be closer to 80 percent, and included personal guarantee provisions; Stofik, 153; Marlene Sokol, “Bankers still tiptoe on beach,” Miami Herald, May 31, 1987.
\textsuperscript{168} Debbie Sontag, “Developer cashing in on South Beach restoration,” Miami Herald, July 31, 1986.
policies. New planning regulations brought lawsuits, but many were dismissed due to the landmark 1978 Supreme Court ruling on the designation of Grand Central Station as a New York City landmark. However, the code enforcements still seemed to favor new construction over rehabilitation, minimal protections against demolition were in place, and old zoning laws conflicted with the vision of regulating historic districts. It was clear that the city commission viewed historic preservation in terms of economic value, rather than one of cultural or historic value.

Though there was success along Ocean Drive, further south where the failed South Shore Redevelopment project would have broken ground, many abandoned buildings were boarded up by owners who never recovered from the city’s “blighted” determinations. An illustration of these failed policies directly led to the demolition of the Biscaya Hotel on March 15, 1987. Constructed in 1925 in the Spanish Mediterranean revival style, the historic structure represented the last remaining example of the grand bayside hotels. For all of MDPL’s successes in its short history, they realized the need to apply additional political pressure to initiate strengthen demolition protections.

Figure 3.66: Abandoned The Biscaya, known as The Floridian in the 1920s, c. 1983
Figure 3.67: Demolition, March 15, 1987
Figure 3.68: Capitman and fellow advocates picketing to save The Biscaya, 1986

169 Elderly resident commenting on displacement through gentrification: “All I see are young people. I don’t know what has happened to our old friends. It’s funny. My generation built this town and now nobody wants us here;” Stofik, 150.
170 Penn Central Transportation Co. v. New York City, 538 U.S. 104 (1978); Another ruling by the U.S. Fifth Circuit Court of Appeals in 1974’s Mather vs. New Orleans, stated that “ephemeral societal interests” must be considered in crafting zoning laws; Mather v. New Orleans, 516 F.2d 1051 (5th Circuit, 1975).
171 Interview with Debbie Tackett.
Good news came on May 6, 1987, with the effective adoption of Ordinance No. 87-2665 designating Altos del Mar a local historic preservation district. However, just a few months after Biscaya’s demolition, the MDPL began a new campaign, SOS (Save Our Senator), to prevent demolition of the Senator Hotel. Although the hotel was demolished on May 3, 1988, advocacy efforts delayed demolition for an additional year and further resulted in the passing of a strengthened ordinance to counteract forthcoming demolitions. Finally, on February 3, 1988, Ordinance No. 88-2598 strengthened the demolition regulations.

Figure 3.69: “Altos del Mar on the upswing as historic oceanfront area,” *Miami Today,* July 25, 1991

Art Deco was gaining international appreciation and cultural tourism was becoming a reality. In May 1988, a Miami Beach Art Deco Guide with six self-guided walking tours along South Beach was published by MDPL. MDPL founder Barbara Baer Capitman’s book, *Deco Delights: Preserving the Beauty and Joy of Miami Beach Architecture,* was published in June 1988. That same month, Ordinance No. 88-2606 placed the National Register’s Miami Beach Architectural District under Design Review jurisdiction, regulating any

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175 Unfortunately it was too late for the The Poinciana Hotel designed by Albert Anis in 1939, located at 1555 Collins Avenue, which was demolished in January 1988, and the Senator Hotel designed by L. Murray Dixon in 1939, at 1201 Collins Avenue, which was demolished on May 3, 1988; Ordinance No. 88-2598, City of Miami Beach, February 3, 1988, http://docmgmt.miamibeachfl.gov/WebLink/DocView.aspx?id=48966&searchid=cb87ba07-808e-9330-e95c070467d0&dbid=0. Accessed April 2, 2017.
176 The guidebook was written by Keith Root with editorial assistance by Dr. Ernest Martin and Michael Kinerk.
exterior additions or alterations.\textsuperscript{177}

The end of the 1980s manifested a remarkable transference from the turbulence and abandonment of neighborhoods across Miami Beach to political and community support for historic preservation as a source of economic revitalization. On April 5, 1989, the Venetian Causeway, completed in 1926, was designated as a local landmark.\textsuperscript{178} Two new historic districts in the Flamingo and Museum neighborhoods were suggested by the City Commission for designation consideration on September 7 and 21, 1989. As a 1988 \textit{Miami Herald} quoted pro-development commissioner Abe Resnick, “We have experienced in the last few years a response—not just from our community but worldwide—that Art Deco’s giving the city a lot of glory and vitality.”\textsuperscript{179} Economic development through tourism was the key to historic preservation’s relevance, and every time an irreplaceable resource was demolished, it fostered new media attention for stronger protective legislation.

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\caption{Repairing cracked plaster of facade of Bentley Hotel, 1986, and comparison to 2016}
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\section*{3.23. PRESERVATION IN THE 1990s}

Just as “Surrounded Islands” by Christo and Jean-Claude brought artists to Miami

Beach and the success of “Miami Vice” brought international media attention, early
campaigns by Calvin Klein and photographer Bruce Weber in the mid 1980s inspired the
modeling industry.\textsuperscript{180} Unique architectural locations for photo shoots brought an estimated
$45 million in revenue from the fashion business in the 1989-90 season.\textsuperscript{181} A renewed
image of the city lured a new type of tourist and resident. The cultural crowd flourished with
the addition of the symphony, ballet, South Florida Arts Center, and media industries.\textsuperscript{182}

On June 20, 1990, Ordinance No. 90-2698 designated the Flamingo Park and
Museum Park local historic preservation districts.\textsuperscript{183} In January 1991, the MDPL organized
the First World Congress on Art Deco\textsuperscript{184}, to promote an international value of preserving Art
Deco’s heritage. Still, on March 2, 1992, another Roy F. France masterpiece, The Sands
Hotel constructed in 1939, at 1601 Collins Avenue, was demolished.\textsuperscript{184}

The Miami Beach Architectural District was still not fully under the regulation of any
local jurisdiction, with only 85\% of the district within the boundaries of municipal historic
districts. In June 1992, the Planning Board held another hearing to designate the left out
resources of the District, and on September 23, 1992, a recommendation for the nomination
of all remaining areas was delivered. This deadline was particularly stressed as the National
Trust for Historic Preservation’s annual conference was held in Miami on October 1992.\textsuperscript{185}
Ordinance No. 92-2821 was accepted on November 4, 1992, and extended to the entire
mile-square Art Deco district.\textsuperscript{186}

Another demographic critical to the success of Miami Beach’s revitalization were
contributions from the LGBTQ community. In 1992, the city adopted an equal rights

\begin{footnotesize}
\begin{itemize}
\item[181] Print and video ads for American Airlines, JCPenney, Bally of Switzerland, Yoplait, Bloomingdale’s, and Spiegel; They appeared in GQ, Vogue, Parade, Cosmopolitan, Life, Elle, and other prominent magazines; The music videos were broadcast on MTV; David Kidwell, “Fashion biz brings bucks to the Beach,” Miami Herald, October 10, 1990.
\item[182] Interview with Andrew Captiman; Myma Katz Frommer and Harvey Frommer, It Happened in Miami, the Magic City (Lanham, MD: The Rowman & Littlefield Publishing Group, Inc., 2015), 22.
\item[183] Ordinance No. 90-2698, City of Miami Beach, June 20, 1990.
\item[184] Klepser, 139.
\item[186] This protected the full area entered into the National Register of Historic Places (1979) from demolition.
\end{itemize}
\end{footnotesize}
ordinance banning discrimination based on sexual orientation. Prominent preservationists, such as Leonard Horowitz, and the annual Winter Party to raise funding for AIDS research, were major economic forces in the city’s regeneration.

Figure 3.71: Elderly resident and new billboard demonstrate changing demographics, 1997

Figure 3.72: NTHP announces 1992 conference in Miami

Thirteen years after the National Register nomination, the entire Miami Beach Architectural District was finally under location protection from demolition, however nothing regulated the demolition of interior historic features. Real estate prices were rapidly increasing and sophisticated new buyers demanded modern upgrades, even if the exterior shell was retained and rehabilitated. The inappropriate renovations of the Delano Hotel lobby in 1993 by designer Phillipe Starck became the strengthening example for interior protections. Developers wanted to maximize profits by increasing floor area of interior spaces, while preservationists were debating issues of “facadism” across the country. By 1994, the Historic Preservation Ordinance was amended to include protection for historically significant public interiors.

Another issue was the existing language within the Ordinance. Though demolition guidelines were strengthened in 1988, on June 3, 1993, the Historic Preservation Board held a public hearing to consider Italian fashion designer Gianni Versace’s application for a certificate of appropriateness for demolition of the Revere Hotel, designed by Herbert Mathes in 1950.\textsuperscript{191} Within its National Register description, the property was listed as “contributing,” rather than “historic,” and an order granted Versace’s request after six months of vigorous protest by MDPL and other advocates.\textsuperscript{192} The Revere Hotel was demolished and converted to Versace’s personal garage and swimming pool. Again, in reactionary fashion, the City of Miami Beach’s Historic Preservation Ordinance recognized that it needed to be strengthened, but only after a significant loss. Recalling the National Register nomination, the integrity of the district in its entirety was essential rather than any individual structure. Less than a year later, in May 1994, the Ordinance was strengthened to protect both “contributing” and “historic” buildings within National Register districts.

Tourism had returned and South Beach was the principal allure. In 1996, The Society

\textsuperscript{191} Larry Rother, “A Designer’s Inspiration is Booed in Miami Beach,” The New York Times, August 19, 1993.
\textsuperscript{192} Nancy San Martin, “Preservationists fight for hotel designer wants room for garden next to Miami Beach palace,” SunSentinel, July 21, 1993.
of American Travel Writers awarded MDPL the prestigious Phoenix Award in recognition of its role in reviving the travel industry through the use of historic preservation. Glamour was restored, but at the expense of replacing the elderly demographics central to its Art Deco origins. Two additional historic districts were designated in 1996, Ocean Beach through Ordinance No. 96-3037 on February 20th, and Harding Township/Altos del Mar also adopted through Ordinance No. 96-3057 on September 25th. The end of the year recognized its preservation pioneer, by officially renaming 10th Street, between Washington Avenue and Ocean Drive, as “Barbara Capitman Way” in November 1996.

Even with these protections, a 1997 survey revealed that 10% of Art Deco District had been demolished in the eighteen years since designation, with an additional 11% altered beyond reversibility measures. Demographics were again shifting quickly to an affluent lifestyle, but Miami Beach’s commercial success was seen as a model for historic preservation. Cultural tourism became a measurable sector to report by the Travel Industry Association of America by 1997, and became big industry for Miami Beach and the state of Florida.

195 Interview with Andrew Capitman.
196 The survey was completed by University of Miami architecture students which included 259 total structures comprised of hotels, apartments, commercial buildings on Ocean Drive, Collins Avenue, and Washington Avenue from the National Register listing; Peter Whoriskey, “Survey: Beach is losing historic buildings," Miami Herald, May 17, 1997.
197Stofik, 239.
By 1998, MDPL successfully lobbied the City of Miami Beach to limit rooftop additions to one story on Lincoln Road. On June 9, 1999, Ordinance No. 99-3186 designated the local historic district of Palm View. The last political act of the century came on November 29, 1999, when President Bill Clinton signed an amendment to the Lanham Trademarking Act to ensure the right of hotels in national, state and local historic districts to maintain their historic names even if in “conflict” with an entity of the same name. This was an example of preservation advocates working in partnership with the Florida delegation to the House of Representatives, the National Trust for Historic Preservation, and the City of Miami Beach to win legislation that was mutually beneficial. The influence of media continued, and by 1999, Florida had become the number three filming destination in the United States, with Miami Beach as the tropical backdrop to films, photo shoots, and television programming.

As a traditionally pro-development constituency turned into a majority of pro-preservation commissioners, the city redrew its zoning allowances and down-zoned. Developers would be limited to building smaller structures than before. It reduced the build-out capacity of the city by 6,400 units and the city realized these maximums would ensure that infrastructure could keep up with demand. A few large projects were approved prior to

200 Stofik, 241.
the agreement, but the shift to maintain the current skyline was a first.\footnote{Three condominiums—the White, Blue and Green Diamonds—would rise forty-six and forty-eight stories in Middle Beach, boldly claiming the status of being the tallest oceanfront condos in the world. Thomas Kramer’s Portofino group on the southern portion of Miami Beach already had the Portofino Tower and added the thirty-seven story Murano and forty-story Continuum.}

### 3.24. KEY TAKEAWAYS

Florida has built one of the most respected historic preservation programs in America, with state, city, and municipal education, advocacy, and funding resources. Miami Beach in particular had many success stories, and the community and politicians became aware of historic preservation’s positive influence on increasing real estate values, particularly revitalizing economic development through tourism.

An in-depth understanding of Miami Beach through a historical perspective will further solidify three facts about the evolution of historic preservation policymaking:

1. Miami Beach has a long-standing connection to private development driving policy and planning decisions;
2. The city’s relationship to its environment and weather events have continuously been integral to its historical expansion; and
3. Historic preservation remains a highly contested political pursuit, where compromise remains crucial to achieve “shared” goals.

The progression to municipal historic preservation regulation has informed current conditions and future constraints. With the impending threat of sea level rise, the need to critically think of the future feasibility of historic resources will be vital to their integration within citywide resiliency planning.
CHAPTER FOUR
CURRENT CONDITIONS
4.1. INTRODUCTION

Miami Beach has now turned its attention to aggrandized issues of resiliency policy planning and combating sea level rise. In this endeavor, the city has undertaken a $400 million Resiliency Plan and hired the city’s first Chief Resiliency Officer, yet many of these plans are admittedly short-term and threaten the building stock currently under the purview of historic preservation regulations. This chapter seeks to establish a framework of prevailing and prospective municipal planning in order to evaluate concerns for historic resources. Current and future challenges are site specific and intended to demonstrate the widening role that historic preservation can play with integration to resiliency planning.

4.2. GEOGRAPHY

Mi Iami Beach is an independent city, one of thirty-one municipalities that lie within Miami-Dade County. Miami Beach rests along seven miles of the Atlantic coast, between the cruise terminals through Government Cut on its south and the town of Surfside on its north. The City of Miami is across Biscayne Bay to the west. Miami Beach has been divided into three sections: North, Middle (or Central), and South Beach since the early 1920s. The lines
of demarcation steadily shifted northward as the city grew, and today (2017) South Beach is considered south of 23rd street, Middle Beach encompasses the area north of 23rd Street and the Indian Creek and south of 63rd Street, and North Beach is the northernmost section of the city, roughly bound by 63rd Street and Indian Creek Drive to the south and 87th Terrace to the north. According to the United States Census Bureau, the city has a total area of 18.7 square miles, composed of 7.0 square miles of land and 11.7 square miles of water.

In order to understand the importance of historic preservation regulation in Miami Beach, geospatial data confirms that 29.81% of all buildings and 25.02% of all land area are under local historic preservation regulation.\(^1\) Since the 1983 Historic Preservation Ordinance was enacted, the following historic resources have been designated:

- 12 Local Historic Districts
- Inventory of 1,516 contributing properties and a total number of 1,861 properties located within the existing local historic districts
- 15 individually locally designated historic sites
- 30 individually locally designated single family homes
- 4 National Register Historic Districts: (1) Miami Beach Architectural District (commonly referred to as the Art Deco District), 1979; (2) Normandy Isles National Register Historic District, 2008; (3) North Shore National Register Historic District, 2009; and (4) National Register Collins Waterfront Architectural Historic District, 2011
- 6 individually designated National Register listings: (1) Beth Jacob Social Hall and Congregation, 1980; (2) The Venetian Causeway, 1989; (3) The Ocean Spray Hotel, 2004; (4) The Cadillac Hotel, 2005; (5) The Fontainebleau Hotel, 2008; and (6) Lincoln Road Mall, 2011\(^2\)

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1. This is data based from 2009 and received from the City of Miami Beach. An inventory of 1,515 contributing properties within existing Local Historic Districts with a total number of 1,861 existing within Local Historic District demonstrates the high concentration of contributing properties across these twelve Local Historic Districts.
Overall, escalations in designation most notably include a 36% increase in surveyed properties, a 500% increase in locally designated single-family homes, and a 300% increase in National Register historic districts from 2005 to 2015.³

In addition, data was compiled to understand the effects of sea level rise from a quantitative perspective at increments of two and four-foot topographic elevations.⁴ The lowest lying areas of the city are predominately composed of new development (non-historic) areas, whereas most historic resources were typically built towards the nominally higher eastern oceanfront. There are 6,381 tax parcels in Miami Beach with 2,127 in National Register historic districts and 1,972 in local historic districts for a combined 2,315 tax parcels in either historic district.⁵

In order to provide data-driven analysis of historic properties, tax parcel level information was intersected at 2 and 4 foot intervals to understand percentages of total historic districts affected.⁶ National Register historic districts and local historic districts were split, though there are some overlaps, to demonstrate the difference in regulatory protection from demolition and highlight those eligible for federal historic tax credits.⁷ This data will be helpful to identify prioritized adaptation areas based on total percentages of buildings affected.⁸ The total tax parcels intersected at 2 feet (projected sea level rise by 2050) across Miami Beach total 35% (2,255/6,381 parcels) and at 4 feet (projected sea level rise by 2100) equals 75% (4,813/6,381 parcels).⁹ These overall percentages are lower than averages throughout both historic district typologies. The following research depicts these

³ Ibid.
⁴ Data sources utilized for the GIS analysis: Local Historic District: City of Miami Beach, 2009; Local Historic Site: City of Miami Beach, 2009; National Register Historic District: City of Miami Beach, 2009; Property Parcel: Miami-Dade County, 2016; Cartographic Streets: Miami-Dade County, 2006; Topography: Florida Division of Emergency Management, 2009.
⁵ A tax parcel is a division of land developed for the sole purpose of creating a complete, accurate, and equitable unit of taxation in support of taxpayers, contributing a fair share of support for the community services received.
⁶ These projections are based on topographic information. As will be discussed in the thesis, the particular geology and construction methods in Miami Beach pose issues that even though certain parcels may be above levels of elevation, this doesn’t preclude basement infiltration or the effects of neighboring buildings and infrastructure improvements (such as raised street levels) to exacerbate effects.
⁷ Please note that National Register Historic Districts do overlap certain Local Historic Districts. Miami Beach Architectural District includes: Museum, Espanola Way, Flamingo Park, Ocean Drive/Collins Ave. Collins Waterfront Architectural District includes: Collins Waterfront Historic District. North Shore Historic District includes: Harding Townsite. Two National Register Historic Districts are currently under review to be designated as either Local Historic Districts or Neighborhood Conservation Districts. These include: North Shore and Normandy Isles, which are discussed in detail in Appendix B4.
⁸ Due to the constraints of time and aims of this thesis on policy progression, the focus was on the regulatory differences between National Register and Local Historic District listings. Further research for ownership, property values, socioeconomic, and historic property information should be undertaken. This research is meant to provide a basis for discussion of the widespread impact 2 and 4 feet of sea level rise would definitely have based on topography.
⁹ At 2 feet, National Register and local historic districts intersect with 23% of parcels, and at 4 feet intersect at 51% and 46% respectively.
locations, as well as total calculations to identify particular areas of concern.

Table 4.1: Environmental Scan of historic resources, 2016

<table>
<thead>
<tr>
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<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Surveyed Properties*</td>
<td>2,884</td>
<td>3,001</td>
<td>3,885</td>
<td>3,915</td>
<td>3,918</td>
<td>3,918</td>
<td>3,918</td>
<td>3,918</td>
<td>3,920</td>
<td>3,923</td>
<td>36%</td>
<td></td>
</tr>
<tr>
<td>Number of Properties Designated Contributing within Local Historic Districts</td>
<td>1,478</td>
<td>1,478</td>
<td>1,478</td>
<td>1,500</td>
<td>1,515</td>
<td>1,515</td>
<td>1,516</td>
<td>1,516</td>
<td>1,516</td>
<td>1,516</td>
<td>3%</td>
<td></td>
</tr>
<tr>
<td>Number of Individual, Local Historic Preservation Sites Designated</td>
<td>14</td>
<td>14</td>
<td>14</td>
<td>14</td>
<td>15</td>
<td>15</td>
<td>15</td>
<td>15</td>
<td>15</td>
<td>15</td>
<td>7%</td>
<td></td>
</tr>
<tr>
<td>Number of Single Family Homes locally Designated</td>
<td>5</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>10</td>
<td>20</td>
<td>22</td>
<td>23</td>
<td>26</td>
<td>27</td>
<td>30</td>
<td>500%</td>
</tr>
<tr>
<td># of Districts locally designated or expanded</td>
<td>14</td>
<td>14</td>
<td>14</td>
<td>15</td>
<td>17</td>
<td>17</td>
<td>17</td>
<td>17</td>
<td>17</td>
<td>17</td>
<td>21%</td>
<td></td>
</tr>
<tr>
<td># of national register districts listed</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>300%</td>
<td></td>
</tr>
<tr>
<td># of national register individual sites listed</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>500%</td>
<td></td>
</tr>
</tbody>
</table>

*Includes all properties throughout the city that have been surveyed to date but may not yet have been brought forward for local designation.

Table 4.2: Environmental Scan of historic resources, 2016

<table>
<thead>
<tr>
<th>LOCAL HISTORIC DISTRICT</th>
<th>NATIONAL REGISTER HISTORIC DISTRICT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collins Corridor</td>
<td>Collins Waterfront</td>
</tr>
<tr>
<td>Museum</td>
<td>Miami Beach Architectural</td>
</tr>
<tr>
<td>Waterway</td>
<td>Normandy Isles</td>
</tr>
<tr>
<td>North Beach</td>
<td>North Shore</td>
</tr>
<tr>
<td>Morris Lapidus</td>
<td></td>
</tr>
<tr>
<td>Palm View</td>
<td></td>
</tr>
<tr>
<td>Flamingo Park</td>
<td></td>
</tr>
<tr>
<td>Ocean Drive/Collins</td>
<td></td>
</tr>
<tr>
<td>Harding</td>
<td></td>
</tr>
<tr>
<td>Towing</td>
<td></td>
</tr>
<tr>
<td>Altos del Mar</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
</tr>
</tbody>
</table>

Table 4.2: Total percentages of 4 feet topographic intersects of tax parcels by LHD and NRHD

Weinstein-Berman 111
Data sources utilized for the GIS analysis: Local Historic District: City of Miami Beach, 2009; Local Historic Site: City of Miami Beach, 2009; National Register Historic District: City of Miami Beach, 2009; Property Parcel: Miami-Dade County, 2016; Cartographic Streets: Miami-Dade County, 2006. Author: LAW, 4/12/17

NATIONAL REGISTER AND LOCAL HISTORIC DISTRICT LOCATION MAP FOR MIAMI BEACH, FLORIDA, 2017

TOTALS UNDER HISTORIC PRESERVATION REGULATION

29.8% ALL BUILDINGS

25.0% ALL LAND MASS

LEGEND

LOCAL HISTORIC DISTRICT

NRHD= NATIONAL REGISTER HISTORIC DISTRICT

LHD= LOCAL HISTORIC DISTRICT

HS= HISTORIC SITE

Flamingo Waterway LHD

Morris Lapidus/Mid 20th Century LHD

Collins Waterfront LHD and NRHD

Museum LHD

Ocean Drive/Collins Avenue LHD

Espanola Way LHD

Miami Beach Architectural NRHD

Flamingo Park LHD

North Beach LHD

Altos del Mar LHD

Harding Townsite LHD

North Shore NRHD

Normandy Isles NRHD

Palm View LHD

BISCAYNE BAY

ATLANTIC OCEAN

Figure 4.2: Miami Beach local and National Register historic districts location map
Data sources utilized for the GIS analysis: Local Historic District: City of Miami Beach, 2009; Local Historic Site: City of Miami Beach, 2009; National Register Historic District: City of Miami Beach, 2009; Property Parcel: Miami-Dade County, 2016; Cartographic Streets: Miami-Dade County, 2006; Topography: Florida Division of Emergency Management, 2009. Author: LAW, 4/12/17

Figure 4.3: North Beach, 2 and 4 foot topographic intersects of tax parcels in historic districts
Figure 4.4: Middle Beach, 2 and 4 foot topographic intersects of tax parcels in historic districts
Figure 4.5: South Beach, 2 and 4 foot topographic intersects of tax parcels in historic districts
Figure 4.6: Miami Beach, 2 foot topographic intersect of tax parcels
Figure 4.7: Miami Beach, 2 and 4 foot topographic intersects of tax parcels
Data sources utilized for the GIS analysis: Local Historic District: City of Miami Beach, 2009; Local Historic Site: City of Miami Beach, 2009; National Register Historic District: City of Miami Beach, 2009; Property Parcel: Miami-Dade County, 2016; Cartographic Streets: Miami-Dade County, 2006. Author: LAW, 4/12/17
Figure 4.8: 2 and 4 foot topographic intersect choropleths, local historic districts, by tax parcel

Figure 4.9: 2 and 4 foot topographic intersect choropleths, National Register historic districts, by tax parcel
The start of 21st century history began with two significant events. The first advancement was the shift in responsibility of the City’s Historic Preservation Board (HPB) from a collective responsibility between the HPB and the Design Review Board (DRB) for jurisdiction over new and additional construction in historic districts, to becoming the sole decision-maker. This provided more power for preservation-based experts and professionals to determine outcomes of historic resources. The second was the dedication of a commemorative plaque affixed to the Cardozo Hotel honoring Barbara Baer Capitman as an inductee of the State’s “Great Floridians” program. The next year, in January 2001, prolific Streamline Moderne architects Henry Hohauser and L. Murray Dixon were also honored as “Great Floridians” by the State. The success of South Beach’s revitalization and appreciation for Art Deco architecture continued to achieve critical praise.

designated Pine Tree Drive as a Historic Roadway. Finally, at the close of the year in October, a permanent home for the MDPL’s Visitor Interpretive Center, Art Deco Museum, and Barbara Capitman Archives were established at 1001 Ocean Drive. This provided a home base for MDPL staff, exhibitions, advocacy events, and archival research.

Still, Miami Beach was pro-development in its policies outside of the fiscal successes of historic districts. After months of lobbying efforts in November 2002, Miami Beach commissioners voted to reduce building heights on the southernmost tip of Ocean Drive from 100 to 75 feet, though this was still a compromise from the originally envisioned maximum height of 35 feet for buildings south of Fifth Street. However, 75 feet would still impose over modest Art Deco buildings on Miami Beach’s southern tip.

The issue of “demolition by neglect” remained a loophole for developers and property owners to prioritize public safety concerns over aesthetic ones. Beginning in March 2004, the City of Miami Beach Mayor’s Blue Ribbon Committee presented its initial report on targeted solutions for incidences of purposeful neglect in order to bypass historic preservation regulations. By 2005, Miami Beach City Commission passed the “Demolition by Neglect” Ordinance, which provided stricter definitions of what constituted neglect with potential fines up to $5,000 per day for non-compliance. In July 2004, advocacy efforts to save the Smith House, a vernacular oolitic limestone structure built in 1916 from demolition began. An expansion in appreciation of architectural styles beyond Art Deco and Mediterranean Revival began to garner support for municipal protection.

In April 2005, the Commission approved the Flamingo Waterway District as a local historic district, and a month later passed additional protections to limit building heights from

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17 City of Miami Beach Code, Sec. 118-532. “Proceedings before the historic preservation board: “Required minimum maintenance standards. It is the intent of this article to preserve from deliberate or inadvertent neglect, the interior, exterior, structural stability and historic and architectural integrity of any building, structure, improvement, landscape feature, public interior or site individually designated in accordance with sections 118-591, 118-592 and 118-593, or located within an historic district, whether vacant or inhabited,” City of Miami Beach municipal code.
18 The house at 900 Collins Avenue (also known as the “Coral Rock House”), was the home of early Miami Beach settler Avery Smith, who ran a casino (bathing pavilion) and ferry service on Miami Beach beginning in 1909.
four to three stories. With the establishment of a permanent home and additional funding from the National Endowment for the Humanities, the MDPL co-sponsored a weeklong teacher training program entitled “Using Buildings To Tell Stories.” The continued educational initiatives of the MDPL remain a pillar for sustained community advocacy and municipal historic preservation policy encouragement.

![Figure 4.11: Avery Smith House, 1925](Image 60x466 to 376x620) ![Figure 4.12: After demolition, 2011](Image 385x485 to 543x594) ![Figure 4.13: Reconstruction, 2016](Image 60x466 to 376x620)

In July 2006, the Commission passed an ordinance to require property owners seeking to use more than 30% of their lot space to renovate or build new structures to go before the DRB panel for approval. The ordinance was intended to provide more firm regulatory feedback on the trend towards contemporary “McMansions” on undersized lots, rather than the preservation of existing, historic single-family homes. This remains an ongoing conflict to balance historic preservation concerns with realistic expectation of multi-million dollar property values in Miami Beach. Continued support of historic districts broadened with the westward expansion of the Flamingo Park Historic District in January 2008. By October 2009, the Morris Lapidus / Mid 20th Century Historic District was added as a local historic district. This one-mile oceanfront stretch of land spans from 44th Street to the 5300 block of Collins Avenue, and focused primarily on the hotels and

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20 On their website, the MDPL features upcoming events and advocacy projects clearly stating, “Educating the community we serve through free exhibits, lectures, panel discussions, and special events is made possible with the generous support of our individual members, business sponsors, and the Miami-Dade County Department of Cultural Affairs and the Cultural Affairs Council, the Miami-Dade County Mayor and Board of County Commissioners, City of Miami Beach, Cultural Affairs Program, Cultural Arts Council and the City of Miami Beach Mayor and Commission.” [http://www.mdpl.org/events/special-events/](http://www.mdpl.org/events/special-events/). Accessed February 17, 2017.


condominiums designed by the architect Morris Lapidus. Just as the Miami Beach Architectural District pioneered the appreciation of vernacular Art Deco structures, the designation of MiMo architecture demonstrated the evolving recognition for Miami Beach’s tropical variation on accepted architectural movements.25

With new threats to absorb, such as sea level rise caused by climate change, skillful tactics must be adopted to communicate the implicit connection between heritage, economics, and environmental concerns. Currently, the National Register listed Normandy Isle Historic District and the Tatum Waterway Historic District in North Beach are being debated for designation as either local historic districts and neighborhood conservation districts.26 These instances intersected economic development and resiliency concerns in their community outreach processes and will be discussed as a case study.27

4.4. CURRENT CONDITIONS AND MUNICIPAL PLANNING IMPLEMENTATIONS

This section will explore the ongoing issues surrounding the preservation of historic resources and the challenges posed by sea level rise. The chief aims will be to address concerns of municipal planning decisions, long-term investments in resiliency, recent sustainability regulations, geology and water management, and “soft” and “hard” engineering adaptation options. The synthesis of these challenges can guide decision-makers in the effective negotiation of competing values ascribed to historic resources.

4.4.1 Flood hazards and current municipal planning

26 A Neighborhood Conservation District (NCD) is a set of land use regulations that are applied to a specific neighborhood as an overlay zoning district. The focus of a Neighborhood Conservation District is on the physical design of new development and may include regulations regarding a property’s lot size, street setback, interior setback, front-yard parking, building height, house size, and fences. In a Historic District, the regulations and review standards have more emphasis on historical and architectural details such as construction materials, roof shapes, lighting, proportion, and appurtenant fixtures. This leads to a lengthier review process because Historic District properties must go through a Design Review phase by the Historic Preservation Board in order to gain a Certificate of Appropriateness. In an NCD, planning staff can review for approval of review standards.
27 See North Beach Case Study in Appendix B4.
Climate-based disasters caused $46 billion in damage and killed at least 138 in the 48 contiguous United States last year, with inland flooding emerging as the costliest weather event for the first time since 1997.\textsuperscript{28} The number of billion-dollar occurrences in 2016 was the second highest since 1980, with one less than the 16 in 2011.\textsuperscript{29} Combined with increasing sea levels on prone low-lying coastal areas, disaster mitigation has been a top concern of municipalities. Miami Beach currently averages just four feet above sea level.\textsuperscript{30}

Whether the majority of the cause remains anthropogenic or natural, the end result remains undeniable. Regardless of political viewpoint, the sea level rises. This process has accumulated over 20,000 years, since the last glacial maximum.\textsuperscript{31} Globally, the sea level has already risen 400 feet, and continues intensifying. As associate professor at Florida International University’s Sea Level Solutions Center, Jeff Onstead proclaims, “Even if global emissions dropped dramatically today, the city would still be locked in for 15 feet of sea-level rise over the next 200 years.”\textsuperscript{32} This is especially concerning as experts estimate beachfront property in Miami-Dade County to be valued at $15 billion, with over $3.5 trillion in losses by 2070.\textsuperscript{33}

\textsuperscript{29} It was the first time that more than two inland flooding events caused losses exceeding $1 billion each. Hurricane Matthew in October and flooding in Louisiana in August topped the 2016 list causing $10 billion in damage each. Matthew killed 49 people in the U.S., while 13 died in Louisiana’s floods; “Billion-Dollar Weather and Climate Disasters: Overview,” National Oceanic and Atmospheric Administration, https://www.ncdc.noaa.gov/billions/. Accessed February 13, 2017.
\textsuperscript{30} The Miami metropolitan region has the greatest amount of exposed financial assets and 4th-largest population vulnerable to sea level rise in the world. The only other cities with a higher combined (financial assets and population) risk are Hong Kong and Calcutta; Gus Lubin and Mike Nudelman, “Rising Sea Levels Could Cause Staggering Damage To These Cities,” Business Insider, April 22, 2014.
\textsuperscript{31} This encompasses periods of gradual and rapid rise (likely due to catastrophic collapse of ice sheets and massive interior lakes emptying into the ocean); Ralph W. Tiner, “Changing Sea levels during the past 25,000 years,” U.S. Fish & Wildlife Service, Northeast Region, https://www.fws.gov/slamm/Changes%20in%20Sea%20Level_expanded%20version_template.pdf. Accessed February 14, 2017.
\textsuperscript{32} By the end of the century at least six feet of sea level rise will occur, at a rate of one inch per years, which will subsume Coral Gables, much of Little Havana, downtown Miami, and all of Miami Beach; Matt Vasilagambros, “Taking the High Ground—and Developing It,” The Atlantic, March 6, 2016, https://www.theatlantic.com/business/archive/2016/03/taking-the-high-ground-and-developing-it/472326/. Accessed February 18, 2017.
4.4.2. Sunny day flooding and Miami Beach projections

Sunny day flooding, separate from storm surge, has been a growing issue for Miami Beach affecting daily life, businesses, and tourism revenue. During King Tides, neighborhoods have experienced continual dry-weather street flooding as seawater emerged through sewer systems.34 Using observed linear trends, scientists at the University of Miami’s Rosenstiel School of Marine & Atmospheric Science have observed that the sea level could be

34 “King Tides” are defined as “the highest predicted high tide of the year at a coastal location. It is above the highest water level reached at high tide on an average day.” “King Tides and Climate Change,” Environmental Protection Agency, https://www.epa.gov/cres/king-tides-and-climate-change. Accessed April 2, 2017.
5 inches higher by 2034, but claim a realistic range is 5-9 inches.\textsuperscript{35} Using a sea level rise projection of 3 feet by 2100 from the 5th IPCC Report and elevation data, the entirety of Miami Beach would be inundated.\textsuperscript{36} According to the chief of the National Centers’ climate monitoring branch, Deke Arndt, “We have not arrived in our climate of the future, but we have certainly left our climate of the past. Our institutions will need to use this information—and the details within it—to make better bottom-line decisions.”\textsuperscript{37} Indeed, these are no longer theoretical assumptions and inundations in Miami Beach and other coastal regions have become visible reminders of the destruction possible and the future of increasing flood hazards.\textsuperscript{38}

4.4.3. Southeast Regional Climate Compact

The institution of the Southeast Regional Climate Compact (SRCC), a bipartisan effort across South Florida to lobby for federal funding and policy changes was adopted by Miami-Dade County on December 1, 2009. Amid national debates, with Florida Senator Marco

40 The four counties of South Florida (Palm Beach, Broward, Miami-Dade, and Monroe), combined are more populous than 30 of the 50 states, and their joint effort has turned out to be the most successful example of local bipartisan cooperation on climate change in the county; Ted Hesson, “Working Across Party Lines, The Atlantic, December 2, 2016.
Rubio denying the anthropogenic causes of the recent exacerbation in climate change to Florida’s governor Rick Scott banning the terms “climate change” or “global warming” in government communications, underlying political differences have extended to municipal planning decisions. By 2011, members of the SRCC enlisted support from scientists within the U.S. Geological Survey, Department of Interior, and the U.S. Army Corps of Engineers to provide visual metrics for measuring risks due to flood hazards. By 2012, county officials had developed a unified climate plan consisting of a 5-year action plan for mitigation.

Among its recommendations, the main goal was to “protect the assets of the region’s unique quality of life and economy, guiding future investments, and fostering livable, sustainable, and resilient communities.” Though they mention, “Sustainable Communities and Transportation Planning” as one of seven categories for recommendations, no explicit mention of historic and cultural resources is referenced in specific “Adaptation Action Areas.” Though tourism afforded through a particular image of the city remains the primary revenue driver for much of South Florida, historic preservation is never explicitly stated as a recommendation. Within its own compact, they estimate that the four counties of Southeast Florida account for a combined Gross Domestic Product of more than $2.5 billion annually and more than 37% of statewide economic output.

4.4.4. Effects of SRCC on City of Miami Beach’s Regional Climate Action Plan

In direct response to the Southeast Florida Regional Climate Change Compact, the City of Miami Beach instituted its own Regional Climate Action Plan on April 25, 2013. However, due to the initial lack of specificity in the 2012 County report, heritage and cultural resources

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43 Southeast Florida Regional Compact, V.

44 The Super Committee worked to consolidate the recommendations into seven categories, including: Sustainable Communities and Transportation Planning; Water Supply, Management, and Infrastructure; Natural Systems; Agriculture; Energy and Fuel; Risk Reduction and Emergency Management and; Outreach and Public Policy; Ibid, Section VI, Recommendations.

45 Particularly in Miami Beach, this link as branded through its architectural heritage remains precarious; Ibid, A-2.
management adaptation and mitigation efforts through historic preservation are ignored. The focus primarily surrounds the construction of state-of-the-art infrastructure, resilient building regulations, and instituting technological solutions, rather than the adaptation of existing historic resources.

As a result, an ambitious $400 million resiliency plan has become a top municipal expenditure for the next five years. The design, termed the “street of tomorrow” by city engineer Bruce Mowry, raises the sidewalk 2½ feet above current elevations and allows the installation of 80 pumping systems in phases across the city’s most vulnerable areas. To combat flooding, problematic streets have been raised and repaved, allowing the installation of vast drain and pump systems to return water back to the bay. The approach has demonstrated success in several neighborhoods, though after one year since its inception the

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47 The City of Miami Beach Sustainability Plan of 2010 does include the “Preservation of historically significant structures, sites, and districts” as a success indicator, though there is no mention of this on updated Regional Climate Action Plan Matrix from April 25, 2013; City of Miami Beach Sustainability Plan, 2010, 8.

estimated 5-year plan may be extended and now city officials are looking at an increased $500 million expenditure.\textsuperscript{49}

\begin{figure}[h]
\centering
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\caption{Figure 4.22: Demonstrating 2½ feet elevation of raised streets in Sunset Harbor}
\end{figure}

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{figure4_23.png}
\caption{Figure 4.23: Renderings demonstrate the integration of pump system to existing infrastructure}
\end{figure}

\subsection*{4.4.5. Lessons learned with the current Resiliency Plan}

Controversy on whether the pump system pollutes Biscayne Bay has required a reevaluation of future implementations.\textsuperscript{50} As Mayor Levine states, “When you are doing this, there are no textbooks on ‘How to Protect Your City from Sea Level Rise.’ We have a team that’s going to get it done, that’s going to protect this city. We can’t let investor confidence, resident confidence, confidence in our economy start to fall away.”\textsuperscript{51} To confront these issues, the city of has involved key international players to strategize improved long-term solutions.

\textsuperscript{49} Another infrastructure project is a $25 million investment to create a higher seawall along Indian Creek, which would provide updated underground pipework and a storm water pump. The project is expected to last two years and tackle a mile-long stretch that was the worst hit during seasonal high tides. “Miami Beach kicks off seawall construction ahead of king tide season,” The Real Deal South Florida, September 16, 2016, https://therealdeal.com/miami/2016/09/16/miami-beach-kicks-off-seawall-construction-ahead-of-king-tide-season/. Accessed February 18, 2016.

\textsuperscript{50} Then there are the ripple effects of years of construction, traffic jams and potential environmental damage — the still undetermined consequences of pumping runoff tainted by fertilizer, dog poop and road spills into Biscayne Bay or deep underground beneath a fresh water aquifer that will also shrink as the ocean encroaches; Flechas and Stolevich, Miami Herald, October 23, 2015.

In February 2017, Henk Ovink, a Special Envoy for Water Affairs of the Kingdom of the Netherlands visited Miami Beach with two city officials on a three-day tour of South Florida.\textsuperscript{52} He stated that the good news included, “The Beach’s incremental approach, which involves rallying community support as it goes about raising streets and sidewalks, installing massive pumps to remove water, and rewriting its building and zoning codes under a plan to remake 40 percent of city streets within a decade.” However, his visit emphasized the need to reevaluate the conception of “living with water” instead of control.\textsuperscript{53} The Dutch have challenged the way cities operate, based on the buy-in of citizens to change fundamental lifestyle decisions, which will be further detailed in the Netherlands Case Study.

\textbf{4.4.6. 100 Resilient Cities and the Global Resilience-Building Network}

Municipal planning implementations have proved effective and nimble. On May 25, 2016, Greater Miami and the Beaches issued a press release for their selection to participate in 100 Resilient Cities (100RC) and The Rockefeller Foundation’s Global Resilience-Building Network.\textsuperscript{54} Positions of Chief Resilience Officers funded between a three-county coalition of Miami Beach, Miami, and Miami-Dade County were coordinated through 100RC and $164 million Rockefeller Foundation endowment. The emphasis on collaborative governance has not always been easy in the context of state and federal political climates.

As stated in the press release by Peter Madonia, Chief Operating Officer of The Rockefeller Foundation, “Miami is ground zero for some of the most common and pressing challenges facing cities in the 21\textsuperscript{st} century. A dynamic, holistic strategy for moving Miami forward should address the city’s aging infrastructure, housing stock, and public transportation system... Cities like Miami demonstrate why building resilience is so important.” The aims of the 100RC is threefold: assistance to resources for drafting a

\textsuperscript{52} Ovink is a Dutch water expert who worked as the Netherlands’ chief of water management and spatial planning, then worked for two years as senior advisor to former President Barack Obama’s Hurricane Sandy recovery task force, and now is an envoy for the Dutch government to share his expertise on water management and sea level rise; Vigilucci, Miami Herald.
\textsuperscript{53} He is currently involved with the $920M water defense planning around lower Manhattan, the Bronx, New Jersey shorelines, Long Island, and Staten Island.
Resilience Strategy, providing access for private sector, public sector, academic, and NGO resilience tools, and facilitate membership of a global network of peer cities to share best practices and challenges.55

The approach under Mayor Levine to rapidly undertake urgent improvements, while researching incremental steps to institute cost-effective 100-year storm standards has built consensus among residents.56 The 2016 Community Survey by the City of Miami Beach demonstrates that 89% of respondents supported the spending of tax dollars to address rising sea levels and 64% agreed that stormwater and drainage improvements were the most important to residents, even though only 37% strongly agreed that they had observed coastal water level increases.57 With sea level rise and resiliency planning no immediate solutions exist, however an incremental approach to create safe, efficient, and truly sustainable neighborhoods necessitates perseverance.

![Graph 4.1: Level of agreement with the statements](image1)

![Graph 4.2: Support for spending tax dollars to address SLR](image2)

55 "Letter to Commission, Greater Miami & the Beaches Selected by 100 Resilient Cities, LTC No. 226-2016" City of Miami Beach, Office of the City Manager, May 24, 2016. From Jimmy L. Morales, City Manager to Mayor Phillip Levine and Members of the City Commission.

56 The 100-year flood is referred to as the 1% annual exceedance probability flood, since it is a flood that has a 1% chance of being equaled or exceeded in any single year.

57 A significant driver in developing Citywide priorities is community input received through the satisfaction survey conducted with residents, businesses, and community organizations, as well as focus groups within the community; “Excellence—Customer Input,” City of Miami Beach, http://web.miamibeachfl.gov/excellence/scroll.aspx?id=18256. Accessed March 15, 2017.
4.4.7. Excellence Model

The City of Miami Beach uses a performance-based model to continuously monitor opportunities for municipal improvement with an “Excellence Model.” Driven by its mission statement, priorities are established at the strategic level based on customer input and environmental scan data. These datasets include demographic information, socioeconomic data, department workload reports, and quantitative historic preservation numbers. Annually resources are allocated in support of strategic priorities, and performance is continually monitored to track progress and make adjustments. The 2016 Community Survey demonstrates a decreasing trend among residents in their perceptions of municipal historic preservation efforts. Overall patterns of decreased satisfaction level are also evident in other perceptions of the city, notably quality of life and efforts to be a “green” or sustainable city.

59 The Office of Budget and Performance Improvement (OBPI) is the primary facilitator for the City’s Excellence Model. The Office of Budget and Performance Improvement facilitates maximization and allocation of resources to achieve measurable results responsive to community needs.
4.4.8. LEED construction regulations

In order to fund costly infrastructure projects, Miami Beach has begun to implement new regulations that prioritize energy-efficient new developments. As of April 1, 2016, developers must either erect structures that are certified LEED gold and higher or pay a 5% tax of the total construction cost for structures larger than 7,000 square feet.61 By placing the burden on the private sector, long-term resiliency investments can be a reality. However,

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robust real estate development runs contrary to global mitigation agendas and the goals of historic preservation to adapt existing structures that hold aesthetic and societal value.  

Though it is impossible to halt any new development, these regulatory policies do factor in long-term resiliency goals for the city. The policy’s intention lies in finding creative ways to initiate “incentives for the development community to look at their means and methods of constructing,” as Betsy Wheaton, the city’s environment and sustainability director states. From the Resiliency Fund, anticipated projects include permeable pavement, improving the tree canopy, reintroducing mangroves, and seawall initiatives.

<table>
<thead>
<tr>
<th>Level of Certification Achieved</th>
<th>Sustainability Fee Reimbursement to Participant for meeting certain Green Building certification levels</th>
</tr>
</thead>
<tbody>
<tr>
<td>Failure to obtain Certification</td>
<td>0% refund of bond or payment of Sustainability Fee</td>
</tr>
<tr>
<td>LEED Certified</td>
<td>50% refund of bond or payment of Sustainability Fee</td>
</tr>
<tr>
<td>LEED Silver Certified</td>
<td>66% refund of bond or payment of Sustainability Fee</td>
</tr>
<tr>
<td>LEED Gold Certified or Living Building Challenge Certified</td>
<td>100% refund of bond or payment of Sustainability Fee</td>
</tr>
<tr>
<td>LEED Platinum Certified or Net Zero Energy Building Certification</td>
<td>100% refund of bond or payment of Sustainability Fee</td>
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</table>

This funding remains contingent on buildings that don’t comply with regulations, which can be seen as a lose-lose scenario for preservation advocates. If that is the only way that money can be deposited into the fund within the short-term, preservation goals and resiliency goals will both compromise their contribution to long-term resiliency. The need to shift to a process of adapting historic resources, rather than incentivizing new development, though it might be LEED certified, should be a top priority for the city. Similarly, in Section 8-6 of the...
City Code, an expedited permitting program for green buildings should be extended to the retrofitting and adaptation of existing, historic structures.\textsuperscript{66}

To understand potential incomes, between 2010 and 2015, 216 permits were issued for buildings larger than 7,000 square feet, which would equate to $60 million if none were LEED gold certified or higher. Though it will take another five years to demonstrate the value of this new ordinance, private industry will become more involved in their stake of municipal resiliency planning.\textsuperscript{67} As Miami Beach developer, Todd Glaser, cautioned, “the costs are just going up on everything and things are slowing down. And the city is not taking that into consideration.”\textsuperscript{68}

4.4.9. Resiliency building regulations

In addition to the approval of Chapter 133 in the City Code of Sustainability and Resiliency on February 10, 2016, core questions of the shortened lifespan of the built environment, especially vulnerable structures under historic preservation regulation will continue to be concerns.\textsuperscript{69} Zoning regulations to anticipate resiliency planning have consisted of requirements to raise new construction at least three to four feet above the base flood elevations. These developments are in anticipation of increased regulation from FEMA to require owners to build on elevated ground.\textsuperscript{70} These regulations will foster exceptional investments in flood-prone areas. Current regulations only require that buildings be at or above the elevation within the 100-year floodplain and historic resources are exempt from these requirements.

\textsuperscript{66} As used in this Section a green building shall mean one whose design, construction, and operation promote the preservation of resources and environmentally sensitive construction practices, systems and materials. In making the determination of whether the structure is a green building, the Building Official shall rely on the review, evaluation and where available registration or certification of the design by recognized environmental rating agencies including the Florida Green Building Coalition, the National Home Builder Association and the U.S. Green Building Council; Ord. No. 05-115, § 1, 7-7-05, http://web.miamibeachfl.gov/building/kiosk7/scroll.aspx?id=39202

\textsuperscript{67} The new law was effective for projects that applied for review after April 1, 2016; Stuart Kaplow, “Miami Beach’s New Green Building Tax,” Green Building Law Update, Environmental Law and Sustainability for Business, July 10, 2016.

\textsuperscript{68} Flechas, Miami Herald.


The most recent version of Miami Beach’s Resiliency Plan from 2015 recommends increased height of land for new development projects, increased heights for sea walls, increased elevations of base ground floors in structures, and increased elevations of streets and public spaces. To combat sea level rise, these measures are necessary to reduce flood insurance premiums.\textsuperscript{71}

### 4.4.10. Long-term real estate and tourism investments

The dire prospects for long-term coastal real estate valuations as a side effect of climate change have already begun to alter dynamics of marketing flood-prone properties across competitive markets. Though demand remains strong in desirable areas like Miami Beach, long-term investment in vulnerable communities has begun to change the mindset of purchasers, with location and adaptation measures at the top of some investors’ minds.\textsuperscript{72} As developer Scott Robins, chairman of the City’s Sea Rise Committee, stated, “You’d be surprised how much people tune the issue [sea level rise] out. Some people are tuned into it, but most aren’t.”\textsuperscript{73} A majority of the concern lies in the long-term residents who view Miami Beach as their permanent home and perceive issues of climate change resiliency as the defining issue for the city’s future.\textsuperscript{74}

\textsuperscript{71} Resiliency Plan, City of Miami Beach, 2015.
\textsuperscript{74} See previous results from 2016 Community Survey: 89% of respondents supported the spending of tax dollars to address rising sea levels and 64% agreed that stormwater and drainage improvements were the most important to residents, even though only 37% strongly agreed that they had observed coastal water level increases.
4.4.11. Waterfront property market

According to a November 24, 2016, *The New York Times* article, “Some analysts say the economic impact of a collapse in the waterfront property market could surpass that of the bursting dot-com and real estate bubbles of 2000 and 2008.” These realities would be disastrous for the economic lifelines that Miami Beach depends on for survival. In 2016, home sales increased 2.6% nationally, but have dropped 7.6% in high-risk flood zones in
Miami-Dade country according to data. James Murley, Miami-Dade’s chief resilience officer stated that it is important, “to avoid spooking the market since real estate investment produces much of the revenue that pays for these upgrades.” This balancing act remains poignant in Florida due to state and municipal reliance on property and sales taxes, to offset the lack of revenue from income tax.

4.4.12. Elevation of historic properties

By rehabilitating existing buildings in conjunction with policies that protect historic resources, coastal areas can conserve environmental sources, while improving resiliency to sea level rise. These strategies of adaptation are executed by the relationship of the first occupied floor of a building and the base flood elevation (BFE). If the first occupied floor remains above the BFE, property owners can flood-proof the understory (basement or crawl space) with minimal change to the structure. Alternatively, as the height of flooding due to sea-level rise increases, property owners may assume extensive processes by physically elevating the building and successively flood-proofing the new understory. Raising the building allows water infiltration to move underneath and around, promoting less direct damage to the resource. FEMA suggests that, for circumstances where it is essential to preserve the building’s exterior relationship to the ground, the interior floors can be raised in isolation. This option may be favored for buildings with high ceilings and elevated windowsills, provided that the materials that remain below the BFE are flood-proof.

77 Property owners can create positive drainage around their building or reinforce the existing foundation systems by implementing dry- or wet-flood-proofing – meaning that portions of the building can be made watertight or allow internal flooding.
79 “Floodplain Management Bulletin.” Federal Emergency Management Agency. Vol. 12. For instance, in Darlington, Wisconsin, as part of its Hazard Mitigation Plan in 1993, nineteen historic commercial buildings in the downtown business district were retrofitted to meet BFE requirements while preserving the historic entrances and storefronts. While meeting local zoning ordinances, historic preservation requirements and Hazard Mitigation Grant Program (HMGP) criteria, the town filled-in the basements of these buildings, raised the first floors to the BFE, dry-flood proofed the first floors and raised utilities to the BFE plus two feet, and constructed interior floodwalls in a vestibule area behind the entrance that separated the street level from the elevated first floor. Wisconsin Emergency Management, “Mitigation Leads to Preservation and Economic Recovery for One Community: Darlington, Wisconsin.” http://emergencymanagement.wi.gov/mitigation/stories/hm-darlington_success.pdf. Accessed November 13, 2016.
Advocates for more severe flood insurance requirements above the new NFIP maps recommend that local regulations should encourage adding additional protections.  

4.4.13. Technological solutions

Adaptation efforts have also begun within the Sustainability and Resiliency Committee. Sponsored by Commissioner Kristen Rosen Gonzalez, the city has proposed exploring options to use Triodetic’s Tube and Hub technology to raise a municipal building as a prototype for residents who will need to raise their private in the future. Initially proposed on June 8, 2016, the estimated cost for this technology would average $15 per square foot. In addition to elevating structures, the relocation of structures was also presented. They are specifically looking to elevate the existing Carl Fisher Building within the current Convention Center renovations, and have put out requests for similar technological proposals as of September 2016.

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80 Siders, 89. These include applying a freeboard (an additional height requirement above the BFE) and implementing V-Zone requirements to A-Zone properties.

81 The most updated information on the Commission Committee referral tracking for the Sustainability and Resiliency Committee can be found online, http://miamibeachfl.gov/cityclerk/scroll.aspx?id=63217


Similar to Galveston, it is clear that Miami Beach has prioritized elevation solutions. As Eric Carpenter, public works director for the City of Miami Beach, stated “The only tried and true solution to combating rising sea levels is to raise with it. Obviously, the city can control our portion of the property and we plan on raising most of our land and we’re hoping that the private development community follows suit.”

The eventual shift to elevating structures or providing an elevated finished-first floor are the current projections for architectural solutions, which would rely on private investment, rather than government assistance at any level.

### 4.4.14. Water management and geologic constraints

In addition to surface flooding, intervention also occurs from below through the city’s porous geological surface. Saltwater intrusion already exists along the coastal communities of South Florida. As the water table rises with increasing sea levels, more pressure will be exerted on the fresh water in the aquifer, propelling the fresh water upward toward the surface.

Amplified global contributions to sea level rise, flooding from storm surge, and high tides will continue with repeated severity. Restoring the aquifers of the Everglades to its

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85 Municipal wells pump fresh water up from the aquifer for residential and agricultural use, but some cities have already had to shut down some wells because the water being pumped up was brackish. Water tables will continue to rise, and saltwater intrusion will continue to contaminate fresh water supplies. One city—Hallandale Beach, just north of Miami—has already had to close most of its drinking wells, because the water is too salty. The water table also supplies 90% of South Florida’s drinking water.
natural freshwater flow will be an essential long-term strategy to incrementally combat saltwater intrusion.

Figure: 4.30: Schematic drawing of saltwater intrusion

4.4.15. South Florida Water Management District

The South Florida Water Management District (SFWMD), a state agency, operates one of the largest water control systems, including twenty-three hundred miles of canals, sixty-one pump stations, and more than two thousand water control structures. Floridians south of Orlando depend on this system to prevent inundation for much of the low-lying coastal and inland communities. When the system was redesigned in the 1950s, the water level of these interstitial aqueous landscapes could be sustained to 1½ feet higher than the elevation of high tide.

With sea level rise, the previous elevation difference has been reduced to eight inches. Researchers at Florida Atlantic University have found that with six more inches of sea level rise, SFWMD will relinquish half its flood-control capacity. Critical pump and flood control structures to maintain inundation levels and safe drinking water identified 20 vulnerable systems six years ago. After five years of budget cuts, only one pump has been fixed. The second assessment by SFWMD to assess risky structures remains ongoing.

4.4.16. Geological constraints of oolitic limestone

86 The most recent data and research from the South Florida Water Management District can be found online, https://www.sfwmd.gov/.
87 Due to gravity, this elevation allowed water to flow off the land toward the nearest water source and flushed enough freshwater out to prevent saltwater from entering the porous substrate.
88 Kolbert, “The Siege of Miami.”
Much of these salinity issues are predicated on Miami Beach’s foundation of oolitic limestone, composed mainly of ooids with quartz sand and small mollusk fossils. Due to its porous nature, water infiltration is not only a threat from the street level, but also below the surface. Properties are prone to flooding through ground floors making permeability challenging for historic structures.

Due to its porous limestone bedrock, solutions in successful resiliency case studies cannot be applied in Miami Beach. Unlike countries such as The Netherlands that can create dykes and levees for further protection from flood hazards, the bedrock porosity ensures saltwater intrusion will occur through foundations. As City Engineer Bruce Mowry stated, “That is the one that scares us more than anything. New Orleans, the Netherlands—everybody understands putting in barriers, perimeter levees, pumps. Very few people understand: What do you do when the water’s coming up through the ground?” Mowry has also alluded to the possibility of finding a resin that could be injected into the limestone which would fill the porosity of the limestone, then set to form a seal would provide a more permanent resistant at the ground floor.

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90 Particular to the Miami Limestone, ooids are small coated carbonate grains, which contain a nucleus of either a shell fragment, or a quartz grain. Miami Limestone is young geologically, having formed only during the last inter-glacial period approximately 119 to 124 thousand years ago, a period characterized by sea levels that were 12 to 20 feet above current levels and temperatures that were at least 2 degrees warmer than present; Robert B. Halley and Charles C. Evans, *The Miami Limestone: A Guide to Selected Outcrops and Their Interpretation*, Miami: Miami Geological Society, 1983.


The importance of regional planning, combined with global mitigation efforts, requires particular emphasis as unique geologies depend on iterative solutions. Suggestions on how to store rising water levels and stormwater have already been presented in municipal commission meetings, including the use of additional storage underneath newly elevated roads, ground floors, and parking lots.94

### 4.4.17. “Soft” and “hard” engineering adaptation options

In the case of coastal communities, shoreline protection interventions can be used to maintain or enhance the protective functionality of the coastline to prevent flood hazards. Approaches for shoreline intervention can be classified to include both “soft” and “hard” measures.95 Soft measures use organic materials to cultivate living shorelines, through a combination of options including: beach nourishment, dune replenishment, revegetation, and wetlands restoration. Soft measures, though man-made, can “imitate natural systems, interact with the local ecosystem, and adapt to changes in the environment.”96 Hard measures include
levees, dikes, embankments, seawalls, river channel modification, floodgates, and reservoirs. The EPA emboldens governments to implement living shorelines. Hard engineering barriers can be strengthened in combination with soft measures through hybrid stabilization.

4.4.18. Impact on historic resources

A combination of approaches can be employed depending on economic stability, real estate values, the capacity of land availability, and the feasibility of defending the shores without damaging the natural environment. However, hard measures can inflict aesthetic or physical damage on the historic built environment. The City of Miami Beach advocates for several retrofitting methods to protect investments from unnecessary damage,

including: elevating the structure so that the lowest floor is above flood protection levels; elevating critical electrical facilities above flood protection levels; wet flood proofing the structure when water is allowed to enter; relocation to higher ground; utilizing levee and floodwall protection as barriers; and dry flood proofing to seal the structure. In each of these scenarios, the integrity of historic resources will be compromised.

4.4.19. Continued renourishment projects

Ongoing efforts of beach renourishment have continued. Starting in August 2016, the U.S. Army Corps of Engineers began a $11.9 million project to replenish 230 feet of oceanfront. As Laurel Reichold, Corps project manager stated, “The renourished beach will help protect infrastructure, including iconic, historically and architecturally significant buildings on South Beach. The Corps builds beaches to protect infrastructure, preserve wildlife, support the economy, and build coastal resiliency.” The federal government paid half the cost of the work with state and county revenues splitting the remaining expenditure, providing a future model for public adaptation efforts of historic resources.

Figure 4.36: Educational plaques along current beach renourishment projects

Figure 4.37: Beach renourishment project, 2016

101 Though this will provide economic return especially from tourism revenues, as the original projects in the late 1970s proved, the expressed action plan was to provide protection from storm surge. Joey Flechas, “More sand being brought in for shrinking Miami Beach shore,” Miami Herald, August 23, 2016, http://www.miamiherald.com/news/local/community/miami-dade/miami-beach/article97398432.html. Accessed February 19, 2017.
5.1. INTRODUCTION

Upon the analysis of current conditions and municipal policy implementations, future challenges for the integration of historic structures in resiliency planning are limited by economic, historic preservation policies, and adaptation constraints. Through a clear assessment of these factors, a basis to rationalize future possibilities for integration within resiliency planning can be achieved.

5.2. ECONOMIC

Historic resources have been and will continue to be valued for their economic contributions from a municipal planning perspective.1 Due to these future constraints, the challenge to find creative solutions with decreased opportunities for fiscal feasibility requires specific attention. In the past, historic resources have been exempt from planning regulations, but issues of sea level rise warrant one of three solutions: elevation, relocation, or demolition.2 Each option is tied to economic consequences. Creative opportunities will shift accepted notions of historic preservation’s reliance on authenticity, yet provide a robust link between positive environmental contributions and the cost-benefit of integrating historic resources with resiliency planning.

5.2.1. Increasing flood insurance premiums

In 2012, the National Flood Insurance Program (NFIP) overhauled its existing mandates, increasing flood insurance premiums of special flood hazard areas, seeking to eliminate existing flood insurance subsidies.3 This includes all of Miami Beach. With rising premiums and diminishing property values, a trend towards decreasing real estate value has

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1 Interview with Ricky Arriola, Debbie Tackett, and Jeana Wiser.
3 Based on various conditions set forth in the law, subsidies and grandfathered rates will be eliminated for most properties in the future. Subsidies will be phased out for properties that are non-primary residences, severe repetitive loss properties, business properties, and properties that have incurred flood-related damages where claims payments exceed the fair market value of the property; The most recent information can be found online at FEMA’s website, https://www.fema.gov/flood-insurance-rate-map-firm. Accessed February 19, 2017.
undergone some market ramifications. Experts predict another real estate bubble due to sea level rise, especially as the federal government shifts away from subsidizing flood insurance rates, allowing premiums to reflect true market risk.

5.2.2. Exemption of historic properties from NFIP

Wayne Pathman, chairman of the Miami Beach Chamber of Commerce and a land-use attorney, claimed that insurance carriers are already preparing to raise flood insurance rates dramatically. Discussions of the future impossibility to obtain mortgages on historically designated buildings, which generally lie within 100-year floodplains since they were constructed prior to the 1968 establishment of the NFIP are ongoing. These issues will need to be considered in proactive fashion if Miami Beach anticipates preserving a wide scope of its historic resources. Currently, Miami Beach is Class 6 in Community Rating System (CRS) within the NFIP, which authorizes residents up to a 20% discount on flood insurance policies.

Though historic property owners are exempt from floodplain management requirements, adaptation measures to comply with requirements currently need approval from certified staff, impacting nearly 30% of Miami Beach’s building stock. The NFIP exempts historic structures from improvement requirements, however this doesn’t protect the resource. Regulations also contain a provision that states, “variances may be granted for the repair or rehabilitation of historic structures upon a determination that the proposed

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4 As an example, Roy and Carol Baker tried for several months to sell their home in Siesta Key in 2014. Interested buyers kept backing out when they learned the additional annual flood insurance premium was $7,000; Ann Carrns, “Federal Flood Insurance Premiums for Homeowners Rise, The New York Times, April 2, 2015.
7 The National Flood Insurance Program (NFIP) is a program created by the Congress of the United States in 1968 through the National Flood Insurance Act of 1968 (P.L. 90-448). The program enables property owners in participating communities to purchase insurance protection, administered by the government, against losses from flooding, and requires flood insurance for all loans or lines of credit that are secured by existing buildings, manufactured homes, or buildings under construction, that are located in a community that participates in the NFIP.
8 City of Miami Beach participates in the Community Rating System (CRS) of the National Flood Insurance Program (NFIP). CRS provides incentive for a community does beyond the NFIP’s minimum requirements to reduce flood risk. The CRS is a voluntary incentive program that rewards community actions that reduce flood risk through discounted flood insurance rates.
9 As a requirement, the elevation of structures above a Base Flood Elevation (BFE) would have an adverse effect on accepted notions of authenticity and integrity within preservation philosophy. A designated historic structure can obtain the benefit of subsidized flood insurance through the NFIP even if it has been substantially improved or substantially damaged so long as the building maintains its historic designation.; National Flood Insurance Program (NFIP), Floodplain Management Bulletin – Historic Structures, FEMA, http://www.fema.gov/library/filetype=publishedFile&file=8_a.467.Z_historic.s. Accessed March 20, 2017.
10 Significant historic structures include resources eligible for individual listing on the National Register, contributing resources to a historic district, listing on a State register, or local designated; Interview with Christine Rupp and Jeana Wiser.
repair or rehabilitation will not preclude the structure’s continued designation as a historic structure and the variance is the minimum necessary to preserve the historic character and design of the structure.\textsuperscript{11}

Flood insurance rates will exponentially increase without compliance, especially since the NFIP now requires increased rates to reflect true flood risk. These fiscal surges for historic properties, especially those that have future development capped and aesthetic historic preservation regulations, make them especially vulnerable.\textsuperscript{12}

5.2.3. Fiscal burden for private investment and ownership

Urban development can greatly affect the natural drainage patterns with increased amounts of pavement reducing the ability for rainwater to be absorbed. Precipitation from heavy rain, in addition to sunny-day flooding occurrences may not qualify for federal or state assistance.\textsuperscript{13} In these cases, flood insurance may be the only financial assistance property owners can receive other than personal loans. Homeowner’s insurance policies do not cover damages and losses due to flooding.

5.2.4. Increased stormwater fees

Another aspect remains the increased responsibility of the owner to pay for protection of their assets. In 2014, the City Commission approved an 84% increase in storm water fees to compensate for the initial infrastructure projects presently being implemented.\textsuperscript{14} The funding secured $90 million in bonds while only increasing the typical storm water tax from $9.06 to $16.67 per month, allowing immediate action. However, Moody’s responded with a negative outlook for the bond issuance due to anticipated debt and future rate hikes.


\textsuperscript{12} Interview with Debbie Tackett.

\textsuperscript{13} For example, Jennifer Hernandez, supervisor of the Alden Hotel on Indian Creek Drive, lamented that an increase of high tide in October 2015 caused guests to complain and some even cancel their reservations after the property was inaccessible by foot; Joey Flechas and Walter Michot, “Tides cause flooding in Miami Beach again Friday morning.” Miami Herald, October 9, 2015, http://www.miamiherald.com/news/local/community/miami-dade/miami-beach/article38329890.html. Accessed February 18, 2017.

This doesn’t bode well for the long-term adaptation methods for the estimated $6 billion worth of built environment across Miami-Dade County.\textsuperscript{15} The commission estimated that the fee could reach $27.38 per month, which would greatly distress working-class residents.

\textbf{5.2.5. Climate immobility}

An issuance of federal or state funding would help to lessen the burden on private owners, however these scenarios are unlikely when reviewing historical precedents. In the case of Galveston, though the city received federal, state, and municipal funding through increased taxes after the 1900 Hurricane, the majority of the expenditure relied on private property owners to adapt their property.\textsuperscript{16} In Miami Beach, at 22 Star Island, Lennar CEO Stuart Miller opted to move and lift his historic property instead of demolishing it.\textsuperscript{17} Estimated to cost around $1 million for the relocation, the expense of adapting historic properties will not be feasible for all homeowners and investors, creating a new class of immobile residents.\textsuperscript{18}

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\includegraphics[width=\textwidth]{star_island_mansion_move.jpg}
\caption{Elevation and relocation of 22 Star Island, 2016}
\end{figure}

\textsuperscript{15} Interview with Katherine Kallergis.
\textsuperscript{16} Galveston Case Study detailed in Appendix B2.
\textsuperscript{18} The New York-based company in charge of the move, Brownie, specializes in house lifting and moving, and has elevated properties across the United States. According to Ciraldo, the process involved inserting a number of steel beams into the base of house and then coordinating hydraulic jacks to lift the home. Once it was lifted, large wheels -- similar to those on aircraft -- were placed below the structure. All 1.86 million pounds were elevated three feet above the flood plain; video available of the move in this article: Jessica Weiss, “Watch a 2-million-pound historic Star Island mansion move on wheels,” Miami New Times, March 24, 2016. http://www.miaminewtimes.com/news/watch-a-2-million-pound-historic-star-island-mansion-move-on-wheels-8342393. Accessed March 5, 2017.
5.2.6. Reliance on government assistance

Though preservation policies have proven time and again their positive economic impacts on communities, the threat of removing historic tax credits, funding for preservation grants, and the overall divestment of public funding on “discretionary” funding for arts-related initiatives have demonstrated an increased strain on municipal governments and private interests. 19 20 Historic preservation regulations that occurred from the 1980s onwards in Miami Beach made fiscal sense and therefore encouraged private developers to invest in short- and long-term capacities.21

Though it is critical to understand the political legacies of a particular place, an overarching framework by federal authorities to implement guidance and funding has directed past municipal historic preservation policymaking. These are complicated issues, but needs continual scrutiny as numerous public policy analysts debate acute possibilities for federal funding of historic resources and climate change.22

5.2.7. Legal issues inherent to adaptation

Another concern remains the inability of a majority of property owners to afford the expense of elevating their sea walls or properties, which subsequently positions their neighbors to increased exposure. Eventually, enforceable regulations to comply with elevation standards could financially displace residents from their homes and create legal pressures. These are complicated legal issues and the city has already maintained the stance that though they are looking for solutions for property owners and businesses, their main

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19 The National Trust for Historic Preservation has been a leader in advocacy efforts to protect the Historic Tax Credit. A draft plan to reform the tax code would repeal the historic tax credit; The most recent information can be found online here, https://savingplaces.org/action-center/#/WksfSSBfZMrG. 
21 There was a clear positive gain in cost-benefit analyses of revitalizing dilapidated areas through private investment and the public extension of tax credits to eventually gain increased property values. 
22 Michael Novogradac. "Washington Wire: How Will Tax Credits Fare Under President Trump?" Noovogradac Company, LLP. December 1, 2016. https://www.novoco.com/periodicals/articles/washington-wire-how-will-tax-credits-fare-under-president-trump. Accessed January 22, 2017; There was also a conference call that the National Trust for Historic Preservation put together entitled “Addressing the threat to the Federal Historic Tax Credit and Setting the Preservation Policy Agenda for the 115th Congress,” on January 19, 2017, which I was able to listen to through the Preservation Leadership Forum.
priority persists through funding of public infrastructure improvements and municipal
properties.\textsuperscript{23} As of September 14, 2016, the Florida Bar was promoting course certifications
for “Sea Level Rise: A Big Deal for Real Estate Transactions,” to introduce concerns of
government regulations on properties subject to sea level rise and tools to reduced potential
legal problems in the future.\textsuperscript{24}

5.2.8. Definition of “public good”

Legally, public money should be spent on “public goods,” not private property. By
definition, this includes “any item that taxation is used to finance, the consumption of which
has been decided by the whole of society. It is not an item for consumption that
an individual has decided upon.”\textsuperscript{25} If long-term flood hazards affect the community as a
whole, the operation of businesses, access to transportation, property values, and increased
insurance premiums, the questions remains if municipal subsidies constitute a permissible
application of taxation for a public good.

Recently, this created further doubt when a private business was denied a $15,000
insurance claim after their property was considered basement level following the elevation of
surrounding streets in the Sunset Harbor neighborhood.\textsuperscript{26} The city did step in to provide
FEMA with an elevation certificate that proves the restaurant is not an actual basement, but
these scenarios are to be expected when tackling issues with few comparative precedents.

\begin{figure}[h]
  \centering
  \includegraphics[width=\textwidth]{figure52.png}
  \caption{Figure 5.2: 1801 Purdy Ave., before and after flooding}
  \end{figure}

\begin{figure}[h]
  \centering
  \includegraphics[width=\textwidth]{figure53.png}
  \caption{Figure 5.3: Current “street of tomorrow”}
  \end{figure}

\begin{flushright}
\begin{footnotesize}
\textsuperscript{23} Interview with Debbie Tackett.
\end{footnotesize}
\end{flushright}
5.3. HISTORIC PRESERVATION POLICIES

Coastal cities were built relatively recently, without expert knowledge of resiliency or widespread examples of dynamic coastlines. As the sea level rises, coastlines will retreat inward. Though Dutch urban planner Steven Slabbers stated that sea level rise is a “storm surge in slow motion that never creates a sense of crisis,” Miami Beach will need to grapple with issues of adaptation well before 2050. Solutions demand creative, costly, and aggressive planning to be able to adapt in the coming decades. An unprecedented battle for historic resources to prove their societal worth culturally, economically, and environmentally will rival its initial legitimacy as a widely-accepted planning tool for tourism revitalization.

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</thead>
<tbody>
<tr>
<td>CITY FOUNDED</td>
<td>ART DECO DISTRICT LISTED</td>
<td>GREEN COMMITTEE</td>
<td>SUSTAINABILITY COMMITTEE</td>
<td>SEA LEVEL RISE PLAN ENACTED BY BLUE RIBBON PANEL</td>
<td>CONTINUED STUDIES ON IMPACTS OF HISTORIC AREAS</td>
<td></td>
</tr>
<tr>
<td>City of Miami Beach founded on a series of barrier islands that are subsequently developed to add more real estate</td>
<td>Miami Beach Architectural District listed on National Register, benefit from volunteer efforts of Coral Reef Capitalism and MDPL</td>
<td>The City’s Green Ad-Hoc Committee was formed, which presented a community forum to discuss environmental issues within the city.</td>
<td>City formalized this committee through the creation of the Sustainability Committee. A new chapter in the City Code is now dedicated to sustainable initiatives.</td>
<td>5400 million poured into state-of-the-art stormwater solutions, from volleys and pumps to raised roads. The project is expected to be fully operational in 2020.</td>
<td>Sea level rise is a long-term priority for the City Administration. Working with Universities of Miami to develop and implement guidelines for adaptation at historic structures.</td>
<td></td>
</tr>
<tr>
<td>Figure 5.5: Chronology of significant environmental and historic preservation events</td>
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5.3.1. Lack of acknowledgement in resiliency planning

A prescient convening of the 2010 National Convention held in Miami Beach of the American Institute of Architects to honor the MDPL with a rare AIA Presidential Citation praised, “…their creation of a network of international partnerships have done more than preserve an irreplaceable cultural legacy for future generations; their success demonstrates

that caring for our design heritage can be the engine of community revitalization and a resource for a more sustainable world." Yet, in the recent implementations of municipal sustainability planning documents, the explicit mention of “historic preservation” is neglected as a tool for resiliency.

5.3.2. Association with unaffordability

Historic preservation has been linked to growing concerns of housing unaffordability. Precedents of elderly residents being pushed out of South Beach as the area went through its 1980s revitalization have not been easily forgotten, and recent concerns with the planning regulations in North Beach have raised these same questions of affordability for working-class residents. Globally, increases in climate refugees, who generally reside in informal settlements of a city’s most vulnerable urban areas, have added attention to the diminishing geography of economical options. Even in a wealthy city such as Miami Beach, mobility and adaptation options will not be affordable for everyone. A median household income of $42,547 for Miami Beach residents remains lower than the national median of $53,657. However, the mean single-family home price in 2015 was $2.5 million and the mean condominium sale was $644,149.

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29 North Beach Case Study detailed in Appendix B4
30 “This [climate change/sea level rise] will potentially force significant geographic shifts in low-lying coastal settlements and cities around the globe in the coming century, requiring major transformations in infrastructure and large-scale relocations.” Avrami and Mason, 2017, 18.
32 Ibid, 27.
**DEMOGRAPHIC AND ECONOMIC INFORMATION**

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</thead>
<tbody>
<tr>
<td><strong>HOUSEHOLDS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Households</td>
<td>55,673</td>
<td>49,243</td>
<td>46,242</td>
<td>44,521</td>
<td>41,463</td>
<td>47,168</td>
<td>43,115</td>
<td>43,312</td>
<td>43,650</td>
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<tr>
<td>Median Household Income</td>
<td>$8,503</td>
<td>$15,312</td>
<td>$27,322</td>
<td>$44,739</td>
<td>$42,274</td>
<td>$38,640</td>
<td>$43,321</td>
<td>$43,316</td>
<td>$42,547</td>
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<td>% Income from Earnings</td>
<td>37.4%</td>
<td>57.1%</td>
<td>72.2%</td>
<td>79.0%</td>
<td>78%</td>
<td>77.5%</td>
<td>78.1%</td>
<td>**</td>
<td>**</td>
</tr>
<tr>
<td>Mean Earnings</td>
<td>$16,234</td>
<td>$31,320</td>
<td>$56,767</td>
<td>$79,940</td>
<td>$81,863</td>
<td>$77,829</td>
<td>$86,688</td>
<td>$83,225</td>
<td>$85,725</td>
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<td>Average Household Size</td>
<td>n/a</td>
<td>1.85</td>
<td>1.87</td>
<td>1.91</td>
<td>2</td>
<td>1.84</td>
<td>2.21</td>
<td>2.09</td>
<td>2.05</td>
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<td>Family Households</td>
<td>24,895</td>
<td>21,326</td>
<td>18,342</td>
<td>17,652</td>
<td>16,228</td>
<td>18,350</td>
<td>17,979</td>
<td>17,844</td>
<td>18,476</td>
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<td>Median Family Income</td>
<td>$14,061</td>
<td>$22,020</td>
<td>$33,440</td>
<td>$54,431</td>
<td>$53,491</td>
<td>$50,758</td>
<td>$54,155</td>
<td>$53,351</td>
<td>$54,513</td>
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<td>Family Size</td>
<td>n/a</td>
<td>2.76</td>
<td>2.84</td>
<td>3</td>
<td>2.70</td>
<td>2.99</td>
<td>3.01</td>
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<tr>
<td>Total Housing Units</td>
<td>64,129</td>
<td>62,413</td>
<td>59,723</td>
<td>65,583</td>
<td>66,194</td>
<td>67,499</td>
<td>68,237</td>
<td>67,975</td>
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**SINGLE FAMILY HOME SALES**

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<tr>
<th></th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
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<tbody>
<tr>
<td>Number of Single Family Home Sales</td>
<td>279</td>
<td>156</td>
<td>118</td>
<td>175</td>
<td>207</td>
<td>229</td>
<td>269</td>
<td>371</td>
<td>234</td>
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<tr>
<td>Single Family Home Sales Volume</td>
<td>479,474,000</td>
<td>278,147,000</td>
<td>278,814,000</td>
<td>231,520,000</td>
<td>288,519,000</td>
<td>441,371,000</td>
<td>541,143,000</td>
<td>786,708,600</td>
<td>857,468,930</td>
</tr>
<tr>
<td>Mean Single Family Home Sale Price</td>
<td>$1,718,545</td>
<td>$1,750,942</td>
<td>$2,362,831</td>
<td>$1,208,714</td>
<td>$1,358,957</td>
<td>$1,853,500</td>
<td>$2,013,417</td>
<td>$2,126,239</td>
<td>$2,646,909</td>
</tr>
<tr>
<td>Median Single Family Home Sale Price</td>
<td>$1,230,333</td>
<td>$1,375,667</td>
<td>$1,430,528</td>
<td>$662,756</td>
<td>$689,420</td>
<td>n/a</td>
<td>n/a</td>
<td>$1,100,000</td>
<td>$1,337,000</td>
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<tr>
<td>Year over Year Price Increase</td>
<td>2%</td>
<td>39%</td>
<td>-4%</td>
<td>12%</td>
<td>36%</td>
<td>9%</td>
<td>6%</td>
<td>24%</td>
<td>-5%</td>
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**CONDOMINUM SALES**

<table>
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<tr>
<th></th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Condominium Sales</td>
<td>2,534</td>
<td>1,328</td>
<td>1,259</td>
<td>1,492</td>
<td>1,887</td>
<td>2,336</td>
<td>2,371</td>
<td>2,727</td>
<td>2,512</td>
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<tr>
<td>Condominium Sales Volume</td>
<td>735,496,000</td>
<td>747,987,000</td>
<td>727,320,000</td>
<td>655,317,000</td>
<td>810,950,000</td>
<td>1,028,712,000</td>
<td>1,220,124,000</td>
<td>1,495,479,000</td>
<td>1,611,223,710</td>
</tr>
<tr>
<td>Mean Condominium Sale Price</td>
<td>$290,330</td>
<td>$363,243</td>
<td>$577,856</td>
<td>$439,221</td>
<td>$426,04</td>
<td>$436,417</td>
<td>$513,417</td>
<td>$548,797</td>
<td>$641,414</td>
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<tr>
<td>Median Condominium Sale Price</td>
<td>$353,000</td>
<td>$358,750</td>
<td>$340,796</td>
<td>$363,324</td>
<td>$218,053</td>
<td>n/a</td>
<td>n/a</td>
<td>$290,000</td>
<td>$321,000</td>
</tr>
<tr>
<td>Year over Year Price Increase</td>
<td>94%</td>
<td>3%</td>
<td>-24%</td>
<td>-3%</td>
<td>2%</td>
<td>10%</td>
<td>7%</td>
<td>1%</td>
<td>0.43%</td>
</tr>
</tbody>
</table>

**Graph 5.1**: Comparison of demographic and economic information to single family home and condominium sales

The inequality of access to mobility that remains intrinsic to sea level rise predictions will pit historic preservation concerns against increased public and private expenditures to
create long-term resiliency. The inevitable nature of gradual sea level rise will force lower income residents out, while wealthier citizens will have to pay excessive amounts for the adaptation of their historic properties currently below BFE. Modest, historic apartment buildings and homes may not be able to pay increased insurance bills or comply with adaptation regulations. These costs will be distributed among renters and homeowners reducing the desirability for long-term investment. Not only will the physical impacts of sea level rise become widespread, but also the socioeconomic ramifications will consequence lower income, less mobile residents.

5.3.3. Use of cost-benefit analysis to define value

These investments were feasible from a cost-benefit perspective in the economic downturn of the 1980s to revitalize, given the value added in rehabilitating a dilapidated structure into a prime oceanfront property. However, with the high cost of adaptation already limited by historic preservation regulatory policies of constricting height additions and aesthetic modifications, the outlook of a cost-benefit analysis (CBA) to warrant any short-term profit gain remains improbable. No federal financial mechanism similar to the federal rehabilitation tax credits currently exists for the adaptation of historic resources to sea level rise. If historic preservation can only be viewed through a financial prism, rather than one contributing to multiple quality of life factors through a social return on investment (SROI), controlled additions or adaptations to historic resources can only be seen as depreciating assets in need of long-term resiliency investments.

5.3.4. Multiple ownership structures

34 Profit margins could be demonstrated through restored and flipped properties—Sanchez sold the Waldorf Towers for three and a half times what he purchased it for less than a year earlier; Debbie Sontag, “Developer cashing in on South Beach restoration,” Miami Herald, July 31, 1986.
35 SROI has been defined as a “principles-based method for measuring extra-financial value, such as environmental and social value not currently reflected in conventional financial accounts, relative to resources invested to evaluate impact on stakeholders, identify ways to improve performance, and enhance the performance of investments; Hall Millar, “Social Return on Investment (SROI) and Performance Measurement,” Public Management Review, Volume 15 (2002), 923–941.
These empirical financial factors affect municipal decision-making and the allocation of capital improvement project expenditures. Infrastructure improvements through the Resiliency Plan were necessary and straightforward given the singular governmental ownership and responsibility of roads and stormwater systems. Multiple ownership structures among historic resources complicates this dexterity, but residents will be obligated to pay for their individual adaptations to meet raised street levels and building regulations. With sustainability increasingly identified as a top municipal priority, the generation of revenue from combined heritage and sustainability-oriented employment has the possibility to attract visitors, residents and businesses interested in embracing the ingenuity of resiliency planning.

5.4. ADAPTATION

Preservation professionals must choose which cultural resources can be saved and compromises will have to be prioritized with adaptation. In order to implement sustainable communities and protect these resources for future generations, a broadened understanding of a community’s character must anticipate the best solutions from a matrix of possible tools. This will be imperative to allow preservation and resiliency decision-makers the ability to effectively engage in dialogue as they work toward shaping collective policies.

5.4.1. Responsive adaptation decision-making

Preservation discourse has begun to incorporate climate change mitigation and environmental sustainability measures in their efforts to preserve existing historic building stock.36 Conflict among stakeholders and their respective priorities have always demanded that preservationists prove a “public good” in response to pressures of real estate development, urban policy, and issues of sustainability. With new threats of sea level rise, whose values will be projected in the outcomes of resulting resiliency policy decisions?

36 Benefits of reuse, capturing embodied energy and integrating energy efficiency standards have been documented by the Preservation Green Lab of the National Trust of Historic Preservation. https://savingplaces.org/preservation-green-lab#.WCZB6eEricg. Accessed October 25, 2016; Interview with Jeana Wiser.
Adger, Lorenzoni, and O’Brien further questioned, “The values that are pursued and those that are ignored can easily become enmeshed in the politics of climate change adaptation.”37 Financially cost-effective and resilient solutions that honor historic resources, need consensus, not further obstacles. If preservation professionals are not active participants in values-based discussions, priority will reside among other public policy objectives, such as the current Excellence Model, for adaptation that may not be compliant with historic preservation efforts.38

5.4.2. Integrity compliance

There are, in addition to governmental responses, divisions among preservation theorists, practitioners, and historic property owners, producing conflicts over what the acceptable reactions are to climate change threats.39 Further delayed management among federal, state, and local policies may not be able to respond in a timely manner to the cultural shifts necessary for the implement of adaptation strategies.40 As Rachel Isacoff stated, “Stakeholders of vulnerable historic properties will need to consider ways to maintain the scale and context of, as well as how to prolong, existing communities in their place, while questioning the degree of integrity necessary for historic structures to remain significant.”41 This conflict of viewpoints imposed on advancing solutions for cultural heritage preservation, especially in flood-prone environments, will be impediments fundamental to overcome for successful results.

The NPS remains predominantly committed to maintaining integrity and has yet to provide the public with any direction about how to apply the Standards for Rehabilitation in these circumstances. In 2011, the NPS did complete Sustainability Guidelines, which provided clear explanations of which treatments are or are not recommended in terms of

---

38 Ibid, 339-342.
39 Interview with Rosa Lowinger and Jeana Wiser.
41 Isacoff, 82-83.
maintaining and incorporating sustainability measures into historic resources.\textsuperscript{42} This acknowledgement of the significance of reuse is a critical first step to integrate historic preservation into climate change and resiliency policy.\textsuperscript{43}

The ability to analyze and link characteristics between the need for social sustainability in climate adaptation and the impacts of these preservation decisions on communities, can challenge existing notions of culture that go beyond political and economic realities.\textsuperscript{44} Community-based adaptation should be an answer within collective concepts for healthy, vibrant cities and will contribute to overall resiliency efforts currently being executed. Though adaptation will require compromises and diverse strategies, inclusive policy-making through public, private, and civil partnerships addressing “the tension between national strategic frameworks and local flexibility for delivery” can begin to set the groundwork to accomplish mutual goals.\textsuperscript{45} Preservation professionals will need to negotiate for weakened integrity of historic districts due to sea-level rise and climate change adaptations.

5.4.3. Relocation, reconstruction, and retreat

Though resources have the potential for relocation, historic properties will be difficult to advocate for funding on a purely economical basis. As discussed previously, only significant investment can afford the million-dollar price tag estimates of elevation and relocation arrangements.\textsuperscript{46} This type of safeguarding will not be affordable to the majority of

\begin{footnotes}
\footnote{46}{As discussed previously, in March 2016, the historic home of 22 Star Island, purchased by Lennar CEO Stuart Miller, was relocated to another site within their property and raised three feet above the base flood plain; Jessica Weiss, “Watch a 2-Million-Pound Historic Star Island Mansion Move on Wheels,” Miami New Times, March 24, 2016, http://www.miaminewtimes.com/news/watch-a-2-million-pound-historic-star-island-mansion-move-on-wheels-8342393. Accessed February 18, 2017.}
\end{footnotes}
homeowners, and businesses will see these long-term infrastructure improvements as investment liabilities.

A fiscally realistic response for long-term resiliency remains retreat. Philip Stoddard, mayor of South Miami stated, “What that means is, there’s no keeping the water out. So ultimately this area has to depopulate. What I want to work toward is a slow and graceful depopulation, rather than a sudden and catastrophic one.” Coastal residents have historically retreated to upland terrain to limit vulnerabilities to climate change. However, retreat is not viewed as a viable option for Miami Beach.

Through preservation policies, the relocation of properties can eliminate the need for flood insurance, however relocated historic properties may be excluded from the National Register. The criteria considerations for the National Register exclude several typologies, including relocated properties. Since a listed property retains significance due to its integrity of location and setting, the NPS recommends not listing moved properties. Previously listed properties from the National Register can be delisted if later moved.

However, according to criteria considerations, “moved properties may be listed if they retain enough of their stylistic features, workmanship, feeling and association to portray their architectural values.” To remain designated, moved properties must preserve an orientation, setting and environment similar to its original setting. A reconstruction can be listed occasionally if, after an appropriate amount of time, “it has become significant in its own right. In such a case, the reconstructed resource would be important for what it illustrates about the period in which it was built rather than the historic period it depicts.”

Isacoff highlighted the challenges ahead, “While rebuilding restrictions can encourage individual property owners to retreat, it is important for historic communities to consider relocating as a whole to maintain their cultural identity.” Relocation could be a

---

48 Discussed in an interview with Debbie Tackett.
50 This requirement further emphasizes the need for government agencies to have a targeted area specified in a historic communities’ relocation plan, if an entire district or portion of a district needs to be relocated.
51 Duncan, 11.
52 Isacoff, 73.
serious contender as Miami Beach looks to future adaptation measures within the next 50 years, however the notion of integrity defining significance needs to be reconsidered and applied within accepted historic preservation standards.

5.5. CONCLUSION

Significant future constraints threaten the existing success of historic preservation policies in Miami Beach due to the effects of climate change. Though these issues may seem unprecedented, the city has a proven history of resilience. As in the initial legislation of municipal historic preservation charters, though aims shared common ideals of economic development and architectural revitalization, outcomes were predicated on particular circumstances, political pressures, and social precedents. The prospect to further links across interdisciplinary sectors in response to these constraints can only strengthen the future legitimacy of historic preservation to delve beyond architectural and historical exemplars.
6.1. INTRODUCTION

This final chapter establishes historical themes from the early development through the birth of the historic preservation movement in Miami Beach to lay the groundwork for prospective solutions. A progression of people-place relationships contributed positively to the economic vitality and architectural resiliency of Miami Beach, leaving the opportunity for historic preservation as a future tool for environmental revitalization and continued sustainability practices. Historic preservation municipal planning must strive to integrate with resiliency planning in order to adapt holistically with sea level rise, and be eligible for large-scale public economic investments. These significant developments underscore the need for a social and political perspective on the city’s past to underpin a wider chronicle than simply the protection of the historical built environment. Understanding how municipal policies were accomplished, the compromises that had to be made, and historical reactions to past challenges will help Miami Beach move forward as a city at the forefront of applying solutions and adjusting to concerns between climate change resiliency and the adaptation of historic resources.

6.1.1. “RAMP” Model: Resiliency, Adaptation, and Municipal Policy

The field of historic preservation and its tools for regulation has had far reaching effects in the city’s political, architectural, and social progression. In order to shift historic preservation’s relevance to future challenges, similar events must target integration within resiliency planning. Based on these endorsements, the adaptation of existing historic resources should play a key role. A “RAMP” model provides the basis to understand how historic preservation can relate to future solutions between resiliency, adaptation, and municipal policy goals. Understanding the broader public impacts of historic preservation through a cost-benefit analysis will necessitate public investment for the private adaptation of historic resources. If nothing is offered from the public sector to assist vulnerable property owners, the degradation of Miami Beach’s unique architectural identity has the potential to foster negative tourism and economic impacts. Similarly, if the preservation community cannot align with adaptation measures necessary to reconfigure historic resources, entire historic districts have the potential for widespread loss in the face of saving original material fabric.

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1 As discussed previously, this similar to the revitalization of the Miami Beach Architectural District which revolutionized historic preservation’s trajectory and legitimacy in 1980s Miami Beach.
2 Resolution No. 2013-28142, City of Miami Beach, February 6, 2013; Relevant sections of RCAP viewed in Appendix D.
By comparing lessons learned to current initiatives stated in the Regional Climate Action Plan (RCAP), recommendations that are specific to historic preservation will be identified. Two central lessons have been established to provide a roadmap for future “RAMP” opportunities. These principles include:

1. Rethinking the city’s relationship to nature;
2. Reevaluating social and environmental benefits of historic preservation;
3. Prioritizing funding assistance outside of municipal controls;
4. Reactionary policymaking will lead to failure; and
5. Translating economic and architectural resilience.

6.2. SWOT ANALYSIS

The following SWOT (Strength, Weaknesses, Opportunities, Threats) analysis aims to dissect common themes from Miami Beach’s chronological progression and apply them as either advantages or disadvantages to overcome future challenges in the relevance of historic resources to resiliency planning. The identification of external factors intends to aid opportunities and avoid threats to future historic preservation policymaking. These concepts will be further detailed as they relate to themes within the five principles.

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2 Resolution No. 2013-28142, City of Miami Beach, February 6, 2013; Relevant sections of RCAP viewed in Appendix D.
## 6.3. LESSON ONE: RETHINK THE CITY’S RELATIONSHIP TO NATURE

The distinctive geography and weather patterns of Miami Beach have reliably charmed residents, tourists, and businesses prior to the city’s founding in 1915.\(^3\) With the impending consequences of climate change, Miami Beach’s greatest assets have ironically become a considerable challenge to overcome. As a 2016 *New York Times* article illustrated, “In Miami Beach and Fort Lauderdale, as well as in older Northern cities like Boston and New York, tidal marshes and creeks were filled in a century or more ago to make new land, and it is in these areas—“back bays,” as some of these spots are called—flooding is happening first.”\(^4\) As a barrier island composed of porous limestone, inimitable geological conditions pose further challenges for the city.

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\(^3\) In my interview with Andrew Capitman, he even recalled his mother’s initial draw to Miami Beach was her interest in barrier islands, and the appreciation for Art Deco architecture was something she recognized as special due to her design expertise, but wasn’t the sole reason for the founder of the MDPL’s crusade to save South Beach.

6.3.1. Unsustainable development

Through technological innovations, early dredging from channels provided the ability to drain and devise a foundation for future development. As discussed in Chapter 2, the developers’ goals were never natural landscapes, but the creation of an “ideal tropical” destination to lure investment from Northerners. This has created an unsustainable development pattern of working to control nature, rather than working with its natural ecology. Though future municipal sustainability goals have highlighted the potential for the reintroduction of “natural” green infrastructure, these short-term infrastructure projects have maintained a mentality of conquering nature.  

Figure 6.3: Elevations within west-east cross section of Miami Beach

Figure 6.4: “Hard” infrastructure projects such as the pump systems in place in the Sunset Harbor area of Miami Beach

These proposed projects include living coral reefs to protect against tidal flooding, a reestablishment of indigenous mangroves to balance ecological concerns, and the restoration of living shorelines.
Sustaining the ecological balance between the natural and man-made remains essential for the continued resiliency objectives of the city. However, the pursuit of new development to fund these infrastructure resiliency programs conflicts with these goals. As Adam Freed contributed, “‘There’s no price on carbon, building in high-risk areas & other externalities—we’re not pricing these things correctly.’” To illustrate these concerns Aromar Revi, Director of the Indian Institute for Human Settlements, stated, “We must start thinking of cities not just as drivers of economic growth, but also as spaces that are tied to and dependent on natural processes; as organic entities that are bound by their appetites to the natural world.” As a relatively low-priority item on Maslow’s hierarchy of needs when compared to life safety concerns, historic preservation can connect these historical lessons learned to opportunities for future sustainability synthesis and relevance.

For now, the answer to fuel municipal financing for green infrastructure projects remains based on the dependence of new development rather than the rehabilitation of existing building stock. A funding mechanism to either tax risky new development or tax the demolition of certain historic

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8 Maslow used the terms "physiological", "safety", "belonging" and "love", "esteem", "self-actualization", and "self-transcendence" to describe the pattern that human motivations generally move through.
properties can contribute to an adaptation fund for historic resources, which align with long-term resiliency goals. The National Wildlife Federation has proclaimed ways to mitigate the effects of climate change are to “curb development that degrades coastal ecosystems” and reform of the NFIP to discourage redevelopment in “risky areas.” Combined with building regulations that seek to mitigate and reduce long-term carbon footprint impacts, working with nature is an essential component for barrier island survival.

Figure 6.7: Venetian Islands, 1926

Figure 6.8: Six man-made Venetian Islands, 2016

6.3.2. Recommendation RCAP integration

<table>
<thead>
<tr>
<th>Source</th>
<th>Item</th>
<th>Recommendation</th>
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</thead>
<tbody>
<tr>
<td>RCAP</td>
<td>SP-6</td>
<td>Develop policies, as provided for in Florida law and in collaboration with the appropriate municipal and county planning authorities, related to areas designated as Adaptation Action Areas or similarly vulnerable areas to improve resilience to coastal flooding, sea level rise and other climate related vulnerabilities and provide guidance for other adaptation planning efforts.</td>
</tr>
<tr>
<td>Historic Preservation Integration</td>
<td>Utilize a Dutch model to prioritize creative adaptation, rather than “hard” infrastructure</td>
<td>Educate policymakers to implement policies that work with, rather than against nature. Miami Beach has historically utilized “hard” infrastructure improvements, however the promotion of historic resources as a tool for “soft” adaptation efforts can foster long-term mitigation goals and open funding resources. A model can be found in the “Resilience and Racial Equity” proposal for Boston.</td>
</tr>
</tbody>
</table>

Table 6.1: Lesson One integration to Regional Climate Action Plan

9 Miami Beach needs to consider not only LEED certification of new construction, but explore options to severely penalize the demolition of new structures or embed additional taxes within Environmental Impact Studies which could contribute funding resources for private adaptation of historic structures.


11 “Long-term benefits are numerous and include reducing the city’s carbon footprint; reducing potential risks and costs from environmental impacts; preserving natural resources and maintaining a high quality of life for residents and visitors; and reinforcing the City of Miami Beach as a world-class city by preserving its resources for the future.” From the City of Miami Beach’s “Rising Above” portal found here, http://www.miamibeachfl.gov/green/scroll.aspx?id=63975. Accessed April 1, 2017.

6.3.3. Demonstrate environmental contributions

Creative architectural solutions and interdisciplinary research to ally historic preservation with environmental goals are forthcoming, but at the municipal level no mention of “historic preservation” as a solution to future resiliency challenges exists. As Debbie Tackett, City of Miami’s Preservation and Design Manager stated, “currently preservation and sustainability policies are running parallel, but we are working towards full integration.” The complexities and variety of historic structures accounts to some degree for the delay in affiliation to sustainability policies, but as the previous topographic survey indicated a majority of historic districts will see over 50% of their resources compromised with 4 feet of sea level rise, by the year 2100.

The concept of historic buildings as the “greenest option” has garnered much investigation, most notably in the initiatives of the National Trust for Historic Preservation’s Green Lab which published the benefits of reuse for its positive environmental impacts. They state that “it can take between 10 to 80 years for a new energy efficient building to overcome, through efficient operations, the climate change impacts created by its construction,” and of economic impacts that, “historic rehabilitation has a thirty-two year track record of creating 2 million jobs and generating $90 billion in private investment. Studies show residential rehabilitation creates 50% more jobs than new construction.” Even with these empirical facts, social awareness and political acceptance has yet to integrate these two tandem goals. Utilizing an activist legacy from notables such as Barbara Baer Capitman, Nancy Liebman, and Matti Bower, local preservationists need to capitalize on these

13 Interview between Debbie Tackett and author on March 28, 2017 at the City of Miami Beach’s Planning Department.
14 These figures are based on projected estimates from the 2012 Southeast Florida Regional Climate Change Compact.
quantitative facts to demonstrate the cost-benefit analysis of public assistance for historic resources as a positive driver of sustainability.

6.3.4. Recommendation for RCAP integration

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<thead>
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<th>Source</th>
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<th>Recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td>RCAP</td>
<td>WS-10</td>
<td>Encourage, foster, and support investigative work and scientific research that improves the understanding of local and regional climate change impacts specific to Southeast Florida.</td>
</tr>
<tr>
<td>Historic Preservation Integration</td>
<td>Demonstrate positive environmental contributions of historic resources</td>
<td>Foster long-term advocacy for the alliance between historic preservation and resiliency strategies, where they currently run parallel to each other. Ultimately the best long-term response remains reduction of exposure during disasters. Existing structures currently under historic preservation regulations embody these principles. By limiting additional development, a controlled urban footprint reduces risks of sea level rise effects, storm water inundation, and storm surge. Utilize indigenous knowledge to find local historical solutions for environmental damage.</td>
</tr>
<tr>
<td>RCAP</td>
<td>RR-7</td>
<td>Continue to implement and enforce strong building codes that require new construction and substantial improvements to existing structures to mitigate against the impacts of flooding, severe winds, and sea level rise, and which are consistent with Climate Change Adaptation policy.</td>
</tr>
<tr>
<td>Historic Preservation Integration</td>
<td>Modify historic preservation rehabilitation guidelines</td>
<td>Allow creative adaptation solutions of historic resources that promote and integrate with resiliency building codes. Adaptation guides can incorporate varying typologies, construction methods and interventions. Solutions to utilize ground floors into useable space for stormwater management can be further researched particular to adaptation of historic structures. Mississippi and Louisiana have examples of adaptation guidelines which can serve as models.</td>
</tr>
<tr>
<td>RCAP</td>
<td>SP-2</td>
<td>Incorporate “Adaption Action Area” definition (as provided for in Florida law) into municipal and/or county Comprehensive Plans, to provide a means to identify those</td>
</tr>
</tbody>
</table>

16 Interview with Jack Johnson and Christine Rupp.
18 Though NPS is currently working on revised elevation design guidelines, solutions will be particular to geography, geology, typology, etc.
19 As stated by Betsy Wheaton, the city’s environment and sustainability director, the policy’s intention lies in finding creative ways to initiate “incentives for the development community to look at their means and methods of constructing.” Joey Flechas, “Miami Beach wants developers to go green or pay fee.” *Miami Herald*, April 29, 2016.
Weinstein-Berman

areas deemed most vulnerable to sea level rise and other climate change impacts including but not limited to extreme high tides, heavy local rain events, and (Number SP-2): storm surge for the purpose of prioritized funding and adaptation planning.

| Historic Preservation Integration | Create a preservation-climate based “Adaptation Action Area” for a historic district as a case study | Target a historic district as a case study to implement an “Adaptation Action Area” utilizing data-drive results from further studies that build upon topographical research. As an example, PlaNYC’s “Resiliency Plan” from 2013, demonstrates the need for civic investment to reduce destruction of structures and protect infrastructure on a citywide scale. This approach can decrease the costs of flood insurance and reduce the need to elevate buildings within these zones through community-wide soft and hard adaptation methods. 

Table 6.2: Lesson One integration to Regional Climate Action Plan

6.4. LESSON TWO: REEVALUATE SOCIAL AND ENVIRONMENTAL BENEFITS OF HISTORIC PRESERVATION

A values-based approach of ascribing significance to historic resources continually evolves to determine regulatory procedures for protection. 

Authenticity of original fabric, disapproval of relocated or reconstructed historic resources, and the notion of prioritizing architectural and historical significance as opposed to social or cultural values, pigeonholes historic preservation as a field to one that values the object, rather than the continual process of “living heritage.” In addition to these challenges, historically Miami Beach has favored the economic benefits of historic preservation. These justifications are valid given the immense fiscal contributions, however a requirement to broaden and balance these values will be vital to conquer future challenges. As Mason and Avrami stated, “the goal is to understand conservation planning as a social and political process, as opposed to a technical


22 “The key concept of values-based approach is that of stakeholder groups... Heritage is not self-evident, with inherent values. The significance of heritage is not only in the fabric, but in the values ascribed by the stakeholder groups to heritage;” Ioannis Poulios, “Moving Beyond a Values-Based Approach to Heritage Conservation,” Conservation and Management of Architecture Sites, Vol. 12, No. 2, May 2010, 172.

problem to solve. “24 In Miami Beach, historic preservation has the opportunity to shift beyond what many view as a static, inflexible, and unimaginative regulatory process, by demonstrating the willingness to provide adaptation solutions to sea level rise.

6.4.1. Economic value ascribed to historic resources

A 2010 study that highlighted the economic impacts of historic preservation in Miami Beach found that $2.702 billion (42% of total across the state of Florida) in rehabilitation and new construction took place within the city’s historic districts from 1987 to 2009; and of this total number $725 million was spent in the historic districts in South Beach alone.25 This amounted to $212 million investments financed by the federal historic preservation tax credit in South Beach and $340 million in Middle Beach, which equaled 60% of the statewide allocation of federal tax credits from 1987 to 2010. These are sizable economic benefits from historic preservation tools, even amidst a statewide context. Continued economic benefits through the adaptation of historic resources can be utilized through planning changes to allow diverse zoning usage, lessen square foot limitations currently at 400 square feet per unit, or develop a Transfer of Development Rights programs to recapture lost FAR.26 In doing so, increased revenues would require a percentage of income to be devoted to the adaptation or rehabilitation of historic resources to promote resiliency without public investment.

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<tr>
<th>Year</th>
<th>Total Cost</th>
<th>Value of Tax Credits</th>
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<td>$629,200</td>
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<td>1988</td>
<td>$7,479,484</td>
<td>$1,495,897</td>
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<td>1989</td>
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<td>1991</td>
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<td>1992</td>
<td>$2,207,115</td>
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<td>1993</td>
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<td>1999</td>
<td>$551,588,968</td>
<td>$110,317,194</td>
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26 Discussed in interview with Jack Johnson and Debbie Tackett. This is also part of the discussions surrounding local historic districts in North Beach to incentivize revitalization through the private sector.
6.4.2. Recommendation for integration in RCAP

<table>
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<td>RCAP</td>
<td>SP-20</td>
<td>Require that new development and redevelopment in areas with existing and planned multimodal corridors that connect urban and other centers in the region be planned and designed to support walking, biking and transit use.</td>
</tr>
</tbody>
</table>

| Historic Preservation Integration | Develop social-benefit analyses for historic districts | Research and advocacy efforts must demonstrate the social values of historic preservation, not solely the economic. In order to garner fiscal support, historic resources must prove their societal contributions to environmental resiliency. Possibility to utilize metrics such as connectivity and walkability of historic districts to support social-benefit analyses and identify other factors for inclusion outside of cost-benefit analyses which will favor demolition and new construction in most cases. |

Table 6.3: Lesson Two integration to Regional Climate Action Plan

6.4.3. Dependence on tourism revenue for employment

Over the five years leading up to 1982, Miami Beach’s unemployment was the highest it had ever been and new construction diminished to almost nothing, impacting the city’s income from building fees. Tourism declined and a national recession created a negative outlook for investment. Even with these recent lessons, Miami Beach has yet to truly diversify from this reliance. In tandem with real estate values, Miami Beach’s employment remains intrinsic to the health of its tourism industry. The city drew over $15 billion in revenue from 1995 to 2009 with food, drinks and lodging returns from tourists; Historic South Beach accounted for 75% of this spending. From the abandonment and blight of South Beach, this would be impossible to imagine at the onset of the 1970s. In 2008, a total of 474 businesses in the accommodations and food services sector totaled $1.6 billion in sales revenue and employed 16,427 people, accounting for 22% of the total Gross City Product ($7.3 billion). Additionally, 44% of people employed on Miami Beach were in the hospitality sector by the second quarter of 2009.

27 Interview with Christine Rupp, Debbie Tackett, and Jeana Wiser.
28 Stofik, 89.
Rehabilitation expenditures for the adaptation of historic resources will provide employment and revenue diversity for technological and architectural solutions. An example can be found in the 2025 City of Miami Beach Comprehensive Plan, which states, “provide opportunity to share in the..."
unique heritage of Miami Beach and promote sound economic development.”

Predominately viewed as a regulation of aesthetics, historic preservation can pivot as a positive influence to diversify employment. In the Netherlands, with 59% of their landmass prone to flood, $7 billion in prevention expenditures are disbursed every year, yet provides 65% of the GDP. Using threatened resources to create sustainability-based employment and revenue can serve as a model to balance Miami Beach’s dependence on tourism and real estate income. The current $400 million Resiliency Plan has proven that investment leads to localized and skilled employment opportunities. With widespread adaptation of historic districts funded partially through public capital improvement projects, Miami Beach can serve as a future proving ground and model for coastal communities.

6.4.4. Recommendation for integration in RCAP

<table>
<thead>
<tr>
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<tr>
<td>RCAP</td>
<td>EF-3</td>
<td>Set a recurring five-year regional goal to increase renewable energy capacity and conservation – which includes the co-benefits of economic development and job creation – through revising building and zoning codes and architectural design guidelines to allow for, encourage, and integrate renewable energy sources into the power supply.</td>
</tr>
<tr>
<td>Historic Preservation Integration</td>
<td>Develop employment diversity through adaptation of historic structures</td>
<td>Historic Preservation can play a central role to balance the dependence of tourism revenue by establishing adaptation mechanisms for historic structures. Historic Preservation has the opportunity to demonstrate problem solving through adaptive strategies and employ local skilled workers in the creative and construction sectors.</td>
</tr>
</tbody>
</table>

Table 6.4: Lesson Two integration to Regional Climate Action Plan

6.5. LESSON THREE: PRIORITIZE FUNDING ASSISTANCE OUTSIDE OF MUNICIPAL CONTROLS

The early pioneering spirit of Miami Beach relied on wealthy private developers to create “America’s Playground,” however as the city expanded, outside financial assistance at the federal, state, and county level were crucial to advance earlier developments. Though Fisher was instrumental in the completion of the funding gap of the original Collins Bridge, completed in 1913, additional infrastructure links westward to the City of Miami were completed with

32 Notes were taken at the National Trust for Historic Preservation annual conference Past Forward on “Climate Change: Living on the Edge,” Learning Lab, Session #LTH150, November 17, 2016. The panel included A.D. Brand and B.L.M Kothuis, Delft University of Technology, the Netherlands; Claudette Hanks Reichel, Louisiana State AgCenter; Dwayne Jones, Galveston Historical Foundation; Deborah Tackett, City of Miami Beach.
outside subsidy. Similarly, future challenges and the complexities of climate adaptation cannot fully be dealt with solely through municipal and private resources.  

6.5.1. Connectivity to other municipalities

There is no one-size-fits-all solution and in the case of Miami Beach, adaptation cannot be the financial burden of a single municipality. Several levels of government rely on shared regional responsibilities, including crucial public services of water management, emergency assistance, and environmental resource management throughout Miami-Dade County. The economic impact of Miami Beach’s financial health has become integral to South Florida and the state as a whole. The collection of property tax at the county level plus dominance of tourism revenues place Miami Beach in a commanding position to negotiate funding from multiple governmental resources. Other locales might not have ample political and economic capacity. In the case of Miami Beach, public funding to allow historic district-wide adaptation efforts will be necessary in order to achieve the continuity of urban fabric, accessibility, and creative integration of ground floors to stormwater resistance.

6.5.2. Recommendation for integration in RCAP

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<tbody>
<tr>
<td>RCAP</td>
<td>SP-9</td>
<td>Coordinate regionally across municipalities and county planning authorities on the development of projects and funding proposals to seek prioritized funding for identified infrastructure needs and specific adaptation improvements required within Adaptation Action Area or other related adaptation planning areas.</td>
</tr>
</tbody>
</table>

33 All case studies demonstrate that private owners and investors will need to endow unforeseen capital in their properties to adhere to new building codes and long-term infrastructure projects, see Appendix B.

34 Florida has no state income tax, therefore Miami Beach’s municipal revenue derives primarily from property, hotel, and development taxes.
| Historic Preservation Integration | Foster regional preservation-climate change based lobbying coalitions | Coalitions specific to heritage-climate change should lobby for funding based on eco-regions, similar to the 100 Resilient Cities model.  
Education from preservation advocacy groups and governmental agencies can help advise adaptation options and funding. Proactively seek solutions to economic issues such as increased flood insurance premiums and adaptation. |
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<tr>
<td><strong>RCAP</strong></td>
<td>SP-33</td>
<td>Coordinate initiatives with those of the seven-county Southeast Florida Prosperity Plan, known as Seven50, to maximize the opportunities presented as Seven50 is developed (e.g., sharing data and analyses; participating in alternative future scenario planning; engaging a myriad of public, private and civic partners)</td>
</tr>
<tr>
<td><strong>Historic Preservation Integration</strong></td>
<td>Include historic resources to Prosperity Plan</td>
<td>Preservation advocates and government representatives need to present data-driven analyses that promote adaptation funding in historic districts. The economic and environmental benefit would offset total reconstruction or demolition costs of historic structures.</td>
</tr>
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<td>Source</td>
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<tr>
<td><strong>RCAP</strong></td>
<td>PP-12</td>
<td>Urge Congress to pass legislation that would create a permanent funding source to finance infrastructure projects to adapt to the impacts of climate change with emphasis on investments in areas such as water management, water supply, transportation and other projects that serve to reduce risks to urban infrastructure from extreme weather events and rising sea levels.</td>
</tr>
<tr>
<td><strong>Historic Preservation Integration</strong></td>
<td>Seek federal funding resources</td>
<td>Promote the inclusion of historic resources as a positive contributor to environmental resiliency for available federal funding. A financial incentive for historic property owners to comply with the guidelines should also be considered. Federal funding resources could include pre-disaster FEMA grants, U.S. Army Corps of Engineers Silver Jackets in-kind services, or HUD initiatives.</td>
</tr>
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<td>Source</td>
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</tr>
<tr>
<td><strong>RCAP</strong></td>
<td>WS-11</td>
<td>Undertake efforts to fill identified data gaps through local program efforts, agency collaborations, and advocacy for additional state/federal resources, as needed.</td>
</tr>
<tr>
<td><strong>Historic Preservation Integration</strong></td>
<td>Contribute historic preservation datasets to existing resources</td>
<td>Integrate historic preservation data across agency and intergovernmental resources in order to influence decision-making processes. Provide updated economic and environmental information as new technologies are available. Though interactive tools such as “Eyes on The Rise” and “Game of Floods” exist, more backend data needs to become available to the public. Building upon the GIS studies conducted in this research, deeper layers of information can inform further socioeconomic, historic studies.</td>
</tr>
</tbody>
</table>

35 Discussed in interviews with Jack Johnson and Jeana Wiser.
36 Discussed in interviews with Debbie Tackett, Ricky Arriola, and Jeana Wiser.
37 Discussed in interviews with Debbie Tackett and Jeana Wiser.
6.6. LESSON FOUR: REACTIONARY POLICYMAKING WILL LEAD TO WIDESPREAD LOSS OF HISTORIC RESOURCES

Historic preservation advocates have reacted to negative ramifications, but with future challenges of climate change proactivity is paramount. Looking to the lessons learned from the MDPL’s struggles against the South Shore Redevelopment Authority, a proactive approach fostered enough time to stall the project to its eventual demise. 39 Though historic resources were lost in the late 1970s as a result of urban renewal, the Miami Beach Architectural District was listed on the National Register by 1979. Other landmarks were demolished until local historic preservation regulations could be instituted for their protection. 40 This is not an option with sea level rise and will lead to widespread loss. The fundamental shift among advocates to make the necessary economic and theoretical allowances for the adaptation of historic resources will be a challenge, but needs to occur now in order to avoid disastrous future conditions. Proactively aligning the societal and environmental benefits of historic resources, as well as their cost-benefit contributions to a robust tourism industry, need to be boldly stated. Miami Beach must choose to embrace imminent change by utilizing historic preservation as the creative lever to foster resiliency planning.

39 The South Shore Redevelopment Agency was founded in 1976, with the intent to promote a master plan clearing the existing architecture and relocating the elderly population south of Sixth Street. Muss and his colleagues hired a consultant in 1973 to create a slide show that would persuade the city commission to create this independent agency; Frederic Tasker, “Asked for a hotel, Muss offered a community,” Miami Herald, September 24, 1978.

40 See previous examples of The New Yorker, The Biscaya, Versace’s mansion, and The Delano interior in Chapter 3.
6.6.1. Recommendation for integration in RCAP

<table>
<thead>
<tr>
<th>Source</th>
<th>Item</th>
<th>Recommendation</th>
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</thead>
<tbody>
<tr>
<td>RCAP</td>
<td>WS-9</td>
<td>Incorporate and prioritize preferred climate adaptation improvement projects in capital improvement plans and pursue funding.</td>
</tr>
<tr>
<td>Historic Preservation</td>
<td>Advocate for inclusion as an adaptation improvement project</td>
<td>Identify a historic district as a case study to implement capital improvement funding. Already the MDPL and the AIA have begun educational forums to solidify their advocacy goals within a resilient future.41</td>
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<th>Recommendation</th>
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<tbody>
<tr>
<td>RCAP</td>
<td>SP-7</td>
<td>Develop sea level rise scenario maps to be considered for inclusion in appropriate Comprehensive Plans and/or regional planning documents as determined by the appropriate local government to guide municipal and county government climate adaptation planning efforts and continue to update regional and local planning efforts as more data becomes available and scientific projections are refined.</td>
</tr>
<tr>
<td>Historic Preservation</td>
<td>Use scenario planning to analyze adaptation of historic resources</td>
<td>Future design challenges pose a significant opportunity for South Florida. The world will be looking to the region to develop transformative interventions to deal with the inevitable consequences of sea level rise. Similar to the early founding of the city, pioneer developers overcame adversity of natural disasters, environmental challenges, and shifts in architectural identity. Where adaptation is feasible, a Goals Achievement Matrix can be utilized to compare and assist resiliency interventions for the maximum retention of integrity and feasibility.42</td>
</tr>
</tbody>
</table>

Table 6.6: Lesson Four integration to Regional Climate Action Plan

6.7. LESSON FIVE: TRANSLATE ECONOMIC AND ARCHITECTURAL RESILIENCE

Miami Beach is a master of reinvention and promoting its own architectural identity. From a failed coconut plantation, “America’s Playground” blossomed. From the devastation of the 1926 "Great Miami" hurricane, one of the most impressive collections of 20th-century architecture formed its built character. From the abandonment and increasing dilapidation of the 1970s/80s, the city’s activists and entrepreneurs created one of America’s most successful economic development and tourism preservation initiatives, despite fierce opposition from historically pro-development city

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42 In 1968, Morris Hill published the Goals Achievement Matrix (GAM) that can apply multiple evaluation criteria, especially principles that were previously thought to make immeasurable contributions within the valorization of analyses. Compatible with the prerequisites of tightly resourced municipalities, all goals can be weighted by a common scale: high (3), medium (2), and low (1), to assign priorities and create a “balance sheet of development” for urban planning goals; Morris Hill, “A goals-achievement matrix for evaluating alternative plans,” *Journal of the American Planning Association*, Vol. 34, No. 1 (1968), 19-29.
officials. The next challenge will be to establish Miami Beach as a leader in resiliency and adaptation while maintaining the city’s internationally recognizable architectural identity.

Figure 6.17: 1926 Hurricane decimates “America’s Riviera”  
Figure 6.18: “Dade County breaks 1980 murder record”

6.7.1. Continued resilience through historic preservation

An overall history of resilience can be patterned from the city’s inception to today. The entrepreneurial spirit and nimbleness of municipal government to enact policies based on economic development and tourism incentives are unparalleled in the state of Florida.43 In municipal discussions, Miami Beach functions almost as a sovereign island-nation, willing to seek solutions and demonstrate leadership in maintaining quality of life concerns, safeguarding historic resources, and continuing the desirability of real estate values and ownership. As Susan M. Torriente, Miami Beach’s Chief Resilience Officer, stated in the 100 Resilient Cities press release, “Together, we are writing the textbook for addressing sea level rise, reducing our risks, and creating a vibrant and resilient city of tomorrow. Our creative and collective efforts today are the foundation for the future of Greater Miami and the Beaches.”44 Historic resources can contribute robustly to these aims and must be integrated with resiliency planning to provide opportunity for public funding of adaptation in order to be protected from the imminent threat of sea level rise. This will shift accepted notions of historic preservation, but are necessary for the vital survival of the city’s societal, economic, and environmental

43 “With over $212 million in tax credit investment since 1986 [to 2006], no city in Florida has benefitted as much as Miami Beach. Tax credit projects, together with successful local historic districts, represent the foundation of the redevelopment and renewal of this city, especially the famous Art Deco district.” “Contributions of Historic Preservation to the Quality of Life in Florida,” University of Florida, November 2006, 78.
6.7.2. Recommendation for integration in RCAP

<table>
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<td>RCAP</td>
<td>PP-1</td>
<td>Provide outreach to residents, stakeholders and elected officials on the importance of addressing climate change adaptation and preparedness and develop a program to educate specific interest groups about the Compact, Regional Climate Action Plan, and the benefits of Adaptation Action Area. Consider utilizing the Academy concept to educate elected leaders, academic interests and other decision makers.</td>
</tr>
<tr>
<td>Historic Preservation Integration</td>
<td>Include adaptation of historic properties in community outreach education</td>
<td>Education initiatives should foster advocacy among the community, as well as target historic preservation as a solution for long-term resiliency. In decisions in North Beach, community engagement was critical. Another example can be found in the Bridgeport, CT, Rebuild by Design proposal.</td>
</tr>
<tr>
<td>RCAP</td>
<td>SP-28</td>
<td>Continue to implement strategies aimed at maximizing the efficiency of the existing transportation network by all agencies across the region. Many of these strategies also result in greenhouse gas emissions reductions. There is a need for a toolbox of successful strategies that can be duplicated across the region. Agencies should make an effort to collect information that will allow for evaluation of the effectiveness of a strategy in reducing greenhouse gas emissions.</td>
</tr>
<tr>
<td>Historic Preservation Integration</td>
<td>Demonstration of greenhouse gas reductions inherent to historic resources</td>
<td>Institute municipal policies that favor historic preservation and disincentivize new construction as a tool for resiliency. These aims can align with recommendations of maximizing existing transportation networks, where the maximization of existing buildings should be utilized.</td>
</tr>
<tr>
<td>RCAP</td>
<td>SP-24</td>
<td>Consider the adoption of green neighborhood certification programs, such as LEED ND (Neighborhood Development) to guide decision making and development and to provide an incentive for better location, design, and construction of new residential, commercial, and mixed-use developments with the goal of increasing transportation choices while reducing household transportation costs. Incorporate sustainable building and neighborhood ratings or national model green building codes, including but not limited to those defined in Section 255.253(7), Florida Statutes, into municipal codes region-wide.</td>
</tr>
<tr>
<td>Historic Preservation Integration</td>
<td>Advocate for green neighborhood certification (LEED)</td>
<td>Demonstrate the inherent resiliency in the historic building stock. Studies that are specific to historic districts can be researched to provide quantitative data, cost-benefit</td>
</tr>
</tbody>
</table>

45 See North Beach case study in Appendix B.
with inclusion of historic districts analyses, and social-benefit analyses on a building-level basis. This model can be used to allow reproduction of findings across varying historic typologies, geographies, and social circumstances while providing consistency.⁴⁷

| Table 6.7: Lesson Five integration to Regional Climate Action Plan |

### 6.8. CONCLUSION

This thesis demonstrates that interdisciplinary and multi-governmental agreement across agencies is necessary to accomplish long-term sustainability in Miami Beach. The economic values of historic preservation that have instituted immense tourism revenues and employment now require an essential shift to reposition Miami Beach as a resilient city of the future, capable of adapting historic resources in the face of sea level rise. Through collective action, the city has chosen to apply funding to resiliency measures, and historic preservation must seek creative solutions to integrate with these goals. As Michael Kimmelman stated, "Social resilience is inextricable from climate resilience—fundamentally related to creating community & environmental justice."⁴⁸ Through literature and policy reviews, an examination of case studies, interviews with stakeholders, and geospatial analyses, the importance of understanding the geology, architectural history, and transitions in development patterns have demonstrated the need for a community-specific narrative through the political, social, and economic progression of an historic preservation ethos. Though the need for bricks-and-mortar solutions such as creative adaptation need immediate research, community engagement and preservation activism have been and will continue to be the bedrock of Miami Beach’s successes as a “vibrant, tropical, historic community”.

A community determines policy decisions, and the influence to enact historic preservation policies depends on local players to demand a progression of societal events. As green infrastructure has become a commonly accepted capital improvement project for municipalities interested in long-term resiliency, a shift within the profession of historic preservation needs to allow the adaptation and sustainable retrofitting of historic structures to become a relevant contributor to collective goals. Especially as retreat remains an infeasible

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⁴⁷ Interview with Jeana Wiser.  
As Gustavo F. Araoz stated, “an important cultural value of the historic city rests precisely upon its ability to be in a constant evolution, where forms, space and uses are always adapting to replace obsolescence with functionality. This gives rise to the paradox—or perhaps the oxymoron—of the concept of preserving the ability to change.”

In that lies the prospect to follow lessons learned from Miami Beach’s past dependence on historic preservation for revitalization to recreate its future.

As a city with a population of 92,312 and 7.63 square miles in size, powerful yet flexible municipal decision-making must balance the contributions of historic preservation to define the city’s character. Through the address of challenges and opportunities, this thesis presented a thorough analysis of the how past lessons learned can successfully integrate with current resiliency planning. This research proves the unequivocal confirmation of the relevance of historic resources as a current and future societal asset within a continually evolving set of challenges to encourage citywide policies and funding resources that incentivize adaptation prior to widespread devastation as a result sea level rise.

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49 The issue of retreat was discussed with Debbie Tackett, Preservation and Design Manager for the City of Miami Beach, on March 27, 2017 and it was clarified that this issue was discussed and off the table for the foreseeable future by city planners and commissioners.


51 Data gathered from the U.S. Census, 2015 of Miami Beach, Florida; From the 2016 Environmental Scan, the City of Miami Beach also detailed 23,801 seasonal residents, 32,985 hotel guests, and 30,800 beach visitors, for a total average daily population of 222,079.
APPENDIX A
THEMATIC CHRONOLOGY
<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>1810</td>
<td>Miami Beach is founded.</td>
</tr>
<tr>
<td>1820</td>
<td>First military training in Miami Beach.</td>
</tr>
<tr>
<td>1830</td>
<td>The Miami Beach Resort and Hotel opens.</td>
</tr>
<tr>
<td>1840</td>
<td>The Miami Beach Fire Department is established.</td>
</tr>
<tr>
<td>1850</td>
<td>Miami Beach becomes the county seat.</td>
</tr>
<tr>
<td>1860</td>
<td>Miami Beach is incorporated.</td>
</tr>
<tr>
<td>1865</td>
<td>The Miami Beach Boarding House Association is established.</td>
</tr>
<tr>
<td>1870</td>
<td>The Miami Beach Hotel Association is established.</td>
</tr>
<tr>
<td>1880</td>
<td>Miami Beach becomes the second city in South Florida.</td>
</tr>
<tr>
<td>1890</td>
<td>Miami Beach is designated as a city.</td>
</tr>
<tr>
<td>1900</td>
<td>Miami Beach becomes the county seat.</td>
</tr>
<tr>
<td>1910</td>
<td>Miami Beach is incorporated as a city.</td>
</tr>
<tr>
<td>1920</td>
<td>Miami Beach becomes the county seat.</td>
</tr>
<tr>
<td>1930</td>
<td>Miami Beach becomes the county seat.</td>
</tr>
<tr>
<td>1940</td>
<td>Miami Beach becomes the county seat.</td>
</tr>
<tr>
<td>1950</td>
<td>Miami Beach becomes the county seat.</td>
</tr>
<tr>
<td>1960</td>
<td>Miami Beach becomes the county seat.</td>
</tr>
<tr>
<td>1970</td>
<td>Miami Beach becomes the county seat.</td>
</tr>
<tr>
<td>1980</td>
<td>Miami Beach becomes the county seat.</td>
</tr>
<tr>
<td>1990</td>
<td>Miami Beach becomes the county seat.</td>
</tr>
<tr>
<td>2000</td>
<td>Miami Beach becomes the county seat.</td>
</tr>
<tr>
<td>2010</td>
<td>Miami Beach becomes the county seat.</td>
</tr>
<tr>
<td>2020</td>
<td>Miami Beach becomes the county seat.</td>
</tr>
</tbody>
</table>
APPENDIX B: CASE STUDIES

Case studies will focus on the Netherlands’ evolution towards a positive attitude of resiliency planning and national expenditures of infrastructure projects; Venice’s tension as an overcrowded tourist destination confronting continued flood hazard events and degradation; Galveston’s “hard” infrastructure improvements after the devastating 1900 Hurricane and recent developments towards “soft” infrastructure planning for historic resources; and North Beach’s recent debates between regulations as a local Historic District or a Neighborhood Conservation District with confrontations of sea level rise. Continuing from the early development and evolution of municipal historic preservation policies through the close of the 20th century, this chapter will institute a contextual framework for a final chapter exploring lessons learned and recommendations.

B.1. CASE STUDY: THE NETHERLANDS AND CENTURIES OF RESILIENCY HERITAGE

The Dutch approach blends water management with urban planning. The history of water control in the Netherlands is grounded in over a millennium of experience. A quarter of the nation sits below sea level, with 56% of their landmass prone to recurrent flooding. Earliest records of resilience strategies date back to medieval times when farmers worked together to construct retaining walls that would hold back the invading sea.¹ Today, scientific research and technological improvements have transformed the country’s famous dike systems into sophisticated, massive infrastructure and earth works projects that instead of simply trying to keep water out, channel it and tame its impact.

Since the late 16th century, large polder (reclaimed land) areas were preserved through elaborate drainage systems that include dikes, canals and pumping stations.² On these vulnerable landscapes, land was reclaimed through a process of constructing “rafts” or

² Beginning around 400 BCE, the Frisians were first to settle the Netherlands. It was they who built terpen (an Old Frisian word meaning “villages”), which were earth mounds upon which they built houses or even entire villages. These terpen were built to protect the villages from flooding.
concrete piles, sometimes as long as 65 feet, and driving these reinforcements into the silt layer. Nearly 17% of the country’s land area is reclaimed from the sea and from lakes. Over 2,000 miles of dikes, dams, and locks work to protect communities through natural and technological solutions. However, these successes differ due to Miami Beach’s oolitic limestone geology and the susceptibility of the city to hurricanes.

Figure B.1: the Great Flood of 1916

Figure B.2: Storms and flooding throughout 1916 led to the impetus for the Dutch to start a major project to reclaim the Zuiderzee.

Figure B.3: Coastline shortening in the Netherlands from 100AD to 2000

The Dutch have learned not to fight water, but to live with it. South Florida will have to adopt this mentality and shift interdisciplinary planning policies towards these goals in order to acquire long-term success. The shift will not just have to be through government policies and urban planning solutions, but a fundamental change in cultural acceptance of these facts. Continued development and new construction doesn’t comply with long-term resiliency planning.

Deborah Tackett, Preservation and Design Manager for the City of Miami Beach, and A.D. Brand and B.L.M. Kothuis, two Ph.D. candidates from the Delft University of Technology in the Netherlands, provided insights into the different approaches that municipalities have

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4 “Water is in our culture and in the DNA of the Netherlands,” Ovink told University of Miami architecture students in a lecture Wednesday. “The main difference between the Netherlands and other places where you live on the edge, like South Florida, is that we realized 1,000 years ago that we had to change how we built the country.” Vigliucci, Miami Herald.
addressed regarding coastal resilience.\(^5\) Sustainability has been a point of concern for Miami Beach for over a decade, but the 2012 Southeast Florida Regional Compact recently put resiliency planning into the spotlight. In the Netherlands, they have been dealing with these issues for centuries.\(^6\) Brand and Kothuis stated a common phrase “While God created the world, the Dutch created the Netherlands.”

With 59% of their landmass prone to flood, $7B in prevention expenditures are disbursed every year, yet provides 65% of the GDP. Though the expense is vast, the creation of location-specific, high-education jobs is a positive shift in economic diversification for Miami Beach employment. Kothuis and Brand’s research on the evolution of public debate and the spatial impact of municipal decisions provides a precedent for different perspectives of the adaptation to flood hazards.\(^7\) The continuous effort and shifting values ascribed to these stakeholders will be an ongoing point of contention in Miami Beach as effects of climate change develop consistent challenges to overcome.

**Takeaways for future challenges in Miami Beach:**

- A combination of “soft” and “hard” infrastructure improvements are necessary for true long-term resiliency;

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\(^5\) Notes were taken at the National Trust for Historic Preservation annual conference Past Forward on “Climate Change: Living on the Edge,” Learning Lab, Session #LTH150, November 17, 2016. The panel included A.D. Brand and B.L.M Kothuis, Delft University of Technology, the Netherlands; Claudette Hanks Reichel, Louisiana State AgCenter; Dwayne Jones, Galveston Historical Foundation; Deborah Tackett, City of Miami Beach.

\(^6\) Kolthius and Brand’s research specifically deals with the evolution in attitudes towards flood risk reduction through a comparative analysis of discourse between different segments of the general public.

\(^7\) They separated their findings into three categories: “threat,” the mentality of the policymaker; “fight,” the approach of the engineer; and “victory,” the mindset of citizens. Their consensus verified the need for public attitudes to support the realization of public policies, which in turn shapes spatial heritage at the municipal level.
• The incremental building of attitudes towards a consensus of “living with water” rather than trying to control it allows policymaking success;
• Resiliency could provide high-paying localized job opportunities that would increase tax revenue

B.2. CASE STUDY: GALVESTON, TEXAS AND THE HURRICANE OF 1900

Galveston remains an ideal comparative analysis due to its analogous geography as a barrier island and comparative size at 27 miles long and 3 miles wide.8 Surrounded by the Gulf of Mexico on the east and south, West Bay on the west, and Galveston Bay to the north, it developed as a major sea port and commercial center in the United States during the late 19th century. Also similar to Miami Beach, it suffered a devastating hurricane in 1900 that resulted in a redirection of the island’s image and economic opportunities.9 The significant loss of life and damage led to immediate action. More than 3,600 homes were destroyed, totaling $30 million ($700 million in today’s value) in damage to commercial structures. Not only were their port activities disrupted, but also the oceanfront tourism industry was destroyed overnight. One of the important lessons of the hurricane was that a majority of the historic stone and brick structures weathered damage from the storm, but were still standing.

By 1901, three engineers were hired to essentially raise the entire city to make it more resilient and less susceptible to natural disasters, specifically flood hazards that were the main cause of sustained damage to homes and businesses.10 The solution was in “hard” infrastructure improvements, including raising the entire city 17 feet at the seawall and sloping downwards at a ratio of one foot for every 1,500 feet to the bay. To accomplish this engineering feat, 16 million cubic yards of sand were dredged from the shipping channel and pumped into quarter mile squares in the city. Buildings were elevated in anticipation of

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8 Miami Beach’s area totals 18.7 square miles, with 7.0 square miles of land mass.
9 On the morning of 8 September 1900 Galveston was a growing and flourishing port city of 37,000. By the evening of 9 September nearly 3,600 homes were destroyed and an estimated 6,000 to 8,000 residents were dead. Even a century later the Galveston hurricane is regarded as the worst natural disaster ever to strike the United States; “Galveston 1900: Storm of the Century,” The Portal to Texas History, http://education.texashistory.unt.edu/lessons/psa/Galveston1900/. Accessed February 19, 2017.
the dredging infill. The city funded infrastructure improvements, including the moving of utilities, but private homeowners were responsible for the elevation of their property to meet the new grade levels. By 1911, 500 city blocks, a total of 2,146 buildings, were raised ranging from a few inches to as much as 11 feet. The current 10-mile long seawall was constructed over a period of sixty years, beginning in 1902. The cost of the project was estimated at $10M per mile, totaling more than $100M. A majority of the expense was on the city, however federal, state, and county assistance helped greatly.

Figure B.6: Map of damage after 1900 Hurricane
Figure B.7: Damage after 1900 Hurricane
Figure B.8: Damage after 1900 Hurricane
Figure B.9: St. Patrick’s Church during the grade raising

The choice to institute infrastructure projects instead of a retreat from the inhospitable conditions of the barrier island cornered Galveston into long-term effects. As author David

11 This also included the elevation of utilities such as sewer, water, and gas lines; Jodi Wright-Gidley and Jennifer Marines. Galveston A City On Stilts. Charleston, SC: Arcadia Publishing, 2008.
13 In August 1915, a similar hurricane caused flooding and destruction outside of the seawall, but resources within were protected.
McComb stated, "Human technology made it possible - for the city of Galveston to remain on such unstable land. The city did not flourish. Houston left the island city far behind. Galveston simply survived."15 This is a worthy lesson to take head in the expenditures currently being planned and further implemented in Miami Beach municipal planning.16 The overview of the long-term impacts of adaptation strategies provided a context for over 100 years of infrastructure investments to prevent recurring flood hazards.17

In Galveston, the education and advocacy aspects of resiliency planning have advanced with the establishment of Galveston Futures, a cooperative venture between Texas A&M University at Galveston and the Houston Advanced Research Center.18 The delicate balance between honoring historic resources and resiliency concepts are at the core of their mission. The Galveston Historical Foundation also has ongoing education programs, including their Living on the Edge Conference. The aim of the annual event is to provide a cross-disciplinary forum to explore lessons learned and seek solutions to “confront environmental, social, and political challenges facing coastline communities and their cultural

16 Notes were taken at the National Trust for Historic Preservation annual conference Past Forward on “Flood Adaptation Strategies: Options and Impacts,” Training, Session #PLT102, November 16, 2016. The tour included talks from Michael Guillot, Hal Needham, and Matthew Pelz, Galveston Historical Foundation.
17 This points to the Resiliency Plan of Miami Beach constructing elevated streets and installing pump systems.
resources.” Ongoing research and advocacy from non-profits and academia can serve as a model for implementation in Miami Beach.

Like Miami Beach, Galveston has strengthened its preservation policies to protect historic resources while fostering opportunities for economic development. An updated Preservation Plan, released May 30, 2012, puts resiliency and sustainability at the forefront of heritage conservation, specifically in resolutions for the planned rising sea levels. The city also has devised new standards for compatible development along commercial corridors. These balances accommodate growth while also maintaining community character and allowing for future resiliency measures.

**Takeaways for future challenges in Miami Beach:**

- Though the city funded public infrastructure improvements, including elevation of streets and the movement of utilities, private homeowner were responsible for the expenditure of elevating their private property;
- Federal, state, and county funds assisted with public improvements, but a majority of the burden was on the local government to access capital for infrastructure spending;
- Early conviction of adaptation solutions instead of retreat locked the municipality into long-term expenditures that recur infinitely and allow the city to exist, rather than flourish like nearby Houston;
- Galveston researchers and preservationists are exploring creative solutions to ensure prolonged resiliency outside of “hard” infrastructure expenditures to honor historic resources while tackling resiliency concerns for the future; and
- Policymakers seek balance to accommodate growth while maintaining community character and allowing for impending resiliency measures.

**B.3. CASE STUDY: RECURRING FLOOD EVENTS IN VENICE AND THE IMPACT OF TOURISM**

Similarities in the economic dependence of Venice’s and Miami Beach’s tourism industry due their distinctive branding of historic architecture presented a relevant research opportunity. In Greater Miami, over 14.6 million visitors contributed $23.8 billion to the economy according to a 2015 annual report. In Miami Beach, this amounts to a $69 million collection of the 3% hotel room tax; while 77.2% of visitors cited the Art Deco District/South Beach as their top destination and 72.0% visited the beaches. In Venice, by 2015 over 20 million visitors annually descended upon the city, prompted the backing for a

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5 billion large-scale infrastructure improvements to “save” the city.\textsuperscript{22} This dependence on tourism for tax and employment revenues affects political and planning decisions to preserve an image that visitor’s have come to expect.

Venice, like Miami Beach, is composed of a multitude of 118 small islands. Due to it’s low-lying geography, the city has always been prone to flood events, but an unprecedented occurrence in November 1966 promoted an international campaign to seek immediate solutions that would preserve it’s historic architecture, urban spaces, and artwork.\textsuperscript{23} Non-profit organizations, such as the World Monuments Fund, have dedicated over 50 years of conservation and research support to advise long-term technological solutions.\textsuperscript{24} In 2014, the entire city was listed on the World Monuments Watch to raise awareness of the consequences that come with strained tourism increases.

The establishment of Venice was beneficial from a defensive standpoint in its early development of the 1600s, which allowed the city to become one of the most prominent international trading hubs. Whereas Miami Beach used dredge and fill methods, Venice relied on compounded silt and sand to create a wooden foundation of alder stakes.\textsuperscript{25} Zatterone or “large rafts” supported Kirmenjak stones, which prevented rising damp while maintaining a firm establishment for the city’s development. Though these buildings have


\textsuperscript{24} As an example these conservation projects included exterior and interior conservation on the Scuola Grande di San Giovanni Evangelista, Santa Maria della Visitazione (Church of the Pietà), Scuola Grande di San Rocco, Church of San Giovanni in Bragora, Basilica of San Pietro di Castello, The Venetian Ghetto: Schola Canton, Bartolomeo Colleoni Monument, as well as setting up the Misericordia Laboratory for research and training.

proven resilient over the past 400 years, the increased sea levels and sinking foundations have created a citywide engineering problem.

The devastation of an early natural disaster in 1966 continues to exacerbate future challenges with the steady rise of the sea level and the sinking of the city. The brick structures are particularly susceptible to erosion due to its porosity affecting the structural integrity of nearly every building in Venice.\(^{26}\) According a 2006 PBS investigation, Piazza San Marco flooded 121 times in 2004, as opposed to just 7 times per year in the 1900s.\(^{27}\) Estimates by the Intergovernmental Panel on Climate Change (IPCC), predicts global water levels will rise approximately 8 inches by 2050, and 20 inches by 2100, which at just 1 foot would result in the flooding of St. Mark’s Square more than 360 times a year. In 2003, the MOSE Project was approved after over a decade of preparation.\(^{28}\)

The project consists of 79 mobile floodgates that are distributed among three entrances of the lagoon. Though dynamic to water levels, unlike the permanent infrastructure of Miami Beach’s current pump system, the gates would fill with compressed air allowing them to rise out of the water until the tides subside. Once these gates are intact, every inlet of Venice would have the ability to “plug” as floodwaters rise to infiltrate the city.\(^{29}\) Even after


\(^{28}\) MOSE stands for MOdulo Sperimentale Elettromeccanico, Experimental Electromechanical Module and was constructed under the authority of the Venice Ministry of Infrastructure and Transport.

decades of planning and testing, many doubt the long-term viability of the project. Additional social factors threaten the historic demographics of the city.

From 2001 to 2011, the city’s historic center has suffered a 10% decline in population. However, cruise passenger visitation has increased by 400% from 2008 to 2013, with some 20,000 people debarking per day during the peak tourism season. This has created stress on historic resources, augmented environmental concerns, and provoked governmental debates. The city has even begun to debate tourism caps to prevent overcrowding, as result of UNESCO threats that it would delist the city if it failed to ban large cruise ships by 2017. Though examples are not as extreme in Miami Beach, the threat of solely relying on tourism for economic revenue can be troublesome.

Takeaways for future challenges in Miami Beach:

• Compromises will need to be sacrificed in order to accomplish long-term solutions;
• A lengthy research and bureaucratic process can create unanticipated economic and social stresses;
• Unchecked tourism increases further exacerbate sustainability and resiliency measures for the protection of heritage resources; and
• The potential for sustainability-related employment to balance tourism revenues could/should be an important future source of job creation.

B.4. CASE STUDY: MIAMI BEACH’S NORTH BEACH, COMBINING HISTORIC PRESERVATION, ECONOMIC DEVELOPMENT, AND CLIMATE CHANGE CONCERNS

Debate at the nexus of historic preservation, economic development, and climate change concerns has recently unfolded in North Beach, specifically the revitalization from

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30 Numerous environmental groups have questioned the water management tactics, since tidal flows would be artificial, and others have noted that the current sea level rise predictions could be intensified by unexpected effects of climate change.
63rd Street to 87th Terrace between the oceanfront and Biscayne Bay. The compromise between preserving the area’s MiMo architecture and allowing resiliency measures for long-term planning, were debate among multiple design charrettes seeking community input. Recommendations proposed a demolition moratorium to extend for six months and a Neighborhood Conservation District would encompass much of the area. In addition, a local historic district will be created along the south shore of Normandy Isle. An area of contention among residents was the denial of a local historic district along the Tatum Waterway, even though 75% of buildings in this area have been listed within a National Register Historic District.

The master plan is modeled in large part on the success of South Beach and its transformation from its blighted 1980s environment through reinvestment and revitalization. The master plan states, “Strategies for achieving the desired physical and economic revitalization, through the protection of the existing neighborhood and assets are essential.”

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35 The main difference between a conservation district and a historic district are the later prohibits demolition, whereas the former solely has regulation of design guidelines in terms of size and scale for new construction.
36 A large component of this denial was the lack of a feasible management plan for historic structures along Tatum Waterway to provide long-term adaptation measures for resiliency concerns. The master plan from the planning firm Dover Kohl called for the creation of two local historic districts: both Tatum Waterway and Normandy Isle. The plan calls for five big ideas to revitalize the area, the creation of a town center along 71st Street, more walkable streets – enhancing neighborhoods through the creation of local historic districts and local conservation districts, the creation of more parks and buildings to withstand the challenges of sea-level rise. The full master plan can be viewed online at https://www.dropbox.com/s/a/qPhyxn909jdoacc/PlanNoBe_92316.pdf?dl=0, Draft completed September 23, 2016.
The economic benefits of historic preservation were observed in the report with positive outcomes for job creation, property values, property taxes, tourism, and localization.  

A proposal to provide economic feasibility in exchange for the protection of historic resources would be the establishment of a Transfer of Development Rights (TDR) program that would identify specific sending and receiving districts. In 2014, the Mayor’s Blue Ribbon Panel recommended a TDR overlay district for North Beach’s Town Center corridor and found that 657,382 square feet of developable floor area were currently underutilized. A Historic Preservation Fund would be subsidized primarily through the exchange of fees for additional FAR development, which would in turn provide eligible property owners with the opportunity to receive grants.  

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38 A model for the benefits and regulation differentiations between local historic districts, local conservation districts, and national historic districts made clear to city officials, residents, and business owners the outcomes of final approvals. Existing local Historic Districts of Altos del Mar (1987), Harding Townsite/South Altos Del Mar (1996), and North Beach Resort (2009) overlap in various capacities with two National Register Historic Districts, North Shore and Normandy Isles. The precedent of a Neighborhood Conservation District (NCD) in Miami Beach existed with the 2005 establishment of the Gilbert M. Fein NCD in South Beach. The enactment of this NCD was primarily in response to recent upzoning surrounding the area and its potential to threaten the neighborhood’s character and scale.  

Much like the branding of the Miami Beach Architectural District with its unique and comprehensive Art Deco architecture, recommendations to capitalize on the branding MiMo architecture have parallels. The master plan suggests protection of valuable MiMo assets, extending local historic district protections to resources already within the two National Register Historic Districts, promoting a MiMo district through wayfinding and signage, education and advocacy of the MiMo style, and the establishment of an annual MiMo signature event.

An overall revitalization of the area through “urban resilience” tackles three main issues: sea level rise, storm water management, and storm surge. As Piet Dircke, a Dutch water engineer, stated, North Beach can use its mix of beaches and dunes to protect the urban environment by “combing soft or natural solutions using the forces of nature, sand with
strong and civil engineered solutions.\textsuperscript{40} In North Beach, issues of eminent domain are also a legal concern as only three miles along the western edge is owned by the City, whereas over sixty miles of waterfront are privately owned.

![Figure B.31: Pedestrian bridge, northeast at 80th St.](image1)
![Figure 3.32: Mangroves along Rue Notre Dame waterfront](image2)

Overall a balance between maintaining the architectural character of the city and protecting historic resources through short- and long-term resiliency planning can begin to see regulatory results in the case of North Beach. The choice to create a Neighborhood Conservation District directly correlates to concerns of the perceived divergences between historic preservation and resiliency planning.\textsuperscript{41} Instead of placing higher aesthetic regulations through a municipal Historic District, a Neighborhood Conservation District would allow demolition, so long as new construction met approval of scale and aesthetic concerns. This lessens the burden on owners and developers to comply with historic preservation regulations, however leaves potential for irreplaceable historic properties to be demolished for economic purposes.

**Takeaways for future challenges in Miami Beach:**


\textsuperscript{41} Lingering tensions between historic preservation and affordable housing garnered further criticism with Commissioner Kristen Rosen Gonzalez claiming that historic districts would protect 10,000 working-class renters who would be displaced if demolition was allowed to occur; Erik Bojnansky, The Real Deal South Florida, December 6, 2016.
• The compromise of a Neighborhood Conservation District can be an important step in balancing feasibility concerns with an overall appreciation of the historic resources;

• The establishment of a Transfer of Development Rights program and Historic Preservation Fund to provide alternative income resources for historic properties with expected expenditures of resiliency adaptation should be explored for Miami Beach as a whole;\footnote{Discussed in interview with Debbie Tackett.} and

• Rebranding to capitalize on the MiMo architecture and resiliency qualities of North Beach in its town planning, should be extended to Miami Beach as a whole.
APPENDIX C
QUALITATIVE INTERVIEW TRANSCRIPTS
APPENDIX C: QUALITATIVE INTERVIEWS

INTERVIEW 1
Ricky Arriola
Commissioner, City of Miami Beach
Vice-Chair of the Sustainability and Resiliency Committee
Resident of Miami Beach
February 6, 2017

INTERVIEW 2
Andrew Capitman
Son of Barbara Baer Capitman
Managing Director, Duff & Phelps
Resident of New York City, lived in Miami Beach
February 15, 2017

INTERVIEW 3
Jack Johnson
Former Board Member of MDPL and MDCDC
Resident and MDPL Tour Guide
Resident of Miami Beach
April 1, 2017

INTERVIEW 4
Rosa Lowinger
Founder, RLA Conservation
Resident of Miami
April 4, 2017

INTERVIEW 5
Christine Rupp
Executive Director
Dade Heritage Trust
Resident of Miami
April 5, 2017

INTERVIEW 6
Deborah Tackett
Preservation and Design Manager, City of Miami Beach
Resident of Miami Beach
March 27, 2017

INTERVIEW 7
Jeana Wiser
Senior Manager, Resilient Communities
National Trust for Historic Preservation, Preservation Green Lab
Resident of New York City, visits Miami regularly
April 3, 2017
C.1 INTERVIEW: RICKY ARRIOLA
Commissioner, City of Miami Beach; Vice-Chair of the Sustainability and Resiliency Committee
Interview Date: February 6, 2017

LWB: How would you describe the value of Miami Beach’s architectural image to the community as a commissioner?

RA: Our architectural beauty and historic districts are a large part of what makes Miami Beach such a great place to live, such a great place to visit. A big driving force for why people come as tourists is to see us as a prominent beach town in the United States and internationally. There are a lot of places one could choose to live, but I think our architecture and charm of historic districts are a large part of our success.

LWB: Did you grow up in Miami Beach?

RA: No, I didn't. I grew up in Miami, but I have been coming to Miami Beach my whole life.

LWB: Do you have any early memories of Miami Beach? Particularly in the 1970s or 1980s? Especially the changes that you have noticed over time.

RA: Yes, I remember going to Miami Beach, but when I was a kid in the 1970s and early 1980s, Miami Beach was not really a place to live, it was more a place to visit for special occasions. It was mainly a retirement community; it didn't really have any compelling reason for wanting to visit, other than the beach itself. In Miami there were other options such as Key Biscayne. Miami Beach was a place that was catered to an older clientele, so you came for destinations such as Joe's Stone Crab, or the Forge, or the Convention Center, the Jackie Gleason Theater. You would go for specific reasons, one off type things.

LWB: With sea level rise becoming an increasing concern among communities and preservationists, what do you see as long term solutions for Miami Beach’s historic resources? Especially with the Resiliency Plan, that is predicted to last over the next 50 years, but thinking beyond that, is that something that municipal government is thinking of?

RA: The local government is making a big investment in sea level rise efforts. Hopefully the state and federal government will also contribute, but right now the costs are being born by the local community in Miami Beach.

LWB: Is that something that is a top priority for the municipal government?

RA: Yes, it is one of our very top priorities and other than the renovation of the Convention Center that is currently underway, it is our most significant capital investment.

LWB: I noticed that there is new regulation for new construction to be LEED certified. As far as an overall Resiliency Plan, do you see other regulation potential in the future to limit the type of development that occurs in Miami Beach? This seems like a good first step, if over 10,000 buildings must meet certain levels of certification.

RA: Yes, the threshold is 10,000 square feet for commercial buildings and 5,000 square feet for residential. We are trying to create incentives for people to build in an eco-friendly manner, not just in terms of energy consumption but also resiliency, specifically towards sea level rise, but also regulations that will enhance the kinds of communities that we live in.
LWB: The new North Beach discussions are historic districting have looked at incorporating sea level rise into their development. For example, making the ground floor above certain flood plain levels. Do you think that this will serve as a model for future historic districts or landmarks in Miami Beach, where they incorporate this type of planning?

RA: That’s right. North Beach will designate certain areas on historic. We are working on zoning guidelines for neighborhood conservation districts for another area that we are looking to designate, so that not only architecturally there will be a certain style, but also architecturally geared towards building resiliency into the neighborhoods.

LWB: As a commissioner, what are your biggest concerns for Miami Beach’s historic resources? Especially as historically in the 1970s and 1980s, the cost-benefit analysis made sense to invest from a value-add perspective, but as they are inherently depreciating assets with additional costs of adaptation to sea level rise, how do you think the future will hold for traditional real estate investment? Historic resources rely on incentives or mechanisms such as transfers of development rights to provide economic feasibility generally, and in exchange they provide a public good. This made sense in the 1970s, you had these abandoned buildings that needed revitalization, but now what you have is sea level rise, adaptation is expensive, owners will need to incur these costs themselves, so a cost-benefit analyses doesn’t have the same parameters as before. Are commissioners concerned with historic resources, in 50 years when the sea levels do rise and property owners have they have real investments to make, for the long-term investment potential?

RA: Yes, we are. In the aspect of "depreciating assets", I'm not sure of that characterization, some might argue that, but I’m not sure. Historically, real estate in general has risen at or above the rate of inflation, and part of our efforts to integrate historic preservation into resiliency planning is so that these buildings won't depreciate in value over the long-term. A number of things would happen. One is the buildings themselves become subject to neglect and therefore might be destroyed, demolished and/or leads to blight in neighborhoods if buildings deteriorate because the upkeep can't be afforded. What we are trying to make sure they don't depreciate in value. We’re pushing for resiliency throughout the city so that these historic buildings for example wouldn’t succumb to flooding and have repercussions of climate change. Not just through building code regulations, in terms of making buildings more resilient, but looking at other options such as allowing them to have transferable development rights for example which would allow owners to recapture lost development potential. Or things similar to TDRs as a way to create economic value in buildings that can't be demolished due to historic preservation, but still need investment to make them resilient for the next 100 years. Allowing TDRs to other parts of town, could be reinvested in buildings to make them more resilient in the long haul.

C.2 INTERVIEW: ANDREW CAPITMAN
Current Title: Managing Director, Duff & Phelps
Interview Date: February 15, 2017

LWB: How did your mom, Barbara Baer Captiman, become interested or first learn about preservation?

AC: I think my mother was initially interested in the role of barrier islands from an ecological point of view; especially the negative effects of high-density development along the barrier islands of Florida contributing to the degradation of the ecology of South Florida.
LWB: Did that evolve into an appreciation for Art Deco architecture in Miami Beach?

AC: No, it was more about what was happening in Miami Beach and what could be done about it. Other parts of South Florida were solid walls of large buildings against the ocean, cutting off everything behind. Where it started was that my mother was anti-development. The fortunate circumstance was that she was very design-oriented. She was an artist herself, with the political will and highest motive of stopping development. She was also open to the idea and recognized that the architectural appearance of the Art Deco District as a basis for saying, "don't tear this down and build high-rises." It just so happened that she recognized the unique characteristics of the Art Deco District and she became really dedicated to that. At that point, what was happening in Miami Beach was thoughtless. There was no advocacy at that time saying, "let's turn this around, save what we have, and remain successful as a commercial, tourist community." Barbara and I were always very clear that repurposing had its place. The whole point of this strategy was economic benefit for the local communities, so that it could improve.

LWB: That's fascinating, especially considering what is going on currently in Miami Beach. Were you initially talking with city officials or was it more seen as a grassroots strategy to achieve preservation through personal investment?

AC: We were having discussions with a number of Miami Beach institutions, including the Chamber of Commerce, the City Commission, and the City Manager's office. The developers in the city, such as Abe Resnick, didn't want preservation. His construction was horrible and he had a business model of selling apartments to retiring people through his network of Miami Beach's Orthodox Jewish population. His apartments were not well constructed, and he was tearing down existing buildings. I remember he went on television and said, "if I own these buildings, then they are mine to destroy." The Beach was filled with that.

LWB: That is one of the themes that I picked up on. As the preservation movement was building a coalition, and gaining status as a viable economic opportunity, it really was reactionary. Abe Resnick for example had to demolish The New Yorker, one of his properties, in order for people to realize that these are irreplaceable resources. That continued with The Delano interiors, after their demolition the protection of historic interiors were strengthened. How do you think that this can be shifted to proactive policies of preservation and resiliency, given that sea level rise is no longer a political debate, but an inevitability? How do you think that the preservation advocates can be proactive based on your experience in Miami Beach?

AC: I think it's questionable what type of campaign you would want to wage. To me, I think that there is enough time to fight some other battles as well. The first one is that Ocean Drive needs to be changed. Ocean Drive needs to be cleaned up. Mango's established classlessness very early on, and has made enormous amounts of money over the years. He should be put out of business to change the standards of Ocean Drive. Things such as the amount of outdoor seats, the noise level so that the quality of the experiences are elevated, as some examples. In the process I think you flush out a lot of really undesirable factors to unify Ocean Drive and allow revenues to go up. I would fight that kind of battle first. Right now I don't think that there's consolidated business leadership in the Art Deco District that's striving to become the palazzi of Venice for Miami Beach.

LWB: Do you still visit Miami Beach?
AC: Yes, I've been working on the Barbara Baer Capitman Memorial Project. I spent six years working on that which we just finished last April. So, I've been in Miami Beach a lot recently.

LWB: There's a section in North Beach where they are looking to designate two local historic districts. They're trying to institute similar incentive policies to regenerate the area similar to South Beach in the late 1970s through the 1980s. The plan on Ocean Terrace is to demolish some historic structures in order to spur development and make the new architecture resilient to sea level rise. Due to community support they were able to block this, but for now, as an example they are looking to allow short-term rentals within designated commercial zones to increase revenue for historic properties as an incentive for rehabilitation. Do you have advice for policymakers or developers interested in this area?

AC: I think my main question again would be the fight against absolute idiocy. There is absolutely no indication that every historic place needs to change. There's no question about that and that leads to shortcomings. They're complacent if they think that they haven't done enough historic preservation. You want to create an environment where people want to have commercial businesses, and historic preservation enhances this. Better occupants are wanted to increase the value of the rent along the current corridor. To get higher rents, you need higher volume of traffic. To get more traffic, you need a better environment. A way to do that is to maintain buildings and not knock them down to give the area character. There is zero evidence where this hasn't worked.

LWB: If the aim is economic development I agree, but do you have any thoughts on people who view this as the potential to displace the current population once the area is revitalized? How do you respond to that backlash against historic preservation?

AC: In my past experience, we had a unique circumstance. We had one population of elderly people, but another population of old people was not replacing them. We had first-generation, foreign-born people who were retiring to Miami Beach at a very old age and living there. The next cohort of old people wasn’t replacing them. The next group was college graduates. Everybody else rises if you already own your home and your value goes up. It's a trade up with the rest of the wave as your income stabilizes. There are so many things that affect people's ability to get a down payment or have enough income to buy a house in America that to say that historic preservation is making affordability less attainable is ridiculous. I would say that by not allowing demolition of smaller historic buildings to be replaced by higher-density luxury buildings, no matter the fact that it doesn't help the neighborhood or that they aren't intended for first-time homeowners anyways, defeats this purpose. If rents go up, then people will be forced out. On the other hand, whoever said that you should be able to live next to the ocean cheaply? This is one of those occasions where you need that hard-nosed answer.

LWB: If you view Miami Beach's integration of preservation policies as successful, do you think that there is a place for preservation within the sustainability realm and resiliency planning going forward? For example, they have new infrastructure projects and one way that they would like to pay for these would be to penalize new construction that doesn’t meet certain LEED standards. It's still creating new development while not utilizing the current building stock or incentivizing the retrofitting of existing structures. The city wants to be a model for resiliency, that's how they are positioning their branding, but they are not achieving this will historic preservation in mind.
AC: Every time I have talked to architects, they don't see certification as onerous. I do think that historic preservation owners need to have a voice as a group. Whenever they are looking at saving the city, they should look at saving their buildings as historic districts.

LWB: I will be looking into ownership structures to address these issues. When you owned and operated properties in Miami Beach were they mainly owner-occupied or comprised through investment structures, such as REITs?

AC: Virtually nothing on South Beach was what would now be called institutionally-owned. It was owned by wealthy, entrepreneurial individuals by and large. REIT ownership really looks at the long-term value of the property.

C.3 INTERVIEW: JACK JOHNSON
Former MDPL and MBCDC Board Member, community preservationist
Interview Date: March 31, 2017

LWB: Can you tell me about your background and how you first came across historic preservation? In these interviews I'm trying to gain an understanding of how the preservation movement started in Miami Beach and how those successes from a municipal planning perspective can be used to integrate historic preservation with sustainability goals?

JJ: My professional background is for 32-years I worked for HUD, mostly in New York City, but it was because of that that I came to Miami in 1999 to get a promotion. The last 4 years of my career were with the Miami office of HUD as Director of Community Planning and Development. In the course of my career at HUD, I worked occasionally on projects that involved historic preservation, most notably the preservation of the Old Federal Courthouse in White Plains, New York. It wasn't a huge passion of mine. When I came to Miami in 1999, I had friends here who were involved with MDPL. One of them Richard Hoberman, had worked at the HUD office in New York. He's a native of Miami Beach and in 1980 he resigned from the New York office and returned to Miami Beach. He became one of the early directors of the MDPL. Then I also had a neighbor here who was involved in MDPL on the board. Between the two of them I was encouraged to get involved with the organization and become a tour guide. I was on the board of the organization, now I am on the Executive Committee and still lead tours from time to time.

LWB: What compelled you to dedicate your time as a tour guide? Was it because of the architecture? Or because you perceived the buildings as being under threat? Or to be involved with your friends? What was the impetus for taking that step further to become more involved in MDPL?

JJ: It was a couple of things. Primarily, my interest in Art Deco architecture. Of course, I had seen a lot in New York. Everyone in New York is familiar with Art Deco architecture, but I was never really touched by anything. As a separate architectural style, it just looked like old architecture to me. It wasn't until I came to Miami Beach that I began to understand what was unique about Art Deco architecture and really was drawn to them. In Miami Beach, they are unique, approachable buildings. They aren't big behemoths, they are buildings at a human-scale that really define the city in a way that New York is not defined by Art Deco, so much as it's a collection of architecture. I became very interested in that. Then my housing experience led to my becoming involved with the MBCDC, which was another organization that had been founded by Barbara Baer Capitman. It originally had as its purpose to
promote economic development through the restoration and reuse of historic buildings in Miami Beach. By the time that I began to work with them, they were acquiring and restoring historic buildings in order to convert them to affordable housing. That was the connection with my housing experience. I became Chair of the Board for a period of 8 years.

LWB: Are you still at the MBCDC?

JJ: I’m not. I served as Chairman longer than I wanted to, but I was searching for the right person to take over. It took a while to find him, but when I did, I turned it over to him. Within a year I resigned as a board member.

LWB: Preservation is now widely accepted for its economic and tourism contributions in Miami Beach, but that wasn’t always the case. Do you think that lessons could be learned from these past struggles to inform future decisions of heritage resources, specifically with sea level rise projected to significantly impact the city within the next 50 years?

JJ: Yes, that is a major issue for the city now. The city has been very aggressively confronting sea level rise and taking actions to prepare for it, but most of what they have done has been infrastructure related, which is important and of course the easiest because the city controls its own infrastructure. In particular, the City of Miami Beach with the tourism that was benefitted from the restoration of its Art Deco heritage, is a wealthy community. The city has resources that other municipalities don’t have, so they have been able to invest the money raising the height of streets, improving storm drainage facilities, and pumps to remove flood waters from the streets. But, the city does not control private properties, and most of the historic structures in Miami Beach are privately owned. Due to the influence of the historic preservation movement over the decades, it does require the preservation of those structures that are contributing to the historic nature and located within historic districts to be preserved, but the city has not invested in protecting those structures from the effects of sea level rise. As long as both the federal and state governments are controlled by people who deny the existence of climate change and sea level rise, there will be no financial resources available to protect the historic heritage of the city. That is problem number one. Problem number two is that development interests in Miami Beach which have long paid homage to historic preservation, even when they weren’t doing much about it or actively working against it, and they are now using the threat of sea level rise as a reason why historic properties should be replaced by new development. Whereas, they say new buildings are being built with ground floors that are significantly elevated above the existing structures, and are therefore more resistant to the effects of sea level rise. That ignores the fact that sooner or later sea level rise will affect everyone, new and old alike, because once the level of the ocean exceeds the ground level even new buildings will have problem of access. The real estate development interests are using sea level rise as an excuse to enable them to build structures that will be profitable in the short-term. In the process, they will likely kill the tourism industry in Miami Beach long before sea level rise starts. If not for the historic heritage of Miami Beach, this city would be just like any other coastal city in Florida. It would have nothing to distinguish itself.

LWB: From my research, the historic preservation movement began to turn when they were first able to get the National Register listing which gave it prominence and marketing clout, and then it seemed as if when they partnered with developers that could properly restore and bring a new skill set to much of the dilapidated buildings in South Beach, that’s when they saw the economic potential and brought them onboard. Given that sea level rise adaptation will bring added expense, do you see any lessons that could be extrapolated from this partnership with investors that do appreciate historic resources to be able to find a compromise and make it work? Or do you think outside funding, such as federal tax credits, were the main drivers for investment?
JJ: Yes, federal tax credits thus far still are available to developers. The problem is that the cost of elevating buildings is a huge addition to the cost of restoration. As I said before, until and unless federal and state governments begin to make funding available for that purpose, it’s not going to be economically feasible for developers to both elevate and restore buildings. There are examples, most notably, on Star Island of buildings that have been elevated by people who have a commitment to historic preservation and a great deal of money to spend. That’s not going to work in the case of real estate developers who are primarily driven by the bottom line and future ROI. If the initial investment is so high that they can’t see an eventual return on that investment, then they are not going to make the investment in the first place.

LWB: The MDPL just recently started advertising elevation workshops for historic properties, but browsing their website and looking at interviews in The Miami Herald, it seems as if they are advocating against the demolition of single-family homes in Miami Beach, rather than long-term goals of working with the city to integrate with resiliency and sustainability goals. As the foremost preservation advocacy group in Miami Beach, how can this be improved? Do you think there will be a shift for this to become more of a priority?

JJ: Elevation of single-family homes is less expensive than elevation of larger buildings. People buy homes only secondarily because they expect to eventually sell them for more money than they bought it for. Their primary reason for buying a house is so that they have a place to live. It also stabilizes their monthly expenses for living there, as opposed to renters who are subjected to the ups and downs of the real estate market. Homeowners often make investments in their homes knowing that their investments will not increase the value of their homes, simply because they want a better place to live. To the extent that we can successfully convince people that living in a historic home has advantages that living in a new home doesn’t have and that therefore making an investment in their properties to elevate them as well as to preserve them is necessary. Then, I think that we have a reasonable chance of achieving some success in the preservation of single-family homes. That’s a much more difficult challenge over the long-term when it comes to commercial buildings.

LWB: Have their been discussions of promoting historic preservation as “the greenest option” if you are looking at long-term mitigation goals?

JJ: Absolutely it is. That is the other argument that can be made and is not made strongly enough I think. I don’t know if in your research you came across an architect named Elefante. He has done calculations of energy use and has concluded that the demolition of a historic building and the environmental cost to replace it with a new building which is as green as new buildings can be, is such that the advantages of the new building will not offset the environmental cost of demolition and reconstruction for a period of 90 years. There are significant arguments to be made that preservation is significantly greener than even the greenest, new construction. That argument that money is the decisive factor is precisely what has gotten us into the entire climate change cycle. As long as money is the determining factor for the decisions we make as a race, there will be no end to global warming. I have no solutions for that. The political will that is also not going to happen because of the influence of money on politics.

LWB: With the phenomenon of the preservation movement in Miami Beach, it seems at sometimes they were at odds with developers, but somehow they were able to gain consensus among residents to invest in historic structures. Is there a way to recreate that consensus among residents to demonstrate that historic buildings are the greenest option. The MDPL could use their influence to rally their support to gain more political advantage?
JJ: That is in large part what MDPL is attempting to do. It’s recent emphasis on single-family home preservation, trying to convince homeowners to preserve their homes and to resist the temptation to sell their homes to the highest bidder without regard to what the highest bidder tends to do with the property. Again given the influence of money, it’s a very difficult challenge to get people to consider the importance of those issues.

LWB: How can preservationists maintain or improve the conveyance of the societal benefits that historic preservation provides with increased government divestment, diminishing public resources, and future issues of climate change?

JJ: The unwillingness of government to confront the reality of climate change and make investments in reversing the effects of the processes of climate change to mitigate is the main issue. As long as the federal and state governments are unwilling to do that, it makes the future prospects very dim. At this point all that we can do as an organization and as a coalition of organizations with other preservation groups around the country is to try to educate people about the importance of the preservation of our heritage. The damaging effects of climate change on preservation and the need to invest in the funding of adaptation to historic buildings that will result in their preservation. I don’t know if tax credits for adaptation would constitute a sufficiently significant financial incentive to encourage the elevation and restoration of buildings. It might help as it has helped in the past, but I think that in addition to that the resources of the federal government have to be brought to bear in other communities that don’t have the resources of Miami Beach make the necessary infrastructure improvements. That’s something that most coastal communities simply cannot afford. For most coastal communities, it’s a matter of waiting for the sea level to rise and for property values to diminish and thereby make the costs greater and the resources less. I think that the first step that needs to be taken by the federal government, if it ever reaches the point where it acknowledged the threat of sea level rise, is to make resources available to coastal communities for adaptation improvements. Those types of investment could conceivably have a longer-term impact on the preservation of historic structures in other communities than is the case in Miami Beach. One of Miami Beach’s problems is the composition of the bedrock. You can’t build a seawall that will prevent the water from percolating through the foundation. In other cases you can, but in those other cases, they usually don’t have the resources available to do that. Although it won’t resolve the problems of Miami Beach, I think the first step that the federal government would make would be to make available funding for infrastructure. It’s a long way down the road before we get to the point where the federal government makes resources available to individual property owners and that is really what needs to happen in a community like Miami Beach. I hate to be so pessimistic, but having served the federal government, a community activist, and a member of the Planning Board, but having the opportunity to view these issues from all of these angles and how various institutions react to and address these problems, it’s very difficult to conceive of adequate solutions becoming available anytime soon. There should also be a coalition of coastal communities advocating for funding to respond to the crisis of sea level rise. It’s something that I have been thinking about.

C.4 INTERVIEW: ROSA LOWINGER
Founder, RLA Conservation
April 5, 2017

LWB: My first questions is, what do you see as the future challenges of the conservation field, particularly with climate change? Does it affect your practice at this particular moment?
RL: I think one of the primary challenges in Miami Beach, is understanding how they are going to keep from going underwater? There are utilizing infrastructure improvements, but unless there’s major concerted thinking that has a way of dealing with rising sea levels, I don’t know what they are going to do. Miami Beach floods all the time. They’re raising streets, but it’s going to be an ongoing issue. I think what’s going to happen is that sea level rise will be the primary directive for everything. So all other concerns are going to fall by the wayside, and nobody would be worried about historic preservation. Climate change is going to have a similar effect or a catastrophic hurricane, which we luckily haven’t had recently. Everything else will start to take a back seat. That said, the incredible engine of economic renewal that South Beach proved to be has allowed everyone to understand the importance of historic buildings. Now that doesn’t always translate into restoration or conservation that’s done properly. People think you can keep the footprint and that’s it. Maybe the facade, and the rest of it is rehabilitated. However, it’s at least a beginning.

LWB: Do you see sea level rise as a factor for developing long-term conservation management strategies?

RL: Yes, hopefully. The APT in 2019 conference will look specifically at this issue. They are very much involved in the Sustainability Committee of APT with concerns of sea level rise. The 2019 conference is going to be held in Miami with the workshop being held in Havana.

LWB: Have clients begun to express concerns of sea level rise to you? Or do you think updated management practices will mainly be driven by experts and academics?

RL: Private clients who own historic property or historic sculpture are beginning to think and be concerned about it. What is happening is that storm surges are coming in further, so wealthy people who have collections and outdoor sculpture or monumental buildings are starting to feel the impact. They are worrying about what to do.

LWB: Do you think that authenticity and relying on original fabric that defines the current historic preservation field will need to shift with climate change; particularly with clients as you mentioned, elevating or relocating historic resources?

RL: That is the one thing I want to put blinders on and not think about that. To me, I'm a conservator, so original fabric is what it’s all about; however, this may be the case. In Vizcaya as an example, it’s on the water in Miami. Robert Winthrop Chandler painted the ceiling and it’s not currently sustainable. It’s plaster and with the heat from the outdoors, it’s getting ravaged by one thing or another. They’re actually talking about putting a replica outdoors and putting the ceiling indoors. So it is going to affect historic fabric.

LWB: How do you think advocates can further align with long-term sustainability and resiliency goals? For example, right now historic districts are not seen by policymakers as contributing to mitigation efforts and they’re relying on new development to fund resiliency and adaptation projects. Do you see a way for preservationists to really make the case that structures which already exist are inherently sustainable and they deserve priority rather than new construction?

RL: That is a lot of what APT is working on. APT has a huge effort around that. I think all of us in the preservation community are worried about exactly that. You just pinpointed a major concern. It’s so much easier to say “oh well”, because no one wants to preserve old things anyways, unless they are already on the bandwagon. It’s like preaching to the choir. People would rather build new things, and of course the developers who have so much money are always willing and hoping to build new. It’s harder now, that’s why a team effort is so important. APT is drawing attention to exactly that question.
C.5 INTERVIEW: CHRISTINE RUPP  
Current Title: Executive Director, Dade Heritage Trust  
Interview Date: April 4, 2017

LWB: Through my research Miami Beach has historically been resilient—socially, economically and architecturally, but with the unprecedented future challenge of sea level rise how can historic preservation advocates align their efforts with sustainability and resiliency goals?

CR: I’m the fairly new director of Dade Heritage Trust (DHT), over the past year and a half. The main advocacy organization for Miami Beach is the Miami Design Preservation League (MDPL). DHT has traditionally taken a hands-off approach with Miami Beach because the MDPL does such a remarkable job. DHT does have an appointee on the City of Miami Beach Historic Preservation Board, but it’s very rare that we will get involved or immersed in any historic preservation issues in Miami Beach unless we’re called upon specifically to do that. This is because (1) they have a very strong historic preservation ordinance, (2) they have a very strong HP board, and (3) they have the strength of MDPL. I can talk about Miami in general and give some direction with regard to how I believe preservation and resiliency are going to have to work together in order to be successful. It has to be a regional approach. I know that the Rockefeller Foundation has funded the project called "Resilient Miami" that brings together three municipalities: Miami-Dade County, the City of Miami, and the City of Miami Beach. The Rockefeller Foundation is looking at resiliency internationally and this is the only environment where they have three municipalities working together. From a preservation perspective, I think that in order for us to move forward, I have to take my direction from how the government is going to react. We can add expertise about preserving historic buildings, but the infrastructure for preservation is going to have to come from the municipalities. Having said that, I will tell you that it is unfortunate but the true circumstance in Miami and Miami-Dade County remains that the preservation departments are severely understaffed and underfunded. I believe that the City of Miami Beach is well established when it comes to preservation and how they deal with it, but here in the City of Miami, where DHT is located, there are only two historic preservation officers—one full-time and one part-time employee. They have so much on their plate right now, that for them to add the layer of sea level rise, even to think about their own historic buildings that are owned by the City of Miami would be an insurmountable challenge for them. The City of Miami did hire a Chief Resiliency Officer by the name of Jane Gilbert, and she is going to be working probably 24 hours a day, but also in conjunction with the Rockefeller Foundation project. I can tell you there have been some workshops, but we have not been given any directives about how to deal with sea level rise here. In Miami and even in Miami Beach, there are still allowing development on the water.

LWB: As a preservationists, it’s difficult to convey the value of historic resources beyond the economic to gain public consensus. There is little further economic benefit that a lot of these rehabilitated historic structures can offer. Maybe in the 1970s, when these resources didn’t have as much value it would have been more feasible, but today they’re not valued for recapturing this potential and are solely seen for their tourism potential.

CR: That’s right. You just have to wonder when someone is going to say "ok, time out, let’s take a look here and see the direction we are headed," because it doesn’t make sense. It’s unfortunate that it seems in Miami, not just in preservation, but also in planning and zoning
in general, no one is willing to do that because of the immense economic gains that are out there for new development.

LWB: Looking at preservation as a whole, it has been interesting to research Miami Beach as a case study. It’s another turning point because with climate change, historic preservation does have a place in sustainability. I think promoting historic districts as inherently green has future potential. There is something to be said about that, more data and studies could persuade policymakers for further integration between the two planning disciplines. When I was researching, there really aren’t Miami Beach- or Miami-specific studies that have that concrete data. In speaking with Jeana Wiser from the Preservation Green Lab, she said that a lot of this is due to the fact that people are afraid of Miami Beach to begin with because they see it as too far gone.

CR: As long there is a demand, the supply is going to be there. Internationally, people are still drawn to Miami Beach and investing in Miami Beach. It’s all about the money; it’s unfortunate but true. Let’s just say that on the whole, real estate investors decided to put the brakes on Miami Beach development to look at the science and understand the future. Until that happens and the economics of the place turn, that is not going to change. Preservation has always been a challenge here and always will be because this area of South Florida evolved very quickly in regards to development and without much planning. This pattern continues with the real estate cycles. The biggest threat on Miami Beach will be when there is a situation between preservation and building new. They will use new construction as a way to demonstrate improvement for resiliency’s sake and as solution to sea level rise, whereas historic resources cannot. The decision makers are using sea level rise as a way to get rid of the historic fabric and I don’t know how you argue that either. Do you start raising buildings? We are giving an award at our ceremony tomorrow night to an architectural firm for a client that purchased three contiguous properties on Indian Creek Drive. They did make enhancements to the structure to deal with sea level rise, without raising the buildings. These creative solutions are interesting, but on the grand scale they are still new development.

LWB: As you mentioned, property values are not decreasing in Miami Beach at all, they are in an upward cycle due to geographic limitations and the fact that people want to live near the ocean.

CR: There is no action, just a lot of talk at this point. On Friday, there was a Critical Mass Ride, and I had not been over to the Beach for a while, especially the areas where they are beginning to raise all of the roads. As I was riding, I was thinking that there must be a philosophy around this because the storefronts are now below grade. I’m not an engineer, but the water will flow downhill. The installation of huge drains to handle that runoff affects the built environment.

LWB: In the course of this thesis, I really focused on how the history and lessons learned can push historic preservation policy forward. One solution is to try to integrate as much as possible with resiliency planning. For funding, I know that the City is looking to FEMA and other federal agencies to lobby for pre-disaster adaptation funding for private owners, or establish benefits for them because ultimately it will be up to private owners to elevate or rehabilitate their property. Do you know if anything in the preservation field specifically that address this? There have and will continue to be workshops to educate homeowners on short-term adaptation efforts, aside from elevating their property, but do you see that as another advocacy lane? Not necessarily for DHT, but maybe for MDPL to advocate for federal funding or grants?
CR: Yes, I think as this develops more people will begin to questions whether the cost of adaptation is worth the expense. Or 100 years from now when Miami Beach is inundated, will it just be gone? I’m not sure of the specifics in regards to federal funding. I will say that no one in South Florida wishes for a hurricane because of the devastation. We have not had a major hurricane here in many years and one big storm might change people’s mind.

LWB: There are many issues: economic, continued development, how to architecturally deal with adaptation, and then there is the general consensus among people as taxpayers to advocate where they want these revenues invested. A lot of people don’t think about sea level rise. Even myself, I witnessed the City installing pumps a couple of years ago and never really thought critically about this until I began researching for thesis. For people, I’m sure it’s in the back of the minds, but it doesn’t seem at this point to impact their daily thinking about the built environment. I’m aiming to prove in my thesis that historic preservation has been a successful tool for economic and architectural revitalization, and it does have the potential in the future to provide the same benefits for future resiliency and sustainability efforts.

CR: The interesting thing about Miami to me is that the majority of historic inventory that exists in Miami-Dade County right now was done by people a long time ago. They were predominately older, white people who lived in Miami for a long time, possibly all of their life, but certainly had a connection to Miami’s history. Those people are going away. I think that general attitude toward preservation is going to be interesting to track; especially in Miami, where everyone is from somewhere else. They don’t have the built-in knowledge or even a sense of respect for the city’s history and understand that historic buildings can help tell that story. It will be interesting in the years to come how preservation survives in Miami, let alone with challenges of sea level. Unless we get more people to understand why it’s important to save historic buildings and get their buy-in, preservation is facing huge issues here. I was talking with Commissioner Russell about historic preservation efforts in Miami, he’s interested, but overall there is very little political appetite. Historic preservation doesn’t pull as well as other issues such as traffic, crime, affordability, etc. If there is the political will in Miami Beach to really double down on new projects, which take sea level rise into consideration that is key. Don’t we all really want our government to help us and be the thought leaders?

LWB: I agree with you. In the past that social buy-in was achieved through economic aims, but in the future it needs to integrate with environmental concerns and data.

C.6 INTERVIEW: DEBORAH TACKETT
Current Title: Design and Preservation Manager, City of Miami Beach
Interview Date: March 27, 2017

LWB: Historically Miami Beach has been resilient socially, economically, architecturally, by using historic preservation as a tool to accomplish these goals. When I have been reviewing municipal sustainability and resiliency long-term planning, historic preservation is not utilized as a tool.

DT: That is correct. It hasn’t been integrated yet, but it’s on a parallel track. I think the reason why it hasn’t been fully integrated yet is because there are more challenging issues dealing with existing buildings, whereas the engineering work is much more straightforward. Moving forward we have… actually tomorrow there will be a planning board meeting to discuss a series of criteria that are proposed to become part of our Ordinance. Right now exists a series of certificate of appropriateness criteria. If adopted, resiliency criteria along with our
analysis of historic preservation projects will be updated. Moving forward, although the historic preservation portion has taken a little longer to integrate itself into resiliency, it will become much more integrate. Longer-term we are trying to look at urban design guidelines where the streets will be raised. It will be interesting as some of our most significant historic neighborhoods are at a higher elevation. When the city prioritized our engineering projects for stormwater and street raising, most of what had already occurred is in the non-historic districts. As we move forward, we are starting to phase some of the raised streets and stormwater projects in historic neighborhoods. We will hopefully have these guidelines for not only the urban streetscape, but also looking at each individual historic building. That could be a series of things—repurposing ground floors, waterproofing, raising buildings if possible, and also guidelines for new construction. The good thing is that the City of Miami Beach has always been very progressive, so I'm not too concerned that we're going to be frozen in time and changes are not going to be permitted. I think the City always has looked towards technology. I'm hopeful that will continue as new technologies are developed to elevate, repurpose, or flood proof buildings. I think the City is going to embrace these changes.

LWB: That would be great.

DT: I have travelled a lot and talked with historic preservation staff in other cities, and they are always shocked by how progressive and flexible we are. Other places are more conservative and don't want to embrace change.

LWB: I think other cities and their municipal budgets don't allow them to complete large-scale infrastructure projects.

DT: Exactly, it is an imminent threat. How can we design for that?

LWB: Looking back at the history, especially at the start of the Miami Beach Architectural District designation in the late 1970s, the availability of federal tax credits encouraged private investment. Do you see lessons learned for preservation advocates because it will be expensive to raise historic structures as an example, and make necessary infrastructure improvements for private property owners.

DT: Correct, I think there are always opportunities. We saw what happened in New York after Sandy, because they had a disaster there were large funding mechanisms for people to raise buildings and create more resilient architecture. We have been lucky here that we haven't had a disaster, but we don't have available federal funding at this point. That is something that the City in terms of our lobbying is talking to FEMA about. The City Manager's office is meeting with FEMA quite often, and we would like to see FEMA move forward in the future as well to examine pre-disaster funding to help us become more resilient before a disaster hits. That is the new wave for hopefully learning lessons. Yes, we understand we may get a lot of money if the City does flood and it does have a catastrophic event, but if we can change that model so that there could be some assistance prior; this is what the city wishes would happen.

LWB: I know the City is partnering with academics and researchers to understand historic preservation as integral to resiliency planning because Miami Beach does rely on historic resources economically.

DT: Yes, I do think that moving forward, preservation is always going to be part of the City's economic and social base. It may look slightly different in the long-term future, but I think the
City has made a serious commitment to preserving and designating properties historic. It’s a complex issue, and you have a lot of different stakeholders. Most of these buildings are privately-owned, as well. I don’t see a world where Miami Beach does not have a valuable historic building stock.

LWB: I read recently that the new development that is not at least LEED gold certified will be taxed at an incremental rate. Those revenues will go into a Resiliency Fund. Do you see somewhat of a disconnect from a historic preservation standpoint?

DT: That is something that people talk about. I don’t see it as a disconnect because these are City resiliency projects. It’s not going in a fund to help private property owners with resiliency. It will fund projects so that the City can become more resilient in the public right-of-way. That is a significant investment for the City. Soon we will have to look at larger areas for water retention. I don’t think it’s a disconnect. I think it’s something that’s a possibility in the future, for the City to be looking at certain regulations or fees that could be paid for people that are demolishing buildings. For right now, we’re not using any of our money to directly assist private property owners, even from this Resiliency Fund.

LWB: The question there remains that FEMA recommends not building in vulnerable areas. Miami Beach is entirely seen as a vulnerable area because of its geology and development that already exists. The disconnect seems that the City is incentivizing new building to pay for resiliency measures, though this seems counterintuitive of instead rehabilitating what currently exists.

DT: At this point, the City hasn’t issued a policy direction in terms of what private property owners are able to do with their properties. We have our Land Use Board and Historic Preservation Board, which review projects, but the reality of it is that creating a resilient community into the future is expensive. We are committed to keeping our tax base up for quality-of-life and basic city services, as well as the large infrastructure projects so that we don’t have to tax our residents to the point where it’s unaffordable to live here. I think it’s a balance. The money doesn’t come out of the sky. We have a very strong tax base and we are increasing that. Density has not been increased. So, yes, you see a lot of major new construction, but the City has not ever since the late 1980s, when we started downzoning to today increased density. It has always been downzoned. We depend on not only property taxes, but also hotel and retail taxes in order to fund these infrastructure projects. While our engineers believe some of these solutions are temporary, they still are necessary.

LWB: Do you see neighborhood conservation districts as becoming more prevalent in the future, given recent discussions surrounding new historic districts in North Beach?

DT: No, I think that neighborhood conservation districts are a great tool, but they are very different from Historic Districts. They serve a completely different purpose. The City is also looking at designating two local historic districts in North Beach, and I believe that the commission understands that even though these buildings are vulnerable, the ones we are proposing to designate historic are of “exceptional quality”. The consistency of the architecture in those areas is worth creating a local historic district, where the goal is to preserve architectural fabric. I think neighborhood conservation districts are completely different in terms of looking at scale, mass, volumes, typologies, setbacks, so that you can retain the character, but not the physical material. At the end of the day, our recommendations are professional and based on criteria. Our recommendation with regard to historic districts and conservation districts really look at the physical fabric and what we think would best suit each of those areas.
LWB: Looking at Galveston after the 1900 Hurricane, they choose to remain and create large infrastructure projects to protect against future disasters. They have been locked in to these decisions from over a century ago and continue to raise streets and improve their seawalls. For them, retreat was never an option, which has been utilized as an choice in historic preservation discussions. Is this something that has come up in discussions in Miami Beach at all as a possibility?

DT: Retreat is not an option. The policymakers have taken that off the table. The decision has been made to push forward, do what we can at this point, there's always hope that technology in the next 40 years will provide a solution. The City is looking positively into the future, doing as best as we can right now.

LWB: How can preservationists convey the intangible social values to policymakers as historic resources become more limited? Taking into account with the revitalization of South Beach in the 1970s, the cost-benefit analysis made sense, there was a lack of economic value and investors were able to reap benefit. However, with sea level rise and historic preservation regulations capping density, long-term investments such as raising your building make these properties riskier. How can preservationists look to policymakers to work on incentivizing investment; especially as the historic architecture is a large draw from a tourism perspective.

DT: We are still seeing investment in historic properties. It varies in different neighborhoods based on geographic location. We have the oceanfront properties that have an extreme property value. Those properties for the most part have been significantly developed. Recently, there have been a lot of major developments and moving forward there will be more projects. Investment for those areas is happening, there is no issue with that. I think when you start looking at the inland properties that's where it is becoming more challenging. The smaller properties will struggle, especially given increased insurance premiums. It's easy if you're sitting on a piece of property that is worth $120 million. It's not so easy if you're sitting on a lot with four residential units and that's your main source of income. Moving forward, the preservationist community needs to understand that and look at creative solutions. Not only potentially increasing allowable square footage. If we look at repurposing and flood proofing ground floors in smaller properties, they will lose this FAR as usable space. Maybe the city would let them recoup lost FAR as an addition since it is not habitable. Another potential would be to change uses. There are certain uses that produce a lot more income than strictly residential. We have very defined zoning districts in terms of residential-only. Maybe those regulations could be looked at differently to allow a property to get more income where appropriate. I'm not saying that in a single-family neighborhood you could change zoning to allow a nightclub. Perhaps short-term rentals or small commercial spaces, office spaces in strategic locations. Those types of things would go a long way in these more difficult areas, where the property owners may not have the same resources as the oceanfront owners. Increased income would help subsidize resiliency investments for historic properties. Even opportunities such as smaller unit sizes. Right now, you can only have a 400 square foot apartment. Maybe you have micro-units. You would have more units, with increased income. For historic buildings you must have an average of 550 square feet per unit, and a minimum of 400 square feet. That's a way for property owners, if you have more units that are smaller, you can increase your income. There are creative ways to tackle these issues and maybe there is a percentage that requires owners to put a certain number of this increased income into resiliency investments. Also, the potential for a TDR program. This would technically be an upzoning, even though you would be distributing it differently. Any increase in FAR requires voter referendum.
C.7 INTERVIEW: JEANA WISER
Title: Senior Manager, Resilient Communities, National Trust for Historic Preservation, Preservation Green Lab
Interview Date: April 3, 2017

LWB: Historic Preservation has proven its economic and tourism value, especially in “maintaining and increasing real estate values,” however we have not yet integrated with sustainability policymaking though reports demonstrate historic rehabilitation as the “greenest option.” How can advocates promote these positive environmental contributions and what can policymakers do?

JW: I wanted to make sure that you knew from the Preservation Green Lab’s reports of the benefits of building reuse.

LWB: Yes, I cited it for not only its embodied energy, but also as an employment driver to provide diversity from its dependence on tourism.

JW: That’s a good point about the tourism dollars in Miami Beach. Are there numbers from the tourism board connected to the historic districts?

LWB: Yes, there is. There was a report from 2009, which stated that this is in the billions of dollars per year while 40% of local employment directly relates to tourism spending. They also go on to say that around 65% were specifically spent in South Beach out of that total, which demonstrates a valid point for preservation’s economic value within the city.

JW: In terms of property values decreasing due to short- and long-term concerns of climate change, some of the highest property values are in the historic districts of Miami Beach. There’s certainly a case to be made for the future of Miami Beach to find a way to include some of the historic buildings. It will take creativity and flexibility. A place such as Miami Beach is a place where the rubber is going to hit the road, and in terms of how far preservation is willing to go to accommodate these changes—that’s really exciting to me in many ways. I think that this is a really good opportunity to test and prove that there can be a spot for historic buildings for a place that is right on the front lines. It’s probably the largest city in the United States with a population that’s right there.

LWB: I do too. In speaking with Debbie Tackett at the City of Miami Beach, she has been the preservation officer for awhile and when I brought up issues, she told me that they were working on integrating preservation and sustainability, but based on the policy review I completed, “historic preservation” is not mentioned at all even with all the quantitative economic benefits, as of yet. Their motto hinges on a “vibrant, tropical, historic community,” yet there are no plans to fund adaptation of historic resources. They also will be building more new developments in the future.

JW: Did you ask what her vision of what the future of Miami Beach would be in the next 50 years?

LWB: Her recommendation would be to continually designate historic districts that are worthy due to architectural significance. As a city, their responsibility is to maintain the infrastructure. They understand the importance of historic preservation, but because these resources are privately-owned, it is up to private property owners. If you look at beach renourishment projects, these are funded by federal and state entities. If we view historic resources as important at the beaches, shouldn’t they receive funding for resiliency design also? Adaptation is an expensive long-term investment on top of already costly restoration
costs of historic structures. What should be the responsibility at federal/state/municipal levels to assist private homeowners to incentivize retention of historic resources?

JW: In terms of taking a step away from the local, looking at which scale is going to fund these types of projects, have you talked to the Florida SHPO? The state of Connecticut through their SHPO office created a program using post-disaster funding from Sandy to create a “historic coastal resilience” program where they are going to be providing money and financial support for a whole host of resilient preservation projects. This includes brick and mortar projects, elevation of historic properties, developing plans, as well as completing surveys to prioritize action areas, to provide a holistic preservation for a coastal community, specifically responding to resilience and sea level rise. That’s very interesting and it makes sense. As you said, there’s an entire sustainability plan for the City of Miami Beach and they don’t mention “historic preservation” as essential. You will have to have some of these programs and money being brought forward before you see recognition of the inclusion of historic properties in larger resilience plans. There should be creative uses of the allocation of funds, such as FEMA post-disaster funds that the SHPO can utilize. I do know that the State of Florida does have funding and many of Florida’s historic coastal communities are on the coast.

LWB: Yes, and the property values are in these communities so that puts them in the position to negotiate for these funds. I did mention pre-disaster funding options and they are currently lobbying federally, but this is more tied to worries of rapidly increasing flood insurance. These are legal issues and what if the city becomes uninsurable? Property values will be worthless, and this is the most immediate driver for these decisions. The Resiliency Fund is to increase infrastructure projects, rather than target any public support for privately-owned adaptation of historic structures.

JW: There’s another note that I wanted to make regarding another resource. Through the Army Corps of Engineers, they have a non-structural flood-proofing committee. It’s a special advisory committee that works with communities in a planning capacity, which would include elevation, implementing temporary flood walls, and raising equipment. They’re really interested in historic communities and finding a balance in a custom approach for historic districts. They bring their technical services in and they are funded federally through The Silver Jackets, an Army Corps body. They already have funding and can offer $100,000 in in-kind technical services to develop a report and recommendations for specific typologies of buildings that are prevalent. I talk to them frequently about helping them to figure out where to make the most sense for them to be working to support preservation of historic neighborhoods. That is a real underutilized resource and could become custom for preservation. They are building up a great portfolio of working with historic communities, so they are getting know the challenges and opportunities of historic structures.

LWB: I know it’s ongoing so I don’t have the specific information, but local academic institutions I believe are working in tandem with the City of Miami Beach to implement design guidelines for adaptation because the building code will have to be changed.

JW: In terms of preservation, the state of Mississippi has a report which talks about specific design guidelines, and recently the state of Louisiana has the same thing. There is starting to be a series of reports that are coming forward now that are looking at elevation guidelines for historic resources.
LWB: Yes, I have come across those resources. One of the conflicts that I see is among preservationists themselves. If it is a National Register historic district, how will this work? What do you view as the biggest challenges for historic preservation to overcome with regard to integration with municipal resiliency planning?

JW: It's interesting. My colleague and I who have worked on a lot of climate change projects. We provided extensive comments to the National Park Service. They released their Climate Change Strategy several months ago. Another document that they have in the works are more practical in terms of how to implement climate change strategies. In our series of comments to them, we were really pushing them to recognize that we are living in a new reality with climate change. Particularly with sea level rise, it will push the preservation field to make a decision whether they want to squabble about how much to alter a historic building, meanwhile the sea level is rising. Or do you want to come up with new ways to promote flexibility and options that maybe are not the best-case scenarios from a preservation standpoint, but because of the context it's necessary. In general, I think that people are loosening up, especially with places that have to, like Miami Beach. That's an option in Miami Beach, to do whatever it takes or being realistic into the future, there's also a conversation of abandonment.

LWB: Yes, I did mention that to Debbie Tackett, but retreat is not an option for Miami Beach. We discussed Galveston not retreating and they are still dealing with these decisions a century later.

JW: The other thing is the general vision of the future of Miami Beach. It's a unique situation, because it's not a small, working-class coastal community. There are high real estate values, and the taxpayer base is considerable enough to allow the city to figure out how to make it work. My vision with increasingly more water present in the city would be to figure out some way to accommodate that water. If historic buildings don't rise with the rest of the buildings, especially as you go into the future with more new developments, it will leave them vulnerable and left out of the equation. To me, especially in tandem with elevating roads, it makes sense that there needs to be a prioritized system of neighborhoods that could be elevated to maintain cohesion within the city.

LWB: Yes, this makes sense from a preservation standpoint. Have you seen 22 Star Island? It's a large structure, but it cost an estimated $1 million to get to higher ground, which allowed them to build another structure in front of it. That's where MDPL comes in where single-family homeowners cannot afford that expense to advocate for municipal funding. Are there any precedents that you know of? In all the examples I have looked at, it's fundamentally up to the private property owner to incur these expenses.

JW: In Louisiana, which is a different context, there are grants that are available to help people with home elevation. I believe they are available at the federal, state, and local levels. Rod Scott, from a technical expertise standpoint, has done meetings in Miami Beach and focuses on elevation. He has a practical and realistic outlook because he is actually implementing these projects. He understands the flood insurance benefits and how to make the case for a positive ROI in terms of investing in elevation to offset increased premiums. He also knows all of the grant programs and would be really good to talk to in terms of posing the questions of the practical matters. One thing would also be to make a better understanding of census data and demographics of people who are living in these neighborhoods.
LWB: There is census data available and I am looking at this for different increments of sea level rise. While the vast majority is wealthy, there are vulnerable residents who will have to move. These are huge economic questions.

JW: It's such a unique situation because Miami Beach will really be the first city in the United States where all of this is coming to a head first. It's very complicated. Regarding the cost and how to pay for it, those conversations would be good in terms of elevation. That same thing is going on Bridgeport, Connecticut right now also related to the Rebuild by Design competition. It's one of five projects. In addition they received funds through the National Resilience Competition. These are two big pots of money being applied to resiliency, and a big part of what they are doing is infrastructure elevation. The next step is to determine how to best connect the existing, older fabric to the new, resilient improvements. One question that is really interesting towards preservation-based regional coalition to develop strategies, which would be new. In terms of citywide efforts, in Philadelphia and Annapolis, they did significant surveying and integration of cultural resources into their hazard mitigation plan. This is becoming a new standard for how cities are looking at the vulnerability of historic resources and their importance. Looking at a regional approach with academic institutions and non-profits, such as The Miami Foundation, I would hope that someone would look to funding that kind of initiative. There is now a San Francisco Bay version of Rebuild by Design that is looking at a regional approach to resilience planning. The William Penn Foundation is specifically identifying the need to adapt historic properties to sea level rise, so there is momentum there. With the climate-heritage listserv and History Above Water conference, there is a growing momentum of preservation professionals, climate change experts, academics, and designers all coming together to apply that knowledge in one place to develop solutions. A lot of people are intimidated by Miami Beach in terms of coming up with solutions. They have a general sentiment that it's "too far gone" and nothing really can be done. That's challenging and difficult and may be partly to blame for the lack of preservation attention on Miami Beach.

LWB: Yes, when you state in your motto as a city that you want a "historic" city, and then there is no mention of historic preservation in future sustainability or resiliency planning, that is difficult to overcome that mentality.

JW: The other thing that I wanted to mention, but there is a tool that has been developed called "Game of Floods" and it's specifically related to preservation as a resource for older communities. It helps people think about decision-making for cities that are dealing with sea level rise, in terms of different districts and vulnerabilities, understanding demographics and put yourself in the position of a decision-maker. It's from the Marin County Planning Department, but they have begun tweaking the system to understand this through a preservation-lens at the citywide level. It's a way to bring people together to make decisions.

LWB: I am optimistic and I agree that Miami Beach is in a unique position. That's why the historical analysis is central to the thesis because it validates how important political advocacy is. Without this, Miami Beach would look like any other coastal Florida city. It's challenging because there are some many different aspects to this now that they didn't have to deal with in the past.

JW: I feel like Galveston, though it is a different context, it is a good example. Also, The Netherlands. You are not going to be able to hold the water back or raise anything, but instead find ways to accommodate water more and more. In a regional approach, such as The Netherlands, that will need to a component, but it will inherently benefit historic buildings. My colleagues and I like that approach a lot and cities like Boston embracing that. They have good recommendations for the Back Bay neighborhood, which includes a series of
canals. They are looking at ways to alter the landscape to preserve their historic resources while channeling the water.

LWB: Yes, there was a student design in Miami Beach that looked at this, but there are political constraints to this approach because these cycles run on four-year terms, but I do think that could be a creative possibility for the future.

JW: Property owners are taxpayers. This is an important point. Right now we are still in a mode where cities are testing options. To leverage that as much as possible to help encourage and incentivize cities that aren't active in this area, that has to be a part of it. Have you looked at "Surging Seas"? They have risk-zone maps so you can look at data quickly without GIS. They also have different categories: landmarks, property values, demographics, etc. It's a useful tool to very quickly demonstrate data.

LWB: Yes, it's interesting. In Miami Beach, fortunately most historic districts are on the oceanfront, which have a higher elevation that allows more time to create design standards for adaptation. Eventually however, the entire city has the potential to be inundated due to its low-lying topography.

JW: In my mind, a big picture recommendation could be to outline a preservation-climate change partner led effort to really dig in and develop a strong program for how these historic buildings are going to adapt to sea level rise and address all of the factors that you are talking about. This is ground zero. If not do it here, where would you do it? Building upon the 100 Resilient Cities work, I think it could be argued that this becomes a component of their resiliency plan. They are in the early stages of that so you could have a clear and concise recommendation that there is a chapter on historic resources in Miami Beach and a clear vision that helps address the ways in which these buildings are going to be adapted, including funding and a range of options.

LWB: Yes, making historic preservation relevant to climate change issues is a central theme to my thesis, and in the case of Miami Beach these resources should be afforded funding opportunities.
APPENDIX D: REGIONAL CLIMATE ACTION PLAN INTEGRATION

The RCAP provides a framework to help guide future resiliency planning and policies. Noted to be a “living document with options that each regional or local government may adopt and utilize based on their interests and vision of the future,” this provides an opportunity for more direct historic preservation integration. The RCAP lists 110 actionable recommendations that are broken down into the following areas:

1. Sustainable Communities & Transportation Planning (SP)
2. Water Supply, Management & Infrastructure (WS)
3. Natural Systems (NS)
4. Agriculture (A)
5. Energy & Fuel (EF)
6. Risk Reduction & Emergency Management (RR)
7. Outreach & Public Policy (PP)

This thesis highlights 15 actionable items for integration that fall into 5 of the 7 RCAP categories:

1. SP-2, SP-6, SP-7, SP-9, SP-20, SP-24, SP-28, SP-33
2. WS-9, WS-10, WS-11
5. EF-3
6. RR-7
7. PP-1, PP-12

D.1. SECTION 1: SUSTAINABLE COMMUNITIES & TRANSPORTATION PLANNING

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<td>RCAP</td>
<td>SP-2</td>
<td>Incorporate “Adaption Action Area” definition (as provided for in Florida law) into municipal and/or county Comprehensive Plans, to provide a means to identify those areas deemed most vulnerable to sea level rise and other climate change impacts including but not limited to extreme high tides, heavy local rain events, and storm surge for the purpose of prioritized funding and...</td>
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1 Resolution No. 2013-28142, City of Miami Beach, February 6, 2013.
adaptation planning.

| Historic Preservation Integration | Create a preservation-climate based “Adaptation Action Area” for a historic district as a case study | Target a historic district as a case study to implement an “Adaptation Action Area” utilizing data-drive results from further studies that build upon topographical research. As an example, PlaNYC’s “Resiliency Plan” from 2013, demonstrates the need for civic investment to reduce destruction of structures and protect infrastructure on a citywide scale. This approach can decrease the costs of flood insurance and reduce the need to elevate buildings within these zones through community-wide soft and hard adaptation methods. Based on GIS research, the local historic districts of Collins Corridor, Museum, and Waterway should be targeted first for a building by building assessment of adaptation opportunities. |

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<td>Historic Preservation Integration</td>
<td>Utilize a Dutch model to prioritize creative adaptation, rather than “hard” infrastructure</td>
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<tr>
<td>RCAP</td>
<td>SP-7</td>
</tr>
<tr>
<td>Historic Preservation Integration</td>
<td>Use scenario planning to analyze adaptation of historic resources</td>
</tr>
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### Source


4 In 1968, Morris Hill published the Goals Achievement Matrix (GAM) that can apply multiple evaluation criteria, especially principles that were previously thought to make immeasurable contributions within the valorization of analyses. Compatible with the prerequisites of tightly resourced municipalities, all goals can be weighted by a common scale: high (3), medium (2), and low (1), to assign priorities and create a “balance sheet of development” for urban planning goals; Morris Hill, “A goals-achievement matrix for evaluating alternative plans,” *Journal of the American Planning Association*, Vol. 34, No. 1 (1968), 19-29.
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<tr>
<td>RCAP</td>
<td>SP-9</td>
<td>Coordinate regionally across municipalities and county planning authorities on the development of projects and funding proposals to seek prioritized funding for identified infrastructure needs and specific adaptation improvements required within Adaptation Action Area or other related adaptation planning areas.</td>
</tr>
<tr>
<td>Historic Preservation Integration</td>
<td>Foster regional preservation-climate change based lobbying coalitions</td>
<td>Coalitions specific to heritage-climate change should lobby for funding based on eco-regions, similar to the 100 Resilient Cities model. Education from preservation advocacy groups and governmental agencies can help advise adaptation options and funding. Proactively seek solutions to economic issues such as increased flood insurance premiums and adaptation.</td>
</tr>
<tr>
<td>Source</td>
<td>Item</td>
<td>Recommendation</td>
</tr>
<tr>
<td>RCAP</td>
<td>SP-20</td>
<td>Require that new development and redevelopment in areas with existing and planned multimodal corridors that connect urban and other centers in the region be planned and designed to support walking, biking and transit use.</td>
</tr>
<tr>
<td>Historic Preservation Integration</td>
<td>Develop social-benefit analyses for historic districts</td>
<td>Research and advocacy efforts must demonstrate the social values of historic preservation, not solely the economic. In order to garner fiscal support, historic resources must prove their societal contributions to environmental resiliency. Possibility to utilize metrics such as connectivity and walkability of historic districts to support social-benefit analyses and identify other factors for inclusion outside of cost-benefit analyses which will favor demolition and new construction in most cases.</td>
</tr>
<tr>
<td>Source</td>
<td>Item</td>
<td>Recommendation</td>
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<tr>
<td>RCAP</td>
<td>SP-24</td>
<td>Consider the adoption of green neighborhood certification programs, such as LEED ND (Neighborhood Development) to guide decision making and development and to provide an incentive for better location, design, and construction of new residential, commercial, and mixed-use developments with the goal of increasing transportation choices while reducing household transportation costs. Incorporate sustainable building and neighborhood ratings or national model green building codes, including but not limited to those defined in Section 255.253(7), Florida Statutes, into municipal codes region-wide.</td>
</tr>
<tr>
<td>Historic Preservation Integration</td>
<td>Advocate for green neighborhood certification (LEED ND) with inclusion of historic districts</td>
<td>Demonstrate the inherent resiliency in the historic building stock. Studies that are specific to historic districts can be researched to provide quantitative data, cost-benefit analyses, and social-benefit analyses on a building-level basis. This model can be used to allow reproduction of findings across varying historic typologies, geographies, and social circumstances while providing consistency.</td>
</tr>
<tr>
<td>Source</td>
<td>Item</td>
<td>Recommendation</td>
</tr>
<tr>
<td>RCAP</td>
<td>SP-28</td>
<td>Continue to implement strategies aimed at maximizing the efficiency of the existing transportation network by all agencies across the region. Many of these strategies also result in greenhouse gas emissions reductions. There is a need for a toolbox of successful strategies that can be duplicated across the region. Agencies should make an effort to collect information that will allow for evaluation of the effectiveness of a strategy in reducing greenhouse gas</td>
</tr>
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</table>

5 Discussed in interviews with Jack Johnson and Jeana Wiser.  
6 Interview with Christine Rupp, Debbie Tackett, and Jeana Wiser.  
7 Interview with Jeana Wiser.
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<tbody>
<tr>
<td>RCAP</td>
<td>SP-33</td>
<td>Coordinate initiatives with those of the seven-county Southeast Florida Prosperity Plan, known as Seven50, to maximize the opportunities presented as Seven50 is developed (e.g., sharing data and analyses; participating in alternative future scenario planning; engaging a myriad of public, private and civic partners).</td>
</tr>
<tr>
<td>Historic Preservation Integration</td>
<td>Include historic resources to Prosperity Plan</td>
<td>Preservation advocates and government representatives need to present data-driven analyses that promote adaptation funding in historic districts. The economic and environmental benefit would offset total reconstruction or demolition costs of historic structures. 8</td>
</tr>
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### D.2. SECTION 2: WATER SUPPLY, MANAGEMENT & INFRASTRUCTURE

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<tr>
<td>RCAP</td>
<td>WS-9</td>
<td>Incorporate and prioritize preferred climate adaptation improvement projects in capital improvement plans and pursue funding.</td>
</tr>
<tr>
<td>Historic Preservation Integration</td>
<td>Advocate for inclusion as an adaptation improvement project</td>
<td>Identify a historic district as a case study to implement capital improvement funding. Already the MDPL and the AIA have begun educational forums to solidify their advocacy goals within a resilient future. 9</td>
</tr>
<tr>
<td>RCAP</td>
<td>WS-10</td>
<td>Encourage, foster, and support investigative work and scientific research that improves the understanding of local and regional climate change impacts specific to Southeast Florida.</td>
</tr>
<tr>
<td>Historic Preservation Integration</td>
<td>Demonstrate positive environmental contributions of historic resources</td>
<td>Foster long-term advocacy for the alliance between historic preservation and resiliency strategies, where they currently run parallel to each other. 10 Ultimately the best long-term response remains reduction of exposure during disasters. Existing structures currently under historic preservation regulations embody these principles. By limiting additional development, a controlled urban footprint reduces risks of sea level rise effects, storm water inundation, and storm surge. Utilize indigenous knowledge to find local historical solutions for environmental damage. 11</td>
</tr>
<tr>
<td>RCAP</td>
<td>WS-11</td>
<td>Undertake efforts to fill identified data gaps through local program efforts, agency collaborations, and advocacy for additional state/federal resources, as needed.</td>
</tr>
<tr>
<td>Historic Preservation Integration</td>
<td>Contribute historic preservation</td>
<td>Integrate historic preservation data across agency and intergovernmental resources in order to influence decision-</td>
</tr>
</tbody>
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8 Discussed in interviews with Debbie Tackett, Ricky Arriola, and Jeana Wiser.
10 Interview with Jack Johnson and Christine Rupp.
| Integration | datasets to existing resources | making processes. Provide updated economic and environmental information as new technologies are available. Though interactive tools such as “Eyes on The Rise” and “Game of Floods” exist, more backend data needs to become available to the public. Building upon the GIS studies conducted in this research, deeper layers of information can inform further socioeconomic, historic building data, and nuanced scenario planning on a building-by-building basis. |

### D.3. SECTION 5: ENERGY & FUEL

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<th>Source</th>
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<tr>
<td>RCAP</td>
<td>EF-3</td>
<td>Set a recurring five-year regional goal to increase renewable energy capacity and conservation – which includes the co-benefits of economic development and job creation – through revising building and zoning codes and architectural design guidelines to allow for, encourage, and integrate renewable energy sources into the power supply.</td>
</tr>
<tr>
<td>Historic Preservation Integration</td>
<td>Develop employment diversity through adaptation of historic structures</td>
<td>Historic Preservation can play a central role to balance the dependence of tourism revenue by establishing adaptation mechanisms for historic structures. Historic Preservation has the opportunity to demonstrate problem solving through adaptive strategies and employ local skilled workers in the creative and construction sectors.</td>
</tr>
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### D.4. SECTION 6: RISK REDUCTION & EMERGENCY MANAGEMENT

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<tr>
<td>RCAP</td>
<td>RR-7</td>
<td>Continue to implement and enforce strong building codes that require new construction and substantial improvements to existing structures to mitigate against the impacts of flooding, severe winds, and sea level rise, and which are consistent with Climate Change Adaptation policy.</td>
</tr>
<tr>
<td>Historic Preservation Integration</td>
<td>Modify historic preservation rehabilitation guidelines</td>
<td>Allow creative adaptation solutions of historic resources that promote and integrate with resiliency building codes. Adaptation guides can incorporate varying typologies, construction methods and interventions. Solutions to utilize ground floors into useable space for stormwater management can be further researched particuler to adaptation of historic structures. Mississippi and Louisiana have examples of adaptation guidelines which can serve as models.</td>
</tr>
</tbody>
</table>

13 Though NPS is currently working on revised elevation design guidelines, solutions will be particular to geography, geology, typology, etc.
14 As stated by Betsy Wheaton, the city’s environment and sustainability director, the policy’s intention lies in finding creative ways to initiate “incentives for the development community to look at their means and methods of constructing.” Joey Flechas, “Miami Beach wants developers to go green or pay fee,” Miami Herald, April 29, 2016.
## D.5. SECTION 6: OUTREACH & PUBLIC POLICY

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<tr>
<td>RCAP</td>
<td>PP-1</td>
<td>Provide outreach to residents, stakeholders and elected officials on the importance of addressing climate change adaptation and preparedness and develop a program to educate specific interest groups about the Compact, Regional Climate Action Plan, and the benefits of Adaptation Action Area. Consider utilizing the Academy concept to educate elected leaders, academic interests and other decision makers.</td>
</tr>
<tr>
<td>Historic Preservation Integration</td>
<td>Include adaptation of historic properties in community outreach education</td>
<td>Education initiatives should foster advocacy among the community, as well as target historic preservation as a solution for long-term resiliency. In decisions in North Beach, community engagement was critical. Another example can be found in the Bridgeport, CT, Rebuild by Design proposal.</td>
</tr>
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<tr>
<td>RCAP</td>
<td>PP-12</td>
<td>Urge Congress to pass legislation that would create a permanent funding source to finance infrastructure projects to adapt to the impacts of climate change with emphasis on investments in areas such as water management, water supply, transportation and other projects that serve to reduce risks to urban infrastructure from extreme weather events and rising sea levels.</td>
</tr>
<tr>
<td>Historic Preservation Integration</td>
<td>Seek federal funding resources</td>
<td>Promote the inclusion of historic resources as a positive contributor to environmental resiliency for available federal funding. A financial incentive for historic property owners to comply with the guidelines should also be considered. Federal funding resources could include pre-disaster FEMA grants, U.S. Army Corps of Engineers Silver Jackets in-kind services, or HUD initiatives.</td>
</tr>
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16 See North Beach case study in Appendix B.
18 Discussed in interviews with Debbie Tackett and Jeana Wiser.
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